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Says Velpeau, speaking of incised wounds in general: "In order to attain this end, we must give to the dressing more care and time than is ordinarily given to it; the section of the soft parts should be neat and regular; the integuments should fall without effort on the front part of the stump." . . . "All the arteries liable to bleed should be immediately tied or twisted; the sides of the wound, freed from foreign substances, should touch throughout their whole surface." . . . "The straps should do no more than preserve the coaptation, without pressing or exercising any drawing force." . . . "The suture should be added to them, or even preferred, if the skin is thin or tends to roll inward; the diseased parts should be afterward kept in the most perfect immobility, and the inflammation should be moderated by every possible means."

When speaking of amputations Velpeau repeats in effect the same instructions.

Most of these surgeons have referred in their writings to the necessity of waiting until the surface of the wounds becomes *glazed*, before closing them.

"After a time," says Bennett, "the surface is glazed, as it is called;" and it is at this period that he recommends the closure of the wound.

Says Pirrie: "All oozing having been completely arrested, foreign matter removed, and the surface having taken on a glazed appearance," we may proceed to close the wound.

Not a few of the most distinguished operators went much farther both in their teachings and practice.

Mr. Syme says wait six or eight hours before closing the wound.

Velpeau says that "in order to arrive with more certainty at this result, Parrish, in America, and also a great number of surgeons in England and Germany, and Dupuytren, in France, have established a precept not to dress recent wounds but after the lapse of some hours." Dr. Townsend, in a note to the American edition of Velpeau, says that Dr. Valentine Mott "approves very highly of leaving many wounds exposed for some time, even for an hour or more."

Of those mentioned above, Mr. Syme subsequently modified his opinion so much as to permit the dressing to be made at the same time as the amputation.

Even at a date much later than any writer which has been hitherto mentioned, Mr. Erichsen has said, "Hence in the dressing of surgical wounds, such as stumps after amputation, and in all cases in which it is advisable to attempt to procure union by adhesive inflammation, the cut surfaces should not be brought together for a few hours, until all oozing of blood has ceased and the fibrinous layer has been thrown out."

It needs to be said that, following the example of Mr. Syme, after a time most surgeons relinquished the practice of waiting several hours before closing the wound, both because of its inconvenience and because in most cases the glazed appearance was found to be present sufficiently early to enable them to do so without compromising the desired result.

Alanson, Syme, Liston, and probably all the systematic writers of this period, taught the necessity of not only stopping all bleeding, but also of providing for the escape of serum by suitable drainage. Mr. Syme, in 1825, wrote a paper in which he spoke of the flow of serum as "invariable," and of the absolute necessity, therefore, of providing for its escape.

Let us now inquire what were the results of this plan of treatment, which was substituted for the open treatment, and which found favor with so many—nearly all, indeed—of the most practical surgeons at the close of the last century and up to a late period during the present century.

Alanson declares that, under his improved treatment, of 35 cases of amputation of the leg and thigh, at the public hospital in Liverpool, he did not lose one, while of the preceding 46 amputations he had lost 10.

Mr. Liston, a pupil of Syme's, says, that of the last 20 cases of amputation of the thigh for chronic disease, which he had seen performed by Mr. Syme under this plan of treatment, not one died; and this although some of them seemed in a nearly hopeless condition at the time of the operation.

Of 92 soldiers treated in this manner on the field of battle by Percy, 86 were cured in twenty-six days; and of 70 cases thus treated by Lucas only 5 died.

It is true that Pelletan, who did not favor the practice of attempting union by adhesion, lost 5 out of 6 treated by himself; but it is sufficiently apparent that he had not complied with two of the most important conditions of success, when he declares that in all the fatal cases the autopsy showed the presence of blood, as well as of pus, between the surfaces of the wounds; and that in the only case in which recovery took place the accumulated pus forced off the adhesive straps. He had neither secured the bleeding vessels properly, nor provided for drainage.

What treatment, either ancient or modern, has presented a better record than this furnished by Alanson, Syme, Liston, Percy, Lucas, and, so far as we know, by the faithful disciples and distinguished advocates of their practice?

It is scarcely necessary to remind you that these results were obtained before the introduction of anæsthetics or of antiseptics.

In the face of these remarkable and universally conceded successes, which contrasted so strongly with the slow and uncertain results of the earlier practice, it is hard to understand how any steps backward could have been taken; but this is what actually happened, the retrograde movement commencing even before the distinguished advocates of the new system had died. Here we enter that point in the history of the treatment of wounds to which I have already referred, as that in which the practice of attempting to obtain union by adhesion "faltered," and surgeons were everywhere returning to the practice of leaving their large incised wounds to suppurate and granulate. Of the fact as now stated there is no question. How this change was brought about I will now attempt to explain, and also how, through the agency of one man, Mr. Lister, the practice of union by adhesion was happily restored.

In the first place, to comply with all the conditions demanded for union by adhesion requires time and painstaking. It demands scrupulous attention to the most minute details. To omit one of the many conditions named is, in most cases, as fatal as to omit the whole. Celerity is here inconsistent with success. Surgeons, therefore, who wish to acquire a reputation as "brilliant" operators, are likely, especially in their public or hospital exhibitions, where their example can do most harm, to fall short of the requisition, and then, by their failures, to bring discredit upon the system they teach and are attempting to follow.

Second, war is unfavorable to this department of surgery. The exigences of the battle-field do not supply the time, nor the appliances necessary for the application of all the principles involved in primary union. There are many occasions on the field of battle when the demands upon the surgeon to save the life of the patients temporarily, must be paramount to all other considerations, and in which, as Armand has said, the only precept is, *cite, citissime.*

Macleod says, speaking of his experience in the Crimean War, "I never saw one case among our most numerous amputations in which primary adhesions took place throughout the whole surface of the flaps."

My personal experience in our own late Civil War was that primary union after large amputations was the exception; and that toward the close of the war army surgeons were everywhere returning to the practice of open dressings. This lack of success in their attempts to secure primary union upon the field induced, it is fair to suppose, on the minds of many who did not sufficiently

consider the causes of their failures, a general lack of confidence in the plan, which led them to reject it even after they returned to civil practice.

If Percy had better success as an army surgeon in securing primary union than most other surgeons have had, it was because he was better able to comply with the conditions.

Third, the introduction of anæsthetics has had no inconsiderable influence. My own experience has not furnished me with any evidence that general anæsthesia has appreciably delayed the union of tegumentary wounds, or of the majority of small wounds, when they occur in most of the other tissues of the body. What the fact may be in this regard, I am unable to say, nor would it perhaps be very easy to determine; but in reference to its effect in large muscular wounds, or in major amputations, and especially where muscular flaps are made, I have no doubt their union has been thereby delayed and often prevented.

I practised surgery some years before the introduction of anæsthetics, and soon after I began to use them it became a matter of common observation with me, and of comment, that the same measures did not so often insure primary union as before. I think also that Macleod's experience in the Crimean War, already referred to, goes further than proving that amputations made under these circumstances do not usually comply with the conditions of success. He says that "chloroform was almost universally used in the British army." If, then, he was unable to meet with a single case of complete primary union, it seems fair to charge a part of this result to the general use of chloroform.

But aside of any specific testimony upon this subject, let me appeal to the reader's intelligent judgment. When large flap amputations are made while the patient is completely under the influence of an anæsthetic, in addition to the total loss of sensibility—for which both operator and patient have reason to be thankful—we observe that the muscles do not quiver and retract under the knife, that they hang apparently lifeless from the wound as they do when made upon the cadaver, and that they do not wholly resume their normal contractility and position until some hours after the operation is completed. The arterial blood is dark, and can scarcely be distinguished from the venous, showing that it is imperfectly oxidized. The surface of the wound has a dark, grumous look, wholly unlike the appearance presented under other circumstances.

Is it reasonable to suppose that the effusion of lymph, so as to give a glazed appearance to the wound, and which is essential to primary union, will not, under these circumstances, be delayed? and that this delay will not often extend beyond the period when primary union is possible? For myself, if I were asked this question, and no evidence were presented on either side, I would say it must necessarily be delayed.

I have been speaking thus far of the circumstances which seem to explain why surgeons for a while faltered in their faith in primary union. This explanation, however, which may or may not be correct, was not necessary to the historical sketch which I proposed to make. The material point is, that for a time surgeons did actually treat wounds as if they had forgotten the conditions of success, or had lost faith in the earlier teachings.

In attestation we have only need to recall what we have often witnessed in the public amphitheatres in this city and elsewhere during the last twenty or thirty years; large flap amputations, made dexterously, but afterward the surfaces of the wound rudely handled, fretted by rough sponges, the wounds closed before the blood had ceased to flow, then hermetically sealed by adhesive straps, without provision for drainage, and hurried from the amphitheatre to make way for another brilliant operation.

To one who has only observed the results of this method of treatment, without having given attention to the means by which they were brought about, the sole conclusion must be, that it would be far better to return to the old practice of leaving the wounds open, since nothing short of a miracle could secure primary union; and this is precisely the conclusion to which, within a few years, some surgeons have arrived.

We have now reached the period in the history of surgery when Mr. Lister interposed, and turned back the tide. He taught that under a most thorough system of antisepsis primary union could be secured; and he demonstrated that it could be secured even after the most profound anæsthesia. This was the great lesson which he had in his mind, and which he successfully taught; but he taught also, incidentally, that the wound must be handled gently, all foreign substances must be removed, the blood must cease to flow, and provision must be made for drainage. In short, if you will look carefully into his teachings and practice, and the practice of his disciples, you will see that they omit nothing which, in the opening of this paper, I declared essential to success; and I venture to say, that if they did, no amount or quality of antisepsis would secure union by adhesion.

The influence of Mr. Lister, backed by his specious theories, secured a return to the old practice of the advocates of primary union in all its essential details, and to this it added antisepsis. Fortunately, antisepsis carried with itself, inseparably, one thing more, namely, the agency of a moderate stimulant and astringent, which served materially to resuscitate the tissues and the capillary vessels which had been temporarily paralyzed by the general anæsthesia, and thus in some measure to counteract its deleterious effects.

As to his practice of removing carefully and effectually all foreign substances before closing the wound, and providing for the escape of the serum or blood which might subsequently be effused between the cut surfaces; and as to his practice of applying industriously, so long as the wound was open, a moderate stimulus to the cut surfaces in the form of spray or lavements of dilute carbolic acid—these are *facts* which admit of no dispute. But as to his declaration that the results which he obtained were due to the destruction of certain microorganisms constantly floating in the atmosphere, and which being received and propagated upon the raw surfaces prevent primary union, or which being conveyed into the system by absorption cause septicæmia—this is only a *theory*, and one which is far from being universally accepted. It has not been conclusively shown that the formation of pus depends in any case upon the presence of germs. When suppuration takes place in closed cavities these germs are generally absent; but as if to show how impossible it is to prevent their pernicious intrusion—in case it be admitted that they can or do cause suppuration—they are occasionally found in great numbers in cavities which have never been open to the air.

If germs are so readily absorbed by open surfaces, and distributed through the system, of what possible use is it to commence the application of the antiseptics one or several hours after the reception of a wound, or months after the skin has been destroyed, and then apply it with so much assiduity, so long as the knife of the surgeon or his hands are in the wound?

If, on the other hand, the germs are not so easily absorbed, and only nestle upon the surface of the wound, why, instead of using the antiseptic from the beginning to the close of a surgical operation, is it not sufficient to apply it thoroughly just before closing the wound?

There is one quality or property of antiseptics to which allusion has not yet been made, namely, their power to prevent the decomposition of blood, of pus, and of serum; the decomposition of either of which changes these otherwise comparatively innocuous fluids into an irritating ichor. But when employed for this purpose they can serve no useful end, except when blood, serum,

or pus are actually present. To apply them, therefore, immediately preceding the closure of the wound, and whenever subsequently blood, serum, or pus present themselves, or seem likely to present themselves, is rational, and would justify their employment also, within certain limitations, in all cases, after the closure of the wound and until the end of the treatment; but it supplies no argument for the adoption of all the complicated procedures with which Mr. Lister and his disciples preface and encumber their operations.

The conclusion to which we are brought is, that while we are indebted to Mr. Lister for having restored confidence in union by adhesion, it seems equally certain that his excellent results have been obtained, not by a literal compliance with the rules which are the logical deduction from his theories, but by his strict enforcement, in the practical application of his theories, of certain other conditions, which he seems to regard as accessory and incidental, rather than of paramount importance.

If this conclusion is correct, then there is not sufficient reason why the air of a room in a private house, or even in a public hospital, not suspected of being infected by some contagious or infectious disease, such as diphtheria, scarlatina, erysipelas, etc., should be disinfected before an operation is performed, or why all persons present should have been previously disinfected, or that they should be required to breathe through disinfecting respirators, or should wash their hands in carbolized water, or search beneath their nails for concealed germs, or why they should carbolize their instruments, or why, indeed, they should pour a constant stream of carbolized water or of spray upon the wound while operating, except, as I have already stated, for its utility in closing the capillary vessels, and its power in restoring tone to the paralyzed tissues when anæsthetics have been employed.

The various manipulations and devices for the purpose of excluding the germs above enumerated have at one time or another been suggested by Mr. Lister or his disciples, and, in my opinion, they are all necessary if Mr. Lister's theory be correct. If it be not correct, they serve no other purpose than do the walking, talking, and gestures of the prestidigitator. They abstract the attention, and conceal the adroit manipulation by which the trick is actually performed.

I say this with all respect for the integrity of the distinguished surgeons who hold strictly to Mr. Lister's opinion and practices, since in one particular they differ from the class to which I have compared them. The prestidigitators are not deceived, but deceive their audiences; while Mr. Lister and his disciples deceive both themselves and their audiences.

It will be observed that I have thus far spoken only of carbolic acid as an antiseptic, since it is that which was first used by Mr. Lister, and still continues to be more commonly used than any other; but I am aware that surgeons have lately substituted many other things for carbolic acid, and with equally satisfactory results; and that many who continue to prefer carbolic acid have rejected the continuous spraying, and in several other particulars have modified the treatment. At the present moment a weak solution of the bichloride of mercury is the most active contestant of the alleged superior virtues of carbolic acid.

In a paper read before the New York County Medical Association in February, 1885, Dr. Theodore R. Varick, surgeon to St. Francis' Hospital, Newark, N. J., states that he has for nearly six years substituted hot water, or water a little below the boiling-point. Immediately after the larger vessels have been tied, he applies the water freely and continuously to the raw surfaces until all oozing has ceased and "the parts are thoroughly glazed." The effect of this is, as claimed by Dr. Varick, to coagulate the albumin in the serum, by means of which the open vessels are closed against the admission of germs, and to impart a moderate stimulation.

In a private letter Dr. Varick informs me that of thirty-nine major amputations thus treated, mostly in cases of railroad accidents, only two terminated fatally, one by hemorrhage and one by cardiac disease; and that in all of the various operations performed by him there has been no case of septicæmia or of pyæmia, "although in several instances the hygienic surroundings have been of the worst kind."

Dr. Varick attributes his remarkable success, which is probably equal to that obtained by those who adhere to the use of carbolic acid, or of the bichloride of mercury, to the power of hot water to close hermetically the capillaries, and thus to prevent the admission of germs. Since, however, in most of his cases—railroad injuries—there must have been extensive exposure of the vessels by laceration, it is again difficult to understand, as I have before suggested, how they can be excluded when the door has been left open for some hours before the patients came under his notice. In short, while I fully approve his practice, and have myself often adopted it, I do not accept his theory.

Mr. Lawson Tait, in reporting "a series of one hundred and twelve consecutive cases of consecutive operations for ovarian and parovarian cystoma without a death," and in which no antiseptics were employed, says: "I tried the so-called antiseptic system in all its ever-varying details in as complete and unprejudiced a series of experiments as I believe it possible for man to undertake." . . . "I finally came to the conclusion that my patients were being poisoned by the use of carbolic acid, thymol, and various other substances, which were being used by others as well as myself for the purpose of destroying the germs which were supposed to do so much harm," . . . and he adds, that his experience had proven to his own satisfaction conclusively that he "could do better without Listerism than with it; that, in fact, the only tendency of this so-called antiseptic system was to mar" his success.

In the light of all that has already been said upon this subject no one familiar with Mr. Tait's careful and painstaking mode of operating, will fail to see where lies the real secret of his hitherto unparalleled success, and which he himself says is due to "increased personal experience, increased attention to all the minute details which go to create success, and inattention to any one of which may defeat the best-laid plans." "In every case," he adds, "where there has been a tendency to ooze, or where the patient has been advanced in life, I have used the drainage-tube, an addition to our means of saving life of which it is impossible to speak too highly."

I agree fully with Mr. Tait, that this simple narrative of his personal experience, the accuracy of which is assured by his acknowledged integrity, and by abundant collateral testimony, ought to "dispose forever of the much-discussed question of Listerism in abdominal surgery"

Incidentally I will add that it ought to furnish a beam of light to those surgeons who, during the last three or four years—ever since the death of President Garfield—have been prophesying the brilliant future of gunshot wounds of the belly under a "strictly antiseptic treatment," according to whom the time was near, if it had not actually arrived, when, under the protective influence of antisepsis, surgeons would open the belly freely, unravel the intestines and close their wounds, search carefully through every pocket of the peritoneal cavity, and, if need be, dissect and explore the regions outside of the peritoneum, and, having found and removed the lost ball, they would wash out the fecal matter and the blood which had necessarily escaped into the peritoneal cavity, and close the abdominal wounds, with a reasonable probability of restoring the patient to life and health. The fact that the vertebræ had been penetrated and were crumbling would constitute no bar to success; and indeed nothing would interpose a serious obstacle, except that the missile had lacerated some important blood vessel, or had buried itself in some solid viscus, a fact

which perhaps nothing but an ante-mortem or post-mortem dissection could determine.

These inspired revelations, uttered sometimes with a certain tone of regret for the lamentable ignorance of those who have lived before them—generally by men who have had little or no personal experience in the treatment of such wounds, and who certainly never practised successfully what they foresaw in their prophetic vision—still wait for fulfilment, notwithstanding the many thousand opportunities which both civil and military experience have since furnished.

I am not prepared to say that surgeons have not exaggerated sometimes the dangers and difficulties of searching for balls which have entered the cavity of the belly; but I do not think so; and I believe that all surgeons who have had much experience in this class of injuries will agree with me. I only intend to say that antisepsis has in no degree abated these dangers and difficulties.

Before dismissing this subject it seems necessary to consider briefly certain relatively modern suggestions, other than antisepsis, which have been made for the purpose of securing the primary union of large incised wounds.

"Bruising" the vessels, first suggested by M. Briot, and "torsion," which owes its introduction to M. Velpeau, are both still practised upon the small vessels with a certain degree of success, but in my personal experience both have more often failed.

Veitch, in 1806, used for the ligation of both large and small vessels very fine silk, and cut off the ends, leaving the knot in the wound to become encysted; but as small abscesses subsequently formed in many cases, Ruysch, of Germany, and Physic, of this country, substituted animal ligatures, and treated them in the same manner. Valentine Mott says, like the silk ligatures they often formed abscesses, and after a short time their use was almost entirely abandoned.

At the present time we see the practice of using the animal ligature revived, but only, for the most part, in its application to small vessels upon the surface of the wound. In this manner they are now used quite freely, and no doubt serve the purpose of shortening the period we may have to wait before closing the wound, and of giving additional security against secondary hemorrhage during the early period of reaction. Notwithstanding the statements made to me by some surgeons, that they have seen no abscesses follow their use, this has not been my experience. In at least two cases out of the few in which I have adopted this practice very small abscesses have formed. I must, therefore, consider the method as still under trial.

The substitution of cloth or a towel for the sponge, as a means of removing the blood from the surface of the wound, made, as I understand, for the purpose of protecting the patient against septic germs, is subject to the criticism that it is illogical. If germs can be destroyed which lie exposed upon the surface of a wound, or upon instruments, they can equally be destroyed when they lie secreted in sponges, by a thorough saturation with some disinfectant, or by boiling water; and if they cannot be so disinfected, neither can the towel be. I observe, however, that in using the towel it is only laid upon the surface, not drawn roughly over it, and in this practice I see a positive gain. When a sponge is drawn roughly over the quick and sensitive wound, in the case of a patient who is not anæsthetized, it causes most acute pain; and although when the patient is insensible it can no longer cause pain, it can fret and partially disintegrate the surface as when rasped by a file. If surgeons' assistants cannot learn how properly to use a sponge, let them use a towel.

Drainage-tubes made of bone, from which the mineral structure has been removed, and which, therefore, may become dissolved or even absorbed, present no possible advantage over the ordinary india-rubber flexible tube, except that, if by any accident they should escape into the wound, they will take care of themselves and probably do no harm. The objection to them is, that they are short and inflexible, and cannot be made to follow a long and tortuous canal.

In closing the wound some modern surgeons have given the preference to metallic sutures, others to the animal sutures, or to horsehair, for each of which it is claimed that they cause less irritation than silk, and in this way improve the chances of primary union.

Any suture, no matter of what material composed, will cause irritation and suppuration at the points of pressure, if it is employed upon tegumentary tissues for the purpose of drawing the lips of the wound together forcibly, as when, owing to a deficiency of structure, they could not otherwise be made to meet; but I have elsewhere explained that this is not, in tegumentary wounds, and but rarely in any wound, the proper function of a suture.

In the class of cases now under consideration, where we desire prompt primary union, the suture is intended only to place the edges of the wound in accurate apposition, and to prevent inversion. For this purpose the finest silk suture, introduced as near the margin of the wound as possible, and tied lightly, is the best. It will cause no more irritation than the wire or horsehair, is much more flexible and adjustable, and is, therefore, much more easily and painlessly introduced and removed. The accuracy of these statements I have frequently verified by employing the two materials on different parts of the same wound.

The value of the animal suture consists solely in its being spontaneously removed. If it be claimed that its value, as now generally employed, consists in its being carbolized, the reply is, that the silk may be treated in the same way. The only objection which I have to its use is, that it is less flexible that silk and is not so fine as the finest silk.

Hot water, as a means of imparting a healthy stimulus to paralyzed tissues, of arresting capillary hemorrhage, and of removing the blood from the surface of the wound, has long been employed by me, applied by means of a sponge. The suggestion of Dr. Varick, to apply it in an interrupted stream from the nozzle of a pipe connected with a reservoir, in the same manner in which the antiseptic solutions are now often employed, commends itself theoretically and by its results. A current of hot water, falling with moderate force upon the wound, not only removes the blood from the surface, but also washes it from the tissues where it has accumulated around the bleeding orifices of the small vessels, exposes them to view, and enables the surgeon to apply a ligature if required. It also coagulates the albumin, and for this reason, if for no other, it ought to be satisfactory to those who believe that by the interposition of this shield the vessels are protected from the intrusion of germs; while it is absolutely innocuous, a quality which is not possessed by any of the antiseptics, so called, now in use. The occasional toxic effects of carbolic acid and of the bichloride of mercury, in their surgical application, are known and admitted by all the advocates of antisepsis.

Dr. Varick recommends that the water have a temperature "slightly below the boiling-point." This might do if one were to apply it by means of a sponge, and then only for an instant, as I have often done to close a bleeding arteriole; but if employed continuously, or by irrigation, through the nozzle of a tube, it ought not to exceed in temperature 112° or 115° Fahrenheit, or the temperature which may be easily borne by the naked hand.

Finally, I wish to say that while it seems to me capable of demonstration that the real secret of Mr. Lister has lain concealed under a series of complicated manipulations, my confidence in the intelligence of my professional brethren is such that I believe they will soon abandon all those procedures which are irrelevant and wholly unnecessary to success. This is what they have already begun to do. In addition to those whose names I have mentioned, Mr. Keith, Mr. Callender, Mr. Savory,

and Mr. Bryant, have publicly declared their non-acceptance of the doctrines of Mr. Lister, as have also a considerable number of equally distinguished French and German surgeons; and the number of those who have, after a fair trial, substantially ceased to practise them according to his theory, is constantly increasing. Let us take care, however, that in severing our attachment to certain theories and practices, we do not loose our hold upon anything, whether new or old, which is really useful.

Antiseptics have their position and function in a great variety of wounds, including large simple incised wounds, under certain circumstances, and at certain stages of their progress. What this position is in the latter class of cases—whether it be dominant or subordinate—I have sought to explain.

EXTRA-UTERINE PREGNANCY—A NEW DIAGNOSTIC SYMPTOM OF RUPTURE.

By J. J. E. MAHER, M.D.,

NEW YORK.

On September 15, 1885, I met in my practice with a case of sudden death from an obscure cause. The patient was a lady, aged thirty-two years, a blonde, five feet three inches in height, and weighed one hundred and twenty pounds. She possessed a good physique, powerful endurance, and rather neurotic temperament. She had been a book-folder for five years previous to December, 1884, when she became a sewing-machine operator. In the latter capacity she labored till April 15, 1885. Her family history presents nothing of hereditary influences.

She began to menstruate at the age of fourteen years. No unusual disturbance became manifest in connection with the establishment of this function, nor did it at any time suffer any derangement till interrupted by pregnancy, at the age of twenty years. At full term she gave birth to a healthy male child, and made a good recovery.

Two years later, when near the end of another pregnancy, she received a blow on the abdomen from her husband, and was confined to bed for several days on account of it. In due time, however, a healthy female child was born after an easy labor. Her convalescence seems to have been somewhat protracted. As a sequel of this gestation, she suffered every month thereafter from dysmenorrhœa. In the intervals between these periodical attacks of suffering and malaise she enjoyed good health, and continued to do so till July, 1884, when after a fall on the pavement she suffered from contusion of the right hip. This, however, passed off in a few days, and left her in her usual health. I might here remark that she had separated from her husband, and during the two last years of her life cohabited clandestinely with another man.

About March 1st she became enciente, and six weeks afterward terminated her pregnancy by a provoked abortion. The consequent illness is not said to have been severe, for she rapidly retrieved her lost health and spirits, and in a very few days was enabled to participate in various active amusements. Toward the end of May she began to complain of some slight pain in the lower abdomen, and every now and then she would observe that it was increasing in severity. On June 27th she was completely prostrated by abdominal cramps, and obliged to remain in bed on account of her sufferings for four days. In a few days she was approximately well again (so far as the pain was concerned), and indulged in severe exertion with seeming impunity. About August 1st her menses, which hitherto had been regular, ceased, and appeared no more. This was her own statement, but I am forced to doubt the verity of it, by certain collateral evidence which goes to prove she suffered from metrotaxis up to a few days before her death. About two weeks after this, the abdominal pain, which had gradually become troublesome again, now suddenly assumed a different character, and much resembled that of her dysmenorrhœa. This led her to believe her menses were about to reappear, but in this she was deceived. About this time rectal and vesical tenesmus was superadded, while at the same time she began to suffer from constipation, restlessness and insomnia. For this condition she sought medical relief about September 1st, and learned from her physician that she was suffering from inflammation of the bowels.

On September 15th, about 8 A.M., when attempting to rise, she fell back, prostrated by the sudden aggravation of the abdominal pain. She compared this pain to that of a knife driven into her side. Flexion of the thighs seemed to relieve her somewhat, and hence she assumed a sitting posture, which she maintained for about ten minutes. Being forced to lie down because of a feeling of faintness, she tossed about, endeavoring to assume a decubitus that would afford any respite from the excruciating pain. At 11 A.M. she fainted, and remained syncopated about fifteen seconds, during which a well-marked convulsion was observed. Four times during the afternoon these evanescent fainting attacks recurred, but without convulsions.

About 1 A.M. I was called to the bedside. I found her lying in the left lateral position, with the shoulders depressed, and the knees drawn up, as if endeavoring to relax the abdominal wall. Her countenance, expressive of intense suffering, presented an astonishing pallor. The skin was cold and covered with clammy moisture. Her hands and feet were fast becoming numb. In this frigid state the abdomen was remarkably hot. It was greatly distended, and so painful that the slightest touch could hardly be tolerated. She complained of heat in the stomach and an insatiable thirst, and craved cold drinks. Every draught of whiskey-and-water induced vomiting. Her bowels were confined. The pulse was rapid and thready; the temperature in the mouth 93° F.; the respirations accelerated, shallow, and at intervals interrupted by a yawn or sigh. She was weak, somnolent, and unwilling to be disturbed. When spoken to, however, she was easily aroused, and answered questions in a tone of voice at first enforced by excitement, but almost instantly subdued by exhaustion. Having about finished her reply, she would relapse into her previous lethargic condition. There was no evidence of external hemorrhage. She said she felt pregnant six weeks, yet no external palpable evidence could be found to corroborate her statement, nor did she experience any of those subjective symptoms she was wont to have in connection with her former pregnancies. Vaginal examination, however, showed the os uteri to be patent, the cervical canal admitting index finger to the extent of the first phalanx; the cervix soft, displaced forward, and fixed behind os pubis. The extreme tenderness of the abdomen prevented all further physical exploration.

From the foregoing symptoms was deduced a diagnosis of abdominal hemorrhage with collapse. Heat was applied externally and whiskey administered. My hypodermic syringe not being available, suppositories of one-quarter grain of morphia were ordered. Immediately after the insertion of a single suppository, a tonic convulsion supervened and continued about half a minute. Then, with a precipitant movement of the body, she rolled on her back. She was now unconscious, and could not be aroused. The radial pulse had disappeared, the heart's action was inappreciable, the respirations rapidly became slower and fewer, and in two or three minutes death closed the scene.

At the autopsy, shortly after death, the abdominal incision made along the linea alba, down to the peritoneum, was bloodless. On opening the peritoneal cavity a huge mass of coagulated blood was exposed. The removal of this discovered a fœtus presenting at the abdominal aperture. The cord was still intact, and was traced to a cyst situated on the right side of the pelvic cavity. This was firmly adherent to the peritoneum of the right lateral and posterior walls of the pelvis, and on the left side to the rectum. The rest of the intestines,

matted together by clotted blood, were entirely free from any adhesion. A collection of serous fluid was found in the right flank. No other morbid changes were observed.

The fœtus was five inches long. The head, somewhat large, was well shaped. The cranium, soft as a bag of fluid, presented ossific plates on the parietal, frontal, and occipital protuberance. The eyelids were adherent; the male genitals quite distinct; and the nails well defined. This is obviously a description of a four months' fœtus. The cord, five and a half inches long, was attached to the left margin of the placenta.

The cyst was situated behind and to the right side of the uterus. It was adherent, on the right side, to the pelvic peritoneum as above stated; on the left, to the rectum, to the extent of four inches of its length and one-third of its circumference. The walls of the cyst varied in thickness from one to five lines. The rupture, nearly three inches long, took place, from before backward, along the attachment of the rectum. The placenta was situated on the anterior wall of the sac, and, at the time of rupture, was detached from its bed to the extent of one and a half inch.

The uterine walls were thickened. The cavity, measuring three and a half inches in length, was lined with a shaggy decidua, while the cervical portion was filled with a gelatinous mucous plug. The left tube was pervious. No corpus luteum was found in the left ovary. The right tube would not admit the smallest probe. The right ligament was not dissected.

From the relation of the parts involved, if a communication were to have been established between the fœtal sac and any of the hollow viscera, it would most probably have been with the rectum. Hence this case would have proved an exception to the rule observed by Tait, who says, "If on the right side it evacuates into the cæcum."

That the diagnosis of extra-uterine pregnancy is always difficult, and often impossible, the literature of the past affirms, and that of the present does not seem to contradict. Dr. Thomas, who has reported some thirty cases (the largest number recorded by any one man), after relating his experience in twenty-one cases,[1] drew the following diagnostic conclusions, which may be thus summarized: Symptoms of normal pregnancy accompanied by (1) irregular gushes of blood, ceasing and suddenly recurring without any assignable cause; (2) fixed grinding pain in one iliac fossa, and perhaps down the thigh on the same side; (3) paroxysms of severe pain, with constitutional symptoms, passing off in a short time, to recur in a few days with increased violence; (4) symptoms of abortion without the appearance of a fœtus; (5) expulsion of membranes without accompanying fœtus. Physical signs: (1) Increased size and displacement of uterus; (2) evidence of vacuity of uterine cavity; (3) presence of a cystic tumor, painful to touch, rather immovable, with obscure fluctuation, and sometimes ballottement. Dr. Goodell, following Thomas on the occasion, added,[2] "If after a long sterility a woman become pregnant, suspect extra-uterine fœtation;" and, "The forward displacement of the cervix and bulge in Douglas' pouch often mimic retroflexion of a gravid uterus;" and also, "The supposed uterine globe is smaller than at that time in normal pregnancy." As these symptoms have no particular reference to rupture, Parry adds[3] at this time: "A sudden accession of pain in one iliac fossa with metrorrhagia; a feeling as if something had torn inside of her; symptoms of shock accompanied by great weakness; convulsions and delirium, or perfectly clear intellect; and the abdomen becoming suddenly very severely painful, distended, and dull on percussion; and 'if metrorrhagia has not preceded the symptoms of rupture, it quickly follows them in almost all instances.'"

The above enumeration is unquestionably a faithful picture of a typical case. Thomas says,[1] however, "It is much easier in the lecture-room or in a written treatise to lay down distinctions in these cases than at the bedside." "In all cases of difficult diagnosis," says Matthews Duncan, "if you do not suspect a thing, you are almost certain not to find it."

As there is as yet no symptom known that can be considered peculiar to extra-uterine gestation, and as all the symptoms can do no more than arouse a suspicion of that condition, to be rendered positive or negative by physical signs, so even to suspect extra-uterine fœtation it is absolutely necessary to have suspicious symptoms. Of the five symptoms of Dr. Thomas three refer to the metrorrhagic discharges, and are alone suspicious. The long period of sterility is said to be suspicious. In the foregoing enumeration there are, therefore, only four suspicious symptoms, and of these only one, the feigned sterility of nine years, was present in my case; but before any importance can be attached to this symptom as suspicious of eratic gestation, it must first be proven that the woman is pregnant. Since there was no positive evidence of pregnancy, even the previous sterility lost its value as a suspicious symptom. There was not in my case, *à priori*, a single symptom that could lead a medical attendant even to suspect the existence of extra-uterine pregnancy antecedent to an autopsical revelation.

Fränkel[2] will accept no symptom unless pregnancy has so far progressed that its existence can be proven beyond a doubt, and the uterus is empty.

Vulliet showed his honesty when he reported[3] the case that had been four months in his private hospital, and had been examined many, many times during that period, but was not diagnosed as one of extra-uterine pregnancy until the abdomen was opened. If, with plenty of time, every convenience and facility, Vulliet could not diagnose his case of tubovarian gestation, it becomes difficult to understand how in many of the recorded cases the vaunted diagnosis had been made *ante-mortem*, with such marvellous precision.

Parry, treating of rupture, asserts[4] that "the symptoms of this are well marked." The above symptoms, however, taken from his work, presuppose a diagnosis of the real condition, and consequently if there be no such presupposed knowledge, these well-marked symptoms are not in the least peculiar to rupture of an extra-uterine fœtal cyst. This becomes obvious when it is remembered that the fourth case in Tait's series,[5] operated upon at the time of rupture, was diagnosed by him as one of pyosalpinx. Paul Mundé has recorded a case[6] of tubal pregnancy, the diagnosis of which, made by him, to "make assurance doubly sure," was corroborated by Emmet, and in which, after the application of twenty-four volts of galvanism, all the above-marked symptoms supervened, the weakness being in a small degree. So positive was he that rupture had taken place, that he was waiting only for the patient to rally to perform laparotomy. Though the requisite diagnosis had been made before their onset, time proved those marked symptoms to be due to nothing more than purely nervous shock.

Speaking of this difficulty in diagnosis at the time of rupture, Tait[7] says: "As I have now completely adopted the principle of always opening the abdomen when I find a patient in danger with abdominal symptoms, this barrier no longer exists."

From a therapeutical standpoint, the great desideratum in diagnosis is undoubtedly to establish, if possible, the existence or absence of abdominal hemorrhage. The afore-cited case of Mundé shows the almost insuperable difficulty. Treating of laparotomy after rupture, Lusk[8] quotes Kiwisch, in recommending the operation, as hav-

[1] Transactions of American Gynecological Society, [illegible]. Tait
[2] Extra-uterine Pregnancy, p. [illegible]

[illegible]

ing advised to make a small puncture through the peritoneum, and to introduce a pipette into the abdominal cavity, "in order to be sure that internal hemorrhage had really taken place." But this pipette exploration would have been of doubtful expedience in Clark's[1] case, where it is reported that the liquor amnii was the first thing to issue from the abdominal opening at the autopsy.

It was observed that a diagnosis of abdominal hemorrhage had been presumed in my case. It was founded on the following evidences: The symptoms of shock, accompanied by great weakness; the sudden onset of severe pain in, and distention of, the abdomen, and that remarkable abdominal heat, both subjective and objective, presenting so striking a contrast to that of the rest of the body.

This symptomatic abdominal heat does not appear to have hitherto attracted any attention in the cases already recorded; yet if it be remembered that there is beneath the abdominal wall a clot of warm blood varying in bulk from one or two quarts to as many gallons,[2] it becomes an easy matter to appreciate the importance of this symptom in its bearing upon the diagnosis. Indeed, this symptom alone, *cæteris paribus*, would seem to be unequivocal in differentiating abdominal hemorrhage from purely nervous shock.

The etiology of this case is apparently fourfold: (1) The fact that she was a hard-working woman; (2) that she was practically one of those "widows indulging in hymeneal pleasures, but who pretended to be chaste;" (3) the injury received from her husband nine years ago, followed by dysmenorrhœa; and (4) the abortion of last spring. The fourth eliminates the first and second, but whether the old injury or the recent abortion was the real predisposing cause seems impossible to determine.

In the history of this pregnancy it was observed that on June 27th, exactly six weeks after conception, she was prostrated by abdominal cramps, and obliged to remain in bed for three or four days. This attack was, in all probability, an early rupture, from which the patient recovered; the rupture having taken place, as Tait maintains in such cases, in that one-fourth of the tube which is in relation with the cavity of the broad ligament.

The successes of Lawson Tait, who has performed laparotomy at time of rupture in ten cases,[3] with nine recoveries, demonstrates the proper course to be pursued under the circumstances. To operate when the patient is *in articulo mortis* is the most serious question of all; yet the only case in this country recorded[4] as a success (that of Briddon) was operated upon under such circumstances; and Tait says, "Operate, if any chance of success."

Dr. R. B. Maury, however, advises[5] that "Our efforts at the time of rupture should be directed solely to rallying the patient and bringing about reaction."

All the successful operations at the time of rupture, including those of Veit, were preceded by due deliberation; but when there is no time for such deliberation the only justifiable course would seem to be to rally the patient, with the hope of holding in abeyance the almost inevitably fatal issue, until the circumstances will have sanctioned the propriety of an operation.

[2] West Twenty-third Street, New York.

A Change of Name.—The *Aerztliches Intelligenzblatt*, of Munich, after an existence of thirty-two years, has suddenly expanded into a large and handsome weekly journal, and with its growth has taken the name of the *Münchener Medicinische Wochenschrift*. It presents a very handsome appearance in its new dress, and with original articles by Maas, von Ziemssen, Riegel, and others, it ought to satisfy the most exacting of its readers. We congratulate our esteemed contemporary on its prosperity.

REMOVAL OF THE PLACENTA AFTER ABORTION.

By W. T. CHEATHAM, M.D.,

MEMBERS N. C.]

The management of abortions attended with retained secundines has been much and ably discussed of late by many of the most eminent and experienced members of the profession, the preponderance of expression being decidedly to favor the immediate removal of the uterine contents when the ovum has been expelled, the placenta and membranes remaining behind. I will therefore substantially iterate my impressions on this subject as published in the October number of the *North Carolina Medical Journal*, 1884, advocating the immediate removal of the placenta.

The danger attending abortions is to be estimated by many circumstances; first, the period of gestation arrived at, also the previous state of the patient's health; again, by the quantity and rapidity of the hemorrhage, and by the difficulty of checking it; and again by the length of time that the patient has been suffering hemorrhage; and again by the degree of expulsive action as manifested by pain. The principal, if not only, source of peril, is the loss of blood; to that, therefore, our attention should be chiefly directed.

The earlier the period of gestation, the more vigorous the patient's health, the less the amount of hemorrhage, and the less the difficulty of subduing it, the less will be her peril. The state of the uterine action must not be underestimated in forming our judgment; for the more rapidly and vigorously the uterus contracts on its contents, the more likely will it be to expel the ovum speedily, and entirely to empty its own cavity, to close its open vessels, and to put an end to an immediate flow of blood. It has been promulgated as a principle that abortions occurring in the early periods of gestation bring with them but little danger. This proposition is by no means correct; my experience is that it is not without many exceptions. Many women I have seen suffering from the most frightful symptoms of hemorrhage, under abortions of very early periods.

I well remember, in the first year of my professional life, meeting with an abortion occurring about the seventh week, of a most perilous character, and I do not remember ever since having seen a woman in so great a peril as she appeared to be recover. Not only was the bed on which she lay thoroughly saturated with blood, but a quantity of the vital fluid had poured through and lay in a pool upon the floor. She was perfectly senseless, blanched, and cold, and in a state of constant jactitation, with which occasional convulsive phenomena alternated. The respiration and circulation were so imperfect, at one time, we thought the vital spark had fled. This woman made a slow recovery, and for many months her health was quite precarious.

The first question to be considered when called to a case of threatened abortion, is, can the expulsion of the uterine contents be prevented? The answer to this usually depends on the dilatation of the os, and the amount of hemorrhage. If the hemorrhage has been active, and the amount of blood lost considerable, the probability is that the utero-placental connections are so separated that abortion must ensue. Should a vaginal examination show the os to be well dilated, and the membranes bulging, matters have gone so far that we cannot reasonably expect to prevent expulsion of the uterine contents; however, more frequently, on our arrival at the bedside, we find that the ovum has been expelled, and the secundines retained. The os being sufficiently dilated to admit the passage of the embryo, it is safe to conclude that it will admit the entrance of the fingers, and is in a condition to admit of manual or instrumental interference. It is admitted by all who have given this subject consideration that when the ovum is expelled, and the placenta remains behind, we may expect the danger from hemor-

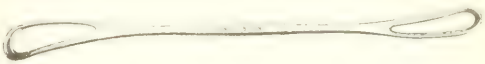
rhage to continue until the placenta and membranes are expelled.

Under these circumstances, and leaving out of consideration the danger of septic difficulties likely to arise from a retained and decomposing placental mass, it is incumbent, as a means of safety to the patient, that we empty the uterus of its contents as speedily as possible, and avoid immediate danger from hemorrhage.

It is not necessary for our purpose that we enter into a discussion of the management of abortions, as recommended in the various works on obstetrics, and usually practised, but may confine our remarks to the immediate removal of the uterine contents when abortion cannot be prevented. We are told to employ the fingers as a means of extraction, to place one hand above the pubes, press the uterus down and make steady the fundus, while with the other we pass the fingers into the uterine cavity and scrape out the offending mass, thus terminating the danger. In patients with thin, pliant abdominal walls, we will most likely succeed in removing the secundines by this method, but this finger-delivery not infrequently is exceedingly difficult of accomplishment. It is not an infrequent occurrence to meet with cases in which the examining finger can with difficulty be brought in contact with the more or less detached placental mass within the uterine cavity, this member being too short to explore the cavity to its fundus, scrape off, and extract the placenta. In stout women, of a nervous, sensitive, unmanageable disposition, with a deep vagina, and thick abdominal walls in connection with a firmly-contracted uterus, rendering the cavity too narrow to permit flexion of the fingers and manipulation of the retained products after they have been forced through the internal os, we shall be thwarted in our efforts and must of necessity look to other and more efficient means to accomplish the desired end. When the placenta and membranes cannot be removed with the fingers, various instruments have been devised for seizing them and bringing them out. Hodges' modification of the bullet-forceps is a failure, for the reason that you cannot maintain your hold on the placenta after you have seized it with the instrument. The same objection does not obtain to Dewees' hook, but this is a sharp instrument, and incalculable damage may be inflicted even when used with skill and caution.

The Duck-bill, Mundé's, Loomis', and other placental forceps of like construction are safe and excellent instruments, but are not easy of application, it being necessary in many cases to use the speculum in order to apply them with the proper precision necessary to a successful extraction of the placenta.

I conceive that most practitioners of an intelligent experience, who are not too faint-hearted to act in an emergency, or are not converts to the so called conservative doctrine and practice of tamponing, washing, and waiting on nature to accomplish the repulsion and delivery of the secundines unaided, have felt the necessity for an instrument that would obviate the delay, and avoid difficulties often incident to the use of the speculum. The immediate surroundings, and, it may be, the feeble and exhausted condition of the woman, would make it not impracticable, but difficult, and perhaps hazardous, to carry this plan into execution. The foregoing, I apprehend, will not apply so aptly and with the same force and emphasis to our city brethren, who enjoy so many facilities and advantages not practically within the domain of the country practitioners, to whom they apply with peculiar aptitude. The city doctor can give his patient his continuous personal attention, if required. Should his numerous engagements intervene, he has professional friends at hand who will promptly supply his place. Therefore, he can more consistently wait, and trust to the conservative management, than the busy country practitioner, whose patients are scattered over a wide scope of territory, many miles apart, and far from his place of residence, and the demand for his services being too great, and his time too precious, to permit a prolonged visit. To tampon, direct the usual remedies for hemorrhage, and leave the subsequent management, during his unavoidable absence, to timid friends, or, worse still, to the ever-present and officious country midwife, would be to jeopardize the immediate safety and future health of the woman, to the detriment of his good reputation. Having for many years exercised the functions of the country doctor, I have often been put severely to the test by difficulties arising during attendance on abortions. On one occasion, in a critical case occurring at the third month, with some constitutional symptoms, the embryo having been expelled fourteen days, I was reduced to the extremity of extracting the retained putrid and decomposing secundines with the handle of a common pewter spoon, it being the only available instrument. Many are the devices of our country brethren when pressed by an emergency. One tells me he has used a loop of common wire as an extractor; another frequently resorts to the sharp curette as an aid to the fingers, with fair success, especially in cases occurring at an early period of pregnancy. In the February, 1883, number of *The American Journal of Obstetrics*, Dr. Mundé has published a description of a placental curette, a most excellent instrument for detaching and scraping out a firmly-adherent or morbidly-attached placenta. It is peculiarly adapted to difficult cases occurring about the second month. Having for many years been convinced of the unsatisfactory teachings and practice usually adopted, as too compromising, in February, 1880, I devised an instrument which has proved satisfactory in my hands, having used it with uniform success, never failing to turn out the uterine contents with ease, safety, and expedition. It is ten inches long, with both ends fenestrated and scoop-shaped, representing two instruments combined in one (a large and small size), either being used, when required, for extracting the uterine



contents. Its edges are oval and smooth, preventing the possibility of danger by cutting, and it is delicately constructed, yet sufficiently strong for practical purposes. When it is apparent that abortion cannot be prevented, and the hemorrhage is severe, with the os sufficiently dilated to admit the index-finger, the placental scoop can be introduced and the uterine contents quickly turned out, putting the patient beyond danger from hemorrhage and septic difficulties likely to supervene when we have a retained and decomposing mass of secundines.

In order to use the scoop intelligently and successfully, the patient should be placed upon her back, with her extremities drawn up and supported by an assistant, or, if preferred, put upon her side, with her hips brought close to the edge of the bed, the extremities flexed and held apart by assistants. With the index-finger in the os as a guide, the scoop should be introduced with its convexity pointing to the posterior intra-uterine surface and passed well up to the fundus. With the left hand above the pubes to steady the uterus, the instrument with the other should be made to sweep the uterine cavity, making its entire circuit two or three times, the edge impinging on the uterine parietes, breaking asunder all placental connections, and then withdrawn with its scooped surface presenting posteriorly, the point of the instrument pressing the uterine surface, bringing with it the product.

Occasionally, after having detached the placental mass, on the withdrawal of the scoop it will be found loose in the os, nothing remaining but to take it away with the fingers, or, if necessary, introduce the instrument again and fish it out. The small-size scoop is of practical utility in abortions occurring from the sixth week to the end of the third month, while the large size meets the demand in those cases occurring from the third to the fifth month, inclusive.

Having in my mind several cases in which the scoop

proved a success after my fingers had failed me, I will give two or three from memory, as succinctly as possible.

CASE I.—A lady, while in town shopping, felt a sudden rush of blood from her genitals, which for the moment excited alarm. The cessation being almost as sudden as the attack, and experiencing no inconvenience, she rode home five miles in a buggy without exciting a return of the hemorrhage. For two months she had an occasional hemorrhagic discharge, the quantity not being sufficient to excite apprehension or cause inconvenience. She was again suddenly seized with an active flow, accompanied by severe bearing-down pains. When I saw her, two fingers could with difficulty be forced through the cervix into the uterine cavity, meeting with an oblong oval body, which gave to the touch a semi-solid elastic feel. Not being able to accomplish its removal with the fingers, the small-size scoop was employed, a separation and extraction effected, the product proving to be an encysted placenta, the embryo having been expelled two months previously.

CASE II.—Embryo expelled at the seventh week, placenta retained with active hemorrhage. Being unable to pass the fingers sufficiently far to detach and extract the offending product, the small-size scoop was employed with easy success.

CASE III.—Fifth month, with fœtus expelled three days previously. Physician in attendance had succeeded in getting away about one-half of the placenta. The os was sufficiently dilated to admit two fingers, but the firmly-contracted condition of the uterus prevented a separation and extraction of the retained portion. The scoop was employed, the attachments broken up, and the remainder of an offensive and decomposing placenta removed.

CASE IV.—Gestation nearing fifth month. Embryo expelled thirty-six hours previously. No hemorrhage since expulsion of embryo. Could pass the fingers into the uterus, but owing to its firm contraction, and narrow condition of its cavity, they were unavailable as a means of delivery. The large-size scoop was employed, the adhesions broken up, and the placenta brought out.

All of the above cases made safe and rapid recoveries. I could make reference to others, but will refrain, as I have already extended my remarks beyond the limit first intended.

A NEW FORM OF CONTINUOUS FLOW SYRINGE.—Dr. Wm. R. Leonard, of New York, has devised a syringe with a single bulb, similar in appearance to the ordinary Davidson apparatus, by which he claims a continuous flow of the injected fluid may be obtained. The modification consists in a longitudinally corrugated outlet-tube which becomes dilated by the pressure of the fluid forced from the bulb, and then by its elastic force insures the steady flow of the fluid during the relaxation of the bulb. The weight attached to the extremity of the receiving-tube is covered with rubber, so as to prevent the clinking in the vessel which is so disagreeable to some nervous individuals. The nozzles are made of hard rubber and are secured by simply pushing them into a soft rubber socket, no screw attachment being provided.

UNALTERABLE COCAINE SOLUTIONS.—Solutions of cocaine, as those of morphine, atropine, and some other alkaloids, when made with simple distilled water, rapidly become spoiled through the growth of a fungus. Such impure solutions may cause injury to the tissues when injected, or may excite inflammation of the conjunctiva when employed in ophthalmic practice. In order to obviate this Dr. George Abbott recommends a solution in camphor water. He has kept solutions of atropine to which camphor (one grain to the ounce) was added for over a year, and has not seen any micro-organisms develop. Camphor is especially suited for preserving solutions intended for use in the eye.

Clinical Department.

TRACHEOTOMY IN A CHILD THIRTEEN MONTHS OLD, FOR THE REMOVAL OF A FOREIGN BODY.

DR. E. B. WARD, of Greensboro, Ala., writes: "On November 22d, early in the morning, a child thirteen months old was brought to my office, suffering from considerable difficulty of respiration. The parents had walked ten miles the night before, bringing the child in their arms. The evening before the child was playing with some peanuts and accidentally got one into the windpipe. She was discovered to be strangled and was jerked up and struck on the back, and various other means were resorted to to relieve the little sufferer, without avail. When I saw the child I found it evidently suffering from some obstruction in the air-passages, and on an examination into the history of the case a diagnosis of a foreign body in the trachea was made. This was confirmed by my father, Dr. T. R. Ward, who saw the case with me. The respirations were labored, harsh and rattling, the child's face was somewhat swollen and cyanosed, and on examination coarse crepitant râles were heard over the whole chest. It was plain that the only relief was from an operation, but the parents at first objected to this, so we decided to wait and requested a consultation. It was three o'clock in the afternoon when the consultation was held, Drs. Peterson, Young, and Inge being present. At this time the child's symptoms were growing rapidly worse, respiration was very difficult, and suffocation seemed imminent. Tracheotomy was plainly indicated as a *dernier ressort*. The patient was anæsthetized and a free opening was made in the trachea. The child's neck was short and deeply covered with adipose. Notwithstanding the engorgement of the lungs and the partial cyanosed condition, chloroform was well borne and did not seem to aggravate the symptoms in the least, but enabled me to perform the operation and make the necessary dissection with ease and precision. The thyroid veins were plainly visible and were held out of the way while the fascia was divided between them, thus exposing the trachea to view. The incision was about one inch in length in the integument, and about one-third of an inch in the trachea. There was not much loss of blood. Just after the incision in the trachea was made a gush of air came through, and we expected to see the foreign body ejected through the opening. While attempting to insert a tracheotomy tube the foreign body was dislodged, but instead of escaping passed by and down lower in the trachea below the wound and became fixed, when respiration instantly ceased, and to all appearances the child was dead. But artificial respiration was diligently resorted to, and I can fully attest the value of this means in this case. A female catheter was introduced in the trachea, and air was blown into the lungs while pressure on the walls of the chest was made to simulate expiration. After awhile our efforts were crowned with success, and after a period of about five minutes had elapsed since the child last breathed, it gave a gasp and the lungs slowly began to work again. The foreign body now was again dislodged by an effort of the child to cough, and in passing the opening of the trachea a half of a parched peanut with the skin attached was seized with forceps and extracted. The respiration, which was hurried previously, gradually became slower and fuller, the child rallied, took nourishment, and rested well through the night. The tube was left *in situ*, as was thought best, and instruction carefully given the nurse to clear it when it filled up. But through neglect, after all the precautions, it was allowed to fill up with mucus, and the child died from suffocation before I could reach it. Thus was wrecked upon an unseen rock a life which science had successfully guided over the breakers, and the art of surgery was robbed of its just prize."

CATIVÍ.

UNDER this title, Dr. Luis Lazo Amàga, of Guatemala describes an affection of the skin, occurring in Honduras, which is characterized by spots of different colors disseminated over the entire body but occurring in closer aggregations in certain localities. He writes: "There are two kinds of *cativí*: one which is accompanied by pruritus and abundant desquamation, and another which wants these qualities, although sometimes we observe a slight pruritus without desquamation.

"The sick present no other symptoms than those enumerated. They exercise their functions just as in a state of health, and the skin, apart from its discoloration, and its scurfy desquamation presents no signs of inflammation.

"The color of the spots varies much, depending in a great part upon the color of the skin, since the whites have many red, black, and blue spots, while the negroes have white and blue ones commonly. At times but a single color is observed, but usually there are several, and from the appearance thus caused those suffering from this affection are called by the natives *pintados* (painted) or *manchados* (spotted).

"The *cativí* is a very contagious disease, as I had occation to observe in an individual who apparently acquired it from having bathed in a river in company with a *manchados*. On an estate of mine, situated in the Department of Olancho, in the Republic of Honduras, the laborers who are not *manchados* avoid making use of the agricultural implements which the *manchados* have handled, because they assured me that the disease was transmitted in this manner.

"What I was able to notice in my sojourn in that place was that the *scaly cativí* is more easily transmitted than the *smooth* kind, and that the first appears in children almost from birth (indeed it is said to be sometimes congenital), while the second does not develop itself before seven years.

"The disease may be hereditary, particularly the *scaly* kind, although some children of the *manchados* do not have it; and I have seen families in which the father and some of the children were suffering from it, while the mother and the others were no

"I am led to believe, from repeated microscopical examinations, that the scaly form of *cativí* is of parasitic origin, but the smooth variety shows nothing to indicate the presence of a fungus or of any low form of animal life such as is found, for example, in scabies. The cause of the disease is unknown; some attribute its origin to the action of the water or to the bites of insects, but my own observations lead me to reject these theories of the etiology of the *cativí*. It is a somewhat curious fact that, in spite of the repugnant aspect of the disease, its subjects do not appear to suffer mentally from their affliction, nor do they shun intercourse with healthy persons.

"No curative method, based upon observation, can be established, because the *manchados* never seek the advice of a physician. The only case of medical cure which I have seen was that of the man, before mentioned, who acquired his disease while bathing, and to whom remedies were given as soon as the first spot appeared. Only five spots were developed, and thanks to an external mercurial treatment, continued for some time, they disappeared, leaving only a slight discoloration of the skin at the points where they were situated.

"I believe that the disease is always curable, and this view is also held by the leading physician in Honduras, Dr. Gamero, whom I once asked if the cativí could be cured. 'When the sick wish they can heal themselves,' he answered, 'but generally they do not wish it; if men, because it exempts them from the military service; if women, because they do not need to.'"

THE BEST SPECIALTY IN MEDICINE is common sense, founded on experience in general practice.

Progress of Medical Science.

COFFEE AS A CAUSE OF PRURITUS.—M. Brown-Séquard states (*Gazette des Hôpitaux*, November 3, 1885) that he has several times seen a most intense pruritus excited by the use of coffee. He relates the case of a lady who suffered from pruritus vulvæ every time that she drank a cup of coffee, the trouble disappearing when she discontinued the beverage. A man, sixty years old, who for forty years had lived in a laboratory filled with the odors from dead bodies of animals, living on bread and black coffee in order to save money to buy animals for experimental purposes, was seized with a most intense pruritus of the anus. The trouble was relieved only after he had given up coffee, and returned each time that he resumed its use.

PECULIAR DEFORMITY OF THE FINGER.—At a meeting of the Academy of Medicine of Paris (*Gazette des Hôpitaux*, November 5, 1885) M. Jules Guérin presented a woman and her three children, each of whom had an angular and lateral deformity of the first phalanx of the index fingers of both hands. The reporter said that the origin of this deformity was to him inexplicable; there was no muscular lesion, no rachitis, and no history of traumatism, and the only possible cause was to be referred to maternal impressions. The mother stated that she had had her deformity on her mind during the entire period of each pregnancy, fearing that her offspring should be similarly affected, and in each instance her fears were realized. M. Guérin proposed to divide the lateral ligaments in order to effect a reposition of the deflected phalanx.

HEPATIC ABSCESS IN TYPHOID FEVER.—Abscess of the liver is not uncommon in dysenteric ulceration of the intestines, but is extremely rare after ulcers occurring in typhoid fever. Dr. Bokai relates the case of a child, ten years old, who was admitted to hospital after having been ill for several weeks with typhoid fever. The only physical signs discoverable were bronchial râles and the evidences of pulmonary engorgement. There was no enlargement of the liver. The course of the fever was not modified by quinine, and after a short time there was a sudden aggravation of the disease, vomiting of greenish matters occurred, and the child died. At the autopsy a large abscess was found in the right lobe of the liver, the left lobe was filled with a number of small abscesses, and a rupture had occurred in the peritoneal cavity, which contained nearly thirty ounces of pus. Peyer's patches were enlarged and presented the characteristic ulcerations of typhoid fever.—*Rivista Clinica e Terapeutica*, December, 1885.

TREATMENT OF DISEASES OF THE STOMACH.—Dr. Talma employs with good effect hydrochloric acid in gastric affections, giving it in a warm draught containing 1 part of acid to 750 of water. The best results are obtained when this solution is sipped slowly after each meal. It prevents the decomposition of the contents of the stomach and by its antiseptic action exerts a favorable influence upon the diseased walls of the organ. It is necessary, of course, to regulate the diet most carefully, avoiding all fatty substances in ulcer or cancer of the stomach.—*Rivista Clinica e Terapeutica*, December, 1885.

INTRA-UTERINE ERYSIPELAS.—Dr. C. H. Stratz relates a case of this nature. A young woman, pregnant for the first time, suffered from several attacks of erysipelas, during the last of which labor began. The child, which was alive and of normal weight, presented the epidermis of the whole body, especially about the buttocks, so loose that it could be pulled off in strips. The mother had facial erysipelas, originating in a crack at the corner of the mouth, and the genitals and other parts of the body were entirely free from the disease.

Voluntary Acceleration of the Heart's Action.—Many cases are reported in medical literature of individuals who possess the power to increase the rapidity of the cardiac pulsations by a simple effort of the will. Dr. Tarchanoff had an opportunity of studying this phenomenon in a student who was able, without any apparent effort, to raise the pulse-beats from 70 to 105 per minute. He concluded that this was accomplished through excitation of the accelerator nerves, rather than by depression of the inhibitory centre. In observations upon a number of similar cases he found that the power of voluntary acceleration of the heart was possessed by individuals who had a special muscular expertness. They were able to move the external ear muscles and the platysma-myoid, or could flex the terminal phalanges of the fingers, the other articulations being held extended. He says that this faculty of voluntary control over the heart is less rare than is generally supposed.—*Gazzetta degli Ospitali*, November 8, 1885.

Antipyrine in Epistaxis.—Dr. Lavrand reports some cases which serve to demonstrate the powerful hæmostatic action of antipyrine. It is certain and prompt in its effects, he says, and is much superior to perchloride of iron, as it is colorless and does not coagulate the tissues like the latter substance. It is used in aqueous solution, of the strength of 1 to 30, applied on lint and inserted as far as possible into the nares. The nostril is then compressed with the fingers so that the tampon soaked in the hæmostatic is in contact with a large extent of the mucous surface. By means of several applications thus made, M. Lavrand succeeded in arresting epistaxis which had persisted in spite of plugging of the anterior and posterior nares.—*Journal de Médecine et de Chirurgie Pratiques*, November, 1885.

Measurement of the Fœtal Feet during Parturition.—Dr. Gonner states that there exists an almost constant proportion between the size of the feet and of the head in the fœtus, and that it is, therefore, possible in breech presentations to estimate the difficulties which will be presented by the passage of the head. From a large number of observations he concludes that in general a foot measuring three inches in length will correspond to eight and one-half pounds in weight of the child, and if a foot is found of greater size the child will be found to exceed the average weight at term.—*Journal de Médecine et de Chirurgie Pratiques*, November, 1885.

Hæmorrhagia Neuralgica.—Under this name, Dr. Englisch, of Vienna, has described a peculiar affection of the lower extremities, accompanied by neuralgia, hemorrhage, and permanent wasting of the limb, five cases of which have come under his notice (*London Medical Record*). These patients, previously in good health and in comparatively comfortable circumstances, were suddenly, and without any precursory symptoms, seized with severe neuralgic pain in the course of the sciatic nerve. After continuing several days, it was succeeded by rigors and high fever, followed by sweats and evidence of considerable depression, and passing into a continued fever lasting several weeks, and exhibiting maxima of 100° F. to 105° F. On the third or fourth day from the commencement of the sciatic pain the limbs began to swell, a soft elastic mass extending from the ham to the hip, and gradually increasing in width, especially above, but not obliterating the form of the muscles, which stood out as if distended. A bloody infiltration next spread over the whole surface of the limb, and the veins appeared as pale brown stripes, such as are sometimes seen in septicæmia. The entire skin changed its color to that caused by deep sugillation. The connective tissue now became deeply infiltrated, and the bellies of the muscles could no longer be defined, the whole limb having been converted into a tense mass, sensitive to touch and quite stiff. The swelling was always greater on the posterior aspect of the limb, which might be flexed in consequence. The hollows of the ham, and on each side of the tendo Achillis, were obliterated. The feet were œdematous, rarely extravasated, and there might be effusion into the knee-joints, though not into the ankle. Both extremities might be affected, but one always more so than the other. From the appearance of the skin, tense, shining, and often red, these cases are usually admitted into the surgical wards under the description of cellulitis or phlegmon. They seldom proceed, however, to suppuration or breach of surface, the pain being due rather to the tension and the previous neuralgia. With the subsidence of the fever, the processes of repair or retrogression commence. These consist mainly in a shrinking of all the soft parts, most conspicuous in the muscles; their rounded form is lost, and the calf acquires an ape-like appearance. The skin shrinks at the same time, so that the tension remains almost unaltered. In extreme cases nothing is left but a mass of rigid connective tissue, in which the bones appear as if imbedded. These changes are most marked in the neighborhood of the ankle, which is completely ankylosed. In one of the cases which Dr. Englisch had an opportunity of examining, the skin was thin, tough, parchment-like, and so firmly adherent to the subjacent connective tissue as to be dissected off with great difficulty. The fasciæ appeared no longer as separate structures, but were inseparably blended with the surrounding tissue. The veins were thickened, and imbedded in the subcutaneous connective tissue. The muscles of the calf appeared as strands of connective tissue, but the tendons could for the most part be liberated from their sheaths. The proper substance of the muscles had disappeared, the sarcolemma alone remaining, with only a few disks here and there, and numerous oil-globules bore witness to the degeneration. The blood-vessels, thickened, and their lumen reduced or even impervious, were immovably imbedded in a mass of fibrous tissue. The capsules of the knee-joint and of the ankle contained no excess of fluid, but were thickened so as to impair the mobility of the joints. The nerves were not visibly altered, but were imbedded, like the vessels, in a mass of connective tissue. The ends of the bones were normal, and the muscles had undergone little alteration, although paralyzed. Beyond evidence of tubercular disease, the other organs were normal. In a second case, which came under observation two years after the commencement of the disease, the ankle was rigidly fixed at a right angle, passive movement being possible only to a very slight extent, and causing intense pain. Movement in the knee was less affected. The rotundity of the calf was quite lost, and the patient walked with great difficulty, and as if on a wooden leg. The pathology of this disease is very obscure. One might be inclined to look on these cases as severe forms of scorbutus; but in none of them were the previous circumstances of the patients such as were likely to induce scurvy, and in one only did the prodromal symptoms suggest such an origin. The intense sciatic pain was a prominent feature. Rigors, fever, etc., are met with only in severe and acute cases of scurvy; but in such extravasation of blood, sponginess of the gums, and lesions of the lungs and intestinal canal, are never absent; whereas, in these patients there were no petechiæ, and the gums, lungs, and bowels were healthy. So were the kidneys in four cases; in one only was there transient hæmoglobinuria. In their character, too, the extravasations differ from those of scurvy; they never appear in the cutis itself, but in the subjacent connective tissue and the muscle-substance of the lower extremities only. The effusion, again, is not of normal blood, but rather such as is seen in septicæmia, and after injections of septic and foul matters into the veins. It follows closely the course of the vessels as brown streaks on the surface of the limb. The changes in the appearance of the skin resemble those which accompany deep extravasation; but the effusion is here, as well as in the infiltration of the tissues, a bloody serum, which accounts for

the absence of any more or less clearly defined petechiæ. The changes in the blood itself are a slight diminution in the number of the white cells, and a marked reduction in that of the red discoid corpuscles, which are replaced by spherical and diverse-shaped red cells, in part nucleated, with an astonishing number of the so-called microcytes, or cells resulting from the division of the former. These changes correspond to those which are observed in osteomyelitis, and would indicate the origin of the disease in a grave alteration of the character and composition of the blood. The consequences and remoter effects, especially the atrophy of the muscular tissue, deserve special study. So soon as the absorption of the infiltration sets in, the muscle-substance begins to waste, and the collective structures of the limb are gradually but uninterruptedly transformed into a connective tissue like that of cicatrices. In several cases this transformation is complete; but even in those in which it is not so, and some muscular power is retained, the wasting of the limb persists many years. The disease seems not to be without its influence on the general health In one of Dr. Englisch's cases there were already symptoms of pulmonary tuberculosis, but this afterward advanced so rapidly that the patient died within two years. A second, though her lungs were quite sound at the time, and there was no history of hereditary tendency, speedily succumbed to tubercle of the lungs and genital organs. A third, left helpless by the atrophy of the limbs, sank not long afterward in like manner. Such being the rapid course of the disease, the treatment must be energetic. The persistent application of cold seems indicated, with a view to check further hemorrhage so long as pain continues. When this has abated, the absorption of the exudation must be promoted by stimulating poultices; later by warm fomentations, resolvents in the form of ointments, massage, etc. The early employment of electricity is to be specially recommended, to maintain the functional activity of such muscle-tissue as remains, and endeavors should be made to reduce the callosity and to restore movement to the joints by means of warm baths, etc. The further treatment must be conducted on general principles.

Hæmoptysis in Syphilis.—Dr. Reyes records some cases of hæmoptysis during the second stage of syphilis, in patients treated by the green iodide of mercury. In one case the hæmoptysis disappeared when the iodide was stopped, and recurred each time this drug was recommenced. Dr. Reyes suggests that in some persons this drug produces a fatty degeneration of the capillaries of the respiratory passages, thus giving rise to rupture and hemorrhage.

The Diaphoretic Treatment of Nephritis.—Following the suggestion of Professor Manassein, Dr. Hess ("St. Petersburg Inaugural Dissertation," 1885) made comparative observations on the effects of the treatment of nephritis by wet packings, hot baths with subsequent wrappings in woollen blankets, and hot-air baths. The experiments were carried out at a hospital in St. Petersburg on six patients, two of whom suffered from chronic interstitial nephritis, two from chronic parenchymatous nephritis, one from acute parenchymatous nephritis, and the last presented an exacerbation of chronic parenchymatous inflammation of the kidneys. The number of observations was sixty (fifteen wet-packs, twenty-four hot-water baths, and twenty-four hot-air baths), each of the patients being alternately subjected to each of the diaphoretic procedures. The author arrived at the following results: 1. The least rise in temperature of the body is produced by wet-packings, the temperature of water used being 45° to 50° F., the duration of packing an hour; the greatest by hot-water baths, at 72° to 80° F., of twenty to thirty minutes' duration; hot-air baths, at 90° to 130° F., of twenty to thirty minutes' duration, stand midway between the two methods. 2. While the temperature falls already in twenty minutes after the packing, it remains elevated even an hour after a hot-air or hot-water bath. 3. After hot-water baths the temperature returns to its normal level more slowly than after hot-air baths. 4. Under the influence of wet-packing the pulse becomes slower, the retardation remaining considerable even twenty minutes after the pack; on the contrary, it is considerably quickened from hot-water and hot-air baths. The increase in its frequency, on the average, is greater in the case of air-baths than in that of water-baths; but in the former the pulse returns to the standard more rapidly than in the latter. In both cases it remains still quickened even an hour after the bath. 5. Under the influence of wet-packing, respiration is quickened, but very moderately. It becomes far more frequent after hot-water and air-baths, especially after the former. It returns to the normal most rapidly after hot-water baths. 6. The least powerful sudorific effects are produced by wet-packings; the most powerful by hot-water baths, with subsequent wrapping in woollen blankets. Hot-air baths occupy a middle stand between the two. 7. In spite of the fact that hot-water and hot-air baths are accompanied by fairly strong symptoms of excitement, while wet-packings, on the contrary, produce a soothing effect on the nervous system, the patients most readily subject themselves to hot-water baths, but not to wet-packings; a circumstance which must be ascribed to a stronger diaphoretic action of the said baths, and to an improved subjective feeling of the patients after hot-water bath.

Periproctitis Simulating Typhoid Fever. Professor Lücke (*Deutsche Medicinal-Zeitung*) relates the case of a strong and healthy man who was struck on the abdomen with a pole, but without receiving any apparent injury. Two weeks later he was seized with typhoid symptoms, high fever, and diarrhœa. These were followed by tenesmus, bloody and then purulent discharges, a gangrenous piece of the rectum was passed, and soon the man died. At the autopsy there was found a perforation in the posterior wall of the rectum, and a large fecal abscess extending to the sacrum. There were no typhoid lesions in the intestinal canal, no caries of the sacrum or coccyx, and no apparent actinomycosis. The author believed that the affection was caused by the lodgement of the actinomycosis fungus in the folds of the rectum, giving rise to ulceration and abscess. The original fungus of actinomycosis can often not be found in abscesses of which it is the cause.

Perforating Ulcer of the Bladder.—Dr. Oliver describes (*Medical Times and Gazette*) an affection which has hitherto been looked upon as more or less peculiar to the stomach and duodenum, viz., perforating ulcer of the bladder. This affection is always acute, and is especially apt to recur. It usually develops without signs of inflammation or suppuration, and, as in the stomach and other parts of the intestinal tract, apparently results from the plugging of vessels which run in and nourish the coats of the viscus. Embolism and thrombosis are the most frequent causes of perforating ulcer in the bladder. The author adds that, in his experience, a rheumatic diathesis augments the tendency to this affection. Females are more prone than males, and especially about the period of puberty. The symptoms and course of this disease are usually very insidious, and fatal peritonitis may result before the condition has been recognized. Pain referred to the hypogastrium, and aggravated by pressure, or by over-distention of the bladder, is a frequent symptom. There is frequency in micturition, with sharp, cutting pain at the end of the process. The most distressing symptom is tenesmus, which results from spasm of the muscular coat, and may continue for some time after the organ has emptied itself. The treatment is rest and milk diet; opiates must be given to relieve pain.

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THE THERAPEUTICAL USES OF OXYGEN.

OXYGEN composes one-fifth of the earth's atmosphere, one-half of the earth's crust, and eight-ninths of the water of the globe. It is an essential part of the daily food, the adult organism using about two pounds daily; over two-thirds of a quart is constantly circulating in the blood, and it is the most potent factor in the processes of tissue growth and change. It is not very strange, therefore, that oxygen should be thought to have great therapeutic possiblities, and that the imagination of the enthusiastic should at times be a little carried away by apparent evidences of its potency.

Oxygen exists in three forms: the nascent, represented by O, the ordinary form, O_2, and the condensed form, ozone, O_3. It is O_2 with which the organism has ordinarily to do. Oxygen enters the system mainly by the lungs, it is absorbed by the serum, and then is quickly taken up by the hæmoglobin of the blood-corpuscles to the point of almost complete saturation, *i.e.*, within nine-tenths of the point of saturation. The oxygen here is not in the form of ozone, as has been sometimes asserted, but is in its neutral form (O_2), and in loose combination with the hæmoglobin (Hoppe-Seyler and Pflüger). The oxygen exists to the extent of about 17 volumes per cent. in arterial blood. This normal proportion cannot readily be changed by any safe artificial methods. The inhalation of compressed air, or pure oxygen, and the practice of rapid respiration, may perhaps increase the volume per cent. a trifle. Regnault and Reiset have shown that warm-blooded animals in an atmosphere of pure oxygen do not absorb more oxygen or excrete more carbonic acid gas than in ordinary air, and P. Bert admits that even in an atmosphere of compressed air there is only a slight increase in the per cent. of oxygen in the blood.

So far as we can learn, therefore, all careful experiments show that in healthy warm-blooded animals the inhalation of pure oxygen causes almost no increase in the amount of oxygen in the blood. This amount is dependent upon another factor, *i.e.*, the amount of hæmoglobin in the blood. If this is increased, the oxygen amount is increased also, and in the same ratio the per cent. of iron—a fact of some significance.

It is the opinion of Rossbach and Nothnagel that oxygen inhaled in any manner whatever has no other effect in kind than the ordinary air supplied in extra abundance.

"Good, pure air, free from injurious gaseous, or solid impurities, has the same therapeutic effects as the inhalations of pure oxygen."

Oxygen has been recommended for a large number of diseases, *e.g.*, chronic phthisis, scrofula, epilepsy, diabetes, neuralgias, anæmia, asthma, pneumonia, asphyxiation, poisoning with toxic gases, intermittent fever, etc. The best results appear to have been obtained in the dyspnœa of pneumonia, asthma, in asphyxiation, gas-poisoning, and anæmia. Its value in chronic disorders of nutrition is still *sub judice*, and a practical objection to its use is the difficulty and expense of administering it in large amounts for a considerable period.

We cannot quite agree with the somewhat dogmatic views of Rossbach and Nothnagel, that the therapeutic use of oxygen is without a physiological basis. It is possible that the systematic, very slight increase in the per cent. of oxygen in the blood, caused by inhaling the pure gas, may give an impetus to the growth of hæmoglobin, especially when that substance is below the normal in amount. In other words, oxygen may stimulate hæmatosis just as iron is believed to do.

A NAVAL MEDICAL AND SURGICAL HISTORY OF THE REBELLION.

THE Secretary of the Newport Medical Society writes us:

"At the regular monthly meeting of the Newport Medical Society, held December 2d, it was voted that the associate member, Dr. Ayre, of the United States Navy, be requested to personally act with the Newport Medical Society in securing the publication of the valuable medical history of the United States Navy during the War of the Rebellion. A large portion of this material is ready for publication; but, owing to the want of Congressional appropriation, is not available for the use of the medical profession.

"The liberal aid afforded the Army Medical Department in publishing the 'Medical and Surgical History of the War of the Rebellion' is sufficient excuse, if any be needed, for pressing the importance of an appropriation for the naval medical and surgical history."

No single literary labor has done more to elevate American medicine in the eyes of the world than the editing of the volumes of medical and surgical history of the war by the Medical Bureau of the War Department. We sincerely trust that the surgeons of the navy may be given the means of carrying out a similar work. We have no doubt that the unanimous sentiment of the profession in behalf of the project can readily be obtained. We wish we could believe that this would carry weight with Congress.

THE CHANCES OF SUCCESS IN THE PRACTICE OF MEDICINE.

IT would be a matter of much interest if some comparative studies could be made showing the relative proportion of successes and failures in the learned professions and in business. At present the medical student is sent off from his Alma Mater with positive assurances that, if he will labor faithfully and wait patiently, success is certain to come. Is this the fact? It does not appear to be so with English medical students, at least. Sir James

Paget has traced the course in life of one thousand medical students, taken at random from an English college. About five per cent. of them failed utterly, while nearly ten per cent. more left the profession without giving it a fair trial; one-half made a fair living, six and a half per cent. achieved considerable success, and two and three-tenths became eminent. Of the whole number who began, less than two-thirds achieved any kind of success.

Such facts as these rather tell against the prevalent view that a man who chooses the medical profession is quite sure of in time getting a living. Yet we often hear this advice given to young men by those who have had some experience in the uncertainties of business.

Whether Sir James Paget's figures will apply to the United States, it is impossible to say definitely. The opportunities for a successful career are naturally much greater here, and if it were not for the fact that competition is twice as active a much larger percentage of successes would be scored. As it is, the probabilities are that of the four or five thousand medical students who are annually graduated by our schools over one-third of them fail or fall by the way.

THE EFFECTS OF CHEWING-GUM.

The following appears in the columns of *The Sun*: "Two medical journals are fighting over chewing-gum. One thinks it preserves the teeth, develops the gums, and should be encouraged; the other points out the injurious draught upon the salivary glands and digestive organs, and its crushing effect upon female loveliness." We have searched in vain for the records of the interesting controversy referred to, and must conclude that it originated *de novo* in *The Sun* editorial office. It is possible that two medical journals might quarrel over the subject of chewing-gum, but physicians in general will quite agree, we think, that the practice should be indulged in only with the greatest moderation. The practice of stimulating one's secretions for the sole purpose of experiencing the pleasurable sensations connected with their flow is not a safe one. There may be an inebriety in chewing rubber-gum, and real sensuality in persistent indulgence in aimless mastication.

THE CARNEGIE LABORATORY.

It is a source of great gratification to find that well-equipped laboratories for purposes of carrying on original research in medical science have been established in this country, despite the absence of Government aid. In this city there has been a particularly urgent need of some such institutions, and the erection and endowment of the Carnegie Laboratory marks a distinct step forward in the medical history of our metropolis. The influence of well-endowed laboratories for exact scientific research is not limited to those who have the opportunity of directly utilizing them, but extends to the whole community. We have no doubt that the work done in Carnegie Laboratory will raise the standard of work done in the medical societies of our city.

The Bellevue Medical College is to be congratulated on having obtained so good an ally as Mr. Carnegie.

SUBSTITUTION OF DRUGS IN PHYSICIANS' PRESCRIPTIONS BY [illegible]

A correspondent from Chicago writes us a very indignant letter over the discovery which he has made, that a druggist has been substituting other preparations for that which he prescribed. We can imagine that, with the immense number of proprietary preparations in the market, the temptation for the druggist to use some other manufacturer's pills, hypophosphites, oil, etc., than the one prescribed, must sometimes be very great. The only honest course, however, is for the druggist, if he has to use another firm's preparation, always to inform the physician of the fact.

Furthermore, the physician on his side, should be very careful in prescribing certain manufacturers' preparations. It is hardly fair to compel a druggist to keep half a dozen lines of quinine pills, fluid extracts, or hypophosphite compounds, when most of them are probably of about equal merit.

News of the Week.

Annual Report of the Surgeon-General of the United States Army for the Year ending December 31, 1884.—The report shows that in an army of 24,035 men, there were 263 deaths (10.9 per 1,000), and 36,829 cases of sickness. The average number of days lost by sickness to each man was 16.2, and the average number of days each case was treated was 10.6. This report compares favorably with those of preceding years, showing a decided decline in sickness. The rate is lower also than that of the British and French armies, though higher than that of the German army, the latter having been on a peace footing. Among the interesting additions to the Museum during the year may be mentioned, a model of the course of the fibres in the human brain, made under the direction of Professor Aeby, by F. Buechi, of Berne, Switzerland; a set of anthropometric apparatus and instruments similar to that shown in the Health Exhibition in London in 1884, and devised by Mr. Francis Galton; a series of colored plaster casts of frozen sections of the human body, as made by Professors Braune, His, and Rauber, of Leipsic; and a series of microscopes illustrating the history of the origin and development of this instrument. Facts regarding the library we have already given.

An English Medical Journal suspends Publication.—One of the four London medical weeklies, *The Medical Times and Gazette*, suspended publication at the close of the past year.

Death of Dr. John Orne Green.—Dr. John Orne Green, of Lowell, Mass., died on Saturday, December 26th, at the age of eighty-seven years. He was the author of a number of valuable medical papers, among which were "A History of Small-pox in Lowell, "Biography of Calvin Thomas, M.D," "Cases of Fracture of the Liver," "Memorial of John C. Dalton, M.D.," and "The Factory System in its Hygienic Relations."

Spontaneous Hydrophobia.—Dr. Dujardin-Beaumetz has read before the Hygienic Society a paper on what he regards as a well-established case of "spontaneous hydro-

phobia" in a man aged twenty-nine. Not only did all the symptoms which characterize that malady declare themselves, but the matter taken from the patient's body when he died communicated it to rabbits inoculated therewith. The patient declared on entering the Hôtel Dieu that he had not been bitten or scratched by a dog or any other animal, nor been in any sort of contact with one. The body was minutely examined before and after death, and the skin was everywhere intact.

Correction in Dr. Van Santvoord's Case before the Pathological Society.—In the report of the proceedings of the New York Pathological Society, which appeared in The Record for December 26, 1885, Dr. Van Santvoord, in the presentation of a carcinomatous uterus, should have been recorded as saying: "That the woman was attended by a midwife, in the capacity of physician, until three days before death, the midwife treating the woman for a 'blood cancer.'" There was no question of pregnancy in the case at all.

Laryngological Section of New York Academy of Medicine.—A meeting called for the organization of a Laryngological Section of the New York Academy of Medicine was held in the rooms of the Academy, on the evening of December 23, 1885, the President of the Academy occupying the chair. A valuable paper, entitled "The Surgical Uses of Electricity in the Upper Air-passages," was read by Dr. R. P. Lincoln, and was followed by a discussion. Dr. Rufus P. Lincoln was elected President, and Dr. D. Bryson Delavan Secretary of the Section for the ensuing year, and a general plan of organization adopted. The interest in the Section manifested by the members present gave gratifying assurance to its future success.

Blackwater Fever.—Dr. J. Farrell Easmon, of Accra, Gold Coast, West Africa, under date of November 9, 1885, writes: "In page 289 of your issue of September 12th, you quote a review of my pamphlet on blackwater fever from the London *Medical Record* of July 15th. My name is not Dr. Farrell, as you have it in your quotation, but Dr. J. Farrell Easmon."

Missionary Physicians in the East.—Dr. Allen's letter on this subject in our December 12th issue has called forth many inquiries from correspondents. We are unable to give any further information than that contained in the communication referred to. Such of our medical friends as desire more should communicate with the missionary boards of their respective religious denominations.

A Professional Pretender.—Graduates of the Medical Department of the University of New York are cautioned against one Dr. F. W. Cowan, who is, under the pretence of being robbed, etc., borrowing money from members of the profession. Dr. H. C. Cooper, Clerk of the University, would be pleased to receive the names of those who have already been victimized.

Successful Vaccination after Small-pox.—Dr. E. D. Powers, of Lafayette, Ind., writes: "Having read the cases of successful vaccination after small-pox in the December 19, 1885, issue of The Medical Record, I am tempted to relate my case. My wife and her brother had the small-pox when young children, both sick at the same time. The brother's face is very badly marked, my wife's not so badly. So there is no doubt as to the nature of the attack in her case. My son, fifteen years of age, having found a point that had been used, playfully insisted on vaccinating his mother, and did so. The vaccination was successful, and ran through a typical course, very much to our surprise, as we considered her perfectly safe."

The Doctor and the State.—Dr. Adolph Rupp, of this city, sends us some criticisms upon our editorial regarding the working of laws regulating medical practice. And he asks: "Are you not giving the State too much power, and in a State, too, where the existing laws regulating medical practice have been adjudged by the court as being as absurd as they are unjust?" It should be remembered that we have not defended present medical laws, but only the principle involved in making them; also, that laws regulating medical practice have very little to do with the doctor after he has become legally registered. Their aim is, or should be, to see that the State is supplied with educated physicians, not quacks. They alone require of the doctor very trivial services to the State, and they do not abridge his liberty more than that of other responsible citizens.

Northwestern Medical and Surgical Society, New York.—At the regular Annual Meeting of the Northwestern Medical and Surgical Society, held on December 16th, the following officers were elected for the ensuing year: Dr. J. H. Fruitnight, President; Dr. R. C. M. Page, Vice-President; Dr. S. Newton Leo, Secretary and Treasurer. From the reports presented by the various committees it was evidenced that the Society was in a very prosperous condition.

Maternity Hospital, New York.—Dr. Egbert H. Grandin has been appointed Obstetric Surgeon to the Maternity Hospital, *vice* Dr. P. F. Mundé resigned.

A Hydrophobia Association has been organized in London. Its objects are to check the great increase in the number of deaths from hydrophobia which has lately taken place. 1. To enforce existing laws as to the capture and destruction of stray and ownerless dogs. 2. To move Parliament for further legislation in reference to dogs, by an increase of the dog tax, and by making it compulsory to have the name and address of the owner on every dog's collar, and a ticket denoting that the tax has been paid. 3. To obtain all possible information on the cause, symptoms, and treatment of the disease, and to make the conclusions arrived at known to the public. 4. To take all such steps as may be considered necessary to further the objects of the Association.

Injunction Denied against the Medical Society of the County of New York.—Albin Fulda, having brought an action against The New York County Medical Society asking that defendant be enjoined from instituting proceedings against plaintiff, under L. 1880, ch. 513, and section 356 of the Penal Code, forbidding any one to practise physic without authority, etc., obtained an order to show cause why defendant should not be so enjoined. After hearing the cause, Judge O'Gorman, last week, at Special Term of the Superior Court,

held that the case was not one in which an injunction should issue. On the moving papers it appeared that the actions instituted by the Society were to recover penalties. The answering affidavits showed, however, that on November 6th, Fulda had been convicted in General Sessions of a misdemeanor in practising physic contrary to the statute, and had appealed because, among other grounds, the Recorder ruled that the People in such prosecutions might rest their case on proving practice, and shift to defendant the burden of proving authority so to do (following People *v.* Nyce, N. Y. Crim. Reps., vol. iii., p. 150). The purpose of the injunction, therefore, was to prevent the Society from complaining of similar breaches of the criminal law.

This case has deservedly attracted attention, and Judge O'Gorman's decision is calculated to sustain a sound and wholesome rule. It appeared on the hearing that the plaintiff claimed to have received a medical diploma from a college in Halle, in Prussia, which diploma he had lost. Having had sufficient time to obtain from this college some verification of his statement, he failed to do so, when it would have been important to his defence in the criminal action which had been brought against him, and in which he was convicted of practising the profession of a physician without license. The general principle upon which Judge O'Gorman put his ruling was that a court of equity, in the exercise of a sound discretion, ought not, unless in the protection of a suitor from clear, manifest, and irreparable injury, to use its great power by injunction to stay proceedings of public officers, acting in good faith, under competent authority, in arrest of persons accused of violation of law. On this subject the learned Judge adverted to Davis *v.* American, etc. (75 N. Y., 369), and cases reported in 12 Abb. N. C., 436 et seq. The wholesomeness of the application of this principle to suits brought to enjoin the enforcement of the medical qualification and registry laws is obvious, in view of the great danger to the public from allowing men to practise medicine without due evidence of their proper preliminary education. There can be no doubt that, inconvenient as such regulations sometimes are to practitioners and those desiring to become practitioners, they are in the long run greatly to the advantage of the practitioners of medicine as well as to the public at large. Whatever raises the standard of professional qualifications inevitably improves the position as well as the usefulness of the profession, and the records of the law bear witness so frequently to the criminality of incapacity that the enforcement of restrictive regulation is a matter for congratulation.—*The Daily Register.*

A Compliment to an American Physician.—At the next meeting of the British Medical Association, at Brighton, the address in medicine will be delivered by Dr. Austin Flint. Of him the *British Medical Journal* says: "Dr. Austin Flint holds a position of recognized eminence and seniority in America, and has filled with honor the highest professional offices in his country. He is well known at the meetings of our Association, and has won for himself universal esteem and friendship. He is an admirable type of a class of American physicians, and, while retaining the national characteristics, is distinguished for cosmopolitan culture and calmness of judgment."

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 28, 1885.

Daniel Lewis, M.D., President, in the Chair.

The *Comitia Minora* reported, in

THE CASE OF BROWN *vs.* FIELD,

that nearly five thousand dollars had been pledged toward an indemnity fund, to be used if necessary in defraying the expense of further legal proceedings incident to an appeal.

Dr. J. Leonard Corning read a paper in which he described his method of producing

PROLONGED ANÆSTHETIZATION BY INCARCERATION OF THE ANÆSTHETIC FLUID IN THE FIELD OF OPERATION,

and exhibited the apparatus used for accomplishing this purpose. As injection into veins is not desirable, he adopts the precautionary measure of mapping them out with a blue crayon pencil after the circulation has been interrupted in the superficial veins by an elastic bandage. The next step consists in exsanguinating the limb with the Esmarch bandage, making a long fold behind the points of injection, and the application of this should cease when the lower boundary of the field of operation has been reached. The injections should be made after the application of the Esmarch bandage, and just above its border. First make superficial injections of a one or two per cent. solution of cocaine, and as soon as anæsthesia of the skin is accomplished, proceed to anæsthetize the deeper parts by injecting the tissues with a one or two per cent. solution by means of long needles. *The greater the extent of operation the weaker must be the solution used.* Make the injections as rapidly as possible, which should not occupy more than four or five minutes. Then apply a tourniquet a short distance above the upper border of the anæsthetic zone. The best tourniquet is an india-rubber band, three inches long and two inches wide, secured in place by a powerful clamp. Supplementary injections may be required, which can be made as rapidly as possible *after loosening* the tourniquet, and, when done, again tightening it. A complete description of this ingenious method will soon appear in a monograph.

The President cited a case which he regarded as a very good test of the value of Dr. Corning's method. It was one of recurrent epithelioma situated over the left shoulder-blade, and the incision for its removal was three and a half inches in length. The integument proved to be not less than one-fourth of an inch thick, and yet the patient went through the operation without complaint. Only one application of cocaine was made.

Dr. Milton Josiah Roberts regarded the technique of the method as essential, and the details should be carefully observed. He had adopted Dr. Corning's method satisfactorily in exsection of the elbow- and hip-joint, in osteotomies, scraping extensive abscesses in connection with bone disease, etc.

Dr. Paul F. Mundé then read a paper on

THE TREATMENT OF PELVIC ABSCESS IN WOMEN BY INCISION AND DRAINAGE.

By far the larger proportion of cases of pelvic peritonitis and cellulitis terminate in a gradual absorption and ultimate complete disappearance of the exudation, leaving either no traces whatever, or merely a more or less limited mobility of the uterus, or a vague fulness of the parametrium. This process of absorption may extend over months, and even years, severely taxing the endurance of the patient and the resources of the physician.

The rapid breaking down of the exudation and the formation of an abscess is comparatively rare, and may be considered decidedly the exception. It is most liable to occur when the exudation has formed very rapidly and is very large, and when the recuperative powers of the patient are below par. Suppuration occurs by far more frequently in cellulitic exudations than in those caused by pelvic peritonitis, and is most commonly met with when the cellulitis comes on after parturition at term or after an abortion. In cellulitis it is self-evident that the exudation and, *eo ipso*, the abscess is extra-peritoneal. In peritonitis, the pus, of course, lies in the peritoneal cavity; but the rapid formation of adhesions between adjacent folds of intestines and neighboring organs and tissues closes the abscess-cavity, and separates its contents from the rest of the abdominal cavity almost as securely as when the abscess is extra-peritoneal. This point is of considerable practical importance in deciding as to the safety of tapping or incising a pelvic abscess; for, if the adhesions which shut off an intra-peritoneal abscess from the rest of the serous cavity are sufficiently firm, and if the wall of the abscess is adherent to the abdominal wall, there is no more risk in opening such an abscess than if it were actually extra-peritoneal.

Fortunately, the necessity of making the differential diagnosis between these two conditions does not often occur, since cellulitis far more frequently terminates in suppuration than peritonitis.

When I suspect suppuration in a pelvic exudation, which I do either because the swelling persists undiminished long after nature should by rights have absorbed it, or because it becomes puffy, doughy, and boggy to the touch, or because distinct fluctuation can be felt, I first proceed to verify my suspicion by the aspirator, and having discovered pus, if the quantity is presumably small, attempt to remove it all by aspiration through the vagina, where the suspicious point is usually most prominent. I have had an aspirator made, with a long metal tube provided with a stop-cock, to which tube I first attach a hypodermic syringe, and when pus is found close the stop-cock, and substitute for the hypodermic a larger syringe holding about one ounce; opening the stop-cock, I then withdraw all the pus by repeatedly filling the syringe if necessary. If there are a number of small abscesses, so-called multiple abscesses, repeated introduction of the needle may be required at different spots, in order to remove all the pus.

To insure success by this method of simple aspiration (without incision and drainage, understand), it is absolutely necessary that the abscess cavity be so small as to permit of its contracting and closing when its contents are removed.

Accordingly as a pelvic abscess points toward a spot where it can be readily reached by the knife, or opens in some inaccessible cavity, such as high in the rectum or in the bladder, is the operative treatment easy or difficult.

As a rule, the rectal perforation is situated too high up to enable it to be reached and enlarged. Such patients may carry their abscesses about with them for years, and experience comparatively little discomfort from them, except the occasional purulent evacuations from the rectum.

If the abscess happened to burst into the bladder, it is even less easy to reach, and our efforts are almost wholly restricted to irrigating the bladder and preventing that viscus from catarrhal inflammation. This variety of pelvic abscess usually heals soon, because natural drainage is better provided for than in rectal perforation.

When the abscess opens through the vaginal roof, generally to one side or behind the cervix, drainage is mostly so perfect that, as the exudation is absorbed, the abscess cavity also contracts and closes. A necessary condition for this happy termination is that the opening remains sufficiently large to permit free drainage.

Some pelvic exudations extend not only down into the pelvic cavity (I have seen them in the recto-vaginal septum nearly down to the perineum), but also work their way over to the iliac fossa and into the supra-peritoneal cellular tissue of the anterior abdominal wall, dissecting off the peritoneum from the ileum and anterior pelvic wall, and forming a hard, brawny swelling, apparently immediately under the skin of the hypogastrium. Such exudations are rather prone to suppurate, and the pus will then usually point toward some spot to the side of the median line, toward the crest of the ileum.

The indication in these cases obviously is to follow the old surgical rule and give exit to the pus as soon as, and where it can be most distinctly felt, whether this be in the abdominal region or in the vagina.

If a soft, boggy, more or less fluctuating spot can be detected in the abdominal exudation, an aspirator or exploring needle should be thrust into it, and if pus is found, a grooved director should be inserted, and the abscess thoroughly opened with a blunt-pointed bistoury. All sinuses should be explored with the probe or finger, and thoroughly opened.

If the pus has burrowed deep down into the pelvic cavity, so that a probe passed to the bottom of the abscess can be felt through the vaginal vault, the abdominal incision alone will usually not suffice, since perfect drainage will be next to impossible, and pus will almost surely remain hidden in pelvic sinuses and retard closure of the abscess. Hence it is imperative to make a counter-opening in the vaginal vault, and to keep it open it is necessary to pass a drainage-tube through from the abdominal incision into the vagina and retain it there until the gradual closure of the abscess calls for its substitution by a smaller one, and ultimate removal.

Dr. W. M. Polk, at a recent meeting of the New York Obstetrical Society, reported a case of a suspected small abscess deep in the pelvic cavity opposite the ischiatic spine, in which fluctuation could not be detected through the vagina. Feeling sure that deep-seated pus existed, he cut down from the abdominal wall, pushed up the peritoneum, found the abscess by the aspirator, opened and drained it, and the patient recovered. It is seldom necessary, and not often thought safe, to cut down on such deep-seated accumulations of pus in the pelvic cavity; indeed, they can almost always be more easily reached through the vagina. And it would seem that vaginal drainage would be preferable, in such cases, to the abdominal exit chosen by Dr. Polk.

Intra-peritoneal abscesses are fortunately not so common as those in the cellular tissue of the pelvis and abdominal walls. And in the former, adhesions between the intestines and the abdominal wall are often so dense as to render the abscess practically extra-peritoneal. When the abscess then points through the abdominal wall, its incision, while really a laparotomy, does not open the free abdominal cavity, and is usually no more dangerous than that of a simple pelvo-parietal abscess. Of course, care must be observed not to break down the adhesions and open the healthy peritoneal cavity.

The mistake of calling the incision of a pelvic abscess which points through the abdominal walls a "laparotomy" appears to have been made by various authors and speakers.

Dr. Mundé's paper contained the histories of ten cases, at the end of which the author gave the following conclusions:

1. Pelvic abscess in the female is not very common, in proportion to the great frequency of pelvic exudations, and probably does not occur in more than ten per cent. of all cases, the majority of exudations terminating in spontaneous absorption.

2. Pelvic abscess may be either extra-peritoneal, the result of cellulitis (by far the most common variety), or intra-peritoneal, the consequence of pelvic peritonitis. If intra-peritoneal, the adhesive inflammation between pelvic viscera and intestines may so seal the abscess-cavity as to render it *practically extra*-peritoneal.

Abscess of the ovary and pyo-salpinx do not belong

in the category of "pelvic abscess" proper, and do not fall under the same therapeutic rules, unless when, by agglutination to the abdominal wall or to Douglas' pouch, they become virtually extra-peritoneal.

3. Small deep-seated pelvic abscess, not exceeding a capacity of two ounces, and minute multiple abscesses in the cellular tissue can often be permanently cured by evacuating the pus thoroughly with the aspirator. The surrounding exudation is then rapidly absorbed.

4. About one-half of the abscesses open spontaneously into the vagina, rectum, bladder, or through the abdominal wall and ischiatic fossa. These cases may gradually recover without treatment, or the sinuses may persist until closed by surgical interference.

5. Abscesses containing more than two ounces of pus should be opened by free incision along an exploring needle or grooved director, cleared of débris by finger or blunt curette, and drained and irrigated, if necessary, through a drainage-tube.

6. This incision should be made at the spot where the pus points most distinctly, which is usually the vaginal vault.

7. In a certain number of cases the pus points through the abdominal wall, generally in the iliac fossa, and the incision should then be ample, and free drainage should be secured.

8. When the pus has burrowed deep into the pelvic cavity, and a probe can be passed from the abdominal incision down to the vaginal roof, mere abdomino-cutaneous drainage will not suffice, and a counter-opening must be made in the vagina, and a drainage-tube carried through from the abdominal wound into the vagina. This drainage-tube may have to be worn for months. In making this incision, care should be taken not to wound the bladder.

9. The opening of a pelvic abscess which points through the abdominal wall does not differ from, and is no more dangerous than, the same operation elsewhere on the cutaneous surface of the body. It is not an "abdominal section" or a "laparotomy," in the sense that those terms are now used to indicate the surgical opening of the peritoneal cavity.

10. Chronic pelvic abscesses, which have burst spontaneously, and have discharged through the vagina, rectum, or elsewhere for months or years, are exceedingly difficult to cure. This is particularly the case when the opening is high up in the rectum. A counter-opening in the vagina, or enlarging the opening if there situated, the curette, stimulant irrigation, etc., may occasionally succeed, but usually fail.

11. A perityphlitic abscess may point through the abdominal wall, and simulate a pelvic abscess proper. Aspiration will settle the diagnosis; the treatment is the same.

12. The majority of cases of pelvic abscess recover; at least the mortality is small.

Dr. W. M. Polk presumed that all had been very much interested in the paper of the evening, especially as it formulated a number of very well-known rules, which we should never decline to receive, particularly when they came from a source so well able to impress us with their importance.

First a few words concerning the criticism entered on his own case. Dr. Mundé had expressed the thought that the case was one in which the pus might properly have been reached through the vaginal roof. Dr. Polk only wished that Dr. Mundé had been there to try it, for he tried his best, and so did the other gentlemen who were present; but the conditions were such as made it utterly impossible to do so without making an incision, which would have jeopardized the life of the woman. The abscess was located immediately in front of the rectum, and immediately behind the broad ligament, and there was no opening between the abscess and the vaginal roof. In fact, until the patient was anæsthetized, he was not at all sure that there was an accumulation of pus in the pelvis. Therefore he performed the operation he did, making a section as for ligation of the common iliac artery, separated the peritoneum from the sides of the pelvis as far down as the middle of the sacro-sciatic foramen, put in a drainage-tube, and the patient had done well.

Since the operation an abscess has opened into the original one, and now free drainage exists without entering the peritoneal cavity. He did not perform laparotomy for the reason that the abscess was situated deep in the pelvis, without any communication with the vagina, was limited in extent, and if he had opened the peritoneum he would have simply given access to that cavity, which would have been exceedingly dangerous.

It should be understood, however, that wherever the abscess can be reached through the vagina, unquestionably that is the direction from which it should be approached.

With reference to pelvic abscesses in general, the entire question had been gone over more or less thoroughly for ten or fifteen years, and he had hoped that Dr. Mundé would bring forward some new ideas with regard to the method of meeting this very difficult pathological process. He said this with all respect, because the author of the paper was so thoroughly posted in all gynecological subjects that he had come feeling that we were going to have a broader field opened up than had been presented.

So far as mortality was concerned, his experience did not agree with that of Dr. Mundé.

The general question was simply, not whether we should evacuate purulent collections in the pelvic cavity because all agreed on that point, but it was as to the propriety of opening the abdominal cavity for the purpose of establishing free drainage in obstinate cases of pelvic abscess. Dr. Polk thought that in many cases this method offered the best chance of saving the patient's life. One difficulty was, that many would hesitate to open the abdominal cavity in the beginning of these cases, and in the meantime sepsis has developed, with the depression which attends it. But even then he thought he should be disposed to make a section through the abdominal walls, to determine what was there, if no more than an exploratory incision, trusting to finding a condition of things which could be removed.

Perhaps it would prove to be a case of pyo-salpinx, and if so, abdominal section was the proper method of treatment. If an abscess, it would be a condition of things which would permit the operator to clear out the abdominal cavity and introduce drainage. This refers solely to those cases of obscure abscess which are situated deeply, and which cannot be thoroughly drained through the vagina, and in which, unless the pus is gotten rid of thoroughly, the patient will die. Dr. Polk then narrated a case as a representative of a class.

Dr. W. T. Lusk said that what he had to add was chiefly a matter of ancient history, which meant ten years' experience in connection with this subject. When he began work in Bellevue Hospital, in 1871, the obstetric service overshadowed the gynecological service, and the cases sent there were chiefly those of pelvic cellulitis and abortion. The cases of pelvic abscess were very severe, and at that time, strange though it might seem, there were but few practitioners who could diagnosticate this condition. He did not, at that time, know that when a large collection of pus was recognizable, any harm would come from making a large free incision and letting it out; and whenever he found fluctuation above the symphysis pubis with reddening of the skin, he assumed that the tumor was adherent to the abdominal walls, and that it was only necessary to make a sufficiently large incision to remove the patient from danger at once. He had never seen any serious symptoms when these abscesses had been opened *freely;* all the patients got well, and he did not believe that if the incision was made large enough originally it was necessary to establish drainage from the vaginal cul-de-sac. If pus is found by aspiration, make an incision, three or four

inches long if necessary, empty the sac, fill the cavity with oakum, pour in Peruvian balsam when the granulations are flabby, and the cavity soon fills up.

But there are cases in which it is necessary to pass a tube up through the vaginal cul-de-sac. Dr. Lusk then spoke of the first case which he saw treated in this manner. The consultation, consisting of Drs. Barker, S. B. Ward (now of Albany), and himself, disapproved of the method as it had been suggested by Dr. C. A. Leale, to which Dr. Leale said, "Then I would be happy to have you stay and look on." Dr. Lusk assisted. The exit into the vagina was found, the sinus was followed up and opened, and a drainage-tube was introduced. Within one month the patient was well, after having suffered *nine* years from pelvic abscess which communicated with the large intestine, and also opened into the vagina.

Dr. Lusk referred to a case in which a good man treated a pelvic abscess as a fibroid tumor for two years; the patient was cured by the drainage-tube in a short time. He also referred to *two* cases which illustrated the possibility of confounding ovarian cyst and pelvic abscess, and in both the patients were quickly cured by removal of pus through the vaginal cul-de-sac.

Dr. W. Gill Wylie could agree with a good deal of Dr. Mundé's paper, but there were some points on which he held different views. In the first place, very many of the cases which Dr. Mundé would call cellulitis, he would call pelvic peritonitis.

Again, he thought that probably four-fifths of the cases of pelvic abscess were really culminations of disease of the Fallopian tubes. There is first inflammation in the posterior layer of the broad ligament, lymph is thrown out, contraction ensues, the tube is rolled backward, both tubes and ovary are in a measure cut off from the general cavity of the peritoneum, and in this rolled-up tissue the great majority of so-called pelvic abscesses begin.

He had adopted this view within the last three or four years, and it had come from observations made in laparotomies.

He thought that Dr. Mundé had laid too little stress on the dangers of even puncturing with an aspirator in the vagina. He doubted whether he should ever attempt to puncture an abscess holding more than two ounces in the pelvic cavity, unless a mere phlegmon with boggy tissue and pointed. He regarded free drainage as the proper treatment, of course, as Dr. Mundé had stated, and he would first perform it through the vagina, but if that failed he would resort to other measures. His method of establishing this drainage is to introduce an aspirator-needle, dilate the puncture, and then insert a drainage-tube.

Dr. Irwin referred to a case of acute pelvic abscess in which he advised opening at once, but the circumstances surrounding the consultation were such as rendered it especially desirable to postpone for twelve hours, and in the meantime rupture occurred into the bladder. The patient recovered after a tedious illness. Dr. Irwin thought that the case illustrated the principle that the pus of acute inflammation should be evacuated at once, which might avoid long and painful illness.

Dr. Putnam-Jacobi thought it of great importance to have it laid down at what time after the subsidence of acute inflammation the operation should be performed. She cited a case in which she urged a prominent gynecologist to aspirate a pelvic mass which remained after an acute inflammation had subsided, with the view to the probable removal of a small quantity of pus, and thus prevent perforation somewhere else. He finally consented, and did draw off about a drachm of pus; but within a week there was a discharge of pus from the bladder, which was repeated three or four times. The patient recovered from the acute attack with an exudation which disappeared only after two years. The question is whether the irritation caused by the attempt to relieve the patient did not facilitate suppuration and ulceration into the bladder, which otherwise might have been averted.

Dr. Fruitnight related a case in which pelvic cellulitis was followed by abscess, with perforation into the rectum, and in which Dr. Leale established free drainage through the vagina. The patient wore the tube for four months, and is now well.

Dr. Mundé, in closing the discussion, was very much obliged for the response made to his invitation to discuss his paper. He would like, however, to take exception to the criticism that his paper contained nothing new, and desired to say that he did not claim that it did. He did not write it for that purpose, but invited his distinguished hearers to discuss it for the purpose of hearing from them something new, and he had had the pleasure of hearing several things.

As to the statement made by Dr. Wylie, that the great majority of cases of pelvic abscess are cases of pyo-salpinx, he did not believe that he should ever agree with him on that point.

He agreed with Dr. Polk that there was danger in opening abscesses through the vagina, because of the danger of opening the uterine arteries, and he had omitted to mention the fact in his paper. He had brought the subject before the Society because he wished to bring out a number of points in connection with these cases, and to especially make prominent the fact that they can be operated upon as easily as abscesses elsewhere, with certain precautions taken into consideration.

The first three gentlemen who participated in the discussion had wandered from the subject, as intra-peritoneal abscess did not come into consideration in his paper. He agreed with them as to the treatment proper for pyo-salpinx when it is loose in the pelvis. He had also thought it important to point out the difference between laparotomy and opening of the abdominal walls.

THE CROTON WATER SUPPLY.

Dr. John C. Peters, from the Committee on Hygiene, made a verbal report on the question of increased water-supply for the city of New York, and pointed out the advantages claimed for the Quaker Bridge Dam, and those which would follow the construction of the Sodom Dam, which could be built at much less cost and be made available within a much less period of time.

Dr. Atruzzo raised the question,

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protect illegally qualified practitioners of medicine? and promised to ventilate the subject more fully. No action was taken by the Society.

The Society then adjourned.

The Mental Symptoms of Aortic Regurgitation.—Dr. Douty contributes a few notes with regard to the relations between heart-lesions and certain forms of insanity (*The Lancet*). The author records fourteen cases met with in the Worcester Asylum, in which there was incompetence of the aortic valves. Of these, eleven were cases of mania, one of dementia, one of dementia with general paralysis, and one of melancholia. Of these eleven cases of mania, seven possessed very marked auditory and visual hallucinations; and from the author's observations he thinks it probable that, when fuller statistics are collected upon this subject, we shall arrive at the conclusion that the typical mental symptom of aortic regurgitation is a delusional mania, coupled with a condition of extreme instability of temperament. As surely as one discovers an aortic regurgitant bruit, almost so surely is one told by the attendant that the patient has an obstinate and irritable temper. Another very common accompaniment of this valvular lesion is the prevalence of hallucinations. Out of the fourteen cases recorded not one recovered. Rest may cause improvement for a time, but relapses always occur, and the patients never fully recover.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, December 14, 1885.

STEPHEN SMITH, M.D., CHAIRMAN.

THE INDICATIONS FOR LAPAROTOMY IN PENETRATING WOUNDS OF THE ABDOMEN.

IN presenting the subject for discussion, THE CHAIRMAN remarked that penetrating wounds of the abdomen were of such frequent occurrence, especially in hospital practice, that they have a peculiar interest to the surgeon. The first question that confronts him is as to the extent and nature of the injury to the viscera of the abdomen, and it is generally exceedingly difficult to determine that question by the symptoms present. Even if he is satisfied that the viscera are wounded, he cannot decide as to the severity of the injuries and whether they call for operative interference. These difficulties grow out of the variable character of the symptoms which these injuries present in different cases and conditions, and the impossibility of deciding from the symptoms how amenable to treatment the lesions may be. It is a fact well recognized that cases recover in which the symptoms are of the most dangerous character, and, again, cases prove fatal in which the symptoms are very slight. Every surgeon treating these wounds has felt an almost irresistible impulse to open the cavity of the abdomen, and settle at once the question as to the exact nature of the lesions by ocular inspection, and proceed accordingly. Delay has seemed to him likely to prove fatal, and yet he has hesitated, owing to the perhaps greater danger of the operation than the injury. Recent experience has, however, proved that laparotomy, as an exploratory operation, is by no means as dangerous as has heretofore been believed, provided it is performed with proper precautions. If, indeed, an exploratory operation may thus be performed with impunity, one great obstacle to the successful treatment of these wounds is removed. We are favored this evening with the presence of surgeons of different hospitals, and of gynecologists of large experience, and it can but prove interesting and profitable to listen to their statements and opinions. He called upon Dr. J. D. Bryant, of Bellevue Hospital, to open the discussion.

DR. JOSEPH D. BRYANT said that the statement that "laparotomy should be performed in all cases immediately after the accident" embodied the important part of the question before the Section. He could not advocate the sentiment contained in the statement. It could not be said that it had yet been accepted by the general profession.

Conservatism was especially necessary in the advocacy of an operation the propriety of which, as yet, was surrounded by doubt. Marked advancements have been made in abdominal and general surgery, but it cannot yet be proclaimed that "laparotomy in all cases should be performed immediately after the occurrence of the accident." Few, indeed, were the hospitals that possessed the facilities necessary to the proper performance of the operation immediately.

With the permission of the Chairman, Dr. Bryant would transfer the words of the statement so that it would read, "Should laparotomy be performed in all cases immediately after the accident?" This question practically embodies three others:

First, should laparotomy be performed in any case? *second*, should laparotomy be performed in all cases? and, *third*, when contemplated, should it be performed immediately after the accident?

Ovariotomy and laparotomy for other conditions in the female are accepted operations. There is no proof that the peritoneum of the male is less tolerant of manipulation than that of the female. The length of time occupied, and the extent of raw surfaces made in many of the successful operations for conditions within the abdominal cavity, removes objections in this direction against operative interference in penetrating wounds of the abdomen.

The practical points to be considered in a case of penetrating abdominal wound that do not exert an equal influence in laparotomy for other common diseases are:

First, doubt whether the abdominal viscera have been injured. An exploratory laparotomy will enable the operator to answer this question.

Second, existing shock. This element is almost entirely limited to those cases in which laparotomy is proposed for penetrating wounds. Slight shock is always present. He believed, however, that it had been established that when severe shock followed immediately after the injury, it was due, in the great majority of cases, to loss of blood. If due to loss of blood that loss should be checked at once, and exploratory laparotomy will decide this question.

Third, unfavorable surroundings of the patient. This, like the second, was limited to laparotomy for penetrating wounds.

Fourth, unskilled operators, by which was meant that the attending surgeon may not have had his attention *forcibly* directed to the details of the operation. This obstacle can be readily overcome.

Fifth, greater exposure of the abdominal cavity and its contents. The great caution necessary in finding and removing from the abdominal cavity all the blood and extravasated intestinal matter, to check hemorrhage, and also to detect all points of injury, requires a thorough examination of the intestines and the omentum according to a preconceived method, rather than with roughness associated with haste. Time should not be considered; but care and completeness should be the determining factors in every case.

Sixth, existence of hemorrhage. In visceral perforation intra-abdominal hemorrhage is necessarily a constant feature. The suspicion of the existence of such hemorrhage is sufficient to indicate an exploratory incision.

Seventh, extravasation of intestinal contents. This is a part of the history of penetrating abdominal wounds, and is not to be dreaded by surgeons. Fecal and urinary extravasations constitute the strongest indications for laparotomy.

Eighth, the greater difficulty of cleansing the abdominal cavity. It is more tedious and difficult than under other circumstances, but of greater importance than in laparotomy under other circumstances. Its thorough performance, especially with reference to intestinal contents, appears to be the only means of saving the life of the patient.

Dr. Bryant believed that laparotomy was a justifiable operation, but that it should not be attempted, even in so-called favorable cases, unless the operator could avail himself of many of the recognized means of procedure necessary to combat the shock of the operation, and was sufficiently familiar with its steps to operate with accuracy and despatch.

Second, should laparotomy be performed in all cases? This question had been allotted to others to discuss.

Third, when contemplated, should it be done immediately after the accident? All things being equal, it should be performed at once; that is, as soon as the necessary preparations can be made.

Dr. Bryant believed that laparotomy should be of two kinds, exploratory and actual.

Among the common causes of death from penetrating abdominal wounds are hemorrhage, peritonitis, septicæmia, exhaustion, etc. Blood and intestinal contents can be recognized through the exploratory opening.

Does the explorative incision expose the patient to unusual danger? He thought not. It seemed to him that surgical experience answered the question in the negative.

Dr. Robert F. Weir remarked that in respect to penetrating stab wounds of the abdominal cavity a mere expectant plan of treatment could be followed, as the slighter impetus of a knife would more likely permit of the intestine escaping injury than when the belly was invaded by a bullet. This fact was well shown long prior to the experiments of Parkes by those of Hoyne, who in refuting, in 1865, the advice given by Legouest in gunshot wounds of the abdomen, to "enlarge the wound and draw out the adjacent intestine with the finger, and sew up the opening if thus found," showed, by shooting with a revolver of thirty two calibre into cadavers at a distance varying from three hundred and seven paces, that in eighteen bodies there were ninety wounds of the intestines produced, and that in only two instances were the bowels uninjured. We must expect, therefore, in penetrating gunshot wounds of the abdomen, to have numerous visceral injuries. In Bull's successful case there were seven openings in the intestines, and in Hamilton's eleven. In the experiments of Hoyne the greatest number found in one cadaver was ten, but Longmore gives a case where a wound received by a man when defecating perforated the bowels sixteen times. While perhaps some variation from the severity of the injury made by a ball may be found in battle, yet in the close-range shooting that so frequently sends patients to a civil hospital the determination of the simple question of the penetration or non-penetration of the abdominal cavity by a ball is all important. This is better done by the enlargement of the wound and the introduction of the finger, though sufficient information may in many instances be obtained by the probe. But clinically it is found that every case of such a wound does not justify a laparotomy. When such a patient comes under the eye of a surgeon, the collapse in which he or she is in may, and too often does, prohibit utterly surgical interference. In only one condition is there an operation justifiable, and that is for the arrest of the hemorrhage which may be the cause of the shock. To determine this so difficult question, Dr. Weir suggests a small incision, under cocaine or without an æsthetic, be made in the median line, or that the wound of a direct one be enlarged and a sponge on a stick be thrust down to the pelvis or into the lumbar gutters. Its state on withdrawal will at once decide the question—if no bleeding has occurred, the wound can be closed, and a better condition of the patient awaited for, to undertake the more important act of exploring for wounded viscera.

Where the general condition of the patient warranted, he was strongly in favor of laparotomy in the treatment of these cases of gunshot injury. In addition to the successful cases already referred to, there was another of gunshot wound reported in Demarara, where the bullet was found by laparotomy imbedded in the liver, whence it was satisfactorily extracted. In such operations not only should antisepsis be rigidly carried out, but a rather large abdominal section should be made, so that the intestines could be rapidly handled, either by turning them out of the peritoneal cavity, which is the most certain, but probably the more dangerous, plan, or by passing the coils between the fingers and keeping them in the abdominal cavity. The former plan has the weight of the authority of Treves in its favor.

It is admitted to be an operation of great risk, but, done for an injury, nearly always fatal. However, it seems that those cases in which fæces readily escape through the wound have a better chance of recovery than where this symptom is absent. Whether more of such cases recover in this way than would after laparotomy is premature to say; indeed, the whole subject of laparotomy for gunshot wounds is so recent that he would not wish to be too dogmatic in presenting the foregoing views, and would like to maintain a reserve of judgment to be strengthened by further experience.

Dr. W. M. Polk said that he had had no experience in gunshot wounds of the abdomen, and if he made any remarks in response to the invitation of the Chairman they should relate solely to abdominal section from the standpoint of gynecology. Laparotomy for gunshot wounds was, to his mind, a more serious operation than the usual section for the removal of ovarian tumors or diseased tubes.

Save in the event of extensive adhesions, in neither of these conditions was it necessary to disturb the intestines or other viscera to any extent. The time usually at our disposal in which we studied the cases gave us in many instances a fair idea of the relations of the growth to be removed. This in itself was a great advantage.

When one looked back at the operations but recently performed for the removal, for instance, of the tubes and ovaries, and contrasted the results as then obtained with those now had, some light might be thrown on the causes which made operations for gunshot wounds of the intestines more dangerous than operations for the removal of bodies whose position could in a measure be determined beforehand.

Formerly it was the custom with many operators, in case adhesions were found, to consume much time in separating them; if there was even oozing, the intestines, which had already been much disturbed, were lifted from the pelvis, pushed up into the abdominal cavity, or were laid out on the abdominal surface; every bleeding point was scrupulously stanched, sometimes even by the use of powerful hæmostatics; in fact, the peritoneal surfaces, visceral and parietal, were much handled and exposed. As a result these cases often died. Such, in fact, was the mortality that every one shrank from the operation. The idea prevailed, as in a measure accounting for the mortality, that the virgin peritoneum was a specially inflammable tissue, and old cases, cases which had been the victims of one or more attacks of peritonitis, were considered the more favorable. Some maintained that the American women were more prone to the cause of death appertaining to abdominal section.

With the introduction of better methods of operating, these ideas had been abandoned as the mortality had lessened. For this advance we were indebted to Mr. Tait. Now we made small incisions, if possible, we went directly down into the pelvis, and in the removal of the tubes and ovaries did, in nearly all cases, our work by the sense of touch. Adhesions were torn up, and, unless there was something more than general oozing, we put in a drainage-tube, with the assurance that the bleeding would soon cease. There was very little exposure of the peritoneum, and very little handling of the viscera.

Now, these conditions might even be present in the removal of tumors of large size, for the intestines in such cases were pushed well aside by the growth; and owing to the improvement in the conduct of such cases adhesions were becoming less common, certainly less extensive; consequently less excuse for exposing and handling the intestines.

If this could obtain in the operations for the relief and cure of gunshot wounds, Dr. Polk thought laparotomy for the one class of cases would be as harmless as the same operation for the other. It was for the great surgeons to say whether such could be brought about.

As to the danger of simple exploratory incisions, that would depend upon how much exploring was done. In the case of a tumor, even of considerable size, an exploratory incision would involve but little risk. As pointed out, the intestines in such cases were usually pushed well aside, back, and above, so that the hand could be carried around such growths with but little disturbance to the viscera. Supposing the case to be one of a small pelvic growth, we would carry our fingers into a territory comparatively limited.

In one whose topography was fairly fixed in our minds, as the result of previous vaginal and rectal examinations, there was but little disturbance needed to obtain positive and speedy knowledge of the conditions present. Was this possible in exploratory incisions having for their

object the determining of the damage done in cases of gunshot wounds? He thought not. The amount of handling and exposure of the viscera that would be needed to gain accurate information in cases of gunshot wounds made such an exploration more hazardous than such as fell usually to the lot of the gynecologist.

As regards the mortality of abdominal sections, Dr. Polk would cite the results obtained in the department of gynecology in Bellevue Hospital during the present year. In that department alone there had been some forty-five such sections, covering the removal of the various pelvic morbid growths, from simple ovaries and tubes to uteri, the seat of fibroid disease, and there had been but three deaths.

This, too, in a general hospital, which but a few years ago was spoken of as a pest-house. Several of Dr. Polk's operations had been done in the general amphitheatre, before several hundred students. All of these cases had made excellent recoveries.

Dr. Polk did not believe that the difference in the results now obtained in the so-called "Tait cases," as compared with those obtained a few years ago, could be set down to the presence of sepsis then and its absence now. Many of the worst results under the old method of exposure and handling had been obtained in the midst of the fiercest rage of Listerism; in fact, he was not so sure but that some of the fatal results were due to the too free use of disinfectants rather than to their absence.

We were probably no cleaner now than we were then. Then it was with the aid of disinfectants, now with the aid of boiled water and soap. But now we operated better. He did not regard a properly made exploratory incision as specially dangerous in itself.

In answer to a question from the Chairman, as to whether he considered the pelvic peritoneum more tolerant than the abdominal peritoneum, Dr. Polk replied that, to his mind, the tissue was in all essential respects the same in both regions. The fact that pelvic peritonitis was so common, that it was generally local, and so rarely fatal, was, in his opinion, a mere matter of location. Owing to the position of the patient, gravity tended to keep the offending matter at the bottom of the sac. Such was not the case when the offending material attacked the upper parts of the peritoneal sac. In the one case the conditions were generally favorable for the encapsulating of the poison by the quickly forming plastic exudation; in the other, that is, when the poison gains access above, it is constantly tending downward, and the limiting exudation is steadily encroached upon till finally it gives way. If the position of patients with pelvic peritonitis were to be reversed, so as to make that region the highest, he was disposed to think that cases of general peritonitis would as often spring from pelvic peritonitis as from peritonitis beginning elsewhere, it being understood, of course, that the poison originating the inflammation should be the same in any cases selected for comparison.

Dr. Alfred C. Post remarked that there was a great difference in the danger of abdominal wounds, depending on their situation. The danger of fecal extravasation was much greater in wounds of the umbilical zone than in those of the epigastric or hypogastric zone. Punctured wounds penetrating the stomach are much less dangerous than those which penetrate the intestinal canal. Dr. Post remembered a case to which he was called, in which a man was stabbed in the epigastric region, in which there was a protrusion of omentum at the wound, and vomiting of undigested food with a considerable quantity of blood. Perfect quiet was enjoined, with entire abstinence from food for several days, nothing being taken into the stomach but small pieces of ice. The patient recovered without any alarming symptoms.

Small wounds of the abdomen may give rise to fecal extravasation, as in a case which was presented at Dr. Post's clinic, in which a persistent fecal fistula followed the use of an aspirating needle, in the hands of a physician unknown to the reporter, designed to evacuate the urinary bladder. A small, indirect wound penetrating one of the hollow viscera is sometimes more dangerous than a large, direct one, the extravasated material in the one case being confined in the abdominal cavity, while in the other there is no obstacle to its free escape through the wound. Dr. Post related a remarkable case of recovery from a gunshot wound of the abdomen, which occurred during the draft riot in this city in the war of the rebellion. A man who had not emptied his bladder for many hours was standing on Fourth Avenue at the corner of Twenty-second Street, when he was struck in the lower part of the abdomen with a large bullet fired from a gun in the hands of a man on Third Avenue. There was a great gush of urine through the wound, and the patient was soon after seen by Professor W. H. Van Buren, who continued to attend him. The wound was so large and direct that the urine readily escaped from it, and the patient recovered without any very formidable symptoms.

Dr. Post expressed the decided opinion that in penetrating wounds of the abdomen, attended with extravasation of fæces, urine, or bile, or with copious hemorrhage, the danger is greatly diminished by laparotomy, followed by a thorough washing of those parts of the cavity which have been contaminated by contact with foreign material. He alluded to the practice of Mr. Lawson Tait, who introduces into the peritoneal cavity large quantities of warm water, lifting the viscera with his hand, and moving them so that the water may flow freely over every part of their surface.

In cases of formidable hemorrhage from abdominal wounds, the patient's safety is greatly promoted by exposing and tying the bleeding vessels.

Dr. W. Gill Wylie said, if we understood thoroughly the pathology of shock, we could better answer the questions asked. I do not altogether agree with the remarks of Dr. Polk. It is true that the older methods of doing laparotomy gave very bad results, but I am certain that it was not shock that caused death in most cases. The large openings made in the abdominal wall, and the prolonged operation, gave greater exposure to septic poisons, and the larger number of assistants increased the number of hands, instruments, etc. My opportunity for seeing others operate for the past thirteen years have been great; and I am certain that at least four-fifths of the deaths have been due to sepsis.

My opinion is that the peritoneum and intestines will stand a great deal of handling without serious results, provided we do not cause hemorrhage or infect with septic poison.

In a large experience I have come to the conclusion that, as we operate to-day, shock is to be feared chiefly in those cases where we have large vascular growths to deal with, such as vascular myomatous tumors, where a certain amount of hemorrhage cannot be avoided, and we often lose more blood than we think. Enough attention has not been paid to the direct influence of removing intra-abdominal pressure. Often the intra-abdominal tension is very great, and when we open the abdomen the immense blood-vessels of these vascular tumors fill and distend, and may thus take a pint or more of blood suddenly from the circulation. Besides, we know the capacity of the abdominal and pelvic blood-vessels and that they can hold one-third or more of all the blood, and when intra-abdominal pressure is removed they fill and distend, and in a measure thus account for the shock. When we pull on the uterus when the abdomen is open signs of shock often at once become apparent. Now we can push up the uterus by the vagina, when the abdomen is closed, and no such result is produced. I think this is due to the suction action caused by atmospheric pressure. As the uterus is lifted the immense pelvic veins fill and suddenly withdraw a certain amount of blood from the heart. A sudden withdrawal of a relatively small amount of blood will thus cause shock.

To obviate this result, I would try to force back blood into the circulation, by means of an elastic bandage, or pressure on vascular tumors, before tying the arteries that supply them with blood, and after the operation always secure even, elastic pressure over the abdomen and pelvis by means of strapping and bandaging, with a large amount of cotton-wool over the whole surface. My views are, then, avoid hemorrhage or a sudden withdrawal of blood from the general circulation and you will not often have dangerous shock from operating. Keep away septic poison by as little exposure of the peritoneum as possible, and carefully wash out of the peritoneum blood, pus, or any matter likely to cause sepsis; and to accomplish this I do not hesitate to syringe the peritoneum with one to ten thousand bichloride of mercury, or one to one hundred carbolic acid, and follow this with boiled water at a temperature of 102° or 104° F. To prevent any excess of water remaining, I usually put under the small of the back an elastic pillow, which will prevent sagging on the sides, and I then carefully sponge in Douglas' pouch. I certainly would not hesitate to open and explore in any case of wound to the peritoneum or intestines, where the life of the patient was in danger from either hemorrhage or perforation.

Dr. L. M. Bingham, University of Vermont, Burlington, was invited to participate in the discussion, and said that in cases of shock from wounds of the abdomen, or from any other source, he believed they were followed by temporary paralysis of vaso-motor nerves, and consequently there was dilatation of all the blood-vessels. He believed that the capacity of the blood-vessels in the abdominal cavity was sufficient, when dilated by shock, to contain all the blood in the body, hence, under such circumstances it was good practice to compress the abdominal viscera with firm and steady pressure, thus preventing the blood-vessels from overfilling with blood. In simple cases of syncope this pressure is followed by immediate restoration.

Dr. C. S. Wood said this was an important question and discussion, as the remarks made would be published and scattered broadcast through the land.

Should all cases of penetrating wounds of the abdominal cavity be treated by laparotomy? In reply to this it should be considered that, in our large cities, with the best of surgeons, good hospitals, all the means of antisepsis at our command, and with the patients seen early, this course may be advisable; but of the whole number of cases occurring throughout the country probably not more than one in twenty will occur where such advantages exist. Few, comparatively, of the profession are capable or qualified to perform successfully this operation; besides, they have not the necessary means at command, now considered so indispensable, to make the operation a success; therefore we should not be in haste in recommending it in all cases. There can be no question, but with our present antiseptic precautions very many valuable lives may be saved, and he often thought that had Jim Fisk received the same treatment that Dr. Bull gave his patient, he might have been alive to-day.

If he might be permitted to refer to army experience he would state that we saw a great many perforating wounds of this cavity, that we did not use antiseptics at that time, and that most of them died, even on the field where they fell, before we saw them at all. Still, some recovered, three such cases being reported by him in "The Medical and Surgical History of the War," cases where fecal discharges occurred from both the point of entrance and exit of the bullet. Other cases recovered where the cavity was opened by a piece of a shell, and portions of the omentum either sloughed or were cut away by the surgeon. For one he was disposed to be rather conservative in this as well as other operations, as shown by a paper recently read by him before one of our sister societies on the treatment of intestinal obstruction, in which he urged the use of all other means before proceeding to the severe and usually fatal operation of laparotomy.

Dr. A. C. Bernays, of St. Louis, said: I think the question must be answered in the affirmative. There is given a *perforating* wound of the abdomen, we are in ignorance as to the inward or deeper injuries. We know, and the remarks of Drs. Bryant, Polk, and Wylie confirm the fact, that explorative laparotomy is not a dangerous operation. It is evident, then, that by performing laparotomy, we do not increase the already existing danger caused by the traumatism. The operation, first, makes a diagnosis possible, and, secondly, permits us to adopt curative means. We may expect to save many lives by this operation, and I am emphatically in favor of its performance in all cases. This morning, through the kindness of Dr. Dennis, I saw a case where laparotomy was performed soon after a stab wound. The gut was found perforated in two places. Dr. F. S. Dennis stitched the wounds, replaced the bowel, and I can assure you, that the patient is perfectly well at the present time, fifteen days after the accident. In illustration of the fact that nature will sometimes achieve a cure unassisted by surgical skill, I will relate the following case, which I saw in consultation with Dr. E. Voerster, of St. Louis, some months ago. A child, about five years old, was shot in the abdomen, the ball entering just above the middle of Poupart's ligament. There was free discharge of thin fecal matter through the opening for four or five weeks. Evidently adhesions had formed and there was practically an artificial anus through which a part of the contents of the alimentary canal was discharged, another part passing off *per vias naturales*. The anus closed spontaneously, aided only by salves and perhaps some cauterizations. Had I been called early in the case I would most probably have done laparotomy. I would consider it bad practice on the part of the surgeon to refuse laparotomy in such a case, while I must admire the courage (or the blissful inactivity) displayed by the physician in this case.

Dr. George G. Hopkins, of Brooklyn, asked: Do I understand Dr. Weir to say that the exploratory incisions should always be the enlarging of the original wound?

Dr. Weir answered in the affirmative.

Dr. Hopkins: Then, Mr. Chairman, it seems to me that in comparing laparotomy for penetrating wounds with laparatomy done by abdominal surgeons, as suggested by Drs. Polk and Wylie, for the removal of ovarian and other growths, we have lost sight of the fact that these operations are always done in the median line, while the others are more frequently done in other parts of the abdominal parietes, the former involving no muscular and the minimum amount of other tissue; therefore the two series of operations are not comparable. Furthermore the innocuousness of women to abdominal incision, as compared with men, though generally believed, is yet to be proven, as it is founded upon the fact of their great tolerance of incisions done in the linea alba. It occurs to me that the better practice would be always to make even the exploratory incision in penetrating wounds in the median line.

The Section then adjourned.

A Specific against Cholera and Typhus.—According to a St. Petersburg paper the celebrated Russian traveller Dr. Fodtschenco recently discovered in Turkestan a plant which is said to be an excellent specific against cholera and typhus. It is used by the natives of Central Asia against all kinds of maladies, and every effort has been made to keep its properties from the knowledge of Europeans. The plant, which is named "Ferula Sumbul," has been acclimatized in the Moscow Botanical Garden, and the justly great name of Fodtschenco deserves this notice of its merits.—*Paris Correspondent of Philadelphia Medical Times.*

Correspondence.

OUR LONDON LETTER.

THE BROWN LECTURES FOR 1885—METABOLISM—THE SKILLS AS TO THE NATURE OF CRETINISM—THE BELLS FUNCTION OF THE THYROID GLAND—RESULTS OF REMOVING IT—CHANGES IN THE GLAND IN CASES OF MYXŒDEMA—RECENT NERVOUS PATHOLOGY—NERVE-CENTRES AND THEIR RATE OF DISCHARGE—LOCALIZATION—VIEWS OF MERIC AND SCHIFF—A NEW THEORY OF ANKLE-CLONUS—FUNCTIONAL DISORDERS OF THE CENTRAL NERVOUS SYSTEM PRODUCED BY LOSS OF THE FUNCTION OF THE THYROID GLAND AND PITUITARY BODY RESPECTIVELY—EXPERIMENTAL EPILEPSY.

With the advent of December the season has arrived at which the "Brown Lectures" are delivered. They consist of an annual course of about five lectures, delivered at the London University by the Professor of Pathology at the Brown Institution. This institution was founded in connection with the University of London about ten or twelve years ago, by means of a munificent legacy bequeathed for the purpose by a wealthy gentleman named Brown. It is located in Vauxhall and comprises, in the first place, a hospital for animals, with in-patients and out-patients, and, secondly, a laboratory with appliances for physiological and pathological research. The Professor-Superintendent is expected to make researches, and a condition of his retaining the appointment is that he shall deliver a short course of lectures every year at the University of London on some subject in comparative pathology. These usually embody the results of the researches made during the previous year. Among former professors may be mentioned Dr. Burdon Sanderson, formerly Professor of Physiology in University College, London, and now Professor of the same subject at the University of Oxford. The present holder of the appointment is Mr. Victor Horsley, a former pupil of Professor Sanderson's and a distinguished graduate of the University of London. Mr. Horsley is still quite a young man, but is already favorably known by his investigations. The lectures now in course of delivery are in part a continuation of those given last year, of which some account appeared in your columns at the time.

The first lecture was delivered on December 7th. In this Mr. Horsley proceeded to develop still further the views which he enunciated last year as to the functions of the thyroid gland, the symptoms caused by its removal, and their relation to myxœdema and cretinism. After briefly referring to the terms on which the lectures were instituted and specifying the subjects he proposed to take up in his course this year, Mr. Horsley opened by discussing at some length the subject of metabolism. Metabolic processes, he remarked, must be of two kinds, viz.: constructive and destructive. There must be a controlling influence though this was not necessarily an inhibiting influence. If there were a mechanism of control it must be dual. Excretion was both destructive and constructive. The urinary secretion was an instance of the latter. Excretory functions were much easier to study than the building-up of tissue. The thyroid gland was an excretory body. Such a body did not necessarily possess a duct. He regarded the thyroid as an organ which took up worn-out material and by its functions *led to* the building-up of tissue. He stated last year that myxœdema and cretinism were respectively acute and chronic forms of disease following loss of the thyroid.

He now remarked that there were two views at present current as to the nature of cretinism and cachexia strumipriva. One of these was that it was virtually a condition of chronic asphyxia. This he termed the Swiss view. It was advocated by Kocher and Schiff. The latter had found that in animals from whom the thyroid had been removed and who had reached a moribund condition, life could be prolonged by opening the trachea and performing artificial respiration. But in no case could life be thus prolonged for more than a few hours—twelve at most—and Mr. Horsley remarked that it was known that artificial respiration stimulated the heart and he considered the prolongation of life as due to this cause. The other view, he said, might be termed the English view. It was that the condition was caused by a lesion of the sympathetic.

Last year, he said, he had stated that the function of the thyroid was duplex, viz.: First, that it regulated muciparous metabolism, and, second, it was a hæmapoietic, gland. He now had further proofs of the latter to offer. He had observed that extreme anæmia *immediately* followed removal of the thyroid. Its immediate occurrence showed that it was not due to a secondary cachexia. He had also found (by means of observations made with the hæmacytometer) that the red blood-corpuscles contained in the thyroid vein were markedly in excess of those in the thyroid artery. The relative proportions varied considerably in different cases. This tended to show that the physiological importance of the thyroid varied considerably. These experiments were made on dogs. As corroborative of his view as to the hæmapoietic function of the gland Mr. Horsley referred to its enormous vascular supply.

The loss of function ensuing on removal of the thyroid caused symptoms due to defective nutrition. Mr. Horsley now recognizes three stages in the myxœdematous condition caused by removal of the thyroid; viz., 1, neurotic; 2, mucinoid; 3, atrophic. The third stage, he said, he had only observed since the publication of his previous observations last year. It was marked by general imbecility and atrophy of all the tissues, especially the muscles. It was producible only in monkeys. It had not previously been found possible to prolong life beyond the second stage, but by the application of heat he had been able to do so. By placing the monkeys in a temperature of 90° their lives had been prolonged, but not for more than a month in very young animals. At the onset of nervous symptoms they were placed in a vapor bath at 105° F. The recognition of this stage, he thought, showed a distinction between myxœdema and cretinism. In this case the animal lived through myxœdema into cretinism.

The symptoms due to removal of the thyroid were atrophy, dryness of the skin (lessened by heat), tremors, loss of hair, and caries of the teeth. The age of the animal was an important point. Removal of thyroid produced a greater effect on a young than on an old animal. Mr. Horsley also suggested that the thyroid had an influence on the (real) age of a man, and said he would parody a statement of Dr. Hughlings Jackson, and say that a man's age did not depend upon the number of times he had been round the sun, but upon the state of his thyroid gland. The state of previous nutrition was an obvious factor and stood next to age. The proclivity of females to myxœdema was very marked. The Report of the Clinical Society showed that out of more than one hundred cases only fifteen were males. Mr. Horsley thought that in females special causes might be in operation. In males, he said, the tissues tended more to develop in the direction of specialization. Bone, fibrous tissue, fatty tissue, would be the order in men; the reverse order would represent the tendency in the female sex. The thyroid gland varied with the condition of the uterus. Thus it varied during menstruation and pregnancy. He might remark, too, that in females the mucous tract was somewhat more extensive than in males.

The changes in the thyroid gland from myxœdema resembled those which are senile. There was apparently chronic congestion of the whole gland, and then degenerative changes which were not simple atrophy. Dr.

Hughlings Jackson had suggested that these were due to changes in the medulla.

In the second lecture (December 9th) some account was given of some researches into the pathology of the central nervous system. Mr. Horsley devoted some time to discussing the rate at which nerve-centres discharge. The term centre, he said, was a vague one. It might consist of two cells merely and these cells were not necessarily dissociated from the rest of the nervous substance. Add to these cells two conductors. Stimulation to the centres would differ much in its effects from similar stimulation applied to the conductors. The latter were not capable of originating energy.

Going on to speak of the question of localization of functions Mr. Horsley referred to the divergence between the English views (those of Jackson and Ferrier) and the continental ones (those of Goltz). He thought the differences might be largely explained by the fact that the English experiments had been made on monkeys and the continental ones on dogs. It was pretty well agreed that the fronto-parietal group of cells contained the motor centres. The smaller cells had sensory functions. The paracentral lobule contained enormous ganglion-cells and was the centre for movements of the leg. The cells in the arm-centre were smaller, and those in the centre for the fingers were smaller still. Mr. Horsley suggested that the size of the cells varied in accordance with the part supplied.

Mr. Horsley then referred to the views of Meric and Schiff respectively. Meric concluded from his experiments that afferent impulses go to a sensory receptive area and from thence to the motor cortical centre. Schiff thinks that afferent impulses go straight to the motor area of the cortex which is therefore sensory as well as motor. He found that section of the posterior column of the spinal cord caused paralysis ("ataxia"). This he (Schiff) thought to be sensory, as it disappeared in standing on a rough floor. Mr. Horsley opposed this view. The symptoms also, he remarked, were those of what (in England) is termed cortical paralysis rather than those of ataxy. Schiff's views, he said, were contrary to the ordinary ones, and, if accepted, would cause us to assume a decussation of sensory fibres high up, *e.g.*, in the tegmentum. Mr. Horsley said he explained Schiff's results as due to a blocking of motor tracts. He had repeated Schiff's experiments with antiseptic precautions. These were not used by Schiff.

When the operation was done antiseptically the incision in the cord healed in a few days. Exudation could not then escape but caused pressure. In his own experiments he found that those two in which antiseptics failed and the wound became septic were the two in which he got results most nearly resembling those obtained by Schiff. The results of the others were much less marked. Another explanation he would suggest was that in making the incision in the cord vessels supplying various parts were necessarily divided.

Mr. Horsley then detailed at some length the method he had adopted to determine the rate of discharge from nerve-centres. He found it to be at the rate of from eight to ten discharges per second. This was the same rate as the muscular movements in ankle-clonus. From this Mr. Horsley suggested a new theory of ankle-clonus. It might, he said, be merely a record of the fundamental rate at which nerve-centres discharge. Muscle, being elastic, simply recorded. The stretching of the muscle irritated the spinal cord and thus started the ankle-clonus. Discharges from the cortex, he said, might be at the rate of ten or twelve per second. But in passing through the lower centre (anterior cornu of spinal cord) the latter acted as a transmutor and reduced them to the normal rate. When powerfully irritated the lower centre might become polarized and act simply as a conductor.

The third lecture (December 11th) was opened by discussing the functional nervous disorders of the central nervous system produced by loss of the function of the thyroid gland. The symptoms, remarked the lecturer, followed a degeneration of nerve-centres due to arrested metabolism in the thyroid. They were (1) tremor; (2) paresis; (3) paralysis. The tremor was fine and constant. It was at the rate of from eight to ten per second. After a time it became interrupted and its rate got doubled or trebled. He considered that the tremors were developed in the lowest motor-centres. They might be explained on three different theories, viz., (1) on a theory of perfect automatism, *i.e.*, that the centres automatically discharged themselves at their normal rate of from eight to ten per second; (2) on the theory that, nutrition being depressed, any irritation might cause a centre to discharge itself at its normal rate; (3) on the theory that the defect of nutrition fell first on the inhibitory centres. Mr. Horsley said his own view was that depressed function of the centre caused it to react to stimuli which would have no effect upon it in health. The stimulus, he said, must not be great or the tremors would stop. They ceased on voluntary movement. The next stage was paresis. The extensors were first affected and the fore-paw (hand) was semi-flexed as in (human) paralysis agitans. He used the term paresis, as the paralysis was not complete. The animal moved when offered food. Semi-rigidity (contractures) then came on, but this did not resemble the rigidity following lesions of the cortex, as it only made the movements of the animal slow. Finally paralysis ensued. The attacks were unilateral in character and much resembled hemiplegia in man. After a while, the animals began to improve—especially with warmth—and in a few hours (five or six) the symptoms would pass completely away. As the symptoms were due to depressed nutrition of the nerve-centres, we should not expect epileptic seizures to follow removal of the thyroid, and as a matter of fact they did not. They might occur in the first few days after operation but not afterward. The cortex was "played out."

Mr. Horsley then went on to speak of experimental epilepsy and the effects produced by removal of the pituitary body. The epileptic spasms experimentally produced in animals are, he said, very short in duration, and much less marked than those occurring in man. After removal of the pituitary body, however (which he had successfully effected in two dogs by trephining the base of the skull through the mouth), the cortex apparently became hyper-excitable, and true, well-marked epilepsy could be produced by excitation. Mr. Horsley referred to a work published by Wenzel in 1810, in which the latter stated that in every one of twenty fatal cases of epilepsy, he had found disease of the pituitary body after death.

Mr. Horsley's lectures have not yet appeared in this country, and I have given the above brief account of them from notes taken at the time. The two concluding lectures will be delivered next week. These will scarcely be of equal interest to practitioners with the three already given. Mr. Horsley proposes to take up the subject of canine chorea—a disease, he remarks, which is very common in dogs—and will endeavor to show from the pathological changes found in the spinal cord that it is really disseminated sclerosis.

ARTIFICIAL ALIMENTATION IN CASES OF VOMITING FROM PREGNANCY.

To the Editor of The Medical Record.

SIR: I was much gratified to see in THE RECORD of December 12th, an account of a cure by Brünniche—by the introduction in the œsophageal tube of liquid food, as milk, powdered beef, etc.—of a pregnant woman suffering from uncontrollable vomiting. Except this case, reported this year, I have never known of any case of this sort successfully treated by the œsophageal sound (*gavage*)

but one reported by myself in a series of articles on super-alimentation, artificial alimentation, etc., published in the *New York Medical Journal*, April 19th and 26th, and May 10, 1884. This was a case so desperate that the patient would have died from inanition without the treatment employed, unless, indeed, premature labor had been induced. These cases possess all the more interest, because Dr. Debove, whose experience in artificial alimentation has been very extensive—much greater probably than that of any other physician—and who by his sound has contributed greatly to its practicability, informed me, in the summer of 1884, that he had not found it of use in the inanition of pregnancy resulting from vomiting, although he had, as his published cases show, used it with great success in hysterical anorexia and vomiting.

According to Debove, there is no relation between the appetite of patients and their digestive faculties. The food introduced into the stomach artificially may be tolerated and digested, no matter how sensitive the pharynx may be. The substances employed by me in the case referred to were the powder of beef, the yolk of eggs, and milk.

If carefully studied and employed, I believe alimentation with Debove's stomach-tube will be found efficacious in some cases of vomiting of pregnancy where all other means fail. Respectfully yours,

H. E. Millard, M.D.

4 East Forty-first Street, New York, December 15, 1885.

WHAT IS THE REMEDY FOR THE MEDICAL CHARITY ABUSE?

To the Editor of The Medical Record.

Sir: The command in your editorial of November 28th, to forever hold our peace, if we do not now speak, in case we hold views contrary to those outlined with regard to medical charity and the Charity Organization Society of your city, is heard. This demand to speak, and the fear that the opportunity will forever be gone unless we speak before the declaration, "What God hath joined," etc., I venture to give my views.

Public charity abuse is fast increasing all over the country, and will increase the faster as the public find out there are these places where they can get medical skill, which is said to be the best, for nothing.

The solicitation of funds, Hospital Sundays, etc., advertise the scheme, and only add to the applications. The only reason they are not twice as numerous, is because clinic privileges are not better known.

Many of us in the country, who go down to learn of you, know well how you work, hastening to close your business in the morning to fill your chairs in these places in the afternoon. We envy you the eminence you attain, but are thankful we do not have to work so hard. We try to emulate your policy in founding institutions, but pray to be delivered from your embarrassments. For the consequence we have no one to blame but ourselves when these things come about, and we should be willing to see ourselves as others see us.

What then! The medical profession has assumed the wrong status in its relation to public charities, and in so doing presents an enigma to the public mind which is always a puzzle, and which few can solve and understand. Duty calls the doctor to a share of the charity work, but the rest of mankind observe their vigorous appetites for this peculiar diet with complacency. They cannot and do not claim to do their work for charity's sake. What they suppose to be an elegant system has created an evil at which they are now appalled.

Queries are admissible here. Is it possible that 150,000 or 175,000 persons were *fed* free in New York City last year? (There are a thousand hungry to one needing professional care.) Were there as many persons in all the other walks of life who gave one-third of their time to charitable work without remuneration? Is there as much money spent in clothing, feeding, housing, and warming the needy as is here represented in time and labor at reasonable rates, as is exhibited in charity work by the doctor? All the other necessities of life are met, after a closer investigation as to facts, and the dispenser is held accountable.

So long as the members of the profession stand about the doors of these institutions soliciting a place for themselves, so long charity business will grow. This policy not only exists in the great cities, but all over the country. It founds medical colleges, and the professors receive about the same pay, and the clinics in them are on the same basis, and doctors are made chiefly to organize more clinics. The relation to the sick (the chronically sick especially) is thus made an embarrassing one. Such a relation is not independent or dignified to the physician, for the patient, *if posted*, holds him at a disadvantage. His fees in the country are held to the price of the railroad fare to the nearest clinic, where he knows they will take him in at little or no cost. This is degrading to the business!

The physician outside of these institutions represent to those suggesting to go to free clinics that they are for the pauper, where experiments are made for the benefit of students; they use you for students' practice, they give you half attention, etc., which they find not true when they go there.

Ostensibly these are for the benefit of the poor, the student, the professor, and the growth of the art, and under this policy the competition among the clinics is very great, and it is only the older doctors who venture to question persons who do not seem to belong there. I have known men, "living on their money," to go a great distance and get gratuitous advice from the best of the staff, and I have seen teachers of classes pay patients to allow examinations by students. We go down and sit at the feet of the professors, and go where they have provided the most material and built up the largest clinics, and in this way the growth of the art is promoted and extended; but this is expensive to a proper relation of the sick to the healer.

The Charity Organization in its detective work, by twice the labor that physicians perform in attending the patient, may be able to sift out a few in the cities, but the delay and the expense involved render detection, even in the cities, extremely doubtful; while among those from the country it is almost impossible to make it effectual, especially where it is so easy to hide and go from one clinic to another; taking also into consideration the nature of this detective, the quality of the person necessarily employed to do the hunting, his standing between the claimant of charity and the "rich doctor," and the source from which he must get his pay therefor, and also the difficulty of fixing a scale upon which applicants would be entitled to the aid, makes the work expected of them doubtful of accomplishment.

While the inducement to cross the campus is so great, and severity cannot be used when they attempt it, and the party they wish to see stands beckoning them, the guards will have a hard time of it.

Under the rulings of the Code the only road to fame, the only way to be known, is to belong to an institution with others, with a board of trustees, a yearly catalogue, and an annual commencement, or banquet, with the aspirant's name included in the list.

The remedy? Provision should be made by which we could found hospitals on private enterprise, which now is impossible, except in rare instances. The exigencies demand it (charity hospitals, with paying and non-paying patients together, saying nothing of the many other bad influences, are not the things), and the standard of excellence would continuously be raised by the improvement.

The business requirements should be allowed to take its place upon a commercial basis, and be governed by its laws. It is by unnatural edicts that it is prevented from taking the course that its requirements demand,

and the progress of the times indicate. Specialism has been alike retarded, and is still so, by thus hampering it. The world's history is full of examples of one generation dictating to the next what is right and what is dignity. The floods come and the house does not stand.

It is fast growing that the division of labor is but a forerunner of this other aid to the proper treatment of disease. Such institutions will naturally be in specialties, and they will be centres of large fields of practice, and the query is, in what way can they be made known. Is there no dignified method of doing this?

The undignified part of advertising is bragging, the mention of special qualifications, advantages had, present or former positions, special attainments, relationships, publishing cures, etc. These are all undignified, out of taste, and should be discountenanced; but the simple announcement of one's business, the place of its transaction, when truthfully told, is it beneath the dignity of any lawful business or profession? If thus proscribed, the ethics of advertising would be as well defined as at present, and a clear line of demarcation could be held. The methods of first-class literary institutions are good models. It seems to me that such a policy would but add dignity to the art, for if handsome buildings and costly appurtenances give dignity to the educational profession, why would it not to the medical? When the members of the medical profession confine their hospital work to the institutions built by charity funds, when they sit there to dispense to the most of its inmates for nothing, they are losing the opportunity, to say the least, of a fair exhibit to the world of the value and importance of their work. In our relation to the quack institution at present, we prevent the development of the law of survival of the fittest by chaining ourselves, and allowing the environment wholly to the least fit.

Should we allow this scope to the development of the business and the art, the charity institution would stand where the poor-house now stands, and the irregular would be superseded.

I write this with no invidious spirit. I labor within the pale of the Code and conform to its dictates and rulings, but not without feeling that there is injustice done to the true relation of the profession to the public, by the declaration of principles which, considering the necessities of the advanced methods of treating disease and the modern methods of doing business, are behind the times and retard the development of the art.

Expediencies must supersede manners and customs and old ethics.

Respectfully submitted, E. H. H.

Iowa, December, 1885.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 20, 1885, to December 26, 1885.

Fryer, B. E., Major and Surgeon. Sick leave extended six months on Surgeon's certificate of disability. S. O. 292, A. G. O., December 21, 1885.

Vickery R. S., Major and Surgeon. Relieved from duty in Department of the Columbia, to repair to Washington, D.C., and report in person to Surgeon-General, for duty in connection with Army and Navy Hospital, Hot Springs, Ark. S. O. 293, A. G. O., December 22, 1885.

Reed, W., Captain and Assistant Surgeon. Leave extended one month. S. O. 293, A. G. O., December 22, 1885.

To Disguise the Odor of Iodoform Krieger makes use of the ethereal oil of sassafras. The addition of a few drops, he says, suffices to remove entirely the offensive odor, substituting therefor a fresh and agreeable aroma.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 26, 1885:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
December 26, 1885	5	24	40	3	9	95	4	0
Deaths.								
December 26, 1885	0	[illegible]	12	3	1	43	2	0

A Florida physician the other day conceived the impression that some one was peeping through the keyhole of his office door. He investigated with a syringeful of pepper sauce. In about half an hour afterward he found his wife with her left eye covered with a bandage, so great was the pain of an injury which she had received from a chip which flew up and hit the organ, while she was splitting kindling-wood.

Another faux pas of the Telephone.—"Hello, doctor!" "Hello! Mrs. Elcho." "Clara grows better, and her baby is quite well." At this point the girl at the central office cuts off the doctor and turns on a veterinary surgeon, who is giving the order to his assistant to "Give 'er a bran mash, and have the groom rub 'er down."

Luminous trees are reported to be growing in a valley near Tuscarora, Nev. At certain seasons the foliage gives out sufficient light to enable any one near at hand to read small print, while the luminous general effect may be perceived some miles distant. The phenomenon is attributed to parasites.

A Little Cheeky.—Toward the decline of the cholera epidemic in Sicily, a man named Dr. Riforgiato came to Palermo from Catania, asserting that he had an unfailing remedy for the disease. His assertion found credence among the people, and they carried him in triumph to the town-hall and demanded that he should at once be put in charge of the cholera hospital. When this modest request was refused by the authorities, the people became excited and created such a disturbance that it was found necessary to call out the military to restore order.

Mountain and Sea-air.—Highly nervous persons, the victims of hypochondria, those suffering from excessive brain-work—above all, those in whom these conditions are found in conjunction—should not, as a general rule, be advised to try the sea-side. A quiet inland locality, or some mountainous spot of moderate elevation, will be found to suit their cases better. The monotonous aspect of the sea and the ceaseless beat of its waves are mentally depressing, while the highly strung neurotic patient is irritated instead of braced by the stimulating effects of the sea-air. Those who are just recovering from a serious illness, such as pneumonia or typhoid fever, should not be sent prematurely to the sea-side, as an accession of febrile symptoms is frequently the untoward result. An inland locality is more suitable during early convalescence; but, later on, nothing conduces more to complete cure than a resort to the sea-side. The marvellously restorative effects of sea-air in cases of slight general debility, in persons of strumous habit, and in those with family predisposition to phthisis, are well understood, and must not be regarded as being in any degree impugned by the opinions expressed in the present article.—*British Medical Journal.*

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Original Articles.

PRESENT STATUS OF THE PNEUMATIC TREATMENT OF RESPIRATORY DISEASES.[1]

BY E. DARWIN HUDSON, JR., M.D.,

THE introduction to the medical profession of the pneumatic cabinet, or pneumatic differentiator, of Mr. Joseph Ketchum has created a renewed interest in the entire question of the value of compressed and rarefied air as therapeutic agents. The fact that Professor Bowditch, of Boston, and the late Professor Armor, of Brooklyn, had consented to stand in an advisory relation, or as sponsors, to those having its construction and use in charge, afforded a guarantee that it was a scientific apparatus, constructed to fulfil the recognized principles of pneumatic treatment. And the detailed and favorable reports of Drs. Williams,[2] V. Y. Bowditch,[3] Boughton,[4] and Jensen [4] have already established the claim of the cabinet and method of employing it to careful consideration and trial.

The subject is one which has occupied the medical mind periodically for nearly a century. As far back as 1800 the Royal Society of Haarlem [5] proposed as a subject for competition "The Influence of Condensed Air on Animal and Vegetable Life." Nothing of value was elicited. Again, Sir John Sinclair, following observations upon lower animals, suggested the application of condensed air to the treatment of human disease. But the great treatise of Laennec, in 1819, makes no mention of pneumatic treatment. In 1835 M. Junod [6] made the first authentic experiments as to the influence of compressed air on the human body. Majendie and his colleagues reported adversely upon M. Junod's conclusions, but at a subsequent period the French Academy, with full appreciation, reversed its verdict, and awarded M. Junod a medal of honor. Attention became fixed as to the significance of pneumatic therapeutics. Efforts were made, as expressed by Ramadge,[7] at "establishing the normal relation between inspiration and expiration." Ramadge's tubes are pictured and described in his translation of Laennec. Definite treatment by immersion of patients in reservoirs of compressed or rarefied air was conducted from 1850 to 1857 by Tabarié,[8] Bertin,[9] of Montpellier, Pravaz [10] and Millet,[10] of Lyons, and A. Simpson.[11]

Tabarié's spheres were of iron, and would hold from one to twelve persons. He advised sittings of two hours duration, with an increased pressure of from one-half to two-thirds of an atmosphere. A course of thirty to forty sittings was advised for radical cure.

Bertin pursued similar methods, employing, as did Pravaz and others, the spheres of Tabarié. He reported the cure of fifteen cases of uncomplicated emphysema, and of ninety-two cases of nervous and catarrhal asthma, with associated emphysema. Sixty-seven are reported as cured, twenty-two as benefited, and three as unsuccessful. Air-chambers, cumbrous, expensive, and not portable, were thus far used.

I. Hauke,[1] of Vienna, is said to have first devised available portable apparatus for therapeutic uses, and to have led Waldenburg to give his attention to the subject.

Waldenburg devised the apparatus now bearing his name, and accumulated physical data and clinical observations enabling him to formulate a system of pneumatic therapeutics.[2] He devised a simple and portable apparatus for condensing and rarefying air, without delay, for consecutive or alternating use at the same sitting. It has been well compared, by Dr. J. H. Emerson,[3] as to appearance and principle, to the storage vats for illuminating gas. One cylinder, with an open end downward immersed in water, within a second and larger clyinder. By means of lateral uprights, with cords, pulleys, and graduated weights, the upper cylinder may at will be lowered and raised, and its contained air either condensed or rarefied. Tubing and a mouth-piece complete the apparatus.

In determining the indications for pneumatic treatment in different thoracic diseases, Waldenburg was largely guided by the causes of dyspnœa, whether the product of inspiratory or expiratory obstruction, or both. He concluded that in emphysema retarded expiration is alone the cause of dyspnœa; that in stenosis of the upper air-passages, and in most forms of bronchial catarrh, including submucous thickenings and bronchial distortions, inspiration alone is interfered with. In phthisis he regarded inspiration as chiefly obstructed; expiration also, but to a lesser degree.

For the above conditions he employed and rarefied air in accordance with his conception of the chest dynamics as related to the pneumatic forces at his command.

His methods may be briefly summarized as follows: 1, The inspiration of condensed air; 2, the expiration into condensed air; 3, the inspiration of rarefied air; 4, the expiration into rarefied air. The second method, expiration into condensed air, was found impractical; the third, inspiration of rarefied air, was found of doubtful value and often attended with danger. The first and fourth methods, viz., inspiration of condensed air, and expiration into rarefied air, alone were announced to be of value. The inhalation of condensed air was regarded as the method indicated in all cases of stenosis of the upper air-passages, in contraction of air-passages, obstruction, occlusion, or collapse of terminal tubes and air-sacs; the expiration into rarefied air was demonstrated the correct method indicated for the treatment and radical cure of emphysema.

Concerning the latter method, the subsequent testimony of very many observers is cumulative and enthusiastic. The testimony as to benefit from pneumatic treatment in chronic bronchial catarrh, caseous phthisis, chronic interstitial pneumonia, contracted chests from pleuritic adhesions and pleuritic thickening, is less unanimous.

[1] [illegible] paper on The Physics of Pneumatic Differentiation.

[illegible] Pneumatic Differentiation, New York MEDICAL RECORD, January 17, 1885.

[illegible] Medical Association, August 1, 1885.

[illegible]

[illegible] Translation of Laennec on Médiate Auscultation, p. 862. London, 1846.

[illegible]

[illegible] Bertin: Du Bain d'Air Comprimé.

[illegible]

[illegible]

[illegible] Künsthchan Respiration und des [illegible]

The introduction of a cabinet like that of Ketchum and Williams, which enables the patient to combine inhalations of atmospheric air, heated air, and medicated at the barometric pressure of air as ordinarily inhaled, with diminution of atmospheric pressure on the thoracic walls and peripheral circulation of the entire body, will help to solve the many unsettled problems of pneumo-therapy. This cabinet is, then, the most complete yet offered to scientists and the medical profession for testing the clearly-formulated principles of pneumatic-therapeutics given to us by Waldenburg. Dr. Mitchell Bruce[1] has well said: "Air stands in a dual relation to the economy as a definite compound of certain gases, and as an atmosphere with a certain pressure." The apparatus of Waldenburg, approaching the mouth only in inspiration or expiration with a column of condensed or rarefied air, did two things: 1, Afforded either an increased or diminished supply of oxygen; 2, produced increased or diminished pressure on the interior of the air-passages and pulmonary vesiculi.

The cabinet of Ketchum and Williams does all this, and further, removes pressure from the peripheral circulation of the entire body, inducing determination of blood away from internal viscera to the surface, drawing the chest-wall outward, increasing its capacity. This being done at the same time that the inspiration of atmospheric air (relatively condensed air) dilates the bronchi and vesicles, and compresses their vascular channels, the promise of increased chest capacity, and reopening of contracted tubes and collapsed alveoli is very great. How far this is desirable, safe, and curative, only cumulative testimony can determine. To this purpose the wisest precautions have been taken by the projectors of the cabinet and its method of use as to the disposition of the cabinet, entrusting it only to safe hands, and for use in suitable cases after a discriminating diagnosis. The cabinet of Ketchum and its method of use have been thus described by Houghton:[2] "The cabinet is an air-tight chamber, in which the patient sits or reclines, breathing from the outside through a flexible tube. We exhaust a small portion of the air about him, causing a deep, easy, and pleasant inhalation, filling every part of the lungs with the air or spray, producing a stronger and more regular circulation, bringing the blood into complete relation with the oxygen of the air, and introducing the medication in every recess with ease. We have now simply aided the patient to take a deeper breath than he otherwise could. We can then either produce a compression of air about the body, compelling an evacuation of the lungs, and repeat the former movement, or we can continue the rarefied condition and let the patient expel the air by his own effort. In this latter way we produce the same effect upon the lungs that a dumb-bell does upon the muscles of the arm, for the effect is to exhale and not to inhale. We thus have such complete control over the movements of respiration that we can increase or diminish the force, frequency, and depth of each breath at our pleasure, and without the slightest effort or discomfort on the part of the patient." It should be clearly understood that the departure in atmospheric pressure for therapeutic purposes, both for condensed and rarefied air, is quite within the limits of safety, even for the most delicate structures of diseased organs.

It must be remembered that Waldenburg's methods propose but an increase of from $\frac{1}{60}$ to $\frac{1}{40}$ of an atmosphere for condensed air, and diminution of a fraction of an atmosphere for rarefied air. The Ketchum cabinet proposes only a fall of $\frac{1}{10}$ to 1 inch of barometrical pressure, or a minimum rarefaction of $\frac{1}{30}$ and a maximum of $\frac{1}{20}$ of an atmosphere. The observations of Dr. A. H. Smith in the study of the Caisson Disease[3] demonstrated that, with an increase as great as fifteen to twenty pounds to the inch, no bad symptoms followed, either from the long immersion in the condensed air of the caisson, or from the sudden transitions to and from the external air. Not until a pressure of forty or fifty pounds more superadded were the brain and cord engorged, or the possible introductions of nitrogen into the blood effected.

Vivenot employed as high as $\frac{3}{4}$ of an atmosphere. Flint[1] mentions beneficial treatment by one, and even as high as five atmospheres. Bartholow favors a chamber with 1½ or 2 atmospheres. The phenomena following an initial inhalation of condensed air, as stated by Bruce, are "pallor of skin and mucous membranes, sensation of pain in ears, diminished frequency of respiration, but the act becomes easier; enlargement of lungs, increase of vital capacity, as shown by the spirometer; depression of the cardiac force, and diminution in size and force of pulse, and rise of temperature." Frequent exposures to condensed air increase the bodily strength. These results are attained: first, by increased supply of oxygen; second, by increased pressure.

As to the beneficial influence on the heart, Niemeyer may be cited. He says that inhalation of compressed air is "the most efficacious of all dietetic remedies, in the widest sense of the word."[2] The pulse, under the influence of compressed air, is reduced from 12 to 15 in the minute. Rosenthal[3] compares compressed air to digitalis in small doses, in its effect on the heart, and advises its use in mitral and aortic lesions. Not only does compressed air strengthen the circulation, but it equalizes the two circulations, increasing tension within the left ventricle, lessening tension in the right. Pressure is transferred from the venous to the arterial channels. Oxygen gives better blood, digestion is improved, and strength is the result.

Compressed air can be administered with uniformity of pressure, and for sittings of sufficient duration to be valuable, only by use of a cabinet. The compressed-air cabinets formerly constructed had necessitated the application of the same pressure on the exterior of the body, and on the interior of the air-passages.

The new cabinet reverses this order, by subjecting the periphery of the body to rarefied air, but admitting atmospheric air by a tube to the mouth and air-passages—a relatively dense air. It therefore fulfils all the requirements for the pneumatic treatment of phthisis, of local and diffused infiltrations, collapse of vesicles, constrictions, and catarrhal tumefactions of bronchial mucous membranes.

It has been suggested that the Ketchum cabinet is not adapted for the treatment of emphysema. The latter disease, it has been thought, demands: first, inspiration of positively condensed air, *i.e.*, a requisite amount of oxygen to aerate the blood within a lessened volume of inspired air; and second, expiration into a column or volume of rarefied air, producing a suction, or "pneumatic aspiration,"[4] of the residual air, and thus progressive collapse of dilated emphysematous vesicles and spaces.

Trial of the cabinet already has demonstrated its usefulness in many cases of emphysema. Its gymnastic exercise of pulmonary elastic tissue, as described by Houghton, would warrant the expectation of its usefulness in this disease. One of the questions which this most valuable apparatus may help to solve is the superiority of pneumatic artificial methods above simple methodical chest expansion. In the treatment of poorly-developed, weak chests, of pleuritic thickenings and adhesions, of bronchial warping and contraction, of chronic bronchial catarrh, and of the various stages and forms of early and late phthisis, systematic efforts at voluntary chest expansion are most efficacious. The ordinary increase of chest measurement in quiet breathing is but a half-inch to an inch. Yet by forced effort an increase of two or three inches can at once be secured. So, too, in normal quiet respirations twenty-six cubic inches of air are inspired, yet double, treble, nay, six or seven times that amount, may be drawn into the chest by

[1] Practice of Medicine, p. [illegible], Ed. 1881. [2] P. 89, "Vol." Ed. N. Y., 1874.
[3] Zeitschrift, vol. [illegible], p. [illegible]. [4] Chew Pebber, vol. [illegible], Emphysema.

forced breathing. Tubes are distended, air-sacs ordinarily inactive or feebly expanded are brought into fullest action, increased oxygenation is produced, blood is more fully vivified, and heart and circulation stimulated; strength results, and a general improvement of nutrition. Even with pronounced serum of the pleura, bronchi, or pulmonary parenchyma, this result can be attained. The phthisical chest, by means of systematic chest expansion, especially after the method formulated and so long used by Leaming,[1] results, after a very brief time, in a progressive increase of circumference of chest, of two to three inches and more, and often a re-development of both normal vital capacity and full respiratory motion, with consequent health. If, added to such methodical expansion, treatment by inhalation of condensed air or medicated vapors be employed, in spray, as the balsams or other astringents are employed, still further curative results have followed. The mechanism of this natural method is in accord with the principles and purposes of the artificial method—the employment of cabinets and condensers. That the cabinet of Mr. Ketchum may prove even more efficacious where it can be made available, I am willing to believe.

Many other therapeutic problems may be solved by the Ketchum cabinet. The withdrawal of peripheral pressure favors elimination by the skin; it also relieves venous engorgement and vascular tension in the kidneys and liver, and permits the depurative functions of those organs to be resumed—functions so often vitiated by interstitial deposit, induced by the obstructive changes in circulation within heart and lungs, or, in common with them, the product of a rheumatic or gouty bile.

THE PHYSICS OF PNEUMATIC DIFFERENTIATION.[2]

By JOSEPH KETCHUM,

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In the spring of 1883 the author was invited by Dr. Herbert F. Williams, of Brooklyn, N. Y., to investigate the existing devices and methods for inhalation. He remarked, "If only some sure method of topical application to diseased lungs could be made, it would be a great stride in the treatment of pulmonary disease." By a thorough investigation of known methods, and an analysis of their defects, I arrived at the following conclusions: The range of theory *must* be in the field of Pneumohydrodynamics. The vehicle must be air—the only medium tolerated by the lungs. Physical forces must be employed to control and bring into relation physiological law and anatomical conditions. The agent must not only be conveyed to, but surely deposited in, the desired locality.

A study of the anatomy of the organs of respiration and their muscular environment, together with the physiology of respiration observed from a philosophical standpoint, presented the following inevitable considerations.

The obstacles presented were: First, relatively high temperature of the lungs compared with that of inspired air. Second, resistance due to bronchial friction. Third, remoteness of the regions usually affected from the larger bronchi. Fourth, the normal limitation of respiratory energy to merely partial collapse of the lungs, and the usual impairment of that energy in disease.

In considering any method of overcoming, and perhaps utilizing, these recognized conditions, the following limits present themselves:

1. The burden of moisture or vapor with which air may be charged.
2. The tensile strength of diseased pulmonary tissue.
3. The interference with other physiological phenomena.
4. The latent muscular strength of the subject.

[1] Leaming: [illegible]

[2] Read before the Section in Practice of Medicine of the New York Academy of Medicine, December 15, 1885.

Now, what is the value of the obstacles noted?

First, as to relative temperature, with the barometer at 30 inches. Air inspired at 70° F. has a tension of .733 while at 90° F., which is approximately the temperature at expiration, its tension has been increased to 1.410; this difference in the tension of the aqueous vapor indicates the increase in its hygrometric capacity; or, in other words, its capacity for water has been increased in the above proportion; consequently a constant process of evaporation from the aerating surface is going on, which, according to the researches of Valentin (Dalton, p. 235), is 8,100 grains, or about 1¼ pound avoirdupois daily. It is therefore clear that, with any method applied under natural conditions, respiratory air charged with moisture at a temperature below that of the lungs, not only retains its moisture during the complete act, but acquires an additional quantity by evaporation from the pulmonary surface, in exact proportion as the pulmonary temperature is imparted to the inspired air.

By what artificial aid can this process of evaporation be not only checked, but the natural process be reversed, and the air be compelled to deposit instead of acquire moisture when within the lungs?

The two conditions hostile to the deposit of moisture are the contrasted temperatures, and their variations of aqueous tension.

The former is beyond control; for no artifice can safely invade the lungs to sufficiently reduce their temperature. We can, however, compel condensation, by inter-pulmonary compression, to an extent that will not only counteract the increase of tension, but will leave a margin sufficient to effect this condensation. If a lung is surrounded by an atmosphere equal to a barometric height of twenty-nine inches, while its interior is exposed to one of thirty inches, a differential pressure equal to one-thirtieth of an atmosphere is exerted against the walls; and to effect expiration this pressure must not only be overcome, but muscular or other force must be exerted sufficiently to overcome its inertia, as well as the capillary and bronchial friction heretofore referred to as the second obstacle.

Manometric tests show that in respiration, under the circumstances stated, the expiratory effort is equal to a difference of 4.5 inches of the manometer, and that a pressure five and a half times as great as that at which air enters, is necessary to dislodge it. This increase in pressure reduces the carrying capacity, or hygrometric condition, and is equivalent to a reduction of temperature, and a resulting condensation of the vapor from the air respired.

Second. The usual remoteness of lesions from the larger bronchi.

The usual remoteness of lesions from the larger bronchi is observed, and the connection between the cause and effect springs into prominence. Having demonstrated that wherever saturated air penetrates, its physical properties can be so changed that condensation ensues it only remains to prove that these localities are penetrated by saturated air, and the topical application is demonstrated. Spirometric tests show that, while tranquil inspiration amounts to from fourteen to eighteen cubic inches, the initial inspiration, aided by the differentiation of the breathing and the surrounding atmospheres, amounts to from twenty-eight to forty cubic inches, dependent upon the differentiation; and this excess over tranquil respiration must penetrate to regions only partly used, or entirely disused, in ordinary respiration. Boyle's law (that gases at a given temperature occupy space inversely to their pressure) will not account for this difference of forty or fifty per cent., even though we had no other means of verification; but auscultation, under these differential circumstances, in the regions above noted, shows that air is entering and circulating with a freedom that demonstrates the penetration to these regions of the increased volume of air.

Third. The limitation of respiratory energy with its

impairment by disease, is overcome by supplying the force denied, for without sufficient expiratory force condensation cannot be effected; but expiration is effected to a greater or less extent, depending on the subject, or the differential force employed, and to exactly that extent is condensation produced.

Having presented the obstacles, and the means by which they may be removed or used as favorable factors, let us determine the limits within which they may be applied.

First. Of prime importance is the limit of humidity with which we can burden our only means of transportation to lobule and vesicle; and this limit is reached when the respiratory column of air is charged with not only all the moisture that the surrounding barometric and thermometric conditions will permit, but also all that can be imposed on it in a state of high mechanical subdivision.

Second. Next in importance is the limit of tensile strength of diseased pulmonary tissue; and here is met the same responsibility which is assumed by the physician or surgeon in every operative procedure, or the employment of any muscular force. The same judgment which gauges the force of forceps traction or estimates the proper amplitude of forcible flexion of an anchylosed joint, must guide him in the application of this force to the lung tissue. The method is exceptionally secure, however, in that the force at command is subject to voluntary graduations, ranging from the delicate influence which determines the depth of the fish in its element, to the enormous energy which in a surface-blast of dynamite rends the rock before the atmospheric inertia is overcome.

We are free from the errors of judgment sometimes accompanying operative procedure, where muscular effort may be miscalculated.

The pneumatic force is indicated by gauges which are a constant reminder of the force employed.

Third. Interference with physiological phenomena. Here we meet the first question in which philosophical theory does not furnish exact data, and knowing that any interference with the equilibrium of the respired atmosphere must exert a direct influence on the circulation, and through it on its source of energy, the heart, we are driven to the domain of experiment to determine how far we may safely resort to such interference. Exhaustive investigation made by Drs. Tiegel and De Watteville, of New York, and reported by the former in an article published in the *Journal of the American Medical Association* of November 28, 1885, definitely shows how far this interference can be carried, and under what conditions it is indicated or contra-indicated.

Fourth. The normal limitation of respiratory energy requires only a moment's consideration, for while the amount of condensation produced by the patient's effort is limited by his expiratory power, the slightest thought shows that the same power that filled and dilated his lungs may be brought to bear in collapsing them, by the reversal of the process, and by mechanical means succeed when nature impaired by disease fails. To deny this is to question both the efficacy and appropriateness of the Marshall Hall or Sylvester method of artificial respiration.

I have endeavored to confine the range of invention to its narrowest possible limits, and to make the product fit the necessity. The details of the method and its requirements naturally follow. In order to utilize "air in its greatest vapor-carrying capacity," the influence which renders its weight appreciable must be employed, and the rarefaction of the surrounding atmosphere becomes the essential part of the process. Muscular contraction will in most cases give the physical condition necessary to condensation, but the process should be armed against the emergency of a failure in this respect; and this renders it imperative that there be incorporated a method of mechanical compression of the surcharged air, which must be sufficient to supply the deficiency of expiratory force on the part of the subject, as well as to overcome the friction and inertia of inspired air.

The instrument constructed to comply with the above requirements is a cabinet of proper size and shape to hold a man in the sitting posture, and rigid enough to withstand the superficial pressure when rarefaction is produced inside; strong enough to stand the jars and jolts of transportation, yet light enough to be taken from office to office, or from doctor to patient. It is made of steel sides, bottom and top fitted to a wrought iron angle frame, with a heavy glass front and a door in the rear, air-tight when closed, but capable of being opened at an instant's notice. In front and below the glass is a projection which sustains the atomizing apparatus and medicine receptacle. In the centre of the glass an aperture is pierced through which the breathing-faucet penetrates far enough into the cabinet to allow a soft rubber breathing-tube to be slipped on. The breathing-faucet is constructed of hard rubber, and is of such shape and design that when in use the condensate collecting in it on the patient's side of the stop-cock flows out through a drip-hole in the latter, while the condensate formed in front flows back into the medicine receptacle and is re-used. At the side of the projection is another stop-cock entering the steel front of the cabinet, used for decreasing the rarity or pressure inside the cabinet without removal of the breathing-tube from the mouth of the patient. In front and immediately over the glass is a manometer gauge connecting with the interior of the cabinet, filled with mercury to the zero point and graduated to $\frac{1}{10}$ inches. On the top or roof is a bellows whose interior capacity is approximately one-thirtieth of the cubic capacity of the cabinet. The interior of the bellows, by a valve in its floor, communicates with the interior of the cabinet. This valve is operated from the inside of the cabinet. The bellows communicates with the outside air by another valve in its upper side operated from the rear of the cabinet. The bellows is operated by a rock-shaft running across the top of the instrument, supported by shaft standards on each side, and to one end of which an operating lever is keyed. The saturation of the air is accomplished by the use of an atomizer and stand operated by compressed air or steam, and of such height as to deliver its spray directly into the mouth of the breathing-faucet.

The method of administration is so simple that, under the general instruction of the physician as to medication, length of time, and amplitude of force as indicated by the gauge, it can and has been satisfactorily used by the invalid's ordinary attendant.

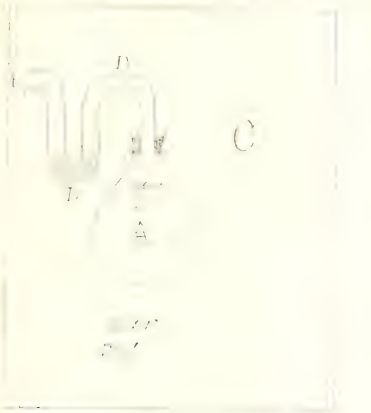
The patient is first instructed in the method of respiring entirely through the mouth, and is told that while the air will flow down into the lungs without any effort, a slight blowing force will be necessary to expel it preparatory to the next inspiration.

He is next told that when the air of the cabinet is rarefied he may experience a slight swelling of the tympani, and to relieve which he is instructed to swallow, thus opening the meatus of the Eustachian canal, and allowing sufficient of the air enclosed to flow into the throat to produce equilibrium with the surrounding atmosphere. He is next seated in the cabinet on a chair adjustable for height, and raised or lowered until his mouth is on a plane of slightly higher elevation than the opening in the glass front, and a clamp is placed on the external nares to prevent the escape of air by that channel. The door is now closed, the valve-rods having previously been placed to indicate that the valves are set to produce rarefaction; the operator passes to the front of the instrument and, having closed the breathing and auxiliary faucet, with his eye on the gauge, moves the lever operating the bellows toward the rear with a slow, even motion, until the difference between the levels in the two arms of the manometer indicates a rarefaction of, say, from one and a half to two inches.

The object of this procedure, before beginning the treatment proper, is to expand the residual air in the lungs, and if any has been imprisoned behind mucus, or catarrhal plugs, or infarctions, to exert a pushing influence from behind and toward larger bronchi, and produce

ultimate evacuation. This is demonstrated by the following experiment:

The gas-flask A is fitted with the bent, [illegible] tube D, in the curve of which a small quantity of colored glycerine, or other fluid, is introduced; this remains at the bottom of the curve B only so long as the [illegible]



on the flask side is equal to that on the open side, E. Now, if the atmospheric conditions are so changed that the atmosphere in C is rarefied to the extent of, say, one inch of the manometer, then a pressure is exerted on the fluid B by the air in the flask A, in its effort to restore equilibrium, which will drive it out of the mouth of the tube at E. Supposing the flask A represent the air occluded, B the infarction, and D the connecting bronchus, trachea and mouth, and the application is evident.

The rarefaction is now allowed to run down by the use of the auxiliary faucet until the manometer indicates the amount deemed proper by the attending physician, and the spray having been adjusted to the breathing-faucet and turned on, the patient is instructed to take the breathing-tube and place the mouth-piece with which the end is fitted in his mouth, in front of and against his teeth, enclosing the rim with his lips to prevent displacement by the interior pressure. The stop-cock is slowly turned on. Nature asserts herself, and the inflation of the cheeks and rise of the thoracic envelope indicate that the restraint first offered by the stop-cock is now offered by the cell-walls, and the same influence that is distending the cheeks so markedly is distending the alveolar walls.

This first inspiration has distended every cell and avenue, and the process of diffusion with the air charged with vapor of the medicament proceeds with a rapidity commensurate with its enlarged avenue of approach, and the act of expiration commences. This is brought about by the patient's forced muscular expiratory effort, and the pressure of the cell-walls on the loaded air reduces its hygrometric condition to a point where condensation is effected exactly in proportion to the energy of the effort, minus the effect of the increased temperature. Subsequent respiration is no greater in amplitude than normal, except in so far as the feeling of inflation may induce a greater expiratory effort; but after a time the patient becomes fatigued, notwithstanding frequent rests (during which he respires the air in the cabinet), and the expiratory act becomes labored. The door is now opened and the valves, inside and out, are set for vibration of the enclosed atmosphere synchronously with the respiratory act from plus to minus, the weight of the outside air. In other words, the top valve is closed and the bottom one opened wide. The door is again closed and the breathing-faucet is opened, and with the lever the bellows is raised until it has reached an elevation equal to one-half its height, and the patient is instructed to again place the tube in his mouth and make his first act one of inspiration. At the same time the operator raises the bellows to its full height and holds it during the interval preceding the expiration. Then, allowing it to descend to the midway point, he forces it to complete collapse, thus compressing the air to the extent of one-half the contents of the bellows, and by this compression forcing the collapse of the thoracic walls and consequent compression and condensation. This method continues, if used as a pulmonary calisthenic, or as a "means of topical application of remedial agents," until in the judgment of the operator the dose or exercise is deemed sufficient. The influence of compressed air surrounding the patient while he is breathing at normal density, of course exerts its influence in a contrary direction, except in relation to condensation, where the outflow of air is retarded by the constricted condition of the glottis during expiration (Dalton, p. 233). This anatomical verification of the conclusion arrived at, independently, by logical deductions from the action of the manometer in estimating the dynamic value of expiratory energy, is as welcome as it is conclusive.

The question of the diffusion of gases relates to the subjects at hand only so far as it applies to the interchange of the same gas under different physical conditions, viz: their relative humidities. In a normal tranquil respiration the amount of diffusion of wet residual air into comparatively dry tidal air, and in a given time, depends upon the size of the avenue through which such diffusion must take place; the relationship in volumes between the tidal and residual air being as 1 to 10, or 20 to 200 cubic inches (Carpenter, p. 300, ed. 1885).

Now, if the volume of tidal air be increased to 40 cubic inches by aid of differentiation, a corresponding dilatation of the cell structure is effected and the avenue through which the diffusion takes place is correspondingly enlarged. The relationship of volumes has now been changed and is 1 to 5, or 40 to 200 cubic inches, and a greater amount of diffusion in the interval between inspiration and expiration is accomplished.

Under the last-named circumstances the physical conditions have been reversed, and instead of 200 cubic inches of residual air diffusing its moisture into 20 cubic inches of comparatively dry tidal air, we have 40 cubic inches of tidal air diffusing into the residual air the moisture with which it has been burdened.

The increase in osmosis of O and CO is apparent, but must be investigated by the physiologist rather than the physicist.

The use of differentiation of the respiring and surrounding atmosphere has been likened in effect to the use of compressed air of the same relative density. In the condensed air method, of which the Waldenburg apparatus is perhaps the best example, the forcible expansion of inter-pulmonary tissue is effected by the exhibition of pressure from without, aimed at it from in front, and maintained during the entire act, or only during inspiration, and is exerted in direct and limited lines of force. This energy tends in no way to assist inspiration, but is simply forced into the air avenues whose remote end is closed, and whose enclosing space is already occupied by the residual air. The pressure is also equal in all parts of the lung, the thin septa of cell-walls bearing the same strain as the comparatively strong walls of the bronchi. The use of air under pressure of course reduces its ability to carry moisture, and denies us the use of the agency of pressure to effect condensation. The method employed in the differential scheme as applied, the use to which the compressed air apparatus is limited, is exactly the reverse.

In the pneumatic cabinet the dilatation is produced by the physical enlargement of the thorax and abdominal area, the recession of the diaphragm into the abdominal region, and the proportionate enlargement of each cell toward the occupancy of the enlarged thoracic cavity. Each cell and avenue, in obedience to physical law, is

now inviting new air to enter with an energy limited to its structural environment, and controlled by the tensile strength of its individual wall. One can hardly confound the force radiating from each point of superficial surface away from the centre, to that which radiates from the centre toward each point of interior surface, and which must always be limited to the tensile strength of the weakest cell-wall.

By the compressed air method the tidal air is forced first into the larger bronchi, where meeting the residual air, its force is first felt and the bronchi are correspondingly enlarged, when they in their turn aid the pressure in condensing that in the bronchioles and alveoli; but long before this point is reached and the pulmonary atmosphere is equalized, the capacity of the thorax in its position at expiration is occupied, and the energy of the compressed air is devoted to the elevation of the thoracic envelope and the depression of its floor. During the process of equalization the forced expiration takes place, combatting the pressure of the gasometer and losing the benefit of a proportion of the elasticity of the normal air by its condensation, and limited by its rigid surroundings. By the time expiration is finished equalization has taken place, and the volume of air under pressure is circumscribed on one side by the iron walls of the gasometer, opposed on the other by the thin septa of inter-cellular tissue. In the differential method the rarefaction of the surrounding air places the thorax in the position of forced inspiration. Each alveolus, bronchiole, and bronchus is expanded to a degree dependent upon the structural strength of the part. The residual air is expanded, and each atom separated from its neighbor invites a new-comer from the tidal air to occupy the space made vacant by their separation.

Expiration commences, and now, without the removal of the initial pressure, the strain on the inter-pulmonary walls is modified by the enormous elasticity of the respiring atmosphere, confined only by space itself.

The personal equation of the subject is important, for while one will involuntarily close the throat against a stream of air projected *at it*, however gently it may be done, and an effort of will is required to effect inspiration, the *aspiratory* influence which *invites* the stream of air of the same force will be accepted without a sign of antagonism.

The cabinet is the merely mechanical expression of a theory. Its scope and applicability can only be known and utilized through investigation and experience. Already it has stimulated physicians to the deeper investigation of pulmonary therapeutic agents. The use of chemically dry air in imitation and elaboration of high altitude and climate, of the introduction of germicidal or nutritive agents to the absorbing surfaces of the lungs, and its possibilities as an agent of resuscitation from traumatic or other coma, are being pushed with evidence of ultimate success.

I have endeavored to avoid the quotation of physical laws as enunciated by such authorities as Gay-Lussac, Regnault, Boyle, Torrecelli, and others, choosing the logical rather than the mathematical method of elucidating the physical aspect of the process.

It would be unjust indeed were I to close without acknowledging my deep obligation to Dr. Herbert F. Williams, my friend, and in all that pertains to the science of anatomy and physiology, my preceptor.

The recent death of Professor Samuel G. Armor deprives me of the opportunity of personally paying to him the tribute due for his active interest, valuable advice, and unwavering support during a year of anxious study and experiment.

Bibliography.—Gray's Anatomy; Dalton's Physiology; Carpenter's Human Physiology; Lieutenant R. S. Williams', U. S. E. C., Hypsometric and Meteorological Tables; Guyot and Plantamour's Tables; Watts' Dictionary of Chemistry; Josiah M. Cook's Philosophy of Chemistry; Ganot's Physics; Dechanel's Physics.

171 [illegible] AVENUE.

THE ÆSTHETIC APPLICATION OF DENTAL ART.[1]

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On different occasions during my period of practice, I have been requested by patients to explain why it is that dentists seem to know so little about art. What can I say more than to confess that I do not know? I have found repeatedly that such a reply does not in any sense afford satisfaction to the inquirer, or tend to extricate me from an embarrassing position, but only serves to push me more deeply into difficulties.

The query in the outset was prompted, probably, by a passing thought, and had they received any convincing reply, their momentary inquisitiveness would have been gratified and the subject dropped then and there.

But, perceiving my inability to give any reason why a profession so entirely made up of artistic requirements, should have no facilities for cultivating an æsthetic taste in the dental colleges, their curiosity naturally became aroused, and I regretted that I allowed them to see that the question was too much for me.

And can we wonder greatly that such questions meet us, when we reflect that one of the two greater branches of dentistry consists entirely in restoring nature by art?

What is Art? Of all the short words in our language there are but few which are handled more frequently, and that, too, by persons who really have but a faint idea of what those three letters signify. How many of the thousands of sight-seers who visit the galleries of our own and foreign countries, and are thus permitted to look upon the work of celebrated artists, comprehend that the creations before them are the result of the careful study of a lifetime. They are only conscious of the general effect of a work of art, and do not realize what a vast amount of study and labor is required to attain such grand results.

For the sake of illustration, let us for an instant glance at a painting. The artist has presented his work true to life; almost too much so to be pleasant. It has been truly said, that, next to the actual pain experienced in being a party to sorrow is the touching suggestion which a faithful picture communicates.

Wandering over the canvas, our eye first notes the general interest; we remark the excellency of the drawing, the perspective, and the coloring, but soon our attention becomes riveted on the central object, a representation of an old woman, a glance at whose face at once proclaims the *special* motive of the work. The scene is a court of justice, with all of its characteristic stiffness and its unpleasant suggestiveness. Spectators are there with faces full of feeling. The learned lawyers, in powdered wigs, are there true to life, while, in contrast, stands this poorly-dressed woman before the judge who is about to pass sentence of death upon an only son. She is offering a mute appeal—no words of supplication; but the trembling arms and old withered hands outstretched, tears flowing over wrinkled cheeks, the intense agony so plainly depicted on every feature, is an appeal more touching than any eloquence the tongue could have offered. Such a picture commands the attention of every beholder; but how few realize what an immense amount of work it required to reach such a mark of perfection! What an insight into human nature was called for to enable the artist to portray this touching scene! Do they reflect upon the fact that a knowledge of anatomy, physiology, and other studies are required, as well as of colors and their application? Many persons have a faculty of painting a fair representation of the human face upon canvas—they are said to be talented in that respect. But if they expect to approach anywhere in the vicinity of perfection they must be acquainted with the forms of the bones of the head, as well as the muscles and softer tissues. How

[1] Read before the Alumni Association of the Boston Dental College, Boston, October [illegible], 1885.

can they truthfully give the form of the outside without some knowledge of the framework within?

Now, if this knowledge is indispensable to an artist, why should it not be equally desirable that the mechanical dentist should be conversant with its principles also?

An artist, by making himself intimately acquainted with the human form, and by his perceptiveness, power of imitation, and deftness of hand, can place a representation of it upon canvas. He can counterfeit any feature and bring forward any expression. If his work be sculpture, he does away with deception by placing actual shape before us. The one deceives the eye by light and shade, the other gives us substance, the natural light contributing the appearance by which we distinguish the different forms of objects. With the dentist, the object is the same; but, unlike the former, he has not blank canvas or hard stone to work upon, but has living tissue, on which he can learn to put different expressions. Many will say that expression comes from the mind, and that we have no control over it except in our own features. True, it comes from the mind, but it shows itself upon the face, and different expressions are but the result of the action of different muscles in moving portions of the skin (and underlying tissues) so that a new light strikes upon it; this varying light, with its consequent shade, adds a new aspect to the countenance.

An artist can change the whole expression of a painted face by the addition of a little extra light and shade, and that with but a few strokes of the brush. All he does is to *apparently* raise some portions with light and cause others to recede by rendering them a little darker. If colors will change the countenance by appearing to raise portions, is it not patent that *actually* raising those parts will do it even better. It takes but the slightest change in position of the lips and adjacent parts to make a great change in expression. You will put greater faith in this assertion if you will experiment a little yourselves.

Take a portrait, or better, two, precisely alike. The lithographs such as are exhibited in the street-windows by theatres will answer every purpose. It will be best if we choose a lady's face, as it is with the ladies' features, principally, that we will wish to utilize our knowledge, if it be found worthy of use. It is, we will say, a full face, and one with a pleasant look about the features. Now with a crayon make a short downward mark from each corner of the mouth on one picture only, as we will need the other for comparison; then with your finger-end rub in a little white just under the lower lip, adding a trace of shade to the upper lip in the same manner. What is the result? You have a face the owner of which you would think had not an earthly friend. Now, after erasing what you have added, reverse the order of things by placing the light on the upper, the shade on the lower, and drawing your lines upward from angle of mouth, instead of down, as before, and you will find the result reversed also: for the face is found now to be bright and cheerful. By going a little further, and placing two curved lines from base of nose downward, past corners of mouth, with convexity outward, you have a grin that will often prove contagious. A thin piece of paper placed under the lip on the alveolar ridge will add its quota to the expression.

These changes have been effected by a few marks that would be hardly noticeable anywhere else on the drawing, unless about the eyes. If this can be done on paper, can it not be accomplished, say in part, at least, with the face itself? Of course, it is an entirely different matter when we come to put our theory into practice, as it will require that we educate the eye by long and close observation of nature, and teach the hands to follow its dictates.

The lips, of all the features, are the most direct index to the feelings, and the expression characteristic of every face is due almost entirely to the effect of light and shade about the lips. It is (I believe) because we forget this fact, that we often feel dissatisfied with our work even when the patient expresses pleasure with it. I believe, too, that it is owing to the fact that the profession shows want of knowledge, care, or ability in this respect that we meet with so many faces whose owners wear dentures that are blank, or almost expressionless about the mouth. When we hear such common expressions as a beautiful smile, or eloquent lips, do we ever ask ourselves in what does this beauty or that eloquence consist?

Our course of studies in mechanics is, to the best of my knowledge, perfect as far as it goes; but is it carried out to its greatest extent? For instance, we are told to carefully note the play of the lips over the wax articulation; but *what is it* in the play of the features that we are to study? I can but answer for myself. I was expecting to hear *expression* treated in every detail, and felt disappointed when upon nearing a situation where I felt genuine interest, I found that the points which seemed to me of the utmost importance were passed over with a casual remark or two.

I know when I say this that no one will infer that I am trying to pit my limited knowledge and inexperience against years of practical work of my instructors. Perhaps our teachers expected we students to understand without further instruction. Perhaps my classmates, by superior ability, were enabled to bridge over what seemed to me a break in the most interesting part of our course, or it may be that I am expecting too much of dentistry.

Now, the question is, how to proceed in order to derive any professional benefit from the ideas here suggested. As I regard it, the first requisite is to study nature, and study closely. As far as the human countenance is concerned, no one has more opportunity for observation than the dentist. Our business carries with it a certain license, so that we can examine a patient's features critically without giving offence. Unlimited chances are thus offered, and we can watch every face that we work over, and then we must analyze what we see.

Note the general expression, the fulness of the lips, and the tooth development beneath them. Watch where and how the light strikes the face, and what is the result of different lights upon the same features. If any teeth are absent, note the effect upon the expression. Observe color of hair, eyes, and complexion, and then examine the exact shade of the teeth, also the size and shape of the teeth as compared with size and shape of features, form of head, and general build of body. This can be done by a trained eye, while the patient undergoes the usual examination, without suspecting but that your undivided attention is given to the teeth. Then compare this with the next face that presents itself. If this is to afford any benefit to the practitioner, the observation and comparison must be critical. We are too apt to bestow a casual glance, and forget as soon as the patient is gone, whereas we should memorize or make a note of the most important points.

To make ourselves *masters* of the art of light and shade, we must go even farther than this. *We must cultivate a taste for art.* We subscribe for some one or perhaps all of the dental journals—why not for an art journal as well? We try to keep ourselves posted on all the new ideas in our profession—why not mix up a little art with them?

Suppose that we cannot see at first that it is benefiting our work, we cannot deny that it is refining, as well as affording a pleasant change from an occupation that is in many respects disagreeable. Then when we have leisure we can turn our hands to a little modelling.

If we have a small space in our laboratories, why not utilize it by making a bench in a corner that has a good light, and then investing in a few pounds of artists' clay and one or two modelling tools. By an hour's work and the outlay of a few dollars, we have a way of passing our spare moments that will be novel and instructive. For it is in modelling and casting that the effect of light

and shade is made most manifest. If we have doubts of our ability to reap any benefit from modelling, why not try casting, choosing a friend or a patient's face for a subject? Suppose that we try it in this way, our subject being a person who wears a full denture and with a bare face? First make a mould of the face (wax will answer) with the mouth empty. Then one with the plates in position, and then, after building up with wax in different places on the plates, place them in the mouth and make a third mould. Now to cast with plaster. The wax mould will of necessity be thin, so that it is best before casting to build up around the outside of the mould with sand, so that the weight of the plaster, when soft, will not change the shape. Then if you will tint the water with powdered or dry umber and a little vermilion before you mix the plaster, the latter will more nearly resemble the flesh-color. After casting all three, and allowing the plaster to set, if you will remove the wax from each you will be surprised at the entirely different expression on each face. The question is as to where you will find a person who will submit to so much trifling? I have experimented with many different faces, and thus far they have been so deeply interested in the novelty of the work that I have yet to meet the first complaint. In conclusion, let me say that I believe that if our dental brethren who have never tried this, would do so, they would be surprised and pleased with its effect upon their laboratory work. At first, I became discouraged, and thought that I failed more often than I succeeded; but now, when I look back I find that I have not failed. On the contrary, I have succeeded so far that now I am where I can see what can be accomplished if one is persevering. I am convinced that the study of facial expression has helped me wonderfully, and has given a new impetus to work that before seemed monotonous. One thing in which I think all will agree with me is this; that a little art cannot injure us in any way, even if it is æsthetic.

CAMBRIDGEPORT, MASS., October 18, 1885.

COVERING THE HAND WITH SKIN TRANSPLANTED FROM THE CHEST.

BY ALFRED NORTH, M.D.,

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MICHAEL S——, aged twenty-six, Irish, a brass-roller. On October 27, 1884, while cleaning the rolls while they were in motion, the ends of the fingers of the left hand were caught and the entire hand drawn in to the wrist. The skin was cut through entirely around the wrist, and below this point was so thoroughly crushed and separated from the subcutaneous tissues that it could be peeled off like a glove. The only portions of skin left attached to the hand were a piece about an inch and a half long by one inch wide, between the thumb and the index finger, and the normal skin covering the end of the thumb to midway between the first and second joints; also there were several irregular areas of the corium or true skin left upon the index and middle fingers. The third and fourth metacarpal bones were fractured about their middle; the first joint of the index and the second joint of the middle finger were opened; the ring-finger beyond the second joint and the entire little finger were crushed and virtually dead; the superficial palmar arch was severed and both ends were spurting.

Examination under ether.—After making a thorough examination under ether I decided to make an effort to save as much of the hand as possible.

Dressing.—Both ends of the palmar arch were secured and ligated. A drainage-tube was passed through the hand between the fractured metacarpal bones. The skin of the hand was carefully replaced and secured to that of the wrist by means of silk sutures, the various fragments being secured to each other in the same way. The hand was then wrapped in absorbent cotton, a board splint was applied to the back of the forearm, extending to the ends of the fingers, and secured by a bandage applied to the forearm. The hand and fingers were lightly secured to this by a cheese-cloth bandage. Hot-water dressings were used as the most favorable for maintaining life in the crushed tissues.

Subsequent history.—On the following day all the skin which had been separated from the hand assumed a leaden hue and lifeless appearance. At the end of twenty-four hours all hope of saving it was abandoned, and poultices were applied to hasten sloughing. At the end of a week it had all *gangrened* and sloughed away, leaving only those portions of healthy skin upon the thumb, index, and middle fingers which have already been enumerated.

November 20th.—To-day the periosteum was separated from the remaining phalanx of the little finger, the bone was disarticulated, and the articular surface of the metacarpal bone was removed with bone-forceps. The granulating flaps were united over the end of the bone by fine silk sutures.

November 25th.—The remaining phalanx of the ring finger was separated and removed in the same manner, but the articular surface of the metacarpal bone was left and the flaps were not stitched.

The second joint of the middle finger was exsected and the ends of the bones drilled and held together by a silver wire.

Appearance of the hand (November 26th).—The little and ring fingers are gone, the middle finger has been shortened by the exsection to about two-thirds of its normal length, the first joint of the index finger is exposed, and the distal extremity of its second phalanx extended and dead. The dead portion was removed with the bone forceps.

The areas of skin now found upon the hand are located as follows: The thumb is covered to the first joint on the palmar surface, to midway between the first and second joints on the dorsal surface, and on the side toward the index finger it extends to the bottom of the cleft, where there is a narrow, granulating surface extending from the palm to the dorsal extremity of the cleft, at which point the skin of the thumb and that of the index finger are joined by a band of skin about one-quarter of an inch in width.

The index finger is covered, excepting its outer surface, and the palmar surface below the second joint. On the dorsal surface the skin extends one-half inch on to the back of the hand, and here sends off the band which joins that of the thumb.

The middle finger is covered on the dorsal surface to the first joint, on the palmar surface to the second joint, and on the sides to about the same extent.

Comparing the amount of skin now found upon the hand with that which existed after the injury, it will be seen not only that the perfect skin left at that time has markedly extended, but that the fragments of corium scattered over the index and middle fingers have developed almost sufficient integument to cover these members.

The index and middle fingers were to-day dressed in a common plaster-of-Paris splint, both for support and to ascertain the effect of pressure upon the exuberant granulations.

November 28th.—The thumb and fingers were gently exercised by passive motion. The plaster dressing so much improved the granulations of the fingers that I decided to try it upon the hand. The hand was lightly dressed in plaster, to be left two days.

Treatment preparatory to grafting (December 19th).—Since last note the treatment has consisted chiefly of the application of twenty grains of nitrate of silver to the ounce, or of the solid stick, with balsam of Peru and light pressure by a cheese-cloth bandage. The hand continues œdematous and the granulations exuberant. To overcome this, a plaster-of-Paris splint was fitted to the front of the forearm and palm of the hand, and secured snugly by a plaster bandage. Under this press-

ure the œdema soon subsided and the surface became healthy.

The thumb and fingers have been forcibly exercised to prevent anchylosis.

The contractions and adhesions have been constantly opposed by stretching, pressure, and occasionally by cutting.

A number of small grafts have been planted about the stumps of the little and ring fingers. These were secured in place by several different methods: 1. By the ordinary method of pressing the graft gently until it is embedded in the granulations, and keeping it in place from three to five days by the pressure of the dressings. 2. By passing a thread through the graft and stretching it to the granulations. 3. By passing a thread through the granulations on either side of the graft and tying the ends over it. 4. By making a small flap of granulation tissue with the scissors, and raising it up and placing the graft under it.

Either one of the last three methods is preferable to the first or original method as taught in the books.

In this way a number of skin centres were planted about the stumps and bases of the index and middle fingers.

I have decided to cover the remainder of the hand with skin transplanted from the breast. With this in view, the arm has been applied to the chest in several different positions, and left in each for twenty-four hours, in order to ascertain the most desirable site for the operation, as well as the most comfortable position for the patient during the after-treatment. This course was pursued until a position was found satisfactory for both.

First plastic operation (December 20th).—The patient was etherized, and the breast shaved and cleansed with a solution of bichloride of mercury of the strength of one to five thousand.

An incision was made through the skin, ten inches in length, commencing at the second sterno-costal joint on the left side, passing downward and to the right half an inch within the right nipple. A similar parallel incision was made two and a half inches to the left of this. The intermediate skin was freed from the deeper tissues, its ends remaining attached.

The free edges of the skin on either side of the flap were dissected up for an inch or more, and approximated as nearly as possible, and held so by two silver-wire sutures passing beneath the flap.

After all bleeding had ceased, the wound was cleansed and the hand placed beneath the band of skin. The edges of the skin at the back of the wrist and at the bases of the thumb and fingers were carefully freed with scissors, so as to approximate the edges of the flap to a newly made surface. The granulations were also shorn from the back of the hand, and the adipose tissue from the flap.

The edges of the flap were then applied to the freed edges of the skin of the wrist and fingers, and secured by harelip pins and silk sutures.

Dressing.—Four layers of iodoformized gauze were placed between the hand and the chest, and also upon the back of the hand. A Stromeyer's cushion supported the arm and forearm from the body. The arm was held firmly in this position by four broad adhesive straps in different positions. The thumb and fingers were drawn gently toward the left shoulder and fixed by small adhesive straps.

A drainage-tube was inserted above, and another below the hand. A pete-bag was placed above the hand, another below it, and a third below the fingers. These were covered by absorbent cotton and a Lister-gauze bandage, which passed about the body and covered the entire arm and hand. Lastly, a plaster-of-Paris dressing was applied, covering all except the hand.

After-treatment.—The after-treatment consisted of the application of a bottle of hot water to the dressings over the back of the hand for the first twenty-four to forty-eight hours, and the frequent irrigation of the wound through the tubes. The temperature did not exceed 101° F.

Dressings removed (December 27th).—On the seventh day after the operation, the dressings were removed and the hand exposed. Most of the stitches had cut out. They were all removed except a harelip pin at the middle of the wrist, and another through the stump of the little finger, which had not cut. The flap is all alive, and its edges have united at the base of the thumb and at the corresponding point at the wrist, so that the skin is here continuous from the thumb to the forearm.

The deeper surface of the graft has also united to the back of the hand, with the exception of an area about the size of a silver quarter at the ulnar side of the hand, where there is an accumulation of pus. This was reached by a probe from below, evacuated, and a seton passed through. The wound was thoroughly cleansed and new dressings applied.

Second operation (December 29th).—The graft on the back of the hand is doing as well as I could desire, but the patient is suffering markedly from confinement and the shock of the last operation, which renders it important to complete the work and free the hand from the chest as early as possible, so that he may get out of doors. In view of this I concluded to free one end of the graft at once.

No ether was given. The temperature was 99.5° F., before the operation.

The original incisions were extended upward, making the right edge of the flap three and a half inches, and the left edge two and a half inches long.

These were connected by a transverse incision, after which it was separated from the breast.

The fatty tissue was shorn from it. The palm of the hand was turned upward and the granulations thoroughly removed with scissors. The flap was then applied to the palm and stitched in place.

The edges of the skin of the chest wound just made were freed and slid forward, and secured so by silver and silk sutures and adhesive straps.

Dressing.—The hand was so placed as to rest upon the band of skin below it, somewhat as in a sling, hoping that union in this region might be secured by this means. The dressing in all other respects was the same as after the first operation, except that the forearm was made to rest upon a kind of plaster-of-Paris shelf, lined with absorbent cotton. Temperature, 100.5° F. after the operation.

Third operation (January 3, 1885).—Patient is losing strength and perspires profusely. Condition of both patient and hand is at a standstill. I determined to free the lower flap at once, and separate the hand from the body. The second operation was only partially successful. The proximal one-half to two-thirds of the flap has lived and united to the hand. The remainder is dead, though not separated.

Ether was administered. The original incisions were extended downward, making the flap four inches long, after which it was separated from the body. The fatty tissue was removed with scissors, and the granulations of the hand shorn off as before. The flap was then adjusted and secured in place by sutures.

The dressing consisted of iodoformized gauze, absorbent cotton, and a Lister-gauze bandage. A bottle of hot water was applied to the dressings over the palm for forty-eight hours.

The edges of the skin of the lower half of the chest wound were freed for two inches on each side, approximated as nearly as possible, and secured in place by sutures and adhesive straps. In this way the extremities of the chest wound were closed for about two inches, and the intermediate portion reduced to less than two inches in width.

Chest (January 12th).—Since last note the temperature has ranged from 99° to 100° F., with a correspond-

ing pulse. The sutures have all been removed from the breast. The wound is dressed on alternate days by removing the adhesive straps, cleansing, cauterizing the exuberant granulations, and applying new straps. Although the edges retract considerably when the dressings are removed, yet after new straps are applied they are not separated more than one to two inches.

Hand.—Upon the hand about one-third of the end of the first flap and two-thirds of the second have died and separated, leaving the central portion of the palm bare.

For several days the skin has been stretched around the hand by adhesive straps dove-tailing across the palm, the object being to secure the greatest degree of approximation of those portions of the skin remaining upon the palm.

January 20th.—Patient now walks to and from the office. The skin is still stretched across the palm by means of adhesive straps. The chest wound heals rapidly and is still dressed with straps.

The skin on the back of the hand is now continuous from the forearm to the fingers. The central third of the palm, with a few small areas on the fingers, is still granulating. There is a strong tendency to contraction in the deeper tissues of the palm and fingers, drawing the thumb toward the palm and strongly flexing the fingers. A daily effort is made to overcome this tendency by passive motion and forcible extension.

February 4th.—The contraction of the palmar tissues tends to produce so great deformity of the thumb and fingers that it has been determined to make another attempt to cover the palm with transplanted skin. At first it seemed advisable to do this by dissecting a flap from patient's breast, leaving one end attached and applying this to the palm in such a manner as to make the reflection at the roots of the fingers; then, when union had taken place, to separate it from the body, including enough tissue to be utilized in covering the flexor surfaces of the fingers. But after carefully taking into consideration both the patient's condition and that of the hand, I decided to transplant the graft *en masse* from his brother, and thus be enabled to keep the fingers under daily observation and training.

Accordingly both were placed side by side upon a table and etherized. First I relieved the strong flexion of the index finger and adduction of the thumb by making a deep **V**-shaped incision with the angle toward the palm, one arm terminating in the cleft between the index and middle fingers, and the other between the index finger and the thumb. The index finger could then be sufficiently extended and the thumb partially abducted. The tissues were cicatricial to the full depth of the incisions.

Second, the granulations were carefully shorn from the palm and all bleeding arrested.

Third, a graft an inch and a half long and one inch wide was taken from the brother's side, all adipose tissue shorn off, and applied to the palm, the four corners being secured each by a suture.

Dressing.—The **V**-incision was sprinkled with iodoform and filled with sponge. A sponge was applied over the transplanted graft, and the hand enclosed in a cheesecloth bandage. A hot-water rubber bag was applied to the palm and no splint used.

February 5th.—The dressing caused so much pain that the bandage was removed, and it was found that the skin on the back of the hand would not safely bear any degree of pressure.

May 25th.—The graft transplanted from the brother died. Since last note the treatment has been confined to passive motion, forcible extension, stretching and breaking up adhesions, and the training afforded by splints and adhesive straps. In spite of all this the thumb at this date was drawn well into the palm of the hand. Commencing on the flexor surface of the thumb, midway between the first and second joints, and cutting from side to side, I made seven parallel incisions, one-eighth to one-fourth of an inch apart, and extending as deep as the flexor tendon, which was exposed but not cut. The thumb was then extended as far as it was safe to do, and secured in this position to a dorsal splint extending along the forearm. The tissue cut was thoroughly cicatricial. The incisions were all filled with purified sponge.

June 18th.—The thumb has been decidedly improved by the last operation. The sponges did admirably. The entire space included in the incisions was transformed into a granulating surface to which small grafts were applied. To-day three such incisions were made at the base of the index finger, which was then extended and secured in position in the same manner, the incisions again being filled with sponges. The middle finger resists all orthopedic efforts, and persistently tends to the ulnar side of the hand. The first and third joints are anchylosed and the middle joint is a flail-joint since the exsection.

June 29th.—As the index finger is again becoming strongly flexed, and as the middle finger is hopelessly useless, I decided to utilize the latter in freeing the former. Accordingly I made a deep incision across the palm from the cleft between the index and middle fingers to the cleft between the index and the thumb. I then split the middle finger down to the bone on the palmar surface, removed the entire bone to the metacarpo-phalangeal joint, and applied the remaining tissue across the base of the index finger to fill the incision already made, stitching it in place. Other parallel incisions were made across the index finger, and also across the palm—six in all; also five parallel longitudinal incisions in the palm, extending from the upper of the transverse cuts toward the wrist. These latter were for the purpose of opening out the palm, which was considerably drawn in. A sponge was inserted into the disarticulated joint cavity, and also into each of the cuts.

The index finger was then extended and secured to a dorsal splint, which had previously been secured to the forearm. The thumb was extended and secured in like manner, and the dressing completed by sponge-pressure to the palm.

July 1st.—Temperature 99°. The bandage was removed, and, as far as could be seen without removing the sponges, everything seemed to be doing well.

July 2d.—Temperature normal. The sponge covering the palm was raised and the flap found to be alive and doing well. Moderate passive motion of both thumb and index finger is made daily.

July 4th.—The flap has united by first intention. There is a plaster splint applied to the forearm with a rubber band, attached both front and back, for the purpose of applying elastic extension to the thumb.

July 27th.—The hand has greatly improved since the last operation. There is considerable power of voluntary motion in the thumb and finger, and they can now be made to touch. The constant extension of the index finger has stretched the flap at its base so that now it extends well up on the finger. A splint extends along the dorsal surface of the thumb, and another along the back of the index finger. To these the thumb and finger are secured to overcome the tendency to flexion.

September 9th.—The entire hand is now healed. The thumb is strongly drawn toward the palm. The thumb and finger can be made to touch, but only coarse objects can be picked up.

The patient has to-day resumed work.

Deductions.—In my judgment this case illustrates the following points:

1. The importance of temporary dressings previous to operating, for the purpose of ascertaining the position most favorable for the operation and at the same time most comfortable to the patient.

2. The necessity of determining what form of dressing shall be used before operating.

3. The value of large skin grafts in saving members

and rendering them useful, when otherwise they must be sacrificed or become useless.

4. The time saved in the healing process, the greater part of the hand in this case being covered with healthy skin in two weeks.

5. The advantage of transplanting large grafts, before separating them from the body, over transplanting *en masse*.

6. That the most successful method of transplanting small grafts is either by stitching them in place or by raising a flap of granulations and placing them under it.

7. The benefit of pressure in reducing redundant granulations.

8. The value of multiple incisions in overcoming cicatricial contractions, the credit of which, so far as I know, belongs to Dr. Alfred Post, of New York.

9. The advantage of the sponge in stimulating the growth of granulations and rapidly filling up and healing such incisions.

Were I performing a similar operation again, I should free both ends of the flap from the chest at the same time, thus completing the entire work in two operations. I believe my success would have been better in this case if the work had been completed at the second operation and the ends of the flaps made to support and nourish each other.

The only other case of this kind, so far as I am informed, is one of Dr. W. T. Bull, of New York, which was done in 1884, but to my knowledge has not been published yet.

The great advantage of this method over the old method by many small grafts, is well illustrated by the following cases:

In 1879 Dr. W. T. Bull covered the leg and outer part of the thigh with new skin, by means of small grafts. Twelve hundred grafts were used, and the time occupied was six months.

In a case of loss of the entire scalp, Dr. W. L. Bradley, of New Haven, commenced the use of small grafts on December 1, 1873, and by September 22, 1875, had renewed the scalp, using 795 grafts in all.

Dr. W. Symington Brown, of Stoneham, Mass., also replaced the scalp by means of small grafts. He commenced in 1873, used 2,600 grafts, and completed his work in 1876, three years after the injury.

Dr. Bartlett—deceased—of Waterbury, also replaced the scalp by means of small grafts, the process occupying considerable time, but I am unable to say just how long.

On the other hand, in the cases of entire loss of the skin of the hand, these members were covered with healthy skin transplanted from the chest in the course of two to three weeks.

Combined External and Internal Urethrotomy.—We have received a reprint from the *British Medical Journal* of a paper read before the Lancashire and Cheshire Branch of the British Medical Association, by Mr. Reginald Harrison, who opposes strongly the operation of internal urethrotomy, urging that the most serious consequences may, and often do, result from the stagnation of urine in the wound. The portion of urethra involved in the wound is necessarily paralyzed, and is therefore prevented from expelling the urine, which remains to stagnate and undergo absorption in part. To obviate this difficulty, in cases in which the stricture is seated in the scrotal or pendulous portion of the canal, Mr. Harrison combines the external with the internal operation. He states that he has never seen a rigor or the development of urinary fever after this combined operation. The external urethrotomy, which he performs in order to give vent to the urine and keep it from coming in contact with the urethal wound, is properly described as a perineal puncture, only large enough to admit the passage of a drainage-tube into the bladder. The operation has given most satisfactory results, and will, the author believes, remove most of the danger incident to internal urethrotomy as usually performed.

SYMPATHETIC DISEASES OF THE EYE.

BY C. A. BUCKLIN, M.D.,

Under the above title I wish to call attention to some facts of the greatest possible importance. Having been brought so frequently face to face with this horrible condition known as sympathetic disease, I shudder when I think that the sad fate of the patient is too frequently the result of a failure of some family practitioner or too positive specialist to recognize the intricate nature of the trouble, or the hidden danger which is lurking under a calm exterior.

They fail to fully explain the danger which may follow in time, and complete blindness is the result.

The time required from the injury until the other eye is destroyed varies from a few weeks to forty years. It is impossible to consider in detail the subject of sympathetic diseases of the eye in the limited space a general medical journal can devote to the subject.

The entanglement of a ciliary nerve in a scar, or any other constant source of irritation existing in an eye, as chronic inflammation, calcareous deposit, foreign bodies, scars resulting from a wound. A cataract which is overripe, and has become calcareous, may cause the destruction of the eye, the fellow eye, or both eyes.

I desire to present such illustrative cases as will cause the careful to think, and the careless beware. I present the facts as they exist, not with an intention to criticise, but with a pure desire to do the greatest good.

Case I.—Mrs. B——, aged fifty. In May the right side of the face was covered with an eruption which followed an attack of malaria. The eruption caused a severe burning and itching sensation of the entire right side of the face, which later became covered with a yellow crust. The line of division, however, between the crust-covered right side of the face and the healthy left side, was very sharp. At this stage she consulted a physician, who diagnosed the case as an acute eczema, and treated it as such for three months, when one of the pustules appeared upon the cornea, it ulcerated, the cornea perforated, the iris became extensively attached to the perforation, the eye was lost, and in three months more the other eye was affected with sympathetic disease.

The sharp line of division between the affected and healthy side of the face should have attracted the attention of the physician at once, and caused him to recognize the trouble as a neurosis (herpes zoster).

This case illustrates the importance of recognizing and treating properly neurosis of the fifth nerve. Failure to make a correct diagnosis in this case made a blind woman, when correct diagnosis would have led to a favorable termination of the disease.

Case II.—Mr. M——, aged thirty-three, was chipping cast-iron in 1865 when a piece of iron or chisel struck him on the margin of the cornea. It made a simple, clean wound of the cornea, through which the margin of the iris prolapsed. The eye at the time I saw it looked exactly as if Critchett's operation for displacing the pupil had been carefully performed by a skilled operator—he retained fair vision in the injured eye. He consulted his family physician and several specialists of this city, each and every one of whom were enthusiastic in their explanation of the patient's great good luck in having a sharp piece of iron strike the eye and do so little damage.

The general verdict was, "It is a very fortunate accident; the eye is all right."

Let us now observe the consequences, and see how unfortunate the accident was, and how fortunate it would have been for the patient had the eye been so mutilated that its immediate removal would have been necessary.

All attempts to use his eyes for any length of time fatigued him. His business called him upon the water. In 1873, eight years after the accident, he began to see dark clouds pass over the water, or he would observe a

tremulous or undulating appearance of the water which none of his companions could see. It was three months after he first saw these dark shadows before he saw them again.

The periods became more frequent. Within one year from the appearance of the dark shadows the eye which was not injured was totally blind, and only sufficient vision remained in the injured eye to enable him to read large print with difficulty. No one had considered the injury serious, and no one had warned him of the possibility of the other eye being lost by sympathy.

The operation of Critchett for displacing the pupil has in many instances brought about the same sad consequences years after the patient has passed beyond the observation of the surgeon.

Case III.—Mr. M——, struck in 1859 upon the retina by a sharp piece of steel, which perforated the eye but did not enter the ball. It glanced off. The choroid prolapsed through the wound, and at the time of examination looked like a black pin-head on the whole retina under the conjunctiva.

To show that there is a possibility of every one being mistaken about the consequences which may follow such a simple accident, I casually mention the fact that he repeatedly consulted our most respected authorities on ophthalmology about the black speck on his eye. They assured him that it was a matter not worthy of attention.

In 1873, fifteen years after the accident, his eyes began to tire easily. He began to see smoke in the atmosphere, the vision would periodically become obscure, at last the acuteness of vision became permanently obscured.

All efforts to use the eyes produced an immediate sensation of fatigue, and were disagreeable to him.

He was sent to me by an optician to see if glasses would remedy the trouble.

Upon observing the choroidal hernia I suspected a ciliary nerve was implicated. I cut down by way of experiment and cut the hernia off as close to the wound as possible, from which I freed it as thoroughly as I could. The patient at this time had $\frac{2}{10}$ of normal vision.

The strange feature of the case, which surprised me as much as it will any of my readers, is that in eight days the vision increased to $\frac{2}{3}\frac{0}{0}$ of normal vision, and all unpleasant symptoms had disappeared. Those who propose to open the eye to introduce magnets or transfix the choroid with needles, should remember that this case illustrates the possibility of doing a damage which may, fifteen years later, cause both eyes to be lost, although the original object for which the magnet or needles were introduced was well accomplished and successful. Such patients cannot be too thoroughly warned as to the possibility of danger years afterward, and the symptoms which indicate its approach, as fatigue, mist, dark shadows, flashes of light, etc.

Case IV. illustrates an example of the careful specialist, who is thoroughly aware of the danger, while treating a child on the *expectant* plan. The child has a herpes of the cornea, which sloughs with a large prolapse of the iris in the wound. This is followed by cyclitis, for which she is being treated, and the other eye is being kept under observation. The mother is told to bring the child back in four weeks, as the cyclitis in the injured eye has quieted down. In six weeks she returns with the child, and imagine the mental chill which must pass over one when he looks into the *uninjured* eye and sees delicate cyclitic membranes stretching entirely across the field of vision. It is too late to enucleate the offending eye—the child is blind.

There was no warning in the shape of a complaint from the child. There was no decided injection of the eye to attract the attention of the mother or physician.

Specialists are frequently deterred from doing their duty by the outside pressure of parents, friends, physicians, and dishonest or sometimes ignorant "eye-doctors," who are willing to give a favorable prognosis on no other grounds than a desire to please the family.

I believe that in children upon whom we cannot rely for early information regarding symptoms in the other eye, it is the duty of the specialist to strongly advise the removal of every eye which decidedly endangers the fellow eye.

Case V.—Mr. R——, at twenty years of age, cataract found in one eye, from unknown cause. At fifty, sympathetic irritation appeared in other eye in the form of flashes of light. Enucleation of offending eye arrested further development of disease in uninjured eye. The lens was calcareous, and calcareous deposits were thickly distributed through the ciliary body. There were evidences of an old cyclitis, with extensive detachment of the retina. The cyclitis, not being traumatic, was evidently specific.

Case VI.—Mr. L——, struck in the eye with a cowhorn during boyhood. At the age of sixty, the other eye, which has behaved well during this time, is affected sympathetically, the development of which affection is announced by dark shadows followed by flashes of light and entire loss of the uninjured eye. Cyclitis and calcareous deposits are found in the injured eye.

The last two cases bring us to a practical point regarding cataract extractions.

How often has the following rule been laid down to students of ophthalmology?

Never remove a cataract before it is ripe—meaning as long as fingers can be distinguished. Never remove a cataract from an eye when it is plain that no visual improvement can be attained, unless the patient desires it done for cosmetic purposes.

Never remove a cataract as long as there is good vision in the other eye.

In all cases of cataract, except the congenital variety, the crystalline lens is undergoing progressive atrophy—the vitreous is becoming fluid, and the intra-ocular blood-vessels are becoming weak. Calcareous deposits are sure to form in the hypermature cataract.

Is it not better to disregard all these rules and remove the diseased lens from the eye at such time as it can be removed with the greatest safety to the patient? A calcareous lens is a dangerous thing to have in an eye, and also a very dangerous lens to remove by the usual method of opening the capsule, the calcareous débris being liable to fall into the eye during the evacuation of the lens. I have seen both eyes totally lost within ten weeks after such an accident. The operated eye was destroyed by cyclitis, and the eye not operated upon was destroyed by sympathetic disease. If it can be seen that a lens is filled with calcareous deposits and it is to be removed, it is better to remove it in its capsule entire. The removal of the lens in its capsule is a dangerous operation under the most favorable circumstances, and still more liable to cause loss of the vitreous, and intraocular hemorrhage in cases where the lens has remained in the eye till it is filled with calcareous deposits. Having waited till the lens is in this state one is between two fires, and it is impossible to judge which is the more dangerous, the chance of dropping calcareous deposits in the eye by the ordinary method of extraction, or the chance of causing intraocular hemorrhage, or cyclitis, by the violence done the eye in attempting to remove the lens in its capsule. I prefer to remove the lens as soon as they cannot count fingers at a greater distance than two feet. In the majority of cases this avoids all serious complications. The lens comes out easily. There are no calcareous deposits in it. The vitreous and intraocular vessels are in a healthier state than they ever will be at any subsequent time. When I see some specialist of experience who is willing to have the lens and capsule torn from his own eye, I shall believe that this method of removing the lens in its capsule has one enthusiastic and honest advocate. I never will do an operation on a patient's eye that I would not ask a colleague to perform on my eye if I were the patient.

In iritis we sometimes see a nodular appearance of

the surface of the iris: this is due to circumscribed portions of the iris being so scaled down that local cavities are formed in which fluid accumulates and lifts the iris, forming an elevated nodule, of which there may be several. Such eyes, as visual organs, are of no value; they are almost sure to set up sympathetic disease in the other eye, the only preventive measure against which is enucleation. If the family do not indorse this operation let some kind-hearted colleague take the case and also the responsibility. Iridectomy in these cases is too uncertain to be encouraged.

When the entire margin of the pupil is fast to the lens, or cornea, iridectomy is usually all that will be required to make the offending eye safe. Having illustrated what may happen to those who do not appreciate the dangers which may arise from sympathetic disease, we will mention two cases which illustrate what the over-zealous specialists do occasionally.

Mrs. C——, aged fifty, has acute syphilis; right eye develops plastic iritis, with multiple adhesions of the margin of the iris. Four months later simple plastic iritis breaks out in the left eye. She visits two of our city eye institutions. The pupil of the last affected eye dilates readily under atropine, with one marginal attachment of the pupil to the iris. The disease of the second eye is called sympathetic. Enucleation of the right eye is most urgently insisted upon at both institutions.

I freely confess that I am not so bold as to advise the removal of an eye that still has a good visual field, because plastic iritis has b oken out in the fellow-eye without any premonitory symptoms.

The syphilitic eruption being in a most flourishing condition, is it not more judicious to call the iritis of the second eye a specific iritis, and to treat it as such energetically, rather than enucleate one eye before you are sure which eye will turn out to be the better, and before you are sure that the enucleation of the eye will not have a disastrous effect upon the fellow-eye, which is already in an irritable and dangerous condition?

It must also be remembered that such eyes, as a rule, do very well without enucleation.

Mr. R——, aged twenty-five, had specific iritis of one eye, which caused extensive pupillary attachments of the iris to the lens. The pupil appeared blocked with a mass of exudation. Several weeks later the second eye was attacked with plastic iritis. The advice given by several specialists was to enucleate at once. He was treated for syphilis and iritis. At the end of four months the eye with which he could read was the one the enucleation of which had been strongly advised.

A single adhesion of the iris to the lens is more dangerous than two or more adhesions so situated that the movement of the iris is limited; such eyes are only to be operated upon when sympathetic irritation appears in the fellow-eye, or the attachment of the iris to the lens becomes complete and water-tight. This can only be determined by the iris appearing "crater-shaped," thus proving that fluids can no longer escape into the anterior chamber.

Adhesions of the iris to corneal wounds are more liable to be followed by sympathetic trouble than adhesions of the iris to the lens.

Blood-letting Extraordinary.—M. Thevenau, of Nivernais, according to the *Revue Médicale*, had under his care the wife of a sheriff named Gignault, twenty-four years old, whom he bled, in the course of nine months, from September, 1726, to June, 1727, 3,904 times. The woman still lived, and was bled 651 times more in the next six weeks. Bleeding, it appears, was the only means of giving the woman relief, and it was accordingly practised most industriously for three and a quarter years, the number at the expiration of that period reaching the very respectable figure of 26,230. It is not stated why the phlebotomy was discontinued at this time, but possibly the patient died.

Progress of Medical Science.

Bromide of Camphor.—This drug was first introduced into the field of practice in 1871, and possesses, in spite of its comparative youth, an ample literature, of which we will only refer to the most recent and therapeutically important works (*The Therapeutic Gazette*, November 16, 1885). Not long ago Valenti y Vivo called attention to the physiological antagonism existing between the monobromide of camphor and strychnine, a fact which has a toxicological value. Lienhart contested the hypnotic virtue of the drug which Hammond upheld. The latter physician cited a case of delirium tremens in which he employed this remedy. After the eighth dose, Hammond says, the patient slept for four hours. After awaking he obtained the remedy again, and after six doses he slept for six hours. Warren, of New York, as long as ten years ago used the bromide of camphor with good results in typhoid fever, and declared that it exercised an actual influence over temperature and circulation. Petrowitz employed the drug in numerous cases of hysteria, chorea, cardiac palpitations, and nocturnal erections with satisfactory results. He mentions the case of a medical student suffering from nocturnal erections and following pollutions, who was treated with bromide of potassium without success, but was promptly relieved by bromide of camphor. Gubler claimed to have obtained remarkable sedative effects with capsules of bromide of camphor in genital excitation, and especially in blennorrhagic priapism. Camphor, says this author, does not ordinarily traverse the kidneys, but in the form of the monobromide it can be made to do so. Marm employed the drug in mental diseases, and more recently Hammond in hysteria, in doses of two to three grains given every two hours after the paroxysm. In the latter affection it is especially suitable when ether and chloroform are contraindicated. Nothnagel and Rossbach recommended the remedy against nervous excitation of the cardiac and genital systems. Fonssagrives, reviewing the various therapeutic uses of the drug, calls it an antispasmodic, an anaphrodisiac, and a general nervous sedative. Rolland and Mills furnish further testimony to the useful services of the drug in affections of the nervous system. Quite recently it has also been tried in chorea with promising results.

Etiology of Floating Kidney.—It is a well-known fact that movable kidney is found with greatest frequency in multiparæ, and the explanation usually given is that it is due to laxity of the abdominal parietes. But this does not account for the fact that the organ displaced is usually the right one. In the *Revue Bibliographique des Sciences Médicales* of October 31, 1885, Dr. Eugène Martel puts forth the theory that the displacement is caused by the movements of the fœtus in utero. At the end of the fourth, or during the fifth month, the fundus uteri reaches the lower border of the kidneys, and as the organ is usually inclined to the right, it is the kidney of this side that is pressed against. It is at this time, also, that the movements of the lower extremities of the fœtus begin, and as the left occipito-iliac position is the most common one, the right kidney is in position to receive frequent blows from the knees and feet of the child. Dr. Martel states that he has found movable kidney in several instances shortly after a pregnancy during which the fetal movements were especially active.

Dermatitis Exfoliativa in the Adult.—Dr. Funk relates a case of generalized dermatitis in a woman after childbirth. The eruption had all the characters of eczema: papules and pustules, isolated and in groups. Here and there were bullæ of varying size, containing micrococci arranged in small chains. The case recalled in its general characteristics those of dermatitis exfoliativa neonatorum reported by Ritter.—*Revue Bibliographique des Sciences Médicales*, No. 22, 1885.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE QUESTION OF GOVERNMENT PATRONAGE FOR MEDICAL INVESTIGATION.

AN unexpected aspect of the present public interest in the investigations of Pasteur is the awakening of the people to the fact that in this country there might be wider opportunities for profound study of physiology and the workings of disease.

Two great requisites are needful—time and money. That the hydrophobic virus has required two years for its elaboration, gives some inkling that art is long and time is fleeting. It is seldom that the medical scientist has both time and money at his command. The student with a strong bias toward investigating the deep problems of life, and who would gladly shut himself up in a laboratory to attempt their solution, finds himself obliged, after graduation, to go out into the world to win his bread. The process soon dispossesses him of his original enthusiasm; he grows rusty on his once favorite themes, and others more commonplace come in to absorb him. He looks after Mrs. Smith's rheumatism, and takes an interest in Brown's baby, as, rotating through the orbit of childhood, it encounters the diseases peculiar to each succeeding phase, while humanity at large suffers because the grand discoveries which at first beckoned on their Columbus remain still a part of the great unknown.

Americans are peculiarly adapted to become investigators in physiology and the art of healing. Untrammelled by traditions, with their quick perception and power of invention, with their readiness to absorb others' ideas, and to build upon and to enlarge them, if proper encouragement were given them, the world would look to them, as it now does to France and Germany, for the elucidation of wonderful theories relating to disease and human welfare.

Europeans have made strides where we have crept, because government patronage has been extended to the anatomist and the physiologist. What the effect of government patronage would be in this country has been illustrated by its effect in astronomy. A few decades ago this country was not thought of when this science was mentioned. The Government built observatories and took it under its protection; the result is that today we make as many celestial discoveries as any nation; our telescopes are the largest and the best, and are sent for to furnish European observatories.

If the Government would provide laboratories for biological and physiological investigation, it is safe to say that the discoveries of Americans in the terrestrial world would be as great as in the celestial.

In order to combat disease correct theories are necessary, based on absolute fact as far as possible. The microscope and the test-tube have revolutionized the science of medicine. There is no department in the treatment of disease but what holds out alluring promises of reward to the investigator. Since the welfare of the people, nay, their very lives, depend on the working out of these theories, every means and every encouragement should be given to those who attempt it.

It may be alleged that it is not the province of a democratic Government to patronize the arts and sciences; that it does very well for the more arbitrary rulers of Europe. To protect the interests of its people is surely the highest duty of any Government, monarchical or republican. To promote the knowlege of physiology, anatomy, and the healing of disease is to make more competent physicians to cope with the multitudinous ailments which flesh is heir to.

If an American wishes to fathom the deepest mysteries revealed by the microscope, to plunge into the deepest study of biology, he goes to Europe. Marey could never have made his magnificent studies of the circulation of the blood if the French Government had not given him its patronage.

Private munificence does much for arts and sciences in this country, and will probably do more. We are sure, in the fine arts and in medicine, even if entirely neglected by the Government, to do something one of these days worthy of the nation. If Pasteur's interesting experiments in hydrophobia should prove but the baseless fabric of a dream, they will have done much for us in that they have opened the eyes of the people to the fact that the medical scientists of America lack money and patronage to carry out investigations necessary to make a grand progress in the treatment of disease.

PARIS PHYSICIANS AND THE NEXT INTERNATIONAL CONGRESS.

WE publish below a communication from Dr. Johnston, of Paris, regarding the International Medical Congress. Dr. Johnston occupies a leading position among American physicians at Paris, and his letter should be read with attention:

"TO THE EDITOR OF THE MEDICAL RECORD: SIR—A considerable number of Paris physicians of eminence desire to attend the International Medical Congress appointed to be held at Washington in 1887, and have been making preparations to that effect.

"But the distance is great, especially to gentlemen little habituated to voyages of that magnitude; the total time consumed makes a large blank in a man's yearly labor; and to undertake such an enterprise they ought to have as much time for both reflection and preparation as it is possible to give them.

"May I be permitted to say, therefore, that I feel sure that it would be rendering these gentlemen a very great service, in fact, that it is a duty that ought not to be deferred a day longer—if there be any one with sufficient authority to speak in the matter—to announce at

once in the medical press, whether the Congress is to meet as agreed upon at the last Congress at Copenhagen.

"I have the honor to be, etc.,

"W. E. JOHNSTON, M.D.

PARIS, December 15, 1885.

If we were to give to the foregoing inquiry an answer unreservedly in the affirmative, we should be misrepresenting matters to our Parisian confrères. It is announced positively and officially that there is to be an International Medical Congress. But we must add to this that the American profession is seriously divided over the matter of its management, and that a considerable part of the best men of the profession have been excluded, or have been forced in self-respect to withdraw, from all connection with it.

We are glad to state, however, upon authority, that efforts for a compromise are now being made, and that there are a number of prominent gentlemen in this city, who have heretofore held aloof from the Congress, who are willing to join hands with the present management if such concessions are made as will enable them to do this properly.

We shall be able, probably within a fortnight, to say whether these hoped-for arrangements have been made, and we shall make the announcement to our French confrères at that time.

If they are not made, and the present dissensions and disagreements continue, we cannot conscientiously advise foreign physicians to come over here.

EXAGGERATED FECUNDITY.

WE constantly notice in the daily newspapers paragraphs of a quasi-medical character that are quoted from country journals. They usually relate to cases of ministers or remarkable cures without medical aid, but always some sensational story, which makes a good newspaper item, and on this account is copied by all the daily and weekly journals throughout the country.

Recently such an item was published in a leading New York daily journal, and we have since observed it in exchanges from Chicago, Washington, D. C., and it is probably well on its way to more remote points of the Union.

It was the very simple statement, copied from the newspaper published at Napoleon, O., that the wife of William Friend, residing near that city, had presented her husband with five children at a single birth, and that the mother and all the children were doing well.

This story bore the guise of truth, as the name of the unfortunate parents were given, the locality, and authority. We, however, thought we would make this a test case, so as to arrive at the general truth of such statements.

In reply to a letter to the postmaster of Napoleon, O., he (Mr. S. C. Haag) stated that "this occurrence *should* have happened with a family living at Holgate, a town ten miles from here. William Friend himself denies the report, notwithstanding his neighbours claim the statement to be true."

This rather complicated matters, as William Friend, the victim, was surely a good authority on the subject, and ought to have been cognizant of the rather sudden addition of five blooming children to the family circle; but as the local Paul Pry and neighboring gossips still stoutly maintained the fact to be true, it remained an open question whether William Friend, from motives of modesty or prudence, had not withheld the truth. Many a man before him, the hero of a less glorious achievement, had declined public recognition, preferring to pursue quietly the even tenor of his way; besides, William Friend, if a poor man, might have dreaded the effect of the news on his creditors.

The postmaster, however, did one good service in sending the name of the medical attendant who presided at the quintuple delivery of the five little Friends.

He proved to be Dr. J. Townsend of Holgate, O., and in reply to a letter of inquiry, he promptly furnished a solution of the mystery.

From him we learn that, four years ago, Mrs. Friend honored her husband with triplets, whose entrance into and exit from this world was a contemporaneous event. Recently this lady, still despising the orthodox maternal instinct, which is usually all sufficient to satisfy the most ambitious and aspiring husband, gave birth to twins, who still survive.

Such fecundity as five children at two births was apparently a thing to be despised by a Western local editor, so to provide a good sensational item he lumped the aggregate of all the births into one great appalling maternal catastrophe. In other words, he determined "to mix those babies up," although Mrs. Friend, in the exercise of a wise discretion, took a breathing time of four years between her great efforts.

The result of this little investigation among Friends will probably serve as a caution to those who gather medical and scientific facts from lay journals.

M. PASTEUR.

M. PASTEUR is certainly the most astute of scientists. He has developed a protective virus which it takes some two years to manufacture, consequently he is safe for that length of time, at least, against all rivals who would wish to corroborate or otherwise the validity of his method. This virus is employed to prevent a disease which, in the great majority of cases, never develops anyway in the patients subjected to experiment. It is probable that not more than fifteen per cent. of persons bitten by genuinely rabid dogs get the disease.

These facts make M. Pasteur's position, as the inventor of a protective virus, quite a safe one. The distinguished savant is making it still more so by announcing that no others need attempt to manufacture the virus, as he can treat the whole world of bitten people. This speaks volumes for the rarity of rabies in man, or the quantitative resources of Pasteur's laboratory. After a human being is bitten, the disease generally develops between four and twelve weeks. In some cases, however, it has been known to appear within the second week. Unless the people of India, Africa, and China, then, have more than the circumnavigatory abilities of Mr. Phineas Fogg, we hardly see how Professor Pasteur can treat the world.

All this may seem somewhat captious criticism, but

unfortunately this is not the first time that Pasteur has announced, as wonderful discoveries, prophylactic inoculations that have been practical failures. We have every desire to do the distinguished experimenter justice, and will join in ascribing to him the most unstinted honors when he proves that his present jugglery with rabbits' cords amounts to something.

MISTAKEN CRITICS.

We observe that recently some of our usually quiet and mainly scientific and analectic contemporaries have come out with editorials upon the International Medical Congress controversy. This they have characterized as "indecent," "disgusting," "vituperative," "disgraceful," etc.

Such criticisms are untruthful, and do injustice to the medical press of the country. The fact that a quarrel exists is humiliating and unfortunate, but the controversy has been carried on without the use of language that could be called either "vituperative" or "indecent." So far as our own columns are concerned a strict regard has been paid to the use of Parliamentary language, the construction of admittedly rhetorical periods, and the elasticity of journalistic amenities. Most of our contemporaries can safely say the same thing. If there has been anything "indecent" or "disgraceful" it has not been in the mode of the controversy, but in the fact of its existence.

THE NEW YORK STATE MEDICAL SOCIETY.

The annual meeting of this society at Albany will soon take place, and we learn that a very large number of interesting papers have already been promised. We have no doubt that the prospects of a profitable meeting, and the feeling of loyalty to the old State society, will cause a large attendance.

It is quite time to consider the question, however, of some radical change in the society's organization, and in its time and place of meeting. The society, when chartered, and for long years afterward, held some controlling power over the practice of medicine in the State. Its organization was based on this fact, and membership was made a thing not easily attained. The society now has practically only scientific and social functions. The question arises, therefore, whether it would not be wiser to abandon its present elaborate machinery and throw the membership open to all, as is done by most other State medical societies. There are many reasons for believing that its popularity and usefulness could thereby be greatly increased.

THE COMMITMENT AND MANAGEMENT OF THE INSANE.

Two reforms in connection with the insane are urgently needed. One of these relates to the methods of commitment, the other to the treatment of the acute insane.

We have already alluded in these columns to this subject, but a constant reiteration is necessary. Practising physicians in this city who are called upon to commit the insane are often subject to vexatious delays and great personal annoyance. The physician generally has to go down town and await the pleasure of clerks and judges. Certain judges, we are informed, refuse to sign certificates in any case. The doctor is often obliged to fee the clerks in order to facilitate matters. There should be certain judges designated whose duty it would be to sign the certificates, and whose services could always be had without delay.

The manner in which the insane of the city are herded together, without receiving careful examination, or watchful and scientific medical treatment, is simply outrageous. As matters stand now, an insane pauper might just as well be boxed up in the Tombs as sent over to Blackwell's or Ward's Islands. The medical treatment amounts to nothing. It is quite time that some change be initiated. The chronic insane should be sent off to some country asylum, and sufficient room be given for the proper care of the acute cases. Upon treatment rightly given at these stages often depends the individual's future health and usefulness.

THE PREVALENCE AND CAUSES OF HERNIA.

The subject of hernia is one of such permanent interest that we offer no apology for calling attention to a number of facts regarding it which have been gathered together by Mr. R. J. Pye-Smith, although many of them are not particularly new.

Hernia occurs in about 1 in 25 of the population, but it is more frequent in Germany (1 in 13 adults), and least frequent among the Irish. One death in every 500 in England is due to hernia; and out of every 5 cases of strangulation 1 is fatal. Again, 1 case in every 10 suffers strangulation at some period of its existence, and hence 1 case of rupture in every 50 is ultimately, according to Dr. Pye-Smith, fatal.

Half the cases of strangulated hernia admitted into hospitals are inguinal, of which about two-thirds are reduced without operation, and one-third are operated on, with a mortality of forty-eight per cent. About one-seventeenth are umbilical, of which also two-thirds are reduced without operation, and one-third are operated on, with a mortality of fifty per cent. The remainder (nearly half the cases) are femoral, of which one-third are reduced without operation and two-thirds are operated on, with a mortality of forty per cent.

Thus it will be seen that one-half the total cases of strangulated hernia are reduced without operation, and half are operated on, with a mortality of forty-three per cent.

In the male inguinal is over twenty times as common as femoral hernia, while in the female femoral is somewhat (though not much) more common than inguinal.

With regard to age, Dr. Smith finds that inguinal hernia in both sexes commences far more frequently during the first year of life than it does during any subsequent year. It is found, too (Birkett), that half the cases of inguinal hernia admitted into hospital wards are of the congenital form. And again, femoral hernia occurs as a mere curiosity before puberty, but in each of the years between the ages of twenty and fifty, it develops, in women, with great frequency.

The exciting causes of hernia are almost exclusively such as put pressure on the contents of the abdomen, such as accidents causing a squeezing of that cavity,

straining, holding the breath for muscular exertion, especially in lifting weights (in which position the anterior abdominal muscles are at a disadvantage), coughing, vomiting, etc. Hence we find women affected in parturition, men in stricture of the urethra, and both sexes in bronchitis and in constipation. In male children Dr. Smith thinks that far the commonest exciting cause is the straining produced by phimosis. Mr. J. A. Kempe found, at the Ormond Street Hospital, that 3 out of every 5 cases of phimosis were ruptured, and among Dr. Smith's cases of hernia in male infants he found that 4 out of every 5 had phimosis. It is curious that this coincidence appears to have attracted so little attention. It is scarcely, if at all, mentioned in the text-books, and except for Mr. Kempe's communication to *The Lancet* (in 1878), Dr. Smith has seen only passing references to it. It is, however, a point of much practical importance, and may afford an additional reason for performing circumcision or dilating the prepuce in all cases of congenital phimosis, whether hernia is present or not.

DR. SUSSDORFF VINDICATED.

We are happy to learn from official papers before us that the long and annoying suit brought by Mrs. Lydia C. Cocks, of this city, against Dr. Gustave E. Sussdorff and another, for damages at the rate of $50,000 for loss of services of her daughter Clara, through malpractice at the hands of Dr. Sussdorff, has been decided against the plaintiff, and in favor of both defendants. Dr. Sussdorff has not only received a full and clear acquittal from the court, but we notice with pleasure that his treatment was pronounced to have been in every way proper and skilful, and that the patient was not injured, but greatly *benefited* by it. We have always believed such would be the result of the case, knowing, as we do, the doctor to be an honorable gentleman, as well as a skilful and conscientious physician.

We heartily congratulate him upon this final disposition of so annoying a case.

THE FUTURE OF CREMATION.

The literature on this subject has already become quite voluminous. That this method of disposal of the dead will become the method of the future, in cities at least, there seems at present little reason to doubt. It will meet the usual obstacles from old customs, prejudice, and preconceived opinion. But twelve years ago it was demonstrated by two Italian physicians, Brunetto and Gorini, that the body could be reduced to ashes without wounding the feelings of the most susceptible or fastidious; without sight, sound, or smell. The first great step was then taken. Cremation was demonstrated.

Since that time public opinion has steadily grown in its favor. Italy has led in this respect; but in our own land, nay more, within a few miles of us, cremation is now of almost weekly occurrence. Four bodies have already been burned at Fresh Pond, and, if the daily prints are to be believed, with excellent satisfaction to the friends of the deceased.

It is somewhat curious to note the grounds on which cremation has been opposed. The great argument in its favor has always been the sanitary one. From the very outset no one has disputed this or attempted to gainsay it; indeed, any attempt so to do would have been flying in the face of scientific facts. The observations of Pettenkofer, concerning ground-air and water, and the relation of their fluctuations to the outbreak of zymotic diseases, have proved the truth of Sir Henry Thompson's conviction that "no dead body is ever placed in the soil without polluting the earth, the air, and the water, above and about it." Some have declared that the abandonment of inhumation would rob the earth of its due allotment of nitrogen. The reply of the cremationists has been, that while the nitrogen of the incinerated body passes into the atmosphere in a gaseous form, it is by the rain eventually deposited in the earth, just as surely and just as effectually as if inhumation were practised. Some over-anxious orthodox people have feared that cremation would in some way show irreverence for the Christian doctrine of the resurrection, reasoning from an entire misapprehension of the relation between the spiritual and the physical. They have been speedily silenced by the crushing question of the orthodox Lord Shaftesbury: "If burning the body interfered with the resurrection, what would become of the blessed martyrs?" There is no doubt but that cremation was practised in the early days of Christianity. A careful study of the centuries shows it to have prevailed somewhere almost continuously since. Evidences are plain of its existence among the Swiss, in the eighth century, and among certain tribes of North American Indians at a somewhat later period. So in this, as in so many other matters, our greatest advances are only in the line of a return to the manners and customs of our progenitors.

The abolition of much of the expense connected with the present mode of burial is not the least advantage attendant upon cremation. The cost of single graves in the public lots of nearly all the cemeteries about New York is above the means of many poor people, and if they are not the recipients of some charitable organization, their dead must go to the Potter's Field. Even if cremation were to be in these cases at public expense (as will doubtless be the case in the future), it would be some comfort for the friends to know where the ashes of the dead were kept; for a public columbarium is much less harrowing to the feelings than a public burial-place.

Another curious argument advanced in favor of cremation is that the final religious services would be performed under cover, and that friends and relatives would not be exposed—as is now often the case—to the danger of taking cold and contracting thereby a serious if not a fatal illness. This argument is not without some force. From a sympathy and desire to show proper reverence for the dead, many persons expose themselves at funerals to the weather who, under other circumstances, would exercise greater caution.

Of course, no such subject could be discussed at large without stimulating some would-be paragrapher into attempts at humor. These have varied from the account of the small boy who was sent with a tin pail by his mother to the undertaker to learn "if dad was cremated yet," and if so to bring home his ashes, to that sentimentalism which has led some afflicted ones to plant flowering plants in the ashes of their deceased, and presumably water them with tears of sorrow. We are told

in a volume on cremation that this latter occurrence has actually happened. Looking upon the matter of cremation in a sober light, we must admit that it has already gained a foothold in this country. No one has dared to oppose it on scientific grounds. All are convinced of its utility from a sanitary point of view.

ALLEGED MISUNDERSTANDINGS WITH REGARD TO THE INTERNATIONAL MEDICAL CONGRESS.

CERTAIN of the gentlemen now having in charge the conduct of the International Medical Congress are hugging to themselves the delusion that it is simply a want of true understanding of matters that keeps up the present discord.

They should disabuse themselves of this idea at once.

It is perfectly well known that the Congress is now in charge of an Executive Committee, consisting at present of nineteen gentlemen. Three more names will be added when Presidents of the Sections of Physiology, Pathology, and Gynecology have been obtained, and the total membership is limited to thirty.

This Committee fails to gain support or confidence because it represents, not the profession, but the narrow policy and political methods of the American Medical Association —a policy which overturned the work and affronted the dignity of the original Committee, and because no confidence is felt that it will carry on the management of the Congress on liberal principles, recognizing scientific merit apart from any Code affiliation.

If the members of this Committee will personally take the trouble to make concessions which will remove this distrust, the organization can go on. But they must do more than tender a sop here and there, with no definite assurance as to their future policy.

News of the Week.

TOXIC EFFECTS OF COCAINE.—Dr. Thomas R. Pooley, of this city, writes: "In your issue of the 26th ult., p. 716, appears an abstract from the *British Medical Journal*, which in turn is an extract from a communication from Dr. Ziem, of Dantzic, to the *Allgemeine Medicinische Central-Zeitung*, on the 'Toxic Action of Cocaine.' This author reports a case in which toxic symptoms occurred from the instillation of two drops of a four per cent. solution of cocaine to the eye of a man aged forty. He then refers to seventeen cases which have been recorded in ophthalmological literature, and gives the authors' names, with the number of cases recorded by each. Three of these observations are credited to Dr. H. Knapp, of this city. My purpose in this communication is to state that, in all probability, one of the three cases credited to Dr. Knapp in reality was observed by me and referred to in his paper, by my consent, upon a written request of his to be allowed to do so. Since, so far as I am aware, mine was one of the earliest observations of the toxic effects of cocaine when dropped into the eye, it seems to me important to briefly refer to it again. November 14, 1884, preparatory to operating upon a healthy girl for strabismus, I instilled one or two drops of a four per cent. solution of cocaine. In a few minutes after there followed such extreme dizziness that the patient did not dare to try and rise from her chair lest she should fall. She did not lose color, had no nausea, but broke out in a profuse cold perspiration, and the dilatation of her pupil was greater than I had ever seen before from this drug. This case was referred to in a paper read at the Medical Society of the County of New York, February 3, 1885, and since published in their 'Transactions.' It was also published in the *New England Medical Monthly* for March, 1885, and is referred to by Dr. Knapp in his lengthy paper on 'Cocaine and its Use in Ophthalmic and General Surgery,' published in his Archives, volume xiii., Nos. 3 and 4, p. 442."

JOURNALISTIC CHANGES.—We learn that *The Analectic* will in future be edited by Dr. R. W. Amidon. *The American Practitioner* and *The Louisville Medical News* will hereafter be merged into one, and will be called *The American Practitioner and News*, edited by Drs. D. W. Yandell and H. A. Cotell. It will appear every two weeks.

NEW YORK POST-GRADUATE MEDICAL SCHOOL.—We are informed that the report that the Post-Graduate Medical School does not intend to take women physicians as matriculants is incorrect.

THE HOSPITAL SATURDAY AND SUNDAY FUND.—Up to the first of the week the total amount of the hospital Saturday and Sunday contributions for 1885–86 was nearly twenty thousand dollars. It is stated that the total amount promises to be larger than it was last year.

CHOLERA STILL ACTIVE.—As late as December 15th last cholera was reported still present in certain districts of Italy.

PASTEUR'S INOCULATIONS.—Pasteur has now treated seven Americans for the purpose of preventing hydrophobia. Of these it is not positively known that a single one of them was bitten by a rabid dog, unless it be Kaufman. The daily papers of the present week announce that the dog which bit him bit another dog, which latter has had signs of hydrophobia.

DR. C. L. DANA has been appointed Visiting Physician to Bellevue Hospital. An honor worthily bestowed.

DR. JOHN C. FAIRFAX, a practising physician of Prince George County, Md., is by descent and law the eleventh Lord Fairfax. He is also Lord Camerden. The first title is Scotch, the second an English title. Dr. Fairfax is an American citizen, and does not aspire to such baubles as an hereditary peerage bestows without estates to sustain them.—*New Orleans Times-Democrat.*

MR. AM ENDE, the Hoboken druggist who was put on trial for causing the death of two persons by administering morphine instead of quinine, has been acquitted. The defence set up was that the accident that resulted in the deaths was such as might have occurred in any drug store, and that outside of that Am Ende was suffering from mental overwork that made him absent-minded and led to his doing mechanically the things he had to do. After deliberating an hour and a half the jury rendered a verdict of "Not guilty." No doubt the lesson has been severe enough without the enforcement of a legal penalty. We are glad that Mr. Am Ende was set free. At the

same time it is quite evident that the defence set up was utterly frivolous and invalid. The defendant escaped no doubt because the jury did not think that he deserved the penalties of manslaughter. Perhaps it might be better if the law allowed some milder penalties for punishing the carelessness of druggists than those which now exist.

The Attack on the City Board of Health.—Much disappointment is felt in medical circles over the action of the Board of Estimate and Apportionment in cutting down the appropriations for the City Health Board, and for the Street-Cleaning Department. While several Departments, including that of Parks and of Police, receive increased amounts, that for the Health Board is cut down from $469,758 to $319,800. The Street-Cleaning Department also receives $100,000 less than last year.

Governor Hill and the State Board of Regents, and the State Board of Health and of Charities.—In his annual message Governor Hill thinks that no reason for the continued existence of the "Board of Regents of the University" exists, and he recommends that it be abolished and its powers and duties relating to schools be transferred to the Department of Public Instruction. He also recommends the abolition of the State Board of Charities, and the creation of a single-headed department as a substitute, the official to be known as the Commissioner of Charities. The work of the State Board of Health, he thinks, could be better attended to by one Health Commissioner of the State.

Another Fire in an Insane Asylum.—The Essex County Insane Asylum, at Newark, N. J., caught fire last week, and part of one of the wings was destroyed, the loss being $75,000. The asylum is a new one, and cost $350,000. No blame is attached to the Medical Superintendent, Dr. Hinckley, who acted intelligently and promptly. It is stated, however, that there has been considerable trouble of late about the management of the asylum, and the entire Board of Freeholders are under indictment "for non-feasance in office."

The "American Pasteur Institute."—The certificate of incorporation of the American Pasteur Institute was filed last week in the New York County Clerk's office. The objects of the "institute" are "the gratuitous cure and treatment by the Pasteur system of inoculation, or such variations thereof and improvements thereon as science may develop, of all persons suffering from, or threatened with, or in danger of hydrophobia or any other disease to which the system of inoculation may be found applicable, and the scientific examination of the causes, development, and improved means of prevention of hydrophobia and other diseases through inoculation or kindred methods." The incorporators are Alexander B. Mott, Michael J. B. Messemer, Louis De Pease, Alexander F. Trantard, Charles F. Nirdlinger, Charles Villa, Valentine Mott, and Adolph Corbett. We learn that a company has been organized in St. Louis, Mo., for the purpose of cultivating and using the Pasteur virus against rabies.

The Honor of Knighthood has been bestowed upon Dr. George E. Paget, of Cambridge; Dr. William Roberts, of Manchester; and Dr. James Sawyer, of Birmingham.

Typhus Fever in a Penitentiary.—Within a few days 13 inmates of the Albany Penitentiary have died of typhus fever. There are 1,075 persons in the prison, and one-tenth of them have suffered from the disease in the last six weeks.

The Vital Statistics of the City for the Past Year.—The records of the Health Department show that during the last year there were 35,696 deaths, 30,030 births, and 11,716 marriages, as against, in the preceding year, 35,054 deaths, 30,527 births, and 11,805 marriages. Thus it is revealed that while the death-list increased 662, the number of births fell off 197, a remarkable decrease, due possibly to the sudden cessation of foreign immigration.

Homicides	57
Drowning	183
Total zymotic diseases	9,086

Of the children born 15,534 were males and 14,503 were of the opposite sex; 29,678 children were white and 352 colored; 16,074 were of foreign parentage and 8,107 were of native parentage. The rest were of mixed parentage. The youngest mother and the youngest father were each thirteen years of age. The oldest mother was fifty years of age. Four of the fathers were eighty years of age each. One woman gave birth to triplets and 254 to twins.

The cases of contagious diseases reported during the year were as follows:

Typhoid fever	943	1,101
Diphtheria	2,891	2,221
Measles	4,066	4,392
Cerebro-spinal meningitis	217	228

There were 68,472 vaccinations performed during the year, as against 34,294 during the preceding year.

Medical Society of the State of New York.—The eightieth annual meeting will be held in the Common Council Chamber, City Hall, Albany, Tuesday, Wednesday, and Thursday, February 2, 3, and 4, 1886. The following is the preliminary announcement of papers: 1, Lessons in the Management of Club-Foot, by V. P. Gibney, M.D., New York; 2, Methods of Diagnosis, by Lawson Tait, F.R.C.S., Birmingham, Eng.; 3, Vesical Calculi in Female Children, with Cases, by N. A. Powell, M.D., Edgar, Ont.; 4, Rheumatic Affections of the Joints, by A. Hadden, M.D., New York; 5, Notes of Autopsy Disclosing Absence of the Liver, by Benj. C. Senton, M.D., Whitehall; 6, Peritonitis of Infants and Children, by A. Jacobi, M.D., New York; 7, The Free Dispensary System, by Joseph W. Howe, M.D., New

York; 8, Infant Feeding, by E. F. Brush, M.D., Mt. Vernon; 9, Consultations, by Laurence Johnson, M.D., New York; 10, Medical Testimony and the Hypothetical Question, by Wm. C. Wey, M.D., Elmira; 11, The Recording of Cases; The Effect of the Electric Light upon the Eye, by Lucien Howe, M.D., Buffalo; 12, The Establishment of a State Board of Medical Examiners, by P. R. Furbeck, M.D., Gloversville; 13, Burns Considered as Wounds and Treated According to Scientific and Antiseptic Methods, by Robt. J. Morris, M.D., New York; 14, Antiseptics in Midwifery, by Walter B. Chase, M.D., Brooklyn; 15, The Results of the Operation for Convergent Squint, by D. B. St. John Roosa, M.D., New York; 16, Spontaneous Expulsion of a Large Calculus in the Case of a Female Aged Sixty-eight Years, by Harvey Jewett, M.D., Canandaigua; 17, Leprosy in Japan, by D. B. Simmons, M.D., Poughkeepsie; 18, The Clinical Diagnosis of Cancer Sufficient for Practical Purposes, by Daniel Lewis, M.D., New York; 19, Some Observations on the Treatment of Uterine Displacements in General Practice, by L. E. Felton, M.D., Potsdam; 20, Obstetric Palpation, by W. W. Potter, M.D., Buffalo; 21, Ovarian Tumor—Advantages of Early Ovariotomy, Disadvantages of Delay, by T. H. Squire, M.D., Elmira; 22, Megrim with Intermittent Ptosis, by J. C. Shaw, M.D., Brooklyn; 23, Acute Nephritis, Especially as Following Diphtheria, by A. R. Simmons, M.D., Utica; 24, Treatment of Aural Polypi by the Injection of Carbolic Acid, by Herman Bendell, M.D., Albany; 25, Tinea Tonsurans; or, Ringworm of the Scalp, by F. C. Curtis, M.D., Albany; 26, A Clinical Note on Bright's Disease and Diabetes Mellitus, by Wesley M. Carpenter, M.D., New York; 27, Report of a Case of Empyema, by B. F. Sherman, M.D., Ogdensburg; 28, On the Limitation of the Contagious Period of Syphilis, in Relation to Marriage, etc., by F. N. Otis, M.D., New York; 29, General Arterio-Capillary Fibrosis, its Relation to Cardiac and Renal Disease, by Alfred L. Loomis, M.D., New York; 30, Prevention of Hemiplegia, by W. H. Thomson, M.D., New York; 31, A Case of Tumor of the Maxillary Antrum and Orbit, by T. R. Pooley, M.D., New York; 32, The Early Management of Cases of Mental Depression, by Willis E. Ford, M.D., Utica; 33, A Comparison of Some of the Modern Methods of Treating Ununited Fractures, by Geo. R. Fowler, M.D., Brooklyn; 34, Ulcerative Endocarditis, by H. R. Hopkins, M.D., Buffalo; 35, Cholera, by J. A. S. Grant Bey, M.D., Cairo, Egypt; 36, Fatty Tumors of the Knee-joint, by R. F. Weir, M.D., New York; 37, Treatment of Tertiary Syphilis of the Nose, Mouth, and Throat; Records of Cases Presented and Fully Illustrated, by D. H. Goodwillie, M.D., New York; 38, Ozæna, by John O. Roe, M.D., Rochester, N. Y.; 39. Hygiene of the Ear, Based upon the Record of More than Twenty-eight Hundred Cases, by C. R. Agnew, M.D., New York; 40, History of a Case of Abscess of the Kidney, by C. L. Stiles, M.D., Owego; 41, Remarks on Pelvic Inflammations in Females and Their Treatment, by Arthur M. Jacobus, M.D., New York; 42, (Subject to be announced,) by William S. Ely, M.D., Rochester; 43, Disease of the Fallopian Tubes, with Reports of Cases, and Characteristic Specimens, by W. Gill Wylie, M.D., New York; 44, Report of a Case of Swallowing a Plate with Four Artificial Teeth, the Same being Passed, per Rectum, on the Sixth Day; with Remarks, by L. M. Bates, M.D., Canaan Four Corners; 45, Excision of the Knee-joint, with Cases, by A. M. Phelps, M.D., Chateaugay; 46, Hemorrhage after Removal of the Cervix Uteri for Epithelioma with the Galvano-Cautery Wire, by James P. Boyd, M.D., Albany; 47, The Benefits Arising from Laws Regulating the Practice of Pharmacy, by A. B. Huested, M.D., Albany; 48, Migraine, by Floyd S. Crego, M.D., Buffalo; 49, Cremation, by Charles Cary, M.D., Buffalo; 50, Tubercular Ulceration of the Pharynx, by F. W. Hinkel, M.D., Buffalo.

Communications relating to the above papers, or others that may yet be offered, as to date of reading and time required, should be addressed to any member of the provisional Business Committee: Dr. W. W. Potter, Chairman, 306 Franklin Street, Buffalo; Dr. Daniel Lewis, 62 Park Avenue, New York; or Dr. A. M. Phelps, Chateaugay, N. Y.

A. VANDERVEER, M.D., *President.*
WM. MANLIUS SMITH, M.D., *Secretary.*

ALBANY, N. Y., January 1, 1886.

Reviews and Notices.

AN ATLAS OF CLINICAL MICROSCOPY. By ALEXANDER PEYER, M.D. Translated and Edited by Alfred C. Girard, M.D., Assistant Surgeon U. S. A. First American, from the MS. of the second German edition, with additions. Ninety plates, with one hundred and five illustrations, chromo-lithographs. New York: D. Appleton & Co., 1, 3 and 5 Bond Street. 1885.

THE translator and editor of the book has hereby rendered substantial assistance to his professional brethren in this country, and the publishers have sustained his labor in a most admirable manner. To the microscopist it is encouraging to look upon the beautiful and correct illustrations of what can be seen in the fluids which have been studied.

Illustrations of these structures are so apt to be coarse and misleading that a close approximation to their delicacy in outline will be hailed with intense satisfaction.

Dr. Peyer has divided his subject into nine parts. Dr. Girard tells us that he induced the author to add fifteen new plates. The *first* part is on the microscopical examination of the blood, and the plates illustrate normal and morbid appearances, and also bacilli found in this fluid. The microscopical appearances of milk are illustrated in the *second* part, including colostrum, mastitis, and chronic disease. The *third* part is devoted to examination of the urine, and embraces its general qualities and chemical composition, as well as crystals, casts, epithelium, bacteria, and foreign bodies. Here also we find illustrated the appearances in diseases of the kidneys and bladder, chronic urethritis and spermatorrhœa. The microscopical examination of the sputum makes up the *fourth* part, and we find illustrated the accidental constituents of expectoration, the appearances of the sputum in pulmonary diseases, the tubercle bacilli, Leyden's asthma crystals, the débris of an hepatic abscess which discharges through a communication made with a bronchus, etc. Part *five* contains the microscopy of the stool, with parasites, cholera bacilli, etc. The *sixth* part consists of the microscopy of the contents of the stomach, chronic gastric catarrh, and the echinococcus. Under the head of microscopy of fluid of abdominal tumors, *seventh* part, are illustrated the contents of an ovarian cyst. The secretions of the female sexual organs have been illustrated in part *eight*, and the various micro-organisms provoking disease, such as pyæmia, typhoid fever, pneumonia, and gonorrhœa, are illustrated in part *nine*. The last illustrations are from Friedländer; otherwise the plates are original with the author, and, so far as the reviewer has been able to discover, are more acceptable. The student, the amateur, and the expert will turn to this as a book of reference, and therefore the publishers would have added to its intrinsic value had they given the readers a full index. This defect in a work of this kind is entirely inexcusable, and should be remedied at once.

PHYSICIAN'S VISITING LIST FOR 1886. Philadelphia: P. Blakiston, Son & Co.

THE fact that this is the thirty-fifth year of publication of this handy visiting list is a sufficient indication of its popularity. It contains the usual tables of poisons and their antidotes, doses of drugs, etc.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 9, 1885.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. T. MITCHELL PRUDDEN reported on the specimen presented at the last meeting, in behalf of a candidate, by Dr. H. J. Boldt (see vol. 28, p. 710).

Dr. Prudden also presented, in behalf of a candidate, a specimen of *carcinoma of the stomach, liver, and omentum.*

SARCOMA OF THE LIVER.

DR. H. J. BOLDT presented a specimen removed from the body of a woman, twenty-six years of age, whom he first saw two and a half months ago. At that time she had noticed for the past few weeks a swelling in the right hypochondrium, and that her strength was daily diminishing. On examination he found the entire abdomen occupied, apparently, by an enlarged liver, which extended upward two and a half inches above the nipple, pressing upon the lung and producing bronchial respiration; her heart was also displaced upward. The patient was not very much emaciated. There was an indistinct history of syphilis. The patient was perhaps temperate. Diagnosis of amyloid degeneration of the liver was made, probably due to syphilis. She entered a hospital where the same diagnosis was made, and where, on examination, the spleen was made out to be very much enlarged. She remained in the hospital several weeks, and was discharged, when she again came under Dr. Boldt's observation, and on further examination the history of syphilis became very doubtful, and still further, he ascertained that previously she had had an eye extirpated by Dr. Knapp. He then suspected that the growth in the abdomen was malignant.

Autopsy, twenty-four hours after death. There was complete absence of rigor mortis. The entire abdominal cavity was found occupied by the enlarged liver, the surface of which was smooth, with the exception of one place where a small nodule protruded. The intestines were crowded into the true pelvis, and were firmly adherent to the under surface of the liver. The mesenteric glands were somewhat enlarged. The ascending colon was adherent to the posterior surface of the liver. The spleen was only moderately enlarged. The lungs were compressed. The heart was exceedingly small, but otherwise normal. The liver weighed nineteen pounds six ounces and a half.

DR. J. WEST ROOSEVELT presented specimens of

COMPOUND CYSTIC KIDNEYS

which were interesting, especially in connection with the specimen reported upon by Dr. Prudden. They represented cystic degeneration of the kidneys and liver. They were referred to the Committee on Microscopy.

Joseph C——, thirty-seven years of age, born in Ireland, married, and a laborer, was admitted to Roosevelt Hospital July 6, 1883. He has been a hard drinker, denies syphilis, and has been sick a year or longer, complaining of palpitation of the heart, and muscæ volitantes; first symptoms five or six months ago; dyspnœa on exertion, general anasarca, vomiting, headache, urine passed frequently and was dark in color. These symptoms were severe for a month or more, and then lessened in intensity, the œdema disappearing, the other symptoms remaining. For last three weeks much thirst.

On admission, poorly nourished, flushed face, tongue moist and clean, no œdema, some dyspnœa; pulse, 84; respiration, 21; temperature, 99.4° F.; slight cough and expectoration; urine neutral, 1.003; albumen five per cent., no casts, granular matter. Liver enlarged, abdominal veins enlarged.

July 8th.—Diarrhœa, light-colored stools.

July 12th.—Great dyspnœa in morning, coma at 11 A.M. Death at 3 P.M., with eyes deflected to the right.

Autopsy, July 13th, at 10.30.—Brain: Normal; some thickening of vessels at the base. Heart: Some hypertrophy of the left ventricle; aortic and mitral valves somewhat thickened. Lungs: Adhesions extensive of pleura over right base; some emphysema; both solid with œdema. Liver: Enlarged; filled with numerous cysts, varying in size from being just visible to the size of a lemon. Walls thin; contents of some, thin straw-colored fluid, while others contain thicker dark fluid. Spleen: Normal. Kidneys: Right extends from liver to margin of true pelvis. The colon lies in front of it. The upper end is bent inward as if from the pressure of the liver. Left of same size, extending from diaphragm to near the true pelvis. Both kidneys are converted into masses of cysts similar to those in the liver. These masses retain somewhat the original shape of the kidneys. To the naked eye no normal kidney tissue can be seen, but between the cysts in places are solid yellowish-red masses. Ureters are patent. Renal arteries: Normal. Bladder: Normal. Stomach: Chronic gastritis.

On looking up the literature of the subject, Dr. Roosevelt had been able to find but few cases of cystic kidneys with cystic liver reported. Frerichs, "Syd. Soc.," second edition, p. 223, reports one case. Bristowe, in the "Transactions of the Pathological Society," bound vol. vii., p. 229, and also vol. x., p. 174, reports cases. Murchison, second edition, records a case of supposed simple cyst with rupture. Kidneys not diseased. W. Johnson Smith, "Quain's Dictionary," p. 849, mentions the existence of such cysts and quotes Hulke for dermoid cysts.

CYSTITIS—PYELITIS—ACUTE INTERSTITIAL PURULENT NEPHRITIS.

Dr. Roosevelt also presented a specimen of cystic kidney removed from the body of a patient who was admitted to Roosevelt Hospital eighteen months ago, with acute cystitis and some evidence of pyelitis. Stone was found in the bladder. The patient lived only a few days. At the autopsy there was found an immensely hypertrophied bladder, containing a stone about the size of a walnut. The right kidney contained small cysts without a trace of kidney tissue. The pelvis and ureter were dilated. The left kidney was increased in size, and showed acute interstitial purulent nephritis. The specimen was referred to the Committee on Microscopy.

DR. WACKERHAGEN presented a specimen with the following history:

RESECTION OF THE LOWER FOURTH OF THE FIBULA.

Nellie L——, a school-girl, aged thirteen, native of the United States, in July, 1882, fell on the pavement, producing a contusion on the outer aspect of the right ankle. Aside from the temporary tenderness no lameness resulted, nor was there at any time pain or other sign of inflammatory action, except swelling, until December, when an abscess ruptured spontaneously. A physician was now for the first time consulted. He enlarged the opening, giving free exit for an abundant flow of pus, after which healing was rapid, leaving no apparent injury to the part. A year and a half later, in May, 1884, the first evidence of joint trouble associated with lameness began to develop, the gait became halting, and the ankle swollen, though still without pain or tenderness.

The joint becoming weak the assistance of a cane was necessary—for throwing the weight incautiously upon the crippled foot it inverted, collapsing suddenly. Associated with this tendency to inversion, movements of flexion and extension were more restricted.

Several months now elapsed under somewhat irregular counter-irritative treatment, the trouble meanwhile progressing steadily.

In March, 1885, after prolonged poulticing applied by

the mother, a second abscess ruptured two and a half inches above the external malleolus.

On the 9th of April following, I was called to see the patient, and enlarged the opening by a longitudinal incision down to the bone and on a level with the malleolus. The fibula was found necrotic in its inner anterior diagonal half for a space of an inch and a quarter. The disease had also encroached upon the astragalus, and in scraping away the affected portion the joint was of necessity invaded. A drainage-tube having been inserted through a counter-opening made on the opposite side of the joint, full antiseptic dressings were applied.

There being no improvement by May 13th, excision was determined upon. The periosteum being carefully preserved, two and a half inches of the fibula were removed and the wound dressed antiseptically. Although the wound healed slowly the changes in the deeper structures were quite satisfactory, the bone being renewed and the functions of the joint in part restored.

Return to use of the limb was gradually permitted, with the aid of a crutch, and at the present time the result is almost perfect.

THE PRESIDENT remarked that it was rare to see disease of the fibula and no disease of either the tibia or the joint.

DR. GIBNEY remarked that most surgeons who perform excision of the ankle-joint find the bones of the tarsus so invaded that the result is a rather full gouging of these bones.

THE PRESIDENT remarked that he had performed complete excision of the ankle-joint in six cases within three months, and in no one was the fibula diseased; nor had he ever seen a case in which the fibula alone was affected.

THROMBOSIS OF THE SUPERIOR LONGITUDINAL AND LEFT LATERAL SINUSES—CARDIAC THROMBOSIS—WHITE RENAL INFARCTIONS.

DR. L. EMMETT HOLT presented the heart and kidneys of a female child, seventeen months old, who died in the New York Infant Asylum, November 11, 1885. The facts in the history were furnished by Dr. E. B. Thelberg, the resident physician.

Until six days before death the history of the child presented nothing of importance. It was born in the institution, had been a rather delicate child; dentition had been difficult and accompanied by marked signs of cerebral irritation, generally also by a rise of temperature, once reaching 105° F. These symptoms always disappeared promptly when the teeth pierced the gum. On November 5th an attack, to all appearance similar to those previously observed, began while the child was cutting the canine teeth. Until November 10th there was nothing peculiar about the symptoms. She was exceedingly irritable, tossing about in the crib, or throwing herself violently backward, stuffing the hands into the mouth, and had an irregular febrile movement which ranged from 99° to 103°. The bromides were given in full doses with but slight effect; rubbing the gums with a cocaine solution, which had been found efficient in similar cases, also gave no relief, and only a temporary quiet was produced by three-grain doses of chloral.

On the morning of November 10th the temperature was found to be 104°, and marked cerebral symptoms were present. She was very drowsy, then comatose, the pupils were contracted; no paralysis was noticed. On the following day, about three hours before death, she quite suddenly developed extreme general cyanosis. The pulse at the wrist became imperceptible. Free stimulation by brandy, ammonia, and inhalations of oxygen was employed, but without perceptible benefit. She died cyanotic. There were no convulsions, and no renal symptoms, the urine being passed freely throughout the sickness.

Autopsy, eighteen hours after death.—*Head:* Fontanelle open about three-fourths of an inch wide; dura, normal; pia slightly cloudy, and a little more than normal quantity of the subarachnoid fluid. The *right* hemisphere was intensely congested, the vessels of the pia were turgid and prominent. The *left* side was anæmic, the contrast being very striking. The difference in the vascularity of the two sides existed in the interior of the brain and in the cerebellum. The basilar and main central arteries were examined but showed no obstruction, and no explanation of the condition of the vessels of the cortex referred to.

The sinuses were then laid open, and a firm thrombus was found filling the posterior two-thirds of the superior longitudinal sinus, and the *left* lateral sinus to the jugular foramen. These thrombi were almost decolorized, slightly adherent, and pretty firmly organized. Thrombi were found in several of the larger veins of the cortex of the left side, extending downward from the superior longitudinal sinus. The *right* lateral sinus contained only dark fluid blood.

Thorax.—The lungs were congested and œdematous, but in other respects normal.

The heart was rather pale, but its walls otherwise normal. No signs of endocarditis present. The right auricle was distended, with a firm, pale thrombus very adherent and extending through the tricuspid opening into the ventricle; here it was also adherent. On the left side were similar thrombi in the auricle and ventricle, but smaller than those of the right, being in the auricle the size of the end of the forefinger, in the ventricle about half as large.

Abdomen.—Liver, intestines, and pancreas normal. Spleen about three times the normal size, firm and intensely congested. No infarctions seen. Kidneys slightly enlarged. Over the surface of each fifteen or twenty circumscribed whitish patches seen, varying in size from a small pea to half an inch in diameter. Capsule over these not adherent. On section of the organ they were found to extend into the kidney as wedge-shaped masses, to the depth of from one-fourth to one inch.

Microscopical examination of the kidneys shows the white patches to be areas of coagulative necrosis, with extensive proliferation of new cells at their margins. A number of small capillary hemorrhages were seen scattered through the organ, and some beginning diffuse nephritis.

The condition of hyperæmia of the right side of the brain and the anæmia of the left seems quite an anomalous one, and exactly the opposite of what would be naturally expected. No explanation was found that appeared satisfactory. The appearance of the thrombi themselves, as well as the renal infarctions, showed beyond all reasonable doubt that they were all of ante-mortem occurrence.

It might be well to state that the usual hypostatic congestion of the body externally was equally intense upon both sides, so that the condition of the brain could not have depended upon position.

DR. AMIDON said that if a less careful examiner than Dr. Holt had reported the case he should say that the hemispheres, had become interchanged, but he thought it was not possible in this case. Probably there was some decided obstruction to the arterial circulation of the left hemisphere which brought about, in the first place, the anæmic condition, and in the second place, the sluggish condition in the venous channels which allowed thrombosis to occur. In the absence of examination of the arteries upon that side he should think that was the probable explanation.

DR. HOLT remarked that the large vessels were examined, but not beyond the second bifurcation; and that special care was taken that the hemispheres did not become interchanged, as attention was directed to that point.

DYSPNŒA—ATHEROMATOUS CONDITION OF THE ARTERIES —MULTIPLE CARCINOMA.

DR. VAN SANTVOORD presented specimens removed from the body of a man seventy years of age, an em-

ployee on Randall's Island, who came under observation of the house physician only two days before death, when he was suffering chiefly from intense dyspnœa, with a history of previous shortness of breath. Physical examination showed that he had considerable fluid in both pleural cavities, with a loud cardiac systolic murmur of rather uncertain origin. He died apparently from the effects of dyspnœa.

At the autopsy the brain was anæmic, the arteries were only slightly atheromatous, but were remarkably brittle. There were one or two spots of softening immediately under the cortex. Each pleural cavity contained about a quart of straw-colored fluid, and in the right there were some flocculi of recent lymph. The upper lobes of both lungs showed fibroid phthisis and cheesy nodules. The pleura on the left side was exceedingly thick, both costal and parietal. The upper lobes were firmly adherent to the chest walls.

The left ventricle of the heart was largely hypertrophied. The mitral valves were slightly atheromatous, but there was no insufficiency. The right ride of the heart was substantially normal. The aorta was exceedingly atheromatous, the process having gone so far as to become calcareous. The aortic valves and the coronary arteries were atheromatous, and the processext ended slightly into the large vessels at the root of the neck.

The radial artery was only slightly atheromatous, and exhibited only a slight amount of thickening.

The stomach was eight inches long, and the lesser curvature was occupied by a saddle shaped neoplasm two and a half inches in length and breadth, and about half an inch thick. The mucous membrane did not seem to be involved, and the tumor was apparently situated in the muscular layer. Subsequent microscopical examination showed that it was carcinoma. The liver was about two-thirds the normal size, its capsule was irregularly thickened, and there were some adhesions to the colon and omentum. The spleen was about half the natural size, and its capsule was very much thickened. The mesentery was very much thickened, and by adhesions the colon had been drawn down and presented a remarkable curve. The same process also extended around the rectum. The kidneys were about two-thirds the normal size; the capsules somewhat adherent. The blood-vessels stood out prominently with thickened walls, and they were, therefore, evidently in a condition of marked fibroid degeneration. There was also fibroid degeneration of several of the organs.

The bladder contained a tumor, circular in shape, one inch wide, one-fourth of an inch thick, and presented the same appearance to the naked eye as that found in the stomach. The rectum was adherent to the base of the bladder by an old process, and in its wall was a tumor like that found in the fundus of the bladder.

Dr. Van Santvoord also presented specimens removed from the body of a man who came into Randall's Island Hospital, with the following history:

ACUTE INTERSTITIAL NEPHRITIS—PNEUMONIA—PECULIAR GROUP OF PHYSICAL SIGNS.

On admission his mental condition was fair, and he said he had been sick seventeen or eighteen days with a fever and cough, but without expectoration. There was marked dulness over the upper lobe, with flatness over the lower lobe; auscultation revealed absence of respiratory murmur over the lower lobe, and amphoric breathing over the upper lobe in front. The examination was made by Dr. E. A. Maxwell. On the following day the amphoric breathing had disappeared, and bronchial breathing had taken its place. Over the lower lobe flatness had also disappeared, and bronchial breathing had appeared where there was absence of respiratory murmur before.

The urine contained albumin to the extent of one-eighth of its bulk, and there were epithelial and blood casts, and free blood. This examination also was made by Dr. Maxwell. On the last day of his life the patient had three epileptiform convulsions.

Autopsy.—The body was in a fair state of general nutrition. The brain: The arachnoid was thickened, as if by some chronic process, and under it was a quantity of a somewhat gelatinous lymph infiltrated with pus. This appearance covered the convex surface, and at the base extended into the spinal canal, especially on the posterior surface of the cord.

The upper lobe of the right lung was in a condition of gray hepatization, and differed from that ordinarily observed in the fact that the consolidation extended very nearly to the anterior edge of the lung, which is free, as a rule, in pneumonia of the upper lobe. Dr. Janeway had already called attention to the fact that in pneumonia affecting the upper lobe, and extending nearly or completely to the anterior edge, there might be not only amphoric respiration instead of bronchial, but also cracked-pot note, because the weight of the lung pressed firmly upon the bronchus and gave rise, by pressure, to the possibility of cracked-pot resonance on percussion.

The left ventricle was considerably hypertrophied, and the aorta contained only a trifling amount of atheroma. The radial artery on the right side was exceedingly atheromatous and calcareous, and the process existed to a less extent in the left radial. The vessels at the base of the brain showed only a moderate amount of atheroma. The kidneys contained a few cysts; one cyst at the upper extremity of one kidney was as large as a turkey's egg. The capsules stripped readily, and the kidney itself had considerable fat in the pelvis, and the process appeared to be one of chronic diffuse nephritis with great predominance of parenchymatous change. The urine had shown that there was an acute interstitial nephritis, which was the fatal factor in the case. The other viscera presented no lesions of special importance.

THE PRESIDENT presented specimens of

CONGENITAL TUMORS IN FRONT OF THE ANTI-TRAGUS.

The father had the same kind of tumors, also his sister, and the growths were evidently hereditary. The specimens were referred to the Committee on Microscopy.

TUBERCULAR (?) TESTIS.

The President also presented a specimen of necrosis of the testicle, accompanied with the following history: David D——, fifty-five years of age, married, a native of Holland, and a cutter by occupation, was admitted to Mt. Sinai Hospital December 7, 1885. He had had a hernia on the left side for twenty-five years. About seven months ago his left testicle became enlarged, and was slightly painful. The swelling increased gradually, and was treated, but did not improve. About six weeks ago the swelling began to extend upward into the inguinal canal, and became harder and more tender. The patient had always been more or less constipated. He had had slight abdominal pains, and almost continuous pain just below Poupart's ligament. He had a chill yesterday. He had a perineal abscess two years ago, due to a piece of wood he had swallowed with bread, and which appeared in the abscess. His previous health had been good. He had been treated lately for posterior spinal sclerosis. His family history was negative.

On examination the tumor was as large as a man's fist, and evidently contained fluid. The diagnosis was, possible hydrocele. The symptoms of strangulated hernia were not clear, but it was thought best to cut down upon the mass, with reference to the condition of the testicle, to the possible existence of a hernia, and with a view to removing the fluid. The incision was made, and Dr. Wyeth found a double cyst. The first was outside the cord, and discharged from one to two ounces of fluid; and inside of that was a second cyst which discharged four ounces of serous fluid. There was no hernia. On examining the testicle it was found to be very much en-

larged and nodular—the epididymis as well as the body of the organ. The testicle was removed.

The surgical point of interest was that it could not be determined whether the tumor was a hernia, or an enlarged testicle, or a hydrocele. The specimen was referred to the Committee on Microscopy.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN PRACTICE.

Stated Meeting, December 15, 1885.

ALFRED L. LOOMIS, M.D., LL.D., CHAIRMAN.

THE PHYSICS OF PNEUMATIC DIFFERENTIATION.

THE discussion was opened by MR. JOSEPH KETCHUM (see p. 31).

DR. E. DARWIN HUDSON, JR., followed in the discussion with remarks which appear on page 29.

Remarks by DR. A. H. SMITH: "It appears to me that the statement by the reader of the paper, that the capacity of the air for retaining moisture is lessened by compression, is opposed to the constant observation that fogs occur chiefly when the barometer is low. So, also, it was observed in the caissons of the Brooklyn Bridge, where the air was always saturated with moisture, that the slightest reduction of the pressure instantly produced an impenetrable mist. The attraction between the molecules of air and the molecules of water is lessened in proportion as they are removed from each other.

"As to the conditions under which the patient breathes when in the cabinet, I cannot see that they differ essentially from those which obtain in the use of the Waldenburg apparatus. In either case there is a difference between the tension of the air inhaled and that of the air surrounding the body; and whether the difference is produced by increasing one or diminishing the other seems to me a matter of indifference. In regard to convenience, however, the cabinet has some advantages.

"As to the gymnastics of the chest, the extra motion is purely passive. It has its value, as passive motion of stiffened joints has, in breaking up adhesions, etc., but it can do little or nothing for the development of the chest-muscles, as no extra activity is demanded of them.

"No comparison can be made between the conditions in the cabinet and those in the caissons of the bridge, since they differ not only in degree, but in kind. In the caissons the pressure of the inspired air and that of the air surrounding the body was the same, and one balanced the other. Had the interior of the lungs communicated with the air outside the caisson, the chest would have been instantly crushed by the unopposed pressure of the compressed air surrounding it. On the other hand, if the pressure had been removed suddenly from the surface of the body, the chest would have been rent asunder by the expansion of the compressed air within it."

DR. PUTNAM-JACOBI had been specially interested in one point to which Mr. Ketchum had directed his particular attention—namely, the importance of condensing the air or vapor, after it has once entered the lungs. She had always understood that in the application of medicated vapors to the lungs the one desirable thing was to avoid their condensation in the upper air-passages before they could reach the lung tissue itself. This difficulty is so great to be overcome that she had been astonished to hear that the inventors of the cabinet had given themselves so much labor and trouble to effect condensation.

In the second place, Mr. Ketchum had shown plainly that inspiration was very much increased; that the lungs could not fail to be expanded; that the air within them was rarefied, and that the divisibility of the vapor was increased; but she failed to see the proof that expiration was increased.

THE CHAIRMAN said that he stood in the position of "a looker-on in Venice," so far as pneumatic differentiation was concerned. It seemed to him, when he was first introduced to it, that the principle was a good one, and on one basis. He did not believe very much in the efficacy of attempts to medicate the lungs by means of spray or vapor, but that in the cabinet, which seemed to him to have a future, was pulmonary gymnastics; and instead of sending patients to high altitudes it may be possible to accomplish, by properly arranged apparatus, what can be obtained by changes in climate. He was willing to assist Mr. Ketchum all that he could in perfecting his instrument, and thought it would not be long before some definite conclusions could be reached, and he also believed that reliable conclusions could be reached only by clinical observations.

DR. W. A. DE WATTEVILLE thought that an important difference between the two methods, that illustrated in the Ketchum cabinet and that applied by Waldenburg's apparatus, was the difference in the influence produced on the circulation. In Waldenburg's apparatus it had been shown that arterial pressure lowered during the respiration of compressed air; while in the differentiation cabinet arterial pressure rose. He thought that this important difference in the physiological effects produced on the circulation showed that there was a difference between inhaling compressed air and inhaling air at ordinary pressure while the body was in a vacuum.

DR. PUTNAM-JACOBI had taken sphygmographic tracings, both before and after the inhalation of compressed air, and had found that the arterial pressure on the radial pulse was increased by the use of the Waldenburg apparatus.

MR. KETCHUM, in closing the discussion, said that Dr. Smith in his remarks had ignored the element of temperature and the question of dew-point.

With reference to the amount of total air during respiration, referred to by Dr. Putnam-Jacobi, he thought it was distinctly stated in his paper that while the initial inspirations ranged from twenty-eight to forty cubic inches, the succeeding inspirations were of no greater amplitude than normal, except that which was due to increased muscular effort, which would vary with different individuals. The expiratory effort was more forcible, as indicated by the manometric test, and it was so for several reasons, which time did not permit him to give.

The amount of condensation would vary with the specific gravity of the fluid and the amount of pressure employed.

The Section then adjourned.

ARTIFICIAL HIBERNATION.—Professor Gruselbache, of the University of Upsala, if the account be true, has evidently been studying "The Man with the Broken Ear," for he proposes to freeze somebody and keep him for two or three years in this glacial condition. He advertises for some obliging individual who will submit himself to the experiment, and promises to thaw him out, well in body and mind, whenever his friends desire. If he cannot find a volunteer he asks the Government to give him a condemned criminal. This would be an excellent plan for governments with large standing armies to adopt; they could keep their soldiers on ice at a slight expense, and then could thaw them out whenever war was declared. There are also numerous other directions in which this method could be applied, and it offers a solution for many perplexing problems of our age. Long live Professor Gruselbache—on ice.

THE RUDOLPH-STIFTUNG IN VIENNA.—The report of this hospital for 1884 shows a total of 8,042 patients treated during the year. Of this number, 4,677 were discharged cured, 1,377 improved, and 413 unimproved. The deaths numbered 894, and 681 remained in hospital on January 1, 1885.

Correspondence.

OUR LONDON LETTER.

[From our Special Correspondent.]

THE COLLEGE OF SURGEONS—CONVOCATION OF THE UNIVERSITY OF LONDON—PROFESSOR JOHN WOOD ON ANTISEPTICS—DISEASES OF THE CIRCULATORY ORGANS IN ANIMALS—FRESH TITULAR DISTINCTION FOR THE MEDICAL PROFESSION.

LONDON, December [illegible], 1885.

ANOTHER meeting of the fellows and members took place at the College of Surgeons the day before yesterday. The resolution proposed by Mr. Timothy Holmes, Surgeon to St. George's Hospital, London, and seconded by Mr. Sampson Gamgee, of Birmingham, was carried by a large majority. This was expected, but there was some opposition, led by no less a personage than Mr. Brudenell Carter, who, to his other qualifications, adds that of a good speaker. The resolution which has been carried is the following: "That the answer of the Council is, in the opinion of the meeting, not satisfactory, and that the Council be respectfully requested to reconsider the questions—firstly, of the representation of members; and, secondly, of submitting for approval any alterations proposed to be made in the constitution, or in the relations of the College, or in any of its by-laws, to a meeting of the fellows and members." The Council of the College has shown itself such a conservative body that it is not much more likely to take any real notice of this resolution than it did of those carried at former meetings of the members and fellows in conclave assembled.

Meanwhile, it may be remarked that the College Council is not the only body opposed to change when affecting itself. The Convocation of the University of London, at its last meeting, showed pretty plainly that it wished to have nothing to do with the movement for promoting a teaching university or to institute any reforms in the existing university. At its last meeting it virtually stultified its previous action. One of the speakers (Dr. Broadbent, Examiner in Medicine), in moving the adjournment of the debate, remarked that his motion, if carried, would lead to the matter being dropped and nothing more being done, and even went so far as to say that this was most desirable. His co-examiner in medicine, Dr. Ord, is in favor of the new movement, though he did not speak at this meeting.

Professor John Wood, in his recent Bradshawe lecture, took up the subject of antiseptics. He is an earnest advocate for their use, and employed them in his wards at King's College Hospital before the advent of Lister to London. We are now so accustomed to the use of antiseptics in surgery that it seems impossible that their introduction can have been so recent. Professor Wood, however, and many of us who are even younger than he is, can remember the pre-antiseptic era. To go back to the time when, although known, antiseptics were far from being universally adopted needs no great effort of memory. Antiseptics have only been generally adopted in British surgical practice within the last ten—or, at most, fifteen—years. Their application to obstetrics is still more recent. Concurrent with the more general use of antiseptics has been the increased attention generally paid to hygienic measures. The importance of the latter as a factor in influencing the satisfactory progress and healing of wounds did not escape Mr. Wood in his recent discourse on the subject. "It is," he said, "in very great measure owing to the remarkable advance in this particular that so much improvement has taken place in longevity, in the rate of mortality, in the shorter duration of surgical complaints, and in the less fatal results of surgical operations during the last twenty years."

Hygienic precautions, strict cleanliness, and the proper application of drainage are placed by Mr. Wood in the fore-front of the precautions to be adopted by the surgeon. Coming to the use of appliances more strictly denominated antiseptic, the lecturer referred to the gradual abandonment by most surgeons of the spray and the gauze dressings, in which he was inclined to concur. Corrosive sublimate was favorably spoken of, but it was suggested that we need further experience to confirm its value. Mr. Wood then referred to some experiments he had lately been making with peroxide of hydrogen as an antiseptic. He employed it in aqueous solution. It was very active, and absolutely non-irritating. Its weak point was its instability. One part in two thousand prevented putrefactive fermentation and destroyed the activity of bacteria and micrococci. It was very convenient in its application. A piece of absorbent cotton was dipped into the solution, squeezed over the wound as a wash, and then laid upon it as a dressing. Over this a piece of thin gutta-percha tissue or oil-skin was laid, and covered with a layer of absorbent or salicylated cotton wool, and bandaged lightly. In deep sinuses and irregular wounds it might be used with a syringe or irritating apparatus and double tubes.

Comparative pathology at present possesses a most able worker in the person of Mr. J. Bland Sutton, of the Middlesex Hospital. Mr. Sutton's labors are unremitting. At the last meeting of the Pathological Society he read a paper on "Diseases of the Circulatory Organs in Animals." He has found lesions of the heart and vessels to be by no means of so frequent occurrence as in man. Pericarditis arose from the same causes, and was very similar to the same disease occurring in man. Galen, he remarked, described the first case of pericardial effusion, and it occurred in a monkey. The milk-white patch was frequent in some birds and monkeys as a consequence of pressure from rickets. Rickety deformities also led (through the pressure they caused) to a very serious condition of the heart, which might be denominated "flexion." Affections of the valves occurred occasionally, leading to incompetence and its results. Diseases of the vessels were very rare, especially atheroma. Arteriocapillary fibrosis affected the medium-sized arteries in horses and cattle, and was associated with chronic interstitial nephritis, as in man.

Amid the kaleidoscopic political changes going on around us, it is with some surprise that I have just seen the announcement of two fresh titular distinctions for the medical profession. Dr. G. E. Paget, of Cambridge, is to have a K.C.B. bestowed on him, and Dr. William Roberts, of Manchester, is to be knighted. Dr. Paget is Regius Professor of Physic in the University of Cambridge, and a brother of Sir James Paget, the eminent London surgeon. Dr. William Roberts is Professor of Clinical Medicine in the Victoria University. In neither case can the title of "Sir" enhance the distinguished professional reputation already enjoyed by each of these gentlemen.

OUR PARIS LETTER.

[illegible]

ACCIDENT FOLLOWING ANÆSTHESIA BY PURE PROTOXIDE OF NITROGEN IN FRANCE AND PRECAUTIONARY MEASURES REGARDING THE SAME—THE ADVANTAGES OF THE ADMINISTRATION WITHIN THE LIMITS OF SOME [illegible] NEW PURGATIVES.

[illegible]

AT a recent meeting of the Société de Biologie, M. Grehant read a paper for M. Lafont on the accidents following anæsthesia by pure nitrous oxide, or laughing-gas. It is known that this agent produces anæsthesia only by causing a veritable asphyxia, and that its employment is often followed by very grave accidents. Among the consecutive accidents observed by M. Lafont may be mentioned: 1. The death of a fœtus in a young woman enceinte five months, in whom anæsthesia was employed for the extraction of a tooth. The movements of the child ceased on the very day of the

anæsthesia, and the expulsion of the dead fœtus took place a month and a half after. 2. The appearance of albuminuria in a certain number of patients suffering from cardiac disease. 3. The suppression of the menses in a young girl who had just reached puberty. 4. The recurrence of epileptic fits in a young man who, after several years, had had no attack. Other cases occurred, but which need not be entered into here. M. Lafont, however, observes that there are numerous contra-indications against the employment of pure laughing-gas, and he thinks it advisable to give it up altogether in practice.

This note reminds me of a case that was lately tried at the Correctional Tribunal of Paris, at which a dentist, M. Duchesne, was condemned to pay three thousand francs damages and a fine of six hundred francs for having administered laughing-gas to a patient who went to him for the extraction of a tooth, and who, after a few inhalations, fell into a state of syncope and died. The dentist not being a qualified man must think himself lucky that he got off so easily; but what saved him was that Dr. Brouardel, the medical jurist, declared that he could not affirm that the death of the patient was caused by the anæsthesia. All he could say was, that the patient's blood contained a certain quantity of nitrous oxide, but that the fatty condition of the heart had a great deal to do with the accident.

Rabies, which, during the period from 1880 to 1884, diminished in Paris in a notable manner, had become more prevalent at the end of last year, and has continued with scarcely any abatement to the present time. From the commencement of the present year twenty cases of death from the disease have already been registered in Paris, and this figure is the highest that has as yet been attained. In consequence of the alarming increase of such a terrible malady, M. Leblanc proposed, at the meeting of the Academy of Medicine, last week, that the following measures should be carried out: 1. That the law of July 21, 1881, which prescribed the declaration of all cases of hydrophobia, the destruction of all animals bitten, the wearing by dogs of a collar of a certain kind, and the taking to the pound those that are found straying. 2. To render general and uniform the organization of the service of epizootics, and to place this service under the direction of veterinarians. 3. To cancel the adjournment of the article of the law forbidding empirics to treat animals affected with contagious maladies. To these propositions, which were unanimously accepted by the Academy, M. Le Fort added another compelling owners of dogs to attach to the collar a small medal bearing a mark showing that the tax had been paid for the year. All dogs not wearing these articles will be treated as stray dogs. M. Dujardin-Beaumetz, in supporting the conclusions of M. Leblanc's report, pointed out the difficulties in carrying out these regulations. M. Dujardin-Beaumetz has been charged for the last five years to search for cases of rabies among the population of Paris. In his report he observed that, as the spontaneousness of rabies is universally denied, the governing bodies are bound to enforce such police regulations as may be necessary to prevent the spread of the disease. It would appear that these regulations are strictly enforced in Germany, where hydrophobia is by no means so common as it is in this country, and even in Great Britain. According to M. Dujardin-Beaumetz's report, there were in Paris, in 1881, 17 cases of death from hydrophobia; in 1882, thanks to the measures that had been taken, there were 11, and in 1883 there were only 6. In 1884 no case of the disease occurred in the first half-year; in the second half 3 cases were reported. In 1885, 20 cases have been registered to the present date.

Since the above communication by Dr. Dujardin-Beaumetz, this physician made another report to the Council of Hygiene of the Seine, to the effect that a case of death from hydrophobia recently occurred at the Hôtel Dieu, and that he had reason to believe that the disease came on spontaneously, as the body bore no marks of having been bitten. The patient was, however, epileptic, and this circumstance would tend to infirm Dr. Dujardin-Beaumetz's conclusion, though the patient denied having ever been bitten. Nevertheless, experiments performed by M. Pasteur on two rabbits which he inoculated with fragments of the medulla oblongata of the patient proved that the latter died from hydrophobia.

At a recent meeting of the Academy of Medicine, Professor Vulpian read a paper on the advantages of the salicylate of lithin in the treatment of rheumatism, whether it be acute, subacute, or chronic. He has found it most useful in cases where the salicylates of soda and quinine failed to effect a cure. Moreover, the inconveniences caused by these drugs are scarcely perceptible in the administration of the salicylate of lithin. It is given in large doses, the same as is done with the salicylate of soda.

At the same meeting, Dr. Desnos, candidate for the membership of the Academy in the section of therapeutics, read a paper on the action of some of the new purgatives brought to notice by Professor Rutherford, of Edinburgh; but while the latter physician experimented on animals, Dr. Desnos submitted the new drugs to clinical experiment. These are sanguinarin, bactisin, juglandin, and phytolaxin. These substances are resinous, and are employed in doses varying from 10 to 60 centigrammes. The effects of the first are nearly *nil*, those of the other two are more certain, while the phytolaxin, in particular, is considered a great acquisition to therapeutics.

CONCERNING THE DISINFECTION OF RAGS.

To the Editor of The Medical Record.

Sir: Mr. Augustine Smith, in his letter anent the disinfection of rags, published in your issue of this date, makes several statements reflecting upon his namesake, the Health Officer of the Port, which, in the interests of justice and of public health, require correction. His first complaint, that rags are to be disinfected "to the satisfaction" of the Health Officer, rather than to that of the importers, would scarcely seem to a professional mind to involve such very improperly "arbitrary power," even if it were strictly in accordance with fact, forasmuch as the said Health Officer is held responsible for the satisfactory exclusion of infection; but, in reality, the rules adopted by Dr. Smith are those which were unanimously formulated by a conference of sanitarians, held at the request of Dr. Smith himself, in his reluctance to exercise his undoubted authority in any way which might seem to inflict hardship upon the rag importers without the concurrence of other representatives of preventive medicine, and of the quarantine establishments of different ports. No one at that conference supposed that the manufacturers of paper "wish to import disease" any more than the opponents of vaccination wish to diffuse small-pox; but it did not occur to them that these manufacturers of paper were the best and most unbiased judges as to either the desirability of disinfection or the most efficient process of performing it. Furthermore, whatsoever may be Mr. Smith's doubts or opinions on the subject, statistics show that there is danger of the importation of infectious disease by rags, and experiment demonstrates the possibility of "thorough disinfection," even in the bale, and it is hardly consonant with the principles of sanitary administration to wait until a suspected article "can be shown to be infected" before taking precautions to render it innocuous. The circumstance that rags may be shipped from a port free from epidemic disease is no evidence that they have not been gathered from infected districts, as every one familiar with the practices of the ubiquitous nomadic "chiffonier" must be aware; and if the public insisted on the importance of promiscuous disinfection of the mails from Canada last summer, it is not likely that this same public will regard as an "out-

rage" any measures to guard against the risk of infection from rags which may, even by remote possibility, have been cast out, soiled, from a sick room or a hospital ward.

Mr. Smith omits to state that the methods of disinfection recommended were to apply to rags which had not been disinfected before exportation, and that several processes were mentioned which should be regarded as "satisfactory" if done abroad, and certified by a responsible person to have been done.

It was, in the opinion of every one present at the above-mentioned conference, to be regretted that what had been shown to be an effective apparatus for the disinfection of baled rags was covered by a patent; and it is still to be regretted that where the safety of the whole community is concerned the Government cannot either purchase the patent or defray the cost of protecting the public health in this as in other respects; but Mr. Smith's allusion to an imaginary "quarantine ring," which by implication must embrace the health authorities of other ports, as well as a number of representative sanitarians in different parts of the country, is as absurd as it is spiteful.

I am, Sir, yours, etc.,

ALFRED LUDLOW CARROLL, M.D.

New Brighton, [illegible]

THE EARLY USE OF IRON IN DIPHTHERIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dr. Winter's article on diphtheria, in your last issue, is a notable exception to the all-pathological, all-etiological style of most of the great writers who spare the time to write for medical periodicals, and I for one thank him for it. He mentions Dr. Heslop, of England, as the first to recommend the iron treatment in this particular disease, and also alludes to the immense doses given by different observers. Dr. C. D. Parke, of this city, is perhaps the first physician on this continent who demonstrated the virtue of this treatment, and his success was so great from the first, that to this day he is called the diphtheria doctor by the public, who are always quick to appreciate and reward success. He began his treatment about the same time (1858 and 1859) that Dr. Winters credits Dr. Heslop with having introduced it in England, wholly independent of any previous knowledge of its use. His observations led him to consider diphtheria allied in nature to erysipelas, which was prevailing also about that time. His success has been remarkable: from that day to this, nearly thirty years, during which time he has been engaged in active practice, he has only lost one case—one which obstinately refused all medicine—and has treated, perhaps, more cases than any physician in this section of the country. Strange to relate, he lost a child of his own with this disease, under the treatment of other physicians, to whose care he consigned it; but this case was one of laryngeal diphtheria. He has had no cases of laryngeal diphtheria in his own practice, which he attributes to the early and rapid use of iron—tincture of iron (which he has used in this disease for nearly thirty years), in large and hourly doses, ten to forty drops, with equal quantity of chlorate of potassa in syrup of acacia and water, or glycerine and water. He does not term primary cases of pseudo-membranous croup as diphtheria, nor has he had to treat any such cases. That we have diphtheria here, in severe types, too, there is no sort of doubt, as the sequels show. I have to-day a patient who has been convalescent from this disease for more than a month, who speaks with great effort, from paresis of the soft palate; who cannot see the figures on the clock-dial, and whose heart beats so feebly that he has fainted four times in the past month from too great fatigue in sitting up, contrary to my orders. I have seen in the past five years three deaths from cardiac paralysis, due to ignorance or neglect in the matter of convalescence in this disease. I have written you this letter for what it is worth, and I think all such data are worth something. That the physicians of this city are more than ordinarily successful in the treatment of this disease I am firmly convinced, both from ample experience in the observation of its ravages North and South, and also from written reports. Dr. F. M. Peterson, of Greensboro', in this State, also independently worked out this treatment, and has been eminently successful in his practice. Dr. Parke, and the remainder of us following in his lead, give calomel at first as a purge, then iron every hour—in bad cases, night and day—followed at once by a drink of rich, sweet milk; and if the membrane do not extend to the larynx, and the patient do not get up too soon, they get well; no matter how bad matters look, they get well. I have seen the pulse in children drop to fifty-eight beats to the minute, and stay there for days and days, and yet get well.

Strange to tell, and unjust to himself, Dr. Parke seldom, if ever, writes for publication; he does not bother his brains much about bacteriology, but he certainly knows how to cure diphtheria.

If this is worth the space, please do justice to this worthy and useful man, who still works in the harness at a ripe and honored old age. Very truly yours,

F. TIPTON, M.D.

[illegible], Ala.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from [illegible], 1885, to [illegible], 1886.

MADDOX, THOMAS J. C., First Lieutenant and Assistant Surgeon. Killed, December 19, 1885, in affair with Apache Indians, near the White House, New Mexico.

IVES, F. J., Assistant Surgeon. Ordered to report to Commanding Officer, District of New Mexico, for duty in the field. S. O. 127, Department of the Platte, December 23, 1885.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 2, 1886:

Week Ending	Typhus Fever	Typhoid Fever	Scarlet Fever	Cerebro-spinal Meningitis	Measles	Diphtheria	Small-pox	Yellow Fever
Cases.								
January 2, 1886	3	5	27	2	14	74	3	0
Deaths.								
January 2, 1886	2	4	4	2	1	32	1	0

HINTS ON THE TREATMENT OF PERSISTENT CONSTIPATION.—*The Lancet* publishes the following letters from various correspondents giving suggestions for the treatment of constipation:

SIR: In reply to your correspondent, "Physician," who asks in your last issue for some hints on the treatment of persistent constipation, I beg to suggest a plan which I found entirely successful in a case which I had recently under my care. The patient, a young man aged twenty-three, had suffered for six months from most obstinate constipation, for which he had tried numerous remedies, but without relief. At the time he came under my care he usually only had a motion, and that a scanty one, once in every week or ten days. I ordered ext. cascaræ sagr. liq., ʒj.; tr. nucis vom., ɱlx.; tr. belladonnæ, ɱv.; to be taken in water every night and morning; the abdomen to be rubbed firmly from right to

left for ten minutes every morning, and the diet to consist largely of porridge, brown bread, and stewed fruit, with entire abstinence from tea. Four hours after the second dose of medicine had been taken he passed a most copious motion. At the end of a week, as the bowels had acted each day, the dose was reduced to half, and continued for another fortnight, by which time he was quite cured. T. L. KENRICK DAVIES, M.B.

SIR: In answer to "Physician," I write to say that I have found the following prescription most successful in some cases of the above complaint: ℞. Tr. nuc. vomic., ♏100; tr. calumb., ʒ iv.; ammon. carb., ʒ ss.; sp. chlorf., ʒ iss.; dec. aloes co., ℥ j.; aq. camph. ad ℥ viij.: an eighth part to be taken two or three times a day, the first dose being taken each day about an hour before breakfast. I am aware that your correspondent says he has already tried strychnine, but possibly he may not have done so in the above combination.

W. L'HEUREUX BLENKARNE.

SIR: Let "Physician" administer to his patient every night, or, if necessary, night and morning, a pill containing one-sixth of a grain of extract of belladonna and half a grain of sulphate of zinc. I feel sure he will be more than satisfied with the result. ARCHD. HAMILTON.

SIR: I would recommend "Physician" to try either one-grain pills of pil. aloes glacialis or the mist. cascara sagrada comp. in teaspoonful doses. Both can be repeated at frequent intervals.

J. G. BRADEN, M.R.C.S.

SIR: If "Physician" will give ʒ ij. ol. ricini, ʒ ij. glycerinæ, and ʒ ss. q. ext. cascara (Battley & Watts) every night at bedtime, he will find the action all he could desire. LARD.

THE PROPORTION OF SURGICAL OPERATIONS THAT ARE NECESSARY.—Of one hundred possible operations, twenty are imperatively necessary, twenty are absolutely inadmissible, and the remaining sixty may be performed or not according to circumstances; and surgeons may and do err in each of these classes of cases.—PROF. VERNEUIL.

WHEN SPECTACLES SHOULD BE USED.—When we are compelled to remove small objects a considerable distance from the eye. When we find the light insufficient. When the object appears blurred, cloudy, or has a mist before it. When the letters of a book run together or appear double or treble. When the eyes become fatigued after reading or other exercise. These rules answer in many cases, but not always. Never choose a pair of spectacles when the eye is fatigued. Wait an hour or two, after you can be better suited. The tired eye needs rest, not glasses, and if they are purchased when the eye is excited or tired, errors are certain to occur in selecting the proper glasses. Wait patiently for an hour or two, or better still, three.—*The Medical Summary.*

POP-CORN AS AN ARTICLE OF DIET.—It is said that chemical analysis of pop-corn shows it to contain more albuminoids than most of the other cereals, and in certain parts of the West it is extensively used as a regular article of food. Our Pilgrim Fathers made some personal experiments with pop-corn, the result being that they started a Day of Thanksgiving for not having to live on it any longer.

A SURE CURE FOR HYDROPHOBIA.—An enterprising physician has secured for himself a thirty days' advertisement on the editorial page of *The Sun* in exchange for the following remedy, which he asserts cured one terrible case of hydrophobia: ℞. Potass. iodid., ʒ iij.; tinct. cinchonæ, ℥ ij.; syr. simplicis, ℥ iv. Sig.: A tablespoonful after each meal for an adult; for children, from one-half to two teaspoonfuls. He takes the wise precaution, however, to cauterize the wound with nitric acid. He does not say whether the simple syrup or the cinchona is the active agent.

WHAT THE PROFESSION NEEDS.—"A full one-half of the young men who come to Philadelphia to study medicine should be turned face about and sent to a village school. The place to intercept incompetents is at the entrance of the medical schools, rather than at their exit."—*Dr. J. E. Garretson.* "The profession is now thoroughly awakened to the necessity of arresting the course of the schools that are annually sending forth thousands of improper persons to practise on the community. . . . The diploma of schools should be beyond suspicion. The signatures should do more than convey the mere intelligence that the holder of a certain certificate has paid his money for two courses of lectures and thirty dollars for the engrossed parchment attesting the same. It does little more just now."—*New England Medical Monthly.*

A SIMPLE EVAPORATOR.—Dr. Cheize, in the *Glasgow Medical Journal*, writes that, wishing to remove an ingrowing toe-nail, and being without a spray-producer, he covered the toe with a pledget of the size of a crown-piece, poured ether on it, and evaporated this by means of a pair of bellows; in five minutes anæsthesia was complete, and lasted while the nail was removed and the matrix seared with the actual cautery.

IODOL—A SUBSTITUTE FOR IODOFORM.—To the progress of synthetical chemistry we owe an addition to our present list of local antiseptics which, if on further trial it be found to bear out the promises made for it by its discoverers, bids fair to take the place of iodoform altogether. Iodol, the substance referred to, is a dark powder obtained from "Dippel's animal oil." It has but little smell, and is soluble in three parts of absolute alcohol, but only in 5,000 parts of water. More than two hundred observations on various diseases have been made with it in the Royal Surgical Institute in Rome. It was used in substance, suspended in glycerine, dissolved in alcohol with glycerine, and as ointment. Chancres were washed with distilled water, very carefully dried, and sprinkled with iodol in powder, and covered with silk protective, the dressing being changed daily. In six days' time the base of the chancres began to granulate, and the edges to show signs of commencing cicatrization. Similar treatment was adopted in the case of open buboes, which very soon began to exhibit a healthy appearance, and in a short time healed up. In many cases of simple indolent ulcers iodol was equally valuable, the whole character of the sore becoming changed after a few applications. Neither erysipelas nor diphtheritis was ever observed in cases treated with iodol.

POST-MORTEM MUSCULAR MOVEMENTS.—At a recent meeting of the Biological Society of Paris, M. Brown-Séquard related some experiments he had made, by means of a special instrument, to determine the movements of single muscles in the body after death. He had found that there was a very considerable degree of contraction and relaxation, as much, for example, as 2½ mm. in a muscle measuring only six millimetres in length. He thought that the results of his experiments disproved the theory of coagulation in the muscular tissue as the cause of cadaveric rigidity.

THE DRY TONGUE IN FEVER.—Dr. Cotter writes in the *Indian Medical Gazette*, that he has had great satisfaction with the use of glycerine painted over the tongue in fevers. It keeps the organ moist and removes the sensation of great thirst and discomfort caused by a dry and foul tongue.

THE ACTION OF HOT BATHS.—Dr. Livierato states that the temperature of the body may be raised from 3° to 5.5° F. by immersion in a hot bath. This elevation may be maintained for nearly an hour if the patient be wrapped in blankets. Not only is the body-heat raised, but the amount of urea excreted in the twenty-four hours may be increased as much as 90 grains above the normal.

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Original Articles.

ON THE RELATION OF LITHÆMIA, OXALURIA, AND PHOSPHATURIA TO NERVOUS SYMPTOMS.[1]

With a Description of an Apparatus for Estimating the Relative Amounts of Phosphatic Deposits and of Uric Acid in the Urine.

By C. L. DANA, M.D.,

[illegible] Diseases, New [illegible]

EVERY one must feel that it is very desirable, in certain chronic functional nervous disorders known clinically as nervous asthenia, hypochondriasis, spinal irritation, etc., to get hold of something objective, some actual evidence of diseased action. In these conditions we have generally to rely upon the patient's statements, and to base our diagnoses on a clinical picture as set forth by a highly awakened imagination. We need something more tangible than this, and physicians have, therefore, turned to the kidneys as likely to furnish a more definite secretion to work upon than does the cerebrum. The results have been to find that with these symptoms of nerve irritability and exhaustion there is often some peculiar condition of the urinary secretion. The terms applied to these conditions are glycosuria, oxaluria, phosphaturia, and lithæmia. There has also been observed, in very rare instances, an excessive excretion of urea, which is called azoturia.

For some time I have been studying the subject of the relation between these urinary disturbances and nervous symptoms. I have tabulated notes of one hundred and ten cases, in most of which the condition of the urine was examined, and in thirty-one of which careful analyses to determine the amounts of uric acid, oxalic acid, phosphates, and sugar were made.

In order to support what conclusions I have been able to make, I shall have first to discuss briefly the urinary disorders referred to.

Oxaluria is a term first given by Dr. Prout to indicate an excessive discharge of oxalic acid in the urine. Dr. Prout, and later, Dr. Golding-Bird, held that there was a true oxalic-acid diathesis. It was characterized by flatulent dyspepsia, melancholia, and nervous irritability and depression. The views of these physicians have been denied by later observers, including Drs. Owen Rees, Beneke, Seligsohn, Bence Jones, and Dickenson. Of late, however, the older view has been revived by Professor A. Cantani, of Naples, who claims that there is not only an oxaluria but an oxalhæmia.

The facts seem to be that oxalic acid, in the form of oxalate of lime, is frequently excreted in normal urine. According to Schultzen it is excreted to the amount of 0.07 gm. daily. A pathological increase occurs in conditions of increased acidity favoring the deposition of urates, and in these cases some of the oxalic acid is formed from the urates. *Oxaluria is oftenest only an indication of lithiasis.* It is also found, however, whenever earthy salts are excreted in excess, and Dickenson thinks that its presence indicates an excessive loss of earthy salts. It [illegible] appears to me that we can discard the term oxaluria altogether, for when oxalate is found continuously in excess in the urine, careful examination will show either an over-acid urine and urates, or sugar; while, on the other hand, when earthy salts are passed in large amount, and some oxalates are formed, they have of themselves no significance (Dickenson). At the same time there are, perhaps, occasional cases of true oxaluria. Thus Furbinger (*Deut. Arch. f. Klin. Med.*, Bd. xvi., p. 500) reports a case in which there was alternately glycosuria and oxaluria. Others have at times reported cases in which there was simply an excess of the oxalate without any excess of urates or phosphates, and without sugar (Dr. C. N. Durselen, *Cin. Lancet and Clinic*, 1884, p. 683). The positive views of Cantani as to the existence of an oxaluria, appear to be not well substantiated. I have not seen his original work, but from a digest of it by Seligsohn ("Eulenberg's Real-Encycl.," Article "Oxaluria") it would appear that his assertion as to an excess of oxalate of lime in the blood was based on a single examination, and that his cases of oxaluria were really cases of lithæmia, or of excessive loss of earthy salts. I have not met with any case which I could positively speak of as one of oxaluria.

The relation of lithæmia to nervous symptoms is a most interesting one. Many writers, from Aretæus down, have called attention to the gouty nature of various severe nervous symptoms, more especially, perhaps, of those of hysteria (Whyth, Laycock), hypochondriasis (Handfield Jones), and neuralgia; and Laycock in particular ("Nervous Diseases of Women," pp. 165, 166) seems to aim to show that hysteria in woman is much the same thing as gout in man. Trousseau refers to the relations between gout and hysteria. Indeed, a long list of authors could be cited who have dwelt upon the relations between the gouty dyscrasia and nervous diseases (*vide* Laycock, *loc. cit.*). With the decline of the humoral pathology the importance of these dyscrasiæ, or toxic conditions of the blood from defective metabolism, was somewhat lost sight of. In 1881 Dr. Da Costa (*American Journal of the Medical Sciences*, October, 1881) called attention to certain clinical facts bearing on this subject. These were, that persons of a lithæmic tendency and history, persons who had a latent gouty disposition, occasionally passing urates in excess, might suffer from a long train of distressing nervous symptoms, such as objective vertigo, periodical headaches, neuralgias, cramps in the legs and muscular twitchings, pains in the fingers, parasthesia, insomnia, great nervous irritability, lassitude, melancholia, and even hysteria. Dr. Da Costa ascribes these symptoms to the irritant action of the over-acid blood, and called the disorder not "American neurasthenia," but "American gout." I am not aware that subsequent writers have brought forward any distinct evidence in support of these views, but they have, I believe, been quite widely received and adopted.

I have myself made many examinations in order to corroborate them, if possible. In about one-fifth of those cases, showing exaggerated nerve-irritability, I have found some evidence of over-acid urine, with excess of urates, and in the majority of these have caused great benefit by the adoption of anti-lithic treatment. Sometimes, even when the urine was cloudy and feebly acid, I have found that there was in reality a small amount of phosphates and an excess of urates.

[1] Read at a meeting of the Practitioners' Society of New York, December, 1885.

I have a striking illustration of this. A married woman, fifty years of age, came to me complaining of great nervousness, confusion of mind, irritability, and depression. She had no organic disease anywhere. Her father died insane, her mother was rheumatic. Of seven brothers and sisters nearly all were rheumatic, but had no nervous troubles. She herself had never had acute rheumatism, but at the time of her visit she had some muscular pains. Her urine was cloudy with phosphates, neutral. On precipitation with Teissier's solution, I found the phosphates below the normal, the urates on the first test acid, sp. gr. 1.022, with an excess of phosphates and a slight excess of urates. Under bicarbonate of potassium his symptoms improved remarkably.

In none of my cases have I been able to get the slightest evidence of developed gout. The histories were sometimes those of rheumatism, either personal or hereditary. In other cases no well-marked gouty or rheumatic history was obtained, and yet there was at times excess of urates.

So far as my experience goes, I cannot see on what ground the term gout is used in connection with these

ILLUSTRATIVE CASES.

	Patient.	Symptoms.	Condition of Urine.	Treatment.	Result.
1	Mrs. H——, aged thirty-two.	For a year has had gastric distress from dyspepsia; constipation; vertigo; headaches and neuralgic pains; morbid fears and very great nervousness; has had one hysteroid convulsion; lacerated cervix.	Urine evening and morning, 1.030, cloudy, acid; urates in great excess, phosphates normal or below average (three examinations).	Diabetic diet. Powders of pepsin, soda, and capsicum; pil. hydrarg. twice weekly.	Great improvement; subsequent relapse, followed by improvement under potas. bicarb.
2	Mrs. M——, aged thirty-eight.	Several years ago had "oxaluria," now has great nervousness, irritability, and mental depression; flatulent dyspepsia of severe type; constipation; epigastric distress; vertigo; periodical headaches; insomnia; chronic bronchitis.	Urine cloudy, acid; excess of urates.	All forms of medicine, such as acids, alkalies, bitters, made her worse; under a meat and milk diet, six light meals daily,	She improved vastly, and wrote me she felt very well.
3	Mrs. W——, aged thirty.	Has been extremely nervous; has morbid fears, vertigo, headaches; a moderate degree of dyspepsia.	Urine dark, acid, 1.028; urates in excess, phosphates average.	Meat and milk and green vegetables; pil. hydrarg. twice weekly, potas. et ferri tart.	Very great and immediate improvement.
4	Mrs. A——, aged twenty-eight.	Very nervous; left intercostal neuralgia; palpitations; slight dyspepsia.	Urine light, cloudy, acid, 1.018; no sugar or albumin; phosphates below average, urates very excessive.	Nitrogenous diet.	Improved.
5	Mr. K——, aged twenty-eight; single; accountant.	Spinal pains and weakness; easily fatigued; can't concentrate thoughts; has had to give up business; cold hands; anæmia; some dyspepsia; occasional emissions.	Urine clear, acid, 1.030; no sugar or albumin; urates in excess, phosphates normal (eight trials).	Nitrogenous diet; Blaud's pills; mercurial laxatives.	No improvement; urates disappeared.
6	Mr. S——, aged thirty-five; married.	Has had several attacks of acute rheumatism; has a mitral lesion; of late has periodical headaches (vertical); insomnia or bad sleep; great mental irritability and depression; nervousness; slight dyspepsia; sometimes has muscular rheumatic pains.	Urine clear, acid, 1.024; urates in slight excess, phosphates average.	Potas. bicarbonate.	Very great improvement.
7	Mr. C——, aged forty-five; married.	Father neuralgic; has had severe malarial poisoning and ague-cake; in late years has had three severe falls (from a wagon); has had no rheumatism or gout; now has tender and painful spine; muscular pains and soreness; tinnitus; bad sleep; very nervous, excitable; worried at times; easily tired; can't exert mental faculties.	Urine clear, acid, 1.024; urates in excess, phosphates average; no sugar or albumin.	Bicarbonate of lithia and potas.; blister to spine; rest.	Great improvement.
8	Mrs. D——, aged forty-five	Mother rheumatic, and all the eight brothers and sisters rheumatic; father died insane; patient never had rheumatism; of late very nervous, excitable, hysterical; confusion of mind; loss of memory; some rheumatic pains in shoulders and legs; anæmia; dyspepsia; has been treated for prolapse and anteversion of uterus.	Urine very cloudy; excess of urates was very marked (two tests), phosphates below average.	Nitrogenous diet; laxatives, Blaud's pills or tartrate of iron and potas.	No improvement at all.

slightly in excess; another test showed a greater excess of urates. She did not improve much on acid tonics and bromides, but improved, though temporarily, on Blaud's pills and on alkaline salts.

A professional gentleman, aged about thirty-three, who had had several attacks of acute rheumatism, came to me complaining of what he called cerebral neurasthenia. He was a man of strong physique, ruddy complexion, and full habit. He had a mitral lesion as the result of his rheumatism. He complained of periodical headaches, parasthesia, vertigo, lassitude, great mental irritability. He had at times passed urates in excess. His urine was

cases. It is well known that many persons live on the verge of a gouty paroxysm for years, and yet have no marked nervous symptoms. Dr. Murchison, in his description of lithiasis, does not describe the nervous symptoms of latent gout, although England is full of it. Both Anstie and Eulenberg speak in most positive terms against there being any causal relation between gout and neuralgia.

It is probable that we see here again the running together of the nervous and rheumatic diatheses, or at least that we have a dyscrasia which is not identical with that of gout, though allied to it.

All the same the view of a humoral origin of certain chronic nervous disorders is a fruitful one, from a therapeutic stand-point, and Dr. Da Costa has done great service in recalling attention to it. My experience so far teaches that in a good many cases of neurasthenia, especially of the gastric type, of hysteria, of spinal irritation in its lighter forms, and, in general, of great nervous irritability, there is an unsuspected excess of uric acid in the urine and blood, or, perhaps, some latent rheumatic taint. Treatment addressed to this will often succeed in giving prompt relief.

The subject of phosphaturia, so-called, is in a state of some confusion. Here again it was Dr. Prout who first associated a tendency to the deposition of earthy phosphates in the urine with conditions of depression and nervous irritability. Dr. Hassell also attributed grave constitutional symptoms to the precipitation in the urine of the crystalline phosphate of lime. Subsequent observers, however, and especially Bence Jones, have shown that in these cases of cloudy urine with deposition of phosphates the trouble is generally due to a diminished acidity of the urine, and not necessarily to excess of the salts. Any urine that for some cause becomes alkaline becomes cloudy and deposits its phosphates. It has been further shown that both an increase in the earthy phosphates and a diminution in the acidity of the urine can be caused merely by changes in diet, by acute, exhausting diarrhœas, or even by temporary attacks of indigestion.

So that of late it has been generally taught that there is no such thing as phosphaturia, or the phosphatic diathesis, but that this was all simply a question of diet and digestion. Dr. Dickenson, while admitting this view, still thinks that there is a condition of exaggerated nervous mobility, irritability, and exhaustion associated with the discharge of an excess of earthy salts. The urine here, he says, is not generally turbid, however, but is clear and yellow. It may even be extremely acid and scalding. There are rarely any deposits except occasional lithates or oxalates. The patients suffer from obscure arthritic pains, vertigo, parasthesia, tinnitus, melancholia, and their condition is often suspected to be one of latent gout. Yet they are made worse by salines, and generally improve under strychnia and mineral acids. Dr. Dickenson appears to be describing, under the head of phosphaturia, a clinical condition surprisingly like that described by Dr. Da Costa under the head of lithæmia or American gout. It is to be greatly regretted that neither of these observers gave comparative estimates of the amount of the earthy salts and of the urates.

In my own experience I do not find that in a majority of cases of nerve-irritation and depression there is any great and persistent excess of the total phosphates excreted, though there is often a diminished alkalinity and cloudy urine. It is a common observation that persons who suffer from dyspepsia and nervous asthenia, will pass cloudy urine after some unusual amount of mental work and worry, or after some dyspeptic attack.

Sometimes these cloudy urines really contain an excess of phosphates, but I have not yet found that it is the rule. My observations on this point are not finished.

As to the significance of those disturbances of the urine, my own opinion is that this so-called phosphaturia, when it occurs, is the result either of a peculiar diet, or of an indigestion due, perhaps, to insufficient innervation of the digestive organs, just as glycosuria and lithæmia may be due to insufficient innervation of the liver.[1] The careful experiments of Mairet (*Archives de Neurolog.*, January, March, and June, 1885) have shown that intellectual work and pathological irritations of the central nervous system slightly increase the excretion of the earthy phosphates, but do not especially change the excretion of the alkaline phosphates.

Treatment, directed to the nerves and stomach (strychnia, mineral acids), will usually very quickly relieve phosphatic urine.

From what has been said it is apparent that it is of the highest importance that the practising physician make himself acquainted with the condition of the urine as regards its phosphatic salts and its uric acid.

Certainly no case of chronic functional nervous disorder can be intelligently treated without such examination.

Here is a case in point: M. H——, aged thirty-two, married, suffers from frequent vertiginous attacks, periodical headaches, great nervous irritability, hysterical crises. Has a badly lacerated cervix. Had been long treated by various measures in vain. A gynecologist at last said she must be operated upon for the laceration.

I found the urine very acid, cloudy with urates (in four specimens). Treatment addressed to this (alkalines and stomachic tonics) gave her not perfect, but very great relief.

In order to facilitate the making of the proper urinary examinations, I have devised an apparatus which enables one with very little trouble to get an approximate idea of the relative amounts of phosphates or of uric acid.

I have several small glass tubes, thirty inches long, one and an eighth inch in external circumference, enlarged at the ends in a funnel shape, and stopped at one end by a rubber cork. These are graduated to fifteen and twenty-five cubic centimetres.

I have taken an artificial solution of triple phosphates of the strength of the average urine (0.5 per cent.), and precipitating the salts have marked the upper line on the tube. I have also, in a large number of cases of normal urine, obtained about the line of an average precipitate of phosphates.

In order to precipitate all the phosphates, both earthy and alkaline, I fill the tube with a definite quantity of urine, and then add Teissier's solution to saturation.

℞.	Aquæ destillat.	80.0
	Ammon. chlorid.	20.0
	Aq. Ammon. fort.	20.0
	Magnes. sulph.	20.0
M.		

One cubic centimetre of precipitate equals about 0.63 of phosphates per litre.

The solution should be renewed occasionally, as it loses some of its strength in standing.

If one wishes to precipitate only the earthy phosphates, he adds simply ammonia. Afterward he can add Teissier's solution, and observe the amount of alkaline phosphates. By this method one can very readily and quickly recognize approximately an excess in phosphate deposit as a whole, or in earthy deposit.

Despite a great deal of experimentation I have not been able to find any better ready test for the uric acid than that by hydrochloric acid.

To determine the amount of the uric acid, therefore, I

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1 Nutrition [illegible] NEW CLASS [illegible] Nerves.—It is [illegible] established [illegible] the nerves [illegible] tissues [illegible] in a state [illegible] healthy [illegible] finally, that upon its integrity depends the function of sensation and reflex action.

Hence pathologists classify symptoms of functional disorders into:

1. The motor and vaso motor neuroses, *e.g.*, paralyses, spasms, etc.
2. The trophic and secretory neuroses, *e.g.*, progressive muscular atrophy, certain skin eruptions, hyperidrosis, etc.
3. The sensory neuroses: neuralgia, hyperæsthesia.

There are certain disorders of assimilation in which metabolism does not go on properly. They are conditions which sometimes come on when the nervous system is poisoned, exhausted, or asthenic. They are caused most likely by the nervous centres not giving to the special metabolic tissues the normal tonic and regulatory impulses. There is in consequence a "metabolic" disorder; just as from deficient innervation there is motor weakness or some secretory disorder. In fine, we have a fourth class of the neuroses, the *metabolic neurosis*. Glycosuria, lithæmia, azoturia, and perhaps "phosphaturia," are included in this head.

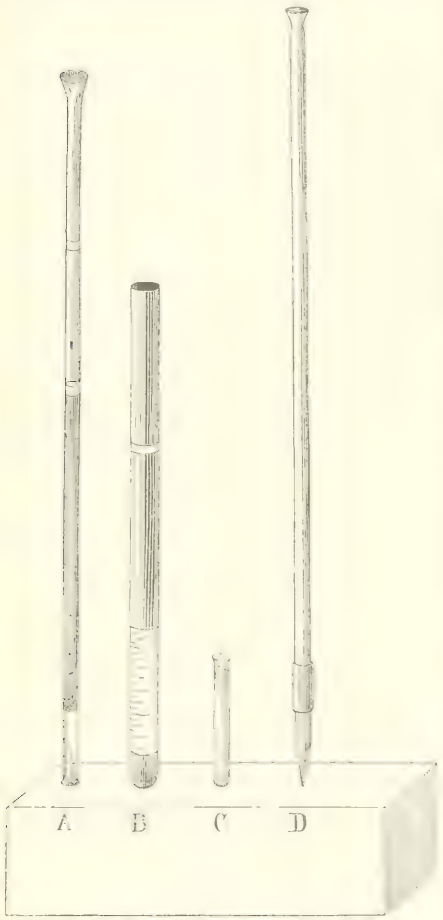
I believe there can be no valid objection to the view thus presented. It is a fundamental law of biology that the nervous system in the higher animals controls and regulates all the different bodily functions. The function of metabolism is the oldest in the history of animal life, and though not sharply specialized and relegated to a [illegible]

Metabolism and tissue-nutrition are not identical, although in its broadest sense metabolism includes nutrition. But in the more special sense, in which I use it, it refers to the livens-consumption of material that circulates in the system, never going to form tissue; the process that is most active in the liver, spleen, and in adenoid and adipose tissue, to all which Foster gives the name metabolic.

A [illegible] a very different thing from a trophoneur[illegible] like a spinal affection of a motor filament.

fill the tube with 15 c.c. of urine, and add 10 c.c. pure muriatic acid, then let it stand for twenty-four to forty-eight hours in a cool, dark place. Normally the amount of uric acid in 15 c.c. of urine is between gr. $\frac{1}{12}$ and gr. $\frac{1}{10}$. This, when precipitated, makes only a few dark specks at the bottom of the tube.

By making a solution of uric acid of the same strength as that of the urine, and then precipitating it, and by numerous tests with healthy urine, I get a very fair idea of the appearance of a normal precipitate. It is an excess when the whole bottom of the tube is covered, and even in clear urine I have seen the precipitate reach $\frac{1}{16}$ of an inch in depth, measured along the tube.



A is the tube ordinarily used. B, one with a funnel-shaped point. C, one in which the upper end is closed with a cork. D, a large tube for the quantitative estimation of uric acid, and for the urinary deposit.

In order to get, if possible, a more accurate measure, I had a funnel-shaped point jointed on the tube instead of a simple cork. This did not seem to work so well.

I am quite aware that the muriatic-acid test is said not to be very accurate, but it seems to me to answer all the purposes, and I find that, used in the long tubes, kept standing erect in the dark and in a cool place, I have no difficulty in getting a precipitate. In test solutions of uric acid I get nearly or quite all of the acid precipitate.[1]

[1] These tubes can be obtained of Mr T. H. Smith, corner Forty-Sixth Street and Sixth Avenue, Sayre's Pharmacy.

By the systematic use of these two tests, which should always be applied several times in each case, using both morning and evening urine, I believe that much help can be obtained in diagnosis and in the treatment and general guidance of the patient. If a persistent excess of phosphates is found without any excess of urates, the use of mineral acids and strychnia will be very surely beneficial. On the other hand, it is very likely that one reason why acids sometimes fail to relieve cases of apparent phosphaturia is that this condition does not really exist.

If acid urine, with high specific gravity, and excess of uric acid are found, a nitrogenous diet, alkalies, cholagogues, stomachic tonics, and stimulants are indicated. Sometimes diet alone is sufficient, and drugs are not tolerated.

It is to be borne in mind all the time that occasional deposits of urates may be due simply to cold weather and digestive disturbances, and may mean nothing.

In conclusion, I would sum up my remarks as follows:

1. There is no such thing as a lithæmic or uric acid diathesis, or as an oxalic acid or phosphatic diathesis.

2. There are, however, morbid conditions of the nervous system which are associated with excessive acidity of the urine and excess of uric acid in the urine. The morbid nervous symptoms in these cases are those of gastric neurasthenia, lighter forms of spinal irritation, great nervous irritability, vertigo, headaches, bad sleep, hypochondriasis, etc.

3. The "lithæmic state" is one that is allied to gout and rheumatism, rather than identical with either.

4. The lithæmic state in question, associated with nervous symptoms, is generally brought on by some overstrain or draining of the nervous system, or by some chronic poisoning of it, as by malaria or lead. It is probably a trophic or metabolic neurosis comparable to diabetes.

5. Oxaluria is generally only a form or indication of lithæmia. When oxalate of lime occurs in abundance with deposits of earthy salts, it has no clinical significance.

6. Phosphaturia, or an excessive deposit of earthy and alkaline phosphates in the urine may be only apparent, and due to deficient acidity of the urine from excess of vegetables or fruits in the diet. But an excessive discharge of phosphates may accompany conditions of functional nervous depression and irritation. It indicates in these cases a disturbance of digestion, due perhaps to some perversion of the innervation of the digestive organs. If kept up, the loss of phosphates and undue alkalinity of the blood may react upon the nervous system, but in the vast majority of cases phosphaturia is only an evidence of indigestion.

7. It is of great importance for purposes of diagnosis and treatment of chronic functional nervous disorders that a careful study of the acidity and alkalinity of the urine be made, and that the proportions of urates and phosphates discharged be estimated.

52 West Forty-Sixth Street.

Illegitimacy in Lima.—The Peruvians seem to have a positive aversion to matrimony, if statistics prove anything. In the register of births for the month of August last, published in *El Monitor Médico*, of 392 children, 208 were illegitimate, 177 legitimate, and 7 doubtful. Of the negroes, 90 per cent. were illegitimate; of the pure-blooded Indians, 68 per cent.; of the mixed race, 60 per cent., and of the whites, less than 29 per cent. It is to be noted, however, that many couples live together as man and wife, and are faithful to each other, although they have not gone through the ceremony of a formal marriage, and their children are consequently recorded as illegitimate.

Miss Alcott remarked during a trip on an ocean steamer: "They name ships Asia, Persia, and Scotia. I wonder it doesn't occur to somebody to name one Nausea."

ANNUAL REPORT OF THE THROAT DEPARTMENT OF THE GERMAN DISPENSARY,

With Remarks on the Treatment of Laryngeal Phthisis, and on Reflex Neuroses due to Nasal Disease.[1]

By J. W. GLEITSMANN, M.D.,

[illegible]

Before entering into the subject proper of my paper, allow me to say a few words about the work done in the Throat and Ear Department, which, as you all know, was the last one to be created as an independent class. When I was assigned to duty in the fall of 1882, the department was still combined with the eye class. A record from the books shows the total number of patients during 1883 to be 3,274, of whom there were 1,407 throat and ear patients. The formal separation from the eye class took place on May 23, 1884, when we moved into our comfortable new building. The number of throat and ear patients during 1884 was 2,219, an increase of fifty-seven per cent. compared with the year previous; during 1885, 3,156, showing an increase of forty-two per cent. over 1884. When you compare the increase of patients in our department with that of the other classes during the last three years, the rapid growth of the former will be still more apparent. Although I may be permitted to say that all the surgeons worked with equal zeal and devotion, the great influx of patients is certainly in a large measure also due to the fact that a separate and distinct department had been created for this class of diseases. The attention of the public once being attracted, a greater number sought help for their ailments.

The report which I now lay before you does not contain the total number of patients, the ear cases being excluded. My intention to treat of the latter at another time, and the fact that the laryngological and rhinological material will more than suffice to occupy our evening, may serve as my excuse.

I am well aware of the shortcomings of statistics like the present; they necessarily suffer from imperfections time only can eliminate. The figures are too small, the time of observation is too short, to allow conclusive deductions in regard to the frequency of a disease, the etiological factors, the influence of sex, seasons, etc. Nevertheless, aside from a review of the work done in the department, the reader will find many interesting data, and if others will publish similar reports in the future, their value will naturally be enhanced. Up to the present time only few statistics of this kind have appeared. Among them I may mention the reports of the Throat Department of the St. Thomas' Hospital, in London, for 1882 and 1883, by Dr. F. Semon, and Dr. Schmiegelow's first report of the Commune Hospital in Copenhagen, published March, 1884. No such compilation, as far as I know, has been made in this country.

The classification of patients under the different headings was rendered the more difficult, as three surgeons succeeded each other during the course of the year on the three alternate working days. A perfect uniformity in the nomenclature could not, therefore, be expected. Further, in many instances a patient suffered from more than one affection at the same time. In order not to complicate the report too much, each patient is enumerated but once and classified according to his most prominent ailment.

Of the total number of patients 2,042 are contained in the different tables; the majority of the other 1,114 were suffering from ear complaints. To many treatment was refused on account of their being found able to pay, and several were assigned to other departments, to which they properly belonged. The 2,042 patients were divided into four groups, and we count, under diseases of the pharynx, 1,100; of the larynx and trachea, 392; of the nose and rhino-pharynx, 493 patients. The fourth group, which strictly does not belong to our specialty, comprises 57 patients, suffering from diseases it was considered opportune to treat in the department.

[1] Read before a meeting of the Physicians of the German Dispensary, January 3, 1886.

[illegible]

			Total.
1. [illegible]	[illegible]	[illegible]	[illegible]
2. [illegible]	[illegible]	[illegible]	[illegible]
3 [illegible]	[illegible]	[illegible]	[illegible]
4 [illegible]	[illegible]	[illegible]	[illegible]
5. [illegible]	[illegible]	[illegible]	[illegible]
6 [illegible]	[illegible]	[illegible]	[illegible]
7 [illegible]	[illegible]	[illegible]	[illegible]
8 [illegible]	[illegible]	[illegible]	[illegible]
9 [illegible]	[illegible]	[illegible]	[illegible]
10. Elongated uvula	7	[illegible]	[illegible]
11 [illegible]	[illegible]	[illegible]	[illegible]
12 [illegible]	[illegible]	[illegible]	[illegible]
13 [illegible]	[illegible]	[illegible]	[illegible]
14 [illegible]	[illegible]	[illegible]	[illegible]
15. Phthisis	3	[illegible]	[illegible]
16. Syphilis	33	[illegible]	[illegible]
17 [illegible]	[illegible]	[illegible]	[illegible]
18 [illegible]	[illegible]	[illegible]	[illegible]
19 [illegible]	[illegible]	[illegible]	[illegible]
20. Cysts	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

1. Laryngitis, acute catarrhal	70	[illegible]	[illegible]
2 [illegible]	[illegible]	[illegible]	[illegible]
3 [illegible]	[illegible]	[illegible]	[illegible]
4. chronic subglottic	[illegible]	[illegible]	[illegible]
5 [illegible]	[illegible]	[illegible]	[illegible]
6 [illegible]	[illegible]	[illegible]	[illegible]
7. Tracheitis, catarrhal	2	[illegible]	[illegible]
8 [illegible]	[illegible]	[illegible]	[illegible]
9 [illegible]	[illegible]	[illegible]	[illegible]
10. Syphilis	[illegible]	[illegible]	[illegible]
11. Hyperæsthesia	2	[illegible]	[illegible]
12 [illegible]	[illegible]	[illegible]	[illegible]
13 [illegible]	[illegible]	[illegible]	[illegible]
14 [illegible]	[illegible]	[illegible]	[illegible]
15 [illegible]	[illegible]	[illegible]	[illegible]
16. [illegible]	[illegible]	[illegible]	[illegible]
17. [illegible]	[illegible]	[illegible]	[illegible]
18. Papilloma	[illegible]	[illegible]	[illegible]
19. [illegible]	[illegible]	[illegible]	[illegible]
20. [illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]

Nose and Naso-pharynx.

			Total.
1 [illegible]	[illegible]	[illegible]	[illegible]
2. [illegible]	[illegible]	[illegible]	[illegible]
3 [illegible]	[illegible]	[illegible]	[illegible]
4 [illegible]	[illegible]	[illegible]	[illegible]
5. Rhino-pharyngitis, chronic	64	[illegible]	[illegible]
6. Perichondritis of septum, traumatic	[illegible]	[illegible]	[illegible]
7 [illegible]	[illegible]	[illegible]	[illegible]
8 [illegible]	[illegible]	[illegible]	[illegible]
9. [illegible]	[illegible]	[illegible]	[illegible]
10. Acne rosacea	1	[illegible]	[illegible]
11 [illegible]	[illegible]	[illegible]	[illegible]
12. Foreign bodies	2	[illegible]	[illegible]
13. [illegible]	[illegible]	[illegible]	[illegible]
14. Mucous polypi	18	[illegible]	[illegible]
15 [illegible]	[illegible]	[illegible]	[illegible]
16 [illegible]	[illegible]	[illegible]	[illegible]
17. [illegible]	[illegible]	[illegible]	[illegible]
18. Perforation of septum, non-specific	3	[illegible]	[illegible]
19. [illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	220	[illegible]

UNCLASSIFIED.

Disease	Male.	Female.	Total.
1. Gingivitis	2	2	4
2. Epulis	3	..	3
3. Ranula	..	1	1
4. Stomatitis, catarrhal	3	5	8
5. " specific	3	1	4
6. Glossitis	2	2	4
7. Leukoplakia	1	..	1
8. Lymphadenitis	0	1.0	1.
9. Cervical abscess	2	..	2
10. Goitre	3	8	11
Total	29	29	57

SUMMARY.

Disease.	Male.	Female.	Total.
1. Pharynx	621	479	1,100
2. Larynx and trachea	255	137	392
3. Nose and naso-pharynx	273	220	493
4. Unclassified	28	29	57
Grand total	1,177	865	2,042

From the sixty-nine different diseases in the tables before you I have selected two topics which I thought of sufficient interest to engage your attention this evening, viz., the treatment of laryngeal phthisis and the reflex neuroses due to nasal disease. In order not to transgress the allotted time, I shall be brief and only mention the salient points.

It always has been the endeavor of physicians to treat laryngeal phthisis successfully. While some writers, as, for instance, Tevishaber,[1] Heinze,[2] believe in temporary relief only, the majority of observers consider a permanent cure possible. Some of the latter, for instance, Mackenzie,[3] Cohen,[4] regard cure as an exception; others, as Bosworth,[5] Schmidt,[6] report very favorable results. The former has cured sixty cases, the latter nineteen of three hundred and fifteen patients seen within three years, and nine of eighty-seven seen later. But while Bosworth holds the opinion that laryngeal phthisis is not necessarily of tubercular origin primarily, and that tubercle as a rule plays no part in its primary causation or development,[7] Schmidt agrees with Heinze as to its tubercular nature from the beginning, and calls only such patients cured who remained free from laryngeal and pulmonary symptoms for a long period.

In order to combat the local complication successfully, treatment of the pulmonary affection is absolutely necessary. It will here suffice to merely mention the measures to be adopted: as climatic treatment, due attention to the skin, suitable nourishment, avoidance of dust, and rest of the vocal organs.

It was thought that with the invention of the laryngoscope a more successful treatment could be inaugurated, but the expectations were not realized. Astringents and caustics were first employed, but were soon abandoned as too irritating, and as failing to change the malignant nature of the ulcerations. When, in 1860, atomization was introduced, the remedies were applied in spray form. Resolvents, astringents, and recently antiseptics have been recommended, as boracic acid, carbolic acid, also creasote, thymol, oil of turpentine, with or without addition of narcotics.

Schmidt ascribes his good results, mentioned above, to the inhaling of disinfectant and antiseptic vapors. Eight to fifteen drops of a mixture of ten parts of balsam of Peru and five parts of rectified alcohol are put into half a litre of boiling water, and the patient is directed to inhale the vapor for five minutes three to four times daily. Antiseptics can also be inhaled for a longer time through respirators, Herschmann's mask. In order to avoid the irritation of mouth-breathing, Whistler devised a pattern which allows inhalation through the nose only, and later added an instrument for the same purpose for patients on whom tracheotomy had been performed.[1] He chiefly uses conium, turpentine, camphor, eucalyptus oil.

The same class of remedies is also applied locally with the cotton-carrier or powder-blower. The best results have been obtained with boracic acid and iodoform. As boracic acid has been superseded by the iodoform, I shall confine my remarks to the latter. Lincoln employed iodoform as early as 1873,[2] and in 1878 it was in use in the London Throat Hospital. In Germany Schmidt induced Beetz[3] to make the first insufflations in laryngeal phthisis with good results. Iodoform is at present the most favorite remedy with the majority of laryngologists, although it has some drawbacks. Some patients lose their appetite, and Fraenkel[4] not long ago stated, in a meeting of the Berliner Medical Society, that iodoform does not kill the bacilli.

Quite recently Krause recommended lactic acid[6] and praised very highly its beneficial effect. His attention was drawn to this remedy by Mosetig-Moorhof,[6] who destroyed superficial epitheliomata, and papillomatous and fungous growths by the concentrated acid. The advantage lactic acid possesses over other caustic remedies rests in its property of destroying diseased tissue, leaving the healthy parts intact. In order to obtain the full effect of the acid, it is necessary to employ it in concentrated state, and to leave it in contact with the tissue for some time. Krause adopted this procedure as far as possible to the laryngeal application by rubbing the solution into the affected parts, and by rapidly increasing the strength from ten to fifty, even eighty per cent. He reports fourteen cases, some very severe, with extensive ulcerations over the greater part of the larynx, and then summarizes as follows: After the application of strong solutions a tough scab is seen adhering firmly to the ulcers. The swelling and infiltration decreases, and after the sore clears up, healthy granulations appear. The ulcers become smaller, cicatrization commences, dysphagia disappears, and the voice and general condition improves. In a later communication[7] Krause relates favorable reports received by Gottstein and Hering, and quite recently Jelinek[8] corroborated these statements. The discussions following these last two papers developed considerable opposition, and opinions are widely divided at the present time.

The desire to judge for myself as to the utility of this treatment, induced me last fall to adopt it in my department.

Only such patients were selected as had positive signs of pulmonary complications and well developed laryngeal symptoms, such as tubercular infiltration or ulceration. The histories are, in brief, as follows:

CASE I.—Female, aged thirty-eight. Cavity in right apex; slight hoarseness and small infiltration on posterior wall of larynx. Treatment began October 28th. December 29th the laryngeal swelling had grown smaller, but had not disappeared entirely, voice better.

CASE II.—Male, aged thirty-one, upholsterer. Dulness and moist râles at left apex anteriorly; considerable tumefaction of the arytenoid cartilages; conical excrescence on posterior wall of larynx; hoarseness, no dysphagia. Persistent treatment for two months with strong solutions resulted in but slight decrease of the posterior infiltration.

[1] Transactions International Laryngological Congress, Milan, 1880, p. 100.
[2] Manual of Diseases of the Throat [illegible] and Nose, p. [illegible]
[3] Transactions American Laryngological Association, [illegible]
[4] [illegible]
[5] Transactions International Laryngological Congress, Milan, 1880, p. 100.
[6] Manual of Diseases of the Throat [illegible] and Nose. New York, 1881.

[1] Medical Times and Gazette, December 16, 1882, and June 20, 1885.
[2] New York Medical Record, 1873, p. 4[illegible]
[3] Berliner Klinische Wochenschrift, Nos. 2, 1882.
[4] Ibidem, No. 1, 1885. [illegible] Ibidem, No. 29, 1885.
[5] Centralblatt für die [illegible], No. [illegible]
Berliner Klinische Wochenschrift, No. [illegible]
Wiener Medizinische Presse, No. [illegible]

Case III.—Male, cabinetmaker, aged thirty-eight. Cavity in right apex; hectic symptoms; large œdematous swelling of left ventricular band, its posterior third destroyed by deep, angry ulceration; dysphagia. Patient had been treated with iodoform and cocaine without visible effect. Lactic-acid treatment begun October 28th. After two weeks the ulcer was perfectly clean and cicatrization had commenced; marked improvement. End of November, slight infiltration of left aryteno-epiglottic fold and left vocal cord, which were in statu quo December 29th, the patient being irregular in his calls. The first ulcer remained healed.

Case IV.—Male, aged forty-six, works in a brewery. Right lung diseased; infiltration of intra arytenoid region. Ulceration began while under iodoform treatment; odynphagia. Lactic acid lessens the pain and cleans the ulcer, but during its use the process extends to the epiglottis, and patient goes to a hospital, where he dies.

Case V.—Male, machinist, aged forty-nine. Right lung affected; superficial erosions of the free border of both vocal cords; slight infiltration of ventricular bands anteriorly; hoarseness. No visible effect of treatment.

Case VI.—Male, cigarmaker, aged forty-one. Right lung diseased; larynx shows swelling of the left arytenoid cartilage and slightly ulcerated cords. Patient at first bears only weak solutions, but in spite of strong applications during one month the right arytenoid and both ventricular bands had become infiltrated. Dysphagia had decreased.

Case VII.—Male, aged thirty-two, clerk. Dulness, moist râles at right apex; left edge of the epiglottis slightly tumefied, ulceration extending through the mucous membrane to the cartilage; severe odynphagia. Treatment begun November 14th, with solutions of ten per cent., rapidly increased to twenty-five and fifty per cent. Two weeks later the ulcer had cleared and pain in swallowing disappeared. Middle of December ulceration began on the right side of the epiglottis, and one application of seventy-five per cent. was made. Patient complained of great pain during the week following, but felt relief after three subsequent insufflations of iodoform.

Case VIII.—Male, aged thirty-two, porter. Affection of both lungs. The whole larynx one large ulcerated surface; extreme odynphagia. Patient was irregular in his calls, and no perceptible effect of the treatment could be observed.

A ninth case, although not properly belonging here, deserves mention. The patient, male, aged forty-six, had no physical signs of lung disease, and careful microscopic examination of his sputa as well as laryngeal secretion showed no bacilli. But the ulceration of the epiglottis and a deep ulcer on the posterior part of the left ventricular band, extending to the cord, made the diagnosis of phthisical laryngitis most probable. After one month's treatment the ulcer was clean, and dysphagia relieved. Patient died soon afterward from intercurrent pneumonia; no post-mortem allowed.

These observations will justify the following conclusions:

1. Lactic acid is a valuable remedy in most cases of phthisical ulceration of the larynx. The ulcers heal rapidly and the distressing pain in swallowing is thereby relieved.

2. Its use does not prevent the formation of new infiltrations, or ulcerations.

3. When not combined with other proceedings, it has little or no effect on infiltrations, which are covered by intact mucous membrane and epithelium.

The last subject of my paper, the reflex neuroses due to nasal disease, has of late engaged the attention of medical writers to such a degree that I have thought it of sufficient interest to give you a short review.

Distinction has first to be made between normal and pathological reflex phenomena. To the former belong sneezing, caused by inhalation of dust, introduction of irritating powders into the nose; epiphora, produced by similar causes; further, the reflex relation between mucous membrane and respiration and circulation, described by Kratschmer.[1] When a quietly breathing rabbit is made to inhale the vapor of a volatile liquid, *i.e.*, ether, ammonia, etc., the thorax assumes the expiratory position and the heart ceases to beat. Finally, cough can be elicited by irritation of a normal nose, for instance, contact with a probe—a question recently exhaustively studied by Mackenzie.[2]

The first observation of pathological reflexes was made by Voltolini,[3] who cured a patient of asthma by extirpation of nasal polypi. He soon was followed by others, for instance, Haenisch,[4] Porter,[5] who effected a cure of asthma by removal of a pharyngeal polypus; but it was left to Hack to draw general attention to the subject.[6] Although he seemed at first too enthusiastic, and was obliged to modify his views later on, he certainly deserves the credit of having pointed out a group of diseases due to nasal affections, and of having thereby made them amenable to treatment. The present state of the question is, in a few words, as follows:

It has been well known for some time that there exists a cavernous erectile tissue on the lower and middle turbinated bones of the nose, an excellent description of which has recently been given by Zuckerkandl.[7] This tissue can be irritated and made turgescent by reflexes arising from other parts of the body, and by morbid local changes, and then produce neurotic symptoms. The neuroses are generally transmitted by the first and second branch of the trigeminus, but the olfactory also plays its part; it is, for instance, known that an asthmatic attack has supervened on entering a room containing violets.

Of the reflexes which are produced by transmission from outside sources, I may mention sneezing after looking into a glaring light, for instance, sunlight, and filling of the nasal vessels with the sensation of stuffiness after exposure of the skin to cold. The psychical sphere and genital tract also sometimes exert their influence on the erectile tissue, which fills with some women during menstruation.[8]

The observation that many patients with nasal hypertrophies have no reflex symptoms, is explained by Rossbach on the assumption that the nervous system of such sufferers is similar to that of neurasthenic and hysterical people. The lower turbinated are most frequently diseased; next, the lower and middle combined; last, the middle ones alone. The disease is more frequent in the better situated than poorer class, and, contrary to adenoid vegetations, more in adults than children.

We can distinguish several forms of reflex neuroses, the most frequent of which are: (1) spastic neuroses, as bronchial asthma, spasmodic sneezing and coughing, also glottic spasm; (2) neuroses of the sensory sphere, as abnormal and painful sensations in the pharynx and larynx, hemicrania, supra-orbital neuralgia, alopecias in remote parts of the body; (3) of vaso-motor reflexes we have erythema of the nose, œdema of the face, erysipelatous swelling of the eyelids and cheeks. To this group can also be referred attacks of vertigo, and, according to the opinion of most American writers, the hay fever; (4) serous neuroses manifest themselves in profuse, sudden, serous secretion from the nose, in epiphora, which in this case is not brought on by mechanical obstruction of the lachrymal duct; finally, salivation. Further, there have been observed scotomata, palpitation of the heart, epileptoid attacks, etc. Sommerbrodt[9] published the case of a boy who had œdema of the face, spasmodic sneezing, profuse nasal secretion—all men-

tioned above. Further, he suffered from reflexes to the bronchial vessels with all the physical signs of chronic bronchitis; from reflex vomiting and reflex involvement of the nerve-fibres of the skin, causing chilliness, rigor, paleness. After a few days of treatment of both lower turbinated bodies with the galvano-cautery he showed improvement, and was entirely cured within one month.

The prognosis is better for the local symptoms arising from the nasal affection, as coryza, epistaxis, inflammatory conjunctivitis, than for the reflex phenomena. Therefore it is best to be reserved in the opinion expressed to the patient.

When there is doubt if the neurotic symptoms are due to nasal disease, the use of cocaine can help the diagnosis, as cases are described in which the reflex neuroses were temporarily suspended after application of cocaine to the nasal hypertrophies. Cocaine, besides its analgesic and anæsthetic properties, also has the effect of depleting the cavernous erectile bodies. Even weak solutions cause collapse of the turgescent tissue, and the mucous membrane can be seen to adhere close to the bone. Bosworth was the first to draw attention to this fact, which already has been found useful in the treatment of various nasal affections.

Before resorting to the actual cautery, milder means can be employed to remove the hypertrophies, as, for instance, glycerole of iodine, iodide of zinc, of caustics, nitric acid, chromic acid, glacial acetic acid, etc.; but our chief dependence will always remain the galvano-cautery, on account of its quick and positive action. By applying cocaine before and after the operation, not only will pain be avoided, but the patient will also escape the distress caused by the swelling and stuffiness following the application of the cautery without this precaution.

KERATOSIS SEBACEA—A CASE ASSOCIATED WITH HYPERTRICHOSIS.

By GEORGE T. ELLIOT, M.D.,

[illegible]

THE literature of this dermatosis is very misleading and confusing, owing partly to the variety of names under which it has been described, and partly to the very different diseases which have been confounded with it. The term Ichthyosis sebacea seems, however, to be the one in most general use, notwithstanding that it is also given to processes which have no connection with the sebaceous glands, as, for instance, keratosis diffusa intra-uterina.

Seborrhœa squamosum neonatorum, Xeroderma saurioides, Cutis testacea, Ichthyosis congenita, Seborrhœa universalis, Acné sebacée, etc., are still further designations which are made synonymous with each other and with ichthyosis sebacea. Yet the processes which are included under these are in many cases very different, not only from each other, but also from keratosis sebacea, and one is at an utter loss either to reconcile them together, or to regard them as dependent even in a remote degree upon the same cause. Affections due to an anomalous development of the epidermis, dating from early intra-uterine life, as in ichthyosis congenita, those having their origin in an excessive and abnormal secretion of vernix caseosa, as in seborrhœa squamosum neonatorum, and those arising from an inordinate action of the fully developed sebaceous glands, accompanied by an exfoliation of their epithelium, as in keratosis sebacea, are thus found jumbled together, regarded as being more or less the same, and dubbed with a name, ichthyosis sebacea, common to and interchangeable between them all. The confusion which results from this is necessarily antagonistic to any clear comprehension of the subject, and brings the reader into a condition of utter perplexity.

I shall scarcely, however, in this article, attempt to elucidate the differences existing between the various affections bearing the name ichthyosis sebacea, my intention being only to describe a case which is interesting from its rarity, and from an unusual feature accompanying it. That I use the term keratosis sebacea, instead of ichthyosis sebacea, is owing to the confusion surrounding this latter, and because it expresses most clearly the nature of the changes which occur in the course of the affection.

Lebert ("Ueber Keratose," Breslau, 1864) defines keratosis sebacea as a species of seborrhœa which differs from ordinary seborrhœa in that it is accompanied by more extensive exfoliation of the epithelium of the sebaceous glands, the affection being primarily dependent upon an enormously increased secretion of sebum, and upon epithelial hyperplasia. Keratofication is secondary, and results from inspissation and desiccation of the secreted mass.

There are rather few descriptions of keratosis sebacea given either in text-books or in journals. Of these the most accurate is that of Erasmus Wilson, which is quoted in extenso by Lebert. Biefel, likewise, under the name of ichthyosis spuria, and Schwimmer, under that of seborrhœa universalis, each describe a case agreeing perfectly with Wilson's, and distinguishable for accuracy and clearness. Reference to the affection, and mention of the process is also given by many others, but these observers are the only ones whom I have found treating it with definiteness and thoroughness.

The cases described by them leave no question in regard to the sebaceous origin and nature of the affection. Biefel and Schwimmer held that it was situated entirely in the glands which secrete sebum, and Wilson, though considering it a form of ichthyosis, yet believed it to be one in which the sebaceous glands played a principal part. As Lebert says, there is an exfoliation of the epithelium of the glands which occurs before the cells have undergone complete fatty degeneration, and these, arriving upon the surface mixed up with the sebum, undoubtedly aid in producing the incrustation. But yet there is no connection between this exfoliation and the epidermic changes seen in ichthyosis, which depend upon an anomalous development of the epidermis. In the one, the horny appearance acquired by these exfoliated cells is entirely secondary, and due to a process of desiccation, but in the other the cells are true epidermis cells, which have been produced in the natural manner, only deviating in their arrangement from the norm. In addition, in keratosis sebacea there is no hereditary tendency, while in ichthyosis it is absolutely established. Besides, as will be seen presently, the objective symptoms presented by this affection separate it very distinctly from those which belong properly to the ichthyoses. In its development, keratosis sebacea seems to follow no definite rule. At times appearing shortly after birth, at others not until adult life has been reached, it seems to be limited to no particular age, but to occur at any time in post-uterine life. Biefel's patient was twenty-two years of age when first seen by him. The affection had been more or less present since childhood, but rapid and extensive increase had commenced only at the age of nineteen. Wilson mentions two sisters, seen by Dr. Ogle, in whom the process developed at the age of fourteen, following vaccination. It may be universal, or limited to only small areas, or again consist of only a few patches.

The first changes observed in the development of keratosis sebacea consist in a largely increased secretion of sebaceous matter. It is, as it were, poured out upon the skin, accumulating rapidly and becoming gradually inspissated, until it forms a hard and dry incrustation. The color, at first only grayish, becomes gradually brown, and then darker and darker, until it varies from a deep brown to even a black or greenish black. This change in color is due both to deposition of dust upon the surface, and also to pigment mixed with the secreted sebum. The incrustation is not uniform, but is cracked

and broken into pieces of variable shape and size, which, though externally hard, horny, and of dark color, yet are softer as the surface of the skin is approached, and contiguous to it are quite soft and fatty, and light gray. On removing some of the mass, the skin is found normal in appearance, or perhaps slightly reddened, but the ducts of the sebaceous glands are dilated and patent. The general health of the patient is usually unaffected, and only the objectionable appearance of the evil is complained of.

This brief *résumé* of the principal features of keratosis sebacea is, I think, sufficient to identify it with the following case. This latter presented, in addition to these symptoms, however, one, as already mentioned, which materially increased the interest excited by the unusual affection.

W——, a boy, aged seven months, born in New York, of German parentage, was brought last June to Dr. Bulkley's clinic at the New York Skin and Cancer Hospital. The baby was well nourished, fat, and playful. He nursed well, his bowels were in normal condition, and he was evidently in perfect health. His parents, also, were strong and healthy, and their other children were entirely free from any affection of the skin. Besides, they knew of no one connected with their family who had suffered or were suffering from any similar or correlative process. The baby's skin had been, at birth, perfectly normal, and had remained so up to the age of six weeks. At that time diffuse, irregular, but distinctly limited erythematous patches began to appear upon both ankles and the dorsal surfaces of both feet. They were not elevated, and were entirely free of squamæ. In a few days, however, these patches were found covered with thin, whitish, easily detachable and soft scales, which, notwithstanding repeated washing, accumulated rapidly, became thicker and harder, and underwent changes in color until they were of a dark brown or black. Almost immediately after the appearance of the patches on the feet and ankles, the erythematous condition began to extend upward upon the legs, until it occupied the entire lower extremities. The formation of scales upon them ensued in the same way as upon the first patches. The process likewise developed itself in a few places upon the body. The child's health remained perfect all this time.

Status præsens.—On removing his clothes, the little patient presented the following condition: The dorsal surfaces of the feet, and the entire lower extremities as far upward as Poupart's ligament anteriorly, and the gluteal fold posteriorly, with the exception of an irregular, diamond-shaped space occupying the popliteal region, were entirely covered by an incrustation of a dark-brown and greenish-black color. This shaded off toward the plantar surfaces of the feet, which were entirely free, in thin, light-brown scales. The upper surfaces of the first and second phalanges of the toes were also more or less covered by thick, dark, hard squamæ. The incrustation was not uniform, but divided up into small pieces of various shapes and sizes, none being larger than a small grain of corn. They were elevated above the skin from one-sixteenth to one-tenth of an inch, and their external surfaces were slightly convex, and polished from friction. Each small piece seemed to fit into the other, and offered no hinderance to the natural movements of the child. The encasing sheath on the extremities resembled very much a mosaic in dark brown. The scales were rather adherent, but on removing some of them, nothing but a slightly reddened appearance of the skin was observed.

The penis, scrotum, and perineum were entirely free, as also a narrow line along the inner margin of the inguino-scrotal space. The buttocks were the seat of only a diffuse redness, which extended upward as far as the second lumbar vertebra. The irregular border which bounded this diffuse patch was, however, covered with brown scales, and their absence from the buttocks was probably due to the manner in which the child was carried. Irregularly shaped spots, varying in size from a twenty-five-cent piece to the palm of the hand, were also seen here and there on the abdomen and back, some only erythematous, others covered with light-brown squamæ. The backs of the hands, the wrists, and the arms, as far up as the elbows, showed diffuse redness, with here and there accumulation of brownish and black scales. The incrustation is not so uniform upon the upper extremities as it is upon the lower; the scales are not so thick, nor are they so closely aggregated together, and they are found more upon the extensor surfaces than upon the flexors. The palms of the hands are entirely free. On the neck, again, we find three or four distinctly limited oval spots, varying in size from a twenty-five-cent piece to a silver dollar, and upon the cheek one measuring two inches by one and a half inch. These last show only a condition of erythema, are devoid of squamæ, and are soft, velvety, and slightly oily to the touch. Over the anterior portion of the right parietal bone a patch is situated, which presents the same appearance as seen on the legs. The skin between all of these discrete patches is white and soft, and seems to be in every way perfectly normal.

On removing some of the incrustation, which, externally, was hard and dense, it was seen that it became gradually softer as the skin was neared, the color at the same time becoming grayish. They crumbled rather easily under pressure, with the exception of the outermost layer, which resisted even considerable force. Examined under the microscope, they proved to be composed of: Sebaceous matter in great quantity; oil-globules; horny cells (some diffusely pigmented, others containing only pigment granules); free pigment; cholesterin crystals in large numbers; foreign matter.

Diachylon ointment was prescribed for the little patient, and the mother was instructed to apply it freely over all the affected portions of the skin. She brought the baby back in a few days, and stated that, in a few hours after the application of the ointment, the incrustation was removed with perfect ease. On examining the baby, only a reddened condition of the skin was found, it being soft and velvety. Over the entire surface the dilated openings of the sebaceous glands were plainly visible, and a condition was observed which had not been noticed at the first examination. There was a hypertrichosis situated over almost the entire body, but most marked upon the lower extremities. These were thickly covered by a growth of hair, light in color, of about the same individual size as the hair upon the patient's scalp, and of an average length of nearly one third of an inch, some being as long as one-half inch, others shorter. On the upper extremities the condition was not developed to so marked a degree, and on the body there was only a more decided hairy development than would normally be the case. The hair on the body was of an average length of about one-fifth of an inch. On the face the hair was likewise somewhat increased, but on the scalp it was about normal. It was light in color, soft and silky. The mother could give no definite information as to whether this condition had existed since birth, or whether it had developed subsequently to it, as she had never given any particular attention to it.

The removal of the scales ensued with great rapidity. The surface left without ointment was covered in a few hours with a coating of sebum, and at the end of twenty-four hours small brown scales could be detached. A regular line of treatment was instituted, but beyond keeping the scales away it has produced little benefit. A renewal of the incrustation ensued as soon as treatment was in any way omitted.

The affection presented by this little patient is one of considerable interest, both on account of its rarity and from its being associated with a hypertrichosis. It is rather difficult to say definitely to what extent this hypertrichosis was natural, or whether it was partly associated with a hypertrichosis irritativa. The mother had not

paid sufficient attention to it to state how long it had been present, and necessarily the hairs could give no clue. Their greatly increased length, however, on those portions of the body where the incrustation was most marked would seem to indicate that this was due to irritation, but then a condition of hirsuteness, though less marked, was also present on those parts not yet invaded by the process. The growth of hair, on the other hand, could scarcely be that ofttimes seen at birth and persisting for a few weeks at the utmost afterward, since they would not have remained unshed up to the age of seven months, and neither could they have been retained there by the incrustation. This latter was not continuous from the beginning of the affection, but it was at times cast off of its own accord; and, moreover, they should have come away with the incrustation when it was removed by the application of the ointment, if this had been the case. But it was not. The hairs, when noticed at the time of the second visit, were all firmly attached to their papillæ, requiring the usual amount of force to remove them. The most probable explanation of the condition, to me, was that a degree of true hypertrichosis did exist from the beginning, and on those parts subjected a long time to the irritation caused by the presence of the incrustation a condition of hypertrichosis irritativa ensued, and we thus found the hairs longer on those parts than on those not yet implicated in the process. In view of this hypertrichosis, the question was brought up as to what possible connection there could be between the two processes, if any. Unfortunately, no microscopical examination of the tissue was possible, and little aid is obtainable from the literature of hypertrichosis, it being entirely taken up with the clinical features and the distribution of the hairs, no record of a microscopical examination of the sebaceous glands being recorded. It is, however, perfectly presumable, that if, on those parts of the body normally occupied by lanugo hairs with rudimentary glands attached and a comparatively small number of fully-developed sebaceous glands, a growth of hair is found approximating and corresponding to that of, for instance, the scalp, there will be an accompanying development of the sebaceous glands. Naturally, I refer here to the condition known as hypertrichosis adnata, and not to hypertrichosis produced only by irritation. The very large amount of sebum poured out upon the skin of this little patient would be partly accounted for should this development of the sebaceous glands be present, but in the absence of a microscopical examination any theory must remain only suppositious. The association of these two conditions is curious and interesting, but what interdependence, if any, existed between them, is of course under the circumstances not capable of being proved. A further peculiar symptom in the case is the appearance of the erythematous patches and plaques preceding the accumulation of the sebaceous matter. In seborrheic affections in general the skin affected by the process is either unchanged in appearance, or only secondarily does it become reddened and congested.

But, in this patient, the first symptoms presented consisted of circumscribed plaques of diffuse redness, upon which was subsequently developed the sebaceous incrustation. The appearance of these plaques is certainly curious, and suggests a vaso-motor disturbance; that by means of some cause a dilatation of the blood-vessels through the action of the vaso-dilator nerves occurred. These areas of congestion always preceded the increased sebaceous secretion, and the accumulation of sebum on the skin was entirely limited to them, the remaining portions of the cutaneous surface being entirely free. Moreover, from the beginning of the affection, as the area of congestion proceeded from its starting-point, the dorsum of the feet, and encroached upward upon the lower extremity, so also did the sebaceous incrustation keep pace with this encroachment, but at no time did any seborrheic disturbance precede the erythematous condition. That there was a causal connection between the congestion and the excessive secretion of sebum, is undoubtedly true. An excess of nutrition being supplied to the glands through the great increase in the amount of blood going to them, they would be stimulated to great activity, with the result of a largely increased secretion of sebaceous matter; furthermore, this abnormal activity would also show itself in the rapid production of new epithelial cells, and the equally rapid casting off of the old ones. Many of these latter would thus be desquamated without having undergone complete fatty degeneration, and would pass out through the ducts, together with the rest of the products of the glands. Having arrived upon the surface, they became there horny in character through desiccation, and aided greatly in forming the incrustation. This seems to me to be the part played by the congestion in causing, or, at least, in greatly aiding the hypersecretion of the sebum, but when the cause of the congestion is sought, there is nothing from which any conclusion can be drawn. Our knowledge as yet of neuropathy in connection with affections of the skin is very limited, and few proved and accepted facts in regard to it are recorded. This patient showed certainly no symptoms referable to any disturbance of innervation, and the areas of congestion, though on their first appearance, and during their subsequent development, they were for the most part symmetrical, yet were not entirely so. Subjectively, there was nothing to deduct from; yet, from the objective symptoms, it is presumable that some nervous disturbance existed, but what was its cause, or how it originated, it is scarcely possible to say.

Clinical Department

CIRRHOSIS OF THE LIVER IN CHILDREN.

Dr. Wesley M. Carpenter, of this city, writes that the case reported by Dr. Marsh, of Oswego Falls, N. Y., in The Medical Record for December 19, 1885, recalls the fact that those who have opportunity to make autopsies in large numbers, occasionally find cirrhosis of the liver in young subjects. He has in his collection at the Laboratory of Biology and Pathology, University Medical College, specimens from children four and seven years of age, in which the lesion exists to a remarkable degree, giving to the organ a nodular appearance, and exhibiting, with the microscope, broad bands of interstitial growth.

In this class of cases, it is important, in studying the etiology, to ascertain the facts concerning the existence of syphilis. Moreover, it is not impossible that, in some instances, alcohol, even at the early age of two and a half years, may be allowed to exert its influence on the tissues through the agency of nurses.

ABNORMAL MOTILITY OF TONGUE—ENLARGED UVULA.

Dr. John Winslow, of Ithaca, N. Y., writes: "The ability to explore the naso-pharyngeal space with the tip of the tongue is probably not so very rare. To the cases lately reported in The Record, I can add that of Isaac N. Van O——, who called upon me April 16, 1879, in great distress of mind, since he had discovered a hole in each side of his throat behind the palate. To my questions he replied that he felt the holes with his tongue, as he would show me; and he at once placed the tip of that organ in the orifice of either Eustachian tube. This was proved by introducing the Eustachian catheter, which he could feel and dislodge with the tongue. This patient could also move his ears to a quite unusual extent.

"My surprise at the disappearance of the tongue be-

hind the velum in this case was hardly greater than at the comical annoyance of a colored man who consulted me for a bad habit he had of swallowing his palate! I expressed doubt, when he indignantly said he would vomit it up before me, and, true enough, he threw forward upon his tongue a uvula nearly three inches long, with a bulbous extremity about three-fourths of an inch broad. The dimensions were increased at the time by œdema attendant upon an acute faucitis. Of course, he could not keep the mass in his mouth, and so packed it away in the lower pharynx; and equally of course he was speedily relieved."

ALARMING SYMPTOMS FOLLOWING VACCINATION.

Dr. F. L. Putt, of Middlebury, Ind., writes that he was much interested in the report of two cases by Dr. White, under the title "What Is It?" in The Medical Record of December 12, 1885, but regrets that an inquiry concerning the virus used was not made. He says that in 1881 he noticed in several of his cases of vaccination a decided tendency to stupor, and, at the same time, a slight suppression of urine, and, quite frequently, retention. The patients complained of a difficulty in commencing micturition, and the urine on cooling deposited a copious sediment. The older patients stated that they noticed this as soon as the vesicles began to form on the arm, and that it continued until the crust became detached. There was also tenderness on pressure over the kidneys. Quinine, chlorate, and nitrate of potassium, bicarbonate of sodium, camphor, and sometimes gelsemium and cannabis indica, were given in varying proportions. The patients all recovered under this treatment. All of these cases occurred in the same neighborhood, and were the result of one day's vaccination. On inquiring concerning the virus of the physician from whom it was obtained, it was learned that it was procured from a foundling asylum. This same physician had more bad results than all the others in the town. Dr. Putt considered the trouble to be an irritation of the kidneys from blood-poisoning.

DISLOCATION OF THE UNGUAL PHALANX OF THE THUMB.

Dr. R. B. Jessup, Jr., of Vincennes, Ind., reports the following rare case: "Mr. Hoké, a Frenchman, sixty-five years of age, residing three miles south of town, fell into his cellar on November 9, 1885, sustaining various bruises on the body and head. He was well enough on the third day to come to town to have his thumb examined. In his fall he injured it, and as seen by me, there was considerable swelling, and the second (ungual) phalanx was immovably fixed in a position almost at a right angle to the line of the first phalanx. Careful examination revealed the articular surface of the second phalanx looking backward, and the phalanx displaced in the same direction. The reduction was simple. Flexion was forcibly made, and at the same time pressure in a forward direction was exerted on the articular surface of the phalanx. This was seen by another surgeon, and was undoubtedly a case of simple dislocation of the second (ungual) phalanx backward on the first phalanx."

A REMARKABLE CONGENITAL DEFORMITY.

Dr. Blair D. Taylor, Captain and Assistant Surgeon U.S.A., of Little Rock Barracks, Ark., writes that he was called to see a girl seven years old who presented the following conditions: "There was complete atrophy of the left scapular muscles, with the single exception of the deltoid, which retained sufficient power to raise the arm about two inches. The entire upper extremity on the same side was nothing more than a cylinder about one inch in diameter, consisting solely of integument and bone. The elbow was bent at a right angle, and anchylosed, and the extremity of the forearm was clubbed, and presented some faint traces of a division into a thumb and fingers, the latter being consolidated. Both pectoral muscles on this side, the latissimus dorsi, serratus magnus, trapezius, rhomboids, and all the other muscles of the arm, forearm, and hand, were completely shrunken and useless. On the front of the shoulder, just over the coracoid process, was a deep scar, about the size of a nickel five-cent piece, and just above the spine of the scapula were three deep scars, about half as large as the other. Both parents had dark eyes and complexions, but the child had a gray eye on the left side, and a dark-brown one on the right. The left side of the head, face, and neck was pale, and never became flushed or moistened with perspiration during exercise. On the right side, the complexion was ruddy, and perspiration was free, and increased by exertion. The child complained of frequent neuralgic pains in the milk-teeth of the left side of the mouth, although they were as perfect in appearance as those on the other side. The sight of each eye was equally good, and there was no atrophy or paralysis of the facial muscles, or of the sterno-cleido-mastoids. In every other respect the girl was perfectly developed, and she was unusually active and intelligent for her age. Examination of the left lung showed no abnormality, except a lack of expansion on that side from atrophy of the serratus magnus. The heart and other internal organs were healthy as far as could be determined. The occasion of the visit at this time was for advice concerning an indolent ulcer over the left elbow, which had existed almost constantly from birth, healing up at intervals, and reappearing upon the receipt of any slight injury. The existence of this ulcer was easily explained by the feebleness of the circulation in the left arm." Dr. Taylor is inclined to attribute this arrest of development to the influence of maternal impressions. He learned that the mother, when two months pregnant with this, the first child, while passing through a neighbor's yard, was suddenly attacked by a large and fierce dog, who sprung up, attempting to seize her by the left shoulder. The woman threw up her left hand to the same shoulder, and disengaged her cloak, leaving it in the animal's jaws, escaping herself without any physical injury. To the fright and lasting impression which this incident left upon her mind, the mother attributed her child's deformity. Both parents are healthy, and two children born subsequently are physically perfect. When the child was born the stump of the hand was touching the left acromion process, in exactly the position which the mother's arm was while she was disengaging her cloak, but by subsequent manipulation the forearm was brought down to its present position at a right angle to the arm. The scars on the shoulder resembled such as would have been produced on the mother had the dog succeeded in his attempt to imprint his teeth in her shoulder.

A CASE OF PNEUMOTHORAX.

Dr. Benjamin R. Symonds, of Beverly, Mass., reports the following interesting case:

On July 15, 1885, H. C——, a boiler-maker by trade, presented himself at the Out-Patient Department of the Rhode Island Hospital for treatment. The patient was a man of forty years of age, well nourished, muscular, and up to the present trouble had "never had a day's sickness."

July 11th, four days before he sought the advice of a physician, he was at work as usual. Suddenly, "while inside a fire-box," "riveting stay-bolts," he "felt all filled up with air." He stopped work, and came outside, thinking the air would make him feel better. He obtained no relief, however, and very soon quit work and went home.

Severe pain in the left chest and back developed, for which he applied turpentine, but with no relief. He soon began to suffer from a slight cough, but raised nothing; found that he was unable to lie down, and lost his appetite and strength.

This is the history he gave, and his symptoms had remained about the same. We will now proceed to examine into the physical signs which immediately throw considerable light on the case.

After removing the clothes from the upper portion of the body, inspection showed the chest to be rather one-sided, the left side being much more prominent than the right; there was considerable fulness above the left clavicle, the intercostal spaces were bulging, and during respiration the right side of the chest appeared to do about all the work.

Chest measured thirty-seven inches; thoroughly expanded, thirty-seven and a half inches; fully contracted, thirty-five inches. The left side of the chest measured the most, but the power of expansion, however, was found to be in the right side.

Percussion showed exaggerated resonance over the whole of the left side, and where the muscular walls were thinnest this resonance was tympanitic. The cardiac dulness showed the heart to be displaced to the right.

Auscultation revealed increased respiratory murmur on the right side, no respiration at all anywhere on the left side. But all over the left chest could be heard metallic tinkling.

The suddenness of the attack and the attendant symptoms, together with the physical examination, seemed to me to point to a rupture of an air-vesicle and a filling up of the left pleural cavity with air.

At the end of three weeks' time the patient had regained his appetite, but could not exert himself without getting all tired out. The examination of the chest still showed that the pleural cavity was filled with air. But in six weeks I noticed a change; there seemed to be a faint respiratory murmur over the left side anteriorly, and this gradually increased in area until, in two months, the chest appeared to be in a normal condition, and the patient had gone back to his employment.

Progress of Medical Science.

Morbid Arterial Tension.—This subject, which may well claim the serious attention of the practitioner, was ably handled by Dr. Goodhart, in "The Bradshawe Lecture," for 1885. In the *London Medical Record*, November 15, 1885, a *résumé* appears, which sets forth the points of chief interest in the questions derived from the association of morbid arterial tension with Bright's disease. Bright noticed the hypertrophy of the left ventricle that occurs in chronic renal disease, and attributed it to the impurity of the blood, and to the extra work thus thrown upon the heart, in consequence of the refusal of the tissues to allow a free passage to a substance of which they disapproved. Dr. George Johnson at one time held much the same view, but abandoned it for what is now well known as the stopcock theory; this supposes that the function of the muscular coat of the arterioles is a controlling one; and that, when blood is ill-adapted to the tissues, control will be increased, and the blood shut off more or less from the tissues. Obstruction then must necessarily be created behind, and throw increased work upon the heart, and thus account for the hypertrophy of the left ventricle. As an athlete increases the size of muscles which are constantly used, so does the muscular tissue of the vessels and heart become increased by this extra work that is put upon them. The author and Dr. Dickinson are, however, of the opinion that the function of the muscular coat of the arteries is not a retarding or controlling one, as insisted upon by Dr. Johnson, but rather a propelling one. To demonstrate this theory, the action of digitalis is brought forward. Digitalis is said to increase the action of the muscular wall of the heart on the one hand, of the arteries on the other; now, if the muscular coat of the arterioles control and retard the circulation, the undoubted diuretic action of digitalis is not easy to explain. As regards the existence or not of spasm, Dr. Goodhart states that there can be no muscle, and no physiological muscular action, without the risk of the frequent exhibition of morbid muscular action, or spasm; and the assumption of some such spasm in the muscular tissues of the arteries is very agreeable in explaining many of the phenomena of Bright's disease; for instance, the headache and renal asthma are often much relieved by nitrite of amyl and nitro-glycerine, both drugs unquestionably acting by relaxing spasm and promoting dilatation of the peripheral vessels. The subject next expands in two directions: on the one hand by the hypothesis that chronic Bright's disease is an arterio-capillary fibrosis, or generalized tissue-change, and, on the other hand, by the use of the sphygmograph. Taking the arterio-capillary fibrosis theory first, the author quotes from the paper of Sir William Gull and Dr. Sutton, in which they say, "Old age is not an entity, but a set of conditions predisposing to that state which is called chronic Bright's disease." Old age is no matter of years and averages, but the running down of a spring set for an individual. It comes at times even to children; and although chronic Bright's disease is in many cases associated with renal disease, it is not essentially a matter of organs; the generalized change in the tissues of the whole body is the essential, and to some this comes not by kidney chiefly, but by lung chiefly, by brain, by heart, etc. This idea is a suggestive one, and is largely true, but it derives its strength less from the labors of the histologist than from the intuition of experience; to base it upon the non-existence or unimportance of muscular hypertrophy in the arterioles, and to ascribe the thickening which exists, to an essential hyalin-fibroid degeneration, is, in the opinion of Dr. Goodhart, a mistake. There are, no doubt, groups of cases in which the disease in the kidneys is certainly the cause of the changes in the heart and arteries; for instance, in a large proportion of cases of chronic parenchymatous nephritis the heart and arteries are hypertrophied, and this without doubt is due to the kidneys. Again, in some cases, the failure of health and of nutrition will not unfrequently combine so to reduce the arterial tension, as to deprive the circulatory system of any excuse to hypertrophy. These cases are more dangerous than those of granular kidney, because the left ventricle has more tendency to dilate, and thus to relieve the excessive tension, so that the death of the patient often forestalls the hypertrophy of the heart and arterioles. The author puts forward thef ollowing statement with reference to these cases of renal disease. "In proportion as the renal disease is sudden and severe, so is the risk of dilatation of the heart. The more insidious it is, the more likely is the cardiac hypertrophy to be present in greatest perfection." Another important point to bear in mind is that, while granular kidney often terminates in cerebral hemorrhage, the subject of chronic parenchymatous nephritis rarely dies by that means (in lardaceous disease cerebral hemorrhage is still rarer). At first sight, this would seem to favor the view that the disease of the vessels is a peculiar one, and independent of the nephritis; but it is obvious that dilatation of the heart is unfavorable to the occurrence of apoplexy; it relaxes the tension at the centre which would otherwise be put on at the periphery, and death comes about by cardiac failure, and not by peripheral hemorrhage. Concerning the pathology of the arterial changes, and the excess of the hyalin-fibroid material which is observed, together with the atrophy of the muscular coat in the arteries, the author explains his views on the following grounds. The general demand for labor is physiologically responded to by general hypertrophy of all the tissues of the arterial coats, so that not only is there

hypertrophy of the muscular coat, but also of the connective-tissue materials of the arterial walls. When this is once established, and the conditions for obtaining supplies are prohibited in any way, then the least organized tissues seem to grow at the expense of—or, as it is termed, by "sponging" upon—the more highly organized structures; and thus in a case of chronic renal disease of the tissues and vessels it is possible to find vessels conspicuous for their increase of muscular tissue in one part, and in another conspicuous for the increase of their hyalin-fibroid structures. There is another aspect of the question, which provides ground for belief in the existence of diffused degeneration before any serious mischief can be detected in the kidneys. Ever since the time of Bright it has been felt that the discovery of albumen in a patient's urine is a late and rough test of disease, and during the last few years several observers have discovered what they consider early manifestations of the disease; but it was Mahomed who taught us more than any one, by his observations with the sphygmograph, how to detect the pulse of high tension. In one of Mahomed's most valuable papers on this subject ("Transactions of the Royal Medical and Chirurgical Society," 1874) it was shown precisely that morbid conditions of the pulse (high tension) precede any evidence of disease in the kidney. Mahomed draws the conclusion from a number of observations, that the vascular condition is the cause of the albuminuria, and not the converse, as had been generally supposed. As early as 1849 Dr. Walshe stated that Bright's disease was not renal, but primarily a blood-disease. Dr. Goodhart next alludes to what he considers the strongest evidence in favor of the generalized nature of the changes which include chronic Bright's disease. It forms the subject of some of Mahomed's latest work in a paper on "Chronic Bright's Disease without Albuminuria" ("Guy's Hospital Reports," Series 3, vol. xxv.). Dr. Goodhart, however, rejects this nomenclature; and says that Bright's disease, if it means anything, means nephritis, and suggests that some such title as arterio-capillary fibrosis should be used to include all these cases.

Renal Lesions in Hereditary Syphilis.—Dr. E. Marchiafava thus describes the lesions found by him in the kidney in two cases of hereditary syphilis (*Rivista Clinica*, No. 10. 1885). The organs were of normal size, but the cortical substance was of a grayish color and dotted with minute whitish nodules, corresponding to the glomeruli. Under the microscope the lesions were seen to proceed from a diffuse arteritis of the glomerular and afferent vessels. The arteries were contracted, and finally obliterated, and became converted into a hyaline mass. The vascular loops of the glomeruli were thus destroyed, as was also at a later period the epithelium of the convoluted tubules, which derives its nourishment from the afferent vessels.

Eruptions Following the Use of Quinine.—In a recent thesis, Dr. Levassor presents a study of the different forms of eruption which may be caused by the ingestion of sulphate of quinine (*Archives Médicales Belges*, November, 1885). The eruption, which is of very rare occurrence, may be observed under four different forms: scarlatinal, rubeolar, papulo-erythematous, and purpuric. The first variety may present so close a resemblance to scarlatina as to render a differential diagnosis a matter of great difficulty. In a case seen by Dr. Levassor there were high fever, a rapid pulse, cephalalgia, and general malaise. The eruption appeared soon after and involved not only the integument but also the mucous membrane of the fauces, but was not accompanied with any pain or swelling of the tonsils. The deception was rendered complete by the occurrence of desquamation at the end of four days. The true nature of the eruption was recognized only upon its recurrence some time later after a second dose of quinine. The rubeolar form is more frequent than the preceding. It is manifested by the sudden appearance of an eruption of small, rose-colored spots, spread over the whole body, and not raised above the surrounding integument. These disappear rapidly and are followed by desquamation. The erythematous variety differs from that just described in that the red spots, project above the surface, resembling very closely a papular erythema. The purpuric form is very rare. There are a few small, lightly ecchymotic spots localized in certain regions of the body, which appear and disappear with great rapidity. These different eruptions may be caused by a very small dose of quinine, and are due to a real idiosyncrasy of the patient. They are without danger, and in case of their appearance, if the quinine is really necessary, it may be continued without regard being had to the cutaneous manifestations.

The Nocturnal Cough of Children.—It not infrequently happens that children are waked suddenly from quiet slumber by a violent, and sometimes convulsive, cough. This has been ascribed by McCoy to reflex irritation from accumulation of mucus within the nasal cavities. During the day the mucus flows away, but in the night it collects upon the sensitive areas in the nasal fossæ and excites a cough. Dr. Gonzalez Alvarez thinks this theory untenable, except in a few rare instances, and attributes the cough to laryngeal irritation. He says that the saliva and buccal mucus accumulate in considerable quantities, especially when there is stomatitis or gingivitis from dentition. Most of this is removed by the acts of deglutition which take place during sleep, but some does not so escape, but trickles into the posterior commissure of the larynx. He states that this cough occurs very frequently during the period of dentition, even when there is no nasal catarrh, a fact which leads him to reject the theory of nasal reflex irritation. The treatment of this nocturnal cough consists in diminishing the secretion by means of chlorate of potassium. A teaspoonful of a two per cent. solution is given every hour or two hours during the day, and at bedtime.—*Revue Bibliographique des Sciences Médicales*, November 22, 1885.

Resection of the Knee in Children.—The following are the conclusions of Dr. Rivera y Sanz, in an article on this subject published in the *Archivos de Medicina y Cirurgia de los Miños*, Nos. 1, 2, 6, 7, and 8, 1885: 1. The value of active intervention by means of resection of the joint is indisputable. 2. Resection should be preferred to amputation when the affection is exclusively local; but should, of course, be reserved for those cases in which other more conservative measures have been shown to be ineffectual. 3. If osteitis of the knee coexist with disease of the internal organs, resection is contra-indicated. The question of amputation in such cases is to be determined by the degree and character of the visceral complication. It has never been proven that the operation may give rise to the appearance of new foci of tubercular disease in the internal organs. When such metastases occur they are due to the fact that the operation was incomplete, and are, therefore, the result of auto-inoculation.

Fecal Umbilical Fistula.—Dr. Talini relates the case of a boy, nine years old, who had suffered for about two months from what the attending physician regarded as typhoid fever. Growing better, he was sent to the country, but while there was taken again with fever, abdominal pains, and diarrhœa. In a short time a red, tense, painful swelling appeared at the umbilicus, and opening spontaneously, a fistula communicating with the intestine was formed. The child became more and more emaciated and weak, and finally died. The autopsy revealed the existence of acute miliary tuberculosis of the pleura and peritoneum and also the presence of a large cavity at the apex of the left lung. The fistula had arisen from perforation of the transverse colon, which was adherent to the abdominal parietes, from the corrosion of a tubercular ulcer.—*Lo Sperimentale*, November, 1885.

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THE DANGER TO THE KIDNEYS IN THE USE OF MERCURY.

Two years ago we called attention to a new non-mercurial treatment for syphilis, devised by Dr. Güntz, of Dresden. This treatment consisted, so far as drugs went, in the administration of "chrom-water," a watery solution of chromic salts.

We believe that the chrom-water treatment of syphilis has not gained the confidence of therapeutists. Yet Dr. Güntz does not lose faith in it, and in a recent article in *Memorabilien* he puts forth a new reason for adopting it. This reason is, in brief, that in a certain large per cent. of syphilitics the use of mercury is dangerous, because it is liable to bring on or aggravate renal disease.

Dr. Güntz collects a number of records, showing that in the systematic treatment of syphilis by mercurialization deaths reaching to 3.5 per cent. have occurred; these deaths, he believes, being due, in part at least, to the action of the mercury on the kidneys.

Dr. Güntz collects also considerable evidence from various observers, showing that the continuous administration of mercury may cause albuminuria. On this point he will meet no opposition, since it is quite generally admitted that such accidents may happen, and that albumen not very rarely appears in the urine in hydrargyrosis.

But, aside from this, Güntz argues that mercury is a dangerous drug to use when Bright's disease is already present, and in phthisis. In either of these disorders the production of mercurialism may result in grave accidents, or even death.

Now, according to Bamberger's autopsical records, there were found in 19,000 necropsies 2,430 cases of Morbus Brightii, besides a very great number of other forms of renal disease. Spiess is quoted as saying that among 220 post-mortems on syphilitics, made at the Charité, over one-half (147) had renal disease.

The large proportion of kidney disease among syphilitics is accounted for on three grounds: 1, The ordinarily considerable per cent. of Bright's disease; 2, the predisposition to renal disease in the eruptive period of syphilis (*vide* Dreyfuss-Brisac, Colvis, and Lesser); 3, the general use of the mercurial treatment of syphilis.

According to Güntz, twenty per cent. of adult men are syphilitics, twelve per cent. have Bright's disease, and therefore the probabilities are that among 20 syphilitics 2 will have renal disease. In the same way, among 100 men 20 are phthisical, so that among 20 syphilitics 4 would probably have some lung affection, contraindicating mercurialization.

Still further, our author indorses the opinion of Von Sigmund, that two-fifths, or forty per cent., of cases of syphilis are cured spontaneously or without the help of mercury.

A table can therefore be constructed, showing the proportion of syphilitics that are wrongly or needlessly treated by mercurials, as follows: ten per cent. having kidney disease; twenty per cent. having tuberculosis; forty per cent. who will get well anyway, or under other than mercurial treatment; total, seventy per cent.

This leaves only thirty per cent. of syphilitics to receive the benefits of mercury. The figures given by Güntz, whatever their significance in Germany, will have to be changed somewhat for our climate.

For example, the proportion of Bright's disease among adult males is much less than ten per cent. Among 19,000 deaths in this city in persons between the ages of fifteen and sixty, there were only 670 deaths from nephritic diseases, or about three per cent. The proportion of deaths from phthisis among adults is also less than twenty per cent., ranging from twelve to eighteen per cent. Syphilis does not affect one in every five adult male Americans. This high proportion is perhaps reached among certain classes living in large cities or manufacturing towns, but the general testimony of country physicians everywhere is that syphilis is a rather rare disease, and only met with a few times yearly by those in active practice.

The force of Dr. Güntz's figures, however, is not destroyed by the fact that they do not apply with strictness to our country. He has brought out two important points, viz., that there is always need of caution and watchfulness in using mercury continuously, and that many cases of syphilis can be treated successfully without mercury.

A NEW ERA IN THE TREATMENT OF INTERNAL DISEASES.

WE are told by Dr. Albert Reibmeyer, in *Memorabilien*, that a new era has been created in medical treatment by the labors of Körner and Oertel. "What Lister has done for surgery, Oertel has done for internal medicine." The rational basis for modern surgery is cleanliness and antisepsis; in internal medicine it is "regulation of the blood-pressure." Our medical fathers used to attempt this by exhausting venesections, nauseants, purges, and mercurials; later, we tried to get along by tonic measures which would drive on or tone up the laboring heart, or by stimulating the feebly-acting glands and absorbents. Some years ago Körner advocated the dry method of treating acute exudative processes, and even of serous transudations. In pleuritic effusions he cut down the amount of water for a time; he then gave small but frequent doses of chloride of sodium. The thickened blood, enriched with salt, attracted the exuded fluid, and absorption rapidly took place. Thoracentesis, we are told, was never necessary. Dropsical accumulations were removed by the same plan. Körner applied his principle (*Memorabilien*, 1861) in the treatment of acute Bright's disease. Of late Oertel has independently taken up and recommended the same kind of measures. Instead of

sweating and purging the patient while at the same time large amounts of water are given to make up for that lost, he simply cuts down the supply. In this way the blood-volume and pressure are lessened, and the kidneys are rested. We have already referred to Oertel's "dry method" in the treatment of fatty and otherwise inadequate hearts. He aims here, also, by diminishing the volume of blood to lessen the work of the heart.

In the *Medical and Surgical Reporter* of November 21, 1885, Dr. L. Casper reports a case in which he successfully applied Oertel's principle. The patient was a man forty-two years of age, who was apparently in the last stages of cardiac and renal dropsy. He was a small man, with a thorax deformed by kyphosis, "evidently causing great contraction of the organs of the chest." The heart was much enlarged, and its beat scarcely perceptible. Dr. Casper does not seem to have been able to make out any valvular lesion. The urine contained a large quantity of albumen. His legs were very œdematous. He was prescribed the following diet:

Fluids.—Six A.M.: Coffee or milk, ca. 125.0 grammes. Noon: 125.0 grammes wine. Evening: 250 grammes wine.

Meats.—Six A.M.: One egg, one roll (ca. 55.0 grammes). Nine A.M.: 80.0 to 100.3 grammes meat, one roll. Noon: 125.0 grammes meat, a little vegetables (green, if possible). Evening: 250.0 grammes wine, 125.0 grammes meat, one egg, a little bread.

Only in case of extraordinary thirst being felt could 125.0 grammes of light beer be drunk, additionally, during the evening.

The amount of liquid allowed was thus only from one pint to a pint and a quarter daily. Under this regimen he lost in weight six kilogrammes (about thirteen pounds) in five and a half weeks, his original weight being one hundred and forty pounds. In the latter period he was given four grammes of salicylic acid daily, he salicylic acid being given instead of pilocarpin, which Oertel recommends.

With the decrease in weight the patient's strength increased, until at length he was able, although with difficulty, to take walks. The difficulty in breathing became lessened, so that after two weeks the patient could sleep a few hours in bed. The œdema disappeared. The abdomen became softer, so that the liver could be felt. The quantity of albumen deposited in the urine remained unchanged for a long while. The patient, in fine, was taken from death's door and put in a comfortable state of health, and enabled to attend to business.

In another case, reported by Dr. Casper, of a similar character, the following diet was prescribed:

Fluids.—Morning: Tea, 100.0 grammes; milk, 25.0 grammes; sugar, 5.0 grammes. Noon, one hour before eating, 50.0 grammes of sherry wine. Afternoon: Coffee, 100.0 grammes; milk, 25.0 grammes; sugar, 5.0 grammes; Evening: Wine, 100.0 grammes; water, 60.0 to 100.0 grammes.

Meats.—Morning: Roll, 35.0 grammes; raw meat, chopped finely, 80.0 grammes; two soft-boiled eggs. Noon: Meat, 150.0 grammes; vegetables, 100.0 grammes; fruit, 50.0 grammes. Afternoon: One egg, soft-boiled. Evening: Two eggs, broiled meat (cold), 80.0 grammes; roll (no butter, if possible), 50.0 grammes.

Here a cure apparently resulted. These cases are not very accurately reported, especially as regards the physical examination. They serve to illustrate, however, the method of dietetic treatment.

THE TREATMENT OF CHRONIC PLEURISY.

It is a well-known clinical fact that in diseases attended with the exudation of inflammatory products, the amount of the chlorides in the urine is diminished, and even entirely suppressed. This is notably the case in pleurisy and pneumonia. Indeed, some writers recommend a daily examination of the urine in all cases of the latter disease, and claim that a return of the chlorides to their normal amount argues a favorable prognosis, even though signs and symptoms may not show that the crisis has been passed. Acting upon the above theory, a mode of treating pleurisy (sero-fibrinous) was adopted some twenty years ago by Körner in Germany, and some definite results seem to have been reached. The method, in brief, consists in cutting down the fluid ingesta to a minimum and giving rapidly-absorbed salines. Common table-salt is found to fulfil this indication perfectly.

To make practical application of this method, a careful measurement is made of the fluid ingesta and of the daily amount of urine excreted. The former are then cut down (if necessary) till the daily amount of urine equals about two-thirds of the fluids taken. This is about the proportion obtaining in good health. The advocates of this method lay great stress upon the ingesta-egesta relation in all circulatory and respiratory diseases.

In exudative pleurisy, the daily quantity of urine is generally small. The amount of fluid taken is therefore restricted till the above-named ratio is reached. No warm drinks are allowed, and only just enough cold water to quench thirst. The salt is then given in moderate amount, preferably in capsules or wafers, to avoid the sensation of thirst which would result from its contact with the mucous membranes of the mouth and throat. The idea is that the rapid absorption of the saline is followed by diffusion into the exudation, with corresponding absorption of fluid, which is then excreted by the kidneys.

It is no new idea to cut off all fluids in cases of disease attended by serous exudation. It is claimed that the above method of restricted allowance is followed by just as good results as where drink is absolutely prohibited; and of course it is much less annoying to the patients. Glax has reported a series of twenty-five cases of serous pleurisy extending over a period of three and a half years. In thirteen cases the fluid did not reach above the inferior angle of the scapula. These all did remarkably well. In the remaining cases the chest was nearly full of fluid on one side. Of this latter group the average period of illness was twenty-two days. The mean period in the whole twenty-five cases was considerably less. The average duration in the "total abstinence" method has been given as twenty-eight days.

In comparison with these figures, it may be stated that the mean duration of illness in cases treated by the usual tapping and diuretics is given as over forty days. The advocates of the restrictive-saline method do not regard tapping as indicated, unless there be serious dyspnœa from the presence of fluid. At least three weeks should be al-

lowed under other circumstances before tapping is resorted to. They point to the well-known fact that paracentesis of the chest, and even merely repeated trial-punctures, may change the character of the exudation from serous to purulent. This risk has of course been greatly reduced under present antiseptic methods. It is never entirely wanting. The method outlined is certainly an easy one to follow. The slow course of serous pleurisy is but too well known. The plan suggested is well worth a trial.

THE VALUE OF TRAINED NURSES.

The Lancet has been taking the rather curious ground that "trained nurses" are hardly necessary adjuncts of medical work, even if they may not be classed absolutely as superfluous and troublesome. "What nurses are trained to do could be done as well by ordinary servants if the practitioners would and could give precise instruction as to details. The knowledge a trained nurse possesses—the very utmost she can acquire—must be simply so much quackery, in so far as it extends beyond the mere womanly qualification of ministering gently to the sick and obediently carrying into effect a careful practitioner's instructions. Unhappily, female nurses are actually allowed to pass catheters and give hypodermic injections."

That trained nurses are a most useful and almost necessary help to the physician is part of the medical creed in this section of the country. We doubt if a medical man can be found in this city who does not believe in their utility.

It must be confessed, however, that the thing is being a little overdone, and there is sure to be before long something o a reaction. A trained nurse who never should have been a nurse is capable of doing vastly more harm than even the ancient Sarah Gamps, and there are already a great many of these trained women, with enamelled badges, who are untrustworthy, gossipy, mischievous creatures, demanding large pay for ridiculously incompetent service. The socia status of the trained nurse also often makes trouble. We are getting now a class of women who are so much trained that they refuse to do a single item of domestic labor not strictly in their line. They must work on embroidery in the parlor evenings, and if not quite good enough to sit with the family, they are much too good to sit with other servants.

The whole trouble comes from the almost inevitable necessity of training, as nurses, women utterly unfit for such a calling.

These drawbacks, however, do not prevent us from recognizing the extreme value of trained nurses; and *The Lancet's* position is so truly mediæval as to be unworthy of discussion.

GENEROUS CONDUCT TOWARD A BROTHER PHYSICIAN.

It is a great satisfaction to learn of the generous and spirited manner in which the members of the English medical profession have taken up the cause of Dr. Bradley, of Chesterfield, England. In November, 1884, Dr. Bradley was convicted at the Leicester Assizes, before Lord Chief-Justice Coleridge, o an attempt to commit a criminal assault upon a patient, and was sentenced to two years' imprisonment with hard labor. It was believed by the medical profession that the evidence failed to support the charge, and that due weight had not been attached to the fact that the prosecutrix had from her childhood been subject to epileptic fits, and was therefore liable to delusions. The matter was taken up by the medical press, and influential memorials were presented to Sir William Harcourt, the late Home Secretary, urging an inquiry. It was, however, not until a change of government took place that the efforts proved successful. Sir Richard Cross made a careful investigation, and last July he recommended the release of Dr. Bradley, in whose behalf an appeal for subscriptions was commenced.

This resulted in collecting the sum of $2,000, which sum was publicly presented to him on the 11th ult., at a banquet given at Sheffield.

In making the presentation Mr. Jeffries, who had been largely interested in securing the subscriptions, said that petitions in Dr. Bradley's favor had been signed by no fewer than one thousand names, including those of nearly all the leading men in the districts from which they had been sent. In the neighborhood where Dr. Bradley was living when this calamity befell him, all his brother practitioners, without exception, signified their belief in his innocence, and aided in the efforts made in his favor. Mr. Jeffries continued: "In presenting this address to him, we raise our emphatic and indignant protest against the ready credence which the law has given, in his case, to a form of accusation very easy to make, but not always easy to disprove. We do this for our own sakes, because medical men in the daily discharge of their duties, which are often of a delicate character, are exposed, more than other men, to have such charges brought against them."

The action of our English confrères is highly creditable to their unselfishness and kindly feelings. It gives evidence of a spirit of pride in our calling, and of mutual helpfulness which cannot fail to react with benefit upon all connected with or interested in the case. Yet Dr. Bradley, we believe, got no more than was justly due him in the way of support from his medical brethren.

A NEW CARDIAC TONIC.

We have seen in the past few years a number of drugs brought forward as cardiac tonics, to take the place of digitalis. Some of these, as convallaria maialis, promised at first to be really formidable rivals, but they have all been shown, on a more extended trial, to fail in some point, and digitalis still holds the first rank in cardiac therapeutics. The latest claimant is sparteine, which, while not a newly discovered substance, has hitherto not been used as a medicament. It is an alkaloid of the *spartium scoparium*, or broom-tops, and was isolated by Stenhouse in 1850. The pure alkaloid occurs in the form of a liquid, very bitter in taste and insoluble in water, but the sulphate is crystallizable and readily soluble. Lauder Brunton ranges the drug with atropine and daturine as a paralyzer of the inhibitory ganglia of the heart, and experiments have been made with it by Mils, Fick, de Rymond and others, but the conclusions of different experimenters did not agree with each other, and nothing really was known as to the physiological and therapeutical properties of the drug.

In a recent communication to the Académie des

Sciences, M. Germain Sée detailed the results of a number of experiments made upon the human subject with sulphate of sparteine in doses of one and one-half grain. He found three characteristic and constant effects of the drug: The first and most important was a strengthening of the heart; the pulse, while previously almost imperceptible, became full and strong. The second was the almost immediate regulation of the irregular cardiac rhythm, in this respect surpassing that of any other known medicament. The third result was the acceleration of abnormally slow pulsations, resembling in this respect the action of belladonna. This triple action was observed within an hour or two after the administration of the first dose, and continued for three or four days after the sparteine had been discontinued. An improvement in the general strength and in respiration was also noticed, but there was no diuretic effect produced by the moderate dose employed.

M. Sée's conclusions were that sulphate of sparteine was indicated in all cases of yielding of the cardiac muscle, whether from alteration of its tissues or from extra work imposed upon it by an impediment to the circulation. And he asserts that it will speedily improve the character of the pulse when this is weak, irregular, and abnormally slow. We shall doubtless soon have reports from other experimenters with sparteine, and if they should be confirmatory, even in slight degree, of those of M. Sée, and should demonstrate also that the drug is a safe one to use, we shall have obtained a really valuable addition to our very short list of safe and certain cardiac tonics.

QUARANTINE AT THE PORT OF NEW YORK.

From 1880 to 1884, inclusive, nearly two millions of immigrants (1,986,278) entered the port of New York. The Health Officer has power to quarantine only yellow fever, cholera, small-pox, and typhus; yet in 1884 there were 154 cases of other contagious diseases, such as scarlatina, diphtheria, etc., introduced by immigrants.

In 1884, the total number of vessels entering the port and inspected by the Health Officer was 8,086. These carried 321,231 immigrants. Among them were found 184 cases of contagious and infectious diseases.

To accomplish all this work of inspection and quarantine, the State has a Port Health Officer and a Quarantine Commission of three. The Quarantine Commissioners have no very well-define duties, but they draw salaries to the amount of $7,500 annually, and their other expenses make a total of about $33,000 annually to the State.

The Health Officer is paid by fees, and gets, it is believed, from $50,000 to $75,000 yearly.

It is very desirable, from an economic point o view, that there should be some change in the present condition of things. The offices of the Quarantine Commissioners should be abolished, the fees should be lowered, and the Health Officer placed upon a salary, and made accountable to the State for his receipts. So far as efficiency in administration goes, the work of our port officers will bear criticism well. They have at times even done brilliant service in averting epidemics and keeping out disease; this is no excuse, however, for perpetrating a burdensome and extravagant method of maritime quarantine.

The real cause of its continued existence now is, that the "machine" must be run and the "boys" be looked after.

THE USE OF NAPHTHALIN IN CHRONIC DIARRHŒA AND IN TYPHOID FEVER.

Considerable has been written regarding the application of naphthalin in therapeutics. This is a substance derived from coal-tar, having a white, crystalline appearance, and a pungent odor, strongly suggestive of a gas factory. It was first used medicinally, according to Cagnoli, in 1842, as an expectorant, but did not gain the attention of physicians. In 1884, Dr. B. Testa studied its physiological properties. His conclusions were somewhat negative. He found that it was absorbed with difficulty, and that it had no effect upon normal temperatures, but that it reduced febrile temperature, diminished the excretion of urea, and did not cause albuminuria.

Dr. G. Fronmüller (*Memorabilien*, 1883, p. 257) used naphthalin in chronic bronchial catarrh and phthisis, with no very positive results.

Attention was first strongly called to the drug by Professor Rossbach, of Jena, who, at the Congress for Internal Medicine of 1884, strongly recommended it in disorders of the intestine. In chronic diarrhœa and dysentery, with or without ulcerations, Rossbach found naphthalin very efficient. He gave it in single doses of gr. ii. to gr. x. t.i.d., increasing this sometimes to daily doses of five grammes. His prescription for an adult is:

℞. Naphtha . puriss,
Sacchar. alb.....āā 5.00 grammes.
Olei bergamot.....0.03 gramme.
M. Sig.—Pulv., div. in chart No. xx. Sig.—5 to 20 daily.

The administration of naphthalin causes the fæces to be perfectly disinfected and odorless. Its action in cases of chronic diarrhœa is rapid, and most cases, if uncomplicated, are cured in from five to fifteen days. Dr. G. V. Liebig, of Reichenhall, subsequently reported a good result from enemata of naphthalin in a case of dysentery (*Bayr. ärztl., Intell.* Bl. xxxi. 29, 1884).

Dr. Ph. Pauli, of Lübeck (*Berlin, Klin. Woch.*, No. 10, 1884), used naphthalin with good success in the intestinal catarrhs of children. He observed, however, in two cases, some unpleasant after-symptoms, and he expresses the opinion that the drug should be given to small children with care, and that they should be watched. Not more than three ns every three hours should be given to children two years old.

Dr. E. Lehmann observed good results from naphthalin in two cases of chronic intestinal catarrh. In another case he noted some unpleasant effects, resembling strangury, from the drug. In acute diarrhœa, and in the vomiting of children, naphthalin has been given with contradictory results. In dilated stomach, and in the diarrhœa of phthisis, naphthalin has sometimes succeeded and oftener failed (Schutz, Cagnoli, Ewald, Pauli).

Several observers have found that naphthalin given in large doses will, at times, cause a slight bladder

catarrh, burning urine, and even strangury, but Rossbach contends that these accidents can be avoided by beginning with small doses and gradually increasing them.

It is in connection with typhoid fever that the claims for naphthalin are greatest. Rossbach and his assistant, Dr. Götze, believe that it has the power of shortening the course of this disease, lowering the temperature, and, if given early, of even aborting an attack. The *Therapeutic Gazette* gives the following account of Götze's observations, made upon twenty-five cases:

"All cases, with the exception of three, were uninterruptedly treated with naphthaline during the entire typhoid process, all other medication being excluded. The administered dose was one gramme (fifteen grains) and five to seven grammes *pro die*. (The drug used was, according to Rossbach's recommendation, always the purissimum resublimatum with the oil of bergamot.) In the course of the disease all patients had used over seventy grammes (two and one-third ounces), some even as much as one hundred and fifty grammes (four and one-half ounces).

"Untoward secondary effect was noted only in a single case, in which toxic symptoms, marked by cerebral functional depression, set in. The general course of all cases was exceptionally favorable, and the benign character of the intestinal symptoms very pronounced. In three cases an actual abortion of the affection appeared unquestionable; other cases coming under treatment early terminated in six to ten days, in others the fever did not last beyond sixteen days; while in another series the duration of the disease was not shortened at all, though the period of thermal elevation was sensibly shortened. Three cases perished from grave complication, though not from the typhoid process itself. Of considerable interest are the comparative trials with antipyrine and naphthalin. Repeated observations convinced Götze that naphthalin promptly reduced the febrile temperature in cases in which antipyrine (given in antifebrile doses) proved useless."

Democracy and Medicine.—In the name of freedom a Mr. Lowry recently introduced into the House of Representatives the following joint resolution: "Resolved, by the Senate and House of Representatives of the United States of America in Congress assembled, that it shall be a misdemeanor, punishable by a fine of five hundred dollars and dismissal from office, for any officer of the United States Government, civil, military, or naval, to make discrimination in favor of or against any school of medical practice, or its legal diplomas, or its duly and legally graduated members, in the examination and appointment of candidates for medical service in any of the departments of the Government. Section 2. That all such examinations shall be open to the attendance and witness of all physicians, citizens of the United States; and that duly certified copies of the complete records of all the details of said examinations shall be placed on file in the office of the Librarian of Congress, subject to the inspection and use of members of Congress."

When Doctors Disagree.—"The value of phosphorus in many diseases of nervous origin is too well known to call for comment."—*Dr. William Murrell.* "In my private note-book I attach to phosphorus the name 'humbug.'"—*Dr. Samuel Wilks.*

News of the Week.

A Boston Polyclinic.—The Boston physicians who have been giving "Clinical Courses of Instruction in Medicine" have organized a "Polyclinic" for the better prosecution of their work. We are glad to note this evidence of medical enterprise, but regret that our cultured confrères have adopted the unauthorized and artificial spelling of the word to which the misguided orthographists of New York gave birth. There is no such word as "Polyclinic" in any standard dictionary, general or medical. Our learned contemporary also speaks of the "Vienna Polyclinic," an institution which the Viennese would not recognize. "Policlinic" is a word sanctioned by years of usage, and applied to just such institutions as are now being organized in this country. There is no need of a new word.

Dr. John Dickson, one of the oldest and most prominent physicians of Pittsburg, Pa., died on January 8th, from the effects of injuries sustained by a fall some months ago.

The New York City Board of Health condemned and destroyed, in the last calendar year, 799,410 pounds of meat and fish, 212,000 pounds of fruit, 37,905 pounds of canned goods, 72,700 pounds of candy, and large quantities of other kinds of food whose consumption would have raised the death rate. Since January 1st the department has been forced to dismiss many of its inspectors, including several whose duty was the inspection of meat, fish, and milk, and to cut down the salaries of others who remain in the service.

A Surgical Feat.—Dr. Samuel W. Francis says that a clever chiropodist can change the "toe callous" into the Το Κάλον!

Pass and Pluck in Prussia.—In the nine Prussian Universities, during the session of 1884–85, 569 doctors and candidates in medicine were examined for the license to practise (*Venia Practicandi*). Of these 120 presented themselves for the second time, the remaining 449 being new candidates. More than seventy-five per cent. passed (430), 4 of these with the mark "very good," 270 with "good," and 156 with "satisfactory." Berlin had 221 candidates, of whom 64 failed or retired; Griefswald, 80, with 16 failures; Halle, 65, with 14 failures; Breslau, 64, with 15 failures; Göttingen, 37, with 8 failures; Kiel, 31, with 10 failures; Bonn, 30, with 2 failures; Königsberg, 28, with 8 failures; and Marburg, 13, with 2 failures.

A Severe Epidemic of Small-pox is reported to be raging in Vienna.

Laicization of Paris Hospitals.—It is stated that the resolutions recently passed by the Paris Municipal Council relative to the secularization of the hospitals of that city are being put into execution. The Sisters of Mercy in the Cochin Hospital have been ordered to vacate the premises, and their place will be taken by a new staff of lay attendants. It is the intention of the Council to banish, if possible, the religious element from every one of the hospitals, including the Hôtel Dieu.

THE CHOLERA is reported to have broken out in Venice.

"THALLINIZATION" IN THE TREATMENT OF TYPHOID FEVER.—Professor P. Ehrlich and Dr. B. Laquer, of Berlin, announce that by giving thallin almost continuously in grain doses every one or two hours, or half-grain doses every half hour, they are able to keep down the temperature of typhoid fever almost to normal, and materially to relieve the symptoms. From one to three grammes of the drug are given daily.

PRIZES GIVEN BY THE ACADÉMIE DE MÉDECINE.—On December 15th, the Paris Académie de Médecine bestowed fifteen prizes to the amount of nearly 24,000 francs, or about $5,000.

THE QUESTION OF PROFESSIONAL SECRETS.—An eminent French judge has just publicly delivered an important opinion on the subject of professional secrets. According to French law, Article 378 of the Code, all physicians, surgeons, midwives, or druggists who may become possessed of secrets by the practice of their profession are forbidden to reveal them, except in certain cases laid down by the law, where they are obliged to denounce criminals. Infraction of the law involves a punishment by a fine of about one hundred dollars and imprisonment of from one to six months.—Cor. *Philadelphia Medical Times*.

THE SUCCESSOR TO THE LATE PROFESSOR ROBIN is announced to be Dr. Mathias Duval.

THE WINES OF COCA have become both numerous and popular. Several analyses made by Dr. Charles L. Mitchell confirm the view that many physicians have reached, that most of the virtues of coca-wine are due to the alcohol. The amount of cocaine in the pint bottles ranges from one-fifth of a grain to four grains, or from six grains to thirty-three grains of leaves per ounce. Many of the coca-wines have less than two grains to the bottle. Assuming the dose of cocaine to be from one-fourth to one-half of a grain, it is not perhaps desirable that there should be more than two to four grains of the alkaloid in a pint of wine. Dr. Mitchell gives it as one-fifth of a grain of the alkaloid, or thirty to forty grains of the leaves, to an ounce of the wine.

OTHER TRAINING-SCHOOLS FOR NURSES IN INSANE ASYLUMS.—Referring to our editorial on the Training-school for Nurses at the Buffalo State Insane Asylum, Dr. J. C. Shaw, Superintendent of Kings County Insane Asylum, sends a circular giving an account of the establishment, February, 1885, of a training-school in his asylum. The school is in charge of Miss Hawley, assisted by Miss Fay. A course of study and work lasting two years is required. Dr. Shaw writes that a school is, he thinks, being organized in connection with the State Asylum at Norristown, Pa.

A THIRD ASYLUM FOR THE INSANE in Michigan, has recently been completed at Travers City, and patients have been transferred to it from the other over-crowded institutions.

SURGICAL SERVICES THROWN IN.—The following, from a practitioner of this city, will explain itself:

"I enclose part of a letter which I have recently received. The writer is a man of fair means, and has heretofore paid moderate fees. He has been to the Presbyterian Hospital, and evidently has money enough to provide himself with the luxury of a room 'this season of the year,' but he seems to regard the *surgeon* as a part of the bed-clothes, and included in his $15.00 per week.

"'At the Presbyterian Hospital all they charged was for room. Everything there included, such as *nurse*, *surgeon*, and medicine, etc. If I went in a *ward* it was *one dollar* a day and everything included, but I do not wish to go in a ward this season of the year.'"

A POSTHUMOUS TREATISE ON MEDICINE.—A literary event of interest in London medical circles is the publication of the long-expected work by the late Dr. Hilton Fagge, on the Principles and Practice of Medicine.

TELEPHONES FOR THE SICK CHAMBER.—A London firm has devised a telephone by which persons suffering from contagious disorders can safely communicate with their friends.

THE LATE DR. EPHRAIM J. CLARK, OF STATEN ISLAND, N. Y.—At a regular meeting of the Medical Society of Richmond, the following resolutions, commemorative of the death of Dr. Ephraim J. Clark, were unanimously passed:

"*Whereas*, in the providence of God, after a long and useful life, our revered friend and venerable fellow-member of the Medical Society of the County of Richmond, Dr. Ephraim J. Clark, has entered into his eternal rest, Therefore, be it

"*Resolved*, That in the death of Dr. Clark our Society has lost not only its oldest member, but the sole representative of the old school of physicians, so distinguished for urbanity, courtesy, and strict professional etiquette.

"*Resolved*, That his memory be cherished and his example emulated by us, his survivors, as a faithful and obliging friend, a kind and skilful physician, a willing and trusted counsellor, and a courteous Christian gentleman.

"*Resolved*, That the sympathies and condolence of this Society are due, and are hereby tendered, to the family and relatives of our deceased brother, in the belief that their loss is his eternal gain.

"*Resolved*, That these resolutions be engrossed in the archives of this Society, and that a copy of them be sent to the family of the deceased."

THE HOSPITAL SUNDAY COLLECTION amounted, at last accounts, to $35,361.07.

CARING FOR THE INSANE.—In illustration of our criticisms recently made upon this point, we would call attention to the fact that the New York City Female Lunatic Asylum, which has a capacity for 1,250 patients, contained, on October 1st, 1,628, or over 400 in excess.

THE POPE is reported to be suffering from morbus Brightii, and he has summoned, one Dr. Mezger, of Amsterdam, a specialist in that disease (!), to Rome, in order to receive advice and treatment from him.

THE LARGEST CALCULUS ever successfully removed from the bladder was by DR. DUNLAP, of Springfield, Ohio. It weighed over twenty ounces. So says the *Medical Age*.

MEDICAL SOCIETY, STATE OF NEW YORK.—Additional papers to be read at the next meeting of the Medical Society of the State of New York: "The Clinical *vs.* the Microscopical Evidences of Disease," H. C. Coe, M.D., New York; "Hints on the Treatment of Diphtheria," J. M. Bigelow, M.D., Albany; "The Curative Potency of Prolonged Sleep," J. Leonard Corning, M.D., New York; "Non-venereal Syphilis," L. Duncan Bulkley, M.D., New York; "Diet in Cancer," Ephraim Cutter, M.D., New York; "The Prognosis and Treatment of True Lateral Curvature of the Spine," Newton M. Shaffer, M.D., New York; "Bacteria, Identification and Classification of Species," William Hailes, Jr., M.D., Albany; "Hemorrhoids in Pregnancy," W. H. Bailey, M.D., Albany; "Relation of State Boards of Health to Local Boards," Maurice Perkins, M.D., Schenectady; "On the Adoption of some General System of Distributing the Insane of New York State, making Use of the Existing Asylums, and Providing for the Accommodation in each of both Acute and Chronic Insane," Frederick Peterson, M.D., Poughkeepsie.

NEW YORK PATHOLOGICAL SOCIETY.—Officers for the ensuing year: John A. Wyeth, President; T. Mitchell Prudden, Vice-President; Wesley M. Carpenter, Secretary; John H. Hinton, Treasurer; John C. Peters, Editor; Frank Ferguson, Assistant Editor; John C. Peters, T. Mitchell Prudden, L. Emmet Holt, W. P. Northrup, L. Waldstein, Committee on Admissions and Ethics; H. Marion Sims, E. C. Wendt, Members of Committee on Publication. The names of all in arrears in dues four years and more were dropped from the roll.

HOT AËRATED WATERS.—A method has been devised by Mr. Edward Warker, of this city, by which it is possible to raise carbonic acid water and other aërated beverages to any desired temperature, while keeping them at the same time fully charged with the gas. This is effected by passing the fluid through pipes surrounded by hot water, and the contrivance is so simple that it can be used without trouble at the bedside.

Reviews and Notices.

A GUIDE TO THE PRACTICAL EXAMINATION OF THE URINE. By JAMES TYSON, M.D. Fifth Edition, pp. 249. Philadelphia: P. Blakiston, Son & Co. 1886.

THE writer in this edition brings his work up to date with reference to the new and delicate tests for albumin, and with reference to the presence of proteids in the urine and the methods of detecting them. Otherwise the book is very nearly the same which has been found useful by so many in their pursuit of information on this subject.

A CHART OF PHYSICAL SIGNS OF DISEASES OF THE HEART AND RESPIRATORY ORGANS. Compiled from the Works of various Authors, with Original Ideas and Observations. By R. C. M. PAGE, M.D., Instructor in the New York Polyclinic, and Attending Physician for Diseases of the Heart and Lungs to the Northwestern Dispensary. New York: Press of Stettiner, Lambert & Co. 1885.

THE title of this chart explains itself. The tables are concise and well arranged, and are calculated to be of real value to the student or young practitioner who has not yet had the significance of the various thoracic sounds engraven in his memory by practical experience.

DISEASES OF THE NOSE AND THROAT. By CHARLES E. SAJOUS. Pp. 439. Philadelphia: F. A. Davis. 1885.

DR. SAJOUS has brought together his lectures, delivered at the Jefferson Medical College, on rhinology and laryngology. The hundred illustrations colored to represent the anatomical and pathological conditions of the parts under consideration make the work unique and exceedingly valuable. The perseverance and ingenuity of the author, who is also the artist, excite admiration. The text itself will interest and aid the practitioner in search of minute details for the better examination and treatment of diseases of the nose and throat.

ORGANIC MATERIA MEDICA AND THERAPEUTICS. By JAMES YOUNG SIMPSON, M.D. Pp. 337. New York: J. H. Vail & Co. 1885.

THIS manual of the organic preparations of the pharmacopœia presents, in a condensed form, the name, properties, and general effects of each drug. While intended primarily for students, it is yet a valuable acquisition to the library of anyone desiring to refresh his memory. It is arranged in accordance with the "Sixth Decennial Revision of the United States Pharmacopœia." Dosage is given in terms both of the old and the metric systems. A new feature is a list of common names for preparations, *e.g.*, Friar's Balsam, Compound Tincture of Benzoin, etc. This will prove of great service to the student. The typographical appearance of the book is excellent, and it deserves a wide sale.

AN INTRODUCTION TO THE STUDY OF THE DISEASES OF THE NERVOUS SYSTEM, being Lectures delivered in the University of Edinburgh during the Tercentenary Year. By THOMAS GRAINGER STEWART, M.D. 8vo, pp. 237. Philadelphia: J. B. Lippincott Company. 1885.

THE first three chapters cover the subjects of the medical anatomy of the nervous system. The author gives a very good account of this subject, well illustrated by cuts which are mostly old, but to which are added some heliotype representations of sections of the brain. Certain of our expert cerebral anatomists might learn something from the nicety with which these latter are done. The lectures from the fourth to the twelfth are taken up with a description of the method of examining the nervous system. This part of the work is an extremely interesting and instructive one, and should be thoroughly studied. The closing chapters are devoted to some considerations regarding the pathology and treatment of nervous disease. Many physicians who feel a desire to acquaint themselves with modern neurology, but who feel somewhat afraid of the supposed heavy task, will find Dr. Stewart's book just the thing desired. It is clear, systematic, and accurate. It does not pretend to be complete and exhaustive.

PRACTICAL SUGGESTIONS RESPECTING THE VARIETIES OF ELECTRIC CURRENTS, AND THE USES OF ELECTRICITY IN MEDICINE, with Hints relating to the Selection and Care of Electrical Apparatus. By AMBROSE L. RANNEY, M.D. Pp. 147. New York: D. Appleton & Co. 1885.

THIS is a useful little work, presenting in a brief way the subject of electro-technique and electro-therapeutics.

THE EXTRA PHARMACOPŒIA, with the Additions introduced into the British Pharmacopœia, 1885. By WILLIAM MARTINDALE, F.C.S. Medical References, and a Therapeutic Index of Diseases and Symptoms. By W. WYNN WESTCOTT, M.B., Lond. Fourth edition. 16mo, pp. 416. London: H. K. Lewis. 1885.

THIS little work gives an account of many drugs and chemicals in practical use, but not officinal. It is useful for reference, now that so many new drugs are being forced upon one's notice.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 7, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. R. H. DERBY, from the Special Committee consisting of Drs. Agnew, C. S. Bull, Webster, G. M. Smith, Derby, and the President *ex officio*, made a report on

COMMUNICABLE EYE DISEASES

in asylums and residential schools in this city and vicinity.

This Committee has been aided in its work by Dr. J. J. Milhau, representing the State Board of Charities, Mr. Arthur G. Sedgwick, of the State Charities Aid Association, Mr. Elbridge T. Gerry, of the Society for the Prevention of Cruelty to Children, and Mr. James Gallatin, representing the New York Association for Improving the Condition of the Poor.

The Committee has secured an examination of the eyes of the children in *fifty* asylums and residential schools. These examinations were conducted by experts in ophthalmology, who accompanied sanitary inspectors sent by the Board of Health, and the experts included men of the standing of Roosa, Loring, Noyes, Mittendorf, giving ample guarantee that the inspection would be conducted in the most thorough manner.

As samples of the reports made by the inspectors, those from the Deborah Orphan Asylum, 95 to 103 East Broadway, the Roman Catholic Orphan Asylum, Fifth Avenue and Fifty-first Street, and the St. Joseph Asylum, Eighty-ninth Street and Avenue A, were read, giving a total of 1,134 children, of whom 590 were found suffering from communicable eye disease.

The general conclusion of the report was that a worse condition of things exists now than was found when the inspections were made which formed the basis of the preliminary report made by the Committee in June last. The reports submitted showed that the physicians who have charge of these asylums make no systematic inspection of either the buildings or their inmates; that no adequate system of quarantine is practised; that many of the asylums are grossly overcrowded; and that in nearly all the children are admitted without due examination of their physical condition, especially with reference to their eyes.

The report concluded with a copy of an Act for the better preservation of the health of children in institutions, written by Mr. Gerry, endorsed by the Committee, and to which the Academy gave its approval. The proposed Act provides for careful examination of the eyes of each child applying for admission to an institution, forbids the entrance or remaining in contact with children not affected with contagious or infectious eye disease, and prevents overcrowding.

THE TREASURER'S REPORT,

DR. W. F. CUSHMAN, Treasurer, showed a balance in favor of the Academy of $880.58. During the last year fifty-five new Fellows have been admitted.

DR. F. A. CASTLE, Treasurer of the

BOARD OF TRUSTEES,

reported a balance of $647.12; that the library fund is $4,548.66; that the general permanent fund is $1,280.74; and that there is a balance of $137.80 of the fund for the liquidation of the mortgage.

THE COMMITTEE ON LIBRARY

reported that the library contains 27,000 bound volumes, 9,500 pamphlets; that during the last year there had been donated 1,320 bound volumes, 1,214 pamphlets, and 23,865 journals; and that there had been 4,360 visitors.

Other annual reports were read by title and referred, and the Academy then passed to the consideration of proposed

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.

The more important of those adopted are the following: The Committee on Medical Education and the Committee on Medical Ethics were abolished.

The Academy retained its power to discipline its Fellows by adopting the following section, introduced by Dr. Agnew:

"The Council shall, on a written statement signed by a complainant and duly forwarded to the Secretary, take cognizance of any complaint against a Fellow. The Council may, after investigation, dismiss the complaint or transmit its findings for further action by the Academy."

Other clauses in the By-Laws provide that:

"The Academy may suspend or expel a Fellow."

"The public shall be invited to listen to the Anniversary discourse."

"Each Resident Fellow on admission shall pay an initiation fee of *twenty-five* dollars; the dues shall be remitted during the year in which fellowship is acquired."

"Any Resident Fellow who is qualified to vote at an annual election, and has paid five annual dues, may compound for all future annual dues by the payment at one time of one hundred dollars."

OFFICERS FOR THE ENSUING YEAR.

The Tellers reported that the following had been elected:

Vice President—Henry D. Noyes.

Corresponding Secretary—Wesley M. Carpenter.

Treasurer—William L. Chenault.

Trustee—George A. Peters.

Member of Committee on Library—I. H. Emerson.

Member of Committee on Ethics—S. Oakley Vander Poel, Sr. (Committee abolished by Amendments to Constitution and By-laws).

Member of Committee on Education—D. B. St. John Roosa (Committee abolished as was the Committee on Ethics).

Recording Secretary—Arthur M. Jacobus.

Members of Committee on Library—W. H. Katzenbach (full term), Laurence Johnson (short term).

Delegates to the Medical Society of the State of New York (elected by the Academy, formerly appointed by the Council)—W. R. Birdsall, R. W. Amidon, A. S. Hunter, W. E. Bullard, and G. Bacon.

The Academy then adjourned.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, December 4, 1885.

BEVERLEY ROBINSON, M.D., PRESIDENT, IN THE CHAIR.

DOUBLE HARELIP.

DR. R. F. WEIR presented two infants upon whom he had operated for double harelip. In one the complication of an attachment of the inter-maxillary bone to the tip of the nose existed. By the operation adopted in this case, a V-shaped piece of the vomer was removed, the inter-maxillary process crowded backward and fitted into the space between the alveolar borders of the maxillary bone on either side, and the nipple-like process of skin utilized in forming the tip. In both patients the result was unusually good.

DR. C. L. DANA read the paper of the evening (see page 57), entitled

THE RELATION OF LITHÆMIA, CALCULI, AND PHOSPHATURIA TO NERVOUS SYMPTOMS.

DR. W. H. DRAPER said he had listened with great interest to Dr. Dana's paper, and was quite prepared to agree with what he had said regarding the impropriety of creating a diathesis based on the presence of ox-

alate of lime, uric acid and its salts, or the phosphates in the urine. He had long been interested in the association of functional nervous disturbances and these conditions, but with regard to their association with a rheumatic rather than with a gouty taint, he was not quite so clear as to the distinction to be drawn between gout and rheumatism as to be able to say that the lithæmic state did not indicate a gouty habit as positively as it did a rheumatic one. He believed that gout and rheumatism were so nearly alike that it was hardly possible to dissociate them. The fact that uric acid had long been regarded as the materies morbi of gout had fixed in the minds of people the idea that it was the essential cause of this malady, but he believed there were a good many who doubted whether uric acid was anything more than a result of certain changes in the condition of the blood going to excite gout, and that the uric acid itself was not necessarily a cause of that disease. In other words, that there could be gout without an excess of uric acid in the blood. He had often thought that, by careful inquiry into the family histories of persons suffering from nervous disturbances associated with lithæmia, it would be found that there was a gouty tendency. Such, at any rate, had been the result of his own observation. The person suffering from the functional nervous disturbance might himself be free from arthritic disease. It is common enough to find in the same family cases of glycosuria, gout, and lithæmia; therefore, Dr. Draper could not see why we should not speak of lithæmic disease as gouty disease, just as we would speak of gouty disease as lithæmic disease; or, of lithæmic symptoms as gouty symptoms, just as we would speak of gouty symptoms as lithæmic symptoms. Another point which he thought allied them was the fact that they were relieved by the same hygienic and dietetic recommendations. In his experience the gyclosuric were not more relieved by nitrogenous diet than the lithæmic subjects. This might seem like a broad and strong statement, but it was based upon a very large personal experience, and he thought it was confirmed by the experience of others.

Dr. Dana had not treated of the management of these conditions, and he wished, therefore, to say a few words with regard to the dietetic management, especially of the lithæmic state. He could probably best do this by the relation of a case which came under observation two or three years ago, in which the patient presented in a striking manner most of the functional nervous derangements associated with this state. The patient was a married woman who had been travelling in Europe a number of years. She had gouty antecedents, but had never had gout herself. She began to suffer, shortly before her return to this country, from a great variety of nervous disturbances—parasthæsia of all sorts, with great nervous depression; she was melancholic, apprehensive, feared to go out alone, was subject to attacks of dizziness and of numbness of the extremities. She consulted a physician in London who told her she was threatened with apoplexy, and she came home in great terror. When Dr. Draper saw her she was in a pitiable condition, afraid to stay in her room alone, afraid to go out, had alarming attacks of vertigo, would awake in the night with numbness and coldness of the extremities, associated with pallor. The arms and legs at times had the appearance of marble, being perfectly numb and cold. This state would return frequently, two or three times during the night. The urine was found to contain an enormous amount of free uric acid; it was very acid in reaction, and of high specific gravity, and always deposited urates and oxalates. She had the usual dyspeptic symptoms which are associated with such nervous disturbances, a great deal of acid eructations, occasional attacks of diarrhœa alternated with constipation. What was of rare occurrence in his experience, the patient was unable to use alkaline medication; she could not take soda or potash in any form in which he could present it to her. She had been in the habit of taking a mixed diet and wine. Dr. Draper withdrew everything in the form of carbo-hydrates, allowing her only animal food and milk. The urine rapidly changed in character, becoming clear, of lower specific gravity, and free from crystalline deposits, or the deposits of the salts of uric acid. With this change in the urine there came a coincident change in the nervous symptoms. She ceased to have vertigo and the distressing attacks of numbness. The patient had been more or less under his observation since that time, and she informed him that she was unable to use any bread, or any starchy or saccharine food whatever. If she ate bread there would be an immediate return to the uric acid sediments, dizziness, palpitation, and numbness which before distressed her. She had become quite thin; she had before been quite stout; but so long as she continued the nitrogenous diet and milk she enjoyed a very fair degree of health. This was an extreme illustration of what he was sure the experience of all who had tested the value of a nitrogenous diet, or the withdrawal of carbo-hydrates and saccharine foods from the diet of persons suffering from lithæmia, would confirm. He regarded the dietetic management as being by far the most important element in the treatment of these cases. Medication was a secondary matter. Alkaline remedies were, of course, useful, and often necessary.

In addition to the nervous disturbances which characterized the lithæmic state, Dr. Draper thought this condition was often responsible for chronic catarrhal affections, most often of the gastro-intestinal tract, but not infrequently of the respiratory tract. Whether these lesions were brought about by the same changes which provoked the central nervous disturbance or not, he was unable to say. It would seem as if the nervous disturbances were the result of certain vaso-motor derangements, provoked by the condition of the blood, which characterized these cases, and it seemed not improbable that the trophic derangements had a similar origin. In these cases also he believed the dietetic management of most importance.

Dr. E. D. Hudson, Jr., said his views regarding so-called lithæmic and neurasthenic cases had changed somewhat from time to time. At one time he regarded the cases as largely of a neurotic nature primarily, but his views had gradually changed, until he had come to the conclusion that the majority of neurasthenic cases—cases in which there was prostration and functional nervous disorder—were of lithæmic origin, and that the liver was the organ especially at fault. He appreciated the importance of reaching more definite conclusions regarding the nature of these cases by making such observations as Dr. Dana had made—examinations of the urine, etc. At one time he felt pretty sure that uric acid or oxalate of lime existed pretty uniformly in this class of cases, but he had since had opportunity to watch two or three cases for a long period of time, and he had found such great variations in the character of the urine, in the quantity of urinary salts, etc., that he had come to feel that the quantity of urine passed or the kind of salts it contained were of little value. It seemed to him pretty evident that most of these cases occurred in persons of rheumatic or gouty diathesis. He had seen one case in which there was a singular transition from acute and subacute rheumatism to lithæmic symptoms. The patient would have rheumatic tendencies for a period, which would disappear, when he would begin to suffer from lithæmic symptoms, pertaining to the nervous system, etc.; and after being treated for this, there would be a return of the rheumatic symptoms.

The treatment which he had tried had been based upon the different theories as to the cause of the condition. He had not found the treatment, based upon the view that the condition was chiefly a nervous disorder, to be successful. Such remedies as are considered tonic in these conditions—quinine, alcohol, wine, fluid extract of coca, etc.—might relieve these neurasthenic patients of their depressed state for a brief period, but it was a form

of exhilaration which soon gave way to a depression even greater than that which had previously existed. He had, therefore, come to discourage the use of such remedies. Within a few months he had directed treatment more especially to the regulation of the hepatic function, by administering podophyllin, extract of colocynth, dilute muriatic acid, in a bitter tonic, and in a large proportion of cases the results were very good. In addition, he generally restricted the patients to a nitrogenous diet—meats, stale bread and butter—avoiding saccharine and starchy foods, and especially fruits. Still, in the treatment of all cases of this class Dr. Hudson had found that the patients tired of one diet, and he had recently tried the method of allowing the patient to eat of almost everything, and he was somewhat surprised that they had remained free from lithæmic symptoms; and the opinion had been gaining ground with him that, after all, gastric indigestion and direct influence upon the pneumogastric nerve might have something to do in the causation of the condition. There seemed to be an immediate disturbance, in many cases in which digestion was deficient, before it would seem that an acid or poison could form within the system to cause such a variety of nervous symptoms. He always bore in mind a remark by Dr. Flint, that in dyspepsia, as a rule, methods of exclusive diet were not desirable. Probably the same remark would apply to the cases under consideration, and, besides, there should be regular exercise and means taken to stimulate the superficial circulation and to regulate the hepatic function and the stools. By the use of such remedies as nitro-muriatic acid, or bitter tonics, Vichy water, lacto-peptine with bismuth or soda, and something to stimulate the pneumogastric nerve, such as cubebs or ginger, he had found patients who had been treated unsuccessfully by other methods for indigestion and associated nervous symptoms, soon able to eat a promiscuous meal three times a day. Perhaps, however, he would yet meet with cases in which this method of treatment would be unsuccessful, but the facts which he had accumulated went far to prove that the improvement was not simply imaginary, inspired by hope in a new method of treatment.

Dr. G. B. Fowler had examined a great many specimens of urine, and had for a long time kept accurate records of such examinations, and he must say that he believed there was such a thing as oxaluria. The majority of cases of so-called nervous dyspepsia presented constant and marked depositions of oxalate of lime. But in order to determine this it was not sufficient to examine one specimen of urine to-day and another three or four weeks hence. The patient should bring his urine for examination every day for at least a week, for the sources of oxalate of lime in the urine were many, and they might be trivial or otherwise. It might be due directly to the food taken, for certain kinds of food contained an excess of oxalate of lime, and it might appear in the urine without indicating anything pathological. Again, its presence might be due to the food indirectly, because of faulty digestion. It might also be due to insufficient oxidation, for oxalic acid is one of the end products of complete assimilation, and if, through respiratory or cardiac disease, or blood-disease which impairs oxidation, the elements which are thrown off as a result of combustion in the tissues are not sufficiently oxidized, the higher retrograde products, uric acid, oxalic acid, would appear; but in the majority of instances oxalic acid is due to catarrh of the intestinal tract. The presence of acid fermentation gives rise to flatulence, pain, reflex irritations, etc. He therefore thought there is such a thing as oxaluria, not a primary affection, but secondary to interference with digestion. The same might be said of uric acid and phosphates in the urine.

As to treatment, he was decidedly in sympathy with Dr. Draper regarding the value of a nitrogenous diet. He had seen a great many cases of most marked nervous disturbance, some having about all the symptoms of locomotor ataxia, ultimately relieved by persistent use of nitrogenous diet. He was himself an example. Three years ago he did not weigh more than one hundred and ten pounds; he suffered from marked nervous symptoms, such as involuntary tremors which caused his bed to shake, from flatulence, and other gastro-intestinal disturbances. These symptoms passed away when he confined himself to a nitrogenous diet, and he now weighed one hundred and fifty pounds. When Dr. Salsbury made public his views regarding the appearance of the blood in hog-cholera, dyspepsia, etc., through the columns of The Medical Record in 1861–62, they were not accepted with great favor by the profession; but the success of his mode of treatment could not be disputed, and it was due to the use of a nitrogenous diet. So far as his examinations of the blood were concerned, Dr. Fowler was not able yet to express a definite opinion, but he had examined about five or six hundred specimens of blood of which he had kept records. He had observed one thing, that in marked cases of flatulent dyspepsia there was a large number of colorless blood-corpuscles which were not seen in a state of health. In the healthy person the fibrinous mesh was coarse, while the fibres themselves were fine, but in dyspepsia it was found that the meshes were fine while the fibres were coarse, and there were many of these colorless corpuscles entangled in them. Now, if the fibrin depended upon the liver, and the liver was at fault in dyspepsia, it held to reason that in dyspeptic cases we should find more fibrin in the blood. He gave scraped meat, or the pulp, cooked enough to make it palatable, peptonized milk, and plenty of water, which was the great solvent or means by which to cleanse the system.

Dr. A. A. Smith thought that if a physician of fifty years ago could have been present, he would have thought the discussion on this subject simply amounted to a refined explanation for treating the liver in the manner that he had been accustomed to. It seemed to Dr. Smith that we move in cycles. Dr. Hudson had suggested the same idea. Dr. Smith had been taught fifteen years ago that it was not necessary to pay so much attention to the liver; that it was hardly to be regarded as the cause of original sin, and that it was not necessary to direct treatment to this organ in a routine way, as it had been done for many years, giving every patient a dose of calomel or other cathartic which would act upon the liver. But when he became actively engaged in practice, he found that his teachers had paid too little respect to the liver. His own respect for it was constantly increasing. For instance, even in malarial poisoning he would give a cholagogue—not before giving quinine, but in connection with quinine; and he felt quite sure that such treatment would be of great advantage in digestive complaints, such as had been spoken of this evening. Further, he believed that in many cases of organic disease, whether of the respiratory or circulatory tract, and even in some organic diseases affecting the alimentary canal, we could delay the progress of the disease, or certainly make the patient more comfortable, by resorting to the same kind of treatment. In other words, he wished to put himself entirely in accord with much that had been said regarding the liver. There were cases of anæmia with much derangement of the alimentary canal, but not what is called pernicious anæmia, which were not only not benefited, but which were aggravated by the ordinary treatment with iron, etc. But by persistent, not depressing, treatment directed to the alimentary canal, the use of alkalies, cholagogue cathartics to a moderate degree, and the regulation of the diet, and after two or three weeks, perhaps, the use of ordinary remedies employed in such cases, the patients would recover much more quickly. The same remarks he thought would apply to the disturbances of the nervous system mentioned.

Dr. Dana was inclined to think most too much respect had been paid to the liver during the discussion.

He did not think we cured many of the cases under consideration by simply treating the liver. On the other hand, he thought we could get better results by administering strychnine, almost to the degree of poisoning, or by giving strong tonics, or by using such means as would arouse the tone of the general nervous system. He thought there was a pretty large class of cases in which the liver was not at fault at all. There was a class of cases described by Dickinson as having alkaline urine often, or urine containing earthy salts, which he said were injured as a rule by salines; here Dr. Dana thought the liver had nothing to do with causing the condition.

THE PRESIDENT had seen a number of cases with an inflammatory condition of the respiratory tract, such as referred to by Dr. Draper, there being the indications of the lithæmic state described by the speakers—namely, nervous symptoms, engorgement and torpidity of the liver, etc.; yet he had failed to give them much benefit from the general treatment advised by Dr. Draper, but had found local applications necessary.

GARDEN SLUG EJECTED FROM THE STOMACH.

DR. E. D. HUDSON, JR., presented a limax or ordinary garden slug, and said that, about a year ago, Dr. Stephen W. Roof brought him a fish-like animal or body, with the statement that it had been vomited by a young lady who was a sufferer from dyspepsia. Dr. Hudson was of the impression that it was a distoma crassum, but on showing it to Dr. Johnson, the naturalist, he was assured that it was an ordinary garden slug; and inasmuch as air-breathing animals were supposed not to be able to live in the stomach, they concluded the patient's story was not genuine. But about two months later, one of Dr. Hudson's patients, a lady aged twenty-two, unknown to the other patient, brought him a similar object, which Dr. Johnson also demonstrated to be a garden slug. There could have been no collusion between the two ladies, for they were unknown to each other. The animals were said to be alive when ejected. In the second case there was no garden belonging to the house. His patient was believed to be truthful.

The Society then adjourned.

Correspondence.

OUR LONDON LETTER.

From our Special Correspondent.

MEDICAL MEN IN PARLIAMENT—MEDICAL MEN AS ORATORS—PERIPHERAL NEURITIS—THE METROPOLITAN SEWAGE QUESTION.

LONDON, December 26, 1885.

THE estimate which I gave in a former letter as to the probable number of medical men in the new House of Commons has, I find, been slightly exceeded now that the election returns are complete. The new Parliament of 670 members contains 16 medical men. Some of these, however, left the profession years ago, others did so on entering the House, and the new medical members will probably soon follow their example. Parliamentary work is incompatible with professional work, and about the only instances I can call to mind of medical men continuing practice, are those of Dr. Lyons, the late Sir D. Corrigan, and the late Dr. O'Leary, all of Dublin.

By dint of rushing to and fro between London and Dublin they managed to retain some consulting practice, but scarcely sufficient, I should suppose, to adequately remunerate them for the expense of keeping up two establishments and the extra work and anxiety they went through. One of the present members, Dr. Farquharson, although retired from practice, has not withdrawn from the fields of medical literature since his entry on political life. As a rule, though, politics extinguishes professional interests. Those medical men who have sat in the House of Commons and made any name for themselves, have done so as politicians and not as medical men or even as sanitary reformers. On sanitary subjects, indeed, the voice of the profession has not been uplifted in the legislature as it ought to have been. But oratory is not a very common gift in our profession, although it certainly numbers several who may fairly claim to possess it. In this line Sir James Paget is *facile princeps* and the other medical baronets compare very unfavorably with him. Dr. Balthazar Foster, the new medical member for Chester, and President of the Council of the British Medical Association, is an excellent speaker. Mr. Brudenell Carter, the well-known ophthalmic surgeon, is as ready with the tongue (and I may add pen) as with his fingers in ophthalmic surgery. Mr. Rivington, of London, and Mr. Sampson Gamgee, of Birmingham, are both eloquent speakers, though they have been heard but seldom of late years. Both, however, were once more to the front last week at the meeting at the College of Surgeons.

In his recent "Harveian Lectures," Dr. Buzzard has recently directed attention to the important subject of paralyses caused by peripheral neuritis. Dr. Buzzard has shown that such cases are frequently by no means so simple as might be supposed. The symptoms are not always uniform and the neuritis may be multiple, thus rendering the problem somewhat complex. It is very important to diagnose such cases from similar paralyses due to central disease, and the prognosis of the former is much more favorable. Syphilis, gout, lead poisoning, alcoholism, diphtheria, and possibly some other of the acute infectious diseases, are enumerated as common causes of multiple peripheral neuritis.

Considerable attention has lately been devoted to the sewage question as affecting the inhabitants of London. The pessimists have had so much the upper hand of late, that I fear such of your readers as see any of our journals have formed somewhat exaggerated notions of the magnitude of the evil from which we suffer. In spite of all that they say, we, who are dwellers in London, have much for which to be thankful in sanitary matters. The system of main drainage is good and the main sewers are fairly well ventilated. Cesspools have been abolished.

Where "bad drains" are complained of, in ninety-nine cases out of every hundred it is the householder's own pipes which are at fault. The low death rate in London, compared with that of other cities, also points to the general excellence of our system of drainage. This result is, however, unfortunately only obtained at the sacrifice of our river. The Thames is still virtually a vast sewer, but the sewage is not poured into it in its course through London from innumerable drains as was the case twenty years ago, but is carried fourteen miles down the river. The present system of main drainage was commenced twenty years ago and completed ten years ago at a cost of nearly five million pounds sterling. Below the sewage outfalls, the river is very offensive and the dwellers on its banks in that part of its course are said to suffer, though no very definite evidence has yet been adduced on this point. The effect of the tide, also, is felt as high as London Bridge, so *some reflux* of sewage probably occurs. Nevertheless, the condition of the river compares favorably with its state twenty years ago. The chief difficulty in inaugurating any change is the vast bulk of sewage which has to be dealt with. Disinfectants have been lavishly used at the outfalls for several years now, but without any benefit at all proportionate to the sums spent. The latest proposal is to precipitate the solid matter, take it out to sea in barges, and there throw it overboard. Experiments with this method are shortly to be tried on an extensive scale.

THE CONTROLLING FACTOR IN THE DETERMINING CAUSE OF SEX.

To the Editor of The Medical Record.

SIR: Upon reading your editorial review of Mr. Terry's recent work upon "Controlling Sex in Generation," some thoughts occurred to me upon which I would like to receive information. I take it for granted that every physician has patients to whom, if he could impart the secret of "controlling sex," he could remove one stumbling block to domestic felicity—not to dwell upon the fact that there would thereby be born a greater number of that nowadays rare class, "welcome children."

From your article I judge that the work in question claims that the sex is governed by the relative degree of sexual excitement of the parents at the time of congress.

This idea has often been advanced, but, to my mind, not proved, though Mr. Terry seems to have reversed the effect of this greatest sexual excitement, by making the male generate a female instead of his own sex.

There is a degree of probability in the theory that energy will result in a greater effect than listlessness; but how can it be proved that this energy is transmitted to the spermatozoa or ovule, when to all appearances it is expended in the act of liberation of these two elements, spermatozoa and ovule.

Here allow me to suggest that none are so capable of testifying upon this subject as the one hundred and twenty thousand (?) physicians it is claimed that we have in the United States.

Of course, many will object, saying that they do not feel like giving information upon such a "delicate subject." I answer perhaps not. But under the law of compensation, they who all their professional lives are continually seeking "rather delicate" information cannot consistently refuse to contribute to the common stock.

To lead off, I do not think the theory advanced by Mr. Terry will hold, that is, if I may judge by the experience of some of my patients, and it certainly will not in my own family (we have had three children, all males).

Every adult person has speculated upon this question. I have come to the conclusion that it is a mystery; still, that does not stop me from speculating.

After examining all the works to which we have access, including all the human embryos within our reach, we cannot help but be surprised at the advanced stage the embryo attains before we can positively decide upon its sex.

My observations and readings have forced me to the conclusion that the sex depends upon the degree of development, differentiation, or evolution—whichever term suits the case the best—that the animal arrives at; in other words, that sex is merely a degree or phase of development.

To the lower orders we must undoubtedly go for our information. There we find that propagation first begins by division, whether the method by which it is accomplished is by fission, multiplication of the nucleoli, or by budding. Here the sex, if we recognize sex at all, must be termed female. As we ascend higher in the scale we find a sexual differentiation, and that the individual combines the two sexes in the one body. Next we find a separation of the sexes, the male having only a temporary existence, apparently only for the sexual act, and then dies, the female having a more permanent existence.

We can now find the male having a more permanent existence; first arriving at maturity as a separate individual, then permanently uniting with the female during her life, apparently forming a double-headed being, and giving rise to the original belief that it was a double-headed being. I refer to the worm that is the cause of the disease known as the "gapes" in chickens and other feathered creatures.

If we go to the bee for information, we find that the same egg, according to its environment, will develop into a neuter gender, the worker; or a fully developed female, the queen bee; or into a more highly developed being, a male, the drone.

Examine the ovaries of the frog; here we find the ovary develops into a testes, which we know to be the case of the higher animals; but in some females of this animal we can find ovaries which have passed on to the next higher phase of development, and in the same organ can be found ovarian as well as testical tissue; this seems to prove that the testes are a more highly developed, not simply differentiated, tissue.

It may be that the degree of maturity of the spermatozoa determines the sex, the most highly elaborated forming the male, and the less, the female. The degeneracy of the physical powers of an individual should affect the procreative function, and I have for some time regarded the excess of females in a family as indicating the physical degeneracy of that family. It appears to be the case that the more completely domesticated a race of animals become, the greater the ratio of females; their vitality seems to be lessened. The cat tribe is an instance; but I think that the peerage of Great Britain illustrates this perfectly, where the laws of entail and male succession to titles extinguishes the title by reason of lack of males in the family; while I know of no case where there was a lapse of title from lack of female descendants; and though such might be found as an exception only, that of the lack of male heirs is of frequent occurrence.

To return and examine the theory advanced by Mr. Terry. Every physician meets with cases of extremely unexpected and very unfelicitous pregnancies, some occurring during the mid-menstrual period, etc. These all go to confirm the researches of physiology, which teaches us that days can elapse between the date of departure of a spermatozoa and its arrival into port. It is a fact that a long time can pass before the wandering spermatozoa meets with its shipmate, who apparently has been weather-bound in the ovarian and peritoneal seas or the Fallopian gulf. At all events, enough time has intervened for the ardor of both their progenitors to have subsided, therefore leaving them without the impulse of the party having the "greatest sexual excitement;" from which I infer that excitement cannot be the determining cause of sex. Again, how about the sex of a fœtus whose mother conceived while under the paralyzing effects of fear? or while under chloroform, morphine, whiskey, or any partial or complete anæsthetic? Under Mr. Terry's theory the children should be all females, while under the ordinary ideas the children should be all males. But, I ask, are they? and if so, which?

To sum up, the present summit of sexual development seems to be the male, and I believe that the determining cause of sex is the degree of evolution that the being has arrived at. We do find individuals who are farther developed than a female, yet are not complete males. A complete male with ovarian tissue I do not recollect reading of, but I have, of females with a testicle.

At any rate, it is facts we are after, and for the good of our patients, let each physician contribute.

CHARLES AMBROOK, M.D.

A PLEA FOR PERSECUTED LISTERISM.

To the Editor of The Medical Record.

SIR: Professor Tyndall recently wrote: "A great theory has never been accepted without opposition. The theory of gravitation, the theory of undulation, the theory of evolution, the dynamical theory of heat, all had to push their way through conflict to victory. And so it has been with the germ theory of communicable diseases.

Some outlying members of the medical profession dispute it still. . . . Such must always be the course of things as long as men are endowed with different degrees of insight; where the mind of genius discerns the distant truth which it pursues, the mind not so gifted often discerns nothing but the extravagance which it avoids."

The latest attack upon the principles of the germ theory comes from the pen of the distinguished surgeon, Dr. Frank H. Hamilton, in THE RECORD of January 2d, in an article on "The Art of Primary Union, or Union by Adhesion, in Large Incised Wounds." Professor Hamilton enumerates four essential conditions for securing the above result, which may briefly be stated as: 1, Good general health; 2, removal of all foreign bodies; 3, presence of plastic lymph; 4, cleanliness and care in handling wound. In referring later to Lister and his disciples he states: "They omit nothing which in the opening of this paper I declared essential to success."

The advocates of antiseptic methods and their opponents are therefore agreed as to fundamental principles; they only differ in their views of the *modus operandi* of these principles, and it is under condition No. 2 that the difference is most manifest.

The advocates of antiseptic treatment believe that the atmosphere and all dust contain germs, which act as foreign bodies in the wound, and which should be removed and others prevented from gaining access to its interior.

Upon what basis does this belief rest? Pasteur has proved beyond question that fermentation and putrefaction are due to the presence of microscopic plants, and his observations have been confirmed by Tyndall, Burdon-Sanderson, Cohn, and a host of other scientists. In fact, if fermentable and putrescible liquids are deprived of these germs, putrefaction and fermentation do not occur, and the liquids remain unaffected indefinitely. Certain chemicals destroy these germs. Is it not rational to believe that if these germs are allowed free entrance to wounds they establish fermentative and putrefactive changes in the secretions, which produce irritation, and which must result in the formation of pus, and the defeat of condition No. 2? Is it not rational, therefore, to render the wound first *aseptic*, and later *antiseptic*, by the use of chemicals known to produce these results?

Dr. Hamilton also states: "Blood is a foreign body." The advocates of antiseptic methods will hardly accept this statement without some qualification. Is blood in a wound always a foreign body, and, therefore, a source of irritation? Cheyne tells us in his work on "Antiseptic Treatment of Wounds": "There is another mode of healing only seen in the case of wounds where aseptic treatment is thoroughly carried out, or in some rare instances where a crust forms; I mean *healing by organization of blood-clot*." And he quotes the investigations of Dr. H. Tillmaus, of Leipsic, to substantiate his views. He shows that a blood-clot in a wound may be subjected to mechanical or chemical irritation. Chemical, from external sources, or *by fermentation of the clot*. But fermentation only occurs through the agency of microscopic organisms, therefore it becomes a source of irritation only after allowing the entrance of germs in contact with the clot, which initiate fermentative changes, and it thereby becomes a foreign body. But exclude the germs, and the clot undergoes organization or absorption, and no longer constitutes a foreign body. This is beautifully illustrated in the case of simple and compound fractures. In the first, though blood may be extravasated, it does not act as a foreign body. But let an external wound communicate with the seat of fracture, and every surgeon knows how much more serious the case becomes. Why is the clot of blood so harmless in one case and such a source of irritation in the other? The atmospheric germs are responsible for the difference. In the one case it is organized or absorbed, in the other fermentative changes are induced, which render it a source of irritation, if not of inflammation.

Thus we see that these germs may act locally, causing irritation, and thereby promoting union by first intention. That these same germs may gain entrance into the blood and tissues and induce *systemic* changes, there is little room for doubt. With animals this has been demonstrated. Koch has shown that pyæmia is due to a micrococcus, which, isolated by cultures and introduced into the circulation of a healthy animal, reproduced the original disease. The same has been demonstrated with septicæmia in mice. The result will, no doubt, be analogous with *man*, but opportunities of demonstration by inoculation have so far been too few for solving the problem. Dr. Hamilton asks: "What treatment, either ancient or modern, has furnished a better record than this furnished by Alanson, Syme, Liston, Percy, and Lucas . . . these results were obtained before the introduction of anæsthetics or antiseptics." We are told these surgeons exercised the most rigid cleanliness and gentleness, the section of the soft parts was neat and regular, hemorrhage was carefully controlled, the flaps were accurately coaptated, without drawing or pressing, free drainage was instituted, and perfect rest secured.

Is it not possible that these physicians of the last century often employed antiseptic methods unknowingly?

Cheyne shows there are two prominent methods utilized in the antiseptic treatment of wounds. One, Listerism, or the complete exclusion of all germs from the wound. The other impedes the growth of germs after they have gained entrance to the wound, and this is variously accomplished. Different chemicals may be added to the discharge, rendering it unfavorable for their development, or the secretions may flow away so rapidly that the germs cannot thrive within the wound, or the rapidity may be hastened by flowing water, or by evaporation the fluids may be rendered too concentrated to permit of their growth; or, which seems to apply more particularly to the treatment of the last century, "by keeping the parts at perfect rest, and by operating only when the patient is in good health, the tissues and the blood are in such a state as to resist the development of bacteria in the thin layer of lymph between the cut surfaces, and union by first intention thus occurs. This is best carried out by perfect rest and accurate apposition of the cut surfaces."

Any of these methods are *antiseptic* in the broadest sense of the term. They all tend to impede the growth of germs that have gained entrance to the wound, and only illustrate how well an unknown foe has been contended with. But compared with Listerism, they are rudimentary and imperfect.

A few questions are propounded by the author which I will briefly notice:

"If germs are so easily absorbed by open surfaces and distributed through the system, of what possible use is it to commence the application of antiseptics one or several hours after the reception of a wound?"

Would Dr. Hamilton, if called in a case of poisoning, refuse to give the patient an emetic because some of the poison might have been absorbed by the patient's system? Is it not possible that recovery might take place if the poison remaining in the stomach were removed, and he were prevented from taking more?

Again he asks: "If they only nestle on the surface of the wound, is it not sufficient to apply an antiseptic thoroughly just before closing the wound?" Would it be justifiable for a physician to attend a case of labor with filthy hands, thinking he might syringe all filth away at the conclusion of the labor?

Is there anything irrational in using every precaution in preventing infection?

It is not impossible that Listerism, as now practised, is more complicated than necessary, and in time it may be simplified, and perfected as a system, for it does not claim to be infallible. However, it accomplishes the desired end of excluding all germs more perfectly than any other mode of treatment, and the results are gratifying in the extreme. Any other process which embodies

the same principles is also antiseptic. But we may say, with all confidence, that, so far, no system of treatment, antiseptic or otherwise, has been developed which is not inferior to Listerism. ALFRED C. HAVEN, M.D.

LAKE LOGAN, ILL.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 3, 1886, to January 9, 1886.

MCPARLIN, THOMAS A., Colonel and Surgeon. Now awaiting orders in New York City. Ordered for assignment to duty as Medical Director, Department of the Platte, on January 24, 1886. S. O. 5, A. G. O., January 7, 1886.

GODDARD, CHARLES E., Major and Surgeon. Died at Fort Yates, D. T., January 4, 1886.

MUNN, CURTIS E., Captain and Assistant Surgeon. Ordered from Department of the East to the Department of Columbia. S. O. 4, A. G. O., January 6, 1886.

SHANNON, WILLIAM C., Captain and Assistant Surgeon. Ordered from Department of the Platte to Department of the East. S. O. 4, A. G. O., January 6, 1886.

MCCAW, W. D., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Lyon, Col., and ordered for duty at Fort Leavenworth, Kan. S. O. 1, Department of the Missouri, January 4, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 9, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
January 9, 1886	0	12	61	2	16	18	3	0
Deaths.								
January 9, 1886	3	4	13	1	0	5	0	0

COCAINE AS AN EXTRAORDINARY AID IN SURGICAL OPERATIONS.—Dr. Robert Abbe, of this city, writes: "The value of cocaine as an extraordinary aid in the surgical field is daily demonstrated to the wonderment of all, and I take this early opportunity to notice the extremely satisfactory use of it as a local anæsthetic in such operations as the following: Volkman's method for hydrocele—consisting of a long incision through the scrotum and sac, irrigation of its interior, suturing, and draining—which I have recently done on four patients with cocaine. First, October 7th; second, October 9th; and twice on December 29th, the latter being both double hydroceles. The operations were perfectly painless. Amputation of the scrotum, and ligature of the veins for varicocele, I did under cocaine on October 20th last. The patient said he heard me cutting, but felt nothing—even the suturing at the end of a half-hour was not felt. Twice I have used it in bad cases of Dupuytren's contraction of the hand, namely, December 26, 1885, and January 3, 1886, with most admirable results. Finally, growing bolder with experience, I have twice opened the abdomen under its use. First, in a case of intestinal strangulation at the internal inguinal ring. A very small knuckle had been caught, and gave symptoms without external tumor. I did median laparotomy October 5, 1885, after cocaine hypodermics in the line-precincts of the incision. Second, in a lady of sixty-two years, with a ventral hernia existing twenty-seven years, and being uncontrollable and troublesome, I operated for its radical cure under cocaine. It was a troublesome operation, with extensive adhesions within the sac of intestine and omentum. I opened the sac, reduced its contents, stitched its neck, and closed the ventral ring by five heavy catgut sutures. This occupied over an hour, and the cutaneous anæsthesia was diminished so that the final skin-sutures were noticed, though not in any sense painful to her. Even this could have been avoided if I had chosen to give her a second series of hypodermics half-way in the operation, but she rested so comfortably through it that it was not called for. She had no vomiting to disturb the wound, as she would after ether, and primary union, with a nearly normal temperature, has resulted. That was nine days ago. On January 4th I had the pleasure of assisting Dr. Bangs in operating for the radical cure of inguinal hernia, where the cocainization was absolutely perfect during the half-hour occupied in the operation, and the patient rendered invaluable assistance by voluntary management of the sac. I may say that since the adoption of cocaine ether has been used in less than half the operable cases at St. Luke's Hospital, and bids fair to be still further curtailed."

THE LATE PROFESSOR JOHN C. DRAPER, M.D., LL.D.—At a meeting of the faculty of the Medical Department of the University of the City of New York, held December 23, 1885, the following minute was adopted:

Whereas, This institution has been called upon to bear the serious loss of the removal by death of our distinguished colleague, Professor John C. Draper, M.D., LL.D. Therefore, as an expression of our regard for, and appreciation of, his character, be it

Resolved, That Professor John C. Draper's attainments and services as a man of science in both the departments of Chemistry and Physics, wherein he was not only an able teacher, but also an original investigator, rendered his connection with this college of the highest value to its best interests. The unfailing devotion, also, which he showed for its advancement by the faithful labor of years in the lecture-room and in the laboratories of the college has contributed greatly to its usefulness and efficiency as an educational institution.

Resolved, That the services rendered by him for so many years to this college as its Treasurer must signally testify to his excellent executive ability and command of business methods, as well as to his unselfish readiness to work for the common interests of the institution.

Resolved, That the high character and personal qualities of Professor John C. Draper were specially calculated to secure the esteem and warm attachment of his colleagues. As his clear and sound judgment ever was relied upon for counsel, so also did the genial sincerity of his friendship inspire a confidence which grew with years, and which will cause his loss to be deeply felt and long mourned. CHARLES INSLEE PARDEE, Dean.

PHTHIRIASIS PALPEBRARUM.—Dr. James L. Minor, of Memphis, Tenn., writes: "THE MEDICAL RECORD of December 12, 1885, contains an article by Dr. F. W. Ring, of New York, on 'A Case of Phthiriasis Palpebrarum,' which is reported because of the rarity of the affection—rare in the experience of Dr. Ring—rare in the experience of Dr. David Webster, who has 'been looking for a case of pediculi palpebrarum for thirteen years, during which time he has probably treated over fifty thousand patients'—rare in the records of the Manhattan Eye and Ear Hospital, which show a ratio of one to fifty-seven thousand—and rare in ophthalmological literature. Such an experience is, I am sure, exceptional. During the six years of my connection with the New York Eye and Ear Infirmary, and the two years with the Brooklyn Eye and Ear Hospital, I do not recall a year

when one or more cases of pediculi palpebrarum were not observed. And I find, on referring to the reports of these institutions, that my experience is substantiated. The Annual Report of the New York Eye and Ear Infirmary for 1884 gives eight cases of pediculi palpebrarum out of a total of 11,888 eye-patients treated during the year. The Fifteenth Annual Report of the Brooklyn Eye and Ear Hospital gives thirteen cases of pediculi palpebrarum out of a total of 28,816 eye-patients treated at that institution during the fifteen years of its existence. Here we have 40,704 patients, which furnish twenty-one cases of pediculi palpebrarum, or one case of the latter to 1,938 of the former. This proportion is not too great. In fact, I am not sure that it is not smaller than it should be, for it is far from impossible that cases of *pediculi palpebrarum* should be recorded under the head of *blepharitis marginalis*. I could cite two instances where this has been done by competent observers, during the hurried work of a large clinic. I never considered the cases of pediculi ciliaris which came to my notice as of sufficient importance to report, and that this has probably been the experience of others will possibly account for their paucity in medical literature."

THE SIGNIFICANCE OF A PATULOUS OS.—A correspondent asks us the following question: "Can a virgin or nulliparous married woman have an os uteri sufficiently patulous to admit the tip of the index finger? I have a case of a young woman under my care, twenty-four years of age, strong and healthy, whose occupation for the past eight years was standing at a counter making up packages, and sometimes carrying the same up and down stairs. She consulted me for a slight irritation of cervix. I find the os admits the tip of index finger freely, and the anterior lip is much thicker and harder to the touch than would seem normal, and has a decidedly cartilaginous feel. She admits having masturbated at times some years ago, but denies *in toto* having ever held connections with men, and therefore could not be at any time pregnant. I found the hymen also wanting." [Our correspondent's account of admitting the tip of his finger is too vague to be of any value, and may practically mean nothing whatever. He says nothing about the *depth* to which his digit penetrates. One often feels a cervix in which the conditions seem much as we should judge the cervix was in the case of our correspondent. The whole neck is œdematous, especially the anterior portion, feeling thick, and very much like the "lip." The face of the cervix is flattened, and the finger may seem to be admitted for about a quarter of an inch within the os. The condition described would almost certainly deceive an unpractised finger, and even the experienced touch would require the aid of ocular examination to make a certain diagnosis. Such cases have nearly always acute antiflexion, with more or less enlargement and congestion of the entire organ. Examination by speculum generally reveals evidence, also, in these cases, of a cervical endometritis.—ED.]

THEY WERE DOCTORS.—The cars on an incoming train were filled to overflowing, and a man who got on at a small station walked their whole length without being able to find more than one vacant seat. This was part of a whole seat upon which a single passenger was stretched at length. After standing for a time by this seat, and observing no inclination on the part of the occupant to share it with him, he indignantly exclaimed: "You are an infernal hog, sir." "You call me a hog, sir?" retorted the other, who was instantly on his feet and in a fighting posture. "I'll knock the top of your idiotic head clear across the country, sir." A fight was imminent, when the conductor opportunely appeared on the scene. "Hold on, doctor, what's the matter?" shouted the ticket-puncher. "Doctor?" queried the man from the small station; "are you a doctor?" "Yes, sir." "Why, so am I." "Good gracious! is that so?" and they exchanged cards and shook hands. "Why, of course you can have half my seat—all of it—the whole car." "Oh, no, no, doctor; I wouldn't disturb you for the world." "But, doctor, I insist." "Well, doctor, if you insist, why I'll be glad to sit with you." "Of course, doctor." And the reporter of the *Free Press*, who witnessed the affair, says the two doctors sat down together in one seat, and were so soft and tender and loving that tears sprung to the eyes of every passenger.—*Medical Age*.

STATISTICS OF BLINDNESS, DEAF-MUTISM, AND CRETINISM IN ITALY.—The Italian census of 1881 shows a considerable decrease in the number of blind and deaf-mutes during the past ten years, while the proportion of idiots has slightly increased. In all three affections the number of males affected was considerably greater than that of females, a disproportion which has been found to exist in other countries also. Of the blind the greatest number was found in Calabria, Sicily, and Sardinia, provinces in which most of the inhabitants have dark eyes. This tends to support G. May in his assertion, that the dark-eyed are more prone to blindness than are those with light eyes. The greatest number of deaf-mutes was found in Lombardy. This province and Piedmont contained the largest proportion of idiots and cretins, so that in Italy, as well as elsewhere, the inhabitants of mountainous regions would seem to be more subject to these afflictions than those of the plains.—*Schmidt's Jahrbücher*.

PHYSICIANS' PRESCRIPTIONS AND DRUGGISTS' COMMISSIONS.—Professor A. M. Wilder, M.D., of San Francisco, Cal., writes: "In the number of THE RECORD of October 31st appears a short article entitled "Physicians' Commissions from Druggists." As the article in question is much more damaging to the good name of the profession than to the druggists, it would seem to call for some notice. That certain of the leading prescription druggists give large percentages on the first filling of prescriptions is undoubtedly true, and that there is a goodly number of the leading physicians who accept and receive these commissions is doubtless true. That this is a dishonest practice, and one that cannot be too strongly condemned, is also true. It is simply neither more or less than a deliberate system of robbery, and the commissions thus paid must come from the pockets of the patients. But this charge does not cover, or apply to, all the physicians of San Francisco. There are some who are satisfied with the one fee from the patients (failing to receive which does not cause them to enter into a league with the druggists to garrote them), and the same holds true of some of our best druggists, who positively refuse to give commissions. The statement that "sixty per cent. of *gross receipts*" is given is absurd; this commission is *only* on the first filling of the prescription, and all druggists know how many prescriptions are filled over and over *without* the knowledge of the physician who wrote them; and, as they have the prescription on file, they control the refilling—another great evil and one that has been pregnant with much harm. As high as 66⅔ per cent. is paid here by one druggist on first prescriptions. Is this evil confined to San Francisco? Does it not hold true in every large city of the country?"

THE DIAGNOSIS OF LEAD POISONING.—Dr. Dumoulin recently presented to the Royal Academy of Medicine of Belgium a patient suffering from chronic lead poisoning, upon whom he demonstrated a chemical test for this condition. The man's skin became black wherever it was moistened with a solution of sulphide of sodium or of sulphohydrate of ammonia. This, the speaker stated, supported the view of Pereire, that lead was eliminated by the skin, and also offered a more certain means of diagnosis than did the blue line on the gums.

BREAD FOR THE SCROFULOUS.—Senna recommends the use of sea-water in making bread for children suffering from scrofulous affections. After the dough is mixed it should be allowed to stand several hours before baking. The taste is said not to be disagreeable.

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Original Articles.

A CONSIDERATION OF THE THOMSEN SYMPTOM-COMPLEX,[1] WITH REFERENCE TO A NEW FORM OF PARALYSIS AGITANS.

BY ALLAN McLANE HAMILTON, M.D.,

SIR CHARLES BELL, in 1830, under the head of "Affection of the Voluntary Nerves," says: "The most common instance of this is an impediment in speech, when the consent of the muscles is imperfect; but this sometimes extends to all the voluntary muscles of the body. I find that some are capable of lifting a heavy weight, or walking fifteen or twenty miles, and yet they have not the proper command of their limbs; there is an insecurity and want of confidence in the motions of the body, which overtake them upon any excitement; a paralysis of the knees which prevents them from putting one leg before the other, and which endangers their falling. Thus, a gentleman capable of great bodily exertion, on going to hand a lady to the dining-room, will stagger like a drunken man; and in the street any sudden noise or occasion of getting quickly out of the way will cause him to fall down, and in this manner a want of confidence produces a nervous excitement which increases the evil. With confidence, the power of volition acts sufficiently; there is neither defect of speech nor irresolution in the motions of the limbs when the person is at ease or under the flow of spirits."

This is the description of a condition which nearly half a century later was described as a novel disease by a German physician.

In 1876, Dr. Thomsen,[2] the district medical officer of Kappeln, in Schleswig, described a peculiar spasmodic disease of an hereditary character, the victims being members of his own family, and he himself was a sufferer from the malady.

In the year 1866, Leyden,[4] and in 1874 Benedikt,[5] published cases which were undoubtedly of this nature; and later Westphal, Bernhardt, Seeligmüller, Peters, Strumpell; and more lately Schonfeld, Petrone, and Engel have brought forward no less than eight or ten cases. The clinical expressions of the disorder are the following:

1. A sudden spasmodic muscular seizure which attends the performance of a voluntary act.
2. Its subsidence after repetition of the act.
3. An apparent increase in bulk of the several muscles which are chiefly and most frequently the subjects of cramp.
4. An increase in electro-muscular irritability.
5. A normal or slightly excited state of tendinous reflex activity.

These symptoms are often of congenital origin, and progressive as regards intensity. All the voluntary muscles were involved more or less in different cases, but the lower extremities were most often implicated. An attempt to walk was often attended by a sudden flexion of the thigh and leg at an angle of one hundred and twenty degrees, so that the patient presented a peculiar appearance, his body being bent over, and he often fell upon his knees, and when he dropped to the ground he arose with great difficulty. The exercise of volitional efforts seemed only to increase the demoralization. Mental excitement of all kinds made matters worse, and cold aggravated the condition. When the limbs were passively exercised there was resistance and great rigidity.

"If the forearm is rapidly and energetically flexed on the arm, we see the biceps and supinator longus become prominent and hard to the extent that the patient finds it impossible to extend the arm at the moment, the only act possible being one of slow extension which, after a while, finally overcomes the cramp in the flexors" (Petrone).

Vizioli has studied with the dynamograph the action of the voluntary muscles at the time of contraction, at the period of relaxation, and during the continuance of the spasm. When the patient was told to close his fully-open hand, it was at least five seconds before the movement followed. When the fingers were semi-flexed, and the patient was told to entirely close the hand, it was found that the contraction was immediately produced without any volitional retardation.

This contraction was attended by a dynamographic line composed of very marked and numerous oscillations.

It required sometimes five, and even ten seconds for the patient to open his hand after it had been closed a certain time. In this movement the relaxation of the flexors was not marked by a line nearly straight in its descent, but by an oblique line with many oscillations.

The muscles supplied by the cerebral nerves were not exempt. The masseters stiffened, and the patient would stop when eating, his mouth remaining open, he being quite unable to close it. Some patients talked "stiffly," and in Schöenfeld's case the speech was slow and drawling. Some of the patients were unable to open or close their eyes.

Tickling of the palms of the hands, or soles of the feet, would result in flexion of the joint above. In only one case (that of Schöenfeld) were the reflexes exaggerated.

The only American case of Thomsen's disease was reported by Dr. Hugo Engel,[3] of Philadelphia, the patient being a young man seventeen years old, whose symptoms followed a severe fright. Besides the characteristic paresis and rigidity, and the paresis and hypertrophy, there was an increase in the deep reflexes and the appearance of paradoxical contractions, such as Westphal has described.

There seems, in many cases, to be a wide difference not only in the origin of the disease, but in the symptoms associated with the peculiar muscular condition of which I have spoken. In Italy, Vizioli[2] and Ferrari have reported hybrid cases and adult examples like those of Bernhardt, whose patient was a vigorous soldier twenty-two years of age, and Seeligmüller, whose reported case was also an adult male, go to show that a congenital history is by no means the rule.

While there seems to have been a great regularity in the appearance of the symptoms in the several cases already

[1] Myotonia congenita (Thomsen'sche Krankheit). Von Dr. Julius Thomsen. Archiv für Psychiatrie und Nervenkrankheiten, Band vi. Heft 3. Also: Ueber einen mit Muskelhypertrophie verbundenen Fall von congenitaler paralytischer Pseudosclerose. Von Dr. Julius Thomsen. Archiv für Psychiatrie und Nervenkrankheiten, Band vi. Heft 3.

[2] The Nervous System of the Human Body, by Sir Charles Bell. Second edition, 1836, p. 440.

[3] Reclame über die Wirbelsäule. Medicinische Zeitung, 1876.

[4] Klinik der Rückenmarks-Krankheiten, 1866.

[5] Nervenpathologie und Electrotherapie, 1874, vol. i.

[1] Physiological Medicine, Vol. [illegible], p. 274.

[2] Reported to the Physiological Society of Naples, Dec. 1884.

reported, it must be confessed by those who are at all familiar with the clinical features of many progressive diseases of the nervous system (especially those of spinal origin) that this very trouble which Westphal regards as an anomaly of muscular tonus, is not only an occasional but very frequent symptom of a variety of maladies. In most cases it is purely a psychic disorder which depends first upon inhibitory insufficiency, and secondly, upon an unstable emotional state which interferes with the *origin* of proper volitional mandates. It is an occasional symptom of the third stage of locomotor ataxy, is common in hystero-organic disorders of the nervous system, and is by no means uncommonly associated with coarse cerebral lesions. I therefore do not feel like dignifying this symptom-group, in spite of the fact that it existed in a somewhat definite collection in several members of Thomsen's family.

The cases reported by Thomsen and others show, as a rule, that the appearance of the spasmodic condition is an early one—in this respect resembling pseudo-hypertrophic paralysis. In June, 1885, I saw a boy ten years of age, in whom there was no history of hereditary nervous disease, who presented a condition which in some respects resembled pseudo-hypertrophic paralysis, but like a case reported by Vigoroux, was not. The parents had always noticed some difficulty in the child's movements, and especially a tendency to rigidity. This trouble has increased so that he now walks with the greatest difficulty. He is weakly and looks mentally feeble, and the cranial vault is noticeably low. He is pot-bellied and badly nourished, but there seems to be no special muscular atrophy. The muscles of both calves are hard and enlarged, as are the posterior muscles of the thigh, those of the left perhaps being most noticeably affected. An examination of portions removed failed to show any fatty substitution or increase, and the electrical reactions were normal. An attempt at walking is manifested by spastic and irregular progression, the feet being rigidly forced to the ground, the ball of the foot first coming in contact. The toes are flexed. There is no adduction of the knees such as attends the tetanoid paraplegia of Erb. The child advances in what may be called a squatting position, the knees being flexed so that the legs are beneath the thighs and the body is bent forward. The feet are separated, but there is none of the waddling so peculiar to pseudo-hypertrophic paralysis. After walking in this way for some time, the rigidity, which was very great in the beginning, diminished sensibly, and he did better. The father told me that the patient's arms occasionally became rigid. This child has poor control over the functions of his bladder, but the action of his bowels is unimpaired. His tendinous-reflex activity is apparently lowered. His pupils are both dilated, the left perhaps more than the right. His legs are occasionally slightly anæsthetic for a few minutes. There are times when there is little or no embarrassment in walking, but as a rule his cramps are severe and prompt in their appearance, and are always aggravated when he is worried.

A second case is that of a boy nine years old, in whom the development of the spastic symptoms followed a primary stage of head pain, attacks of vomiting which were cerebral, and some disposition to somnolence. About six weeks before I saw him he suffered an apparent and general loss of power of a higher grade in the upper, and then the lower, extremities, which seemed to be of a volitional character. His inability to move his left arm seemed greatest. When he made any effort the leg or arm became rigid; and when seated and told to raise his foot from the ground his leg became cramped and strongly flexed, so that the middle of the calf was pressed against the chair seat. Attempts at passive extension reveal strong muscular contraction of the flexors. When he is told to use his arm, for the purpose of taking hold of some object, it becomes rigidly flexed. Sometimes when, of his own accord, he makes an effort and the cramp occurs, he will bite his other hand, and it would appear that this vicarious expenditure of nervous energy mitigates the exaggerated muscular activity, for it seems to help him. Within six months he has gained flesh. The muscles of the lower extremities are abnormally developed, and there seems to be a general increase in volume without fat. The rotulian tendon-reflex is, perhaps, slightly increased. He passes his urine frequently, and there seems to be some vesical spasm.

A peculiarity of the case is a certain prominence of both eyes, and something which resembles a lateral nystagmus. His mouth is slightly drawn to the left side, while the tongue points to the right. There appears to be no abnormal electrical reactions. In this case, which presents the loss of power, cramp, and muscular enlargement, there appear to be associated symptoms of complex cerebral disease.

The spasmodic phenomena seem to be associated with conditions of normal or even lowered reflex tendinous activity. In several cases of posterior spinal sclerosis I have seen the same thing, and these are examples:

Mr. G——, well-defined history of syphilis; early history of lightning pains (1881), especially in legs and about arms; sciatic pains; early ocular symptoms; some anæsthesia, especially of right sole, which began one year ago, a feeling as if there was an extra layer of stocking between sole and boot; analgesia and anæsthesia, especially of three outer toes of right foot; patellar tendinous reflex extinct in both legs. When he commences to move in the morning there is great rigidity of lower extremities and sometimes painful flexion of knee-joint. Is for a time utterly helpless, and has fallen repeatedly. His legs, when the seat of cramp, become so rigid and unmanageable that his walk is like that of a marionette. Persistence usually results in an ability to walk naturally.

Fig. 1.—Characteristic Attitude of Patient with Paralysis Agitans. (Strümpell.)

I will now present a case in which this peculiar condition existed in connection with other more familiar symptoms, the patient's malady in many respects resembling Parkinson's disease or paralysis agitans. In at least two cases of the disease of which I am cognizant this element existed. In these cases the trembling was inconsiderable and limited, but the other symptoms, viz., festination, the attitude, the facies, and the piping voice were highly characteristic. The first case is one of my own, the second is reported by Buzzard[1], and they closely resemble each other, and I think we are justified in considering *two* forms of paralysis agitans.[2]

Strümpell[3] also says that he has seen cases of paralysis agitans in which there was little or no tremor, but rather marked muscular stiffening (Muskelsteifigkeit).

Some months ago a gentleman fifty-three years old was brought to me for advice and treatment. His family history was good—his father and mother were free from nervous trouble, but certain relatives of the mother were the victims of mental disease. When a child he had had

1. [illegible] Nervous System.
2. [illegible] Disseminated Sclerosis, [illegible]
3. [illegible] und Therapie der inneren Krankheiten, [illegible]

some cerebral trouble of a hydrocephalic nature. He had always been an active, busy man, supporting a large family and acting in the employ of a large firm, where he managed an important department. About five years ago he noticed a pain in the right ulnar nerve, and especially a dull tenderness over the exposed portion at the elbow. One year after this the pain reached the shoulder, and radiated over the back of the scapula and

downward, and he complained not only of pain at several points over the latter, but in the two outer fingers of the right hand as well. His attention became concentrated upon his right arm to such an extent that, after unsuccessful recourse to liniments and ointments, he kept absolutely quiet, made but few voluntary movements, and was constantly upon the alert to avoid jarring the arm. He really thought of little else, became emotional and hypochondriacal, and gave up his business. He sat constantly in a large chair, and could not arise without the help of some member of his family, though his legs were not paralyzed, contractured, or useless, except in the fact that when he tried to arise they became suddenly and rigidly flexed. The slightest assistance would enable him to arise without the production of spastic rigidity, and this consisted simply in the light touch of a hand, the help being rather an encouragement of confidence than any aid in the way of force.

He presents the appearance of a person suffering from paralysis agitans (see Fig. 2), the condition of general flexion being very marked, the body bowed over, and the chin sunk upon the breast. His face wears the characteristic blank expression. There is little or no festination. His sensibility is good, he has control over his bladder, but he is habitually constipated. Tendinous reflexes normal, cutaneous reflex rather too active, producing peculiar phenomenon to which allusion will subsequently be made. There is a very slight inconstant tremor of the right hand, but this disappears entirely at times, and is not aggravated by efforts at self-control.

The most interesting and peculiar feature of the case is the curious spastic irritability, and its relation to the exercise of will. This is almost universal, but most marked in the knee-joints. At times he walks without effort, at others he cannot stand, because of a sudden immovability and rigidity of the knee-joints, and a general spasm of all the flexor muscles of the thighs and legs, so that he crouches when he attempts to stand (Fig. 3), or falls upon his knees. All attempts upon his part to overcome this are attended by an increase of the helplessness. When he sits with crossed legs he is occasionally seized with a cramp of great violence, and he cries piteously for some one to disengage the limbs. If his arms or legs become the seat of spasm during the performance of some voluntary act, they may retain the position, however awkward, until the attention is distracted. The attempts of bystanders only serve at times to aggravate the rigidity. When his leg is forcibly extended when in the rigid position of extreme flexion, it returns immediately to the original position, suggesting the "penknife" contraction of Westphal. Some time after the particular act is persisted in, its accomplishment occasionally becomes easy, but when startled or worried he seems panic-stricken and utterly helpless.

There is no trouble about swallowing or eating, as a rule, but, occasionally, like some of the reported cases of "Thomsen's disease," he at times cannot shut his mouth. It is occasionally impossible to get him to use his ocular muscles, so that his eyeballs remain immovably fixed, and upon one occasion no amount of persuasion could induce him to change their position.

There seems to be, besides this state of things, a very interesting alteration of the emotions. He has fits of temper when he declares the "devil has possession of him," when he utterly refuses to help himself, and insists upon the entire attention of every member of the family who may be present. Tickling of the plantar surface of either

foot would cause a rigid contraction at the knee-joint. Under the stimulus of excitement or diversion he does not suffer so much. Within half an hour after an attack of complete demoralization, I have seen him kick up his heels and throw about his arms without any trouble or stiffening, and this was done by command of his attendant. Shortly after he relapsed into the old state, declaring his inability to take off his clothes or get into bed, and when no assistance was given he remained in a cramped, uncomfortable position in the middle of the floor for some time. His intellect was unusually clear, and his memory

good. There was not the least suspicion of cerebral softening in this case.

The posterior muscles of the thigh were hard and seemingly slightly enlarged. They responded to electrical stimulation. Moral treatment did some good, and for a time, through the establishment of an improved condition of volitional energy, the patient was enabled to perform acts which had, before treatment, been impossible. The tendency to spasm could not be very greatly reduced, however, and at last accounts there was no substantial improvement.

In Engel's case there was a peculiar symptom to which he is, I think erroneously, inclined to attach little importance. . . . "I noted" (said he), "while inspecting the undressed patient before me, a certain slowness in every action of his, even in his speech and in the lifting of the eyelids, as also in the play of his features; but even these signs have a doubtful importance when we remember that they are often noted in young men of his class." This same slowness was a feature of the case of Mr. X——, as well as of the case reported by Buzzard, and it indicates the abouloimic nature of the trouble.

A NEW OPERATION FOR THE ALLEVIATION OF PERSISTENT DEAFNESS.

By WILLIAM H. BATES, M.D.,

NEW YORK.

Many cases of deafness are not benefited by thorough catarrhal treatment, inflation of the middle ear, the use of Siegle's otoscope, an artificial opening in the drum-membrane, division of the tensor tympani, etc. I desire to call the attention of the profession to an operation which has benefited a number of these obstinate cases.

The operation consisted in puncturing or incising the drum-membrane in from five to ten different places. Simple punctures were made, or the drum membrane was slit in various directions. The operation was repeated as soon as the openings in the drum-membrane had healed. The size and freedom of the incisions must be determined after the first operation for each case.

For the operation I employed a Graefe cataract-knife with a long shank. It is important that the knife be *sharp*, and to make this certain I often used a freshly sharpened knife for each puncture. Pain was avoided by this precaution. A dull knife, or the paracentesis instruments sold in the shops, caused more pain than the patients could bear.

Cocaine was not necessary when the knife-blade was in proper condition, and this remedy would not prevent pain when the knife was dull.

The result of this operation is to leave a number of cicatrices in the drum-membrane; the subsequent contraction of these producing a tension by which the membrane is drawn out. The membrane frees itself from adhesions in this manner, and in many cases loosens the anchylosed ossicles. The various benefits of paracentesis, as formerly employed, are not only obtained but much increased. It is not an improvement the result of a perforation of the drummembrane alone, which, as is well known, is often doubtful and transitory, but the subsequent healing of the openings is part of an improving process. The operation, suggested by that of paracentesis, differs from it in the simultaneous number and extent of the incisions, as well as in the purpose for which it is resorted to, and in the immediate and subsequent results.

Case I.—J. M——, aged fourteen, resident of Boston, presented himself at my office, July 8, 1885. Deaf in right ear since childhood. Has had measles, scarlet fever, and cerebro-spinal meningitis. Has been seen and treated by specialists in Boston. Examination: Drum-membrane depressed, thickened, congested, adherent to the promontory from chronic catarrh of the middle ear, Eustachian tubes congested. Hearing distance for snapping of finger-nails, two inches. Hears no conversation, whisper, or watch. Inflated readily. Hearing distance not improved by inflation.

July 18th.—Thorough treatment of the catarrh with inflation of the middle ear had improved the hearing distance at the outset, but this limited improvement was again lost. In view of the etiology of the ear trouble, and still further from the unsatisfactory result of the routine treatment, and the apparent hopelessness of these cases, even in hands more skilled than mine, I was much discouraged. I then determined to make a paracentesis, but one more general than usual.

July 19th.—I made three incisions in the drum-membrane.

July 20th.—My patient heard better; and on examining the drum-membrane I found my punctures healed, and, while the membrane seemed less congested, it also appeared a little less depressed. With nothing to lose, and perhaps something to gain, I now made bold to make six free incisions into the membrane, hoping for a possible continuation of the improvement. These incisions healed over as rapidly as before; and, on the succeeding days, each day found the hearing improved, with an apparent diminishing depression in the membrane. It now occurred to me that the wounds in healing seemed to draw upon the membrane, and that the cicatrices were acting as elevators.

On July 25th, the membrane having healed, I made a single, but very large incision into the drum, and then proposed to await developments. Daily the hearing improved, until, on August 10th, I found the drum-membrane was healed. Examination revealed that the hearing distance for the watch in the right ear had risen to 18 inches (the same for the left ear), which under favorable surroundings was ten feet.

The patient was seen and kindly examined by Dr. Pomeroy, who recognized the hearing distance for watch at 18 inches. The patient remained under observation until August 16th; improvement had remained and increased. He now returned to his home out of town.

January 13, 1886.—A written communication of this date informed me that the improvement has persisted.

Case II.—N. L. J——, male, aged thirty, merchant, native of United States, came under observation at the time that I had met my first encouragement in Case I.

July 21st.—Began treatment. Complained of noises in both ears, and of constant vertigo. Examination revealed no hearing in left ear. In right ear heard snapping of finger-nails at 2 inches. Drum-membranes depressed, thickened, congested, and adherent to the promontory. Made four free incisions in both drums.

Treatment repeated six times, and on August 9th he passed from observation. On this date the tinnitus was much improved, the vertigo had disappeared. Hearing distance in both ears for snapping of finger nails, 6 inches.

Two months later the improvement was reported as continuing.

Case III.—C. H——, German, aged thirty-four; very nervous man. Complained of noises in both ears. Examined and found to be suffering from chronic catarrh of the middle ear.

October 15th.—Heard watch in right ear, two and one-half inches; nine inches in left ear.

October 16th.—One incision in right drum-membrane.

October 17th.—One incision in right drum-membrane.

October 21st.—No better. Incisions were made in both drum-membranes.

October 29th.—Noise in left ear had stopped entirely. Incision in right drum-membrane.

December 4th.—Noises in right ear a little better. Five incisions were made in the right drum-membrane.

January 11th, 1886.—Incision made in the right drum-membrane.

January 14th.—Three incisions were made in the right drum-membrane.

January 15th.—The noises in the left ear have not returned. The noises in the right ear are very much bet-

ter, and have stopped occasionally. The hearing is better for conversation. Patient appears less nervous.

The succeeding case presents some features of unusual interest. It was in the person of a *deaf-mute*, who seemed intelligent.

CASE IV.—E. R——, female, aged seven [illegible], had scarlatina and measles in early infancy, was never able to speak, but appeared observing and intelligent. Is a fairly developed girl. Has been treated three months at one of our public institutions by a most competent specialist without result. Examination revealed chronic catarrh of the middle ear. The drum-membrane was depressed, thickened, congested, adherent to the promontory.

October 3, 1885.—Began treatment. Hearing distance for the snapping of finger-nails four inches for the right ear, one inch for the left ear. Conversation not heard.

October 4th.—Five incisions were made in both drums.

October 6th.—Both drum-membranes healed. Hearing distance improved.

October 7th.—Four incisions in the right drum-membrane, two incisions in the left.

October 8th.—Hears better.

October 9th.—Three incisions in the right drum-membrane.

October 12th.—One incision in the right drum-membrane. Left drum-membrane not healed.

October 14th.—One incision in the right drum-membrane.

October 15th.—Left drum-membrane healed; incised.

October 17th.—Two incisions in the right drum-membrane.

October 19th.—One incision in the right drum-membrane.

October 20th.—Left drum-membrane incised. Hearing lowered immediately after the operation.

October 22d.—Hears snapping of finger-nails two inches with both ears.

October 29th.—Hears snapping of finger-nails six inches with both ears. Five incisions were made in the left drum-membrane; hearing reduced to two inches.

November 1st.—Right drum-membrane healed. Left drum-membrane open. Hears nails with right ear twenty inches; five inches with left ear. Inflation did not improve.

November 26th.—Hears watch half an inch with both ears.

December 7th.—Three incisions were made in the left drum-membrane.

January 6, 1886.—Three incisions made in the right drum-membrane.

January 11th.—Five incisions were made in the left drum-membrane.

January 13th.—Hears watch at least six inches with both ears. Hears conversation and whisper. Since hearing was restored it became necessary to teach patient language, and she is now, under careful tutelage of her guardian, learning the rudiments of speech, her own name, the names of common objects, etc., etc.

With as yet a limited experience and the comparative brief time which has elapsed since I have first performed this operation, its full scope and range has not yet been determined.

That I have benefited some apparently incurable cases, I can, with becoming modesty, honestly contend. In the light of the classical treatment of chronic cases and its frequent failure, this innovation, which has given results as unexpected and satisfactory to me as to the patients, may be fairly presented for future endorsement. To Dr. O. D. Pomeroy I extend most sincere thanks for kind corroboration as to the hearing of some of the above cases. In conclusion, I beg to state that all of the cases have been seen and examined by observers besides myself.

THE PRESENT ABUSE AND FUTURE USE OF DISINFECTING AGENTS.

By [illegible], M.D.

To differ with the present and to attempt to foretell the future is probably as unhappy a combination as one could well take upon himself. It would make it appear that one was both behind and ahead of the times, either of which is objectionable in scientific matters. There is, however, in almost every field of research, a transition stage that is so mixed up in doubt and "a little learning" that it is less desirable than either that which went before or that which follows after. I do not mean to imply that our knowledge of disinfection is in this stage, but it is not very far from it. No one acquainted with the amount of careful, patient work that has been done in this field would willingly say anything that would detract from its value, and such is not the object of this paper. It is rather an attempt to show that in our eagerness to accept and apply the facts as developed we have overrun the line that marks the boundary between fact and speculation. The usual argument for this is, that it is better to keep on the safe side, but it is not a safe side when one accepts a method based on doubtful theories, and feeling secure in this, neglects other conditions of more certain value. The public have been even less conservative than the profession in matters pertaining to disinfectants, so that their manufacture has become an important part of the great patent-medicine industry. The only difference is that physicians do not hesitate to use and recommend nostrums of this class.

I am satisfied that it is not an overestimate to say that three-fourths of all disinfectants sold to individuals are for use in houses where there is no contagious disease, and in most cases no disease of any kind. What, then, is the object of all this? In the first place, it is to destroy or prevent odors due to lack of cleanliness; and, in the second, to obtain a prophylactic against disease. Occasionally the first of these reasons is a good one, for circumstances may justify it for a time; but when such is the case, it should be remembered that one is simply taking the lesser of two evils, both of which should be done away with as soon as possible, and cleanliness substituted. Under this class of "substitutes for cleanliness" may be included the various water-closet disinfecting machines. Aside from being totally inefficient, so far as destroying organisms is concerned, the fact that they are necessary to prevent odors is the best evidence that the closet or water-supply is not what it should be. If we take away the odor simply, in such cases, there is nothing left to remind us of impending danger.

Unless we could disinfect the air we breathe, and everything we come in contact with, the employment of these agents as prophylactics must be considered as entirely useless. This, of course, does not include their use, as mentioned above, to prevent putrefaction where cleanliness cannot be had, or on material that has been exposed to infectious disease. When we consider the use to which disinfectants are usually put, perhaps it does not matter much that various waste products and useless mother-liquors from manufactories are sold under this name.

When we come to those diseases which are known or thought to be caused by bacteria, there are uses for disinfectants concerning which there can be little or no doubt. For example, the discharges of patients in such cases should by all means be submitted to some effective agent, and such an excess should be used as would leave no doubt concerning its action. Although it is not my intention to treat of individual substances in this article, I think that calcium, or sodium hypochlorite, or concentrated mineral acids, are the only perfectly safe agents when dealing with discharges containing albuminous matter, since complete disintegration of the mass is necessary.

For bedding and clothing, ordinary washing, using boiling water, is all that could be desired. While it would be unsafe to say that nothing is gained by disinfecting the walls, furniture, and other objects in a room not in immediate contact with the patient, there is very little evidence in its favor; and it should never be allowed to take the place of isolation and other precautions. Good ventilation is, undoubtedly, the best means of removing organisms from the atmosphere of a room, and probably, also, from surfaces on which they have been deposited. So little is known, in fact, on this subject of transmission of diseases that any attempt to control it must be based on but little more than guess-work.

While many will consider these views as behind the times, it might be well to wait and see if they are not rather behind the fashion. What is needed is more attention to the sources from which we derive our air, food, and water, instead of attempts to purify them after they have become contaminated; and the hope of the future is not in disinfectants, but in better sanitation.

Aside from these facts, the germicidal and antiseptic value of various substances has not been determined with the accuracy that many seem to think. These values must always remain very far from absolute, and the most that can be said is that they hold under certain conditions which are usually very different from those we have to deal with outside of the laboratory. They are in many cases not even comparatively correct. This is not said to cast discredit on such work, but it simply shows that we know almost nothing about the influence of the various conditions under which our experiments are made. In order that it may not appear that I am alone in finding experiments of this kind unsatisfactory, the following table from the well-known investigations of Palon de la Croix is given. The first column gives the proportion of the substance required to prevent the development of bacteria in fresh meat-juice exposed to the air, while the second column gives the results obtained under exactly similar conditions, except that the culture-fluid had been heated to boiling before the antiseptic was added.

Chloride of lime	1 : 3148	1 : 200
Salicylic acid	1 : 8515	1 : 1250
Potassic permanganate	1 : 2005	1 : 300
Sodium borate	1 : 30	1 : 10

It is evident from this that what would usually be considered a slight change in the culture-fluid not only affects results very greatly, but that it may in one case increase the amount of antiseptic required, and in another diminish it. If we drew our conclusions from experiments made on unboiled meat-juice they would be that the relative value of chloride of lime and borax was about as 100 : 1; but when boiled meat-juice is used, this proportion is changed to about 3 : 1.

What is needed is not an increase in the already enormous number of such determinations, but thorough chemical investigation of the changes that take place when these agents are brought into solution with the various substances present in organic liquids. Progress in this direction must be slow, but it will well repay the labor. Something is already being done in this line by studying the effect of antiseptics on the soluble ferments, where their action is very similar, if not identical to what it is on the organized. For example, I have recently found that salicylic acid, which has usually been supposed to act as a protoplasmic poison, will act on diastase, and even on starch, converting it into sugar, in the same proportion that it prevents the development of bacteria, provided the same conditions, as regards the culture-fluid, are present. Chittenden has also shown that mercuric chloride, and other metallic salts, act in about the same proportion on organized and unorganized ferments. I do not think it possible to find any substance that will prevent the growth of bacteria, and not interfere with the action of the soluble ferments; and if this is true, there is no possibility of administering an agent that will disinfect the alimentary canal, and at the same time prove harmless to the patient, since not only digestion, but most probably many other life-processes, are carried on by means of soluble ferments.

I am not familiar enough with the use of antiseptics in surgery to express any decided opinions as to their value; but for reasons already given it must be considered as very doubtful, except in cases of infectious disease. They at least do good by promoting cleanliness, but this is in part counterbalanced by the harm that sometimes follows the use of poisonous or irritating agents.

In conclusion, it might be well to remember that it has been shown that bacteria do far more good than harm, and it is very probable that we could not live without them, so that in trying so diligently to destroy our enemies we may sometimes include our friends among them.

JOHNS HOPKINS UNIVERSITY,
January, 1886.

A PIECE OF IRIS LIVING IN THE VITREOUS CHAMBER—A NOVEL FOREIGN BODY.

By JULIAN J. CHISOLM, M.D.,

PROFESSOR OF EAR AND EAR DISEASES IN THE UNIVERSITY OF MARYLAND, AND SURGEON-IN-CHIEF OF THE PRESBYTERIAN EAR AND EYE HAVEN HOSPITAL OF BALTIMORE, MD.

G. T. S——, aged fifty-nine, in falling from a height, six months since, received an injury to the right eye. When seen by his family physician, seven hours after the accident, he was suffering intensely, the lids having become very much swollen. Upon carefully separating them a wound was discovered at the upper edge of the cornea, from which protruded a thick splinter of wood. The removal of the piece of wood was accompanied by a bloody, watery discharge from the eyeball, leaving, however, so much clotted blood in the anterior chamber as to conceal the amount of injury done to the eye contents. The treatment pursued was cold applications to the eye, the local use of atropia, and the internal administration of anodynes. As the swelling subsided and the blood-pus absorbed, it was found that sight had been reduced in this eye to light perception only. In time, however, the vision commenced to improve, till after three months large near objects could be again recognized. In the meantime the left good eye indicated some growing impairment of vision, both for distant and near objects, and the spectacles heretofore worn with comfort no longer permitted easy reading. This growing defect in the vision of the good eye was supposed to be a sign of sympathetic complications, and for this reason the patient had been sent to me from his distant home for surgical treatment.

I found the good eye hyperopic $V=\frac{5}{40}$. With a $+2\frac{1}{0}$ lens his distant vision became $\frac{5}{15}$, even above the normal. With a $+\frac{1}{8}$ he could readily read brilliant type. His spectacles were $+1\frac{1}{2}$, four numbers too weak for him, hence his recent annoyance in reading.

At first sight his injured eye presented every appearance of a successful cataract extraction. The iridectomy was large, well-shaped, and centrally located, with clean walls back to the very ciliary border. This well-formed artificial pupil was black, with traces of capsular deposit as seen after successful cataract extractions. He could detect large objects and count fingers readily at some distance from the eye. In putting a $+\frac{1}{8}$ lens before his injured eye I was surprised to find $V=\frac{5}{10}$ and with a $\frac{1}{2}$ $+\frac{1}{8}$ glass he could make out words in brilliant type.

He complained of something moving about in his eye, which seemed to wave before his sight. By oblique illumination I could see a whitish body in the vitreous chamber. An ophthalmoscopic examination showed a healthy fundus and clear vitreous, so as to give a perfect retinal picture. Hanging from the roof of the vitreous chamber, at some little distance behind the thin partial capsular film, was a flap of membrane, apparently

one line wide and two lines in length. It was rectangular in shape, and of a yellowish-white color. Upon its surface could be clearly traced a vessel of some size, starting from the adherent base of the flap and running downward through the whole length of the hanging mass to its very free extremity. This piece of living tissue moved to and fro with corresponding movements of the eyeball.

This floating membrane in the vitreous, adhering to the upper and anterior edge of the choroid, could be nothing else but the missing piece of iris. The splinter of wood in entering the eye-ball through the upper scleral border of the cornea, had pushed a piece cleanly out of the iris, from pupillary opening to ciliary border. This detached piece of iris, still holding on to a broad base, had been pushed back into the vitreous chamber through the suspensory ligament of the lens, having its ciliary body connection partially stripped from its ciliary ligament at this point and thrust back with it. The lens must have been injured also at the time of the accident, because through the torn capsule the aqueous had first caused clouding of lens-substance with loss of vision, and afterward restoration of some sight by its slow but complete disappearance by absorption. As there was a broad base to the flap, with ample nourishing blood-vessels, the piece of displaced iris had continued to live. Although it had been bleached so that all traces of its normal pigment had disappeared from it, yet it was still thick enough to show no translucency. Under ophthalmoscopic examination it stood out boldly as a whitish-yellow membrane against the healthy red choroidal background. Curiously enough, the passage made by the splinter into the vitreous chamber had not been invaded by inflammatory deposits. The hyaloid structures had not become the seat of pathological changes, and therefore excellent vision had been retained to the injured eye.

TWO CASES OF CONGENITAL TORTICOLLIS, WITH REMARKS.

BY B. F. HADRA, M.D.

In October last, when I was living in San Antonio, by a strange coincidence two German mothers (farmers' wives) from the very same settlement, near Austin, consulted me about their babies.

1. Selma W——, a female child, six weeks of age, had a tumor of the size of a small walnut in the middle of the sternal portion of the right sterno-cleido-mastoideus, while the muscle itself was very tense and contracted. The tumor was detected about three weeks previously. The patient was the sixth child of the healthy mother; the birth was easy, without any assistance; head presentation.

2. Helena P——, ten weeks old, a girl, with an identical deformity on the same side, but the tumor larger and more elongated. This girl is also the sixth child of a healthy mother; was born in breech presentation, but without any active assistance. The abnormality was noticed about two weeks after birth, and only accidentally, as happened also in the first case.

These cases were obviously cases of torticollis, and both were operated on by subcutaneous myotomy of the sternal portion, just above the tumors. It was impossible to cut through the muscles in one attempt, so extraordinarily firm were the tissues. The tenotome had to be carried forward and backward several times. Still, I was not perfectly satisfied that I had made a thorough division. Taking, then, into consideration that a cutaneous wound, under antiseptic precautions, could not be of more harm than further subcutaneous manœuvres, and prompted beside by the desire to remove the tumors, in accordance with the wishes of the mothers, I decided to make a cutaneous section, which was done next day with the kind assistance of Drs. Cupples and Kingsley.

In both cases the cut surfaces of the divided muscles presented the appearance of dense cicatricial tissue, the tumors being only enlarged parts of the evenly degenerated muscles, forming nodes in the continuity. There was not a trace of old blood clots, or any discoloration of the neighboring parts. The muscles in both cases were well divided by the previous myotomies, still some fibres of the sheaths were holding the parts at certain points. The tumors, or rather the thickened portions, were removed from the lower ends of the divided muscles, the wounds closed and dressed antiseptically. The children did very well, No. 1 making a recovery per primam, No. 2 having a slight discharge from a little spot which did not heal till two weeks afterward. Both scars are linear and hardly visible. The heads now occupy a normal position, the divided sternal portions are hardly to be detected, while the other portions are more slender than on the opposite side.

The excised parts proved to be throughout fibrous callus, and show under the microscope not a trace of muscular tissue.

Beyond noting the strange coincidence of these cases, both being brought in at the very same time, and from the same settlement, and both being females, each affected on the right side, I would like to say a few words in regard to some points connected with this form of torticollis.

1. In regard to etiology, nearly all authors accept a congenital, or better expressed, a fœtal origin of the contraction. Still, Gross states in his work on surgery: "It has been said to be occasionally congenital, and cases of this description are, no doubt, now and then met with, but they must be extremely rare, none having ever fallen under my observation." Now my cases hardly admit of any other explanation. The tumors are explained in Billroth's "Surgery" (Fischer on "Diseases of the Neck"), following Strohmayer, as "cicatrices in consequence of lacerations of the muscles *during* labor." The ruptures are said to be followed by extravasation of blood, which afterward becomes organized, and Skrzeczka is quoted as having found old blood in three cases within the muscular sheaths. Dolbeau, on the other hand, is quoted as having observed a fœtal inflammation of the sterno-cleido-mastoid muscle. The cases reported herewith possess, then, some clinical value, as the anatomical structure of the tumors and their relation to the muscles were investigated during life. Dolbeau's views are thus confirmed. The children were only a few weeks old when the swellings were first noticed, and only two weeks older when operated upon. If Strohmayer's explanation was correct, some signs of a traumatism should have been found, but, what seems to be of more weight, is that the fibrous degeneration was limited to the point of rupture, and had not extended over the whole length of the sternal portion. Moreover, it is hard to believe that such a solid cicatrix could form in so short a time. The possibility of a traumatism is in my two cases excluded; there was no midwife present, and no manipulations were indulged in. Thus it seems to me that such cases are congenital, and due either to fœtal inflammation, probably caused by traumatism in utero (twisting, etc.), to a want of development of the muscular tissue, or to a heterotopy of fibrous tissue. I will not attempt to decide which is the most probable. Neither will I deny that there may be cases, as reported by Strohmayer and others, of traumatism during labor.

2. Why the right side is predilected, and why, also, the female sex is the favorite, I am at a loss to explain.

3. If the deformity of a congenital torticollis from contraction of the sterno-cleido-mastoid muscles is due to a fibrous degeneration, no orthopædy, no emollient treatment, no massage, etc., will be of any benefit. There is no muscular tissue present and none will form. Of course, I do not speak of torticollis from other causes (rheumatism, spinal malformation, etc.).

4. There is, then, only one treatment, and it is that

recommended by our best authorities, viz., myotomy. The tumors may disappear spontaneously by atrophy without an operation—as it appears from the writings of some surgeons—but the contraction will nevertheless grow worse, if left alone.

5. The question whether subcutaneous or percutaneous operation is preferable, is the last point I wish to make. The subcutaneous operation, it is true, is more elegant and leaves immediately after its performance a smaller external disfiguration. In regard to danger, I see no advantage over the other. Even not taking into consideration the possible injury to the neighboring vessels, it is just as safe to cut down, provided antiseptic measures are taken, as to puncture, and to leave behind a quantity of extravasated blood. In cases in which the surgeon is obliged to withdraw the tenotome and to insert it again, to be sure of having thoroughly divided it, the subcutaneous operation seems to be even more dangerous. The relation of the subcutaneous operation to the percutaneous one is about as aspiration is to incision. But the latter has the following advantages: The certainty of having divided every particle of the muscular band; the ability to remove any adventitious matter that it may be advisable to remove; the avoidance of injury to the many nerves situated on and above the muscles; the facility, finally, of cleansing the wound well and of using perfect antisepsis.

COMPOUND GUNSHOT FRACTURE OF RADIUS FROM WINCHESTER RIFLE, TREATED BY PRIMARY ANTISEPTIC OCCLUSION,

Without Removal of the Primary Dressings until the Case had Resolved Itself into a Simple Fracture with Superficial Ulcerations—With Remarks.

By HENRY I. RAYMOND, A.M., M.D.,

ASSISTANT-SURGEON, U.S. ARMY.

George D——, aged seventeen, a half-breed, was shot through the right forearm by a cartridge of 44 calibre, accidentally discharged from a Winchester rifle which fell from his saddle while his horse was attempting to escape from a hornet's nest.

The lad was forty miles distant from surgical aid, and had to ride twenty-six hours (day and night) over a rough mountain trail, and in the hot summer season (thermometer 93° in the shade), to receive professional care of his wounds. Two large colored kerchiefs saturated with clotted blood had served the double purpose of a provisional hæmostatic and an occlusive covering. On removing these (twenty-six hours subsequent to the injury) an ugly-looking wound of exit—such as would be produced through the diminished velocity of a projectile from fracture of the shaft of the radius—was observable, with pouting lips and torn edges. This wound of exit was two and a half by one and three-fourths inch, extending in the line of the thumb from half an inch above the wrist upward along the radial shaft. The wound of entrance, comparatively insignificant, was situated in the line of the little finger three inches above the wrist. By very gentle manipulation bony crepitus was obtained at the site of injury, and by cautious pronation and supination of the hand no rotation of the head of the radius took place.

The *exterior* of the wounds was cleansed in a bichloride solution, and after drying the surfaces they were dusted over with a powder of iodoform and calomel, and covered with borated cotton and oakum. An anterior and posterior splint were applied with the forearm in semi supination, and the whole secured by adhesive straps and roller-bandages.

The temperature per orem marked 100.2° F.; pulse, 85; respiration, 20.

Considering the ugly aspect of the wound, associated with a compound fracture and of twenty-six hours' standing, it was with some hesitancy that I put to a further test my faith in the efficacy of a primary occlusion, but relying upon the pulse and temperature to signal approaching danger, I occluded the wound, seeking to render the fracture "subcutaneous."

To open up the secretions a purgative dose of blue mass and jalap was administered. Let it be remarked here that this was the only dose of medicine in any form—hypnotic, febrifuge, or pain-killer—that was administered in any shape or manner during the continuance of the case (no indication therefor existing), and the diet was not specially restricted, except that meat was interdicted. The accident of birth was not in his favor, inasmuch as the Indians and half-breeds on this Hoopa Reservation and in the adjoining valleys are scourged with struma, phthisis, and syphilis; hence, whatever of good resulted in the healing process may in my opinion be justly accredited to the exclusion of infecting germs, and the placing of the wound in a condition favorable for repair.

The patient was kept in bed for three days, until it should be determined, from the absence of high temperature, that the wound had not been unsuited for occlusion. He was then permitted to go about the ward and into the outdoor air. On the tenth day from the date of application of the wound-dressings they were removed for the first time, the entrance and exit of the wound-track were dressed as simple ulcers, and the fracture-splints reapplied.

Two days later the patient returned to his home, a distance of thirty miles, by muleback, and made me visits at intervals of about two weeks until, the fracture being consolidated, the splints were removed. The pronation and supination movements of the radius were well preserved, they being executed through three-fourths arc of a semicircle.

Permit me a few lines that are elicited by a criticism which, by some oversight, only to-day met my eye, by your correspondent of October 3d, relating to my article on gunshot wounds in your issue of September 12th.

The above case occurred in my practice while preparing my article of September 12th, and I have related it to show the further practical workings of the occlusive method. I trust my critic, on second thought, will not think me so dogmatic as to recommend or practise "but *one* line of treatment of gunshot wounds." What I wish specially to emphasize is this: That the chief interrogatory to be proposed to one's self, and answered according to the surgeon's best judgment, before proceeding further in a case of gunshot wound, of whatever character, is whether or not the given wound is suitable for occlusion. If it be suitable, and the surgeon, by unclean hands or meddlesome interference, renders it noxious and past occlusion, that surgeon has diminished the chance of his patient's recovery and increased the probabilities of untoward wound accidents. In the case above related, I ask if, in the simplicity of treatment, in the care of the wound, in the shortness of time, or in the securing of beneficial results, any other method would have yielded a better return than primary occlusion? How often would the application of this method in suitable cases do excellent service for the country practitioner, whose busy hours and long drives do not permit him the frequent inspections possible to the city practitioner, should he treat a gunshot wound openly! Primary occlusion takes precedence in every case to which it is applicable. In such a case there is, to my mind, no choice of methods. The occlusive here is the best. In so far, I confess I am somewhat dogmatic. But to assert that no discrimination is to be made in the proper selection of cases for occlusion is farthest from my purpose, and I trust my critic will not impute it to me. I agree with him "that certain wounds require one treatment, while other wounds require other treatment, . . . and this is where a good surgeon is expected to use his judgment, and not merely an antiseptic rag." But, I ask,

upon what is he to base his judgment, unless it is upon certain sound principles of surgical practice which I have endeavored to indicate in my article of September 12th? namely, "If the wound is not a fresh and clean one; if the canal has not been shut off from the external world by shifting of the soft parts immediately that the injury took place; or if the wound track, that has been virtually occluded from the start, is laid open now for the first time by the surgeon's examining finger; or if of necessity the surgeon must go into the wound for the purpose of ligating a bleeding vessel, or of removing some palpable object of infection, *let no such second be overlooked.*" "Insure it a radical disinfection and subsequent complete drainage." On the other hand, if a wound is a fresh and clean one, and virtually occluded when it comes into the hands of the surgeon, let it not become infected and rendered unfit for occlusion through contamination, but let it be immediately shut in from hurtful extraneous influences by a clean (non-septic, antiseptic) occlusive covering, whether it be a simple blood-clot, scab, clean charpie, or an "antiseptic (clean) rag."

An attack was recently made against my advocacy, in a paper read before a county medical society, of occlusion to clean non-infected gunshot wounds, by a surgeon who had served through the Rebellion. In antipode to occlusion, he had known surgeons during the Rebellion to invite maggots to infest their wounds, and those wounds did best that were most strongly beleaguered. I had not advocated occlusion in infected wounds, and in such only do maggots abound. Though necessary evils, they may have served a good purpose in infected wounds; as scavengers they were angels in disguise. Better a filthy city with scavengers; but better still a clean one that needs no scavenging. Better close up a clean, non-infected gunshot wound than to infect it, and then invite scavengers; better invite scavengers than close up one already infected.

As to laparotomy in abdominal wounds, and especially in intestinal wounds, I do not see that my critic takes any issue with my paper, but cites the practice of Dr. Bull, as I also did. The innocuousness of a pint of bloody serum in the abdominal cavity is not so apparent to me, "though, when spread out, would make very little show," inasmuch as the *quality* and not the quantity of a fluid determines its septicity, and the labors of Sims in this direction, as recorded in the British medical journals, are not lightly to be set aside.

Regarding gunshot wounds in general, my attention was recently directed, by Assistant-Surgeon J. O. Skinner, to the remarks of Goodwin in the *British Medical Journal*, February 23, 1884, and to the fact that the German surgeons seem to appreciate the surgical situation very well when they refer to their wounds as "fingered" and "unfingered," and to the very apt remarks of Otis, the surgical historian of the Rebellion, in his reference to the practice of "hermetic sealing," or other innovation of surgical practice—that "an invention, or innovation, is first received with incredulity and unfair criticism, and if these fail of their purpose, then the originality or development of the discovery is questioned."

Fort Gaston, California.

Jubilee of the Finnish Medical Society.—The Medical Society of Finland recently celebrated its fiftieth birthday by a reunion in Helsingfors. The proceedings of the society at this meeting have been published in two large volumes, entitled "Skrifter utgifua af Finska Läkaresällskapet vid dess Femtioaars Fest." The first volume contains an interesting history of the society, written by Dr. Otto E. A. Hjelt, together with a list of the members. Dr. Rosina Heikel enjoys the distinction of being the only female member of the Läkaresällskap. The second volume contains a number of papers presented at the meeting by Drs. Saltzman, Homén, Heinricius, Engström, Holsti, Saelan, Fagerlund, Lindén, and Tigerstedt.

Clinical Department

A NEW METHOD FOR THE REMOVAL OF FOREIGN BODIES FROM THE NOSE.

Dr. D. Bryson Delavan, of New York, sends us the following: "The presence of a foreign body in the nasal cavity is usually attended with marked swelling of the neighboring mucous membrane. Its extraction by any of the means in common use is accompanied with pain, often of great severity, and is often followed by copious hemorrhage. The swelling offers, of course, a serious obstacle to the extrusion of a hard body, while one which has increased in size from the imbibition of water becomes all the more firmly impacted. Hence, in attempting the removal of the body, more or less laceration of the membrane is likely to occur. The pain, with difficulty tolerated by an adult, causes a child to become in almost every instance unmanageable, so that an anæsthetic is required. The hemorrhage is usually controllable after the lapse of a few minutes, but may, meanwhile, cause considerable annoyance. From our knowledge of the physiological action of cocaine upon the nasal mucous membrane, it is evident that, by its use in these cases, all of the above difficulties may be overcome; for applied to the nose, the mucous membrane becomes strongly retracted, the sensibility to pain lost, and the blood-vessels exsanguinated. Thus, the calibre of the fossa is greatly widened, the irritation and consequent resistance done away with, hemorrhage prevented, and the removal of the foreign body thereby greatly facilitated. To carry out the method, the occluded nostril should first be cleansed with a spray or a gentle current of some lukewarm alkaline solution, after which a four per cent. solution of cocaine should be applied to the mucous membrane. When its effect has become complete, the extrusion of the body should be attempted by directing the patient to blow forcibly through the affected nostril. Failing in this, it should be drawn out by some suitable instrument. Should the patient be too restless to make this practicable, an anæsthetic may still be administered. In cases of invasion of the frontal sinus or antrum of Highmore by insects or larvæ, cocaine should be applied to the membrane before the administration of chloroform or ether, in order that the canals leading to these cavities may become as patent as possible, and thus the vapor of the anæsthetic be admitted very thoroughly to the intruder's presence. The insensitiveness of the membrane produced by the cocaine will, in these cases, certainly add to the comfort of the sufferer should it be necessary to inject, or still better, to spray the nose with chloroform."

SYMPTOMS RESULTING FROM SWALLOWING A CATERPILLAR.

Dr. George M. Waters, of Columbus, O., writes: "On November 10th I was called to prescribe for a child seven months old. From the parents I learned that the patient had been in good health previous to 2 P.M., and at that time awoke from a sound sleep with a scream and appeared to be choking. Nothing could be found in the throat to account for these peculiar actions, but considerable redness was noticed about the fauces. At 8 P.M. I found the throat intensely inflamed, a slight elevation of temperature, pulse feeble and rapid, and the patient very restless. The following morning the throat inflammation had subsided, but the temperature had reached 102° F., there were symptoms of intense gastric distress, and the face, body and upper extremities were covered with an eruption resembling a severe case of urticaria. Bismuth and oil were ordered with a mild opiate. On the morning of November 12th, the eruption, with exceptional spots, had disappeared, the temperature had fallen to 99.5°, and there were no indications of pain. The pa-

tient was much better, and well it might be, for with the first free stool was passed the body of a caterpillar an inch and a half long, and larger than the common lead pencil; the hair had been completely stripped from the body, which was complete and covered with mucus. With the two following stools came the brown hair of the caterpillar. This was followed by an inflammatory diarrhœa for three days, when the child began to improve rapidly and is now in good health."

SUPRA-PUBIC ASPIRATION FOR RETENTION OF URINE.

Dr. W. McChesney, of Wauconda, Ill., reports the case of a man, aged sixty-seven, who suffered from stricture, the result of a gonorrhœa contracted some twenty years ago. On attempting to pass water on the evening of June 5th, he was unable to do so, and, getting no relief in the morning, sent for the writer. Repeated efforts were made to pass Nos. 6, 8, and 10 gum catheter, but without success; examination per rectum revealed the presence of a greatly enlarged prostate. Before proceeding to puncture, which operation was considered inevitable, the writer called in consultation Dr. Galloway, of Libertyville, who suggested the administration of chloroform and another attempt at catheterization before puncturing. This was tried without success and the bladder was then punctured above the pubes with a small trocar, about three pints of dark-colored urine being removed.

The canula was retained in position by means of threads attached to strips of adhesive-plaster. "I considered this preferable to repeated tapping with the trocar, as I could see no prospect, immediate at least, for the relief of the retention through the urethra. During the next two weeks the bladder was washed out twice daily with a solution of Squibb's boric acid, two drachms to the pint. This sufficed to keep the organ in a healthy condition, as far as could be judged by the appearance of the urine. I attempted to pass a catheter every other day, but found it impossible to do so. In the meantime the opening into the bladder occupied by the canula had enlarged sufficiently to allow of the introduction of a small drainage-tube, which greatly facilitated the process of irrigation.

"Acting upon the advice of Dr. Muffas, of Wheeling, who saw the patient with me, I now gave large doses of potassium iodide, but as the drug was not tolerated by the stomach it was soon discontinued. After repeated trials of the catheter, with every variety of curve, I discharged my patient. I saw him last week and he is as well as usual. Irrigation with the boric acid solution every other day keeps the urine clear."

THE USE OF COCAINE IN AMPUTATIONS.

Dr. Valentine Mott, of 27 East Twenty-fourth Street, reports the following cases of amputations of the finger in which cocaine was used as a local anæsthetic. They were performed by Prof. Alexander B. Mott, at Bellevue Hospital Medical College, on Wednesday, December 23d. The first case was one of osteosarcoma of the proximal phalanx of the little finger. The patient, John S——, aged twenty-eight, had first noticed the growth about three months ago; it had increased very rapidly, so that at the present time it measured five inches around its largest part. Amputation was decided upon. The patient wished to take ether or chloroform, but the heart was found upon examination to be in such a bad state that it would have been foolhardy to have run the risk. Having administered cocaine in a number of cases of operations for tumor with great success, the writer determined to try its effects in this instance, should the patient be willing. Consent having been obtained, the hand was bandaged tightly at the wrist so as to stop the circulation, and six hypodermics of a four per cent. solution of muriate of cocaine were made along the proposed line of incision and one deep down into the joint. About fifty-five minims were used in all. After waiting ten minutes the bandage was removed and the finger was amputated at the metacarpo phalangeal articulation. The patient said that he *felt absolutely* no pain. The ligation of the blood-vessels, all of which were very much enlarged, took some little time, but during the entire period no complaint was made.

In the second case, which was one of necrosis of the proximal phalanx of the middle finger, the success was not so great, owing in a great measure to the fact that no bandage was applied to arrest the circulation in the part. The patient, Jane G——, married, aged twenty-three, was of exceedingly nervous and excitable temperament. Injections were made as before along the proposed line of incision around the metacarpo-phalangeal joint. No struggles were made by the patient while the finger was being removed, although she said that "it hurt," but upon being questioned afterward, admitted that it did not pain her as much as the introduction of the hypodermic needle, and that the soreness half an hour after the operation was greater than the pain experienced during its performance. In this case about forty minims of the solution were administered. Dr. Mott writes: "In using the muriate of cocaine in similar operations in the future I shall most assuredly apply an Esmarch's bandage, so as to limit the action of the cocaine to the part that is to be operated on; and I have no doubt that, by pursuing this plan and injecting the solution not only hypodermically but deep down onto the sensory nerves themselves, far more formidable amputations could be accomplished with almost absolute painlessness."

HYPODERMIC INJECTIONS OF COLD WATER IN SCIATICA.

Dr. D. H. Lewis, of Lone Pine, Pa., writes that he was consulted by a man sixty years of age, who was suffering greatly from sciatica. He had been treated for the past eight weeks by two physicians, and had run through the entire list of anti-neuralgic remedies. Being desirous of trying something which was at least new to the patient, Dr. Lewis determined to employ hypodermic medication, and, having no drug handy which he cared to use, he filled the syringe with cold water and injected the fluid deep down behind the trochanter. The following day the patient returned and said that he was feeling much better. The injections were accordingly repeated every third or fourth day for a period of three weeks, by the end of which time a complete cure was obtained. The writer has since treated a number of cases of sciatica in the same way, with equally gratifying results. He thinks that possibly many of those cases which have been reported as cured by the injection of certain drugs, such as cocaine, might have terminated in an equally favorable manner had simply cold water been used.

Inoculation with Snake-poison.—It is stated on the authority of Rev. Charles Bixby, a native of the country, that preventive inoculation of snake-poison has been practised in Surinam, Dutch Guiana, for centuries. A snake is caught and teased until the glands secreting the poison are hyperæmic and actively secreting. The reptile is then killed and the glands extracted, dried, and pulverized. The inoculation is practised, usually at the wrist, by causing an abrasion of the skin into which some of the powder is rubbed. It is said that those thus inoculated may suffer themselves to be bitten by the snakes with impunity, for no one who had been properly inoculated was ever known to die or even suffer any ill effects from a snake-bite. This is an item which has been going the rounds of the lay journals, and we by no means wish to vouch for its accuracy.

Progress of Medical Science.

Treatment of Pruritus Ani.—The following mode of treatment of this troublesome affection is recommended in the *Lyon Médical*. After a small enema of warm water, the patient inserts within the anus a tampon of cotton soaked in a mixture of carbolic acid and laudanum, each one part; dilute hydrocyanic acid, ten parts; glycerine, fifteen parts, and distilled water, one hundred and eighty parts. This application is to be renewed from time to time until the pruritus has ceased.

Poisoning by Camphor.—In *The Australian Medical Journal*, October 15, 1885, Dr. J. P. Ryan reports the following case: On the afternoon of September 15th, Miss X—— was brought to his house in a cab, and had to be partly lifted and partly supported indoors. Her hair and dress were disordered, her face duskily suffused and perspiring, the breathing slow, shallow, and with a tendency to sighing, and her pulse was rapid, small, and compressible. Her breath smelt of camphor. She was in a semi-unconscious state, with her eyes partly closed, and if placed in the sitting posture her head and body inclined to fall forward and to the side; but if roused and spoken to loudly, she made an attempt to sit upright, lifted her eyelids for a moment, smiled in a lackadaisical sort of way, and responded rationally, but in the unformed halting accents of a person laboring under the influence of drink. She was above the middle height, strongly built, and her sister, who accompanied her, informed him that she was unusually robust and healthy. They had lunched together at one o'clock on coffee and bread and butter, and afterward were doing some shopping. She had a slight cold, for which she had been recommended to try camphor. She had provided herself with a piece as big as an almond, which she began to chew up and swallow in minute portions. Some twenty minutes afterward she suddenly complained to her sister of feeling giddy and queer, and they had barely time to get into a shop which they were passing when she fell down in a quasi-fainting fit. Resort was had to the usual restoratives—[illegible], cold water, smelling-salts, etc.—and after a little she rallied somewhat, but began to talk excitedly, and endeavored to sing or hum snatches of tunes, paying but little heed to the conversation and efforts of those around her. Her face was flushed, the expression peculiar, and her sister said that only she knew that she never drank any wine or spirits, and that they had been together all the forenoon, she would have come to the conclusion that she was under the influence of drink. As the hilarious excitability was gradually passing into a state of stupor, the sister became alarmed, and had her conveyed to his house. She began eating the camphor at two o'clock; twenty minutes or so afterward she had a quasi-fainting attack, followed by hilarity, excitability, with rapidly ensuing stupor, and when he saw her, about three o'clock, she was nearly unconscious, and in a semi-collapsed state. As her condition was somewhat alarming, he lost no time in giving her an emetic dose, twenty grains of zinc sulphate, which was followed by free vomiting; the vomited matter smelt strongly of camphor, but he failed to find any pieces of the drug in it. After waiting for fifteen minutes, he gave her thirty minims of aromatic spirit of ammonia in a small cup of strong black coffee. Her breathing and circulation improved, her face, from being flushed and dusky had become somewhat pale, the expression being more natural, and she gradually sank into a light slumber. Half an hour afterward he administered another dose of coffee and ammonia, and by four o'clock she was sufficiently recovered to be removed to her own home. She was somewhat light-headed and giddy, but only complained of a burning pain at the pit of the stomach, which had disappeared by the next day. The above case is of interest on account of the severe, if not alarming, symptoms produced by an apparently small dose of camphor. Miss X—— could scarcely have taken more than twenty grains, for her sister, a most intelligent woman, assured Dr. Ryan that the piece was no larger than an ordinary almond. If we bear in mind the slight solubility of camphor in water, it may be fairly assumed that a considerable proportion of this was expelled from the stomach in the vomited matters. Now it follows, if this be granted, that dangerous symptoms of poisoning were produced in a healthy adult woman by a quantity not exceeding the ordinary doses of camphor as given in the principal text-books of Materia Medica.

Spontaneous or Infectious Myelitis.—Dr. Ratimoff related to the Russian Medical Society the case of a railway employee who was taken, after a long walk, with chills and severe pains in the left leg. On admission to the Alexander Hospital the leg was seen to be swollen, the skin was tense and œdematous, and the patient had a high fever with delirium. A superficial incision having given no relief, the tibia was trephined and gave exit to a small amount of pus. After this operation the pain diminished and the temperature fell. But the following day the wrist became painful and an abscess formed. The same thing occurred in the shoulder and at other points, and the man finally succumbed from diarrhœa and prostration. Dr. Ratimoff also reported a second case, occurring in a boy fourteen years old, who was suddenly seized with chills followed by a high fever. The right leg was found to be swollen, and the knee-joint contained fluid. In spite of cold applications, rest, and mercurial ointment, the tumefaction increased and the high temperature continued. The bone was then trephined, a large opening being made to facilitate the exit of pus. The pain at once ceased, the temperature fell, and at the end of two weeks the patient was cured.—*Revista de Medicina y Cirurgia Practicas*, December 7, 1885.

The Ascites of Abdominal Tumors.—The Paris correspondent of the *Medical Times*, November 28, 1885, writes that Professor Terrillon, in the course of some practical remarks on the above subject, said that ascites may be produced in three different conditions: the circulation may be embarrassed locally, as in some varieties of hepatic cirrhosis, or indirectly, as in heart troubles; or the peritoneum itself may be inflamed or irritated, as when associated with abdominal tumors. In the last few years points of differential diagnosis have been elucidated. If the ascites be from obstructed circulation, the liquid will be a limpid fluid, resembling water, perhaps slightly colored, containing a little albumen, but no fibrin, and giving no sediment, containing rarely a few red globules, more often a few small white globules. If the ascites be from peritoneal inflammation, the liquid will be thinner, but never transparent, always cloudy, looking like buttermilk, and smelling like decayed cheese. There is a great deal of albumen in this liquid, and of red cells and large white globules, and it deposits a thick sediment. If the effusion be from simple serous irritation, the liquid will be albuminous, rather clear, and often colored like bile. In the sediment will be found elements of great importance. Besides large white globules full of fatty granulations, large irregular cells may be seen, having a central nucleus surrounded by a quantity of granulations. The presence of these cells is usually taken as the sign of a malignant growth being present. Besides these differential characters, M. Méhu has shown that these liquids do not give the same weight of residue. Twenty per thousand is the rate in the first kind, and forty in the second; in that accompanying ovarian cysts the figure goes up to seventy-five or eighty. One word more on the examination of the liquid: we should not at once conclude on some form of cancer if blood be in it, for we often find it in the simplest forms of irritation. Ascites rarely accompanies simple ovarian tumors. On the other hand, it is very

frequent in external papillomata which irritate the peritoneum. It is also almost always found with malignant tumors, such as sarcoma and cancer of the ovaries, intestines, etc. As a general rule, it may be said that there is no connection between the volume of a tumor and the quantity of the ascites. The books tell of the usual symptoms by which we recognize ascites—the large belly, the sensation of wave-motion from side to side, etc. There are, however, two modes of diagnosis that are not much written about: first, always look for a marked dulness in the lumbar region; second, the vaginal cul-de-sac affords a good chance to detect fluid by a vaginal or rectal examination. This is, indeed, the only way to decide the diagnosis between the ascites and an ovarian cyst. Having detected the ascites, we ask what is the cause of it? There are only three ways to find out. First, examine the abdomen; then puncture, and examine the fluid; finally, make an exploratory incision. If the patient have a great deal of liquid and a small tumor, the physical examination will not reveal much. If there be only a little liquid, there are a few signs that may help; but they are not very sure. Sometimes it is possible to depress the abdominal walls and reach the tumor; there may be a real *ballottement;* and, finally, we may by vaginal examination place the tumor in communication with the abdominal walls, so that we can feel it. These means are not many nor very efficient. In making a puncture with the aspirator, we observe three rules: first, antisepsis of the strictest kind for the trocar and the skin of the patient; second, open the abdomen in the median line, to prevent wounding any large vessel; third, the depth to which the instrument is passed must not be great.

Paralysis Following Tonsillitis.—M. Prevost reports in the *Archives Médicales Belges* for November, 1885, the case of a young army officer whom he was called upon to treat for a sore throat. He was found to have a severe inflammation of the tonsils, accompanied with considerable swelling of the soft palate and neighboring parts, but without any false membrane. Under active treatment the affection subsided in about ten days, but a week or two later paralysis of the right upper extremity appeared. There was no fever, no digestive disturbance; the patient slept well and felt well, and there were no symptoms of cardiac or respiratory trouble. The pupils were regular and responsive to light, no headache was complained of, nor were there any other symptoms of spinal or cerebral disease. After a short period the power returned in the affected arm without the employment of electricity. Dr. Prevost believes that the paralysis was a result of the tonsillitis, and places his case in the category of paresis following simple angina, several instances of which have been collected by Gübler.

Iodoform in Gonorrhœa.—Dr. Oger, in discussing the use of iodoform in gonorrhœa (*Journal de Médicine de Paris*), refers to its employment in solution with glycerine by M. Campana in acute and chronic conditions of the disease. The best results are attained, however, when it is applied to the diseased parts in a very fine powder. In this form Timmermans has obtained excellent results. Iodoform being insoluble in water, he suspends, in two and a half ounces of water, sixty grains of the drug, rendered impalpable by previous solution in sulphuric ether. The mixture being well shaken, a small glass syringe is filled and injection practised. As it is important that the iodoform come in direct contact with the inflamed mucous membrane, the urethra should be thoroughly cleansed by urination immediately before the injection is made. The patient should lie on his back, and the injection be made in a direction nearly vertical, gravity thus causing the powder to seek the lower part of the syringe, and thus favoring its introduction into the urethra when pressure is made upon the piston. When the syringe has been emptied, it should be gently withdrawn, and while the meatus is compressed by one hand, with the other careful pressure is made, so that every part of the passage is reached by the fluid, and the iodoform thus deposited upon the mucous membrane. After four or five minutes the fluid is permitted to escape gradually, in order to avoid the ejection of the iodoform. The operation should be repeated at least three times a day. Whatever is the stage of the disease a prompt result is certain, as is shown by diminution of pain—the iodoform evidently acting as an anæsthetic to the inflamed parts. The character of the pus is also changed, and its abundance diminished. Cure is promptly obtained; in one case resulting in five days.

Intestinal Giddiness.—The existence of this variety of giddiness has long been known to us from the occurrence of that form of it associated with, or caused by, the presence of worms in the intestinal tract. Leube has, however, for many years back noticed another form of it, dependent on flatulent distention and relieved by passage of flatus, and several cases which he has recently observed tend to throw some light on the subject (*Deutsches Archiv für klin. Medicin*). In these, three in number, the giddiness was associated with chronic constipation and relieved by free motion of the bowels or passage of flatus, with the sitting posture aggravated by the act of defecation and relieved by standing or walking, and lastly with intestinal catarrah and flatulence; and in all of them he found on examination *per rectum* that the feelings of giddiness were greatly intensified either by the introduction of the finger into, or its withdrawal from, the rectum. He concludes, therefore, that giddiness in patients suffering from intestinal affections has its source in a diseased condition of the intestinal walls, the sensation being due to pressure on the hemorrhoidal plexus of the sympathetic nerve, but in what way brought about remains yet to be seen.

Baths in the Treatment of Cerebral Rheumatism.—The following are the conclusions formulated by Dr. H. Dupré in a recent thesis on this subject (*Revue Médicale*, December 26, 1885): 1. Hydrotherapy ought to be employed in cases of cerebral rheumatism with hyperpyrexia and delirium, whether the articular symptoms be present or not. 2. The condition of the pulse and temperature, and the nervous symptoms, are the indications to be followed in deciding upon this plan of treatment. 3. In presence of such great danger any temporizing method is inadmissible. 4. Baths are to be preferred to any other plan of treatment. 5. In subacute cerebral rheumatism baths of a temperature of 63° to 75° F. should be used. 6. In the acute form a temperature of 85° to 90° F. is preferable, and this may afterward be reduced, if deemed desirable, by adding cold water. 7. This method is often successful, but it should not be considered as certain, for there are cases in which it occasionally fails. 8. There are no absolute contra-indications to the use of baths, though, of course, the method is not without its dangers; it may give rise to congestions of various kinds, syncope, pleurisy, and the like.

Manifestations of Inherited Syphilis on the Ear.—The two most characteristic lesions of the ear caused by inherited syphilis are, according to Dr. Hermet (*Annales de Derm. et de Syph.*, No. 3, 1885), 1, purulent inflammation of the middle ear, leading to the same local consequences as ordinary inflammation of the same parts, but differing from it in being painless; 2, a form of deafness which is very intense in degree, very sudden in its onset, and in which no appreciable lesion of the conducting apparatus may be discoverable. In a case of this latter kind which is related, deafness was said to have developed in four days, when the patient was nine years old. Dr. Hermet remarks that deafness so sudden and intense could only be due to one of three causes, namely, hysteria, tabes, or inherited syphilis. Hysterical deafness comes on in adolescence or adult life, and its chief feature is its curability. The deafness of tabes is equally

sudden as in the case of syphilis, and attains at least as high a degree of intensity. In the present case, however, the age of the child was against tabes; and at the age of twenty-five, when she was seen by Dr. Hermet, there were no signs of tabes. The diagnosis of inherited syphilis was arrived at chiefly by the history of abortions and early deaths of other children, which was furnished by the patient's mother, who also affirmed that her first husband had spots on the penis at the time of her marriage, and that her second husband told her he had had syphilis in earlier life. The only satisfactory evidence of syphilis in the patient herself was the deafness, which was accompanied by an apparently healthy condition of the conducting parts of the ear. From this case Dr. Hermet draws two conclusions: 1, That in some cases an inherited syphilitic diathesis may be revealed by examination of the auditory apparatus alone; 2, that late inherited syphilis may manifest itself solely by disorder of hearing characterized by complete and absolute deafness of very sudden onset, with integrity of the conducting apparatus. The exact cause of this kind of deafness is not yet known; but it appears to be due to neuritis of the auditory nerve. The affections of the ear mentioned above were the only two which had been observed by Dr. Hermet, in the subjects of inherited syphilis up to the end of 1884, when he diagnosed an ulcerating syphilide of the external auditory canal in a child aged three years.

Diabetes in Children.—Dr. Jules Simon reports several cases of glycosuria occurring in young children, among which is the following (*Revue Medicale*, December 5, 1885). A girl thirteen years of age, had been under treatment for several months for purpura. One day she reported herself as very much better, and little more would have been thought of the case had it not been that, the evening before, Dr. Simon had been reading of a case of diabetes in which the grave symptoms had been preceded for several months by purpura. He was thus led to examine the urine of this patient, and found it to contain sugar in small amount. The girl presented no other symptoms which would even faintly suggest diabetes, and it was only the chance of having read this case the previous evening that led the author to examine the condition of his patient's urine. He suggests that there may possibly be some connection between purpura and the profound alteration which finds expression in saccharine diabetes. The urine contained no albumen and the blood on microscopical examination was found to be normal, at least there was no excess of leucocytes.

Death from Entrance of Air into the Uterine Veins.—Recent observations have demonstrated anew the possibility of the entrance of air through the veins of the uterus from mechanical causes. Olshausen has reported a case in which the uterine douche was employed to bring on labor in a case of twin pregnancy. During the injection, the woman complained of inability to breathe, rose up in bed and fell back dead. Post-mortem examination revealed the presence of air in the coronary arteries of the heart, as well as in the uterine vessels. Another case has been recorded by Litzmann, in which an endeavor was made to induce labor by means of intra-uterine injections of warm water. The douche was employed several times, and, at the fourth, although every precaution was used, the woman suddenly began to breathe with difficulty, the face became cyanosed and death speedily occurred. Here also the autopsy showed that air had entered the uterine veins. On examination of the apparatus employed to make the injections, it was found that the piston did not fit exactly into the cylinder. A third case, related by S. Braun (*Schmidt's Jahrbücher*, No. 2, 1885), shows that air may enter the uterine veins even when there is no external mechanical cause acting. A woman, twenty-five years of age, healthy and strong, pregnant for the second time, was delivered of a healthy infant. Labor was normal, and the presentation was by the occiput. The woman, who had been delivered on the side, was now placed on the back, and the placenta was delivered by expression. Immediately afterward the woman's face became cyanosed, she vomited, had a convulsion and lost consciousness. The uterus was flaccid, and a little dark blood was flowing from the vagina, but in insufficient quantity to account for the collapse. Death speedily supervened. Post-mortem examination revealed the presence of air bubbles in the vessels of the neck, of the heart and of the uterus. Braun explains this occurrence by supposing that, after the placenta was detached, air entered the cavity of the flaccid uterus, and then, some obstruction existing, the pressure of the hand of the midwife forced it into the uterine sinuses. The writer thinks that this may be the cause of collapse, with or without a fatal issue, sometimes observed after delivery.

Splenic Anæmia.—The affection known as Hodgkin's disease is often confounded with splenic leucocythæmia, as there is in both an exaggerated development of the lymphatic ganglionic system, but in the former the characteristic alteration in the blood is wanting. Dr. Banti has described another form of anæmia in which the ganglionic system is unaffected, but in which there is a very noticeable hypertrophy of the spleen. There is no apparent cause for the impoverishment of the blood, as it seems not to be due to either scrofula, rachitis, syphilis, or alcoholism. Climate, sex, and age appear to exercise no causative influence upon the disease. At the autopsy the liver is found to be somewhat enlarged, and of a yellow or brownish-red color. It appears under the microscope to be the seat of a circumlobular interstitial hepatitis, arising from around the branches of the portal vein. The hepatic cells are normal, or are atrophied and the seat of fatty degeneration. The spleen sometimes fills a large part of the abdominal cavity, and may weigh as much as five or six pounds or more. Its color is brownish-red. The capsule seems to be thickened and opaque in certain places. The microscope shows the lesions to consist of an atrophy and sclerosis of the Malpighian corpuscles and of a general sclerotic degeneration of all the network of the organ. The disease begins insidiously and presents, ordinarily, three stages in its evolution. In the first there is hypertrophy of the spleen, which ordinarily passes unperceived; in the second stage the symptoms of anæmia appear; and in the third the cachexia supervenes and leads rather rapidly to a fatal issue. The patient is easily fatigued, his breath is short, and the pulse is forcible and rapid. The skin and external mucous surfaces are pale, and there is often œdema of the lower extremities. Then the symptoms become gradually worse. The skin assumes a dirty-white appearance, the adipose tissue disappears, and the œdema becomes generalized. Finally, come hemorrhages and fever. As secondary symptoms may be noted, hypertrophy of the liver, dyspnœa, dyspepsia, diarrhœa, weakening of the mental faculties, etc. The only treatment advised by Dr. Banti is extirpation of the spleen.—*Journal de Medecine de Paris*, December 6, 1885.

Arsenic with Quinine in the Treatment of Malaria.—Dr. Ernst Hensler, of West Franklin, Ind., warmly advocates combining arsenic and quinine in the treatment of malarial fevers. He says that his residence in the Ohio bottom lands has given him a wide experience in this class of diseases. Like so many other physicians, he formerly used either quinine or arsenic alone, and often without success; but latterly he has been in the habit of giving the two drugs at the same time. Since commencing this practice, he states, all his cases were rapidly cured and no relapse occurred.

Blood-letting in Erysipelas.—Dr. Daniel Lizzaralde, of Buenos Ayres, stated that he has seen most excellent results following the abstraction of blood in facial erysipelas. The procedure is indicated in the case of a strong, full-blooded adult, when the temperature is high and the cerebral symptoms are threatening.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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MEDICAL-PRACTICE LAWS.

THE Illinois State Board of Health publishes a collection of the decisions which have been given, up to a comparatively recent period, upon medical-practice laws. These are four in number. The first was rendered by Judge E. S. Williams, in the Cook County Circuit Court, Illinois, October, 1878. This decision established the following points:

"1. The State Board of Health, a corporation created by act of Legislature: constituted, among other things, to have charge of medical practice and medical practitioners in Illinois, and surveillance of the professional conduct of physicians in 'the interests of the health and life of the citizens of the State,' in the exercise of its discretion, cannot be controlled by judicial tribunals. 'Unprofessional conduct' and criminal conduct are not synonymous. The law makes the State Board judge of the former. Equity will not interfere to control its judgment.

"2. The law creating the State Board, and that regulating the practice of medicine, are constitutional and valid.

"3. The right to practise medicine is not a constitutional privilege, nor a property, nor a contract, but a mere statutory privilege, subject to the control of the Legislature."

In July, 1884, the Supreme Court of Minnesota gave a decision upon the action of the State Medical Examining Board, which had refused a license to practise to a quack, because he had been guilty of unprofessional and dishonorable conduct. The points are given as follows:

"1. The legislative act of 1883, regulating the practice of medicine, requires as a condition of the right to practise as a physician (except as to those who have been engaged five years in practice in the State) a certificate of qualification from the faculty of the Medical Department of the State University. Section 9 of the act authorizes this board to refuse such certificate to those guilty of 'unprofessional or dishonorable conduct.' The relator was refused a certificate upon the ground that, as the board determined he was guilty of unprofessional and dishonorable conduct: held,

"1. The applicant had a right to be heard upon the investigation as to his conduct.

"2. The word 'unprofessional' in section 9 is used convertably with 'dishonorable,' having a like meaning.

"3. The act is not unconstitutional.

"4. The relator is not entitled to a remedy by mandamus to secure a review of the correctness, or the reversal of the determination of the board."

We have recently learned from Dr. P. H. Millard, of Stillwater, Minn., Secretary of the State Board of Medical Examiners, that the Supreme Court has rendered two further decisions regarding the Minnesota practice law, both supporting its provisions. The first case was that of a man, E. D. Chapman, whose certificate had been revoked by the board on the ground of unprofessional and dishonorable conduct. The report states that "The sole ground of the relator's objection to the provision of the act empowering the board to revoke decisions is, first, that license to practise medicine, when once granted, is property; second, that the revocation of this license is the exercise of judicial power, which cannot be vested in any power but the courts; third, that to vest this power in a board is to deprive a person of his property 'without due process of law.' The radical fallacy in this chain of reasoning is the assumption that such power to revoke is the exercise of judicial power. There is no distinction between granting and revoking such a license; both come under the police power of the State, the object being to exclude the incompetent. All the States empower boards to issue and revoke licenses to dealers, hackmen, pilots, etc. The constitutionality in such cases has repeatedly been sustained."

In the second case, that of E. E. Feller, the report says:

"In the case of E. E. Feller, the ground on which the writ is asked is not the constitutionality of the revoking power, but that the facts stated in the complaint do not constitute 'unprofessional or dishonorable conduct.' The respondent claims that, if true, this is no ground for issuing the writ, at least not until relator had first pleaded to the jurisdiction of the board, and his plea had been denied. The court holds that the complaint is sufficient. Counsel for relator errs in thinking that the only charge is a breach of professional ethics. The complaint sets forth that the relator advertised his ability to speedily cure chronic, nervous, skin, and blood diseases of both sexes; of the eye, the ear, without injurious drugs or hinderance from business, and others specified, well knowing the claims to be false, and intending to impose on the ignorant and credulous. The gist of the charge is not in the advertisement nor its falsity, but that he knew it to be false. If true, this constitutes unprofessional conduct of the grossest kind."

The law of Minnesota, which resembles that of Illinois, is thus supported by three judicial decisions. And the Board of Examiners is able to refuse or revoke licenses on the ground of unprofessional or dishonorable conduct.

The Court of Appeals of West Virginia rendered a decision, in November, 1884, declaring that the medical practice act of that State was constitutional. A similar decision, sustaining the Missouri State Board of Health, has been rendered by the Supreme Court of Missouri.

It seems as though the validity of acts regulating the practice of medicine was established upon a firm ground.

Unfortunately it has happened that, quite recently, an Illinois court has rendered a decision contradictory, in a large measure, to those previously given, and materially abridging, as we are informed, the powers of the State Health Board in regulating medical practice.

MEDICAL ADVERTISING IN THE DAILY PAPERS.

In the name of all that is reasonable and decent, is it not time that there should be an end put to the sensational reports of so-called remarkable operations, as they are now appearing in the daily papers. They mean nothing, and can do no possible good save to ventilate the weak and senseless vanity of men who can obtain notoriety in no other way. Sometimes the operators have nothing to do with the matter, but in the large majority of instances they take care not to object to the appearance of the reports when they are able to do so. The innocent ignorance displayed on their part as to how they were really made is oftentimes a refreshing contemplation for the student of human nature. But to the ordinary professional mind this goes without the saying. Then, again, the real utility of these sensational stories is to be seriously questioned. To the medical profession they mean nothing more than well-written and highly-colored reports of some of the most ordinary work in any of our hospitals. To the public they are especially misleading, even if they are half-way intelligible. In a word, they prove how much the accomplished press-writer can make out of nothing; he, in fact, is the only one who deserves any credit in the affair. He gratifies his ambition in making the article readable. Rhetoric is one thing, however, and practical knowledge of the subject is another matter. Obviously, the remarkable cases are brought before the wrong court. There is a pressing need for a medical clearing-house for the associated press. Not one of the so-called brilliant operations could legitimately claim a two-line item in any respectable medical journal, and yet we see a half-column of solid type in the jealously-guarded space of a leading daily devoted to such foolish recitals as that of removing pieces of dead bone from the leg, and saving the life of the patient thereby, limbering a stiff joint, while the patient was profoundly under ether, doing impossible things with cocaine, and in one case recently brought to the notice of the public, of actually taking a button of bone from the skull for an old depressed fracture! Patients all liable to recover! Think of it. Medicine certainly should be considered a progressive science by the public, and the daring operators who figure in these exploits should be placed at the head of their calling.

The hydrophobia craze is another phase of the sensational in medicine which is just now occupying the attention of the daily journals. Despite everything that has been said concerning the danger of rabies, and the value of inoculation as a preventive, we have yet to see the game before we fire. Hitting a black cat in the dark is not the best way of proving the relation of cause and effect. It is comforting to know that the public is still safe, but God help the poor dog.

We are hearing, too, of many cases of tongue-extirpation for cancer like that from which General Grant suffered. They are supposed to be interesting, not on account of the operation itself (for this is, alas! not an uncommon one), but because General Grant might have been saved by just such a procedure! What a pity if it is true. What a dreadful mistake the medical staff in charge of General Grant evidently made in not thinking of these possibilities before. It is, of course, too late now to ask the question why a few of the daring and brilliant surgeons, who are reported to be curing their cases up to twenty-four hours after the operation, were not called in time. The best men to judge of the character of General Grant's cancer were those in charge of his case, and who bore the responsibility of its treatment. The verdict of professional opinion indorsed their judgment in every particular. The patient himself, who is credited with ordinary judgment and fair discretion, was satisfied, and what is the utility one way or the other in taking out cancerous tongues by wholesale, merely to prove that a similar procedure would have been the best thing for the lamented General.

If surgeons see fit to cut out tongues and reporters take pleasure in heralding these so-called remarkable achievements, the public should at least be spared by the writers the comparisons with cases they know nothing about. These are on a par, as to point and interest, with the usual accounts of the surgical exploits that appear with startling head-lines in some of the dailies.

A CALIFORNIAN'S VIEW OF THE INTERNATIONAL MEDICAL CONGRESS.

We publish below a letter from Dr. A. M. Wilder, Professor of Ophthalmology and Otology in the University of California, and Vice-president of the Section of Otology and Laryngology in the Ninth International Congress.

We can only reiterate here the opinions referred to by Professor Wilder. It would, we are sure, be much better to have the original enlarged committee added to the present Executive Committee. But this would be an almost complete concession on one side and none whatever on the other. As human nature is constituted, it is possibly asking too much. It is right and necessary, however, that the present Executive Committee concede much more than they have as yet done. There is a desire in this city to accept a compromise, which will involve an assurance that the newly added men will have a positive influence in the management of the Congress.

We regret very much to observe that in Philadelphia, although the most eloquent appeals are made for harmony, yet no spirit of concession is shown, and nothing but complete surrender is demanded.

This does not appear to onlookers as a very genuine form of the "loyalty" which is now the pet word with our Quaker brethren.

Professor Wilder writes:

[illegible]

Sir: The most sensible article I have seen in The Record or any other journal, regarding the troubles connected with the proposed Medical Congress of 1887, is the editorial in the number of The Record of December 19, 1885, and is entitled "Measure for Reconciliation." The article in question has the right ring, and should strike a responsive chord in the breast of any one who really desires to have the success of the Congress assured.

It proposes, first, to ignore the quarrels that have existed between the various committees, and to accept the present Executive Committee as the proper body to complete the details, very justly saying that "the profession at large is indifferent to this point, since it feels that this committee would have no right or inclination to oppose

the Congress simply on account of personal disappointment." It very properly demands "equitable representation on a basis that introduces no side issues," and goes on to say that "if the present Executive Committee will now officer its sections on this basis, it will have the full and enthusiastic support of the great mass of the profession and of the medical press."

The Record has made a brave and most honorable effort to bring the factions together, and heal existing difficulties. It drops all controversies, and only demands equitable representation, free from all side issues, the ignoring of which principle by the original committee has been at the bottom of all the trouble.

That, by virtue of geographical position, population, wealth, access to libraries, numbers, easy concentration, and constant opportunities for mental friction upon professional topics, together with the possession of the "open sesame" to the columns of the leading medical press of the country, the large cities of New York, Philadelphia, Boston, Baltimore, etc., should contain a large proportion of the medical writers and teachers of America, and consequently of men more generally known, both at home and abroad, must be patent to all; but that the best practical work in the profession is confined to these large centres is as certainly untrue, and right here the original committee blundered.

If now that portion of the profession who have so persistently denounced the action of the American Medical Association, taken in New Orleans last April, and who have as generally declined to help on the Congress, and resigned the positions assigned to them in the various sections, stand ready to follow the lead of The Record, it behooves the representatives of the great mass of the profession of the country, who are arrayed on the other side, to be equally ready to sacrifice all personalities, and unite on the common basis of making use of the *best means* for securing the *best results*.

With a view to giving this idea a definite form, I would propose that all those who at present hold official positions in the various sections place such positions in the hands of the present Executive Committee, thus giving it the opportunity of making a redistribution of said offices, unhampered and in accord with its best judgment, aided and assisted by suggestions and counsels of the best men in the profession.

As proof of my sincerity in making this proposal, I hereby declare my readiness to place the position I now hold as a Vice-President of the Section of Otology and Laryngology in the hands of the Executive Committee, to be disposed of in accordance with the above expressed views.

Very truly yours,

A. M. Wilder, M.D.

215 Geary Street, San Francisco, Cal., January 5, 1886.

THE TOPICAL USES OF LACTIC ACID.

Professor R. v. Mosetig-Moorhof, of Vienna, has become an ardent advocate of the use of lactic acid in the treatment of certain morbid growths and ulcerations. His earliest results were obtained with lupus, but he has since used the acid with good success in epithelioma, superficial caries, papillomata, and other new-growths.

At a recent meeting of the Royal Society of Physicians of Vienna, Moorhof presented his views again (*Wiener Medic. Wochensch.*, November 28, 1885), and also showed two patients with extensive epithelioma of the face who had been greatly relieved, if not cured, by the acid.

The especial claim made for lactic acid is that it picks out and destroys morbid tissue, while it has very little effect on the surrounding sound structures. It can be applied to the healthy skin for twenty-four hours without producing more than a redness. Lactic acid can take the place of the sharp spoon and is, in most cases, a more searching and thorough agent.

For superficial application to ulcerating or carious surfaces the pure concentrated acid is used. Absorbent cotton soaked in the caustic may be laid upon the affected part and covered with rubber paper. The surrounding healthy tissue can be protected by covering it with the rubber or collodion. The application is left on from six to twelve or twenty-four hours. It is often so painful that the patients cannot tolerate it for the longer periods. After removing and washing, the part is allowed to rest for a day or so, and then the application is renewed.

Moorhof showed patients upon whom he had made twenty and twenty-six applications.

Parenchymatous injections into the pathogenic foci may also be given. In this case watery solutions of the strength of fifty per cent. to seventy per cent. are used, and from six to fifteen minims injected at a time. Several of these injections may be made at one sitting.

Favorable results with lactic acid have been reported in leucopathic buccalis by Dr. Joseph (*Deut. Med. Woch.*, No. 43). It has also been used in laryngeal tuberculosis by Jelinek, of Vienna, and H. Krause, of Berlin (*Berlin. Med. Woch.*, 1885, No. 25). The latter observer speaks well of its properties; the former declares that "it is no specific against laryngeal tuberculosis," a statement which will hardly surprise any one.

The strong organic acids, more particularly the acetic acids, have for a long time been used as caustics against neoplastic growths. The claim that lactic acid has almost specific powers in selecting for destruction only the neoplastic tissue is one that has been made for other caustics, but never substantiated. Whether lactic acid will do any more than acetic, or than chloride of zinc, or the actual cautery, remains still to be seen. Professor Moorhof's endorsement of, and confidence in, this agent is very strong.

PRACTICAL OBSTETRICS IN THE COLLEGE COURSE.

The founding of a Maternity Hospital, connected with the College of Physicians and Surgeons, of this city, marks an era in higher medical education which is worthy of more than a passing notice. It is safe to say that in no branch of medicine has practical education been more needed by the student than in that of obstetrics. The majority of graduates have no opportunities for attending cases of labor until they commence actual practice, and no practitioner goes with more hesitation and misgiving to any of his first cases than to these. All the didactic teaching that is possible in the best-regulated college can never balance the clinical experience in even a single case under the guidance of a practical obstetrician.

Doubtless, many of our readers can recall their first experiences in obstetrics, associated, as they were, with the difficulties of making out the presentations, the possibilities of retained placenta, ruptured perineum, twins, and post-partum hemorrhage. Happy indeed was he who in his first vaginal examination could recognize the

dilating os in the midst of the slippery mucosity of its relaxed surroundings, and happier still he who could go beyond and differentiate at once between the presenting head or the obtrusive buttocks. Most of us were wise enough to leave Nature to herself, and she invariably helped doctor and patient. But the students of this generation will have better opportunities in practical obstetrics than those who are of old. The college and the students are to be congratulated accordingly.

THE PREVENTION OF BALDNESS.

It has been estimated that one-half the adult men of American birth living in our cities are bald-headed. The estimate is not exaggerated, if it is applied to persons above the age of thirty, and it may be rather under the mark. If, now, it be conceded that one-half of our American business and professional men are bald at the present time, it would be interesting to speculate as to the condition of the heads of their descendants some hundreds of years from now. The probabilities point toward a race of hairless Americans, for baldness is extremely liable to be propagated in the male line, and to appear a little earlier in each generation. The American nation is threatened with the catastrophe of a universal alopecia.

It appears to be worth while, therefore, to consider the subject of prevention, since no means have yet been found for the cure. Why are so many men bald before their time?

The answer has almost always been that it is due to the excessive strain and ceaseless mental and physical activity to which American methods of business and modes of living conduce. From the visitors' gallery of the Stock Exchange, for example, one views a mob of shining pates belonging, as a rule, to rather young men.

Any reformer, however, who expects to prevent baldness by changing American habits may as well stop at once, for he will surely fail. Now, there may be, perhaps, help in some other quarter. The sons of prematurely bald fathers should bear in mind that if they wish to save their hair it will only be through industrious attention to their scalp. This much-neglected surface should be thoroughly cleansed at certain intervals. It should be carefully and regularly examined, and if it be unhealthy, dry, and scurvy, the proper applications should be made to it. The wearing of unventilated hats is one of the greatest sources of failure of nutrition of the hair, and these must be avoided. The beard never falls out, because it gets plenty of sunlight and air. These are what the hair of the scalp needs, also. Women are less bald than men, because, for one reason, their scalps are better ventilated. In fine, civilization has made the hair-producing organs of the scalp delicate and feeble. They have to be nursed and cared for, or they atrophy and disappear. Young Americans who do not wish to lose their hair before they are forty must begin to look after their scalps before they are twenty.

MEDICAL TREATMENT.

Dr. Samuel Wilks has recently given vigorous expression to certain of his views upon the subject of "medical treatment." Dr. Wilks is a physician who has attained deserved eminence for his work in pathology and clinical medicine. If he has not always attained the scientific method in his writings, he at least possesses the real spirit of the searcher after truth, and is quick to recognize what is empirical and artificial in medical work.

Naturally the present state of therapeutics does not please him, nor is he in sympathy with the present inordinate zeal displayed in some quarters in behalf of new remedies and novel therapeutical procedures. The physician's duty, as a worker for his profession, is first of all, he thinks, along the lines of anatomy, physiology, and pathology. We have enough drugs already. What we need is a more thorough and profound knowledge of disease. Therapeutics was primarily the daughter of superstition. Disease was once a fetich or demon to be placated by nauseous doses or painful external applications. The people still retain this sentiment and clamor for some medicinal exorcisement. Our art is mainly a weak yielding to this feeling. The doctor has to give drugs, and he is naturally ambitious to do it rationally; hence the vain attempts to erect therapeutics, which Dr. Wilks seems to think is really only fetich worship, into a science.

The proper thing to do, however, is to find out the nature of the disease. When this is done we shall find our remedies at hand. He says: "I think I can show you how an improved treatment has come about, not by the discovery of new drugs, but by a better knowledge of the nature of disease and by clinical observation. Thousands of persons are now cured of epilepsy, paralysis, and various other nerve disorders, by means of iodide of potassium; and why? Because syphilis was found to attack the brain and internal organs when a more extended and closer observation of morbid structures was begun to be made in the post-mortem room. Let me most emphatically dwell upon this fact, that an improved treatment, saving thousands of lives annually, arose, not from the discovery of a new drug, but from work in the dead-house. Suppose phthisis is proved to be of bacillary origin and is to be treated by antiseptics, where are we to look for the origin of the improved treatment? Not to any new remedies, for they were already at hand, but to the pathological laboratory at Berlin. The cold bath has saved many lives in hyperpyrexia. The remedy had always been before us, but was not put in force until suggested by the thermometer. Look, again, at the enormous improvement in surgery due to the antiseptic treatment, whereby tens of thousands of lives are now annually saved. This was not due to the discovery of new remedies, but by seeing the necessity for using those which we had. I might go on illustrating the fact that a very large part of the improved treatment of late years has not been by the use of new drugs, but by pathological and clinical researches, which have pointed out the use to us of those which we have always before us."

Dr. Wilks speaks respectfully of pharmacology, and yet it is easy to see that he has no great confidence in its practical results. Incidentally he gives some rather hard raps to certain favorite drugs. Of strychnia, he says:

"I have seen hundreds, many hundreds, of persons with paralysis take strychnia, and I never remember to have seen it of any service. I should regard it as almost a useless remedy in this disease. On the other hand, it is most valuable in gastric and intestinal weak-

ness, but I am not aware that its administration in these disorders was due to any suggestion of the physiologist.

"Then, again, there is phosphorus; this was a scientific remedy, because the brain contained it, but doomed soon to become ridiculous when the public believed their minds were being invigorated by swallowing zoedone. I never remember seeing more than one patient the better after taking phosphorus, and therefore I am bound to look upon this as a coincidence. In my private pharmacopœa I have attached to the word phosphorus the name 'humbug.'

"Another good example is the use of digitalis in disease, owing to its supposed physiological effects. I have within the last week seen it given in pericarditis, typhoid fever, and pneumonia, in order to lower the rapidity of the pulse, and on different occasions in, I believe, every known disease where the action of the heart is quickened. No remedy at the present time seems more popular among medical men, but I have failed to learn that in a single instance it has had any marked effects. It seems to me, on theoretical principles, not possible that a remedy should act in the manner hoped for, when the rapidity of the heart's movements depends upon so many different causes; the only true way to discover its value is to make clinical observations of its action in the different diseases in which it is administered. The application of a physiological result to morbid processes, to my mind, in this and in many other cases, has been fraught with harm, and I cannot regard the method as truly scientific."

Yet Dr. Wilks admits later, that after a drug has been found practically useful, pharmacological studies may throw light upon its mode of action. Pharmacology, in other words, has its usefulness and scientific merit in illuminating the past rather than in penetrating the future.

The views on medical treatment above outlined are perhaps not particularly novel, but it is well, at times, to be reminded of the precarious footing which therapeutics holds as a science.

The very natural comment will be, however, that, after all, most of our advances in the line of treatment have been under blind empiricism. Pathology did not reveal to us that iodide and mercury cure syphilis, or that arsenic cures neuralgias, or quinine ague, or opium peritonitis. In fact, our art lacks so much of perfection that we can not afford to ignore any legitimate mode of activity that may, by any possibility, advance it. But the wise physician will direct his energies only in those channels in which he is the most likely to attain results. This is the moral of Dr. Wilks' address.

THE "BUSY PRACTITIONER" AND HIS NEEDS.

This individual has of recent years become a very unique personage in the community. The conception formed of him is that he is a capable, hard-working member of the profession, with a large practice among well-to-do people. In addition, he has the usual hospital, dispensary, journalistic, society, and other duties, which so largely make up the routine life of every medical man. He is supposed to have a carefully-selected and well-stocked library, and to take all the journals. In short, he is regarded as the nearest approach to perpetual motion of which the human organism is capable. In view of all these demands upon his time, numerous philanthropic endeavors have been made to construct for him time- and labor-saving devices. Particularly is this true in the domain of literature, and to such an extent has this been carried that it would require every hour out of the twenty-four for him to examine even a tithe of all the books which have been prepared for him. To many a man comes the awful injunction that came to Josiah Allen's wife, "Write a book." He does not, like her, shrink with awe from the task, but boldly plunges into the work. The book is written. If it contains the result of original investigation it is generally dedicated to the medical profession at large. If (as is, alas, too often the case) it is merely a rumination of previously known and accepted ideas, without the reinforcement of any new pabulum, the cud is generally thrown to the "busy practitioner," who wisely lets it remain where it happens to fall. Its final fate is either to slowly oxidize into oblivion or to cause mental dyspepsia in the omnivorous medical student.

The authors of some of these volumes seem virtually to say: "Such a book is needed: this book supplies the need." They remind us of that body o religious believers who once assembled and passed the ollowing resolutions: "*Resolved*, that the saints shall inherit the earth: *Resolved*, that we are the sain' " nd then adjourned *sine die*. It is not recorded that these resolutions ever produced any vital effect upon theology at large.

The busy practitioner is not blind to his own best interests. Such abstracts for ready reference as he may need from general medical literature he prefers to make for himself. If he cannot find time to do this, he should narrow the circles of his duties to that point where he can acquire that indispensable knowledge which will enable him to keep up with the times. He is not harmed by the books of the class to which we have referred. They fall into the hands of students, who make a wrong use of them. Our best, well-rounded students are not those who rely on abstracts and condensations, but those who follow a wide course of reading, centred around original thought and wide experience. In so doing they plough a wider and deeper furrow. Once emancipated from the confining influences of college examinations they press steadily forward, choose the more solid and practical works, and become our independent thinkers.

Above all, clinical facts are always valuable. We have thus far been able to solve but comparatively few of the problems of medical science. Any data bearing on these problems are most welcome, but in view of the present crowded condition of our literature it is a solemn thing to add mere duplicates of what already exists, without adding any new material. The burden is already heavy enough.

The Health Officer of the Port of New York.—The term of the present Health Officer expired some time ago, and it is only because a "deal" could not be made that he or his successor has not been appointed. Among the persons who are now reported to be aspirants for the position are Drs. F. R. S. Drake, Charles Phelps, A. Flint, J. C. Hutchinson, T. S. Bahan, and L. Foster.

News of the Week.

A Maternity Hospital for the College of Physicians and Surgeons, New York.—Mr. William Douglas Sloane, of this city, is about to erect at his own expense, for the College of Physicians and Surgeons, upon their land, Fifty-ninth Street and Tenth Avenue, a Maternity Hospital. His wife, daughter of the late W. H. Vanderbilt, has endowed the hospital, so that all its beds will be free. When completed, the hospital is to be given to the College. It will bear the name of the "Sloane Maternity."

The American Journal of Obstetrics.—The erroneous impression has reached the profession that *The Journal of Obstetrics* has discontinued the department of Diseases of Children. This is by no means the case. The department of Diseases of Children has merely been discontinued as a *separate* feature of the journal, and has been returned from the care of a special subeditor to that of the editor-in-chief, Dr. Paul F. Mundé, to whom all contributions relating to pediatrics should be sent.

The Massachusetts Board of Health.—A committee from the Massachusetts Medical Society, consisting of six physicians, has been appointed to urge upon the Legislature the advisability of the reorganization of the Massachusetts State Board of Health, by separating it from the Board of Lunacy and Charity.

Our Esteemed Contemporary, the *Florida Medical and Surgical Journal*, is a vivacious and interesting exchange, with no foolish bias in favor of metropolitan medical centres, especially New York. It should not, however, forget that even the lost children of cities larger than Jacksonville have their rights, and we beg of it, when quoting our editorials, to give us the credit, not the *Weekly Medical Review*.

Successful Enforcement of the Medical Law.—With the morning of a new year comes the dawn of better days for the medical men in California. Within the last few months several irregular practitioners have been arrested and brought to justice.—*Pacific Medical and Surgical Journal.*

New York Pathological Society.—It is rumored that the Pathological Society is shortly to come into the possession of funds which will enable it to found a lectureship.

We are pained to see that the *Medical and Surgical Reporter* is departing from its usual conservative and straightforward methods in order to misrepresent the status and statements of The Medical Record. Quoting only a portion of our editorial of January 9th, in which we published the letter of Dr. Johnston, of Paris, it makes us say that "a considerable part of the best men of the profession have been excluded from the International Congress." Our contemporary must know that this is not the whole of the sentence, and it misrepresents our meaning when thus quoted alone. We are forced to add further, that our esteemed contemporary appears to have forgotten that the management of the proposed Congress is not now in the hands of the American Medical Association, but in those of an Executive Committee which has declared itself entirely irresponsible of that body. Appeals to the "loyalty" toward the Association, therefore, are simply a process of beating the wind. Finally, our ever-welcome contemporary should know that italics and small caps cannot make an inherently weak argument vigorous. The *Reporter* is unjust in attributing to us motives of action which do not exist. It is unfair, we think, to its readers in giving them a distorted history of the present status of medical feeling as regards the Congress.

Bellevue Hospital and the City Morgue.—The annual statistical report of Bellevue Hospital, for 1885, shows that during the year 11,864 patients were treated in that institution. Of that number 1,106 died. There were 585 patients in the hospital on January 1st. The year's record at the Morgue shows that 5,763 bodies were received there, 3,967 were buried in the City Cemetery, and 82 bodies were unidentified.

The Erie County Medical Society has been enforcing the medical law, and recently caused the arrest of "the veteran phrenologist," O. S. Fowler, for practising medicine without a license.

The other Side of the Case.—While the Drs. Purdy were fined $500 for reporting a case of small-pox, we learn that now Dr. Z. P. Dendler, of Long Island City, has been indicted and held on the charge of not reporting a case of small-pox. Verily, the doctor's position is not a pleasant one.

Testimonial to a Retired Physician.—A movement is on foot to give Professor Tröltsch, the very distinguished aurist of Vienna, a presentation in recognition of services rendered to science and the medical profession. He has for some time been unable to practise, owing to ill-health, and it is proposed to give him a sum of money, accompanied by an address and an album containing the photographs of those interested in his welfare.

Honoring the Memory of a Physician.—The *Maryland Medical Journal* gives an interesting account of the character of the late Dr. William M. A. Maxwell, of Kent County, Md., and says that "during the month of May last a number of citizens of the county assembled, and, after adopting resolutions expressive of their high regard for the deceased and their deep sympathy for his bereaved family, decided to erect a monument as a token of their love for him, and as an indication of their appreciation of his excellence and usefulness as a citizen, physician, and friend. A committee was appointed, and by June 1st $718.25 had been subscribed for this purpose. On December 22d this monument was unveiled, and an able address was delivered by the President of Delaware College, of which Dr. Maxwell was an alumnus, reviewing the life and character of the deceased." The record of such an appreciative deed ought to be a help and stimulus to all who love their profession.

A Fundamental Objection to the Pneumatic Cabinet.—Dr. H. P. Chace, of Highland Falls, N. Y., writes: In connection with the subject of treatment of lung diseases by pneumatic differentiation, which is so ably presented in theory, at least, in last week's issue of The Medical Record, I wish to say that if there is any benefit to

be desired from its use it is practically excluded from the large majority of sufferers from lung troubles, by the enormous rental (two hundred and fifty dollars per annum !) asked for these instruments. Not one country practitioner in twenty can afford to use one. In the first place, a country physician has but comparatively few patients with chronic lung disease to treat each year. The aggregate of the cases seen by the country physicians form the large majority of those afflicted with these diseases, but they are widely distributed, and not a great number come to any one physician. Again, many of these can only pay a small fee to the doctor. You can't draw blood from a stone; if a patient has not the means, you can't get from him a large sum for treatment. To be sure, the authors explain this enormous rental under the very high-sounding phrase of "keeping them (the cabinet) out of the hands of unscrupulous men," but the same policy will keep it out of the hands of professional men.

Stephen Smith's Amputation at the Knee-joint.—At a recent meeting of the Royal Medical and Chirurgical Society, London, Mr. Thomas Bryant read a paper on amputation at the knee-joint, and reported thirty cases. The author strongly advocated disarticulation by the method of Dr. Stephen Smith. He exhibited illustrations of the operation, and indorsed completely the remarks of the American surgeon upon the value of his method of procedure, and strongly urged its application to cases of amputation in the leg also. The muscle substance was generally included in the flap in thin subjects, but not in others. The resultant stumps in the leg thereby obtained were excellent. As compared with other methods mentioned, Mr. Bryant stated that the method of Dr. Stephen Smith was to be preferred, as it gave a better covering to the condyles of the femur, and the flaps were less prone to slough; it also placed the cicatrix entirely behind the condyles, out of the way of injury, permitting no bagging of fluids, the stump being in the best position for drainage.—*Lancet*, Dec. 12, 1885.

No Increase in Medical Schools and Students during 1885.—In a pamphlet recently issued by the Illinois State Board of Health, entitled "Medical Education and Medical Colleges in the United States and Canada, 1765–1885," it is stated that the most suggestive facts revealed by a study of the tables and data presented are: First, that the number of medical colleges has not increased during the past year; second, that the number of medical students and of medical graduates are decreasing. There are still 128 institutions for medical instruction in the United States and Canada, the same aggregate as at the date of the last report. But there were 760 less students in attendance upon, and 273 less graduates from, the sessions of 1884–85 than upon and from the sessions of 1883–84. In the United States there were 953 less students, and 278 less graduates. In Canada there were 176 more students, and 5 more graduates. Third, a more marked uniformity in the requirements of colleges. There are two more regular schools (101), the same number of homœopathic (13), one less eclectic (11), and one less physio-medical (1), which with two miscellaneous or mixed schools, make the aggregate (128) as before. The number of medical students in 1882–83 was 13,088; in 1883–84, 12,762; in 1884–85, 12,002. In 1881–82 there were graduated 4,555; in 1882–83, 4,215; in 1883–84, 4,101; in 1884–85, only 3,831. This is not very pleasant news for the colleges, but it is very comforting to the general practitioner who is now fighting for a livelihood. The decrease in students and graduates has affected eclectic schools the most, homœopathic schools next, and regular schools least of all, another fact which is encouraging. The increase in past years in students is most conspicuous in the smaller provincial schools, while in the large cities—Boston, New York, Philadelphia, Baltimore, Cincinnati, Chicago, New Orleans, and St. Louis—there has generally been a decrease. Thus the number of matriculants in medical schools in New York has fallen from 2,209 in 1880–81 to 1,826 in 1884–85. This fact will probably be interpreted in two ways, according to the point of view of the observer. It may mean that the metropolitan schools are getting more rigid in their requirements, or that the provincial schools are getting to be better educational institutions. In our opinion both factors are at work.

Attitude of the Philadelphia County Medical Society toward the International Medical Congress.—The Philadelphia County Medical Society held its annual meeting on the 6th inst., for the election of officers and delegates to the State Medical Society and American Medical Association. The regular ticket was set aside and a new one elected by a large majority. The following resolutions were presented by Dr. D. Hays Agnew, and adopted:

"*Resolved*, That at its annual election of delegates to the American Medical Association and to the State Medical Society the Philadelphia County Medical Society desires to express its regret at the action of the American Medical Association at New Orleans, in view of the injurious results which followed to professional harmony and to the prospects of the International Congress.

"*Resolved*, That the delegates from this Society be instructed to endeavor to secure such modification of that action as may best conduce to the re-establishment of professional harmony and to the success of the Congress."

"The Sun" Remedy for Hydrophobia.—*The Sun* is generally brilliant in its eccentricities, but it is now doing a curious thing in publishing from time to time what it calls "Dr. Toal's Remedy for Hydrophobia," as follows: "Wound to be cauterized with strong nitric acid, and then dressed with one-half drachm of belladonna ointment and seven and a half drachms of resin. In the case of an adult the following internal remedy is to be taken: ℞. Kali iodid., ʒ iij.; tinct. cinchona, ℥ ij.; syrup simplex, ℥ iv. One tablespoonful after each meal. For children from one to seven years old, half a teaspoonful is a sufficient dose, and for children from seven to twelve years old, from one to two teaspoonfuls. Putting it in other words, two to five grains for a child under seven, and five grains for one under twelve years. This treatment is to be followed for one week, even when the dog is not mad, as the virus of an angry dog produces hydrophobia. When rabies is manifest, the treatment is to be continued for three weeks. In such a case the fluid can be injected with good effect in doses of from fifteen to thirty grains every two hours."

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Stated Meeting, Wednesday, December 16, 1885.

JOHN C. PETERS, M.D., CHAIRMAN.

THIS Section was fully organized on Wednesday evening, December 16, 1885; Dr. John C. Peters was elected Chairman, and Dr. R. W. Amidon, Secretary.

Dr. PETERS then, by special request, read a paper on

THE TREATMENT OF CHRONIC RHEUMATISM.

He merely alluded to chronic rheumatisms of the heart, pleura, membranes of the brain and spinal cord, of the eye, ear, throat, kidneys, uterus, etc., and quickly turned his attention to chronic rheumatisms of the joints.

Almost all rheumatisms are connected with an excessively acid condition of many of the secretions and excretions, including the saliva, perspiration, and urine; even the chyme and blood are less alkaline than they should be. Next is the excessive preponderance of fibrin in the blood, and the great and early destruction of red blood-globules.

Alkalies form the natural basis of the treatment of almost all rheumatisms, and the first question which arises is whether the potash or soda salts shall be used, or both. As the phosphates and potash salts naturally predominate in the red corpuscles and in the formed tissues, while the chlorides and soda salts are most abundant in the serum and plasma, and in all the infiltrating fluids of all the organs of the body, both potash and soda may have to be used; and they will so aid and compensate each other that neither will have to be given in excess. In chronic rheumatisms Dr. Peters preferred the milder and more tonic soda and potash salts, such as the phosphate of soda, etc. This is a good and mild laxative when purgatives are required; it also lessens the acidity of the mouth, stomach, and bowels which is apt to be present, renders the contents of the thoracic duct and the blood more alkaline, and makes the urine and perspiration alkaline. It also lessens the quantity of fibrin in the blood. It is a cooling and slightly antipyretic remedy, and may be used in strong or saturated solution as a local application to chronically swollen joints. In chronic arthritic rheumatism Charcot prefers the carbonate of soda, of which he gives from seven to ten drachms a day, even to old and feeble women, and says he has never seen anæmia or any dissolution of the blood caused by it; on the contrary, his patients even grew stouter and stronger, possibly from the better digestion of sugar, starch, and fat which is caused by this and other alkalies. It also aids in the destruction of an excess of fibrin in the blood, and helps the liver in its great work of destroying fibrin.

Phosphate of soda is a gentle and pleasant remedy, which may be given in about the way that citrate of potash and Rochelle salts are usually given; the latter in half or one ounce doses when laxation is required, and either in one or two drachm doses when their alkaline effects are more desired. It neutralizes all acids, even that which is abnormally present low down in the large bowels; and moderates the excessive acidity of the normal acid phosphate of soda in the urine, and then helps to keep uric acid and the other urates in solution.

But potash is the natural alkali of the red blood-globules, of the muscles, fibres, and all other formed and solid tissues; and citrate of potash, and even Rochelle salts, which is a tartrate of soda and potash, may reach not only the serum of the blood, but the blood-globules and the parenchymatous structures, when rheumatism is firmly lodged in the latter.

Benzoate of soda is another non depressing soda salt, although it is somewhat antipyretic when given in large doses. It is a solvent of uric acid, increases the elimination of urates in rheumatic lithiasis, and seems not only to convert uric acid into hippuric, but also to liberate a portion of the products of disassimilation in the form of soluble hippuric acid instead of insoluble uric. In delicate and sensitive patients benzoate of soda may be given with aromatic spirits of ammonia, thus: Sodii benzoatis, ʒ vj.; spts. ammon. aromat., ʒ vj.; spts. myristicæ, ʒ vj.; spts. chloroformi, ʒ ij.; spts. gaultheria, ad ℥ vj.—dose, ʒ j. to ʒ ij. in water.

The hippurate of soda has been suggested lately in doses of five to thirty grains. It tends to produce soluble urates. A favorite prescription with Granville is: Sodii hippuratis, ʒ ij.; glycerini, ʒ vj.; aq. cinnamomi, ad ℥ vj.—dose, ʒ ij. to ʒ viij. three times a day.

The tauro-cholate of soda also holds uric acid in solution, and is said to render the stools characteristically rich in bile without causing purging. The usual dose is three to six grains, and it is said to be most useful in obese rheumatic patients, in whom the excess of fat slowly melts away. It is doubtful whether it is more useful than purified ox-gall.

The salicylate of soda is only useful in the acute aggravations of chronic rheumatism. It does not destroy the rheumatic element in the blood.

Valerianate of soda is declared by Granville to be very useful in weak and very sensitive patients. He even thinks its therapeutic value is decidedly greater than that of most of the other salts of soda. It relieves the nervous trouble and hyperæsthesia of rheumatism and gout quite effectively, and he cannot help thinking that it also promotes the activity of the absorbents, thus tending to remove congestion, exudation, and even thickening and hardening about rheumatic joints. Usual dose, one to five grains.

It may be assumed that all the good that can be got out of soda will be obtained by these preparations. Charcot always gives quinine, also, when he uses soda or potash in large and long-continued doses. Others prefer salicine as an anti-rheumatic tonic. Both prevent the excessive formation of uric acid. But the tartrate of potash and iron is the best tonic against the anæmia and debility of chronic rheumatism. It is pleasanter and better than the muriate tincture.

But, as before said, the soda salts only reach the liver and pancreas, the intestinal juices, the chyle and serum of the blood. They do not penetrate into the interior of the red blood-globules, nor into the parenchyma of the muscles and fibrous tissues, which the potash salts do. The acetate of potash, quickly supported by iron, is a most valuable remedy in subacute rheumatism, and especially in those forms which are liable to frequent acute exacerbations.

But citrate of potash is a much more pleasant and less depressing remedy in very chronic cases.

There are, pathologically, two great varieties of chronic rheumatic joint disease: 1, the fibrous; 2, the dendritic. In the fibrous form the tendency of all the exudations is fibrogenous. The inflammatory products or thickenings, instead of remaining in the soft and gelatinous stage of fungoid granulation, become firm and tough. The new cells are converted into fibres, and these harden and contract; even the inner surface of the synovial membrane is made hard. The normal dendritic growths of the villi are conspicuously absent, and in place of them are thick folds of fibrous tissue. The synovial membrane itself is infiltrated with fibrinous substance, composed entirely of fibre-cells, both fusiform and oval; only a few round cells are to be seen.

The favorite remedy for this state is the muriate of ammonia, administered as freely as iodine of potash is often given. If fears are entertained that it will prove too debilitating, it may be aided by aromatic spirits of ammonia, or with quinine, or Huxham's tincture of bark; although Granville prefers the tincture of serpentaria,

which he thinks has a specific effect. The muriate tincture of iron should not be forgotten.

Muriate of ammonia is a solvent and liquefacient remedy which tends to render all the secretions more abundant, while at the same time it reduces the plasticity of the blood and destroys fibrin.

It acts upon the kidneys, and if long continued will cause emaciation, commencing first with absorption of fats and then of soft fibrin. It is used both internally and locally against fibrous thickening of the ligaments and tendons about rheumatic joints. Some go so far as to think it almost specific against all cirrhotic affections of the connective tissues. In chronic rheumatic synovitis it is said to break down all the exudations into a thin mucoid substance which is finally absorbed. It also has a powerful effect on the formation of urea; it is not only converted into urea, but helps to break down uric acid into urea, and aids in the excretion of both. It is also supposed to be really useful in so-called rheumatic neuralgias, when the fibrous sheaths of the nerves are involved. The dose is from five to fifteen grains up to one hundred and fifty grains a day.

Its great rival is corrosive sublimate, which may be given in doses of one-twenty-fourth to one-sixteenth or more of a grain, in Huxham's tincture of bark, or in the tincture of serpentaria.

The next great variety of chronic rheumatic arthritis, or synovitis, is the dendritic, in which the folds or fringes of the synovial membrane are greatly developed, so as to nearly resemble papillomata. For this sabina has been suggested, especially when it occurs in females at the menopause, or where there is decided uterine derangement. Sabina once had a great repute, which was not undeserved, in chronic rheumatism and gout, for which it was employed both internally and locally to the affected joints.

Pulsatilla is a remedy which is supposed to act specifically upon almost all the mucous and synovial membranes, especially those of the small joints, and has a well-assured reputation in chronic rheumatism. It is most useful in subacute and chronic arthritic rheumatism when there is little or no fever; also in what is called rheumatic gout in females, with catarrhal and rheumatic disorders of menstruation.

But next to carbonate of soda, Charcot prefers iodine to the muriate of ammonia and sabina; not iodide of potash, but tincture of iodine, in doses steadily increased from eight to ten drops in twenty-four hours up to thirty to sixty drops. He gives it during meals in water slightly sweetened, or in a glass of Spanish wine, which he says is better. He continues it for several weeks, or even months, and says it never gives rise to symptoms of iodine poisoning. Probably its effects are largely counteracted by the starch in the food. Granville also thinks iodine the most potent and suitable medicine to decompose urates in the blood, and says it relieves chronic rheumatic pains so promptly that he has rarely to use anodynes. But he always gives it combined with muriate of ammonia and chlorate of potash, thus: Ammonii chloridi, ℥ ss.; potassæ chloratis, ʒ ij.; tinct. iodii, ʒ ij.; glycerini, ℥ ss.; aq., ad ℥ xij.—dose, from a tea to a tablespoonful two or three times a day. The taste of this mixture is more disagreeable than that of the tincture of iodine. One of the best prescriptions is that of Dr. Buckler, viz.: Iod. potass., gr. ij.; iodid. ferri, gr. j.; iodine, gr. $\frac{1}{10}$; ext. conii mac., gr. j.—make one pill, to be taken three times a day. These pills are easily taken, and are said to be particularly efficacious in chronic articular rheumatism, even where there is an anæmic, scrofulous, or syphilitic taint. The so-called nodosity of the joints has been successfully treated with iodine.

Arsenic is the great rival of corrosive sublimate, iodine, and muriate of ammonia in chronic rheumatism of the larger joints. Occasionally it produces marked amelioration, but it often fails, and is said to be useless in the most inveterate cases. It generally aggravates at first.

Phosphorus is a more reliable remedy in arthritis deformans, and phosphate of ammonia forms more soluble salts with uric acid than any preparation of soda or lime. Uric acid and the urates disappear rapidly from the urine made after its use, and pains and swellings of the joints are relieved as rapidly as from any preparation of soda or potash. It is fully equal to the other alkalies, and preferable to most of them in delicate and feeble subjects. It maintains a highly alkaline condition of the blood, has a distinctly alkaline reaction itself, and renders the urine alkaline.

Dr. Andrew H. Smith will read the next paper before the Section on "The Treatment of Dropsy with Apocynum cannabinum;" and Dr. Amidon will open the discussion on the local and dietetic treatment of chronic rheumatism.

SECTION IN OBSTETRICS.

Stated Meeting, December 23, 1885.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

DR. EGBERT H. GRANDIN read a paper, entitled

AN OBSCURE CASE OF ABDOMINAL GESTATION, WITH REMARKS BEARING ON TIMELY DIAGNOSIS AND TREATMENT.

Abdominal gestation is a rarity when compared with other abnormalities of pregnancy; the diagnosis is eminently difficult, and therefore it is why, as a rule, those who are unfortunate enough to meet with this condition fall into error, with the result of death of the fœtus, and not infrequently, also, of the mother. A study of the reported cases shows us that pelvic cellulitis, pelvic peritonitis, ovarian cyst, normal pregnancy, pregnancy in the retroflexed uterus, these and other conditions may be diagnosticated instead of abdominal gestation. The reason for this tendency to error lies in the fact that correct diagnosis is only possible through differentiation of the uterus from the abdominal gestation sac. Such differentiation is only, in the majority of cases, possible through resort to the uterine sound, and this instrument is contraindicated in the presence of marked classical and physical signs of uterine pregnancy, if the bimanual examination fails to differentiate certainly the uterus separate from the gestation sac.

In abdominal pregnancy, ordinarily, the history and physical examination suggest uterine gestation, except that there are present, in addition to the classical, rational, and physical signs, the further symptoms of intermittent attacks of pain, irregular discharges, and, perhaps, the passage of what might suggest a decidual membrane. This additional history, according to all our text-books, points strongly to ectopic gestation, and yet this history is very fallible. The irregular attacks of pain, particularly if accompanied by hemorrhage, will preferably suggest impending labor, or abortion, or uterine pregnancy complicated by placenta prævia, rather than the rarer condition—ectopic gestation. The decidua, if seen, and it rarely is, would be of only presumptive value in diagnosis, because both intra- and extra-uterine pregnancy may go on together to term, and therefore a decidua, and even a fœtus, may be passed without invalidating the presence of an abdominal gestation. Of course, if the physician waits and watches, he may disprove impending labor and abortion, but the reader of the paper contended that the physician need not and ought not to wait (indeed, in the interest of both the mother and the child, will often feel he has no right to wait), because there are always absent in advanced (beyond the fourth month) abdominal gestation signs which necessarily can only accompany uterine gestation. These signs are: the uterine souffle, the intermittent rhythmical contractions.

The first of these signs is only of negative value, because it is inconstant. If heard, it points to uterine gestation; if not heard, this is no certain proof that uterine gestation does not exist. The second of these signs is, in the reader's opinion, positive, and yet it is referred to by only one authority (Lusk), and he very briefly, as of value in differential diagnosis. These contractions are, in the hands of a careful observer, diagnostic of uterine pregnancy, and are present whether the fœtus be dead or alive. In case of abdominal gestation they must be absent, because the sac, if it contain any muscular fibre, does not contain sufficient to simulate uterine contraction. This sign, therefore, will always make the distinction between uterine and abdominal gestation.

Dr. Grandin then related an obscure case of abdominal gestation, which he had seen in consultation with Dr. W. J. Burnett, of Long Island City, and in which every means of physical examination failed to make the diagnosis until the sound established the vacuity of the uterus. In this case he did not think of the value of intermittent uterine contractions, else, he felt sure, he could have made the diagnosis without the sound.

This case brought prominently forward the question of treatment applicable to abdominal gestation. The conclusions reached were: If the child were viable, and at term, do laparotomy, which operation gave the child a chance, and did not materially alter the prognosis for the mother, always provided that, at the operation, the placenta were not interfered with. After the death of fœtus, the rule should be to wait until unfavorable symptoms supervened, when, unless the fœtus were small and *distinctly* presenting at some portion of the vagina, laparotomy should be resorted to. This position is in accord with the opinion of all authorities, and based on statistical data. The mortality percentage from opening through vagina is sixty per cent.; from leaving the case to nature's eliminative efforts is 52.65 per cent.; from laparotomy after death of fœtus varies from 15.+ to 38.+ per cent. Even in face of peritonitis, septicæmia, and deep exhaustion, laparotomy has been performed and life saved. Incision by the vagina resembles nature's crude efforts at elimination, and is, therefore, almost always followed by death resulting from the long-continued suppuration the patient is necessarily subjected to. Particularly are these remarks applicable to cases where the putrid fœtus lies high in the abdominal cavity, and therefore cannot be reached through any incision *per vaginam*. Through laparotomy, on the other hand, the putrid fœtus may be at once removed, and the source of suppuration and sepsis is thus taken away from the patient. The shock resulting from laparotomy is not, by any means, so great as that to which the patient is subjected by the prolonged suppurative process necessitated by vaginal incision, the chief reason being that the peritoneum, in the cases under consideration, has been subjected to insult for months, and is, therefore, less sensitive to the surgeon's knife than if it were a "new peritoneum." The reader therefore contended that laparotomy should ever be the operation of choice, especially to-day, when operators were more skilled, the value of strict cleanliness better appreciated, and when the technique of this operation had well-nigh reached perfection.

Dr. Barnim Scharlau read from the hospital notes of the case as recorded in the Mount Sinai Hospital, in which it appeared that the patient entered on August 24, 1885. For the past six weeks she had emaciated rapidly, had had fever, sweating, and after admission the temperature rose from 102.4° to above 104° F. Dr. Scharlau then gave the physical signs present when he examined the patient, the abdomen being distended by a large tumor which extended in the median line as high as the umbilicus, and which had the general form of a fœtus. The uterus was drawn up and pushed to one side; the sound entered to the depth of two and a half inches. The rectum was pushed to the right side of the pelvis; fluctuation was felt through the vaginal walls. [illegible] into the fluctuating mass in the vagina, and pus of a disagreeable odor was withdrawn. August 28th an operation was performed, the patient being under the influence of ether. It was not his intention in doing the operation adopted to confine himself to making an incision into the vagina, leaving the entire subsequent care of the case to nature. The first indication, he thought, was to evacuate the pus; and in making an opening into the vaginal wall for this purpose he thought that, if it were then possible by dilating the opening to reach the fœtal remains, they could also be removed. But after the escape of forty ounces of pus, a flexible sound was introduced to discover, if possible, a communication between the abscess and the amniotic sac, but no such communication could be demonstrated, and nothing could be felt with the finger excepting a soft mass which appeared to be a coil of intestine. Dr. Fluhrer was also unable to feel the fœtus. The patient's condition before the operation was very low. She did not stand the ether well, and there was danger, by further attempts to reach the fœtus, of penetrating the intestine; consequently, nothing more was done than to wash out the cavity, introduce a very large drainage-tube, and put the patient to bed. She did not fully recover from the shock of the operation, and died two days afterward. It was Dr. Scharlau's opinion that if laparotomy had been performed the patient would have died under the knife. At any rate, her condition was such as to lead him to select the more careful procedure.

Dr. P. F. Mundé said that when, during his absence from the city, he was informed of a case of abdominal pregnancy entering his wards in the Mount Sinai Hospital, and he was unable to return to take charge of it, he envied Dr. Scharlau, under whose care the patient then came, his opportunity; but since he had learned what proved to be apparently the inevitable result of the case, he had changed his mind. The difficulty of making a diagnosis in abdominal pregnancy was illustrated in a case seen by Scanzoni a number of years ago. After the patient had visited him he told Dr. Mundé that he had seen a case in which he could not say whether there was abdominal pregnancy, uterine pregnancy, or pregnancy at all. Afterward he made up his mind that it was a case of pregnancy. The patient died, and on the post-mortem table it was found that there was abdominal pregnancy. The case then appeared so plain that it seemed astonishing that a man of Scanzoni's experience should not have readily made the diagnosis, and saved the patient's life by laparotomy. Regarding the treatment in the case related to-night, personally he knew nothing about it, but from what he had heard he must agree with Dr. Scharlau that the patient's condition was so low that it would not have been proper to do anything else than to evacuate pus, which was causing sepsis, by making an opening at the most accessible point, namely, in the vagina. He was speaking, however, of this particular case, and not of cases generally. Here the indication to evacuate the pus could not have been so well met by laparotomy. Drainage by that operation would not have been so good, and shock would have been greater. Probably the patient would have succumbed sooner to shock, although only slightly greater, had abdominal section been performed.

But he agreed also with Dr. Grandin when he said that laparotomy in general was the proper treatment for these cases. If he could feel a fluctuating mass, containing fœtal bones, in Douglas' cul-de-sac, he should probably make an opening there; but usually the fœtal parts were situated higher up, and here laparotomy should be performed, the fœtal remains be removed, and drainage effected. Dr. Mundé had seen Dr. Thomas perform laparotomy in these cases several times, and he had been surprised at the ease with which he carried out the procedure, and by introducing a drainage-tube and irrigating the cavity the patient recovered without any difficulty.

Concerning diagnosis, he thought the point regard-

ing contractions of the uterus made by Dr. Grandin a good one. But practically Dr. Mundé could say little; he had seen only one case of abdominal pregnancy, and in that instance only on one occasion. After diagnosis he did not think operative interference should be undertaken until term, and then the question would arise as to the possibility of saving the life of the child. There were a number of cases in which the fœtus had been extracted after laparotomy, the placenta being left to come away after its own manner. He thought this a perfectly justifiable procedure if the child were alive and viable. If the child were known to be dead, he should think the lapse of a short time before resorting to an operative procedure would matter little, but he did not believe we should wait for septic symptoms to appear, or for the bones to work their way into the external world through the rectum or other passage. He thought it would be perfectly justifiable before this period had arrived to make an exploratory incision and remove the foreign substance.

Dr. W. T. Lusk said we owed a debt of gratitude to anyone who would give so distinct an account of a well-observed clinical case as had been presented this evening; we were especially under obligation to Dr. Grandin for bringing out so clearly the diagnostic points, which, under any circumstances, are none too definite in these cases. Last May Dr. Barker, Dr. Thomas, and Dr. Lusk saw a patient who came from the West; she had gone to the full term of gestation, and had been carrying a child in the abdominal cavity six months after its death. She had stopped to see a gynecologist out West, well known to all of us, who examined her carefully and said that she was suffering from a fibroid of the uterus. He cautioned her against falling into the hands of surgeons in this city, telling her to enjoy herself, spend her time quietly, and to keep away from the surgeons. The case simply showed how eminent men will make mistakes in diagnosis in abdominal pregnancy. It was not necessary at that time to operate, but the patient will probably soon return for an operation.

While all agreed that it was desirable to perform laparotomy, to save, if possible, the life of the child, it was well to bear in mind the results of such operations. There were thirty-one such cases on record, and in only two did the mother recover. Therefore, the method of operating must be improved before we could entertain hope of good results. All of the twenty-nine patients died of hemorrhage or of profuse suppuration following it.

Dr. Lusk then related the following case, which in many respects was parallel to the one related by Dr. Grandin: The woman was a Hungarian, thirty-two years of age, who entered Bellevue Hospital on May 25, 1885. She was the mother of three children, the youngest of whom was three years old. At the birth of this child she had no medical attendance. It seemed that a severe laceration occurred, the exact nature of which was unknown, and intense inflammation followed. Finally, she was taken to Mount Sinai Hospital, and while there an operation was performed for laceration of the cervix. She was benefited by rest and the operation, and went out of the hospital, but soon intense pelvic pains developed. In spite of this, however, for a year and a half she did her ordinary work. The pain then became so severe that she called a physician, who took charge of her for four or five days. For six months she was unable to work. She entered Bellevue Hospital May 25, 1885, having been seized with profuse hemorrhage. The discharge of blood had been intermittent, occurring sometimes at intervals of two weeks, sometimes three weeks; but lately the intervals were much shorter, and during the last profuse hemorrhage she was seized with violent pains, and went into partial collapse. Dr. Lusk saw her the next day, when he found a large flaccid tumor, situated behind the uterus, and pressing the organ upward and forward; its outlines could be distinctly mapped out. Dr. Lusk thought it was a case of recent hæmatocele. At the end of a week he examined the patient again, and found that the tumor had increased in size, and, instead of occupying the median line, it was to the left side. He then suspected extra-uterine pregnancy, but on passing a hypodermic needle into the sac he withdrew it full of blood. This seemed to confirm his first diagnosis of hæmatocele. The patient remained in the hospital with symptoms of pelvic peritonitis and cellulitis, and symptoms due to pressure of the tumor, until the 15th of June, when he examined her again, and found that the tumor had increased very rapidly, and now occupied for the most part the left side. Tension was very great, the uterus reached nearly as high as the umbilicus; there was distinct pulsation of the vaginal parts, which left very little doubt as to the nature of the case. Still he felt puzzled from the fact that before, on introducing the syringe, fluid blood was withdrawn. He was, therefore, tempted to do that which he would not recommend any one else to do, namely, to introduce the needle again. This time he got clear fluid, and it was decided to be fluid from the amniotic sac. The child was no doubt living; the tumor was growing; the vaginal arteries were pulsating distinctly. The faradic current was applied that night, twice the next day, and on the morning of the third day, the 19th of June. On the afternoon of this day acute inflammation developed, thought to be probably due to introduction of septic matter on the needle. This continued for several days, but on the 2d of July the temperature suddenly fell to 95.5° F. in the axilla, and to 97.5° F. in the rectum, and the patient said she felt a great deal better. Diarrhœa set in, the pulse became very rapid and very compressible. For two or three days she continued to feel better, and then had a violent chill; the temperature rose to 103° F.; on the 9th of July it was 104° F., and it continued high on the 10th. The next day if fell somewhat, and the temperature chart presented a moderate curve until the 15th, but the pulse was very rapid and compressible. These observations were made by the house physician, Dr. R. Sayre, as Dr. Lusk, soon after making use of the faradic current, went to Europe. On the 15th of July the nurse noticed a tumor projecting from the rectal wall, and Dr. Sayre on examination found the posterior vaginal wall torn up to its junction with the uterus, and through this opening his finger came in contact with a fœtal head. He extracted the fœtus, which measured about eighteen inches in length, and was attached to the cord, which measured about eight inches. He then introduced his hand into the sac, which had thick walls, and removed the placenta piecemeal. All portions of the sac except that to which the placenta was attached were perfectly smooth. When he finished the pulse was 144, the respiration about sixty. It was thought the patient was about to die, and they did not wait to wash out the sac, but put her to bed, gave digitalis, and had the nurse administer whiskey, a few drops at a time as the patient could be made to take it. The patient having rallied somewhat by evening, the sac was then washed out. Death seemed to be inevitable, but by judicious treatment and constant care the patient was cured, and on Dr. Lusk's return to his service in September, she was walking about the wards. She was discharged the 1st of October, entirely well.

The case was interesting to the speaker because there was, as there commonly is in cases of extra-uterine pregnancy, a long antecedent history of pelvic inflammation; then there developed hæmatocele, for there must have been hemorrhage into the peritoneal sac, as was demonstrated by the withdrawal of blood by the syringe, and this gave rise to difficulty in diagnosis. Use of the electric current caused death of the fœtus, and unfortunately at this time a septic process was set up by the introduction of poisonous matter with the exploratory needle. The patient owed her life largely to the judgment exercised by Dr. Sayre in the management of the case; instead of observing a fixed rule in washing out

the cavity of the sac with an antiseptic fluid, as theoretical considerations might seem to indicate as the proper course, he made the injections only at such times as the patient seemed best able to withstand the disturbance. When she was extremely feeble the injections were omitted.

Dr. E. L. Partridge said he had nothing to contribute in the way of clinical observation. With regard to the diagnostic value of intermittent uterine contractions, he thought it a very good point to be made; perhaps it was the most important differential sign between uterine and abdominal pregnancy after four and a half months had passed. But even with this and all other signs he thought we were in danger of making a mistake in diagnosis, and for this reason he would take occasion to emphasize the importance of more careful study of ordinary cases of pregnancy. The more familiar we were with the signs of natural pregnancy the more likely would we be to detect abdominal pregnancy should a case occur in our practice. Each case had to be considered upon its own merits, and he thought the value of uterine contraction in diagnosticating uterine pregnancy, as distinguished from extra-uterine pregnancy, would be like that of *ballottement* as a sign of ordinary pregnancy; when it could be clearly made out the diagnosis would be positive, but the difficulty would rest in assuring ourselves that this sign existed.

Dr. H. J. Garrigues corrected the author, who said he, Dr. Garrigues, in going over the literature of the subject for four years had found four hundred cases of extra-uterine pregnancy; he should have said two hundred cases. The point he desired to make, however, was sustained, namely, that extra-uterine pregnancy was far from being as rare as the text-books would lead us to believe. He thought the author was correct in laying stress upon the presence or absence of uterine contractions in the differential diagnosis between uterine and abdominal pregnancy. But he was unable to speak from experience, inasmuch as he had seen only one case of advanced abdominal pregnancy, and that was many years ago, when he less appreciated it than he would now, and the patient was in another man's care. He would call attention to another symptom, probably little known, but which was pointed out by Dr. Howard, of Baltimore. Dr. Howard argued that if the fœtal heart-sound could be heard near the abdominal wall, and the uterine souffle could not be heard, it was a sign of abdominal pregnancy. We often had the opposite condition, presence of the uterine souffle, and absence, so far as could be heard, of the fetal heart-sound; but presence of the souffle did not necessarily point to uterine pregnancy, but this sign would be present only after pregnancy was well advanced.

With regard to treatment, he differed somewhat from the teachings of others, especially those of Dr. Thomas, both in the earlier and later periods. He thought that in the early period we should certainly destroy the life of the fœtus by electricity, which is an entirely safe and reliable method. With regard to how far the period for adopting this treatment should be extended, he advocated its use at any time. In fact, it had been employed at the end of the sixth month, in a case reported in a Berlin journal, and the patient afterward menstruated regularly, gained in flesh, and was in good health. The tumor, after destruction of life by faradization, became nodular, increased in hardness, and greatly diminished in size.

Dr. Garrigues did not believe in the employment of laparotomy. He thought the statistics given by Dr. Lusk were very convincing; there were thirty-one cases, twenty-nine of which ended fatally. If we compared with these statistics those of secondary laparotomy, the results in the latter were very good, considerably more than half recovering. He would not agree with Dr. Mundé in advising that laparotomy be performed after death of the fœtus when the woman was in good health, for there were a number of cases on record in which the fœtal remains became mummified, and the woman retained her health. Should she become sick, however, and fever set in, he should do laparotomy.

Dr. Malcolm McLane directed attention to the importance of making an examination under anæsthesia in doubtful cases.

Dr. H. J. Boldt referred to a case of abdominal pregnancy, which he published in the *American Journal of Obstetrics* in 1880, and said that the history of the case differed from that of the case related by Dr. Grandin, in that there had not been pelvic inflammation nor irregular discharges.

Dr. Grandin, in closing the discussion, said that he had not intended to criticise the treatment adopted by Dr. Scharlau in this particular case; his remarks were intended only to be general. Under the circumstances he probably should have adopted the procedure carried out by Dr. Scharlau. With regard to the value of examination under anæsthesia, he was unable in this instance to make a correct diagnosis until the patient had been anæsthetized.

The Section then adjourned.

Correspondence.

OUR LONDON LETTER

[redacted]

An unfailing object of interest, with the commencement of a new year, is the appearance of the annual volume known as "The Medical Directory." This is not an official publication, although it is supposed to be such by many uninitiated persons. It is, though, far more trustworthy than the official "Medical Register," being compiled from annual returns from members of the profession, most of whom comply with the request to return the annual form sent for corrections. From this reason it is also a very interesting work, and compares very favorably with the arid columns of the "Medical Register." Many curious and interesting facts may be gleaned by glancing through its pages. We see, for instance, that among the older hospital surgeons all those who have the F.R.C.S. Eng., put (Hon.) after it, showing that it has not been acquired by examination. *So far as examinations go*, therefore, their position at the College is not better than that of simple members. It might fairly be claimed that it is not so good as that of a modern member, considering that thirty years ago the only test of knowledge applied to candidates for the M.R.C.S. consisted of an hour's *viva voce* examination by members of the Council, thus differing widely from the varied ordeal through which present-day students have to pass. Examinations are not, of course, everything, and it is only the rising generation which thinks so. Still, the fact recorded above is not without interest taken into consideration in connection with the controversy still raging as to the rights of members. The honorary fellows include among others such honored names as James Paget, Richard Quain, Samuel Lane, Thomas Blizard Curling, Charles Hawkins, Prescott Hewett, George Viner Ellis, John Simon, William Bowman, Spencer Wells, Wharton Jones, and George Murray Humphry. The above list might easily be extended. Among the above are several ex-presidents of the College, and four baronets.

The varied lengths of the entries in the "Directory" is not without interest. Many medical men apparently try and make the most of themselves, their qualifications, and published writings. Others go on the opposite tack. Among the former must be placed the gentleman who styles himself M.D. (Logic) on the strength of having

passed his examination for the M.D. at the London University in logic alone, which forms a very minor part of the examination. The number of senior demonstrators of anatomy at University College is, too, something bewildering if the "Directory" is to be taken as evidence on this point. Under the latter category must be placed no less a person than Professor Ringer, who, with a commendable zeal for brevity, does not insert the names of any of his published works. Here also must, I presume, be ranged a London surgeon who, a few years ago, inserted M.B. Camb. after his name, but has apparently thought better of this and now omits it.

A reference to the "Directory" will also show that the ophthalmic surgeon at one of our largest London hospitals was educated in the first instance for the veterinary profession and qualified as a veterinary surgeon; that one of our best-known ovariotomists began life as a naval surgeon, and that a well-known obstetric physician began his career as a surgeon in the Indian army. The paucity of graduates of the University of London among London practitioners is very apparent. Many graduates of that university in arts and science have apparently been forced to go to other universities to qualify in medicine.

Some time back the Medical Temperance Association (consisting of medical men who are themselves abstainers) offered a prize of one hundred guineas to the best essay on the subject written by a medical student. The award has just been made. The increasing number of abstainers among medical men and medical students is shown by the large number of competitors, and by the fact that three are named as worthy of special mention, besides the actual prize-winner.

In some recent visits to the out-patient clinic of the Hospital for Diseases of the Throat I have had the opportunity of observing several interesting cases. One was a rare case of hemorrhagic laryngitis complicated with facial erysipelas, and the existence of an abscess in one of the cervical glands. Strange to say, the general health of the patient did not seem much affected. Treatment was at first directed to the erysipelas. At the second visit this had disappeared. I also saw a case of malignant disease which strongly reminded me of the published medical account of General Grant's case. It seemed to have begun much in the same way, but had extended so far on his first application to the hospital, that it seemed as if the patient could not long survive. Another interesting case was one of anchylosis of the right arytenoid cartilage. It appeared to have existed for some time, the patient having come under treatment for an attack of acute laryngitis supervening on a chronic affection. There was no history of syphilis or tubercle, but the patient was in bad health, and it was feared that the cartilages were affected. In one afternoon I saw five cases of stricture of the œsophagus. Two of these were evidently malignant and in an advanced stage; one was apparently either fibrous or syphilitic, in a young man, for whom large doses of iodide were ordered; one, in a man about forty, seemed to be pouched, and regurgitation of food was tolerably constant; the other, in a young woman, was apparently spasmodic.

PROFESSOR HAMILTON'S PAPER ON THE "ART OF PRIMARY UNION," AND DR. T. R. VARICK'S HOT-WATER APPLICATION.

To the Editor of the Medical Record.

SIR: Anything from the pen of Professor Frank H. Hamilton is interesting and of benefit to the medical profession, owing to the writer's long and extensive experience in the field of operative surgery.

The aphorism that "There is nothing new under the sun," is well proven by Professor Hamilton's historic account of "union by adhesion." That the success of operators a hundred years ago should equal, if not excel, the success of modern operators is *mirabile dictu*. Can it be that surgery is so non-progressive as this? Indeed, until the past decade or so there was really a retrogression. To-day we have only recovered the ground lost and returned to the methods in vogue during the days of Alanson and his contemporaries. Where can any modern operator show results equal to those obtained by Alanson in 1779—thirty-five successive cases of capital amputation safely piloted to recovery?

Professor Hamilton's disposal of Listerism is at once effective and conclusive. The suspicion of jugglery and humbuggery attached to the Lister method works to its disadvantage. Science deals only with truth and fact—not with pretence and fiction.

The blind devotion and infatuation with which some of the followers of Lister advocate and practise his tenets is akin to the superstition of certain African tribes who believe in fetich.

To some, otherwise sane and rational medical scientists, Listerism is a veritable *ignis fatuus*.

To a specious and questionable theory they attribute a success that is due simply to an improved mode of operation and treatment. A strict attention to detail in operation and treatment, perfect cleanliness, and proper drainage is the true reason for Lister's success, and not his germicides and gauze.

To that famed and most odoriferous drug, that remorseless exterminator of germs—carbolic acid—supernatural powers are attributed.

Professor Hamilton, in commenting upon the treatment of large incised wounds, refers to a paper read before the New York County Medical Association in February, 1885, by Dr. Theodore R. Varick, Surgeon to St. Francis' Hospital, Jersey City (not Newark, as stated in Professor H.'s paper).

The article in question was entitled, "The Protective Treatment of Open Wounds," and advocated the application of hot water, or water a little below the boiling point, to the raw surfaces of wounds immediately after the larger vessels had been tied, the application to be kept up until all oozing had ceased and the parts thoroughly glazed.

The Professor goes on to state that Dr. Varick attributes his remarkable success (a recovery of thirty-seven cases out of thirty-nine capital amputations) to the power of hot water to close hermetically the capillaries, and thus prevent the admission of germs. While Professor Hamilton endorses Dr. Varick's practice as valuable, and one he had often adopted himself, he does not accept his theory, on the ground that the most of the cases reported by Dr. Varick were of the class known as "railroad injuries," and as a consequence there must have been extensive exposure of the vessels by laceration, thus affording, for some time previous to the operation, an unimpeded opportunity for the ingress of atmospheric germs.

If the Professor had read over more carefully Dr. Varick's paper he would not have made the mistake of unintentionally misrepresenting him.

Dr. Varick, in describing the dangers of immediate absorption of atmospheric germs after railroad injuries, where there has been laceration of the soft tissues, says: "As before suggested, the open stomata of the vessels would seem to offer special opportunities for the introduction of atmospheric germs, and the imbibition of any extraneous poison, gaseous or fluid. Such would be the case were it not that the flow outward—which occurs at the time of the infliction of the wound and continues for a greater or less period thereafter—of the fluids washes away any foreign substance which may lodge on the abraded surface.

"From arteries and arterioles there is an accelerated current, from the veins and venules a reversed current, and from the lymph spaces an outward flow—all exerting a conservative influence and temporary protective power; so long as these exudations occur the patient is safe from contamination from without."

As has already been stated, Professor Hamilton's objection to Dr. Varick's theory is based on an assumed exposure to infection of a lacerated wound from the time of its inception to the time of treatment. The above quotation from Dr. Varick's paper answers this objection, and offers a very plausible theory for the protection of the patient from atmospheric germs (if such things really exist) during the *ad interim* period. Provided the patient is not in *articulo mortis*, there is an invariable oozing sufficient to prevent the ingress of septic matter.

This theory of Dr. Varick is not only tenable but clearly proven—supposing, of course, that there is no doubt as to the existence of atmospheric germs and their capability of absorption by raw flesh surfaces—by the absolute immunity from all septic complications of the thirty-nine cases reported by him.

Professor Hamilton, commenting further upon the use of hot water in surgical operations, says: "Dr. Varick recommends that the water have a temperature 'slightly below the boiling-point.' This might do if one were to apply it by means of a sponge, and then only for an instant, as I have often done to close a bleeding arteriole, but if employed continuously or by irrigation through the nozzle of a tube it ought not to exceed in temperature 112° or 115° Fahr., or the temperature which may be easily borne by the naked hand."

The chief purpose for which Dr. Varick advocates the hot-water application is to coagulate the albuminous flow from the stump or wound and constringe the bleeding orifices of arterioles and venules. Water at a temperature of 112° to 115° Fahr. would utterly fail to secure either coagulation of albumin or constringement of arterioles and venules; indeed, as to the latter, it would rather favor hemorrhage than restrain it.

To coagulate albumin hot water must have a temperature at least of 140° Fahr. Another very important property of hot water is to promote reaction, when applied to muscular and nervous tissue stilled to a passive and lethargic condition by the influence of the anæsthetic. To secure this reaction the water must be *hot*, not *warm*.

Dr. Varick thus describes the effect of hot water upon the albuminous flow from an incised wound: "In a coagulated state it (albumin) covers the face of the stump or surface of the wound, forming a perfectly fitting impenetrable shield, plugging up every capillary stoma; where heat is the agent employed, constringes every arteriole and venule, and if applied before the outward flow from the divided vessels has ceased, makes the patient absolutely safe from any septic infection from without whatever." This, the doctor says, is a sweeping assertion, but it is based on a long and varied experience.

For the past fifteen years it has been my good fortune and privilege to be associated with Dr. Varick, as a surgeon to St. Francis' Hospital, Jersey City.

Seeing the wonderful success that attended his operations I was led to adopt his method. Previous to the use of hot water at operations, the ordinary methods of the day had been employed. Listerism had been given a fair trial—the attention to detail so earnestly enjoined by its originator had been faithfully carried out, but the results were not such as would warrant a continuance of its use. Possibly it may have been due to some fault in my use of "the method"—perhaps the carbolic acid solutions may have been not just of the proper strength—or I may have inadvertently forgotten to properly carbolize some of the paraphernalia pertaining to the "system." However, I followed directions as closely as possible—carbolized everything and everybody. If an atmospheric germ was able to survive in the operating-room he must have been a very sthenic germ, for the carbolic fumes nearly killed the operator and his assistants.

Of a total of forty four amputations I performed before using the Varick method, sixteen died—five of these cases were treated *à la* Lister, with two deaths. Since I have used the Varick method I have had twenty-nine amputations, with six deaths. Of these six deaths not one could be attributed to a septic complication. One half of the previous sixteen deaths were due to blood-poisoning, the two deaths under the Lister system being unmistakably due to that disease.

A thorough system of drainage in the after-treatment of incised wounds, with perfect cleanliness, is a *sine qua non* to success. This, with the use of hot water at the time of operation, and a painstaking and conscientious attention to detail, as recommended by Velpeau, Lawson Tait, Hamilton, and others, will secure results, in my opinion, far exceeding the success claimed for Listerism or any other antiseptic process.

JOHN D. McGILL, M.D.,
Surgeon to St. Francis' Hospital, Jersey City, N. J.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 10, 1886, to January 16, 1886.

SWIFT, EBENEZER, Lieutenant Colonel, U.S.A. (retired). Died near Hamilton, Bermuda, December 24, 1885.

New Instruments.

A NEW PATTERN OF URETHRAL SOUND.

ONE who proposes to the profession a new instrument must needs apologize, hence I offer the proposition and the apology together.

I invite the attention of the profession to a new pattern of urethral sound. The straight shaft is six and one-half inches in length—the average length of the spongy urethra; the curved and conical part three-fourths of an inch in length—the average length of the membranous urethra; the tip is three-fourths the size of the shaft. Hence, when this instrument is passed

into the average urethra its full length, the commencement of the straight full-sized shaft is at the triangular ligament, and the tip is at the apex of the prostate. The prostatic urethra is not invaded at all. Its advantages over the full-curved sound are several. By its use we get all the benefit that can be had from *any* sound, with none of the mischiefs which are liable to follow the invasion of the prostatic urethra and the bladder; it being conceded that in more than nineteen-twentieths of the cases of urethral disease, for which the frequent use of steel sounds is indicated, the disease is in front of the deep perineal fascia.

1. *It does not cause prostato-cystitis*, which frequently follows passing instruments into the bladder, and which is especially to be deprecated when the bladder is already affected with a mild, chronic hyperæmia or inflammation, which is common in such cases.

2. *It does not induce epididymitis* which only follows instrumentation which mechanically irritates the floor of the prostatic urethra.

3. *It does not induce urethral fever.* That rarely, *if ever*, follows instrumentation or operation below the deep perineal fascia, though further observations on that point are admitted to be desirable.

4. *It causes less pain, and no unnecessary pain.* (See Dr. Weiss' article on the above subject in No. 25 of THE RECORD, for December, 1884.)

Its advantage over a straight instrument is: *Facility of introduction* when the disease is *at* the bulb of the urethra. I have always used a straight sound for the penile urethra, and prefer it, and only pass it through the diseased part; but for disease *at* the bulb, a conical sound *must* pass through the triangular ligament. Here the sound proposed passes as readily as a full curved one, and a straight instrument is here with difficulty passed through both stricture and ligament, even by an expert. Further, the curved part is so short, that, in the penile urethra, where a straight instrument is preferred, this sound answers the purpose about as well, and very much better than one with the full curve. I have a set of eight instruments—every third number of the French scale, from fifteen to thirty-six, inclusive, which were made for me by Tiemann & Co. It is not claimed that the above presents any original points of doctrine, only that the instrument proposed better fulfils well-known indications.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 16, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
January 16, 1886	0	1	37	3	20	81	7	0
Deaths.								
January 16, 1886	1	3	0	5	1	34	2	0

THE LACKAWANNA COUNTY MEDICAL SOCIETY.—Dr. M. J. Williams, of Scranton, Pa., writes: "In looking over my RECORD of the 26th ult. I saw a statement that, 'at a meeting of the Lackawanna County Medical Society, held December 8th, a telegram was received from Dr. J. V. Shoemaker, of Philadelphia, asking the society to rescind their resolution of last month condemning the action of the American Medical Association's new committee in excluding eminent physicians from the Congress. A motion to reconsider the resolution of last month was offered, and, after an animated discussion, was defeated.' How much truth there is in the above statement you will readily see from the following facts, gleaned from the transactions of the Lackawanna County Society for November and December, it being necessary to give both months in order that the subject may be better understood. At a very poorly attended meeting held November 10th, a resolution, condemning the action of the American Medical Association's new committee, was offered and championed by a comparatively new member; in fact, it being his first attendance as a regular member of the society, which received six votes out of a society numbering forty-five members, which truly cannot be considered a very strong expression of the society. Remember, those six included the maker of the resolution, and some that rarely attend the meetings of the society, and only in this case for the express purpose of passing this resolution. Having succeeded in carrying their motion, in order to make the matter more emphatic a second motion was made, to appoint a committee of three to draw up a set of resolutions condemning the action of the new committee of the American Medical Association, which was carried by the same vote as the first motion. But, alas, this proved to be the straw that broke the camel's back, as we learned from the subsequent meeting, held December 8, 1885. The meeting of December 8th being our regular monthly, as well as annual meeting for the election of officers for the ensuing year, was largely attended, there being twenty-nine members present. This proved to be the largest, and most representative meeting ever held of the Lackawanna County Medical Society. Not only was Scranton well represented, but there were present members from Carbondale, Oliphant, Fleetville, and other towns, making it a truly representative meeting. At this meeting, when the condemnatory resolutions were presented, they were defeated by a vote of nineteen to ten; one of the ten not being a member, the vote really stands nineteen to nine, leaving no doubt as to the defeat of the resolutions. A motion was then made to reconsider the action of November, which was carried by the same vote that defeated the resolution. The President being asked to cast his vote, did so with the majority, making twenty votes for reconsideration. In relation to the telegram sent by Dr. J. V. Shoemaker, of Philadelphia, asking the society to rescind their action of November, I will say, the society never received any such telegram. I believe Dr. Throop received a message from Dr. Shoemaker, but as that was private it certainly did not belong to the society. In order that you may see some of the animosity that exists toward Dr. Shoemaker by one of the party that supported the November resolutions, allow me to give the expression in his own language, verbatim, 'I am glad to get a chance to sit on that Shoemaker.' I have submitted this communication to both the president and secretary of the Lackawanna County Medical Society, for their inspection, verification, and approbation, which they fully endorse by adding their official signature. In conclusion, allow me to say that the great majority of the members of the Lackawanna County Medical Society feel sorry that matters exist as they do in relation to the International Congress, but we also wish it understood that we feel loyal to the American Medical Association. Trusting you will pardon me for trespassing so much on your valuable space, expecting to be treated fairly, asking no more, nor expecting any less, I remain, very respectfully,

"M. J. WILLIAMS, M.D.

"B. H. THROOP, *Pres. L. M. Soc.*
"W. A. PAINE, *Sec'y Lack. Co. Med. Society.*"

ANOTHER NEW JOURNAL.—The *Chirurgicheski Vestnik*, "Surgical Courier," is the title of a new monthly journal which is announced to appear early in the present year in St. Petersburg. The editor is Mr. N. A. Velyaminoff.

TREATMENT OF SINGULTUS.—Pagenstecher reports a case of obstinate hiccough, which had resisted all the ordinary remedies, cured by an infusion of jaborandi leaves. The spasm ceased as soon as profuse sweating occurred.

THE MODE OF ACTION OF ANTIPYRIN.—Dr. Francesco Coppola, after excluding one by one all the causes which can effect a reduction of temperature in the animal organism, concludes that the antipyretic effect of this drug depends solely upon an increased dispersion of caloric, and not upon any central action.

AN INTERNATIONAL CONGRESS OF CRIMINAL ANTHROPOLOGY was held in Rome, in November, 1885. The members indulged in prolonged discussions upon the etiology, psychology, and pathological anatomy of crime. The sessions were presided over by Professors Lombroso and Terri.

DEATH IN A DENTIST'S CHAIR.—A Parisian dentist, M. Duchesne, recently had the misfortune to lose a patient to whom he had given an anæsthetic previous to the extraction of a tooth. The dentist, being neither a physician nor an *officer de santé*, was adjudged to have illegally administered the anæsthetic, and therefore to have been guilty of homicide. He escaped, however, with the payment of a fine of 3,600 francs. It would thus appear that homicide, as defined by the French courts, is a pretty cheap recreation after all

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Original Articles.

CATARRHAL INFLAMMATION OF THE UPPER AIR-TRACT.[1]

BY SAMUEL SEXTON, M.D.,

It has not been long since inflammation of the mucous tract of the head was simply known as a "gathering" in the head. Of late this has given way to a term less expressive of the trouble, namely, a "cold in the head." Gradually, however, as catarrhal affections of the ear and nose have received greater attention, their importance is more generally recognized, and it now seems time that the entire pneumatic tract of the head should be considered as a whole, in order that the etiology, pathology, and treatment of this region, or any of its parts, may be intelligently considered. It will be profitable to those who have not already given the subject particular attention, to glance at the pneumatic area of the head, as shown in the accompanying diagrammatic view of this region.[2]

FIG. 1.—Diagram of Upper Respiratory Tract and its Accessories [illegible] S, M, I. superior, middle, and inferior turbinated bones; 5, 5, antrum of Highmore; 6, 6, [illegible]; 7, 7, sphenoidal sinuses; 8, 8, [illegible] sinuses; 9, 9, sphenoidal sinuses; 10, 10, frontal sinuses; 11, 11, infundibulum; 12, 12, Eustachian tubes; 13, 13, tympanum; 14, 14, mastoid cells; 15, 15, mastoid sinuses.

Greater knowledge of the boundaries and extent of the tract may, however, be obtained by studying the prepared bones of the face and head. The osseous forefront in man will thus be seen to consist of a framework not unlike the bony structure in birds, where extreme lightness is assured without undue loss of strength—a conformation well adapted to the physiological requirements of the special-sense nerve distribution to the ear and nose.

The more important cavities of the head concerned in catarrhal inflammation are: 1, the tympanum, mastoid antrum, and cellules; 2, the turbinated bone interspaces; 3, the frontal sinuses; 4, the ethmoidal cells; 5, the antrum of the superior maxillary bone; 6, the sphenoidal sinuses. The large sockets for the lodgement of the eyes, the oro-pharynx, the pharyngeal vault, and the nasal passages, are also a part of this region. The various cavities have connecting sinuses, and the entire system is everywhere lined by mucous membrane.

It is manifest, then, that no one part of the upper air-tract is liable to catarrhal inflammation altogether independently of the others. Before alluding to causation in a broader sense, however, a passing allusion may be made in this connection to several important local anomalies and affections which sometimes stand in a causative relation to catarrh. Thus, deviations of the nasal system occur often enough to attract attention to their possible influence in causing catarrhal inflammation; where this interferes with free circulation of air and the escape of secretions, it may be not only causative of catarrh, but may also increase its dangers. The relations of deviations of the nasal septum to a high palatal arch are notably frequent, and from a study of a large number of subjects of this defect in catarrhal patients, I cannot believe that it has any other significance than that it seems to pertain to individuals with marked ovoidal conformation of the face, who generally have high-arched palates along with the lengthened facial measurement. Diligent search for an explanation of the high arch, in connection with the development of the teeth, was made of the writer's collection of plaster casts of the jaws, several hundred in number; but it would seem that the teeth have no influence in narrowing the arch. The height of the palatal arch has not, so far as I can discover, any significance in respect to a hereditary catarrhal tendency, nor does it bear an unvarying relation to deviations of the nasal system.

Hypertrophy of the tonsils, turbinated bodies, and the mucous membrane of the pharynx (adynoid vegetations), are very common results of catarrhal inflammation, and when present are to be considered as exercising an influence on the mucous tract in the neighborhood as well as remotely through their nervous connections; but while they require attention at the hands of the otologist, the subject would, if followed out in detail, carry me too far.

My own experience, in observing catarrhal inflammation of the head and elsewhere, leads me to rather regard it as the local manifestation of systemic and climatic influences, than, as some authorities intimate, the result of a purely catarrhal diathesis to the local manifestations of which treatment is mainly to be directed. I can but think it a fallacy to consider even a strong predisposition, manifesting itself in the guise of heredity in persons seldom free of catarrh, as demonstrating the purely local nature of the trouble.

In defining catarrhal inflammation it is well to distinguish between the deterioration in mucous surfaces which evinces the natural retrogradation consequent on gradual but sure decay, and the conditions that hasten the process, and, therefore, call for medical treatment. But while natural retrogression is in a measure irremedial, yet it is much less active in the strong and healthy. Catarrhal inflammation manifests itself very differently in different cases; thus the healthy and strong withstand its influences, while the weak and susceptible yield readily. The predisponents and excitants of catarrh give coloring to its manifestations; thus, urban and rural environments, respectively, with the diversity in the habits or occupation of individuals, together with climatic differences, produce very different effects, and it will be well to review their peculiarities separately.

Urban peculiarities.—In cities mental strain from overwork, worry, and dissipations of every kind—in a word, civic wear and tear—gives rise to nervous exhaustion, and consequently to mental and physical disability.

To the above should be added the ceaseless noise and the exceedingly deleterious dust and offensive and noxious odors with which metropolitan air is generally laden.

[1] Read before the Practitioners' Society, June, 1885.

[2] Drawn by Dr. Lennox Browne at the suggestion [illegible]

Persons almost exclusively reared in cities are, moreover, deprived of the tone and vigor imparted by country life.

The mucous membrane of the air-passages in all persons is thus exposed to a variety of local excitants, but among clerks and operatives it is especially liable to become inflamed. Perhaps worse than all else is the pernicious system of overheating dwellings, hotels, schoolhouses, public resorts, factories, railway carriages, and sea-going vessels. Provision is thus made for the comfort of the ailing or indolent on the one hand, and the economical distribution of heat on the other, without due regard for the consequences on health. These unwholesome conditions are the outgrowth of luxurious civic life, the concentration of mercantile and manufacturing interests, the criminal neglect to keep streets and houses clean, and defective drainage. Thus while out-door air has its impurities at all seasons, it is scarcely possible during the winter to live in-doors without experiencing the ill-effects of overheated and impure air, the tendency of which is to deprive persons of the hardihood necessary to resist the unavoidable and natural vicissitudes of out-door life.

The liability to contract catarrhal affections from exposure of the feet, trunk, and head, in street-cars, to draughts of cold air in all seasons is very great.

Rural peculiarities.—Very different from the foregoing are the usual conditions of country life; here physical overwork is more likely to be met with as compared with mental, although worry and grief in various forms are not unknown. Among pioneers in new settlements homesickness often exists, the food-supply frequently is inadequate, and habitations damp, cold, and dark. The statement applies to laborers in public works, and often to men in the frontier military service. In older and improved country places, where extreme exposure is exceptional, catarrhal inflammation is not so severe, yet the causal influences and symptoms differ from those of the city. It may be said that the rural subject presents the sthenic type, with greater temperature disturbance, while in the city patient, if a subject of nervous exhaustion, it is more likely to assume an asthenic form.

The difference in the phenomena observed in what may, for comparison, be designated as two classes of catarrhal disease, serves perhaps to explain some apparent discrepancies in the conclusions arrived at by medical men, who have looked on the same disease from a different point of view, some regarding it as catarrhal inflammation, others as malarial fever.

But this is not so surprising, since catarrhal inflammation often exhibits symptoms commonly, though wrongly, ascribed to malaria; thus fever is often present, being ushered in with chills; there is a tendency to recurrence, malaise, depression of spirits, vertiginous symptoms, and the like. The subsequent debility and typhoidal symptoms, when present, are therefore liable to mislead the observer, especially if he be a believer in the production of typhoid fever from "malarial" influences. One should reflect here on the possibility of these symptoms being due to disturbance of the nervous system wholly.

Malaria has long been a convenient cloak for our ignorance in respect to the origin of disease. The writer recollects how the "bilious remittent" fever of the Southwest was attributed to this cause in his early experience; and an outbreak of so called "typho-malarial" among the soldiers of his regiment while stationed in the Alleghanies, in 1861, occurring after some weeks' exposure in camp, especially to unaccustomed night air, was alleged to be due to this agency. The popular mind to-day gives credence to this mysterious influence, as it always has done for hundreds of years. Says Cooke, in a recent work on Virginia, speaking of the early settlers on the James River in 1607: "With July came the sultry dog days of a southern summer, and the marshy banks of the river, sweltering in the sun, sweated a poisonous malaria which entered into the blood of the English. The whole colony was prostrated by a virulent epidemic." Thus, as at tide-water two hundred and fifty-four years before, was the origin of a disease assigned to the same causation in the mountains in 1861. In both of the instances named men were suddenly transferred from civil life to an out-door existence, in which little care was taken to properly habituate themselves; sometimes they were idle and inactive for weeks and months, until some emergency called forth their utmost exertions, leaving many greatly exhausted. As a class they were without self-restraint in respect to both food and hygiene. Were not physical influences manifestly the cause of whatever affection these people had, rather than mythical ones? A gentleman competent to give an intelligent opinion, and who has long practised medicine in tropical South America, once said to the writer, in discussing this subject, that it was his belief that their severe fevers might justly be regarded as an aggravated form of catarrhal inflammation.

The confounding of symptoms alleged to arise from so-called malarial poisoning with catarrhal inflammation (inclusive of nervous phenomena so often present) seems to have for its origin the belief that a malignant miasm exists in the emanations arising from decaying animal or vegetable matter, sewer-gas, stagnant water, etc., or is disseminated by the pollen or effluvium of plants. It is to be regretted that the accumulated literature of this subject, embracing the labors of writers for many centuries, cannot by incontestable evidence establish these tenets; proof of the existence of malarial poison, according to a contemporary authority, lies mainly in the alleged fact that the sickness it causes yields to the administration of quinine.

In accepting the miasmatic origin of disease, it has been found convenient to explain its morbific influence through zymotic action, and more recently the microbic theory has been advanced; but whether the "fermentation" of zymosis and the presence of bacteria in the blood are not a product rather than a cause of disease, may well be believed.

The neglect of cleanliness, or, more broadly, of sanitation, is fraught with much evil; but while fully recognizing the danger to health from decomposition of animal and vegetable matter, would not a healthier sanitation prevail were the popular "fetich of the sewer," to which such quantities of quinine are sacrificed, put aside? How often has house-drainage been laid under unjust suspicion in pursuit of this imaginary evil; the wall-paper of the sick-room even torn down in the search after the sewer-pipe has been overhauled, or the house abandoned entirely? How often have worry, dissipation, and exposure, lowering the tone of the nervous system, overtaxing the stomach with alcoholic drinks and indigestible food taken at all hours, breathing the poisonous air of the ball-room, theatre, and the like—probably continued for a "season"—been the cause of sickness unjustly attributed to defective drainage?

It may be well to consider the causes of catarrh of the head somewhat broadly, since the belief has taken deep hold on the minds of many that the malady is purely local; when the influences lying behind local manifestations are thus recognized, it is believed a more rational treatment will prevail. Among the causes are:

Meteorological influences. — Lightning stroke, sunstroke, and congelation are not, of course, in the ordinary sense, to be considered as causal; it is the less or entirely inappreciable, and hence unexpected, variations in meteorological conditions that interest us, more especially because they are liable to be underestimated or overlooked entirely. These changes consist in variations in thermal, electrical, and aqueous vapor tension, inclusive, consequently, of the relative amount of sunlight, oxygen, ozone, etc. The most important of these, and doubtless influencing them all in greater or less degree, is the heat radiated from the sun. Animal and vegetable life upon the earth's crust derive their vitality

from this source. It is the struggle against the undue loss of this heat through radiation from the earth's surface, on the one hand, and the avoidance of an excessive supply on the other hand, in order that a healthful equilibrium may be maintained, that concerns the sanitarian. Circumstances have placed man alike in warm and cold climates, as well as in the more favored temperate latitudes; the latter is most favorable, since out-door life may be enjoyed to a greater extent than elsewhere. It behooves one, therefore, in considering the causes of catarrhal inflammation, to take into count weather vicissitudes due to natural causes. A study of meteorological physics, so far as understood, will make known the natural laws regulating heat, electrical and aqueous vapor tension, of the movements of wind and water (trade and anti-trade winds and ocean currents); the proportion of oxygen, ozone, etc., under varying conditions.

The functions of life for the most part must be carried on in an environment of ever-changing physical forces. We may be said to live amidst ceaseless aërial cyclonic movements of greater or less energy, since the air is ever in motion; these storms—sometimes one following the other, sometimes moving along in an irregular manner together—traverse to a greater or less extent the entire continent, disturbing a varying area of territory. As the cyclone constituting the ordinary thunder-storm advances, there is always a higher temperature in front than in the rear—"the warm air in front," according to Mr. Abercromby (*Nature*, 1885), "having a peculiar, close, muggy character. The cold air in the rear, on the contrary, has a peculiarly exhilarating feeling." These conditions are quite independent of the thermometrical condition.

The following puzzling experience is illustrative of the effect of these influences; it occurred in the writer's early experience in practice. The patient was a man, aged forty-five, whose general health was fair; on entering the sick-room I found him gasping for breath. The heart was beating tumultuously, and his nervousness was painful to witness. He had been attacked with these symptoms on the approach of a thunder-storm which was then prevailing. His wife, who showed no alarm, informed me that he always suffered in this manner during storms, and that recovery was always speedy and complete as soon as the weather cleared.

Sudden and extreme changes in altitude also give rise to peculiar disturbances; persons on arriving in this manner, by rail, at an elevation of some sixteen thousand feet in the Andes, are liable to experience very disagreeable sensations, due to the sudden withdrawal of atmospheric tension. Besides the cardiac failure and pulmonary derangement produced by the transition, congestion and anæsthesia of the skin, cramps, and other nervous disturbances are experienced, known in South America as aire. Similar to phenomena occurring in very much *rarefied* air are those witnessed in persons on coming out of the highly *condensed* air of submarine caissons; in either the sudden disturbance of equilibrium of density causes undue nervous strain.

It is, however, the much more slight variations associated with storm movements that probably give rise to the nervousness experienced by certain individuals. The writer has been informed by a number of his patients that they cannot long endure a sea side residence in summer, even in so agreeable a place as Newport, R. I., on account of the extreme nervousness apparently produced by an environment affected by wind that has swept rapidly over the ocean for a long distance. Besides the general nervousness experienced, there was irresistible somnolency at one time, and at another a total inability to obtain sleep.

I am not aware of any explanation of these phenomena being given, but I suspect that when the nervous system is impaired by exhaustion, its liability to undue excitation or depression by the causes alluded to is increased.

Thermal changes are yet more important than either electrical or barometrical. The rapid liberation of heat from the body of the strong generally arouses healthful activity, but it depresses the weak; on the other hand, the acquisition of a relatively great amount of heat is well borne by the former, while prostrating the latter.

Prolonged exertion in extreme summer heat gives rise to nervous prostration or irritability; this is especially liable to occur during the "dog-days" of late summer, when even slight exercise is fatiguing and attended with perspiration. A draught of air is then, according to the Spaniards, *una facada*, a knife-stab, so dangerous is it regarded. But, as would be expected, exposure to night air when the sun's heat is withdrawn, is particularly dangerous to the susceptible. It is then that *sudden* cooling off, especially in damp clothing, and while the body is overheated, that catarrhal inflammation may occur.

It was long ago shown by Dr. Wells, that when the sun has set the earth's surface becomes quickly cooled by radiation, and the air immediately above becoming too cold to retain its aqueous vapor in a state of suspension, the moisture is therefore rapidly deposited upon the earth in the form of dew or frost, according to the lowness of temperature. It will be observed that dampness often shows itself upon the turf sometimes before the sun has sunk, and from this on the dampness and chilliness of the under stratum of air increases more and more up to a certain point. The intelligent class of natives of the tropics practise much caution to avoid the deleterious effects of this exposure, but notwithstanding their prudence, catarrhal affections of a severe character prevail. This result is less surprising, however, when the effect of prolonged summer heat in producing apathy and inertia—totally preventing exercise, and thus increasing susceptibility—is considered.

Night air at sea is likewise to be avoided, since even the general bracing effect of ocean air by no means insures immunity from catarrhal trouble.

The more decided catarrhal attacks are, of course, well known to be ushered in by chill, with more or less nervous disturbance; sometimes a local manifestation also occurs, as torticollis or a "crick" in some other region. Usually, however, we have to consider the influence of slight impressions only on the nervous system; these have been distinguished as a "shock" or a "stab," although but a slight immediate effect is experienced. In the end, however, very decided phenomena are produced through the vaso-motor system of nerves. A susceptible person may not remain with uncovered head for many minutes in the dew-laden tropical night air without sneezing or even contracting rhinitis. Greater or long-continued exposure, especially in run-down persons, may be followed by ague, dengue, neuralgia, or rheumatism, according to the patient's idiosyncrasy or susceptibility. Of course, the hardy native "of the soil," so to speak, becomes acclimated to vicissitudes by long residence, and even the languid and more unstrung resident acquires immunity not to be enjoyed by strangers.

Thermal variations, otherwise inappreciable, visibly affect the system when run down; thus, in a six-days' summer voyage from Suez to Aden, says Medical Director Delavan Bloodgood, U. S. N., in a letter to the writer, the temperature was seldom lower than 100° Fahrenheit, day or night; on entering the Gulf of Aden, however, a breeze encountered, only a few degrees lower, produced such a chilling sensation that the passengers found an increase of clothing absolutely necessary. My informant recalls now, after many years, the chattering of his teeth on that occasion, and the discomfort lasted for several hours. It is not unusual under these circumstances to experience an immense increase in urinary secretion, andt he ship's surgeon in consequence always receives the visits of a large number of surprised, if not alarmed, passengers. Experiences of practical interest bearing on this point are common enough to travellers. Thus Stanley found, after travelling for some considerable time in the relaxing climate of equatorial Africa, that warm clothing,

including an ulster, was comfortable in July, when the minimum temperature was 63° F.; and the draughts of wind sweeping down the gorges, though not decreasing temperature thermometrically, added greatly to the feeling of "miserable chilliness." The catarrhal manifestations which seemed to prevail on the Congo under those circumstances were of the gastric variety. Mr. Crawford, a gentleman engaged in selecting a railway route across the Pampas during the hot months, notes the rapid changes in temperature on La Plata; a sudden fall from great heat to 26° F., freezing ice in the tents on one occasion, and at Mercedes on another, after an intensely cold night, the thermometer registering 34° F., temperature rose to 107° F. in the shade at 4.30 P.M.

Forbes, while travelling in the Eastern Archipelago, found the natives in Sumatra going about, and even sleeping, in all weathers, nearly naked, and enjoying good health; but almost at once succumbing to the low temperature of mountain heights, often actually dying before they could descend. Mr. Forbes, in his admirable work "The Wanderings of a Naturalist in the Eastern Archipelago," states that at an elevation of 10,562 feet up the Dempo, the midday sun was almost unendurably hot, the hands, face, and neck being scorched the moment they came into the sunshine, though a cold wind was blowing; and the thermometer registered only 63° F. When the sun began to decline, however, the temperature fell rapidly; at sunset it was 47.2° F., and for comfort he was obliged to put on triple suits of clothes.

"When at four o'clock next morning," says Mr. Forbes, "I went out into the Sawah, though the thermometer registered 47° F. (the lowest reading of the night was 42° F.), the air, which was perfectly still—its silence, indeed, almost overwhelming—felt absolutely free from rawness, in marked contrast to what I had experienced at sunset under almost the same reading of the thermometer."

Mental exhaustion alone, without open-air exposure, is very often a cause of head catarrh; yet may one sleep in a cold airy apartment, when not overheated, without risk, and patients with high temperature, unless sweating excessively, get on best with such surroundings.

Causative influences like the foregoing finally prevent healthful equipoise between the different organs, and, in consequence of this, elimination is defective. Along with defective nutrition a perverted state of the nervous system obtains: its tension on the one hand is depressed, or on the other hand increased. At either extreme, or in vibrating between them, peculiar phenomena present themselves; thus periodical disturbances influencing temperature may characterize catarrhal fever, or they may manifest themselves as "nervous explosions" at irregular intervals. Certain subjects become known as "nervous," and are liable to uncontrollable sighing, weeping, outbursts of ill-temper, and other emotional manifestations. Others thus illy-balanced indulge inordinately in stimulants, or food, or sexual excess. It is a notable fact that such nervous persons are extremely subject to catarrhal inflammation, which is liable to take on nervous characteristics. Thus, with bronchitis appears the suffocating spasm of asthma, and with rhinitis the violent irritation and sneezing of hay-fever. Catarrhal neuroses, once acquired by the more susceptible, increase by long continuance to a degree never experienced by less sensitive persons. These local disturbances of the mucous surface are comparable to neuroses of the skin, as zoster and pruritus, where cutaneous burning and itching are caused by reflex action.

Where the asthmatic habit exists, meteorological disturbances, excessive physical exertion, undue mental excitement or depression, cold winds and dust, excite spasm and cough. The sight of dust, even without inhaling it, will excite spasmodic cough—indeed, almost every asthmatic has his *bête noire*, which may explain the whimsical origin of asthmatic spasm in some cases.

In the disordered olfaction of hay or rose fever, the odor of the rose and other objects is compared to the irritation of pepper applied to the Schneiderian membrane, and as in asthma, various dusts and odors cause distress.

Head catarrh often begins very early in life, and continues a long time before the subject is brought to the physician's notice. In fact, it is usually neglected until marked deafness has occurred. The neglect of nasal catarrh is often due to the indifference to the slight discomfort attending impairment of smell, since at best this function is less perfect from disuse or want of cultivation than that of the other special senses. In a few instances I found the sense of smell most acute, resembling that of many of the lower animals, where its importance in the economy is scarcely second to hearing and seeing.

The rhinitis of hay and rose fever is often found to stand in a causal relation to otitis, affecting the ears either by extension of the inflammatory process from the naso-pharynx up along the Eustachian tube to the tympanum, or through reflex sympathy of the nerves.

Sympathy of the nerves.—In certain conditions of the system the nerves become exceedingly impressible to excitation; thus the irritation produced by the introduction of a speculum or a probe into the external auditory canal will excite coughing, or a desire to swallow, and various other sensations in the nose, pharynx, or larynx. Many persons can locate the seat of local irritation thus

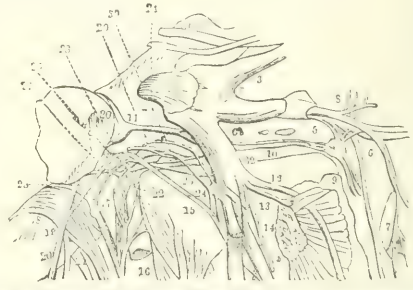

FIG. 2.—Diagram of the Tympanic Plexus (Ranvier). 1, Oculo-motor nerve; 2, trigeminus nerve with the Gasserian ganglion; 3, first branch of the trigeminus nerve; 4, second branch; 5, entrance of the same into the spheno-palatine fossa; 6 and 7, superior maxillary nerve; 8, spheno-ethmoidal nerve; 9, descending palatine nerve; 10, Vidian nerve; 11, large superior petrosal nerve; 12, buccinator nerve; 13 and 14, pterygoid nerve; 15, chorda tympani nerve; 16, carotid plexus of the sympathetic; 17, petrosal ganglion of the glosso-pharyngeal nerve; 18, 19, and 21, vagus, accessory nerve of Willis, and hypoglossus; 20, facial nerve; 22, nervali carotico-tympanici; 23, tympanic, or Jacobson's nerve; 24, small superficial petrosal nerve; 25, nerve of the tensor tympani; 26, tympanic plexus; 27, branch for the oval window; 28, branch for the round window; 29, large, deep-seated petrosal nerve; 30, branch for the Eustachian tube; 31, division of the Vidian nerve into its two branches; 32, anastomosis of fasciculus of the Vidian nerve.

propagated in the ear in some particular spot in these parts, the sensation being described as "burning," "tickling," and the like. *There is very often an increase of the secretion of mucus in the spot thus irritated.* When the throat is in a diseased condition, the reverse of the above often takes place, and the ear may then become affected. When nerve-tension has been long disturbed in this way, reflex phenomena are easily excited; continuous aural, nasal, or dental irritation, even if imperceptible, may affect one part or another, until nutritive (trophic) changes are brought about; slowly progressive aural catarrh finally producing deafness before the patient himself is aware of any morbid action going on. The tissues involved in catarrhal inflammation of the middle ear "consist of a membrane which performs the double duty of mucous membrane and periosteum. The sensitiveness of this structure is extremely great, for it is not only richly supplied with blood-vessels, but also wonderfully well provided with sensory nerves. These latter compose the tympanic plexus, a diagram of which is here shown. This anastomosis derives supplies from sources most extensive; thus by means of branches from the otic ganglion the inferior maxillary nerve is brought into intimate relations with it, and the petrosal ganglion of the glosso-

pharyngeal nerve supplies the tympanic branch, or Jacobson's nerve, which constitutes a large portion of this anastomosis. The carotid plexus of the sympathetic sends a branch to the glosso pharyngeal, and thus establishes a communication between the ear and the superior cervical ganglion of the sympathetic nerve. Through Meckel's ganglion, by means of the Vidian nerve, the superior maxillary of the fifth pair of nerves also is connected with the tympanic system. Besides these there are other connections which may be seen by consulting the diagram."[1]

This extensive nervous connection brings the ear into sympathetic relationship with disturbances in various parts, as the brain, stomach, heart, genito-urinary organs, and cutaneous surface, as well as with other parts already mentioned.

Catarrhal affections of the ear.—From an etiological point of view catarrhal affections of the upper air-tract should be considered as a whole, although the ear, olfactory region, and the various cavities and sinuses of the head may become independently affected. Catarrhal affections of the ear are most frequently met with in the chronic form and in connection with continuous head catarrh; recurrent exasperations ("colds") frequently marking a more or less rapid decrease in hearing power. One ear, usually the left, is found to be first affected, and in the end most impaired.

Aural catarrh, especially the subacute variety, beginning as early as the first month of infantile life, may give rise to total deafness, the proliferation of connective tissue about the articular surfaces of the ossicles producing fixation. Acute purulent inflammation at this period, however, usually leaves the hearing less affected, unless the process become subacute or chronic. The purulent variety may prove fatal; unsuspected ear disease, in fact, is frequently shown, by post mortem examination, to have been the cause of death in young infants, when symptoms of brain disturbance only were recognized during life.

The relations of dentition to aural trouble are very important in infancy; before puberty this process is most active, causing often great nervousness, especially in girls overworked in schools or shops. The catarrhal fever, to which this class of persons is subject, may simulate typhoid fever, for which it has been mistaken.

Adolescents sometimes get their wisdom-teeth with difficulty—indeed they are often not cut until the patient is thirty years or more of age. In consequence of the aural irritation excited through nervous sympathy in such cases, subacute and chronic catarrh of the middle ear, giving rise to extreme deafness, is of frequent occurrence; deafness may come on so gradually that the patient is unaware of its existence until its progress has been marked. Dentition is thus liable to be an important factor in catarrh of the head, and should never be overlooked in treatment. The retention of pulpless teeth should be avoided, especially in persons wanting in nervous tone.

Overworked shop-girls, living under faulty hygienic conditions, having dental irritation, sexual disturbances, and the like, are extremely susceptible to aural catarrh, giving rise to extreme deafness.

Children's catarrh (acute) of the upper air-tract may be ushered in with chill, followed by fever and more or less local irritation, manifested by sneezing, a down-pour of fluid from the nose, and tinnitus aurium as the ear becomes invaded. The fluid profusely secreted by the conjunctival mucous membrane, and that flowing from the anterior nares, often excoriates the cheeks and lips, and later on there is frequently an eczematous eruption at the seat of irritation. The tympanal secretion is sometimes so great that the drumhead gives way and allows the pent-up fluid to escape. The aural discharge also may be the cause of dermatitis, etc., about the external auditory canal and auricle. At first the secretion from the nose and ears may be tinged with blood, but in many cases it soon becomes mucoid, bland, and ropy, and there is a tendency toward a regressive course and spontaneous recovery. In some cases, however, there is a greater tendency to purulency and chronicity; this is especially liable to occur in cachectic, run-down children having chronic head catarrh, difficult dentition, etc.

When serum only, or thin mucus, is poured out into the middle ear, it is frequently carried off into the throat *via* the Eustachian tube, but where the swelling closes the tube, or the mucus is too thick to escape, an accumulation soon takes place, distending the drum-head, and giving rise to earache. When the drum-head has been thickened, and does not give way readily, the distress may become almost unendurable. In the more severe examples of acute aural catarrh the principal seat of the trouble will be found in the attic of the tympanum, where swelling of the mucous lining prevents drainage either down into the atrium of the tympanum or through the Eustachian tube, the pent-up fluids seeking an outlet through the membrana flaccida, which often becomes greatly distended. The secretions, if not liberated, finally burrow along underneath the lining of the superior wall of the external auditory canal, forming a sac of greater or less size, which sometimes entirely conceals the *membrana tympani*. At the same time the *antrum mastoideum* and adjacent cellules are liable to invasion, as well as the periosteum externally.

Subacute aural catarrh, causing great deafness, sometimes occurs consecutive to scarlet fever or measles in children; secretion from the tympanal mucous membrane may be slight, the drum-head may remain intact, and deafness only suspected when the child is found to be backward in learning to talk.

While persons in health quickly rally from head catarrhs, experiencing no harmful result, in delicate children and broken-down and decrepit subjects the disease is liable to assume a chronic form; where the ear is thus affected, recurrent exacerbations are liable to be followed by a decrease in hearing. Concurrent gout, rheumatism, scrofula, consumption, or other constitutional disease increases the gravity of the trouble, and in the two affections last named, as well as in subjects of diabetes mellitus, the tendency to destructive purulent otitis media, with rapid disintegration of the *membrana tympani*, and profuse otorrhœa is marked. In rheumatic and gouty catarrh, however, there is seldom any great amount of pain, the effusion is often serous in character, and no tendency to suppuration exists, the principal seat of inflammation being confined to the attic, involving to some extent the membrana flaccida and other neighboring parts rather than the atrium. These cases are characterized by chronicity, and sometimes a collection of straw-colored serum can be seen behind the drum-head, where it may remain for a long time, displaying air-bubbles when the drum is inflated.

In scrofulo-syphilitic subjects the deeper structures of the ear and nose, including sometimes even the osseous tissue, are liable to be affected; and in syphilitic catarrh, exacerbations are sometimes attended with very pronounced and sudden deafness.

Secretion in catarrhal inflammation is generally characteristic; thus the outpour of fluid from the inflamed mucous membrane of the nose in children, after the feverish stage at the onset, is profuse, as it also is in recurrent rhinitis in adults, notably in hay fever. Incrustations of inspissated muco-pus in the caverns of the nose, especially where a deviation in the septum exists, are seldom seen before puberty; but in chronic catarrh in cachectic persons, or in advanced life, where the mucous membrane enveloping the erectile tissue of the nose has become atrophied, evaporation of the scanty secretion leaves inspissated crusts, which soon become fetid. There is an intermediate stage when mucous secretions become very tough on drying, and are worked out with

[1] Vide author's paper, Earache in Children, Medical Record, May, 1885.

difficulty. Secretion may consist of mucus principally, or it may become sero-mucous, sero-sanguinolent, muco-purulent, purulent, or otherwise combined, according to circumstances.

Inflammation of the mucous membrane of the tympanum, mastoid antrum, or pneumatic cellules of the temporal bone, take on secretory processes similar to the above; the presence of tough mucus affords an explanation of deafness through interference with the movements of the transmitting mechanism; and where sudden and extreme deafness takes place, as in some forms of non-purulent aural catarrh, especially in syphilitic subjects, there is probably infiltration of a particularly adhesive nature, causing rapid fixation of the ossicles. The most marked non-syphilitic examples I have seen were in persons residing in the tropics. Two cases among the latter are particularly instructive. They were non-syphilitic.

Case I.—A gentleman, aged forty-five years, came to me a year ago with the following history: He had resided in Rio, Brazil, some thirteen years altogether, having taken in the meantime two vacations of eighteen months each, during which he visited Europe and this country. During his residence in the tropics, he was for some time under severe mental strain, but passing the warm season in the mountains of Petropolis, the summer residence of the court, at an elevation of some three thousand feet. While so run down, the extreme and sudden variations in temperature were very trying; succeeding to intensely hot and dry days, were damp nights some 20° Fahrenheit cooler. Not having learned of the perils of *el sereno*, the fatal night air, he was less prudent, in respect to exposure after sundown, than the natives, who are careful to protect themselves with warmer clothing, and avoid uncovering the head needlessly for a moment even. He finally contracted severe head catarrh. There was, at first, a sense of great heat and discomfort in the nose, perversion of the sense of smell, especially on first rising in the morning, when everything had the odor of burnt meat. There soon was a profuse down-pour of fluid from the head, which was mixed with blood. On the frontal sinuses and other cavities becoming invaded, the head felt "hot and dry." These symptoms continued for some time. The ears were early involved, and as the disease progressed he became *rapidly very deaf*. Distressing tinnitus accompanied the other symptoms. He was for a few days so deaf as to be unable to converse, but before long some improvement took place; there was no marked improvement in the head catarrh, however, until he left the tropics; and when I saw him subsequently, he could converse with difficulty, in an ordinary tone of voice, at a distance of six or eight feet. Under the favorable influences of the climate in New York, he improved very much under treatment.

The next case is similar to the above.

Case II.—An English gentleman, thirty-five years of age, residing in Venezuela. This patient, a person very much over-worked, in April, 1884, made a three weeks' journey into the interior of the country, during which he was much exposed to an almost continuous rain-storm. He escaped the prevailing fever as he had done hitherto, during twelve years' residence in tropical South America. During his stay with a friend in the country, he sat one morning after breakfast in the corridor of the house *without any coat*. After dinner, the same day, while engaged in conversation he *suddenly* had a most profuse flow of fluid from both nostrils and the eyes, which lasted for some hours. The attack was severe and was accompanied with much coughing. It was feared that this would prove to be a precursor of the "fever" of the country, but the more disagreeable symptoms passed off by the next morning. Head catarrh, however, continued, the tympanum became affected, and there was almost total deafness. A disagreeable sense of fulness in the head, and dryness of the upper air-tract characterized the course of the disease and, in fact, still remained when the writer was consulted.

Treatment.—In the treatment of catarrhal inflammation of any particular part of the upper air-tract, attention should be directed to the condition of every other part; aural catarrh, for example, is not unlikely to be associated with rhinitis. Where indigestion and faulty assimilation are provocative of rheumatism or gout, etc., or, in fact, where any disease may stand in the relation of predisponent or excitant, these factors must not be overlooked, and when the patient's interests require it the valuable aid of other practitioners may be sought.

In no affection is attention to hygiene so important etiologically, and hence the questions of food, clothing, bathing, exercise, and ventilation should receive prompt attention. This will be found a most difficult part of the physician's task, especially as regards children and invalids, since the convenience and comfort of parents and nurses is too often consulted to the detriment of the patient; thus are outings curtailed or prolonged unduly, and heating and ventilation arranged to suit the well rather than the ailing. Open air exercise daily should be insisted upon as far as children are concerned, and when inclement weather prevents going out the nursery may be converted, for the time being, into an open air play-ground by throwing open windows and doors, children (or invalids), being suitably clad. Too often is cloudy, threatening weather an excuse for neglecting exercise.

Out-door life for invalids should be regulated, both as regards preventive and curative treatment, by the patient's tolerance for exercise without undue fatigue.

Protracted in-door life during the dark, damp, cold, short days of winter tends to very much lower the tone of the system; it is after this depressing experience, and on the return of milder weather, that incautious exposure causes catarrhal troubles. Delicate persons, especially when over-heated, should avoid exposure when rapid evaporation of snow and ice occurs during a winter "thaw," since even slight (and usually unconscious) chilling of the body causes mischief then rather than the succeeding cold "snap," the effect of which is to tone up the system. It is said that voyagers returning from high latitudes are extremely susceptible to catarrhal affections on returning suddenly to temperate regions.

Health requires that exercise be taken in very cold weather, provided the proper quantity of food is consumed. Now, the animal heat derived from food with difficulty compensates for the immense quantity lost through the escape of heat into space by radiation. The problem of maintaining an equilibrium between these two diverse processes is therefore difficult of practical solution; thus exercise is impeded in a measure proportionately to the means employed in retaining bodily heat by means of clothing, etc. If the escape of heat is prevented by non-conducting clothing, impervious rubber-cloth, the skins of fur-bearing animals, and the like, escape of insensible perspiration through evaporation from the body is also interfered with, and the clothing becomes saturated with moisture—an exceedingly disagreeable and unhealthful condition. The very general introduction of rubber-cloth and fur garments in our temperate climate is to be greatly deplored, since the bodily temperature is too much increased by their use. In regard to the maintenance of a proper bodily temperature, it may be said that everyone must, in a measure, regulate this by the changes in wrappings suggested by his own sensitiveness, rather than the readings of the thermometer.

The advantages of travel and change of climate have long been recognized, and it is particularly notable that where catarrhal neuroses affect residents of cities, immunity may be enjoyed during a sojourn in the country, and *vice versa*; asthmatics are even permanently cured in this way. The most striking effects, perhaps, follow

changes to pure sea or mountain air, but the writer has known of a number of instances of asthmatics being cured on leaving the great interior valley of the Mississippi to reside in New York City.

The inconsiderate advice sometimes given to patients of delicate constitution while ill, to hurry away from accustomed comforts to some favorite region, may prove exceedingly hurtful. The endurance of patients differs greatly; one may become robust in the Adirondacks, while another cannot endure the exposure of camping out. Patients, therefore, should be well informed in respect to the requirements of the particular spot to which they are sent; for example, they will find that natives of the tropics require thick woollen clothing during their short winter, although the thermometer may register 60° F. only, while those of high latitudes, where the sun's rays during their brief summer are exceedingly oppressive at 60° F., *per contra*, may swim in the ice-cold water with much pleasure. The native Esquimo through much exposure become inured to the dreadful Arctic winter, *even suffering with heat when the temperature rises above the freezing point;* cold weather and exposure, says Schley, in the narrative of the Greely rescue expedition, have no terror for them.

In the tropics, sensitiveness to sudden exposure to air a few degrees below the customary temperature, has been shown to give rise to chilliness; on the other hand, sensitiveness to moderate heat gives rise to equally painful sensations to persons long inured to Arctic cold; thus a scalding sensation is imparted to the skin by the contact of the warm blood flowing from the whale and walrus when slaughtered.

For the greater number it would seem that a knowledge of their own environment, together with a study of the conditions best suited to their needs, is of much greater importance than the discovery of sanitaria, at best available to but few. Indeed, it is useless to seek a perfect climate where catarrh is not found; we can only recommend the best average climate suited to a particular case. Patients from the North find needed rest in the languid life of the South, while Southerners are benefited by the bracing air of the North. Moreover, it will be found by experience that favorite resorts have their off-seasons; for example, Nassau, usually the most charming of winter climates, was during the past winter (1884–85) so disagreeable from the cold and humidity, that many of our patients sent there for the winter were compelled to leave before the season was over. If the invalid go to tropical climes, aqueous vapor is liable to be found in excess the year round, the humidity of the summer interfering with healthful escape of insensible perspiration, and that of the winter conducting away bodily heat too rapidly.

The influence of aqueous vapor in the air is important: Tyndall, says Stewart (*Nature*, vol. ii., 1885), has called attention to the fact, that aqueous vapor being transparent for rays of high temperature, does not stop but a small portion of those which come to us from the sun; but being comparatively opaque for rays of low temperature, it stops the radiation into space from the surface of the earth. In other words, it acts as a cloud in preventing refrigeration which accompanies dew. In regions, however, where the air is very dry, the nights are intensely cold, owing to the uncompensated radiation into space. In Central Asia and in South America, as cited by the writer, water is often frozen after the sun is below the horizon.

The treatment of catarrh of the upper air-tract implies the management, to some extent, of all the troubles about the head, since nearly every affection of the ears, eyes, nose, mouth, and nervous system of this region is generally more or less associated with a departure from the healthful condition of the mucous membrane of this tract. There is too often a demand for an exclusively local treatment, however harsh, which, in attacking a local manifestation, promises to strike down the evil, rather than a rational method which may remove the cause. It is desirable, of course, to get rid of the results of disease, but this will not always affect the cause; in other words, the root of the evil cannot be reached by local treatment alone.

At the onset of acute catarrhal inflammation of the head, local applications, consisting of weak alkaline solutions in water as hot as can be comfortably borne, are soothing, and answer to cleanse the accessible parts when secretions require removal by mechanical means. More rarely are sedative applications required, but where the tonsillar crypts are the seat of chronic inflammation, they may be touched with solutions of nitrate of silver, tinct. iodine, etc. In the chronic form of catarrh, beyond cleanliness, there is but little need of local applications; astringents, however, are sometimes beneficial, especially weak solutions of nitrate of silver, sulphate of zinc, acetate of lead, and the like, or vegetable astringents. These may be applied by means of atomizing apparatus, brushes, or cotton-wool mops; the latter are convenient and have the advantage of being cleanly. Solutions can also be introduced with a syringe, or sniffed up from the hand.

The nasal douche is a most efficacious means of cleansing the naso-pharynx or of applying medicated washes, but it is by far too treacherous to be safely employed by the patient himself. Even sniffing up solutions, or the insufflation of powders, are to some degree open to the same objection, namely: the danger of passing fluids, etc., up through the Eustachian tube into the ear and causing inflammation.

As a rule, I have not often found the nasal mucous membrane to be improved by the application of irritants, which ordinarily give rise to sneezing and coughing when accidentally inhaled, whether employed in dry or humid form, and I believe their indiscriminate use is to be deprecated. The heroic methods often resorted to in treating irremediable, but yet persistent, patients, likewise are usually unjustifiable; the employment of the galvano-cautery, wire snare, écraseur, or strong acids for the removal of structures in the nasal region, has brought out some very energetic methods, which, if safe and proper in skilful hands, are certainly liable to much abuse, and are known to have done positive injury to the nose, as well as set up serious trouble in the ear.

Hypertrophied tonsils, whether obstructing respiration by their size or interfering with the action of the muscles of the upper respiratory tract, should generally be removed.

The treatment of rhinitis, which is so important a feature of hay and rose fever, may often, with advantage, include brushing or spraying the irritated or inflamed turbinated bodies once or more daily with a two to four per cent. solution of cocaine. Tolerance, which sooner or later occurs, lessens its effect finally, and in some cases it does no good.

Atropine ointment, rubbed over the bridge of the nose and the frontal sinuses, often affords great relief; care should be taken, however, to prevent its entrance into the eyes.

Catarrh of the head, especially the acute rhinitis of hay and rose fever, which is most liable to come on in late summer or in the beginning of autumn, seems to depend on the excitability of the nervous system frequently following protracted hot weather, and the neglect of exercise, and it rapidly disappears again under the toning-up influence of cold weather. Since worry and depression of spirits are to be regarded as predisponents in the nervous catarrhs, it is well to remember the advantages of pleasurable excitement, which in asthmatics dispel paroxysms like magic. And, moreover, the "habit" sometimes disappears altogether after the more excitable period of life—the patient, so to speak, having "outgrown" the trouble.

The mucous membrane constituting the inner lining, as compared with the dermic layer forming the outer

covering of the body, offers but little resistance to impressions through the nervous system; inflammation of either, however, often gives rise to sympathetic fever. Perversion of the sexual sense may, in one instance, cause an abundant display of acne upon the skin of the face, or it may expend itself, so to speak, upon the mucous membrane of the head. Sometimes both dermic and mucous surfaces are affected at the same time.

In the internal treatment of acute catarrh of the head the various forms of mercury are most beneficial, especially in the affluent stage; indeed, so long as there is no tendency to suppuration, but rather an inclination to a regressive course, mercury may be used throughout. There is, however, a choice in the form of this drug; one may use hydrargyrum, rubbed up with sugar of milk, which is somewhat similar to quicksilver treated with chalk, only in the former a much finer division of the drug is made. The hydg. chlor. cor., hydg. chlor. mite, and the hydg. cyanidum, are useful forms of the remedy. I myself usually employ the second or third decimal trituration in powder or tablet form, using the cyanide in smaller doses than the others. With the above, given every two or three hours, bryonia alba is a useful adjunct, or this may be given alone after the mercury has been omitted. Where there is pain or nervous irritability, aconite, gelsemium, belladonna, or pulsatilla, are indicated in minute or small and frequently repeated doses; these are particularly indicated where there is fever. Belladonna alone, or with aconite, is specially indicated where tonsillitis is present; where dryness of the throat or increased temperature are observed, they should be suspended for a time. Pulsatilla having no cumulative tendency, is particularly well adapted to children and infants. Where fever arises from the nervous irritation of catarrh, large doses of quinine are not always so much indicated, as minute doses of aconite, frequently repeated. Where purulency threatens or exists, the calx sulphurata may take the place of mercury. In the employment of medicines a due regard for emergencies requires that their use should be prompt in the acute stages, and omitted, from time to time, in order to ascertain what their effect has been. The more profound anodynes are sometimes indicated by the severity of pain; they should, however, only be employed in a tentative way, since they mask symptoms and interfere with nutrition.

In cases where rheumic, gouty, or neurotic tendencies exist, the employment of quinine or rhus toxicodendron is advisable, the former in from two- to five-grain doses, repeated once or twice daily for adults at the onset; the latter, largely diluted, may be longer continued. Diathetical treatment in general need not be alluded to here. Under this treatment, and the enforcement of necessary rest and other hygienic measures, I have seen inflammation of the ears, nose, etc., quickly disappear. The ear, however, frequently requires special treatment after the general subsidence of head catarrh. The aural mucous membrane requires the gentlest management, especially in delicate persons and in children; in the acute stage, more especially in *otitis purulenta acuta*, there is always danger of increasing, rather than abating, the inflammation by vigorous measures. Secretions in the external auditory canal should be only occasionally removed by gentle syringing, but frequently wiped out with absorbent cotton-wool, which takes up serous fluid and brings away the adherent mucopus. Decomposition of secretions should thus be prevented, and drainage secured. The moment secretion lessens one should be prompt in introducing dressings of boracic acid and calendula without unduly disturbing the healing drumhead. Later on boracic acid alone is sufficient, especially if chronicity threatens; at this stage it is sometimes advisable to stimulate the parts with calendula alone. When acuity is absent, and no danger of reopening the perforation exists, inflation of the ear is in some cases required.

The question of the evacuation of pent-up secretions in the atrium or attic of the tympanum can only be decided in any particular instance by careful examination, and a consideration of all of the features of the individual case; it is by no means always demanded, even when the parts are bulging or for the relief of that most uncertain of all symptoms, pain.

Since climatal vicissitudes exist wherever susceptible persons are found, catarrhal inflammation is a very general affection. Unfortunately, not until frequent exacerbations have left the ear or nose in an impaired condition, is advice sought, and we must then often content ourselves with preventive measures which will avert further destructive changes. The peculiarities of each and every case require careful consideration, the details of which cannot, of course, be given here.

In general it may be said, that in infancy the activity of the physiological processes concerned in development are often exhaustive; after puberty, the play of the maturing functions, especially the sexual, frequently are excessive; after adolescence mental and physical strain begins, and from this to middle age and beyond the struggle of existence is less easily borne, and worry becomes perhaps one of the most important factors of the affection under consideration. It is a notable fact that grief is accompanied, in emotional persons, with greatly increased flow of tears and nasal secretion—showing the influence of mental impressions on these parts. Treatment then should be adapted to the temperament and the age of the patient, and should be hygienic as well as medical. In chronic aural catarrh the treatment is necessarily less satisfactory than in the acute form. It is difficult to avoid disappointing the patient whose hopes and expectations are great, since we must often be content with moderate success only. Undue expectations must be met by frankness without discouragement. One's resources may be greatly tested in meeting the various symptoms which alarm the patient in advanced stages of aural catarrh; thus the greatest alarm is occasioned by the distressing symptoms of autophonia, vertigo, and sudden deafness.

ON RESPIRATORY NEUROSES OF NASAL ORIGIN (VASO-MOTOR CORYZA, ASTHMA).[1]

By BEVERLEY ROBINSON, M.D.,

NEW YORK.

When I was asked, some weeks ago, to take part in the discussion this evening, on "Reflex Symptoms in Nasal Affections," it was my impression that I would be expected to talk, and not to write and read what I had written. A few nights since, I was told that it was desired that contributions to the subject to be discussed should be presented in written form. The consequence of this later knowledge is, so far as I am concerned, that my paper appears to me insufficient for my portion of a very large subject. I wish still to add a word, and it is that I have limited myself in my written remarks mainly to two subjects, hay fever (so-called) and asthma. I have done this advisedly—specially, I might add—because these affections are quite frequently met with, and they are diseases, therefore, which have a general professional interest. For this reason, any line of study, or clinical observation, which shall make clearer certain obscure points in their etiology and treatment, will unquestionably attract your attention and thought. With respect to reflex symptoms, which are rarely encountered, I have said but a few words. To speak of each local manifestation by itself would consume valuable time, and perhaps render my paper wearisome. Moreover, unusual cases in this connection, which we read of from time to time, may be often explained in the manner presently to be referred to when I speak of hay fever and asthma. Again, if what I say in this discussion shall throw any

[1] Read before the New York Academy of Medicine, January 21, 1886.

light upon the subject under consideration, it can only be in making reasonable and probable deductions from a judicial survey of the work of prominent observers in their special field. I may be permitted to add, that in my paper on hay fever (so called) which I expect to read before the Section on Laryngology, I have deviated from the path traced for me this evening, and have alluded more to my individual observation and experience than I have felt would be appropriate to the present occasion.

With these few preliminary remarks, I take up the subject assigned to me, viz., nasal reflexes, or reflex neuroses of nasal origin, pertaining to the throat and air-passages, and to general medicine. These may be divided into :

1. *Those affecting the respiratory tract.*—In these I include : (*a*) hay fever ; (*b*) pain and disordered function of the organ of smell ; (*c*) laryngeal cough, spasm of the glottis, alterations of the speaking and singing voice, recurrent laryngitis (Ingals : *Journal Am. Med. Assoc.*) ; (*d*) asthma, recurrent bronchitis, dyspnœic attacks.

2. *Those affecting the digestive tract.*—(*a*) Pain and disordered function of the organ of taste ; (*b*) reflex (?) uvulitis, pharyngitis, tonsillary enlargement, etc. (being *all* diseased conditions of the upper portion of the digestive tract) ; (*c*) gastric disturbances.

3. *Uterine disorders, and affections of the genito-urinary mucous membrane* (J. H. Mackenzie, Elsberg).

4. *Disordered cutaneous function.*—Localized facial sweating (Schmiegelow).[1]

Among these numerous affections, and as placed first on my list, and, also, in view of its great interest and importance, I desire to speak at some length of the affection so long and widely known as hay fever. And here I would immediately say that I am of the opinion that vaso-motor *coryza*, the name assigned to it by Dr. John H. Mackenzie, of Baltimore, is more consonant with a correct scientific interpretation of the disease, and it would be well if physicians were now to adopt it rather than the other misnomer. We are all more or less familiar with the combination of symptoms which constitute this periodical disease. The irritation and occlusion of the nasal passages, the paroxysmal sneezing, suffusion of the conjunctiva, frequent cough, the dyspnœa and oppression, form a picture which once seen is difficult to forget. Of the different theories which have prevailed in regard to its origin and nature, the old *pollen* theory, to which Blackley attributed so much value, mainly because he was a great sufferer from this special irritant, has within the present year been again brought prominently to our attention by its warm defence by no less an authority than Morell Mackenzie, of London. Suffice it to say that the *vitalized principle* of this small corpuscle, which was supposed to be taken up by the blood-vessels and to multiply in their interior, is no longer accepted by the vast majority of observers. Experts now regard it as a local irritant at times, and in certain individuals ; as very efficient in causing vaso-motor coryza ; frequently as *not* specially injurious ; occasionally as obviously innocuous ; and under all circumstances as merely *one* of a large number of special external agents, which may prove active in starting an attack when other conditions are present which are at once primary and essential.

In 1876, Dr. George M. Beard endeavored to show that *vaso-motor coryza* was a purely nervous disease ; that it was an affection peculiar to the conditions of our modern life, and indicated a hyper-sensitive and debilitated nervous system as its main efficient cause. Five years later, in 1881, and although Edson had already made allusion to the fact, Dr. Daly, of Pittsburg, showed conclusively that one very general, almost necessary, condition of the outbreak of this special form of coryza was the existence of catarrhal disease of the nose or naso-pharynx. Daly cured his cases by local treatment, and very soon his ideas and treatment were adopted by Roe, Sajous, Bosworth, Ingals, etc. Dr. John H. Mackenzie then brought to the attention of the profession the fact that in many of these cases there was evidently present a vaso-motor disturbance of the nasal fossæ. Despite these observations, however, it was soon shown that sometimes vaso-motor coryza existed without previous nasal disease, and that there were still other cases in which nasal disease under different forms had lasted for a long while, and yet vaso-motor coryza had never been developed (Cartaz). Nor was local treatment of the nose always effective in curing these attacks. Thus Sommerbrodt, who has been so successful in his treatment of the different neuroses of nasal origin by means of the galvano-cautery, failed notably in two cases of so-called hay fever. Sufficient cases, however, remain to show conclusively that *variable* reflex neuroses depend on *variable* intra-nasal conditions. These conditions may be—(*a*) permanent, and are then of the nature of true organic lesions ; (*b*) ephemeral, or passing—for example, a temporary hyperæsthesia and swelling of the turbinated bodies may be occasioned by cold, warmth, dust, light, psychical emotion, etc. Whenever the irritation is repeated a number of times, the swelling of the soft parts of the nose becomes permanent.

(*c*) Sometimes cough is only explained by intra-nasal conditions, and local treatment of the olfactory organ proves curative when other means have proved ineffectual. Seiler has reported such cases, although in one he attributed the cough to dropping of mucus into the larynx and from the pharynx, and not to the reflex influence of nasal irritation. A case of Mattei has also been reported, in which the envelope of a chestnut lodged in the nose produced spasmodic cough. Once this foreign body had been removed, the cough entirely ceased.

(*d*) Nasal polypi sometimes occasion attacks of asthma as well as other respiratory neuroses, and by their removal the dyspnœic paroxysms are permanently relieved. Voltolini first discovered this fact, which has since been referred to by many writers, among whom I may cite Morell Mackenzie, Terrillon, Fraenkel, etc. Besides polypi, other nasal affections, such as deviated septum, atrophic catarrh, chronic rhinitis, etc., produce similar results. Hunter Mackenzie has particularly called attention to this fact, so far as it related to atrophic inflammation of the nasal passages ; whereas Hack and Sommerbrodt appear to consider that turbinated hypertrophy is the main, if not the sole, condition present under like circumstances. Not only do conditions of atrophy and hypertrophy in the nose produce asthmatic seizures, but mere *irritable* conditions of these passages will produce a like effect. Sometimes, however, polypi, turbinated hypertrophy, deviated septa, atrophic rhinitis, chronic rhinitis, localized or general nasal hyperæsthesia, will exist for long periods, and are never followed by attacks of asthma. Again, I have known at least one case—that of a distinguished practitioner of a neighboring city—in whom several nasal polypi were removed, as they were believed to be the efficient factor in producing severe paroxysmal asthma. The polypi were snared off, and the nasal passages remained for a time relatively clear. Still, the paroxysms of asthma returned, and with quite as great intensity as previous to the operations for polypi. In this case the asthma undoubtedly depended upon an old bronchial catarrh, which was also allied with chronic changes in the cellular structure of the lungs. I have just relieved a patient of a polypus partially filling up the right nasal passage, and who, also, had complete occlusion of the left nasal passage from a thickened and deviated nasal septum and a hypertrophied turbinated body. Until within a year this patient had severe asthmatic attacks. Latterly these paroxysms have wholly disappeared. I attribute this fact to the falling down of the nasal polypus, and the lessened irritation by pressure of the posterior portions of the septum and turbinated bodies.

[1] The division given above is taken in great part from Elsberg (Arch. of Laryng.), and somewhat modified by myself.

Another patient is now under my care—or was a few weeks since—who had complete obstruction of both nasal passages from turbinated hypertrophies, particularly marked or excessive at the posterior portions of the lower bodies. Yet this patient, who was a great sufferer from asthma a few years ago, and when his nasal passages were relatively free, has now little or no asthma, although he cannot respire at all through the nose, and his mouth is frequently agape on this account. There are, without doubt, a great number and variety of affections, mainly neuroses, under the direct influence of morbid intra-nasal conditions; still, at the present time we should be careful not to exaggerate their importance, and whenever and wherever we find a neurosis of the respiratory organs immediately reach the conclusion that the nose occasions it. For a long time the profession has recognized a peptic asthma originating in the stomach. A cough, obstinate and paroxysmal, may also take origin in a catarrhal gastritis. A torpid and congested liver may produce a like effect, and even the spleen is not unknown to have a cough which is named "splenic." There is much truth in the observations of the past few years in regard to the predominating influence of a hyper-sensitive nose, but there is also a tendency to exaggeration in this regard, and we should be careful to exclude other efficient causes of vaso-motor coryza, cough, asthma, etc., before admitting their nasal origin and instituting severe or prolonged treatment of this organ with a view to cure the secondary affections. The nose is naturally a sensitive organ, and many times I have produced epiphora, cough, spasmodic closure of the glottis moderate in amount, and slight dyspnœa, by the mere passage of instruments or simple nasal examinations, when the result of my investigation was to show that no nasal trouble of importance existed. This is no new observation, and I am conscious that you are all familiar with it. It is probably true, as Dr. J. H. Mackenzie has shown, that areas of special morbid sensibility exist in the nose at times. That they do *not* always exist I am equally confident by reason of my own clinical researches. Are these areas of special sensibility limited, more or less narrowly, to the posterior half of the lower turbinated body, as this observer would have us believe, or are they specially assignable to the anterior part of this body, as Hack and Sommerbrodt at first stated? I cannot definitely answer this question, but would add that I am of the opinion that later observations will confirm, to some extent, at least, the fact that Hack has mildly insisted upon in his later communications, viz., that the sensibility of the nasal mucous membrane is far more general than he was prepared to accept at first, and that *areas of irritation* may occasionally be found everywhere in the nasal passages. Of course, when we read the histories of clinical cases we shall be disposed to take a one-sided view unless our reading be extensive; and when some time since I read Dr. J. H. Mackenzie's graphic report of a physician of Baltimore, in whom obstinate cough was entirely relieved by the removal of a posterior hypertrophy of a turbinated body, I had almost concluded that this distinguished observer had discovered a clinical fact to which there were few or no exceptions. Since that time, my own cases have not always corroborated this testimony, and I am forced to conclude that a medium opinion is here the correct view to hold.

Alongside of this opinion, however, comes the broad statement of Sommerbrodt, who affirms that in his one hundred and thirty-eight cases of nasal disease in which there were respiratory or other neuroses, in *all* there was marked turbinated hypertrophy. All, indeed, were treated by the galvano-cautery, and very remarkable and successful were the results achieved by him. Irrespective, however, of any nasal disease, there must at last be a special *personal susceptibility* on the part of the individual in order that the reflex phenomena be produced. Of course, the intra-nasal morbid condition may develop or accentuate this susceptibility, but the fact remains true, since we are frequent observers that *numerous* individuals suffer from nasal disease of different kinds, and yet are never affected by any reflex trouble which we can properly attribute to them. The only way in which we can avoid error is to search carefully for other cause, or causes, of these reflex neuroses, and when none are discovered, then, and then only, we should admit the nasal origin of the neurosis, and institute treatment in accordance with it.

Cocaine, according to Cartaz, is of service in making a correct diagnosis, (1) by reason of the local anæsthesia produced; (2) on account of its decongestioning power. This latter observation, which really belongs to Bosworth, must, in my opinion, be warily accepted. If cocaine be used frequently in a nose which already shows a tendency to congestion, it will finish by augmenting, rather than decreasing, this condition. And as regards its anæsthetic power, I am convinced that after a brief period, in certain cases, it loses this power to a certain degree.

At all events, it does not remain sufficient to prevent the patient from having with considerable intensity all the symptoms which combine to form vaso-motor coryza, or the one major symptom which characterizes *asthma*—viz., intense dyspnœa. In regard to treatment I will be brief. We must first, of course, treat the intra-nasal cause if it be found to exist, and must do it with appropriate means. Hack and Sommerbrodt employ the galvano-cautery exclusively, in view of their theory that in every case there is nasal hypertrophy. But, as we have seen, nasal hypertrophy does not exist always, and in such instances it may be unsuitable and injurious to use the galvano-cautery. Try, therefore, at first, milder cauterizations with nitrate of silver, chromic acid, or, what I especially favor, carbolic acid. Hunter Mackenzie has had excellent results from the use of belladonna bougies (gr. $\frac{1}{2}$—gr. $\frac{1}{6}$).

Cartaz recommends cocaine. After all, these are only palliative measures. When there is considerable hypertrophy the galvano-cautery is the best curative means. When the soft tissues are hard and fibrous the cautery loop, or suitable scissors, may be employed with good effect, as recommended by Cartaz.

REFLEX OCULAR SYMPTOMS IN NASAL AFFECTIONS.[1]

By E. GRUENING, M.D.,

NEW YORK.

In selecting this title for the paper of the evening, I desire to exclude from consideration ocular affections due to an extension of catarrhal disease of the Schneiderian membrane. Such affections are well known, and generally conceded to exist. I wish to lay before you to-night the results of some clinical observations tending to show that certain groups of ocular symptoms may be looked upon as reflex neuroses, and furthermore, that the source of the ocular disturbance may be found in certain alterations of the nasal structures. At present, the view is held by many that asthma, hemicrania, supra- and infra-orbital neuralgia are in many instances but neurotic phenomena due to reflex nasal irritation.

Voltolini demonstrated that asthma may be relieved by the removal of a nasal polypus. Hack mentions a series of two hundred and forty cases of hemicrania and eighty-seven cases of asthma cured by the galvano-caustic destruction of the hypertrophic corpora cavernosa of the nose.

A number of observers following in the wake of Hack's labors report equally favorable results. The immediate cessation of asthma, of hemicrania, of supra-orbital neuralgia, and other symptoms, as a direct consequence of the nasal treatment, argues most forcibly in favor of the reflex nature of these phenomena.

To the ophthalmologist the subject of nasal reflex is

[1] Read before the Section of Ophthalmology, November, 1885, and before the Academy of Medicine of [illegible], 1886.

of great interest. If an irritable nose may cause grave symptoms in distant parts, why should the neighboring eyes, with their direct nervous and vascular connections, be spared? Reflex ocular symptoms—for instance, lachrymation, conjunctival hyperæmia, photophobia—may be readily obtained by touching certain parts of the Schneiderian membrane with a probe, and *vice versa*; reflex nasal symptoms—for instance, sneezing—may be evoked by exposing certain irritable eyes to a bright light.

In the cases mentioned by Hack and his followers, ocular symptoms are incidentally mentioned. Lachrymation, photophobia, increased vascularity of the ocular and palpebral conjunctiva, pain and pressure in and around the eyes, fluttering scotoma, frequently co-existed with the graver symptoms and passed away with them, in consequence of the nasal treatment. Now, a certain group of ocular symptoms, namely, lachrymation, sensitiveness to ordinary light, and redness of the eyes, are presented by a considerable number of our patients, and yet the examination of their eyes reveals absolutely no anomaly. The refraction may be emmetropic, the vision normal, the conjunctiva sound, the puncta lacrymalia may be open and favorably placed, and the nasal ducts permeable.

For such cases collyria have been prescribed, cold or warm applications recommended, general hygienic measures enjoined—all without the slightest benefit to the patient. Knowing that the symptoms—lachrymation, photophobia, and increased vascularity—may be evoked at will in all eyes by mechanical irritation of the nasal mucous membrane, may we not logically infer that the continuance of such ocular symptoms may be due to the continuance of a nasal irritation? This is the *à priori* argument, and of conditional value in practical medicine. If, however, in a considerable number of pertinent cases, showing the ocular symptoms in bold relief, local and general treatment prove ineffective, and nasal treatment promptly effective, should we not then present the convincing *à posteriori* argument—"sublata causa, tollitur effectus?"

Of such cases I have observed a large number in the past two years, and I shall cite only a few of them as representatives of this class.

Case I.—H. S——, aged forty-six. He says, "My eyes have troubled me for twenty years; when I rise in the morning I feel as if I had sand in them; I cannot look at any object in ordinary light; when I converse with any one, I am obliged to put on my blue glasses in order to look at the person. Ordinary daylight and the slightest wind cause my eyes to water. My eyes are always red. I have been treated by every oculist of note in America and Europe. No one has benefited me."

Case II.—H. S——, aged thirty-four, says: "When I awake in the morning my eyes pain me. They are red and feel dry. After I have bathed my face my eyes feel much better. The transition from the sleeping into the waking state is very trying to my eyes. There is more or less watering and smarting of my eyes all day long. This condition has lasted six years. I was treated the first year, but as the treatment did not relieve me, I discontinued it."

Case III.—F. L——, aged twenty-four, a clerk, relates his case in the following manner: "In the morning my eyes are slightly glued, they feel very uncomfortable until I have washed them. They feel weak all day. I cannot bear ordinary daylight, but gaslight is still worse. When a slight wind strikes my face the eyes water. My trouble dates from early childhood. My eyes have been treated, but not improved."

Case IV.—E. H——, aged twenty-six, a draughtsman, says: "I have a constant pressure behind and around my eyes. At times only in one eye, at times in both. The upper lids feel hot and dry. My eyes water freely in the open air, but never in the house, or when I am at work."

Case V.—A. E——, aged twenty-six, salesman, makes the following statement: "My eyes feel very weak in the morning. In the street I can hardly open them. At about ten o'clock they feel better. When I attempt to read in the evening a film comes over my eyes and I cannot continue."

In the cases just mentioned the nasal alterations were slight. I found simple catarrhal affections of the Schneiderian membrane, with insignificant swelling of the corpora cavernosa, a condition so common in New York that it may be considered normal. The question will now be asked as to whether we possess any guide, in the pathological appearance of the nasal mucous membrane, pointing to the origin of the neurotic symptoms. This question must be negatively answered at present.

Why this condition should give rise to ocular symptoms in some persons, and not in others, is difficult to explain. It may be due to a special irritability of the terminal nerves of the nasal mucous membrane; it may be due to a special neurotic tendency on the part of the individual. We have a practical guide in the possible efficiency of the nasal treatment for the relief of the ocular symptoms in the use of cocaine. If in these mild cases the instillation of cocaine into the nose relieves the ocular symptoms, we may assume that a simple anti-catarrhal treatment will suffice for the cure of the affection.

But the cases which we encounter are not all of this simple nature. Very frequently we find an immense hypertrophic swelling of the corpora cavernosa of the turbinated bone. This swelling may be found at the anterior or posterior portions of the lower turbinated bones, on the lower edge of the middle turbinated bones. In other cases we have to deal with a stenosis of the nasal passages due to a variety of causes, a combination of hypertrophy of the erectile tissue, cartilaginous excrescences from, and deviations of, the septum. These are the elements with which we must cope in the successful treatment of the reflex ocular symptoms.

A few clinical observations may serve to illustrate the class of cases in which extensive pathological alterations of the nose gave rise to reflex ocular symptoms, but caused no subjective nasal trouble.

Case I.—G. J——, twenty-six years of age, is a polisher of metals. In the past six years he has been greatly troubled by the bright reflexes of metallic surfaces, so much so, that he was obliged to discontinue his work many weeks. Whenever he fixes any object in ordinary daylight, his eyes begin to water. He has been treated with astringents, electricity, internal remedies, chiefly quinine, and absolute repose in a dark room. He never derived benefit from any mode of treatment. His eyes are sound, the refraction is emmetropic, the vision normal, the conjunctiva more vascular than usual, the lachrymal apparatus apparently in good condition.

The examination of the nose shows that his mucous membrane is of a bright red color and thickened over the right lower and middle turbinated bones. In spite of this thickening the right side of the nose is spacious, and the turbinated bones are nowhere in contact with the septum.

The left side of the nose presents a stenosis, especially of the lower meatus, where a ridge of cartilage, running from the septum to the inferior turbinated bone, and coalescing with the latter, forms a bridge-like connection. Instillations of two and three per cent. solutions of nitrate of silver into the nose, and the application of nitrate of silver in substance to the thickened parts of the nasal mucous membrane, were followed by temporary aggravation of the ocular symptoms, and finally, by a slight improvement. This, however, did not satisfy the patient, as he was not yet able to work steadily. I then removed the cartilaginous ridge of the left side of the nose with a punch especially constructed for the purpose. This operation was followed by an immediate

cessation of the ocular symptoms. The patient resumed his occupation, remaining under observation six months, during which time no relapse occurred.

Case II.—Miss H——, aged sixteen, gives the following history: "When I rise in the morning my forehead and my eyes pain me very much. My eyes feel dry, and it is hard to open them to the light. When I have washed my face and taken my breakfast, my head and my eyes feel better. The slightest wind causes my eyes to water. I cannot study, because when I begin to look at my books my eyes feel brimful of water, as though they would run over if I continued. In the past two years I consulted several physicians, who prescribed eye-washes and glasses. My eyes are just as bad now as they were two years ago."

The examination of this young girl's eyes shows no anomaly.

The refraction is emmetropic, the vision normal, the conjunctiva pale. The examination of her nose yields the following result: The lower end of the right middle turbinated bone is considerably swelled. The mass obstructs the middle meatus and presses upon the septum. I anæsthetized the nasal mucous membrane with cocaine, and destroyed the swelling with the actual cautery. The relief which this patient obtained was immediate, and thus far permanent.

The frontal morning headache did not return, and the patient can use her eyes without inconvenience. The operation was performed March 5th, and the patient was feeling well on October 5th.

Case III.—H. K——, aged twenty-seven, a merchant of New York, consulted me on June 8, 1885. He related his history as follows: "My eyes began to trouble me when I was twelve years of age, and I have been under treatment fifteen years. I feel my chief annoyance in the morning, when my eyelids are very stiff and I cannot open my eyes. When I am in the open air my eyes water continually, especially in winter. In cold weather my eyes are always red, and the glare of the snow is very painful to me. I have never been able to read at night. Whenever I attempted it my eyes filled with water. I was treated with nitrate of silver in the morning, and ointment in the evening, for four years every day, then for two or three years twice a week, then once a week, then once in two weeks, then once in a month, and was finally discharged, but my eyes were as bad as before. Last year I was in Minnesota, where the cold was extreme and the snow covered the ground. My suffering was intense, and I returned to New York to consult my physician. He resorted to the former mode of treatment—a daily application of nitrate of silver to my lids. I am very much discouraged because my eyes do not improve in spite of so much treatment."

The examination of the eyes of this patient showed, as in the other cases, an emmetropic refraction and normal vision, but a decided hyperæmia of the conjunctiva, and a red and velvety appearance of the palpebral conjunctiva. The examination of the nose gave the following result: The mucous membrane covering the right lower turbinated bone was enormously thickened, and changed into a hard globular mass pressing against the septum, resting upon the floor of the nose, and obstructing the lower meatus. Under the use of cocaine the globular swelling became somewhat smaller, allowing the introduction of the wire loop of Stoerk's snare, by means of which the whole mass was removed. The distressing symptoms from which Mr. K—— had suffered so many years disappeared that very day. I saw my patient on November 5th, five months after the operation. He stated that his eyes no longer troubled him in the morning, and that he could read several hours in the evening without any discomfort.

In the past two years I examined and treated more than two hundred cases, in which I referred the ocular symptoms to nasal disease.

The treatment adopted for the cure of the nasal affection differed with the character of the pathologica changes. Thus, in simple catarrh of the nasal mucous membrane astringents were employed, while in the hypertrophic and the obstructive forms of disease the cautery, the snare, the knife, the punch were resorted to. The treatment was not uniformly successful. A number of patients, terrified by the novelty of the procedure, did not return. Many observations were therefore incomplete, but a sufficient number—a series of 150 patients—remained long enough under treatment and observation to allow the formulation of definite conclusions as to the correlation of ocular symptoms and nasal affections.

The cases here presented have the following features in common:

1. Burning and smarting sensation of the lids or of the eyes, more pronounced in the morning than in daytime.
2. Inability to fix an object in ordinary daylight.
3. Increased vascularity of the conjunctiva, and lachrymation upon slight provocation, such as a mild current of air.
4. Sound condition of the eyes and their appendages.
5. Inefficiency of the ocular and the general treatment.
6. Efficiency of the nasal treatment in spite of the absence of nasal symptoms.

THE RELATION OF REST TO THE SUCCESS OF ANTISEPTIC SURGERY, WITH REMARKS ON "LISTERISM."

By SIMON BARUCH, M.D.,

NEW YORK.

The results of antiseptic surgery in Bellevue Hospital, which were so graphically presented by one of its attending surgeons in a recent essay[1] before the New York Academy of Medicine, are extremely gratifying to American physicians, and to the advocates of "Listerism," so called, everywhere.

Scarce have these pæans of praise in behalf of antiseptic surgery passed from our hearing, when quite a different strain reaches us from one of the consulting surgeons of the same institution.[2]

While the former attributes the wonderful results to a scrupulous adherence to antiseptic treatment (introduced by Lister) previous to and during the recent operations (excepting the substitution of the spray by irrigation), the latter regards these "manipulations and devices" as "serving no other purpose than the walking, talking, and gestures of the prestidigitator. They abstract the attention and conceal the adroit manipulation by which the trick is actually performed." To the general practitioner, who must needs study for his guidance the opinions of those whose opportunities for practical observation are larger, such differences regarding the utility of important measures are extremely interesting. To sift the truth is his aim. Fortunately this may be accomplished without difficulty, on the subject under discussion, as I propose to show.

The writer is impelled to the following remarks by reading on the same day the passages quoted below. The great gulf which lies between these opinions he has endeavored to bridge over in vain, and these lines are the result of his reflections upon the subject.

Says Dr. Hamilton, an eminent American surgeon, after casting doubts upon "Mr. Lister's theory, which is far from being universally accepted," and comparing his "manipulations and devices" to those of the prestidigitator: "The prestidigitators are not deceived, but deceive their audiences; while Mr. Lister and his disciples deceive both themselves and their audiences."

Says Professor Gerhardt, the man who was chosen to

[1] The Comparative Results of Operations in Bellevue Hospital, by Stephen Smith, M.D., Medical Record, October 17, 1885.

[2] The Art of Primary Union, etc., in Large Incised Wounds, by Frank H. Hamilton, Medical Record, January 2, 1886.

wear the mantle of Traube and Frerichs: "From Lister's method a new surgery has arisen, which does not shrink from the opening of any cavity of the body, which lays the knife upon the most vital organs, which says, if thy kidney or thy pylorus offend thee, we will pluck it out and cast it away" (*Berl. klin. Wochen.*, p. 947, November 10, 1885).

Having, during a three years' service as military surgeon, and later in private practice, enjoyed considerable opportunity for observing the method of wound-dressing which he was taught twenty-five years ago, and which was in vogue up to the Listerian or antiseptic epoch, and having later, but especially during the past five years, studied the results of the antiseptic method in the New York hospitals, and to a limited extent in private practice, the writer has become a convert to the latter method without hesitation.

When I look back upon my experience in the field-hospitals at Boonsboro', Spottsylvania Court-House, and Gettysburg, and compare it with that of to-day, I rejoice that I have lived to see this happy era in surgery.

Operations (especially secondary procedures) were done with care, and anæsthesia rendered haste unnecessary; the then prevailing principles, which are enunciated so ably in Dr. Hamilton's paper, were executed as nearly as possible, especially with reference to cleanliness; water dressing was applied and the stump left at rest for two or three days. But now the work began. Each stump was exposed by removing the bandages, now soiled and saturated with decomposing fluids; sponges were plied and water was poured in order to cleanse the stump, which lay quivering and trembling within the hands of an assistant. The openings from which dangled the silk ligatures, and which were intended for drainage, were, in many instances, so closed by swelling that it was necessary to cut some of the sutures. The stump being clean, it was again bandaged and replaced. Day after day the poor patient was subjected to the same ordeal, perhaps intensified by the injection of some "disinfectant" (the word antiseptic had not yet became the surgical shibboleth) solution through the stump. This undressing and redressing was continued from day to day, sometimes several times daily, for weeks, until the patient either succumbed or the stump healed, while he was reduced to the last extreme of debility. A few cases recovered by primary union, and were displayed triumphantly as remarkable. This was substantially the practice adopted in the majority of civil and military hospitals twenty-five years ago.

To-day how changed is all this!

The chief aim of the surgeon is to make the wound as free from irritating elements as possible, and afterward to so prepare it as to render it unnecessary to repeat the dressing. Every precaution is taken to render clean and aseptic the part involved, and everything that comes in contact with it; a stream of water, rendered clean and aseptic by boiling or by certain medicinal subtances, plays from an elevated point upon every recess of the wound, gently removing clots and impurities; every bleeding vessel is tied, the ligatures being used without stint and cut short, because, being aseptic, they will not become sources of future irritation; drainage-tubes are freely introduced to lessen tension and guide the fluids outside of the wound, where the antiseptic dressing neutralizes their noxious qualities. Now the stump is placed into a dressing or "device," which provides admirably against decomposition of blood serum or pus, and in this most cleanly condition it is left to the vis medicatrix naturæ. In other words, that which all surgeons formerly attempted to accomplish by daily sponging and washing, is now far more effectively done by the antiseptic absorbent material which surrounds it. The neat Lister dressing, each of whose parts is adapted to certain ends, is now mostly replaced by large quantities of absorbent material, making a more clumsy, yet more simple and not less effective device for executing the principles of antiseptic surgery. What is the result? From every land comes the answer: A new era has arisen in surgery; wounds heal more rapidly, exhaustive suppuration is almost unknown, the ratio of mortality is wonderfully reduced by the infrequency of infective wound disease. "The surgeon should never lose a patient from the consequences of an amputation, provided shock has been overcome" (Schede).

It would be an act of supererogation to defend Listerism at this late day, and such defence would come with more force from a surgeon than from a general practitioner. But even the latter (who should ever keep abreast of the latest thought in all branches) will have neglected his duty if he cannot answer Dr. Hamilton's question: "What treatment, either ancient or modern, has presented a better record than this, furnished by Alanson (35 great amputations without a death), of Syme (20 cases without a death), of Percy (92 cases with six deaths), and of Lucas (70 cases with five deaths)?"

The statistics of modern surgery abound in "better records." I will only refer to two of these. Neuber, of Kiel, reported to the Congress of German Surgeons in April, 1880, that under his Dauerverband he treated 83 major operations, of which 60 healed under one dressing, without a single death. In his work on "Die Amputation unter dem Einfluss der antiseptischen Behandlung, Halle, 1881, Dr. M. Oberst relates 261 cases, with 14 deaths, ten of which died from collapse, one each from tetanus, anæmia, exhaustion, and habitual erysipelas.

It is a singular fact, that the chief advantage of antiseptic dressings has so often been lost sight of in discussions of this subject. To my mind, at least, it appears very probable that in the fact that, by means of the antiseptic treatment of the wound, and by the subsequent antiseptic absorbent dressings, we are enabled to place the wound at complete rest until healing is accomplished—in this fact lies the secret of much of the success of modern surgery. Gamgee has done excellent service in impressing the advantage of rest in connection with antiseptic dressings. Without rest, repair certainly cannot proceed satisfactorily. How was it possible to give the most important element free play, when the wounds were daily manipulated by undressing, sponging, syringing, and bandaging? What would be the result in a simple fracture, if the surgeon imitated the old and happily obsolete practice of wound treatment by manipulating the broken ends of bones once or oftener every day? How long a time would the healing of a simple fracture even require? Certainly many weeks and months, and in depreciated conditions it would be entirely frustrated. But surgery has long ago discovered the vital importance of *rest* in the healing of fractured bones, and the result is rapid and complete union in the large proportion of cases, when rest is fully and thoroughly given to the parts. Lister has succeeded in discovering a principle upon which the same rest may be conferred upon open wounds, whose proper cleansing formerly necessitated frequent disturbance. In the simple fracture the overlying tissues make a complete "Dauerverband" (as Esmarch calls his antiseptic absorbent dressing), which, being impenetrable, renders the site of the lesion aseptic.

Lister has enabled us to imitate this procedure by the modern antiseptic treatment of wounds. By surrounding the latter with gauze protective, cotton, tow, lint, turf, mould, wood-wool, or whatever the ingenuity of the individual surgeon may contrive in imitation of the great Lister's dressing, and in obedience to the principles first inculcated by him, we may permit large wounded surfaces, open or closed, to remain undisturbed for days and weeks. Underneath this benign protection, noxious fluids oozing from the wound become harmless; in fact the latter remains surgically clean, and the great reparative processes of nature are allowed the same full play which they enjoy in a splinted fracture. If the wound is clean and at rest, the patient is well and at rest. Those who have witnessed the frequent prostration of the pa-

tient, the rise of pulse and temperature, and nervous agitation consequent upon the "dressing" of large wounds in the pre-Listerian period, will appreciate this greatest of all boons—rest—which antiseptic surgery has conferred upon wounded men. And what shall be said of the saving of time, trouble, and anxiety to the surgeon and dresser, who were forced to spend hours upon hours in this painful work?

As the valuable paper of Dr. Hamilton, which led me to these reflections, refers chiefly to the inutility of "Listerism" in securing "primary union of large incised wounds," I may be pardoned for a quotation from Lister in relation to this point. "Under strict antiseptic treatment union by first intention has no longer the importance it used to possess. As regards the essential points of avoidance of inflammation and fever, of pain and danger, it is a matter of absolute indifference whether primary union occurs or not" (*The Lancet*, November 19 and 26, 1881). There is therefore no defence called for, upon this point, against the animadversions of the author of the paper.

The opponents of Listerism (so called) seek their chief "argument" in the fact that abdominal surgery has, in the hands of a Keith and a Tait, achieved brilliant results without antiseptics. Those who are familiar with Mr. Lister's writings would scarcely resort to this argument, inasmuch as Mr. Lister has acknowledged that he "never believed that the success of antiseptic ovariotomy should be regarded as a signal proof of the truth of the antiseptic principle." He says: "Mr. Spencer Wells and Mr. Keith achieved results which astonished the world before strict antiseptic treatment was thought of; and when, several years ago, Dr. Keith expressed to me an intention of performing ovariotomy antiseptically, I strongly dissuaded him from his purpose. Even Keith, at length adopting strict antiseptic measures, with an improved spray, for a while surpassed himself by an unbroken series of eighty successful cases" (*The Lancet*, November 19 and 26, 1881). Mr. Lister enters fully into the discussion of the relation of abdominal surgery to antiseptic treatment in the paper.

But Mr. Callender, Mr. Savory, and Mr. Bryant are also cited by the author of the paper, as having "publicly declared their non-acceptance of the doctrines of Mr. Lister." As these are general surgeons, it may be said, at least of Mr. Callender and Mr. Savory, that their practice certainly does not accord with such "public declaration."

In *The Lancet* of April 15, 1882, will be found an article headed "Modified Listerism; the late Mr. Callender's Method of Wound Dressing." This paper is written by one who styles himself "one of Mr. Callender's old dressers," and in it is urged the claim of his master *to be the greatest exponent of this system of dressing wounds* (italics mine).

In *The Medical Times and Gazette*, August 16, 1879, is an account by Mr. Savory of his method of wound-dressing. Without quoting the details, it will suffice to mention that he used carbolized catgut ligature, "then, over the course of the wound and for some distance on either side of it, I should place a layer of folded lint which has been previously well soaked in olive or almond oil containing one part in about fifty of carbolic acid; over this I should place two or more layers of dry lint, either with or without cotton wool," etc. "The principle of Lister's practice is an easily intelligible one." Again, "But the principle on which it rests is a sound one, the logical outcome of established facts." "Defined in this way, *I believe that every successful method of treating wounds will be found to conform to the antiseptic principle*" (Savory, in *The Medical Times and Gazette*, August 16, 1879).

This language does not seem to imply a renunciation of Lister's doctrine, by Mr. Savory at least.

I opine that if the mode of operative procedure and subsequent dressing of "the considerable number of equally distinguished French and German surgeons" referred to by our author as antagonistic to Listerism were investigated, it would be discovered (as in Mr. Callender's and Mr. Savory's cases), that each and every one is carrying out the principles of Lister in some "modified form," whether he irrigate with boiled, carbolized, or sublimated water; whether he ligate with aseptic silk or catgut; whether he dress with protective gauze and mackintosh, or with antiseptic cotton, tow, wood-wool or turf, or with plain carbolized oil. In formulating rules for the guidance of the average surgeon, Lister has exercised great care; by doubly barring and locking the fortress he aims to secure the patient against negligence on the part of his surgeon. The more recent "Dauerverband" of the Germans is an improvement upon the Lister dressing, inasmuch as its excessive breadth and thickness guard against possible carelessness in the application, and does not demand so much exactness of detail, while it enables the wound to rest securely without contamination from within or without.

In conclusion I would express, as a general practitioner, my gratitude to Lister for having greatly lightened my burdens, and give utterance to the hope that my confrères, who in localities distant from the medical centres perform thousands of surgical operations, will look carefully into this subject ere they permit themselves to be led back to the old method of wound-treatment.

43 East Fifty-ninth Street, January 12, 1886.

Progress of Medical Science.

Observations on the Excretion of Albumen in Nephritis.—In his graduation thesis (St. Petersburg, 1884), Dr. Korkunoff records the results of a prolonged series of observations on this important subject. Although scarcely any one topic connected with medicine has received more attention than this one, it nevertheless continues to present interesting problems that still await solution. The author directed his attention in the first place to the excretion of albumen in chronic nephritis, as influenced by conditions of rest and activity, also the time of day and night, and cognate subjects. His conclusions may be summarized as follows: 1. The absolute daily amount of albumen excreted during days of exertion is larger than that during days of rest. 2. The daily percentage of albumen in urine is also less during rest than during exertion. 3. The absolute amount of albumen in urine is larger by day than by night, during both days of exertion and those of rest. 4. The same may be said of the percentage of albumen. At the same time, it must be stated that under rest the percentage decreases by day in a considerably greater degree than by night; hence, on days of rest, the difference in the percentage between day-time and night-time is less considerable than on days of exertion. 5. A comparison between the absolute amount of albumen excreted during day-time under exertion, and that under rest, shows that in the latter case the amount is considerably less; the same may be said of albumen excreted during night. 6. Notwithstanding the fullest possible attempts to preserve identical conditions during individual observations, the excretion of albumen presents considerable variations both under rest and exertion. This circumstance, in all probability, depends upon such factors as the condition of the mind, the quality and amount of sleep, the equalization of which is impossible. Some of the other results obtained by Dr. Korkunoff may be given as follows: 1. Under exertion, the amount of urine is larger by night than by day; under rest, the difference is effaced, or even inverted. 2. During exertion the daily amount of urine is, as a rule, larger than during rest. On the other hand, when we compare the amount of urine excreted with the amount of water ingested by the patient, we find that during exertion, while the patient drinks more water, he excretes relatively smaller amounts

of urine; on the contrary, under rest, the amount of urine is larger than the amount of drink. In other words, exertion brings about an increase in the loss of water by the skin and lungs, while during rest the largest part of the water taken is filtered through the kidneys. 3. During exertion, the specific gravity of urine is higher by day-time than by night, the difference being less marked and sometimes even reversed under the influence of rest. The second part of the author's work describes the outcome of his observations on the excretion of albumen in chronic nephritic patients under the influence of the sudorific treatment by warm baths, with subsequent packing in blankets. The patients were put in bed three days before the observations, and remained there during the whole time of the latter. Each observation lasted eight days, for four of which the patient remained without any treatment, and for the next four took daily two baths of 101.75° F. each of half an hour's duration. From this series of observations, Dr. Korkunoff draws the following conclusions: 1. The absolute daily amount of albumen in urine in bath-days is mostly smaller than in days without baths. 2. The per cent. amount of albumen also lessens under the influence of baths. 3. The weight of the body invariably decreases, the decrease being proportionate to the amount of dropsy present; that is, the more dropsical the patient is, the more considerable is the loss in his weight. 4. The amount of urine invariably lessens, but the specific gravity of the latter increases, in spite of the fact that the amount of water ingested by the patient during the diaphoretic treatment is always larger. 5. The loss of water by the skin and lungs is considerably increased by the sudorific treatment. In all the cases dropsy rapidly disappeared or greatly diminished under the use of baths. From the fact that the absolute and per cent. amount of albumen is diminished by the diaphoretic treatment, the author deduces the practical corollary that warm baths act not only symptomatically, but also produce a favorable influence on the morbid process in the kidneys; for, by their diminishing the excretion of albumen, they stop the progress of general exhaustion of the patient, and relieve the irritation caused to the kidneys by the egress of albumen.

Charcoal Enemata in Typhoid Fever.—Dr. Duval writes in *l'Abeille Médicale* of December 21, 1885, calling attention to the value of rectal injections of charcoal in the treatment of typhoid fever. He gives small enemata of simple water, containing a tablespoonful of vegetable charcoal, two or three times in the twenty-four hours, and finds that by this means he is able to cure the meteorism, and also to destroy the fetid odor of the stools. At the same time there is usually a marked improvement in the general symptoms, thus seeming to prove that no small part of the danger of this disease is due to the resorption of septic material contained in the rectum.

Perforative Peritonitis.—Dr. Ebstein sums up the results of his observations on peritonitis from perforation as follows: 1. As in acute diffuse peritonitis, so also in peritonitis following perforation of the stomach or intestine from ulceration or other cause, there may be contraction of the abdominal muscles; this may be very intense, and its duration may vary. Death may occur while it is present. As a rule, the contraction gives way to more or less swelling of the abdomen, with or without tension of the abdominal muscles. 2. When contraction of the abdominal muscles is present, perforative peritonitis may be suspected: *a*, if symptoms of acute diffuse peritonitis be present; *b*, if liver-dulness, which was known to be present before the symptoms set in, disappear partly or completely, and if there be a doughy condition of the epigastrium, with a distinctly tympanitic, generally high, percussion-sound. 3. The last-named symptoms, however, lose much of their value when the abdomen is much distended, as great distention of the bowels may produce perfectly analogous signs. The statement of the patient that he has felt as if something were torn in his belly has a certain diagnostic value. Dr. Ebstein disapproves of moving or shaking the patient for the purpose of diagnosis, as being dangerous, and of doubtful value. 4. Persistence of liver-dulness in perforation of the stomach or bowel into the peritoneal cavity indicates, provided the liver be not fixed in its position, that the peritoneal cavity contains fluid and not air, or that perforation has taken place a short time before or after death. 5. In some cases of peritonitis from perforation of the stomach, only the contents of the stomach escape into the peritoneum, but no air. The escape of fluid ingesta is followed by very acute peritonitis; if this do not occur, the perforation has taken place after, or a very short time before, death. 6. The absence of vomiting when peritonitis is present, and its arrest when diffuse acute peritonitis has set in and the patient remains conscious, indicates either that the peritonitis has been caused by perforation of the stomach, or that perforation has supervened on diffuse peritonitis. Vomiting is absent where perforation takes place into the general peritoneal cavity; and the same may be the case when the opening leads into the omental sac. Vomiting may occur in peritonitis from perforation of the stomach, or may recur after cessation, if the opening become closed by adhesions to the neighboring parts.—*Zeitschrift für klinische Medicin.*

Quintuple Pregnancy.—Dr. Polyakoff reports the following remarkable case (*Meditsinskoe Obozpénye*, No. 10, 1885): A robust peasant woman, twenty-seven years of age, of Syarai, Russia, married nine years, became pregnant for the seventh time in June. During the latter part of her pregnancy the abdomen was seen to be very large, and the patient suffered from dyspnœa and great weakness. Labor began on March 1st, and five female children were born one after the other at short intervals, three presenting by the occiput and two by the feet. Each fœtus had a sac to itself with a separate amnion, but there was one chorion common to all. The first fœtus, which was deformed, was born dead, the others lived for a few minutes subsequent to birth. There was one placenta, weighing about one pound and a half, and to its edge the umbilical cords were attached. Four of the fœtuses were regularly formed, but the first one born was microcephalic, and had less than the ordinary number of fingers and toes. The umbilical cord attached to this fœtus had one artery and one vein, but the others had each three vessels.

Poisoning from the Fumes of Fulminate of Mercury.—MM. Marie and Conde report four cases of this sort occurring in persons employed in shooting galleries. In some there was simply stomatitis, in others there were muscular tremors in addition. The individuals passed all their time in the galleries, and the cases of poisoning occurred in the winter, when the doors and windows were kept closed. The symptoms made their appearance very soon after a new style of cartridge, in which fulminate of mercury was used, had been adopted. The authors believe that the poisoning was due to the fumes arising from the combustion of the fulminate of mercury in the percussion caps.—*L'Union Médicale*, December 19, 1885.

Cerebro-spinal Meningitis without Symptoms.—A case is reported by Professor Lepidi of a man seventy years old, a hard drinker, in whom a diagnosis of pneumonia was made, but in whom, after death, there were found also the lesions of cerebro-spinal meningitis. With the exception of a little headache and delirium, not uncommon in hard drinkers suffering from pneumonia, there had been no symptoms of cerebro-spinal inflammation. In the meningeal exudations were found micrococci similar to those of pneumonia.—*Gazzetta degli Ospitali*, December 13, 1885.

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A "NEW THEORY OF INFLAMMATION."

THE gross phenomena of inflammation are comparatively simple and easily observed. The four cardinal symptoms noted by Celsus—*rubor*, *tumor*, *dolor*, *color*—have been accepted by all later observers, and modern pathology only adds a possible fifth—the *functio læsa*, *i.e.*, arrest of function in the inflamed part. Histology and chemistry have shown that these grosser disturbances are caused by certain vascular and textural changes, such as dilatation of blood-vessels and increased porosity of their walls, exudation of the plasmatic constituents of the blood and passage out from the vessels of white and red blood-cells. Recent studies also show that the inflammatory process is a destructive and depressive one so far as the tissues are concerned; that it does not irritate and kindle into increased activity the protoplasm of the cells, but, rather, the reverse.

Still further, it is known that inflammation is always started by some irritant or injurious influence acting either upon the blood-vessels or the surrounding tissue, or both.

But pathologists are not yet satisfied simply with having learned the natural history of the inflammatory process. We have had, therefore, at different times, various "theories of inflammation;" that is to say, attempts to formulate a law governing all the phenomena of inflammation. The neuroparalytic and neurospastic theories of Henle and Stilling, Hoffmann, Budge, and others, have long passed away and been discarded as insufficient. The "inflammatory stimulus" theory of Virchow, and the theories of tissue attraction suggested by Paget, Simon, and others, have also been shown to be incompetent. Of late years, owing mainly to the labors of Cohnheim and his pupils, what may be termed the "vascular theory" of inflammation has very largely prevailed. According to this, the inflammatory phenomena are due fundamentally to some injurious influence acting on the vessel or its walls. This influence may come from without, as in trauma, or from within, as in infected blood. In any event, the vessel dilates, its walls become more porous, blood-cells pass out, and plasma exudes.

Changes in the tissues occur either before, during, or after the vascular phenomena, but these changes are destructive and degenerative, and do not cause cell multiplication. The pus-cells present come from the blood.

Despite much opposition, the vascular theory of inflammation still maintains itself as the most satisfactory one yet offered.

Recently a young surgeon of Leipsic, Dr. Landerer, has propounded another theory of inflammation, which he calls the "mechanical" (*Volkmann's Sammlung Klinischer Vorträge*, No. 259).

Dr. Landerer calls attention to the fact that the pressure of the blood in the capillaries is so great that unless there were a supporting pressure from the tissues and fluids outside they would dilate and be unable to retain their contents. The intra-vascular pressure in the capillaries is estimated by Von Kries to be at least equal to twenty millimetres of mercury, or two hundred and fifty millimetres of water. The extra-vascular pressure, on the other hand, is estimated by Landerer to average about one hundred millimetres of water. The elastic cushion of tissues about the capillaries, therefore, exerts a constant supporting pressure equal to about one-third of the expanding intra-vascular pressure. Now, in inflammation it is believed that these surrounding tissues are injured, lose their elasticity, the capillaries receive less support; hence they dilate and blood surges into the affected part. Landerer does not deny the influence of injury to the vessel-wall or the potency of vascular factors in the production of inflammation.

In œdema the tissues are relaxed, but are much less affected than in inflammation. In arterial hyperæmia and congestion of nervous origin there is a paralysis of the arterioles while the tissue elasticity is not affected. Hyperæmia from irritants and heat is like the first stage of an inflammation.

Dr. Landerer considers inflammation a conservative and protective process, designed to relieve the organism of irritable and destructive agencies acting upon it. Inflammation, with him, is a reparatory process, and it is not wise to combat it. He advises the use of warm applications, and rarely of cold, except as an anæsthetic.

We believe that Landerer's observations should be accepted as adding something to our knowledge of the phenomena of inflammation. If correct, they throw new light upon its mechanism. The few pertinent facts which he appears to have established, however, are not sufficient to form the basis of a new theory of inflammation.

THE PHENIC-ACID TREATMENT OF PHTHISIS.

IN the modern treatment of phthisis there is about an equal activity among those who are urging antiseptic and those who are urging supporting medication. Pulmonary injections, inhalations, forced feeding, rectal feeding, dry or compressed, and medicated air are among the measures that are receiving attention.

M. le Dr. Filleau (*Journ. de Médecine de Paris*) believes phthisis to be a parasitic disease, and one to be combated by anti-parasitic remedies. Of these, the most potent against the bacillus and least injurious to the human system is pure carbolic acid. This he does not think should be applied topically, but rather should be given internally. Carbolic acid, he says, is largely excreted by the lungs, and in its passage out the parasite's activity is suppressed and the healing process promoted.

He recommends that the acid be administered hypo-

dermically, and in a considerable experience has never seen any harmful or unpleasant local symptoms develop. His formula is:

℞ Aquæ destillat..... q.s.
Glycerin..... q. s.
Acid. phenic. crystalliz..... 1.00

M. Sig.—Of this, one hundred drops (about gr. ij. of the acid) are injected hypodermically daily, or every other day.

Dr. Filleau states that as much as two grammes of phenic acid can be administered daily, a dose which would require a very large number of injections. Four cases are reported illustrating the efficacy of this phenic-acid treatment of phthisis. The conclusions reached are: 1st, that carbolic acid is the only anti-parasitic as yet known which can be administered subcutaneously in large doses during an indefinite time without causing accidents; 2d, that under the influence of this medication the general state of the patient is promptly ameliorated, the local state is at the same time advantageously modified; 3d, that the tolerance and harmlessness of the drug thus administered are demonstrated (symptoms of carbolic-acid poisoning may appear, but they always come gradually and are quickly relieved by stopping the medicine for a time); 4th, that the treatment must be continued for a long time.

A NEW EXPECTORANT AND SUBSTITUTE FOR SENEGA.

Senega is an old remedy, and one whose virtues have been well established by clinical experience. It, beyond any doubt, has the power of rendering thick mucus in the bronchial tract thinner, and thus more easily expectorated. It is indicated, therefore, in the second stage of acute bronchitis, in emphysema, and in chronic bronchial catarrhs, and bronchial blennorrhœa. It has been given, also, in the resolving stage of acute pneumonia. In these conditions Stokes placed senega at the head of the expectorants. Its use is contra-indicated in phthisis, in febrile conditions, and when the digestion is disordered.

We are told, however, by Professor Rudolph Kobert, of Dorpat, in an article recently published in *The Practitioner*, that of late years the commercial specimens of Polygala senega have been of very unequal quality. The active principles of senega reside in a substance known as polygalic acid, which is in reality a mixture of two other substances both glucosides. The quantity of these glucosides in senega-root is very insignificant, and thus it comes about that one only gets a satisfactory effect when the infusion or decoction is very strong, *e.g.*, 10 or 15 parts in 200 of water. For all these reasons it appears that senega has come to be very little prescribed, and its employment is even entirely abandoned by some physicians.

Professor Kobert announces that he has found that the same active principles which occur in senega are present in another drug that costs only one-fifth as much, viz., the bark of quillaia saponaria. Kobert calls the two glucosides that are usually known as polygalic acid "quillaic acid" and "sapotoxine." He states that it has been found, by clinical investigations in Halle, Strassburg, Freiburg, and elsewhere, that the administration of senega can be very efficiently replaced by that of quillaia.

The therapeutic results, he says, hitherto obtained may be expressed as follows: When expectoration is difficult from the tenacity of the mucus, it is facilitated through the latter being rendered thinner and more copious; at the same time the stimulus to expectorate is increased. It naturally follows that this remedy is not suitable for every case, and that it must not be employed when the urgency to cough and the raw feeling in the throat gets too acute. Vomiting and diarrhœa occur much seldomer than after the use of senega. Any aromatic or simple bitter may be used with it as a flavoring agent. The drug itself contains a large quantity of a sweet carbohydrate, and consequently can be employed in the case of poor persons quite well without any corrective, which is, of course, not the case with senega. The remedy is contra-indicated in cases of ulceration in the throat, or in the gastro-intestinal disturbances, since it is too energetic an irritant for such.

REFLEX NEUROSES FROM NASAL DISEASE.

Since the appearance of the monograph of Dr. W. Hack, of Freiburg, on the operative, radical treatment of migraine, asthma, hay-fever, and numerous other related manifestations, which was the subject of an editorial in a recent number of The Medical Record, German literature especially has abounded in confirmatory clinical evidence of the views promulgated by this author.

Hack, Fraenkel, Sommerbrodt, and others, have demonstrated by clinical observations that many hitherto obscure neuroses display a relation to certain conditions mostly found in the mucous covering of the inferior turbinated bone, anteriorly, which enabled them to relieve or cure the former by removing the latter. Among the neuroses referred to, nightmare, asthma, cough, migraine, supraorbital neuralgia, attack of giddiness, epileptiform attacks, hay-fever are the most prominent in the clinical histories furnished by these authors.

The condition referred to as existing in the nasal fossa is not the hyperplastic or inflammatory thickening connected with rhinitis and nasal catarrh, but a puffed and erectile state of the covering of the anterior portion of the inferior turbinated bone or bones due to distention of the cavernous spaces underlying it. The differential diagnosis is not difficult, inasmuch as the latter condition may be recognized by the yielding of the puffed mucous membrane to the gentle pressure of a probe very much as a moderately filled cyst would do, while in the former (hyperplastic) condition pressure will not produce this effect. The degree of swelling varies greatly: it may touch the septum or not, it may yield entirely or partly to pressure of a probe, but it always returns when the probe is removed. This peculiar erectile character is pathognomonic, and may be discovered by any intelligent practitioner who will take pains to look for it.

We refer to the subject again with the view of calling attention to the recent discussion in the Academy of Medicine, of which a report will be found in our columns to-day. It is to be regretted that the diagnosis of these nasal complications and etiological factors was not dwelt upon by the readers, because this is a subject of

great importance to the general practitioner. Indeed, as has been emphasized by one of the speakers, who alone described this peculiar nasal affection, this question is of far greater import to the general practitioner than to the specialist. When a man suffers from migraine, asthma, or neuralgia he will not apply to the specialist but to his family physician for relief. If the latter be not alert and well-informed on the subject of reflex neuroses from nasal troubles he may treat many such cases in vain. If, however, he will in every obstinate case inspect the nasal fossa, he may confer a lasting boon upon the patient by discovering an obscure cause, and either himself removing it or referring the case to a specialist.

It has been found that frequently the nasal symptoms are not well pronounced, hence the necessity of "interrogating" the nose in every obstinate case. We commend the study of the subject to general practitioners and neurologists.

News of the Week.

Ligature of Femoral Artery under Cocaine.—Dr. Joseph W. Howe ligated the femoral artery for popliteal aneurism, under cocaine, at St. Francis' Hospital, New York, last Tuesday.

The Meeting of the Medical Society of the State of New York.—It is expected that the meeting of the State Society, which will be held in Albany, commencing Tuesday next, at 11 A.M., will be largely attended. More papers have been promised than ever before, and the programme, as arranged by the President, Dr. Vanderveer, and the Business Committee, presents unusual attractions. The sessions will probably be continued through Thursday. Delegates and members desiring reduced rates should communicate with Dr. Manlius Smith, the Secretary, at Syracuse, N. Y.

The Purity of Milk.—The Court of Appeals declares the law constitutional which fixes a standard of purity for milk. The Court of Sessions of Albany convicted the defendant Arthur Cipperly of misdemeanor, charging him with selling adulterated milk, in violation of Chapter 202 of the Laws of 1884. It was selected as a test case, and the decision disposes of the whole subject at once. The General Term had reversed the judgment of the Court of Sessions, and now the Court of Appeals reverses the decision of the General Term and affirms the decision of the Court of Sessions.

A Long Range Quarrel.—The *Therapeutic Gazette*, of Detroit, accused the editor of the Transactions of the *Sei I Kwai*, of Tokio, Japan, of plagiarizing one of the former's articles. The gentleman of the *Sei I Kwai* retorts by asserting that the article in question appeared in his journal four months before it did in the *Gazette*, and gives us "the deadly parallel columns" in both Japanese and English to support his assertion.

New York Post-Graduate Medical School.—Dr. Henry J. Garrigues has been elected Professor of Obstetrics; Dr. C. C. Rice, Instructor in Diseases of the Nose and Throat; Dr. F. B. Carpenter, Instructor in Diseases of the Skin.

The New England Hospital for Women and Children has received a bequest of $10,000 by the will of the late Isaac D. Farnsworth.

The Man of the Day.—The Eden Musée, a waxworks museum of this city, announces: "Monsieur Pasteur performing his operation upon one of the Newark children!"

"What Mrs. Grundy Says: 'That the doctor who writes a book gives himself away, by showing that his time is not disturbed by patients.'"—*Evening Express.*

The Way They Do It.—The trade in homœopathy is becoming systematized. We have received the announcements of a new up-town homœopath, which furnish a good illustration of how they do it. The announcements in question were mailed to the clergymen, and to the neighbors, friends, and to the business men of the vicinity. First is a card, with name, address, etc., upon it; next is a neatly printed note signed by several homœopaths of neighboring cities, and stating that Dr. X. is a skilful homœopath, and most "solid" in the faith; last comes a folded card, vest-pocket size, containing a brief popular essay on pure homœopathy and its advantages. Address and office hours are conspicuously displayed. The whole makes a very creditable typographical and literary display. No doubt it will bring in many patients.

The significance of it all is that certain men believe that they can succeed by announcing, not that they are physicians, but that they are homœopaths. They trade upon the name as quacks do upon their specially potent pills.

Such men are to be treated like any other quacks. But all men using homœopathy do not resort to these practices. Hence the mistake of damning the whole for the sins of part and thus creating a sentiment of sympathy which does so much to keep homœopathy as a distinct form of dogmatic medium alive. The Homœopathic County Society should discipline this man.

Dr. Jonathan Cass, of this city, died on January 22d, at the age of sixty-one years. He was graduated from the Albany Medical School in 1855–56, and commenced the practice of medicine at Great Barrington, Mass. When the war broke out he entered the army as surgeon, and served four years. In 1870 he came to New York, where he had lived ever since.

Death of Dr. McAllister, of Marion, Ala.—Dr. W. T. McAllister, a prominent practitioner of Marion, Ala., died of phthisis, January 13, 1886, aged fifty-six years and eight months.

German Physicians at St. Petersburg.—The profession at St. Petersburg has been somewhat excited by some selections which have recently been made to some rather coveted hospital appointments. The question of nationality has been rather unpleasantly obtruded, the "thorough Russians" complaining that they are being elbowed out by Germans, and their opponents retorting that there are many hospital superintendents whose names are German, and who may be of German descent, and even speak German at home, but they are all bound to be Russians.

Reviews and Notices.

CLIMATOLOGY AND MINERAL WATERS OF THE UNITED STATES. By A. N. BELL, A.M., M.D., Editor of *The Sanitarian*, Member of the American Medical Association, American Public Health Association, American Climatological Association, Medical Society of the State of New York, Kings County Medical Society, N. Y., Honorary Member of the Connecticut Medical Society, Corresponding Member of the Epidemiological Society of London, formerly Passed Assistant Surgeon United States Navy, etc. New York: William Wood & Co. 1885.

THIS book forms the October number of Wood's Library. It contains a vast amount of statistical information concerning the climate of different portions of our country, and also gives the composition of all the mineral spring waters used in medicine. It is a source of astonishment, to one who reads this work, to see the great variety of climate which the citizens of this republic enjoy or suffer under, and he cannot but wonder that it should ever be thought necessary to send consumptives or other patients to Europe, when precisely similar meteorological conditions are to be found in our own country. The subject of climatology in general, than which nothing is regarded by the ordinary reader as drier, is here presented in such a shape as to be almost interesting.

DIAGNOSIS OF DISEASES OF THE BRAIN AND OF THE SPINAL CORD. By W. R. GOWERS, M.D., F.R.C.P., Assistant Professor of Clinical Medicine in University College, Physician to University College Hospital, and to the National Hospital for the Paralyzed and Epileptic. New York: William Wood & Co. 1885.

THIS volume contains the substance of the lectures delivered by the author at University College Hospital, London. The first three lectures of Part I. are devoted to a consideration of the anatomy of the brain. Then follows a review of the symptoms of cerebral disease arranged under the different headings of motor and sensory symptoms; those connected with the organs of special sense, and the affections of speech; and in the concluding lectures the diagnosis of the diseases of the brain is treated of at length. In Part II., which is much shorter, the same general order of subjects is followed, although the division of the work into separate lectures is not adhered to. Illustrations are introduced wherever they serve to elucidate the text. The book is one that will well repay perusal, and no one who reads it can fail to learn something. It forms the concluding (December) number of Wood's Library for 1885.

VENEREAL MEMORANDA. A Manual for the Student and Practitioner. By P. A. MORROW, A.M., M.D., Clinical Professor of Venereal Diseases in the University of the City of New York; Surgeon to Charity Hospital; Attending Surgeon to the Bellevue Hospital Out-door Relief, Department of Skin Diseases, etc. New York: William Wood & Co. 1885.

THIS little volume, one of Wood's Pocket Manuals, contains a large amount of practical information in very condensed form. It is not a good work for a student who is commencing his studies, but for one who has finished his preparatory course and is making a hasty review for examination, it will be of the greatest service. It is an excellent guide also for the general practitioner who has no time to study voluminous treatises, but who may wish to refer to some special point in the diagnosis or treatment of one of the venereal diseases. He will find here just what he wants, and will find it expressed clearly and well.

THE DOCTOR AHEAD.—"If I were so unlucky," said an officer, "as to have a stupid son, I would certainly make him a doctor." "Well," said a doctor, who was in the company, "you think differently, sir, from your father."

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 25, 1886.

DANIEL LEWIS, M.D., PRESIDENT, IN THE CHAIR.

Dr. ROBERT ABBE read a paper entitled

THE ADVANTAGES OF THE OPEN METHOD OF RADICAL CURE OF HERNIA.

The major cutting operation for the radical cure of hernia is as old as the history of surgery, but some textbooks have mentioned it only to condemn, and have echoed the aphorism of Petit, that "nothing justifies operation on a hernia, except strangulation of its contents."

From the date of the Berlin Congress, in 1879, when Czerny reported six cases cured by the open operation under antiseptics, there have been scores of names enrolled in many countries sanctioning the method. In this country, however, the operation has not even yet been practised widely. It was opportune, therefore, to look into the value of the open method and its advantages.

The favorite course pursued in the "open method" of operating consists of cutting down to the sac, while it is distended with gut, stripping it clean of all cellular layers and the elements of the spermatic cord, so that the sac and its contents are lifted out of the scrotum and the fingers can be slipped along the neck of the sac into the ring; then reducing the hernia and carefully slitting open the sac, inspect its interior, sweeping the finger around the abdomen, within the canal, to discover adherent bands; then pass a heavy catgut ligature around the neck of the sac as high as within the ring, if possible, tie the sac off, and cut away below the ligature. After this has been done, approximate the pillars of the ring tightly, leaving only room for the exit of the spermatic cord; most surgeons use heavy catgut for this.

These details vary with circumstances. If the bowel is adherent to the lining of the sac by recent adhesions, it may be stripped off; if old adhesions hold it, the sac is to be cut away nearly to the intestine, and its edges stitched together. The Liverpool surgeons use silver wire instead of catgut for closing the pillars of the ring. Keetley, of London, after exposing all the parts, injects into the cellular tissue of the canal, and rubs into the loose cellular planes, the Heaton fluid, and then brings the pillars of the ring together over that with catgut.

Dr. Abbe then gave briefly the notes of *twenty-one* cases which had been under his personal care. Of these *sixteen* were operated on when not strangulated, and five when seriously so. In each, however, an attempt was made to secure a radical cure by the latest methods.

The results admitted of the following comments: *First*, is the open operation a safe one? and *second*, does it effect a radical cure?

If we accept the statistics of the Liverpool surgeons, with 125 successive cases without a death, and four-fifths of them successful in the result, it must be admitted that it is safe; but no one else has obtained such results.

The proportion of fatal results following the open method in the hands of the best operators makes it about one in eight. This means, probably, that only the worst and most dangerous cases have as yet been induced to submit to the operation, and serious complications are here encountered, such as adherent intestine, feeble patients with fatty hearts, etc. Hemorrhage has happened to the best operators everywhere. An omental pedicle is specially liable to accident, because it is a mass of fat which wastes quickly, and allows the inner folds to slip out from the grasp of the ligature. This can be overcome. Septic peritonitis, erysipelas, and hospitalism have been driven to the wall by clean antiseptic work.

As regards suppuration, Dr. Abbe had frequently been disappointed in finding hernial wounds suppurating when

heavy sutures had been applied to the ring, especially silver-wire and silk. But on the whole, although we dislike to have it occur, he was strongly of the opinion that union by granulation sealed the canal and matted together the ring tissues in a much more secure way than primary union did, and that return of the rupture was less likely to occur. In any case, however, after the operation the patient should support the part from without for many weeks, perhaps for months, to insure permanent relief.

As regards return of the hernia, he thought it extremely probable that in most cases there would be partial recurrence within one or two years; much less likely to follow femoral than inguinal hernia.

This, however, is no sign of failure of the operation, for it almost invariably restores the patient to working power, and from complete invalidism to comparative health. He had yet to see a patient who was not loud in praise of what had been afforded by the operation. His belief was that in simpler cases of small but annoying herniæ, where the patient could be kept on his back for a month and watched afterward, the open operation had a large field of usefulness; while to the sufferers from incarcerated omental masses and ever-recurring intestinal herniæ it was an undoubted boon. He also agreed with Keetley in the opinion that it was safer and more sure to cure in femoral hernia, especially when there is adherent omentum; and it is in these cases especially that the danger of strangulation is greater (eight to one) than in the inguinal hernia.

Dr. A. G. Gerster said he could agree with almost all that had been stated by the author of the paper.

His experience included twenty-five cases, in which he had, in addition to herniotomy, performed the operation for radical cure. In eight cases he had performed the operation for radical cure where there was no strangulation, but the symptoms demanded that something should be done to improve the condition of the patient, if possible. In the cases in which the abdominal rings were not very large the best results had been obtained. Under antiseptic precautions he regarded the operation as a safe one. So far as results were concerned, the appellation "radical cure" was a misnomer, as relapse occurred unless a truss was worn—although a very light truss might be all that would be required. He regarded the cicatricial plug as more efficient than primary adhesion.

Dr. R. F. Weir had operated in eight cases unaccompanied with strangulation. For large irreducible herniæ he regarded the open operation as a good one; also for reducible herniæ which had existed so long that practically the rings are one, and where Heaton's method cannot be applied or has failed. In two or three of his cases suppuration and constitutional disturbance were considerable, but they terminated favorably and without peritonitis. Dr. Weir, however, had not lost faith in Heaton's method, and while he could obtain success in from one-third to one-half of the proper cases by its use, he should be unwilling to extend the cutting operation to these cases.

Dr. O. A. White exhibited an instrument which he devised about the year 1858, and which he had used successfully in a great many cases for the cure of hernia. It was a modification of Wurtzer's plug and transfixion pin, and had *two* needles, and weighed only half an ounce. The scrotal sac is inverted, the needles plunged through, and the whole secured in position by a ligature thrown around two side clamps; it is allowed to remain in position about four days.

Dr. Abbe, in closing the discussion, said that history had not recorded any harm done by transfixion-needles, and yet it was difficult, when the parts were exposed by operation, to see how they could be used safely. He thought the open method best, because the operator could see what he had to deal with. He thought that the tendency would be to change the opinion now held largely by surgeons, if it should be found that further statistics sustained the "open method" of treatment.

Dr. P. A. Morrow then read a paper on

THE DIAGNOSIS OF SMALL-POX,

in which he gave the features of a typical case of small-pox, and its differential diagnosis from measles, varicella, syphilis, papular eczema, lichen febrilis (classed as eczema), sudamina, pemphigus, herpes, erythema and urticaria (papular forms), and acne (produced by drugs and otherwise).

The paper closed with remarks on vaccination and reference to small-pox not necessarily extinguishing the susceptibility to vaccination.

Dr. McLaury referred to a paper recently read by Dr. P. C. Cole, in which the writer stated that variola frequently occurred the second time, and that it was as necessary to be vaccinated after having small-pox as before; these statements were based upon observations made in the army.

Dr. Sell mentioned a case in which Hebra and Kaposi mistook syphilis for small-pox.

Dr. Mittendorf spoke of a case where the diagnosis of small-pox was made, the patient sent to the Island, but which turned out to be a case of syphilis; and the patient had double iritis develop while in the hospital which terminated in total loss of vision in the right, and nearly complete loss of sight in the left eye.

Dr. Vineberg spoke of the prodromal rashes, occurring mostly on the inside of the thighs, as characteristic of small-pox.

Dr. A. B. Judson mentioned a case in which the diagnosis of small-pox was made, but which proved to be a case of acne in which relapsing fever occurred.

Dr. Abbe referred to the differential diagnosis of small-pox and varicella, and said that in a special case Dr. Taylor, of the Health Department, based his diagnosis on the fact that in varicella the vesicle is cuticular largely, and that the vesicle of variola springs from the deeper tissues.

Dr. Morrow said that the prodromal rashes were very uncertain, being absent entirely in some epidemics. With regard to the point mentioned by Dr. Abbe, he hardly thought that any one could safely discriminate between varicella and small-pox by simply inspecting with reference to the superficial and deep-seated character of the vesicles.

Under the head of

NEW BUSINESS,

Dr. P. A. Morrow was elected delegate to the Medical Society of the State of New York, to fill the vacancy caused by the resignation of Dr. W. T. Alexander.

Dr. G. M. Smith gave a brief outline of the history of the action of the Society and the Academy of Medicine concerning contagious eye diseases, and offered the following preamble and resolutions, which were adopted.

Whereas, Contagious ophthalmic disorders in asylums and residential schools seem to have become almost permanently attached to many of these institutions, though at times prevailing to a greater extent than at others;

Resolved, That the Medical Society of the County of New York deems it necessary to invoke legislative action in order to eliminate the causes of disease which are temporarily, and often permanently, injuring the welfare of the occupants of such Asylums.

Resolved, That this Society endorses and recommends to the Legislature of the State of New York, the law drafted under the auspices of a Committee of the New York Academy of Medicine, and subsequently approved by the Academy—the law being denominated "An Act for the Better Preservation of the Health of Children in Institutions."

The President announced that the initial steps had been taken for the publication of a Register of the medical profession of the county, and that it would probably be ready for distribution early in May next.

The Society then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 23, 1885.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

MULTIPLE STRICTURE OF THE URETHRA—PERINEAL ABSCESS—ABSCESS OF THE KIDNEY.

DR. WACKERHAGEN presented a male genito-urinary apparatus which showed laceration of the mucous membrane of the urethra, a false passage, and between the urethral laceration and the prostate behind an abscess cavity, two and a quarter inches wide, two inches long, and containing a large ragged slough. The cavity of the bladder was about the same size as that of the abscess. The ureters were slightly dilated. Pus had been traced as high as the right renal pelvis; the left kidney contained abscess cavities. The specimens were removed from the body of a Scotchman, forty-six years of age, who twenty years ago suffered from gonorrhœa which was followed by no noticeable sequelæ. A few months before death there was increased frequency of micturition. Examination of the urine was negative. Last July he had a perineal abscess, which, as near as could be learned, began its formation three months previously, when he noticed a slight perineal swelling. About the middle of November last Dr. Wackerhagen saw the patient in consultation, when there was almost continuous dribbling of ammoniacal urine through the perineal sinus. There was phimosis, three urethral strictures, and a contracted meatus urinarius. He advised circumcision and internal urethrotomy, which were performed. The general condition of the patient for a time improved, and he was occasionally sounded afterward for the purpose of keeping the divided strictures dilated. Nine days after the internal urethrotomy external perineal urethrotomy was performed. The patient died eight days after the operation. His temperature was normal throughout his entire sickness, until within a few days before his death, when, without chills, the temperature rose, 102° F. being the highest.

THE PRESIDENT said the case was especially interesting to him as he at present had one of urinary fistula under observation, with an abscess in front of the rectum, giving identically the history related by Dr. Wackerhagen, except that the patient has had chills. The urine is now being discharged through an opening in front of the scrotum, and pus posteriorly. The patient is also emaciated to an extreme degree.

DR. WACKERHAGEN said his patient was so extremely reticent that he probably would not have said anything about the chills if he had had any.

DR. L. EMMETT HOLT presented specimens from two cases that were specially interesting in point of contrast. One patient during life had shown many symptoms of tubercular meningitis, but the organs showed at the autopsy no evidence of tubercle. The second case was one of latent tuberculosis, the patient being apparently in good health until three days before death. Both patients were observed in the New York Infant Asylum, and acknowledgments were made to Dr. Thelberg, the resident physician, for particulars in the histories.

MENINGITIS (?)—CROUPOUS DYSENTERY.

CASE I.—N. B——, male, aged fifteen months, a rather delicate child, began to show marked symptoms on November 7th. The child had been wet-nursed until a few days before. Nothing was known of the family history. Had made no attempt to walk, had only four teeth, the fontanelle was widely open, and other signs of rachitis were fairly marked. He was taken with a temperature of 102° F., and for six days it ranged between 101° F. and 104° F., falling only once below 100° F. During this time he was very drowsy, lying for the greater part of the time in a stupor from which he could be only partially roused. He was constipated, but never vomited. The pupils were at times dilated but always responded to light, though sluggishly. There was frequent nystagmus and almost constant grinding of the teeth. He had at times a tendency to opisthotonus, and once twitching of the right face was noted. The pulse was very weak, for the greater part of the time imperceptible at the wrist, and from 120 to 140 per minute. The respirations were from 20 to 50, and often irregular.

The fontanelle was depressed, and the extremities cold, unless artificial heat was kept applied. The abdomen was not retracted. His drowsy, semi-stupid condition alternated with one of irritability.

He took medicine, food, and stimulants well. During the second week of his illness, until November 21st, his fever gradually subsided, and the temperature was occasionally subnormal, once 95° F. in the rectum. From these attacks of collapse nothing roused him so promptly as oxygen.

His treatment up to this time had been ice-bags to the head, hot bottles to the feet, sodii bromidi, gr. iv., and potass. bromidi, gr. viii., every two hours. It was continued. He now began to improve slowly, was less drowsy, took a little notice of the children about him. His face looked not quite so pinched. The pulse was still very feeble and often irregular. He was not so irritable. Had cut two teeth. By December 5th his cerebral symptoms had nearly disappeared. His drugs had been kept up, as symptoms were invariably worse when they were omitted.

His temperature did not rise above 100° F. He was still very weak and had grown quite thin, but was able at this date to sit propped up in a chair, and once laughed aloud. During the week following he gained nine ounces in weight. On December 11th he was taken, without apparent cause, with all the symptoms of acute dysentery, from which he died on December 19th. The temperature was high, reaching 105° F. or over every evening. Six grains of antipyrine, in divided doses, given within an hour, were administered several times with the most gratifying results in reducing the temperature and allaying the restlessness, without depressing the pulse.

The passages were from six to ten in twenty-four hours; in the beginning they contained much blood. Only once was anything resembling membrane noticed.

Several times, when apparently *in articulo mortis*, he was revived by the free use of oxygen, and it seemed as though there was quite a reasonable prospect of recovery. He sank steadily and died of exhaustion. Decided improvement in the stools was obtained by the use of enemata of acid. tannic., gr. xx., repeated every four hours.

Autopsy, thirty-six hours after death.—Body quite emaciated. Brain: A little more congestion than is usual was found in the meninges. There were some slight adhesions between the dura and pia, on the under surface of the frontal lobe. The pia was opaque and cloudy in two or three small patches over the convexity, but no other traces of recent or old inflammation were discoverable, and no tubercles, though they were carefully sought. Thorax: The lungs showed slight hypostatic congestion and a little recent bronchial catarrh; bronchial glands normal. The heart was pale and seemed rather small for the age. Its walls and valves were normal. About a drachm of clear serum in pericardial sac. Abdomen: Stomach a little dilated, and contained undigested food. Nothing abnormal seen in it or in small intestine till the lower part of the ileum was reached; here was the very slightest degree of congestion and swelling of Peyer's patches. Beyond the ileo-cæcal valve the whole gut was the seat of marked changes. These were most intense in the cæcum. The wall of the intestine was three or four times its normal thickness. The mucous membrane was of a greenish-gray color, and was covered with a false membrane, which could be stripped off in

patches. This membrane existed in the ascending colon, but was not seen beyond the hepatic flexure. The rest of the colon and the rectum were of a pale red color, showing marked thickening and enlargement of the solitary follicles, but no ulcers. The small intestine contained normal yellow fæces; the large intestine greenish mucus and fæces, but no blood. Recent lymph covered the meso-cæcum, but the peritoneum was elsewhere normal. The mesenteric glands were enlarged from infiltration of cells, but showed no tendency to cheesy degeneration. Liver: Size normal; weight nine ounces; a little firmer than normal. Its surface showed white glistening streaks. On section a mottled, reddish-white appearance, not very well marked. Spleen: Nearly twice normal size; weight two ounces; moderately congested; firm. Malpighian bodies not specially prominent. Kidneys: Weighed together one and a half ounce; cloudy swelling of the cortex.

Microscopical examination was made of the large intestines, liver, and kidney. The intestines showed the usual appearances of croupous dysentery seen in the adult, except the presence of ulcers of any considerable size. The false membrane was made up of coagulated fibrin, which covered the surface of the mucous membrane and infiltrated the spaces between the crypts of Lieberkühn, causing considerable compression, but nowhere sloughing. The submucous coat showed a large amount of cell-infiltration, and some fibrin. The solitary follicles were distended everywhere, and many had ruptured, forming small ulcers. The liver showed a perceptible but not very marked increase of connective tissue through its whole substance, with areas of anæmia, and others with slight fatty changes. In the kidneys nothing beyond swelling of the epithelium, and a slight amount of infiltration with leucocytes in scattered areas.

The pathological appearances of the different parts of the large intestine showed, quite conclusively, the beneficial effects of the treatment by injections. In the lower part of the bowel, where the changes are usually the most marked, the mucous membrane presented the least changes, the marked thickening only remaining to show that there had been an active process going on, the severity of which was past. The injections used do not seem to have been large enough to reach the ascending colon and cæcum.

GENERAL TUBERCULOSIS WITH LATENT SYMPTOMS—TUBERCULAR MENINGITIS.

CASE II.—The patient was a female child, aged seventeen months; had been in the Institution only six weeks. The family history was not very clearly tubercular. The father was reported to be suffering from "lung trouble," with considerable cough and expectoration. The mother had had suppurative adenitis in the neck and axilla, the scars of which were still present. Otherwise the history on neither side suggested tubercular diathesis. The child had measles at five weeks, but never any other acute illness. A cough for a long time had existed. On admission the child was rather poorly nourished, quite rachitic, and seemed to be suffering from a recent mild bronchitis. There were some coarse râles scattered through the lungs, the respirations were 64, and pulse 140. The temperature was kept for a few days, but as it did not rise above 100° F. in the rectum it was discontinued. Under a generous diet and the use of cod-liver oil and tonics the child improved very markedly in the next month. She gained in weight, improved in general appearance, the appetite was good, and she got strong enough to push a chair about, which she had never done before. The child was examined with some degree of care with reference to the rickets about ten days before she died. The muscles were then a little flabby, there was pot-belly, an unduly opened fontanelle, and relaxation of the ligaments of the lower extremities, but no cachexia, or anæmia even, and nothing to suggest any serious disease. She had no pulmonary symptoms, and the condition of the lungs was not investigated. She had always been inclined to constipation.

She continued without any perceptible change in symptoms until December 17th, when she was seized with a general convulsion, and the temperature rose to 101.8° F. From this till death, on the morning of December 20th, the convulsions were repeated once or twice a day. The temperature ranged from 99° F. to 102° F., never rising above the latter point. The respirations were about 50 a minute. An examination of the chest was made by the resident physician, and marked dulness found along the spine on both sides. The child was so excited that nothing satisfactory was made out on auscultation. There was only slight cough. The bowels were loose. The treatment was directed to the cerebral symptoms, but was without effect. She died a few hours after having had a convulsion.

Autopsy forty-eight hours after death. Brain: There was moderate congestion of the meninges; at the base along the fissures a few scattered miliary tubercles were seen, but no lymph or pus. The pia was somewhat adherent in places. There was no excess of fluid in the ventricles. Lungs: There were firm, old adhesions over the left lung anteriorly and at its base; none of the right side. The posterior portion of the right lung, middle and lower lobes, was in a state of collapse, uniformly smooth, of a dark red color, non-crepitant, and sank in water. It could be inflated with moderate force. The rest of the lung was emphysematous, and showed miliary tubercles very sparsely scattered over its surface, but no other changes. The upper lobe of the left lung was the seat of extensive disease. Its lower half was consolidated, and on section a small cavity was found in the mammary region, containing one or two drachms of pus. The adjacent lung-tissue was studded with yellowish nodules, varying from a very small size up to that of a bean. The rest of the lobe was studded more or less closely with tubercles, which seemed more recent, while the consolidation below was tough and apparently largely fibrous. The lower lobe, like the right lung, showed extensive collapse behind some emphysema, and a very few tubercles. All the bronchial glands were enlarged, several to the size of a hazel-nut, and one or two were broken down and cheesy at their centres. Heart and pericardium were normal. Liver enlarged, very fatty; weight, twelve ounces. Spleen full, three times usual size; weight, three ounces. Malpighian bodies very prominent. Kidneys showed slight cloudy swelling of the cortex. A few miliary tubercles were scattered over the surface of all these organs. Mesenteric glands were all enlarged, the largest being nearly an inch long. None were cheesy. No tubercles seen in the peritoneum.

There was catarrhal swelling of the mucous membrane of the large intestine, particularly in the cæcum and rectum, and the solitary follicles were prominent. Peyer's patches were slightly infiltrated, but there was no ulceration.

Microscopical examination was made of the lungs, and bronchial and mesenteric glands. The firmly consolidated areas were found to be made up almost entirely of new fibrous tissue. In this were imbedded a good many tubercles, mostly caseous, containing numbers of giant cells. The collapsed portions were free from tubercular changes, and showed almost no evidence of inflammation in the alveoli, the interstitial tissue, or the bronchi. The vessels were considerably thickened. The bronchial and mesenteric glands exhibited the various stages of tubercular infiltration and caseation, and contained, like the lung, many giant cells.

The process in the lung was then an old one, probably of many months' standing; after being quiescent for some time it suddenly took on renewed activity, and became the focus for general infection.

DR. PUTNAM JACOBI asked if it was not possible that the cerebral functional disturbance in Dr. Holt's case was due to the cirrhosis of the liver.

Dr. Holt thought that such was hardly the case. During the period of cerebral symptoms the child took four doses of quinine, which might be an element in forming an estimate of the significance of the symptoms, and it was also to be noticed that during the existence of the cerebral symptoms dentition was going on very actively.

Dr. Putnam-Jacobi remarked that dentition was to be regarded as a disturbing element only in rachitic children.

Dr. Amidon said it was his firm belief that some cases of tubercular meningitis recovered, and he referred to one under his observation, in which recovery took place during the use of heroic doses of iodide of potassium. In that instance there was diplopia, frontal headache, facial paralysis on the right side, excessive photophobia, and maniacal disturbance at night. The patient was an adult, and was in a condition of advanced phthisis, probably tubercular in character, and although her condition was not such as to justify heroic treatment, she was treated by the administration of about an ounce of the iodide of potassium in twenty-four hours. The patient recovered entirely from the cerebral symptoms, and at the autopsy, the patient dying some time afterward, not a trace of meningitis could be found. He had always regarded it as a case of tubercular meningitis cured. The patient gave no history of syphilis, and she had well-marked pulmonary tuberculosis.

Dr. Van Santvoord remarked that in the case of children, marked cerebral symptoms were very frequently coincident with other disturbances, and he had been so frequently disappointed with reference to diagnosis and post-mortem changes that he had refrained from making a diagnosis until he saw the lesion in the dead-house.

Dr. Putnam-Jacobi said that the proximate cause of symptoms in tubercular meningitis was hyperæmia of the meninges and softening of the gray matter around the tubercles and immediately under the meninges. Thus we might suspect tubercular meningitis, and it might be simulated by any cause which would produce hyperæmia of the meninges.

Dr. Van Santvoord had been struck with the extreme latency of the course of tubercular meningitis. He recalled one case particularly, in which the process was of weeks' and even months' duration, and gave rise to marked cerebral symptoms only a few days before death.

Dr. J. C. Peters said he had never seen a fatal case of tubercular meningitis unless there was evidence of tubercules in other organs, and he also thought it was exceedingly rare for recovery to take place if there was tuberculosis elsewhere.

Dr. Amidon remarked that a very trifling lesion in the brain could kill a patient, and that he had been obliged sometimes to hunt with a lens in order to find the lesion which was the cause of death.

Dr. Holt said it had always seemed to him unfair to assume that because a patient recovers it was not a case of tubercular meningitis; because we see recoveries from tuberculosis elsewhere, as in tubercular disease of the bones and pulmonary tuberculosis, and therefore we should never hesitate to attack one of these cases with the hope of curing it.

Dr. Van Santvoord asked if in cases of recovery from pulmonary tuberculosis and tubercular disease of the brain, Dr. Holt would not expect to find some lesion at the autopsy?

Dr. Holt said he did not wish to imply that there was no lesion, but that some trace of the disease would be found.

Dr. Putnam Jacobi remarked that, according to recent observations, iodide of potassium was not regarded as a very heroic remedy in tubercular meningitis.

The President said he was acquainted with a case in which the patient, a man forty-three years of age, was now under Dr. Janeway's care, who considers that he is suffering from tubercular meningitis, and has been for a considerable length of time. The Society had already been made familiar with a part of the history of the case in the fact that it was one which illustrated the ready production of albumen in the urine by any active mental agent.

Dr. Prudden thought it was dangerous to draw an analogy with reference to tubercular meningitis from the healing of lesions in the lungs, because the only way in which the pulmonary cure is effected is by the process going on into the condition of fibroid degeneration. As to tubercle, it is now regarded as due to the presence of a bacillus, which produces inflammation of the tissues which goes over into fibroid change.

Dr. Holt would like to direct attention to the occurrence of simple dysentery in young children. This was the third autopsy which he had made within two weeks in which there was simple dysentery disconnected with any other lesion in the intestine. Goodhart states that simple dysentery is extremely rare apart from lesion of the small intestines. In the two cases mentioned, the dysentery was largely follicular.

Dr. Van Santvoord had seen considerable dysentery in children, but it had usually been follicular; indeed, he did not recall a case in which he had seen croupous dysentery.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 21, 1886.

Abraham Jacobi, M.D., President, in the Chair.

REFLEX SYMPTOMS IN NASAL AFFECTIONS.

The discussion on the above subject was introduced by the Section in Ophthalmology, through a paper read by Dr. E. Gruening (see p. 122).

Dr. Thomas A. McBride continued the discussion as follows: "I shall ask your attention briefly to a report of five cases of reflex disturbance arising from nasal disease.

"Case I.—L. D——, aged twenty-four, consulted me in the spring of 1882, for migraine. Since 1880, he had been having attacks of migraine, occurring first every six or eight weeks, and within the last winter, 1882, the attacks had become more frequent. He gave a very classical description of the seizures. He is awakened in the morning with pain over the left eye or left parietal eminences, and this increases in intensity as the day passes, occasionally being accompanied early in the attack by 'zigzags,' or 'fortification lines,' of red, green, and white colors, and sometimes hemianopsia. There is also much nausea and some vomiting. The attack lasts usually about eighteen hours, and the next day he is completely prostrated. His family history is decidedly neurotic. I regarded his case as a very characteristic one of migraine.

"After paying due attention to his diet, and regulating his mode of life, and exercise in open air. I placed him upon arsenic and extract of cannabis indica. The extract of cannabis indica was increased from one-fourth of a grain to half a grain within a few weeks, and this he continued to take for some fourteen months.

"The seizures were certainly diminished much in frequency, and occurred about once in two months, and occasionally not for ten weeks.

"At the end of fourteen months he thought that the cannabis induced nausea, the arsenic had been discontinued after a use of some six months. He complained of a constant feeling of nausea, and besides of a strange sensation in his head, which he could not describe or express. His efforts in description reminded me very much of those made by patients to describe the aura of epilepsy, especially the aura of psychical epilepsy.

"The cannabis could not be held responsible for this symptom, but inasmuch as he had so great a repugnance to taking the drug he was placed upon bromide of sodium, a large dose being taken at bed-time, and a small quantity, grs. x., with caffeine, grs. iij., being taken three times a day.

"The attacks of migraine recurred at the intervals of about two months, but the feeling of nausea remained and was almost constantly present.

"Early in 1884 he went abroad and accidentally came under the care of Dr. Hack, of Freiburg. Dr. Hack recognized the existence of post-nasal catarrh, and regarded that as the cause of the nausea, and possibly of the migraine. The patient was under treatment for one month, and since then has been entirely free from migraine and nausea.

"Case II.—Master C——, aged ten and one-half, of neurotic antecedents. For several years has had more or less headache, and this has been so persistent and so severe as to interfere with his schooling, and for some months (1885) he has been kept out of doors, away from all books and confinement. He located his headaches over the upper part of the forehead. Searching for a cause of the headache, I referred him to Dr. Gruening for examination of his eyes. Dr. Gruening had made a thorough examination of his eyes and found nothing abnormal in these organs to account for the boy's headache. He suggested that the headaches might be due to the morbid processes then active in the nasal passages. I referred the boy to Dr. Lefferts, and by appropriate treatment the nasal affection was cured, and since then no headaches have appeared.

"In a note to me this morning, the boy's father states that he has been entirely free from headaches, except now and then, when they seem to be due to excessive exertion or fatigue.

"Case III.—Miss R——, aged twenty-six, of neurotic antecedents. For the last three years or more has suffered from severe attacks of headache and also from supra-orbital neuralgia. The headache was accompanied by the neuralgia, but headache and neuralgia often occur separately. Both neuralgia and headaches occurred at irregular intervals, but the headaches always came on when she was menstruating, and as a rule the neuralgia accompanied it.

"The headache was located over the upper part of the forehead, verging toward the vertex, and was also located either over one parietal or to the parietal eminences.

"The neuralgia usually affected the left supra-orbital branch, sometimes both, sometimes only the right.

"The attacks began usually in the morning and were accompanied often with nausea, sometimes vomiting. There was no disturbances of vision. The patient suffered from lithæmia, complained somewhat of nasal catarrh, and, as she was fond of music, was over-anxious in regard to her voice, which she thought was affected by the nasal catarrh.

"Dr. Gruening examined her eyes and found, I believe, slight hypermetropia, which was corrected.

"I referred her to Dr. Lefferts for treatment, and after he had cauterized a few times the hypertrophied mucous membrane of the inferior turbinated bones very great improvement was observed as regards her headaches and neuralgias. Since the completion of the treatment of the nasal condition she has been entirely free from all headaches and neuralgia.

"Case IV.—Mrs. R——, aged fifty. For many years had attacks of hemicrania at time of menstruation. Since the menopause, which occurred at forty, the attacks of hemicrania have appeared at intervals of two to six weeks. For the last ten years she has suffered very much from hay fever. Last August she placed herself under the care of a rhinoscopist in a neighboring city, and the result has been that since the treatment she has had no return of the hay fever, and has had no attacks of hemicrania.

"Case V.—Mrs. B——, aged thirty-six. At intervals in her married life, when she has been in poor health, she has complained of difficulty in swallowing liquids, and of regurgitation of food into the mouth. This regurgitation takes place sometimes immediately after swallowing, sometimes not for twenty minutes or longer after the food has been introduced into the stomach. Oser has described this condition under the head of Rumination or Merycismus, in his lectures on 'Die Nervosen des Magens.' Four years ago she was under treatment for post-nasal catarrh abroad, and now suffers more or less from the same trouble. Three weeks ago she came under my care. She was anæmic, and had evidently some gastric catarrh. I ordered for her tonics, arsenic and iron, and dry diet. On the 12th it occurred to me to suggest the use of a spray of cocaine, four per cent., to the nasal passages, and since then she has been entirely free from the difficulty of swallowing and the regurgitation. The treatment in this case is of too recent a date for one to predicate the result as due to the effect of the cocaine spray apart from the psychical effect, since we know that this condition of rumination or merycismus is often present in hysteria, and this patient, although without the positive signs of hysteria, had a tendency to it.

"I have not referred in the above cases to the condition of the nasal passages, which has been assumed to be the exciting cause of the nervous disturbances, for the reason that I was not competent to do so. When asked to make this communication I objected, thinking that it would be better if the report came from the rhinoscopists—the specialists to whom the cases were referred for treatment. I can, therefore, say nothing in regard to the condition of the nasal passages which were accompanied by reflex disturbances. I have not reported cases of asthma, or certain cures of dry bronchitis, for the reason that such cases are acknowledged to-day to be of not unfrequent occurrence."

Dr. Beverley Robinson continued the discussion (see p. 120).

Dr. Goodwillie presented three wax models, which illustrated the morbid conditions found in (1) a case of deviation of the septum, with hypertrophy of the mucous membrane covering the turbinated bones; (2) a case of complete closure of one nostril, and (3) a case of "hay fever," in which there was a decided hypertrophy of the nasal mucous membrane over the turbinated bones.

In all these cases the patients received marked relief from the reflex symptoms by the removal of the abnormal conditions in the nasal passages, which was readily accomplished by means of revolving knives, worked with the dental engine, and by the aid of the galvano-cautery.

Dr. Baruch referred to six cases which he had treated successfully by treating the mucous membrane of the nasal passages; one of reflex cough, two of headache, one of peculiar reflex pain in the throat, and one of asthma. He used the galvano-cautery. Dr. Baruch thought the matter of diagnosis was simple, as the enlargement of the lower turbinated body could be readily recognized, the only difficulty being that the swelling was sometimes absent temporarily; in such cases it could be readily restored by irritation with the probe.

Dr. H. Schweig said that while the galvano-cautery, when properly used, would give brilliant results, it was an agent which by no means could be easily used by those unaccustomed to manipulate in the nasal passages. To be most successful the cavernous tissue should be destroyed, but not at the expense of the secreting surfaces, and the destruction should by preference be made from within outward. Employ only a dull-red heat, puncture the cavernous tissue, and through the small opening sweep the instrument around beneath the surface, and the best results will be secured.

The President alluded to a large number of obser-

vations which he made some twelve or fourteen years ago, and, so fara s he knew, reference to similar observations had not anywhere been made.

These observations related to the influence of catarrh, hypertrophy, and other changes affecting the nasal and pharyngeal cavities, on other parts of the nervous system not mentioned in the present discussion.

It was well known that a large number of little children, half grown, and grown-up people have peculiar bad habits, so called, of winking, frowning horizontally and vertically, drawing up the nose, twitching different parts of the face, shrugging the shoulders, one or both, etc. Such cases are frequently set down as due to bad habit, but they should be studied with reference to the origin of these irregular movements. It had always seemed to him that it was not natural for a little boy to make these motions without some occasion; the cause, however, cannot be so easily determined.

Some of these cases appear to be local chorea minor, and in several instances he had seen the movements terminate in *general* chorea minor.

About twelve years ago his attention was first drawn to the occurrence of hemicrania, left or right, when there is chronic pharyngitis and amygdalitis, by a small pamphlet written by Lorent, of Bremen, who associated these conditions. Dr. Jacobi found that the observation was correct with reference to a number of cases, and from that time he had studied all cases of chronic nasal and pharyngeal catarrh with swelling of the lymphatic glands, and had found that, in hundreds of cases, the local chorea, the involuntary convulsive contractions, or contractions of the same kind brought on by some intended muscular movement, was associated with conjunctivitis, rhinitis, pharyngitis, or with enlarged tonsils, either congenital or acquired, or both.

In other cases of local chorea, which will ocasionally terminate in general chorea, he had found chronic nasal catarrh of the same description given to-night, and with chronic pharyngitis, and with chronic rhinitis without chronic pharyngitis, or the opposite; in many cases it is difficult to say which is the original disease.

The pharyngeal tonsil is frequently overlooked when studying these cases. It is well known that this tonsil is not infrequently the cause of retro-pharyngeal abscess, and it is with cases of abscess that it has been most extensively studied. Inflammation of the pharyngeal tonsil always causes general rhinitis and pharyngitis. The principal book on this subject is a recent publication by Trautmann, who reports one hundred and fifty cases of enlargement due to chronic or subacute inflammation of the pharyngeal tonsil. This author connects it with a number of symptoms such as are described in connection with chronic pharyngitis and rhinitis, and particularly alludes to migraine, which was present in eighty-seven of the one hundred and fifty. Of the eighty-seven, eighty-five were cured by destroying entirely or partially the pharyngeal tonsil; the others were treated in the same way, but were not cured; one of these was complicated with polypus.

These facts show that the whole surface of the nasal cavity is liable to give rise to these reflex symptoms which have been alluded to by the previous speakers; it may be the pharyngeal tonsil, etc. Frequently it appears that it is only one small spot w ich requires treatment, and all the rest will take care of itself.

The remarks concerning local chorea resulting from chronic and subacute pharyngitis and rhinitis the President regarded as only preliminary. He had not published any of his cases; in fact, he had been of the opinion that every one must have noticed them. But it appears that it is not so, and he gave the observation for what it was worth, and recommended those whose attention had not been drawn to the subject to study cases with reference to this point, and to seek the result of the simple treatment.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

[illegible]

MR. HUTCHINSON'S LECTURE ON SYPHILIS AT THE MEDICAL SOCIETY OF LONDON. THE CASE OF DR. TOM BROWNE.

[illegible]

MR. HUTCHINSON is such an acknowledged authority on syphilis that his "Lettsomian Lectures" have been looked forward to with unusual interest. His first lecture was delivered on Monday evening last in the presence of a large audience. In this he enunciated afresh many of his published views, and also brought forward some original observations and opinions.

On the question of the mutual relations of the different forms of primary venereal sores, Mr. Hutchinson may be termed a unicist. He regards soft sores as an appanage of syphilis, and thinks that the poison which produces them may be only a specialized product of inflammation and not a specific virus. He combated the generally received view as to the uniform character of soft sores. If, he said, we placed in one group all the sores which do not harden and which do not infect the system, we should find the typical characters of the chancroid present in but a small proportion of them. This want of uniformity was a strong argument against specificity. Another equally strong argument was that the true chancroid on the genitals was seldom seen except in those who had already had syphilis. With regard to prognosis, if a person who had never suffered before contracted a venereal sore of any kind it would probably lead to syphilis. Mr. Morgan's statistics were quoted in support of this conclusion. The experiments of Morgan, Lee, Gascoyen, Bidenkap, and others were quoted as to the production (in those who had had syphilis) of chancroids by inoculation with syphilitic secretions and purulent secretions from indurated sores which had been made to suppurate by artificial irritation.

Mr. Hutchinson then stated afresh and expanded his already published views as to the relation of phagedæna to syphilis. Phagedæna, as we see it in connection with syphilis, he regarded as being almost invariably of spontaneous origin, *i.e.*, caused by syphilitic inflammation and not by phagedænic contagion. Mr. Hutchinson compared it with the chancroid, believing that, like it, it is a modified form of syphilitic inflammation. I may remark in passing, that most British surgeons believe that phagedæna is a more frequent accompaniment of the chancroid than of indurated chancres. It will be seen from the above that Mr. Hutchinson teaches the reverse. He also holds that hospital phagedæna originates from syphilis, and expounded this view at some length in his recent lecture. The disease was very contagious and spread by contagion only, but it never led to constitutional syphilis. Accepting the hypothesis of its syphilitic origin we had, said the lecturer, a parallel fact to what (in his view) occurred in the case of chancroid. A specialized contagium (pus) had been bred up, which could produce its like wherever inoculated, but did not contain the virus of syphilis.

Mr. Hutchinson also protested against the popular doctrine in regard to another matter. It is generally believed that inflamed buboes following venereal sores occur almost exclusively in connection with soft sores. In private practice, said the lecturer, it was very rare that we had to do with inflamed buboes, but of late years it had so happened that almost all the cases of suppurated bubo which he had seen were cases of syphilis. It was not very exceptional for the typical chancroid to cause no enlargement of the glands at all. The practical inference drawn was that we were on unsafe ground in assuming that scars in the groin implied absence of constitutional infection.

The subject of second attacks was then considered,

For a second attack to occur it has usually been considered necessary for a long interval of years to elapse, but Mr. Hutchinson said he had seen a well-characterized chancre due to fresh contagion, within a year of the first, and before the patient was well rid of his symptoms. He had repeatedly seen them in those who still suffered from reminders of their former attack. It had been proved by experiment that in occasional instances fresh inoculations on patients suffering from syphilis may produce a certain degree of induration, although, as a rule, they failed.

Incubation periods were then discussed and the opinion expressed that they were really longer than has generally been believed. "If by incubation period," said the lecturer, "we mean, as I contend we ought to do, the interval between contagion and the production of an induration which can be diagnosed, then I believe we shall seldom find it less than five weeks, and more often six. If we date to the first appearance of a sore, then it will be a week or ten days shorter, for the development of hardness takes that time."

Another interesting point then referred to was the fact (first noted by Mr. Hutchinson himself) that chancres might recur. It was quite possible for indurations to develop in the retrocoronal fold of the prepuce, which assumed the most exact resemblance to hard chancres, but which were not consequent on any fresh contagion. They occurred to those who had had syphilis and usually on the site of former chancres. They might occur repeatedly to the same individual. They usually appeared within five years from the primary infection. They mostly retained throughout the most exact resemblance to the ordinary collared chancre, and they were often wholly without ulceration. Mr. Hutchinson said he had also known a chancre to recur in a case in which the disease had been due to vaccination.

The frequent occurrence of cases in which syphilis followed what was considered to be only gonorrhœa suggested the suitability of recognizing what we might call gonorrhœa-syphilis. There was no danger now that this name should mislead us into adopting Hunter's erroneous generalization. These cases might be explained on the supposition that the particular virus of syphilis might exist in gonorrhœal pus. If a patient, the subject of secondary syphilis, should contract gonorrhœa no doubt the virus would pass into the discharge, since we knew that it was present in the blood, and found its way into all products of inflammation. Such a person would very likely convey to another gonorrhœa immediately, and a chancre four or five weeks later.

Mr. Hutchinson brought his rather long but very interesting lecture to a conclusion by a brief reference to the subject of syphilis conveyed in vaccination. That the disease may be transmitted by vaccination *with clear lymph* from a syphilitic person he now regards as an established fact. He bases this belief on the result of some experiments made by one of our public vaccinators (on himself) a few years ago. The gentleman referred to finally produced an outbreak of constitutional syphilis by repeatedly vaccinating himself *with clear lymph only* from syphilitic infants.

Dr. J. Crichton Browne has been knighted. Dr. Browne has been known for many years as an able psychologist, but was brought into special prominence a short time ago by his report on "Overpressure in Board Schools." The Liberal Government, then in power, endeavored to suppress the report, and, when printed, to discredit it by printing along with it a rejoinder by Mr. Fitch, one of the Inspectors of Schools. The report, however, carried conviction to its readers, most of whom will be glad to see that the present Government has been ready to accord Dr. Crichton Browne the credit he deserved.

THE USE OF COFFEE sometimes causes pruritus vulvæ and pruritus ani.

THE COMMITMENT OF THE INSANE.

TO THE EDITOR OF THE MEDICAL RECORD.

I MUST take exception to certain statements made in your editorial on "The Commitment and Management of the Insane," in THE MEDICAL RECORD of January 9th. You state that physicians, wishing to have their certificates of insanity signed, are subjected to vexatious delays and personal annoyances, and that the doctor is often obliged to fee the clerks and court-attendants to facilitate matters.

I have been the Examiner in Lunacy for the Department of Public Charities and Correction for the past eight years. As I commit, on an average, fully one hundred patients a month, I am compelled to go to court almost daily. In all that time I have never given a fee to any court-attendant, even of the most trivial nature, nor has any such thing been hinted to me.

In regard to the judges, I have found them agreeable and accommodating, many of them signing my papers while holding court, during an interval in argument between counsel. During vacation time in summer, when there are only a few judges in the city, I may have to wait a little, but no longer than a member of the bar. In all my experience, I have had only one judge refuse to sign my papers. He refused on the ground that it was not constitutional to deprive a person of his liberty except after a trial by a jury, even if he was insane. A number of times, where the cases were urgent, I have had my papers signed by the judges at their residences at night.

WILLIAM L. HARDY, M.D.

353 WEST TWENTY-EIGHTH STREET,
January 12, 1886.

[We can only say that Dr. Hardy's experience is not that of many others, as reported to us.—ED.]

THE PLURAL OF LARYNX.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In all sciences the demand for an exact nomenclature has at some time been felt, and, to a greater or lesser extent, this demand has been satisfied, but much is yet to be done before the physician or surgeon can claim for his science a perfect vocabulary. Many questions regarding the spelling and formation of medical terms constantly arise, and if a layman occasionally offer a suggestion, it will, without doubt, be taken in good part by his professional friends.

A prominent laryngologist of London saw fit to criticise a confrère of Brooklyn for his use of larynges as the plural of larynx, the Englishman claiming larynxes to be the correct form, at the same time clinching his argument by affirming that a Latin scholar, on whose judgment he relied, had assured him of this. Now, though this evidence may have seemed all-sufficient to Dr. ——, yet there may be some incredulous readers of this journal who will demand some more satisfactory evidence, and this it is our present endeavor to furnish.

Of these two forms, which is correct, or, if both be correct, which is to be preferred? If we turn to the dictionaries we shall obtain no assistance, for, without exception, they omit all mention of a plural of larynx. In default of direct evidence we shall have to fall back upon the rather dangerous method of reasoning from analogy. Turning over the leaves of our mental vocabulary, let us halt at the word phalanx, and see whether it will not help us out of our difficulty. Like larynx, phalanx is derived from the Greek, and has in the genitive φαλαγγος; the γγ is equivalent to English ng, γγ being an assimilation of ν with γ, a process quite familiar to Greek scholars. But it does not necessarily follow that the English word has accepted the oblique cases of the Greek noun, as well as its nominative case. Very frequently an English word derived from the Greek forms

its plural after the English fashion, but a particular analogy is always to be preferred to a general one, and if we can find authority for phalanges, we shall have to decide in favor of larynges also. Webster and the Imperial give the plural phalanges as an anatomical term, hence larynges.

The forms derived from phalanx and larynx also materially assist us in our demonstration, for without exception ng is employed, as phalangeal, phalanges, laryngeal, laryngitis, laryngology, etc. An appeal to the cognate dialects reveals the same fact, Latin having the plural phalanges; French, the form laryngi; Italian and Spanish, laryngio.

The arraignment of these arguments would seem to decide the case in favor of larynges, although it is not intended to dispute Dr. ——'s perfect right to use larynxes, "because it's English, you know." We all know the proneness of the English scientist to conservatism, especially in regard to suggestions from this side of the water; we shall not be surprised, therefore, if larynxes still holds its place in English hearts.

Hoping that this note may find a place in your journal, I remain respectfully yours,

DANIEL KILHAM DODGE, A.M.

COLUMBIA COLLEGE, January 8, 1886.

P.S.—Since writing the above I have found in Goold Brown's "Grammar of English Grammars" the plural form larynges, with no mention of larynxes. D. K. D.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 17, 1886, to January 23, 1886.

WEBSTER, WARREN, Major and Surgeon. Sick-leave of absence further extended nine months on account of sickness. S. O. 15, A. G. O., January 19, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 23, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small pox.	Yellow Fever.
Cases.								
January 23, 1886	1	7	43	3	20	76	7	0
Deaths.								
January 23, 1886	0	3	13	3	2	31	1	0

CONTROLLING SEX IN GENERATION.—Dr. E. A. Cobleigh, of Athens, Tenn., writes: "In your issue of December 26, 1885, is a review of a new book by a Mr. Terry, entitled 'Controlling Sex in Generation.' The author assumes that 'at the generation of male offspring the mother must be in a higher degree of sexual excitement than the father,' and conversely. Now, facts are stubborn things, no matter what theory they run against, and this they often do to a well-grounded idea. My experience as a practitioner of medicine leads me to strongly doubt Mr. Terry's hypothesis. One fact does not controvert an argument, for it may be an exceptional one, but several similar antagonistic facts do tend powerfully that way. I have seen several such, two of which are positive facts which oppose squarely the author's assumption. Now, let me ask, is it not the experience of every physician that no inconsiderable number of females in a community may be found who are either *naturally* and wholly devoid of any sexual propensities whatever; or, if not minus this propensity, are at any rate its possessors only to a feeble extent? Such has been my own observation. To this may be added a quota of women who abhor the sexual act through pathological conditions of the sexual organs which render it inconvenient, or even painful,—those suffering from 'dysparennia,' as Barnes calls it. Now, these women conceive like other women, and bear male offspring, as I have more than once had knowledge of in my practice. And, to be more explicit, I will cite three just such cases which I now call to mind, the inside history of which I am thoroughly conversant with. I know two married ladies, in good social position, each of them the mother of two boys and one girl, the girl in both instances being the youngest. One of these women bore both her boys before she ever knew what sexual excitement was, the girl being the fruit, however, of a sexual act participated in fully by both the wife and the husband. In the other case the lady does not, to this day, experience any pleasure whatever in the sexual act. Here were four boys conceived by two females, to my knowledge (for this condition of affairs was a cause of regret in the domestic circle), both of the women being at the time in a mere condition of passive submission. In a third instance a woman, in the highest circles of society, bore an only child under the same circumstances, that child being a boy. I might adduce other instances, but these are sufficient to rebut the hypothesis which I am dealing with. Indeed, I think this theory might rank with a superstition harbored by two men of my acquaintance, one of them a physician himself and the other a clergyman. They believe that the position of the woman during and immediately after the act (on the one side or the other) accurately determines the sex of the resulting fœtus. Both have large families, and they think they have demonstrated a scientific fact by their own experiences.

ANATOMICAL CURIOSITIES.—Broesicke describes in *Virchow's Archiv* the following anomalies which he found on the dissecting table: 1, Congenital union of the kidneys by an S-shaped band; 2, a third median laryngeal ventricle; 3, a diverticulum in the lateral wall of the pharynx communicating with the Eustachian tube.

EXTRAORDINARY FECUNDITY.—We borrow the following questionable story from our otherwise truthful contemporary, the *Raccoglitore Medico*. A certain Maddalena Granata, forty-seven years of age, was married nineteen years ago. Her first child, a girl, was born after nine months, and lived to be eight years old. At the next birth six male fœtuses were brought forth, one of them being apparently in the sixth month, the others younger. The third pregnancy resulted in three more males of seemingly different stages of development. The fourth trial resulted in three more fœtuses, also males, at the sixth month. The fifth pregnancy resulted in twins, females, born at term, one of whom is still living at the age of twelve years. This occurred in 1873, and from that time up to the present Signora Granata has turned out no less than forty-five more fœtuses of the masculine gender, making a grand total of sixty in nineteen years! The woman is in excellent health, and is able to do her full share of work in the fields along with the other patients. The reporter adds that any one who does not believe this tale may inquire of Dr. Raffaele de Sanctis, of the rione Liporta, in lower Nocera, where this remarkable woman lives.

PRIORITY IN HYDROPHOBIA INOCULATIONS.—At a recent meeting of the Royal Academy of Medicine of Rome, a committee was appointed to collect evidence in support of the claim for priority in hydrophobia inoculations made in behalf of Dr. Cappello, of Rome. Before making any great claims it would be well to have the value of the method determined.

THE GERMAN DISPENSARY.—The twenty-eighth annual report of the German Dispensary, No. 137 Second Avenue, shows a total of 33,496 patients treated during the year 1885. The total number of consultations was 79,252, and the average number of consultations by each physician was 2,401. The number of patients treated since the dispensary was founded reaches the large figure of 463,417. The new building donated by the late Mrs. Ottendorfer has proved itself well adapted for its purpose, and of sufficient capacity for the accommodation of the patients, of which, on a busy afternoon, there were sometimes nearly 400. It is gratifying to learn of the number relieved in this institution, but one cannot but ask how many of these 33,496 patients might have been able to pay some physician a moderate fee for advice and treatment. Some of them, no doubt, could have done so.

TOLERANCE OF MORPHINE IN AN INFANT.—A correspondent, from Winnipeg, writes: "I have a case of spina bifida, with hydrocephalus, in a child four and a half months old. The spinal deformity includes the last three lumbar vertebræ. There is complete paralysis of all parts below the seat of lesion, including the sphincters, and also double talipes varus. The child, a little girl, has seemed to suffer excruciating pain ever since birth, keeping up a continual screaming. As we hoped death would soon terminate her troubles, no operation or treatment of any kind has been instituted, except the use of narcotics to allay pain. At the present date she takes half a grain of sulphate of morphia a day, and this has only a quieting effect. She takes one-sixth of a grain for a dose, and is actually thriving on it, so that I am afraid some operation will have to be performed, if only to give her a chance of dying."

HYDROBROMATE OF HYOSCINE.—Dr. P. M. Wise, of the Willard Asylum for the Insane, writes: "Such conflicting reports have appeared recently concerning the value of this substance as a hypnotic, in substitution for the coarser alkaloid hyoscyamine, as to lead one to suppose that the drug used by the several writers was not of a uniform nature. The hyoscine used at the Willard Asylum, where its action has been carefully observed for a number of months, was obtained through Merck's authorized agents in New York, and was delivered in the original packages. The preparation of the aqueous solution was made with great care, and was kept only in ground glass stoppered bottles. The conclusions reached by the medical staff of the asylum in respect to its value as a hypnotic are nearly identical with those of Drs. Peterson and Langdon, as reported in THE MEDICAL RECORD of September 19, 1885. It was found that it disposes to sleep indirectly after several hours, when given in sufficient doses to produce its marked physiological effect, such as muscular relaxation, and, occasionally, stupor; but that it cannot be regarded as a hypnotic in its proper sense. Its use in active mania and melancholia was not attended with desirable results. In cases of insomnia it failed in doses short of producing its disagreeable effects—midriasis and dryness of the throat and mouth. In our experience it does not possess the value of hyoscyamine in any of the uses to which the latter is ordinarily applied. It has been used in doses varying from $\frac{1}{200}$ to $\frac{1}{75}$ of a grain." Dr. Wise adds that he has also tried the drug in whooping-cough in a child nine years of age, without obtaining any appreciable benefits as regards either the paroxysms of coughing or the insomnia.

A NEW INSTRUMENT FOR MAKING VESICO-VAGINAL FISTULÆ.—Dr. Jacob Michaux, of Richmond, Va., sends a description of an instrument which he has devised for establishing vesico-vaginal fistulæ when, in cases of cystitis, this condition is desired. The instrument, called a vesicotome, consists of two separate blades which, when desired, are locked in the same way as the ordinary obstetrical forceps. One of the blades is armed with a punch, either oblong, elliptical, or round, as may be desired, and the other has a slight depression on a lead surface to receive the sharp edges of the punch. The latter blade is first passed into the bladder, and the handle of the instrument raised so as to cause the tip of the blade to bulge into the vagina. Then the other blade, armed with the punch, is passed into the vagina, the handles are locked and then firmly pressed together, so as to cut out a clean piece the exact size and shape of the punch. The patient is to be in the Sims' position, with a Sims' speculum in the vagina.

ABSORBENT COTTON AS A COVERING FOR ELECTRODES.—Dr. J. H. Greene, of Dubuque, Ia., writes that he has been using absorbent cotton as a covering for electrodes, in the place of sponge, for the past two years. He uses an electrode formed of a rounded polar surface fitting into a hard-rubber retaining ring. The absorbent cotton is folded in rectangular form and passed between the ring and the polar surface. The latter is then screwed down, pushing before it the cotton until the latter is arrested by the rubber ring. The cotton fits smoothly over the polar surface, and the whole makes a neat and compact electrode.

A SINGULAR CASE.—At a meeting of the Medical Section of the Academy of Medicine in Ireland, says *The Lancet*, held on the 18th inst., a very remarkable specimen was exhibited by Dr. J. Magee Finny. It was an example of an ulcer of the stomach, which perforated the left ventricle of the heart and caused death by hemorrhage. The subject of this interesting example was a lad aged seventeen, of a somewhat strumous constitution, who was admitted into hospital under Dr. Finny's care about two months since, and died early in December. During his stay in hospital pain was complained of about the cardiac region, and pericarditis was diagnosed; but, strange to relate, there were no symptoms of any gastric irritation, neither pain nor vomiting. On the day death occurred the patient passed blood by stool, and a post-mortem examination showed that the stomach was entirely filled with blood.

MODERATION IN BONE SELLING.—The Austrian Minister of Instruction recently sent a communication to an association of Viennese physicians, requesting, on "legal, moral, and sanitary grounds," the sale of human bones and anatomical preparations be as far as possible restricted. An answer was returned to the effect that there was nothing illegal, immoral, or unsanitary in the sale of such articles, and that if there were, their sale should not be limited, but absolutely prohibited.

A MALE MIDWIFE.—A story is told in the *Journal de Médecine de Paris*, of a young married woman whose notions were so strict that she refused to have a physician attend her in her confinement, and insisted upon having a midwife. The family physician, having a sincere interest in the young lady, and being unwilling to intrust her to the care of a midwife, conceived the idea of sending a young medical friend whose face was beardless though his knowledge and skill were great. The young doctor accordingly dressed himself in female attire, saw the patient, and safely delivered her of a promising child. But he was not allowed to escape without a severe trial, for he was consulted by all the female members of the family, one after the other, for certain little tumors and other blemishes on various parts of the body which they had been unwilling to exhibit to their family physician. His wounded modesty was healed, however, by a plaster in the shape of a five hundred franc note.

MICROBES IN LAUDANUM.—Dr. G. Puerta writes in *El Siglo Médico*, that he has discovered a bacillus in a number of specimens of laudanum examined by him, which bears a striking resemblance to the comma bacillus. He thinks that care is therefore necessary, in examining the stools of patients with diarrhœa, to see that laudanum has not been given, as then bacilli would be found in the dejections and a diagnosis of cholera might be erroneously made.

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METHODS OF DIAGNOSIS.[1]

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AT a meeting of the New York State Medical Society, last February, my friend, Dr. Vander Veer, paid me a compliment of a most unusual kind, and for which no words of mine could possibly form an ample recognition. As I read the paper in which he described his visit to me, and what he saw while he stayed there, I had some difficulty in recognizing that the points upon which he laid great stress really deserved the prominence in which he had placed them. No one, however, can be a judge of his own work, and I therefore accept Dr. Vander Veer's valuation of mine in a spirit as generous, I trust, as that which he has displayed in describing it.

Many of the sentences in Dr. Vander Veer's paper have given me food for thought, and I think that in many respects I have to be grateful to him for improvements in my details, which have been suggested to me merely by seeing my methods described by one who was strange to them. One paragraph in particular has given rise to much introspection, and at first it alarmed me very much, because I felt that if the criticism were deserved (and this sentence really stands alone in the paper as being a criticism in the ordinary sense of the word), I was in all probability doing harm to my patients, and certainly was running the risk of setting a bad example to others whose opportunities were not so great, and whose condition of practice was not so peculiar as my own.

The paragraph I speak of is as follows: "Mr. Tait does not give very much time to the examination of his patients, as a general thing. His manner shows him to have unbounded confidence in making an abdominal section, then treating whatever he may find." I do not believe for a moment, after very careful thought upon the subject, that Dr. Vander Veer arrived at the conclusion that my method of diagnosis was careless and irregular. It is perfectly true that I have unbounded confidence in making an abdominal section, and by long practice have achieved a facility for treating whatever may turn up. But I have satisfied myself that, though the time which I give for the purpose of examination of any particular patient, or of my patients in general, may be short; that that time is only relatively and not actually short, and I desire to say something about my methods of diagnosis in this paper, not merely for the purpose of defending myself from what would appear to be something like a charge of recklessness, but far more to speak, as well as I am able, upon the processes of diagnosis which are peculiar to the practitioner who is not engaged in clinical teaching.

I fancy that the difference must be very much that which would exist between the process of an artist who is also a teacher of drawing, and one laboring entirely in the studio. A teacher must not only be precise and methodical, but he must do everything largely by routine; and to show his pupils how to accomplish their work accurately, he must not only lay down line after line and wash upon wash, but he must teach and give examples at a level which will suit the least instructed and dullest of his pupils. It must, of course, be essentially different in the case of an artist who works purely in his studio, and solely for the purpose of producing, to the exclusion of anything like instruction. I have actually gone to the trouble of watching the technique of two painters—one of them a teacher, the other merely a producer—precisely for the purpose of investigating this point, and I am quite certain that what I have seen about them is equally true of artists in surgery.

It has been my misfortune never to have been a teacher, and therefore I have found, since my attention has been drawn to the matter by Dr. Vander Veer's paper, that I come to my conclusions in ways which are altogether different from those adopted by men who are engaged in the practical instruction of pupils. I was immensely struck with this during my recent visit to the Medical School at Edinburgh, where clinical teaching of medicine and surgery has been brought to its greatest perfection. There I found men who have been my life-long friends, men more or less of my own age, who are trained teachers as well as accomplished practitioners, differing from me precisely in the directions which I have already indicated. There can be little doubt that the training of a teacher inculcates habits of precision and accuracy such as can be acquired in no other way. But, on the other hand, it involves methods of thought, and particularly methods of diagnosis, which, whatever else they may do, involve very protracted methods of reasoning, and a considerable expenditure of time.

I found that their methods were pretty much to my own in the same relation as the multiplication table stands to the arithmometer. They arrived at conclusions identical; but my own methods—some of which are practically inexplicable, because I hardly understand them myself—certainly involve a great saving of time and trouble. Let me instance the method of diagnosis which we call palpation. An abdomen is submitted for examination, uniformly distended, and the question comes to be, first of all, as to whether the distention is due to an intra- or extra-peritoneal cause; as to whether this cause is a collection of fluid or the growth of solid matter; whether these causes may be mixed, and in what relation they stand to one another; what organs may be concerned in the treatment of the enlargement, and fifty other questions of more or less importance in deciding how the disease may be dealt with. A teacher approaches such a subject as this from an altogether different view, and in an altogether different way from those of a man who is engaged exclusively in practice. The teacher's desire is not only that he should arrive at a correct conclusion upon all the questions, or as many of them as are capable of solution, but that fifty or more young men, devoid of experience, may see the reasons and follow his reasoning upon all of these said questions. As these fifty men will move with progressively-increasing slowness in their mental action, it practically comes to this, that the process of diagnosis on the part of clinical teachers can only be made at the rate possible for the dullest pupils.

In the practice of the practitioner there is no such retarding influence, and his methods and his conclusions occupy just as much time as his mind would require to make them. An example of this difference I noticed in the case of a very eminent teacher, whose hands wandered over an abdomen, noting with care, percussing

[1] Read before the Medical Society of the State of New York, February 2, 1886.

uniformly and extensively, seeking everywhere and in all directions for fluctuation, and coming to his conclusions after an examination which occupied over fifteen minutes. He was not at the time engaged in teaching, because we were by ourselves, and he is not a man whose mental powers are by any means slower than my own; but the habit of teaching was on him, and my own conclusions, which were identical with his, were made in exactly one-fifteenth part of the time. From this experience, as well as some others of less note, I derived much comfort, because I felt that Dr. Vander Veer's statement was capable of very satisfactory qualification.

I need not say that, in addition to the absence of the retarding influence which teaching must exercise, another qualification of Dr. Vander Veer's views lies in the fact that my practice is restricted in area to an extent which has probably never before been attempted. Even the practice of ophthalmic surgery may be regarded as a much wider field than that which I occupy, for I limit my work absolutely to the surgery of the abdomen and pelvis, and into this there cannot be brought any of the diverting attractions such as are formed by the refraction cases among diseases of the eye. This restriction of area, coupled with the very large number of cases in my practice, gives me as much facility in the matter of diagnosis as has been accorded to me in the matter of treatment, if the evidence of Dr. Vander Veer, Dr. Dudley, and others is to be accepted as affording a fair criterion.

It is true about every human handicraft, that by restricting the area of production there is secured a much larger experience within that area, and the workmanship which results is very much better. This division of labor must lead to the same improvements and developments in surgery as it has done in everything else. I therefore have to plead that what seemed to Dr. Vander Veer, and I know has seemed to others, but a short and possibly incomplete system of diagnostic methods, is really, so far as results are concerned, quite as complete, if indeed it is not more so, than methods which seem to be far more elaborate and are certainly much slower. Let me give a few examples, such as I have been able to establish in my own belief after much search, as to how a skilled workman may do with his fingers what the inexperienced may require special tools to enable him to accomplish. In the gynecology of twenty years ago, which was pretty much the period at which the great master of the art left it, there still remained a survival of the battles which waged for many years concerning the use of the speculum and the sound. The school of French gynecology was charged with an altogether improper, and indeed, as it was urged, a very indecent frequency in the use of the speculum. On the other hand, the English school, with Simpson at its head, was fully as often and as loudly charged with an improper use of the sound. The conclusion that I have come to concerning both of these instruments and both of these disputes is, that both sides were right and both were wrong.

It is perfectly impossible for any novice in the diseases of women to obtain an accurate notion as to the condition of the vaginal mucous surface of the os and cervix, and to some extent the interior of the uterine canal, without the constant, I would almost say the invariable, use of the speculum. It is also quite as impossible for that novice to form any notion as to the position of the fundus, or the relations of the uterus with the pelvic tumor, without the employment of the sound. But no practitioner of gynecology can possibly be regarded, at least by me, as an accomplished specialist who uses either one or the other of these instruments with great frequency. I have found in my own practice, that just as my experience increased so did both of them become unnecessary, until, concerning the speculum, it is a fact that, unless I want to do some operation, or make some special investigation within or beyond the vaginal cavity, the speculum is never employed at all; and for the discovery of the position of the uterus and its relations, the sound has almost ceased to be an advantage.

It is perfectly impossible for me to convey by any kind of description how I can tell, by the touch, an inflamed vaginal mucous surface from one that is healthy; neither can I describe the feeling that the everted surface of the cervix gives to me which declares the condition of chronic endometritis. But I know that my educated finger-tips can make this distinction. If, on the other hand, I discover a pelvic tumor, long practice enables me to tell with almost perfect certainty, and without the use of the sound, that it is a retroverted fundus, or adherent tube or ovary, or by its fading away toward the broad ligament, on one aspect of the uterus or another, that it is an intraperitoneal hæmatocele; while the peculiar resistance of a myoma conveys to my mind an accurate impression which needs no probing of the uterus to substantiate So a cyst reveals itself in a way I cannot communicate. As a result of all this I very rarely use the sound.

As a matter of fact, I have found that these two instruments, the speculum and the sound, as methods of diagnosis, have been productive of uniformly more harm than good. That a blennorrhagic discharge from the vagina of any patient requires the introduction of a speculum is one, I am fully persuaded, of the stock beliefs of the great bulk of general practitioners. But it is certain that nothing of the kind is requisite, and a very large amount of mischief, there can be no doubt, has been produced by this belief. It is not at all an unusual thing for me, on taking part in a consultation with the family physician concerning some such case, to be told by him that he very much regretted that he had not made an examination by the speculum. Others have told me that they made the said examination, and when asked what they saw, or what they did, the answers usually given are that they did nothing, they merely made the examination; that is to say, they passed the instrument, and with that proceeding were perfectly satisfied—evidently under the belief that the passage of the speculum was quite as much a curative agent as a method of diagnosis. Similarly with the sound. I have heard many practitioners tell me of their experience with the sound, or rather their want of it, and I judged that they looked upon it as a sort of magical charm, the introduction of which into the uterus was to achieve unmeasured good. As a matter of fact, the sound is one of the most dangerous instruments which ever were invented for the treatment of human suffering, and in my own practice obtains hardly any kind of employment at all.

There is a story which is told against myself by some of my colleagues, which I never hesitate to repeat, because it was the kind of accident which is liable to occur to any one, and fortunately the only one of its kind which ever happened to myself. It conveyed a lesson to me of which at the time I stood much in need, and from which I know thousands of my professional brethren may take warning with advantage. Many years ago I was asked by the surgeon of a large general hospital, with whom I was making a casual visit, to give him my opinion on the case of a young woman who had been in the hospital for some months, suffering from a pelvic tumor which seemed to threaten her life. She had hectic and was suffering and very ill. The tumor on one side of the pelvis was apparently quite fixed, and I gave it as my opinion that it was a collection of matter, but in what position I could not say unless she would allow me to make use of the uterine sound, which, unfortunately for myself, but fortunately for the patient, I had in my coat pocket. My friend told me I could do exactly what I thought proper. He had asked me for my opinion as a specialist, and he would not interfere with any steps I thought fit to take for the purpose of furnishing him with that opinion. I immediately proceeded to use the sound and came, quite erroneously, to the conclusion that the patient was suffering from a parametric abscess.

The sound passed, as I thought, into an empty uterus, fixed toward the right side, the uterus being of the normal length. Within twenty-four hours the patient miscarried of a fourth month pregnancy, and this ended all her sufferings. She speedily recovered and left the hospital, cured in a way which nobody expected, and which certainly I did not intend. All such accidents have by no means so happy an ending as mine had, and their number is immense.

But few months pass without my hearing of a case in which some kind of mischief has not been done in this way. The misuse of these instruments, of course, is due very much to the way in which gynecology has been taught, or rather not taught, in the medical schools of Great Britain. It is unfortunately a subject which is extremely difficult to teach, and therefore has hardly been taught at all. In the first place the classes are too large, and to teach individual students, one after another, is a task which hardly any teacher would care to undertake, and certainly one to which very few of the patients in the clientèle would be brought to submit.

One of the most important methods of diagnosis in abdominal disease, and the first to be considered in examining any case, is inspection, and concerning this method a very great deal of nonsense has been talked. For example, Sir Spencer Wells has told us that inspection will reveal the presence or absence of adhesions; but in my own belief, and certainly from the experience of cases in which Sir Spencer Wells himself has made the diagnosis, there is no possibility of determining by inspection, or any other method, the presence of adhesions anywhere in the case of an abdominal tumor.

A careful examination, by the eye, of the contour of an abdomen, when the patient is lying on her back, with the walls of the abdomen perfectly flaccid, will reveal a good deal to the experienced practitioner. A completely and uniformly distended abdomen may mean that the patient is suffering from peritonitis, intestinal obstruction, ascitic effusion, a parovarian tumor, an ovarian tumor, a large myoma of the uterus, or pregnancy. The process of discriminating between these various conditions may very rapidly be completed by one who is accustomed to dealing with them. Thus peritonitis may be at once detected or eliminated by the presence or absence of the short and rapid pectoral breathing, which shows that the patient is loth to use her diaphragm. In fact, by this alone, and without almost any further inquiry, I have satisfied myself as to the nature of the case by a single glance. Ascitic effusion, on the other hand, is revealed at once by the absence of the pectoral breathing, by the greater flattening of the distention, by its tendency to assume a pyriform shape, the broadest diameter just above the pelvis, by the thickening of the walls due to anasarcous effusion, and the presence of white lines in the skin of the flanks.

If the crest of the ilium sticks out under stretched skin, the diagnosis is again almost complete without further inquiry. If, on the other hand, these subsidiary features are absent, and there be a uniform and complete distention, two conditions widely distinct may be suspected. These are parovarian cyst and hydramnios; and here, again, some very curious mistakes have come under my notice, some of which have had very ghastly results. Parovarian cysts after labor sometimes grow with astonishing rapidity. Hydramnios occurs always with twin pregnancies, and generally in unmarried women, who are, of course, disposed to conceal their unfortunate condition, and mere inspection cannot be depended on to discriminate these cases. But inspection will help us very largely to detect pregnancy and myoma, for in these cases the distention is always greatest either at the middle of the tumor or at its upper part, differing in this way completely from ascitic distentions; and here one of the most important agents in the diagnosis of abdominal diseases, palpation, comes at once to our assistance, and to the skilled fingers it ought not to take more than a few seconds to discriminate between all and any of these conditions. The percussion note, which is uniform in a case of peritonitis, will easily determine the condition which is present. One or two delicate touches of the fingers of one hand, while the fingers of the other lie with the most gentle lightness on the other side of the abdomen, will determine the presence of fluid, and it is in this method of palpation where the fingers of the skilled practitioner at once become visible. The inexperienced hands press firmly upon the walls, and may be seen to move to and fro in an aimless fashion, as if they intended to rock a cradle. The gentlest and tenderest touch alone will reveal what is required. A few trials of the different diameters of the abdomen will teach in as many seconds the leading features which are present: first, that there is fluid; secondly, that it is, or is not, near the surface, being contained, or not so contained, within a thin-walled cyst; thirdly, it is one cavity or not; fourthly, the probable character which it presents. The wave excited by gentle tapping is retarded or urged on by the more or less gelatinous nature of the fluid. All these conclusions can be indicated with the utmost rapidity to the skilled fingers, and it is absolutely impossible to teach how this can be, save by the constant practice of the pupil. The parovarian cyst may be diagnosed entirely from one condition—that is, hydramnios; and partly by the thin walls, and partly by the presence of hydramnios, to which I have alluded, is very easily detected. Ascitic fluid is revealed in the same way, with the additional fact that here and there we get tympanitic percussion notes.

The large uterine myoma is defined by its firm sense of resistance, and its uniformly full and pseudo-fluctuation; also by the fact that it has a smaller diameter at the base than it has at the middle or upper part. Pregnancy, the rock ahead to inexperienced practitioners, can be infallibly revealed by palpation. First of all there is fluctuation due to the liquor amnii, and it can be easily detected, and this declares the cystic nature of the mass. If the hand be made to lie gently on the parietes for a few minutes, a rythmical contraction of the uterus, by which at one time it is hard as a cricket-ball, and at another soft as a cushion, will become perfectly apparent; and this is an infinitely more certain sign than the fœtal heart, or the sound of the placental bruit. The fœtal heart is a sound which may guide and sustain the practitioner in his conclusions, but it is so easily imitated by intestinal noises, and so difficult often to find, that it is not to be depended upon with perfect certainty. The placental souffle is probably more certain than the fœtal sounds, but placental sounds are very often, in rapidly growing tumors of the uterus, so completely imitated that there is always a certain amount of doubt connected with them; but the relaxation and contraciton of the uterus in pregnancy is a method of diagnosis which, when once made apparent, can never be mistaken for anything else.

In all these details the rapidity with which the practitioner will come to his conclusions will depend, of course, in the first place, upon the average rapidity of all his mental acts; secondly, upon the greater or less frequency with which he is called upon to make examinations involving these details; and, thirdly, as I have pointed out, whether he be retarded in his purpose by the obligations upon him to teach others. I feel, in analyzing my own actions in this matter, that they become so habitual to me that I record my conclusions almost without considering in detail the steps by which I arrived at them, and therefore it is not with surprise I now see that my friend, Dr. Vander Veer, has had some kind of justification in his statement that "Apparently I gave but little time for the general examination of patients." But perhaps it is more in the examination of the pelvis, as I have already said, than in anything else, that this apparent rapidity becomes evident, and in striking contrast it stands out with the prolonged time employed for in-

frequent methods of examination, such as in the stethoscopic investigation of the abdominal walls for the finding of the fœtal heart.

I have, as Dr. Vander Veer has quite truly said, an unbounded confidence in the performance of abdominal sections, and I have argued again and again for the extended frequency of exploratory incisions for the purpose of securing complete accuracy of diagnosis; but, and this must never be forgotten, only on the grounds that with the completion of the diagnosis in this way there is at the same time opened out the only road for successful after-treatment. But I must ask that no one who has followed the course of my work will dream for a moment that I pass on the latest side in a difficulty of complete diagnosis to the early side of the issue by its completion in the performance of a laparotomy. To those who are opposed to my views in this matter, of course, nothing is easier than to argue, by means of a charge of recklessness, against my new doctrine. But that such a charge is not to be justified, my results can very speedily determine. That a complete and satisfactory diagnosis can ever be made, save in the simplest condition of disease of the abdomen, without an exploratory incision, I have repeatedly denied. I have said over and over again that the abdomen is a region of darkness, and the man who is most sure about his diagnosis is the man who will be most frequently in error. But this does not mean, nor has one word which I have ever written been intended to mean, that every method that is possible for a correct estimate of the nature of the disease should not be exhausted before the abdomen is opened, either for the purpose of diagnosis or treatment, or both combined. Unless this doctrine be most carefully observed mistakes of the most ghastly and fatal kind will inevitably arise, and they will arise in two conditions clearly, from which, I am proud to say, my own practice is absolutely clear. The conditions of pregnancy are such as to make it perfectly certain that to the reckless operator they will yield an unfortunate harvest. Women who are pregnant when they ought not to be so persistently do their utmost to lead practitioners astray, and the reckless surgeon who opens the abdomen, without having carefully exhausted all methods of diagnosis before coming to the last resource, is certain to be led into the error of opening the abdomen to find a pregnancy in the uterus. This has never happened to me. There will also occur to the reckless surgeon, some time or other, that most mysterious and troublesome of all diseases for diagnostic purposes, to which I have already alluded, hydramnios, due to the over-secretion of the liquor amnii. Seven cases of this disease have passed through my hands, and have been accurately diagnosed in every instance and successfully treated, and I cannot imagine anything much more certain to be a trap for the rash and unwary than this most curious disease. The fact that every one of my cases has been recognized, and properly and successfully dealt with, is an evidence that what I am pleading for is correct.

If I may, in conclusion, take one more illustration to show how completely the results of daily practice, or what may be called rule of thumb, may triumph over the mere teaching of the schools, I would mention the much-discussed bimanual method of examination. I read recently a long rigmarole of nonsense by a German, who evolved from his superabundant inner consciousness, but not from clinical experience, the conclusion that no man could properly examine the pelvis in this way unless he had the patient on her back, turned in the lithotomy position, he being placed opposite the perineum. In the first place, English women would not submit to such brutality, and it is wholly unnecessary. The most complete and satisfactory examination of any woman's pelvis can be made while the patient lies quietly on her left side in bed, without the exposure of one square inch of her skin. Any man who requires more than this is either a pupil or a dullard.

So it is with such a special instrument as Sims' speculum. I have heard some of my American friends say that it is impossible to do any operation upon the vagina satisfactorily without it. All I can say is that I have now cured some three hundred cases of vesico-vaginal and recto-vaginal fistulæ, never having failed in any case, nor having ever refused one, and I habitually pass the sutures with my finger-tips, wholly unaided by speculum of any kind.

This may seem all very boastful to many, but my dear friend, Dr. Vander Veer, has drawn me into it. It may also seem incredible, but it is all true, and can be testified to by many men whose names are household words in the great land west of the Atlantic.

THE INFLUENCE OF CHRONIC BRIGHT'S DISEASE ON THE SAFETY OF ANÆSTHETICS.[1]

By WESLEY M. CARPENTER, M.D.,

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The condition of the heart has been regarded as the most important factor in estimating the safety of an anæsthetic. This belief has been attested so frequently that it doubtless will remain undisturbed. Whenever an alarming or a fatal collapse occurs with the inhalation of either chloroform or sulphuric ether, or ensues upon the administration of these agents for anæsthetic purposes, the physician turns, almost instinctively, toward the heart for the explanation of the sudden suspension of animation, or the more gradual development of the fatal result.

Preparatory to the performance of a surgical operation, it is the rule, which should never be overlooked, and which has been observed quite uniformly, to examine the heart before administering the anæsthetic.

It is not improbable that this rule had its origin in observations made concerning the effect produced by chloroform, and here it is, doubtless, that it has had its most faithful observance.

The use of sulphuric ether, however, has become so common in this country, and it has been regarded as so safe that, practically, the examination of the patient with regard to the question of safety of administering it for anæsthetic purposes has been very meagre, and by very many the precaution has been omitted entirely.

That it is by far, very far, the safest agent, and at the same time efficient, that can be used generally for producing anæsthesia for surgical operations, is too well established to need special argument to sustain the claim.

The object of this paper is simply to emphasize a pre caution to which attention has already been directed, namely—that the existence of chronic Bright's disease diminishes the safety of the patient to whom sulphuric ether is administered as an anæsthetic.

Surgeons have long recognized that chronic renal disease materially influences the *results* of operations, and to such an extent that every well-informed surgeon approaches with very great apprehension all operations which become necessities in patients whose urine has persistently contained albumen and casts. Sir James Paget has said, and to this Dr. Norris has referred—"Never perform an operation, except under something like compulsion, on a patient whose urine is constantly albuminous."

But the same attention has not been given to the question of the influence which chronic renal disease exerts on the *safety of administering anæsthetics*, especially sulphuric ether.

The literature of this subject is scant. Dr. Turnbull, of Philadelphia ("Trans. Amer. Med. Assn.," 1880), writes with special reference to the *immediate* effects produced, and says, perhaps a little dogmatically, that "it is now a

[1] Read before the Section on Surgery of the New York Academy of Medicine, January 14, 1886.

well-recognized condition that in disease of the kidneys anæsthesia almost invariably produces coma and death."

The chief paper which I have found is that written by Dr. William F. Norris, of Philadelphia, and read before the American Ophthalmological Society at its annual meeting, in 1881, and entitled, "The Administration of Anæsthetics in Bright's Disease of the Kidneys." Dr. Norris reports two cases of death supervening after cataract operations, and they had four features in common: 1. Both patients were anæsthetized with sulphuric ether. 2. They entirely recovered consciousness. 3. They died comatose, one a few hours and the other eighteen days after the operation. 4. In both cases careful autopsies revealed no organic lesion except Bright's disease of the kidneys. He says, "In my opinion both deaths were due to the same cause, namely, the congestion caused in already diseased kidneys by the administration of ether."

The first case was one of congenital cataract. Two hours after the operation the child had a convulsion, and died comatose two hours later.

The second case was one of senile cataract in a woman sixty-eight years of age. The operation was performed in the afternoon; during the evening of the same day her urine diminished in quantity, and was loaded with urates. The urine continued to show varying conditions of abnormality until the seventeenth day, when a small quantity of albumen was detected and fatty and granular casts; specific gravity, 1.008. The patient died the following day

In both cases a microscopical examination of the kidneys revealed intense congestion with parenchymatous and fatty degeneration. This condition of the kidneys was also present in a case referred to by Dr. Norris, and reported by Dr. Hunt, of Philadelphia (Philadelphia *Medical Times*, January 9, 1875), namely, a marked state of fatty degeneration, and the writer asks the significant question, "May not conditions of this kind often explain the unpleasant, and even fatal, action of an anæsthetic?"

Commenting on Dr. Turnbull's paper and on the reported cases, Dr. Norris says: "If the administration of ether can, in certain cases, so stimulate some latent form of chronic Bright's disease as to cause decided interference with the function of the kidneys, and death from uræmia, at an interval varying from some hours to two or three weeks after the operation, we have certainly additional and grave cause well to weigh the propriety of administering anæsthetics in all operations for chronic diseases in persons with albuminuria, and certainly ought never to perform one without examining the urine."

"I am well aware that anæsthetics are frequently administered in puerperal convulsions, and that ether is occasionally given in cases in which the patients are known to have Bright's disease, and without apparent evil results; but, because fatal results do not follow in all cases, we have no right to shut our eyes to those where their employment apparently leads to fatal disturbance of the renal function."

I now wish to add two cases to those which have been reported.

Case I.—On November 24, 1885, I superintended the post-mortem examination made on the body of a middle-aged woman who had been operated upon for recto-vaginal fistula in one of the large hospitals in this city. I was also told by one of the house staff that the patient had been in the hospital for some time, and that at the occasional examinations a small quantity of albumin had been found in her urine. She desired an operation, as life, with her infirmity, was well-nigh intolerable. Ether was administered with the precautions usually observed in large hospitals, and the patient, without special warning, died upon the table just before the operation was completed. Only a small quantity of blood was lost.

Autopsy twenty-four hours after death. The *heart*: The left ventricle was contracted, its wall hypertrophied, its cavity empty, and its valves normal. The wall of the right ventricle was relaxed, its cavity was empty, and the valves were normal. Microscopical examination of the muscular fibres revealed that they were substantially normal, only occasional pigment granules being present.

A small quantity of dark-colored watery fluid could be pressed from the cut surface of the lungs; the bronchial tubes contained a small quantity of reddish frothy fluid, and the trachea and larynx were unobstructed.

The liver was enlarged and fatty. The spleen was increased in size and was dark-colored.

The prominent lesions were found in the *kidneys*, which were increased in size, the capsules were adherent, the cortices were thickened and pale, and the pyramids were of a deep red color; the pelves and the ureters were normal. Microscopically, they showed the lesions of chronic diffuse nephritis; the intertubular connective tissue was increased, the capsules of the glomeruli were thickened, the tubules were either empty or contained swollen and granular, or broken down and fatty epithelia and casts; the blood-vessels were distended with blood.

The uterus was normal; the left Fallopian tube was dilated, and the left ovary contained a small cyst. There were old pelvic adhesions. The notable features of this case were: (1) the persistent, though slight, albuminuria; (2) the administration of ether; (3) the sudden death; and (4) the marked lesions of chronic Bright's disease with evidence of an acute process.

In estimating the cause of death in such cases, the fact must not be overlooked that all surgical operations, as a rule, are attended by more or less of shock, varying in degree from the slight and transient to the profound, from which the patient never rallies. But here the surgical procedure did not belong to the class regarded as severe operations, and the loss of blood was what is usually regarded as insignificant.

These remarks, so far as shock and loss of blood are concerned, are applicable to the next case.

Case II.—On January 1, 1886, I was invited to examine the organs removed from the body of a middle-aged, powerfully built man, who had died eight hours after the administration of ether and the performance of what is regarded by surgeons as essentially a safe operation, and with the loss of only a moderate quantity of blood.

Two weeks previously this man had been operated upon under the influence of ether, and had, within the usual length of time, passed from under the influence of the anæsthetic without the appearance of any unfavorable symptoms.

After the second operation he apparently rallied completely from the ether, and felt comfortable in bed. At the end of eight hours he got up, went to the water-closet, returned to his bed, was soon heard breathing peculiarly by the other patients, who gave an alarm, but before any medical attendant could reach his bedside he was dead.

The autopsy was performed thirty-six hours after death. Nothing abnormal was found in the brain, except an atheromatous condition of the arteries at the base, a small clot in one of the sinuses, and marked venous engorgement.

The *heart* weighed twenty-four ounces. There were marked hypertrophy and dilatation of the left ventricle. The mitral valve was incompetent (the orifice admitted three fingers) and there were atheromatous patches about its base. The aortic valves were competent; one cusp exhibited a small vegetation upon the ventricular surface. The wall of the right ventricle was very thin, having been encroached upon to such an extent by fat that the muscular tissue was reduced to about one-sixteenth of an inch in thickness. The pulmonary and tricuspid valves were competent. The aorta was markedly atheromatous. Microscopical examination of the cardiac muscle showed the fibres to be normal.

The liver was increased in size; was firm and red Microscopical examination showed that it was slightly cirrhotic, and also the seat of a moderate amount of fatty infiltration. The blood-vessels were filled with blood.

The *kidneys* weighed nine ounces each. The cortical portion was thick and pale; the pyramids were deep red; the capsule was thickened and markedly adherent.

The spleen was enlarged and firm. Microscopical examination of the kidneys showed the lesions of chronic diffuse nephritis, with marked congestion of the blood-vessels of the pyramids, and a swollen and fatty condition of what epithelia still remained in the tubules. Many of the tubules contained casts.

It will be seen at once that in this case there existed a complex condition of things. There was chronic disease of the heart and chronic Bright's disease. The cardiac disease, also, was of the character which favors the supervention of a sudden fatal result on subjecting the patient to any one of several causes.

The kidneys, however, showed the same appearances microscopically as do many kidneys which are the seat of chronic Bright's disease occurring *unassociated* with chronic cardiac disease, and to these were added the vascular and parenchymatous changes belonging to an *acute process;* possibly this acute process was produced by the anæsthetic.

As evidence that this is not an unreasonable conclusion concerning the possible effect produced by the ether, I will refer to a paper read by M. Lafont, at a recent meeting of the Société de Biologie, Paris, in which he makes special reference to the secondary effects of nitrous oxide as an anæsthetic; second in order of mention "is the appearance of albuminuria in a certain number of patients suffering from cardiac disease." [THE MEDICAL RECORD, January 9, 1886.]

Gynecologists have turned their attention in this direction, and from time to time, in their discussions in this country, especially in the American Gynecological Society, reference has been made to the importance of fully appreciating the condition of the kidneys in connection with all operations and the use of anæsthetics. Dr. T. A. Emmet has been so impressed with the importance of this question that he has directed special attention to it in his work on gynecology, in the significant words, "I called the attention of the profession to the greater necessity of examining the condition of the kidneys than that of the heart." "Since then I have had at least *five* deaths occur from uræmic poisoning, which, perhaps, might not have occurred if my assistants had been able to examine, or had appreciated the importance of examining, the urine *before the anæsthetic was given.*" (Italics mine.)

From the foregoing I have been led to the following conclusions:

1. Too great care cannot be exercised in examining the urine, both chemically and microscopically, of all patients who are to undergo surgical operations.

2. Chronic Bright's disease diminishes the safety of anæsthetics, especially sulphuric ether, as well as the safety of the operation.

PARENCHYMATOUS NEPHRITIS CONSECUTIVE TO VARICELLA.—Dr. Franz Hogge reports several cases in which the causal relation of varicella to parenchymatous nephritis was apparently indisputable, and deduces from the study of these cases the following conclusions: 1. Secondary renal inflammation may follow an attack of varicella as well as those of other infectious diseases. 2. Notwithstanding the benign character of varicella, the consecutive nephritis may be as intense as that following scarlet fever, measles, or small-pox. 3. The symptoms of nephritis may become apparent in from five to twenty-one days subsequent to the attack of varicella; they have never been observed during the course of the exanthem or before the desiccation of the vesicles.—*La France Médicale*, December 15, 1885.

DIAGNOSIS AND TREATMENT OF INTRA-PERITONEAL WOUNDS OF THE URINARY BLADDER.[1]

BY ALEXANDER W. STEIN, M.D.,

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MR. CHAIRMAN AND FELLOWS OF THE SURGICAL SECTION: It seems to me you could scarcely have chosen a subject more deserving our joint consideration than the one now before us, for intra-peritoneal injuries of the bladder are not of such frequent occurrence as to enable us individually to acquire a large experience with them, and yet the gravity of the lesion is such that it demands of us an early recognition and a prompt and judicious surgical interference. Intra-peritoneal injuries of the bladder have thus far almost invariably proved fatal. I have not found a single instance of recovery after urinary extravasation from either gunshot, incised, or punctured wound of portions of bladder invested by peritoneum, although at least twenty-eight cases of the former, and thirteen of the latter, have been collected. Juillard[2] and Homans[3] both accidentally opened the posterior wall of the bladder during ovariotomy. Fortunately, there was no extravasation, and both women recovered. Of the nearly two hundred cases of intra-peritoneal lacerations recorded, five have been claimed as instances of recovery, by Chaldicott, Thorp, Walters, Mason, and McDougall, respectively. Of these, however, Walters' patient is the only unequivocal instance of recovery. Here laparotomy demonstrated the existence of an intra-peritoneal laceration two inches in length. That the other cases were intra-peritoneal, is merely a supposition, based mainly on two facts: First, (Thorp's case), that the beak of the catheter passed through the rent beyond the bladder and removed urine, and second, the occurrence in all cases of peritonitis. In regard to Thorp's case there is every reason to believe that the catheter did not actually enter the cavity of the peritoneum, but passed into a sub-peritoneal pouch. Neither can the existence of peritonitis be regarded as a conclusive evidence of the involvement of the peritoneum in the injury. There is hardly anything in the history of Chaldicott's patient, other than the existence of peritonitis, that would lead to the belief that it was an instance of intra-peritoneal laceration, nor is there anything more conclusive in the other cases cited.

After intra-peritoneal stab and punctured wounds death invariably occurred by the third day. In the corresponding gunshot wounds more than one-half the subjects survived the second half of the first week. About one-half the intra-peritoneal lacerations terminate fatally within three days. Few survive the first week.

That by far the largest number of vesical lacerations are intra-peritoneal, finds its explanation probably in the fact that when the bladder is distended and is subjected to violent or sudden compression, the peritoneum, which is then the most tense and least yielding of the several tunics, will split in advance of the subjacent coats and carry the latter with it in the laceration. Most frequently the rupture occurs at the upper and posterior part of the bladder, where the viscus is thinnest, and where in the course of distention it comes in relationship with the vertebro-sacral promontory, against which it is forced. Atony, ulceration, and tunicary herniæ of the vesical walls have naturally enough proved predisposing causes of rupture, but in the vast majority of cases the coats of the bladder were healthy at the time of the injury.

One would expect that a degree of thickness or hypertrophy of the vesical walls would be a safeguard against rupture, but a specimen in my cabinet shows extensive laceration through a contracted bladder whose walls are three-fourths of an inch thick. This man had long suffered with stricture. A kick on the abdomen caused the laceration. A more or less replete state of the bladder

[1] Read before the Surgical Section of the New York Academy of Medicine, January 11, 1886.

[2] Arch. f. klin. Chir., Berlin, Bd. xxv, No. 2.

[3] Boston Med. and Surg. Journ., February 18, 1882.

usually exists previous to the accident, but complete vesical distention is not a *conditio sine qua non*. Rupture by *contre-coup*, as in falling from an elevation upon the feet or buttocks, has occurred even when the bladder was comparatively empty. Wernher's patient passed water half an hour before this accident occurred. That external violence over the region of the viscus is by far the most common determining cause, is well known, but perhaps we do not equally keep in mind that the force may emanate from the individual himself, as occasioned by straining in micturition, etc. Thus, stricture and enlarged prostate have proved factors in the causation of this injury. The bladder has been ruptured during parturition. *A warning to the accoucheur to secure the evacuation of the viscus during labor.* It has occurred from retention of urine induced by the retroverted gravid uterus. In several instances the rupture seems to have been caused solely from pressure of the abdominal muscles upon the distended bladder, without any obstacle to the escape of urine or diseased condition of the bladder-walls being apparent. A man with retention, laceration of the urethra, and extravasation of urine sustained a rupture of bladder in his struggles while undergoing etherization in Bellevue Hospital. *A warning not to administer anæsthetics while the bladder is in a condition of distention.*

The symptoms of our lesion are usually as follows: Inability to walk or stand; severe pain over hypogastrium; incessant desire to micturate, with an inability to void the smallest quantity of urine, or possibly but a few drops mixed with blood; constitutional symptoms indicative of great prostration rapidly ensue, coma or convulsions supervene, and death comes to the relief generally in a few hours, or, at the furthest, a few days. If the subject rallies from this shock or collapse his life is next imperilled by the development of peritonitis or septicæmia. As to the significance of peritonitis as an element in diagnosis between intra- and extra-peritoneal lacerations, it is nothing more than strongly suggestive of the former. Peritonitis in a given case does not necessarily denote laceration of the peritoneum; it is often associated with extra-peritoneal ruptures, either as the direct result of traumatism independent of injury to the bladder, or as the consequence of extension of inflammation from neighboring parts. Of great diagnostic value is the statement so often made by the patient that after the blow over the hypogastrium, or while in the act of straining, he "felt something give way within the abdomen," or "experienced a sudden relief from the discomfort occasioned by the previously distended bladder." The evidence furnished by catheterization is of special value when it is positively known that the individual had not micturated for several hours previous to the accident. Under these circumstances an empty bladder, or one containing but a small quantity of sanguinolent urine, is strongly confirmatory of laceration. Nevertheless, it must be admitted that evidence pointing to this injury is by no means always unequivocal; often the signs and symptoms upon which we would most rely are absent, and those that exist are dangerously misleading, and the case is shrouded in uncertainty and doubt. We depend much upon the statement made as to the nature of the accident, the condition of bladder at the time of injury, relative to distention, etc., but if the patient is unconscious, or is drunk, as is so often the case, no information can be obtained, or what may be given cannot be relied on

If we will take a lesson regarding the inconstancy and unreliability of the most characteristic symptoms, we shall find that standing, or even walking some distance, is not inconsistent with the existence of laceration of the bladder. Neither is the difficulty or inability to micturate a uniform symptom. The patient may have no difficulty in voiding urine, and, indeed, may pass a considerable quantity of water. Gruber's patient, with an intra-peritoneal laceration one and a half inches long at the summit of bladder, "was able to pass water without any difficulty." He died eighty hours after the injury. In some instances quite an interval of time elapsed between the receipt of injury and the development of characteristic symptoms. This would seem explicable only on the supposition that at first the rupture was incomplete, and it should teach us to watch closely a patient on whom the suspicion of rupture rests, for, though the symptoms may for a time be latent, once manifest, they are rapidly progressive.

The retentive power of the bladder noted in some cases was remarkable, and was accounted for in the closure of the vesical wound by "valvular protrusions" and "adhesions." A man fell, and manifested symptoms which led to the diagnosis of laceration of intestine. The catheter evacuated a *large quantity of perfectly clear urine*. He died in twenty-four hours, and the autopsy revealed a large tear in the bladder, into which a coil of intestine had slipped and become engaged. The intestine was found uninjured. There were signs of general peritonitis, and a large quantity of urinous fluid was found in the cavity of the peritoneum. Several other instances might be cited to show that the presence of clear urine in the bladder cannot be accepted as absolute evidence against the existence of injury to this viscus. On the other hand, we should know that the sudden advent of blood in the urine is nothing more than a presumptive evidence, strong though it may be, of this lesion. The urine may be tinged with blood from simple contusion of the bladder without laceration. A man was stamped upon and thrown down-stairs; he was brought to the hospital in a state of profound collapse. There were signs of injury over the abdomen. A catheter withdrew a quantity of *dark, bloody* urine. The entire appearance of the case led to the diagnosis of rupture of the bladder. He died in ten hours, and the autopsy revealed a laceration of the ilium and *no injury* to the bladder. Then, again, if, in addition to the appearance of blood, there should be diminution or, perhaps, suppression of urine, a condition not infrequently concomitant with shock following serious internal injuries, we should meet with additional embarrassment in our diagnosis. In eight or nine instances the diagnosis of rupture was established by the accidental passage of the catheter through the vesical rent into the abdominal cavity. If, after entering the bladder and removing, perhaps, a few drops of urine, the catheter is suddenly felt to slip into a secondary cavity, in which its beak is freely movable, and from which a considerable quantity of sanguinolent urine escapes, it is probable that the laceration extends into the peritoneal cavity, but the instrument may have entered either a sub-peritoneal pouch, or, if the rent is situated low enough, may have passed into an extra-peritoneal circumscribed collection of urine. In some cases a most characteristic sign was noted: That warm water injected through the catheter was felt by the patient in the abdomen, and the escape of the fluid ebbed and flowed with the respiratory movements.

The foregoing facts must certainly tend to disturb our faith in symptoms, and well they may, if in appreciation of their unreliability we shall be led *without delay* to seek the more positive information which digital exploration will yield. In the female this may be readily accomplished through the short urethra. In the male the same may be effected by means of a small, median, perineal incision. If the question still rests between intra- and extra-peritoneal laceration, a supra-pubic incision will dissipate all doubt, at first carefully avoiding the peritoneum. Should the injury prove to be without the peritoneum, the supra-pubic incision will have done no harm. On the contrary should it be intra-peritoneal, it will have been the initial step to a laparotomy.

Intra-peritoneal lacerations have been treated by catheterization, paracentesis, cystotomy, and laparotomy. Paracentesis of the recto-vesical cul-de-sac has been frequently suggested on the supposition that the extra-

vasated urine will gravitate and accumulate at the most dependent parts of the peritoneal cavity, but, in reality, such is not the fact; the urine, when it escapes, is diffused over the entire abdominal cavity by the peristaltic movements of the intestine and by the suction action of the diaphragm, and will not accumulate at one point unless incapsuled by peritoneal agglutinations. When such is the case, and a distinct fluctuating tumor is recognized per rectum, it should be evacuated and the cavity washed out. Several writers mention the existence of such collections of fluid, but it does not appear that any attempt was made to puncture or aspirate those collections in any of the cases.

Lateral cystotomy has been practised several times, but as it cannot accomplish anything toward the removal of urine and blood from the peritoneal cavity, I do not see that it is suggestive of benefit, except as a means of effecting bladder drainage, and for that purpose the catheter *à de meure*, by Chiene's method, with steady and gentle aspiration, is all that could be desired, and, unlike cystotomy, does not entail an additional danger to life.

The advantages of laparotomy, in intra-peritoneal injuries, are: 1, That it permits direct inspection of the seat of lesion and the appreciation of concomitant injury to other parts; 2, that it permits of the removal from the peritoneal cavity of the extravasated urine and blood; 3, that it permits of the cleansing and disinfection of the peritoneal cavity; 4, that it permits the accurate closure of the vesical wound, preventing further effusion of urine. These are undoubtedly the indications to be fulfilled, and the more successfully they are met, the greater the chances of recovery from an otherwise fatal injury. Abdominal surgery has long since established the fact that the danger to life is not in the laparotomy, but in the presence within the peritoneal cavity of a decomposable and septic fluid, and when this is removed shortly after such extravasation has occurred, laparotomy may be practised with every hope of success. This statement receives additional confirmation in the experiences of Juillard and Homans. These gentlemen both injured the intra-peritoneal portion of the bladder during ovariotomy. Fortunately, the bladder was empty, so that no urine escaped into the peritoneal cavity, and both patients recovered. In the first instance, a wound four and one-half inches long was closed with fifteen catgut sutures. Catheter was retained six days; the following four days bladder was catheterized every two hours. After tenth day, urine was voided without catheter.

In the second patient the wound two inches long was brought together by a continuous carbolized silk suture; on the tenth day catheter was removed.

Laparotomy has been performed four times by Walter (1859), Willett (1876), Heath (1876), and Bull (1884). If we ask what encouragement these cases hold out for a repetition of the operation, we find that but one of the four proved successful, that of Walter's. Yet, if we examine into the causes of failure in the other cases, we find that the factors that operated against their success may hereafter be avoided. Walter's successful case was operated on only ten hours after the accident, while Willett operated thirty hours, and Heath forty-two and a half hours, after the injury, both the latter cases being pretty well advanced in dangerous symptoms before the operation was undertaken. In the fatal cases there was imperfect closure of the vesical wound. In the case of Willett the edges of the wound were not closed even at the time of the operation, and in Heath's case, in which a continuous suture was used, the knot slipped or gave way a few days afterward. I think, therefore, it must be admitted that with this experience behind us we have no reason to lose confidence in laparotomy. On the contrary, we should feel encouraged to give it further trial.

The ends to be attained are, thorough cleansing of the peritoneal cavity and the accurate closure of the vesical wound. True, Walter was successful with the wound two inches in extent left open, and it serves to show to what extent the catheter may be relied on for purposes of drainage against the suggestion of perineal cystotomy. But I think few will care to follow Walter's example. In the application of sutures the bladder may be made more accessible by distending the rectum with a colpurenter. The stitches should be taken close together, and in a double set, as recommended by Vincent. In one set—the sero-muscular—taking each suture through the peritoneal and muscular coats of the bladder on each side of the wound; in the other set—the sero-serous—taking the peritoneum alone, a considerable width of this coat being included on both sides, so that when these sutures are hid, wide serous surfaces are brought in close contact, as from this surface the most plastic material is exuded. The mucous membrane should not be included in any of the sutures. As to the material used, carbolized silk (Homans). and catgut (Juillard), have both proved faithful to the trust. If the edges of the wound are much damaged or very ragged they may be vivified before the sutures are applied, but usually this will be unnecessary. Before the abdominal wound is closed the accurate coaptation of the vesical wound should be tested by moderately distending the bladder with water or milk, and if there be any escape between the sutures, an additional stitch applied.

Whether a small drainage-tube of sufficient length to reach to the bottom of the pelvis should be secured at the lower angle of the abdominal wound, is a question. Mr. Heath believes that in his case it not only did not serve the purpose for which it was inserted, but actually caused and intensified peritoneal inflammation. Finally, a catheter should be retained in the bladder with constant and gentle aspiration, or, if preferred, a drainage-tube may be inserted through a small opening into the prostate urethra.

WATER-SUPPLY OF CITIES AND VILLAGES.[1]

By A. VANDER VEER, A.M., M.D.,

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PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

GENTLEMEN: As our "Transactions" will show, for a number of years I have presented several papers on various surgical subjects, and, had I consulted my own inclination, I should again have pursued the same line of thought; but, realizing the great good and influence that our society exerts upon the people as a whole, I have thought best to take up a subject which is now commanding great attention, and must ever continue to do so, while it becomes part of the work allotted to the medical profession.

That all thoughtful members of the human family are ever willing to grant full praise to the worthy divines who have done us so much good, I think there can be no doubt; and that the wise laws, with interpretations given us by eminent jurists, have led us to render great respect to the profession of law is also a recognized truth; yet to neither would I surrender the high and exalted position now occupied by the profession of the healing art in the so-called domain of preventive medicine. The writings of that great man in our profession, who has but recently passed from us—Professor S. D. Gross—are full of the precept-upon-precept teaching and earnest suggestions to the younger men to work in this field of investigation after the causes of disease, for that in it should be found the greatest honor and reward.

In the consideration of this most prominent factor in the cause, production, and spread of disease, water, I know that I am upon ground that has been ably worked by those better prepared by study, and perhaps investigation, than myself, yet I hope in some way to present old and new material in a manner that will work to our mutual instruction and the future good of the different communities in which we move.

[1] Abstract of the Anniversary Address before the Medical Society of the State of New York, at the Twenty-second Annual Meeting, delivered at Albany, February 2, 1886.

We hear it often stated, that in the supplying of pure water to large cities we have not held our own with the ancients. Granting this to be true in the past, I predict that there are those within the reach of my voice who will live to see this assertion thoroughly refuted.

The President then gave a brief outline of the history of obtaining water by wells, which went back to the earliest period of man's existence. The art of boring wells was known about four thousand years ago. After referring to artesian wells, he spoke of *driven wells*, and reached the conclusion that in these wells, put down by the gang method, we have embodied the principle of natural filtration, and that wherever the ground-water is of good quality, and sufficient on trial, of proper depth, and free from possible contamination, it furnishes by far the safest water short of what may be considered nature's purest supply, namely, spring-water.

The applications of the driven-well system for obtaining large volumes of pure water for the supply of a city of six hundred thousand inhabitants is a new departure, and can no longer be considered an important experiment, but an assured success.

As the water obtained by this system comes from depths of forty to one hundred feet below the surface, it is very pure and the supply is steady throughout the year. By other systems the supply is taken from the surface-water, and its quality is often impaired by local impurities, while the quantity in different seasons varies with the rainfall.

The ancients early manifested a desire to procure water from other sources than wells, and by means of aqueducts sought a pure supply even at a great distance from springs, lakes, and mountain sources.

Reference was then made to the aqueduct system as it existed in Egypt and Rome, and at present in India, where it forms a part of the system known to have been employed as far back as the eighth century B.C. The repair and maintenance of these aqueducts became quite expensive, and would be much more so in this country and at the present time.

To every one who is called upon to advise in the question of water-supply, there are certain considerations that must at once claim his careful study and investigation. First to be considered is the quality of the water sought, and no doubt he will, at the present time, have uppermost in his mind the well-known fact that no amount of impure water will cause true cholera and allied diseases, the presence of the microbes being necessary before such waters can do harm in spreading such diseases, although when once there, there is no end to the harm they may do. It is almost hopeless to fight Asiatic cholera with polluted water.

On sanitary grounds soft water is certainly to be preferred; it is true there is no hard water but that can in a manner be softened. One accustomed to drinking soft water should be careful when entering a hard-water section not to drink too freely of the water, and *vice versâ*.

If we consider the quality of water for drinking and domestic purposes, and, that being decided favorable, then at the same time can secure quantity, we have solved the problem for any community.

Beyond a doubt spring-water, as procured from deep springs, or as fed to our mountain lakes, is not only the most palatable but the most wholesome of waters. Next we may rely upon artesian or driven wells, keeping ever in mind the danger of sewage contamination. Large rivers may be made use of, or smaller streams fed by springs and surface-water, but contamination must be guarded against with the greatest care. River-water that has a long distance to run may purify itself from sewage and other forms of pollution, but it, together with water from shallow wells, must be looked upon as dangerous, though it may be pleasant to the taste and sight.

If care be exercised in collecting and storing rain-water, it may be considered safe for drinking and domestic use to a limited extent.

Water, as we are aware, may be clear and sparkling—it may also be palatable—and yet be a disease-spreading water, because of the presence of the germs of typhoid fever, or the microbes of cholera, which no filtration can remove. "The intestinal discharges of typhoid-fever patients, it is well known, contain an infectious agent which has great vitality and enormous power of multiplication and propagation."

One simple fact ought not to lead us into condemning a water-supply, but when we know that certain epidemics have arisen from water-pollution, then we are in duty bound to heed that form of warning, or else suffer that which we might have avoided, and in so doing disgrace the province of preventive medicine.

Now, if we take unpolluted spring-water as our standard, how much may we deviate from it and yet be safe? We must bear in mind that even this source of supply may become contaminated.

Here the President gave an extended review of the late Plymouth epidemic of typhoid fever, and illustrated this part of his subject with elaborate maps.

In the matter of shallow or old wells that have become polluted, public opinion often requires time to crystallize in its exactness or conclusions before sanitary laws can be enforced. The microscopic and biological examination of drinking-water has received a decided impulse in the researches of Koch.

Fortunately, within the past few years biological researches have been conducted with such skill, in the examination of bacteria and microbes, as to largely relieve us of the uncertainty in which the chemists often leave us as to the purity of water. That is, by means of sterilized culture-tubes it is possible to determine as to the amount of disease-germs water may contain.

This method of estimating the potability of waters by the number of living organisms in a given volume has been systematically employed for several years in connection with the sewage irrigation works of Berlin, and the value of the bacterioscopic examination of water has in the last few months been recognized in England.

One great advantage of bacterioscopy over all chemical processes which fail to distinguish between living and dead matter is that it determines the actual number of *living* bacteria in a given volume.

It has long been known that dangerous microscopic animal parasites gain access to the body with the drinking-water.

This is a fact, that water containing an abundance of bacteria contains also enough organic matter to render it unfit for drinking purposes. Fish may thrive at the open end of a sewer that empties *fresh* sewage, but not so if the sewage has become putrid and contains these micro-organisms.

In view of the great difficulty of procuring a sufficient quantity of pure water, and, again, when possible to obtain it, the attendant expense, the question is forced upon us, Can known polluted water be purified?

So far as the answering of this question goes, there are many suggestions offered, but few at all satisfactory. The conclusions of the River Commissioners of Great Britain on this subject are that there is no river in the United Kingdom long enough to secure the oxidation and destruction of any sewage that may be discharged into it, even at its source. While they do not condemn entirely these rivers after an attempt has been made to purify them, yet they do not advise such sources as safe potable waters. These known polluted rivers are often the source of winter diarrhœas, and even more serious consequences, due to the ice-bound condition of the stream preventing the access of oxygen to the water.

Professor Nichols says: "It is certain that we cannot decide with confidence when a stream, once polluted, becomes fit to drink. Moreover, as it is not possible by any practical chemical treatment, or by any process of

filtration, to make a polluted water wholesome, it is safer not to use, as a source of domestic supply, water that is known to have been seriously polluted." We have quoted in this paper the extreme views of two well-known English authorities, but as one reviews the facts carefully he is convinced that a thorough artificial filtration will improve polluted water sufficiently to make it comparatively safe. The method of sand-filtration can be relied upon for the removal of suspended impurities, and it also lessens the amount of organic matter in solution, but the dreadful typhoid-fever germs and like the cannot be reached.

Probably the best material for domestic filters is spongy iron, being superior to animal charcoal; and Bischof, a good authority, lately informs us that filtration through the iron destroys bacterial life, and that water so filtered is incapable of inducing putrefaction in animal matters. Frankland, in his recent investigations, arrives at the same conclusion, and is much in favor of the use of spongy iron for the purification of polluted waters. Then, if polluted water must be used, it should by all means be filtered; and, if there is any suspicion of disease-germs, for domestic purposes it should be boiled from one to two hours, and put in closed earthen or glass vessels in a cool spot for several hours before drinking. The flatness of taste can easily be removed by repeatedly pouring it from one vessel to another until sufficiently aerated. A fresh supply should be prepared every twenty-four hours.

However much it may be deplored, it must be admitted that a large proportion of the waters supplied by public works at the present time require filtration.

The conclusions were that we should, if possible, procure water for domestic uses, first, by gravity and from mountain streams, lakes, or springs; second, the surroundings being safe and proper in every respect, by the gang-syphon driven wells; third, by a system of storage, but so arranging the reservoirs that proper aeration can be employed; and, lastly, if it must be taken from sources known to be polluted, a thorough system of filtration should be employed, and the water as completely oxygenated as is possible before distribution.

Progress of Medical Science.

Hyperthermic Scarlatina.—M. M. Bloch and Vicente report in the *Revue Mensuelle des Maladies de l'Enfance* for October, 1885, the case of a nursing infant, five months old, who was attacked with scarlet fever. The eruption was well marked on the chest and abdomen, scanty over the other parts of the body, and almost entirely wanting on the face. On the third day the temperature rose to 109° F., and the child had convulsions. A lukewarm mustard bath was given, and the body afterward sponged off, while cold compresses were applied to the head. Within an hour the temperature fell to 107.5°, and by evening was down to 103.8°. Four days later it was nearly normal. The child made a good recovery.

The Influence of the Iodides on Nitrogenous Metamorphosis.—The precise way in which the iodides act on the tissues of the body is a subject still involved in obscurity. Their favorable action in various diseased conditions is universally known, but their effects in healthy subjects have received very little attention. Dr. Smirnoff, of St. Petersburg, has undertaken a series of experiments to elucidate the topic in question, especially, however, the influence of the iodides of alkalies on nitrogenous metamorphosis. He directed his attention chiefly to the general nutrition, growth, and development of young animals that received daily iodide of sodium to the amount of two drachms, or iodide of potassium of a little over one drachm. The results obtained by Dr. Smirnoff may be stated as follows: 1. Iodides of alkalies undoubtedly increase disintegration of the proteids of the body; hence an increase of nitrogenous products, as well as of phosphoric and sulphuric acids, is observed; the general systemic nutrition fails, and there appears wasting of the body. 2. Under prolonged use of iodides, the assimilation of nitrogenous elements of the food decreases. 3. The digestive function of the gastric juice fails, though the quantity of the juice remains unchanged. 4. Under prolonged use of iodides there appears albuminuria (on the sixteenth, twenty-sixth, and thirty-second days). 5. Iodine is not eliminated from the body very quickly, as is generally supposed; it may be stored in the system and eliminated only gradually. [In one of the experiments iodine entirely disappeared from the urine only on the fourteenth day afteri ts ingestion; in another, only on the twenty-second.] 6. Iodides of alkalies seem to have no irritant action on the gastro-intestinal mucous membrane. Considering the experimental data above in connection with clinical facts, Dr. Smirnoff comes to the conclusion that a favorable therapeutic action of iodides in syphilis, goître, scrofula, and allied disorders, cannot be explained exclusively and directly by an increase of nitrogenous metamorphosis in consequence of the administration of the drugs; the explanation is to be sought rather in the fact that iodine, being introduced into a diseased system, acts before all and most intensely on morbid products which are less durable and more easily yield to all possible influences than normal tissues of the animal system.

Chorea and Typhoid Fever.—That typhoid fever may abolish chorea is a well-known fact. It does not seem to be so generally known that typhoid fever may originate chorea. Rilliet and Barthez have observed the development of chorea in a patient who was ataxic after typhoid fever. Benedict has also described a tremor of the head with unilateral convulsions. Nothnagel and Ebstein have witnessed choreiform disorders consecutive to pythogenic fever. But if chorea may be regarded as of rare occurrence during convalescence from typhoid fever, it is extremely rare during the actual course of typhoid fever. Peiper has recorded the case of a girl, aged sixteen, who was attacked with typhoid fever, from the first commencement of which involuntary movements of a foot were observed. On the ninth day, however, chorea was fully established, apparently as the result of a violent emotion caused by the receipt of the news that her mother had just died from enteric fever. From the description, it would appear that the chorea was general and severe. It lasted altogether ten days, and during the whole time considerable pyrexia was present. The fever ran a normal course, and convalescence ensued naturally. There was a systolic murmur of obscure character, which finally disappeared. The dependence of the chorea on the cardiac lesion was regarded as out of the question.—*The Lancet.*

Idiopathic Pneumothorax.—Dr. Desmaroux reports the case of a young and exceptionally strong man, who had never been sick, and in whose family there was no history of tuberculosis, who was taken suddenly, while walking, with repeated chills and a very severe pain under the right breast. There was a feeling of great oppression in the chest, and the man staggered in walking, and was obliged to sit down every few minutes to rest himself. Examination showed a bulging of the right side of the chest, and percussion gave a tympanitic resonance, while a feeling of elasticity in the thoracic wall was imparted to the percussing finger. There was complete absence of the normal respiratory murmur, which was replaced by a characteristic amphoric blowing sound. Coughing was performed with difficulty and was without expectoration. Three days after the disease, the patient became delirious, and died. The author believed that this was a case of pneumothorax due to an excretion of gas from the pleura, and not caused by rupture of a healthy lung.—*Centralblatt für Klinische Medicin*, December 5, 1885.

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STATE REGULATION OF THE PRACTICE OF MEDICINE.

UNDER this title, Dr. William C. Dabney discusses, in *The Physician's Magazine*, the present aspect of the subject indicated, and gives some of the results which have been reached by the Virginia State Board of Examiners, of which body he is the president. He discusses, first of all, the desirability of such laws in their application both to the protection and welfare of the community, and to the general subject of raising the standard of medical education. Not content with general reasoning, he adduces some very definite facts brought to light by this State Board. There have thus far appeared before it thirty-nine candidates. All but two of these were graduates of reputable colleges situated in various parts of the country. Of this entire number, eight were rejected. The answers given by some of the candidates to questions on professional topics were certainly unique, and we cannot forbear mentioning a few of them. For the chemical name of common salt, "bicarbonate of soda" was given. The indications for treatment in cholera morbus were considered to be, first, the quieting of the pain, and secondly, removal of the irritant by "*the stomach-pump.*" The vexed question of the preferable way of treating diphtheria was settled by one man to his own satisfaction, at least. It was "belladonna, argenti nitras, aqua calcis, and prophylactics." Apoplexy was defined as a "congestion of the brain, coming on at different times." One man (evidently not a lover of Izaak Walton) mentioned among the causes of hip disease, "taking cold sitting on damp ground; sitting on the banks of rivers, fishing." The centres for will, memory, etc., were located by one candidate in the "spinal marrow." In what light he regarded the cerebrum is not stated. The climax was capped, however, by the answer to the question for an account of the method for ligating the subclavian artery. The candidate advised the Fabian policy that "the patient should be kept quiet and watched clost."

We learn that twenty-nine States and Territories have passed laws to regulate medical practice. In five of these States, viz., Alabama, Arkansas, Mississippi, North Carolina, Virginia (all Southern States, it will be observed), diplomas alone are not sufficient to give a man a legal standing. He must meet the requirements of the State Board. In two of these five States, all graduates are examined by County Boards, and all non-graduates by a State Board. In respect to the legal safeguards thrown about medical practice, North Carolina seems to be the banner State, and she seems to show her faith by her works; for at one of the recent meetings of her State Board, eleven out of fifty-three applicants were rejected, and seven more given leave to withdraw—a practical rejection of one-third of all the applicants.

These facts show that in some sections of the country, at least, the profession is alive to its own interests, and has succeeded in impressing the general public with a sense of its own relations to the important subject of medical education. The practical results in these foremost States have been decidedly encouraging. They have shown that requisite legislation can be brought by perfectly dignified and legitimate methods of agitation; and furthermore, that the enforcement of such legislation can easily be made an assured fact. The question has been agitated in our own State many times. The establishment of a State Board will do more than any other thing, perhaps, to raise the standard of medical education. We have often spoken of the material reasons which lead our medical schools to compete for the attendance of students. This competition is kept up year after year, and its outcome is a lowering of the standard of graduation requirements. The offer is virtually made to students, "Give us your money, and we will put you through." Another pernicious practice is the endorsing of diplomas from colleges in other States, in order to enable the holder of such diploma to obtain full standing under the present statutes. We are glad to note that the University of Pennsylvania has decided not to endorse any more diplomas, unless the applicant shall pass before its own medical faculty a full examination in the seven recognized departments of medical study, including pathology and morbid anatomy. In one of our recent Society meetings, a resolution was introduced looking to an investigation into the prevalent mode of endorsing diplomas. We trust that measures will soon be instituted which may lead to the abolition of the entire system.

The moment a State Board begins to demand a more thorough preparation on the part of men desiring to practise medicine, so soon will the medical colleges begin to demand some decent educational qualifications of its students. That institution which has the hardihood to take such a step and stick to it, will eventually be the gainer. Such a step would primarily result in a reduction of income; secondarily, the institution would be the gainer, because it would gather the best elements from the whole mass of students.

Practical precautions necessary for a State Board are forcibly expressed by Dr. Dabney. The Board should have no connection, collective or individual, with any teaching body. Its members should be nominated, at least, by physicians, who could better judge than laymen of the fitness of any particular man for appointment. It is in no trades-union spirit that these reasons are set forth. We have no right to say to a man or woman, you shall or you shall not study medicine. His or her claim to be allowed to practise must be substantiated before a competent Board of Examiners, free to act, knowing neither fear nor favor.

THE REACTION OF THE GENITAL DISCHARGES OF WOMEN.

SOMETIME ago M. Martineau announced that in blennorrhagia in the female the pus was acid, while in simple vaginitis its reaction was alkaline. The acidity of the blennorrhagic secretion was, therefore, a diagnostic point of much practical value. Since then Martineau has modified his statement, and only claims that the blennorrhagic pus is always acid, not that the secretions in simple vaginitis are invariably alkaline.

The statements made, however, have led Dr. P. Ménière, of Angers, to report the results of some investigations regarding "the chemical reactions of the normal and morbid humors of the female genital apparatus." Dr. Ménière asserts that the secretions of the vulvar sudoriparous glands, muciparous follicles, sebaceous follicles, and the vaginal wall are always normally acid, while the secretions of the glands of Bartholin and of the uterus are alkaline. In vulvitis and vaginitis, simple or specific, the reaction of the secretions is generally if not always acid. In endometritis the reaction of the pus is alkaline.

Dr. Ménière has extended his investigations into an inquiry as to the variations in the reactions of vaginal and uterine secretions in various morbid states. He announces to us as one result of his studies a point of distinction between the sexes which has not, we believe, been heretofore generally recognized, viz., that the "human organism is essentially alkaline," but that "woman is less alkaline than man." This alleged hypo-alkalinity, or extra acidity of the gentler sex has been perhaps noted already by philosophers and students of the domestic relations, but its existence has not been before placed upon a sound scientific and somatic basis.

Dr. Martineau has observed that in states of debility the alkalinity of woman, as measured by her vulvo-vaginal secretions, decreases, or, what amounts to the same thing, her acidity increases, yet the uterine reaction continues alkaline, though more feebly so. During pregnancy, and at about the time of the menses, the secretions from the genitals in women who are not in robust health may become too acid and cause a pruritus vulvæ. A case is reported in which a husband always got herpes præputialis during the latter part of his wife's pregnancy.

This increased acidity of the discharges in debilitated women causes in some instances sterility, and it is known that relief has been obtained for that condition by the use of alkaline injections. The larger amount of leucorrhœa in women who live in cities or under unhygienic conditions is attributed to this tendency on the part of the subacid sex to have too great acidity of their vaginal secretions.

MODERN METHODS OF PHYSICAL DIAGNOSIS.

THE art of physical examination of the chest for the purpose of obtaining objective evidence of disease has made considerable progress, even in late years, particularly in the refinements and niceties of such examinations. An admirable little work, recently written by Dr. Hudson,[1] gives one, in a concise way, an idea of the numerous methods and the elaborate technique which now make up the art of physical diagnosis of thoracic diseases. Years ago we recall studying a small manual in which we heard of very little except percussion and auscultation. Now we find eight methods of examination laid down, viz., inspection, mensuration, palpation, percussion, auscultation, auscultatory percussion, succussion, determining situation and size of surrounding organs, to which must be added, according to Dr. Arthur Ransome, the use of the stethometer and the study of vital capacities and of the respiratory and cardiac rhythm. In actual practice a very common and useful addition, also, to the methods of physical examination is the hypodermic syringe, by which the fact and the character of a pleuritic effusion can be absolutely established.

In the actual practice of physical diagnosis, however, it is still inspection, percussion, and auscultation which are the main sources of our information. Modern research has probably done more in the way of teaching the exact and careful use of those methods than in adding anything absolutely new to them. Still further, however, modern teachings give a vastly more correct interpretation of the significance of these signs which physical examination brings out.

It may be of interest to note the numerous technically recognized variations from health, as recorded by Dr. Hudson. On inspection one may observe abnormal expansion and bulging, retraction and depression, procidentia (of the shoulders and upper lung) and elevation, curvature, and distortion.

Palpation, or the laying on of hands, may reveal some half a dozen varieties of fremitus, viz., respiratory, vocal, tussal, bronchial, pulsatile, and friction. By percussion one gets variations in duration, intensity, and pitch, but especially in quality, of which the chest-wall produces six varieties: the hard, soft, tubular, amphoric and cracked-metal.

Naturally auscultation furnishes the richest evidence of pathological changes. We find recorded, for example, seventeen different changes from the normal conditions of the respiratory sounds. Besides these is the long list of rhonchi, râles, and pleuritic noises.

Students might well feel a little discouraged at the elaborateness with which the study of physical diagnosis has been carried out. Yet the mastering of the essentials is not a difficult task, provided our colleges can give the requisite clinical opportunities. And the discipline which results from a careful training in these details, all of which help to make our art more exact, is of immense value to the medical student. The besetting sin of many practitioners is their disinclination and incapacity to make thorough and searching examinations of their patients. It is the application of these and other methods of physical examination which will show eventually that science is a safer thing than quackery.

[1] Lectures on the Physical Diagnosis of Thoracic Disease. By J. Darwin Hudson, Jr., A.M., M.D. New York: Styles & Cash. 1885.

PRACTICAL MATERIA MEDICA.

A CORRESPONDENT sends us a vigorous and breezy communication upon the subject of practical medicine, and more especially upon the need of winnowing the chaff from the wheat of our materia medica. He refers in illustration to the immense amount of rubbish and uncertainty that there is in our present works, while in all other departments the student and physician is loaded

down with a mass of statements, discussions, and theories, which he thinks only confuse and hinder one in the practice of the medical art.

"Now the remedy," says our correspondent, "as I take it, will be the institution, in reality as well as in name, of a series of works known as 'Practical Materia Medica,' 'Practical Practice,' 'Practical Obstetrics,' etc.

"Permit me, in as few words as possible, to define what I mean by practical materia medica. Let us have a work embracing facts, and facts only; practical points, and practical points only; a full index and *no* preface. How in this realm of doubt can this be done? In this wise. Let us take opium for example. We certainly can give a clear history, and a careful description, including known incompatibles. Let us give such physiological effects on man (not grasshoppers, cats, and guinea-pigs), and *such* effects alone as are known and accepted by the medical world, carefully avoiding and excluding all points now in question. State that in some cases it produces wakefulness, but do not attempt to account for the fact. *Don't* say it is because the vaso-motor system of nerves fails to respond to the stimulus applied to the sympathetic system, thereby failing to produce that peculiar anæmia of the cerebrum necessary to the soporific effect. *Don't;* because some poor student will try to remember the unknown and imaginary reason and forget the fact. Let us take quinine. We all know that it cures ague, except in certain very exceptional cases, and why it don't cure those we *don't* know. Now if this were the only fact known to medical science, it would be enough to justify the beginning of a practical materia medica. We all know that in every case of fever resulting entirely or in part from septic poisoning, quinine has a wonderful antipyretic effect. We must needs, therefore, teach in our modern elaborate materia medicas, and in lecture-rooms, that quinine, without qualification, is a wonderful antipyretic.

"The result is our young graduate goes home, finds a robust farmer with an acute inflammation and temperature of 106° F., gives him promptly thirty grains of quinine, increases the fever, sets him crazy, and puts the whole house in an uproar, and finally goes back to his books, hoping to read, but really to meditate, on the uncertainty and often impracticability of medical science. We turn to our materia medica and find the officinal opium suppository one grain. No account of a suppository made containing less than one grain, and yet I remember, in my early practice, being called to see an old and feeble, but very influential gentleman, who died from opium-poisoning, produced by a one-grain suppository. Every good physician learns, not from materia medica but from his own experience and at the expense of his patients, the careful use of comparatively few remedies.

"There is no physician of more than five years' practice, let him be of high or low degree, who cannot recall many of his unsuccessful cases, which might have resulted favorably had his early teaching been eminently concise and practical. Let us admit no remedy, therefore, into our materia medica, except those endorsed, not by any single practitioner, but by the medical world. Do you think this a difficult task, and that one practical and compendious volume would contain no new remedies? How recent the discovery of cocaine, yet no doubt its history has reached every village and hamlet in the civilized world. Why are not our medical journals filled with the wonderful properties of Jamaica dogwood, manaca, and celerina? Nor will such practical work impede our rapid advancement, but rather greatly enhance it in this, that it will not be man's highest ambition to introduce a new and worthless remedy, or to model a new speculum, but to introduce a remedy or fashion a speculum that will find its way into our practical series, not only because of its intrinsic worth, but because it is recognized by the great thinking, throbbing medical world to be a thing of practicability and a joy forever.

"In THE MEDICAL RECORD of November 7th is a report of a meeting of the New York Academy of Medicine, held October 22d. Before the Section on Obstetrics a paper was read entitled, 'The Management of Unfavorable Cephalic Presentations at the Superior Strait,' wherein the writer maintains, with reference to diagnosis by digital examination, that 'one suture could not be distinguished from another with satisfaction; nor, by means ordinarily practised could the fontanelles be differentiated.' If this be true, why have we deluded ourselves into the belief that we *could* distinguish and differentiate? The writer further states, 'Something more definite must be searched for, and that was the ear, and to do that the hand must, to a greater or less extent, be introduced into the vagina.' In the discussion that followed, this proposition was universally admitted by gentlemen eminent in their profession. Where is the general practitioner, where is the new-born obstetrician, who has not sweat (figuratively) great drops of blood; who has not vilified his own stupidity in his endeavor to perform that which now, I believe for the first time, is *thoroughly* admitted to be *thoroughly* impracticable."

"In the name of *truth*, in the name of the *general practitioner*, but especially in the name of the *medical student*, let us have not only a practical materia medica but a practical practice, and a practical obstetrics."

Our correspondent is quite right in his advocacy of facts as the basis of our medical manuals. In materia medica, particularly, there is nothing more urgently needed than the elimination of a hundred or more useless or superfluous drugs. A society and a medical journal which would take for its object the showing what drugs are not needed would do for medicine an immense service.

THE MEETING OF THE STATE SOCIETY.

WE are glad to notice that the meeting of the Medical Society, held this week in Albany, has been a great success. Not for many years has the attendance been so large, nor during a similar occasion have a greater number of papers of merit been presented and discussed. The new plan of securing a provisional business committee has worked well. The distinguished President, Dr. Vander Veer, deserves the lion's share of praise for the manner in which he discharged the duties of his high office, and for the admirable and judicious presentation of the matters pertaining to the vital interests of the profession of the entire State. He voices the sentiments of the large majority of medical men of the Empire State when he refers, more in sorrow than in anger, to the recent disagreements regarding ethical questions bearing upon

the relations of the Society to the American Medical Association and the forthcoming International Congress. When these differences are calmly discussed they sink into comparative insignificance. Already the properly conservative elements of both parties, not only in this State, but elsewhere, have the whole matter entirely in their hands, and will, we doubt not, be soon ready to meet on a common platform of harmony. In reality we are not far from it already. The sooner the extremes of both sides cease to pose as martyrs, and sink purely personal issues, the sooner will the proper reconciliations be made. But this is only by the way, and the Medical Society of the State of New York, more powerful and more successful than ever, is disposed to be reasonable, conservative, and just. The question of State examinations in medicine comes up yearly, but none too often until it is settled against the avowed and purely private interests which now so actively oppose it. The time must come when we must have independent State examinations in medicine, whether the colleges like it or not. If we fail one year, we are willing to try it the next. The scientific element of the meeting was well represented by leading men from the principal cities, our own little town offering its mite. The papers were, as a rule, short, practical, and therefore instructive. It is sometimes astonishing to see how much limited time and space will do toward shortening sentences, condensing sentiment, and quickening wit.

News of the Week.

The Work of the Small-pox in Montreal.—We learn from the Secretary of the National Board of Health that the total number of deaths from small-pox in the city of Montreal, from the beginning of the epidemic in April to December 31st, was 3,164, as follows: In April, 6; May, 10; June, 14; July, 46; August, 239; September, 659; October, 1,393; November, 633; December, 165. There were also 363 deaths from measles, typhoid fever, and diphtheria during the year, and the total mortality from all causes during 1885 was 7,885, as against 4,358 during 1884.

Cholera in Japan, Spain, and France.—Dr. W. P. Dunwoody, Secretary of the National Board of Health, writes that the United States Consul at Hioga, Japan, reports that during the month of October last 1,208 cases and 628 deaths from cholera were reported in Osaka vicinity, and in Hioga and Kobe there were 354 cases and 227 deaths from cholera during the same period. During the month of November there were 58 cases and 47 deaths from cholera. In the province of Huelva, the extreme southwestern province of Spain, there were, from November 6th to 26th, 42 deaths from cholera. In France, the cholera was still prevalent in the Department of Finistère on December 7th, the date of our last report. During the twelve days from November 26th to December 7th, inclusive, there were 160 cases and 62 deaths.

Æsculapia Victrix.—Under the title "Æsculapia Victrix" Mr. Robert Wilson contributes to the current number of the *Fortnightly Review* an interesting account of the rise, struggles, and present position of the London School of Medicine for Women. This brief sketch of the origin and history of the movement for educating women to undertake the duties of professional life is presumably, says the *Medical Press and Circular*, designed to reawaken the sympathy of the public on behalf of an object that is undeniably a good one, and which just now derives additional importance in connection with the movement in which Lady Dufferin is deeply interested, for supplying female physicians to act as medical attendants to the native women of India. More money is needed to help on the school.

"Wonderful Surgical Operations."—New York, Philadelphia, and other medical centres are not alone in being treated by the daily press with accounts of "wonderful operations." Sir William MacCormac recently performed tracheotomy at St. Thomas's Hospital, and the operation and operator received the admiring comments of the *Daily Mercury* and other papers.

Trouble in the Philadelphia County Medical Society.—As misery is reported to be fond of company, New Yorkers may perhaps sympathize with their Philadelphia brethren in their present trouble. The Philadelphia *Medical Times* says: "At the stated meeting of the Philadelphia County Medical Society held on January 6th, for the purpose of electing officers, the regular nominations for delegates to the State organization and the American Medical Association were set aside, and a new ticket introduced and elected by a proceeding without a precedent in the history of the Society. Now that the meeting is over, and we review its proceedings, we feel that no one who was present can escape a sense of mortification at the disorder which prevailed during the discussion, if not of regret for the results of the ballot. It is true that, by the concerted action of one hundred and fifty members, the Society (whose entire membership is nearly five hundred) finds itself with a bad precedent established, and with a lively factional quarrel in prospect."

An Inquiry into the Abuses of Medical Charity in Liverpool, recently made, showed that 298,000 persons received gratuitous medical relief annually in that city. There were forty-eight medical relief societies, with an annual income of over two hundred thousand dollars.

Patients' Names and Patients' Secrets.—A German practitioner has been sentenced to a fine of $375 for "unauthorized publication of secrets." He seems to have been exorbitant in his fees; but the offence with which he was charged was that of displaying, in a public refreshment-room, a bill of fees to a certain gentleman, which set forth that the attendance was on his wife for a "sexual complaint." The laws in most continental countries distinctly recognize the obligation of medical men to keep the secrets of patients whom they attend professionally.

As One Result of the Hydrophobia Scare in London, seventeen thousand dogs have recently been suffocated.

A Medical Diplomat, M. Paul Bert, has been appointed Minister Resident in Annam, Tonquin, and Gambodia.

THE PAUPER LUNATICS of England cost the government nearly two and a half millions last year. The lunatic asylums of the United States cost about fifteen million dollars annually.

A PROJECT TO ESTABLISH A NATIONAL BUREAU OF HEALTH AT WASHINGTON.—Representative Davis, of the Fall River district of Massachusetts, introduced during the past week a bill "to prevent the introduction of contagious and infectious diseases into the United States, and to establish a bureau of public health." It provides for the appointment by the President, with the approval of the Senate, of a Commissioner of Health, to be chosen from civil life, and to receive a salary of $4,500 a year. He is to be the head of the bureau, which is to be attached to the Department of the Interior. The Department of State is required to obtain from consular officers in foreign ports and places all available information in regard to the sanitary condition of such ports and places, and transmit the same to the bureau. The Commissioner, under the direction of the Secretary of the Interior, is to frame rules which, when approved by the President and issued by the Department of State, shall serve for the instruction of consular officers of the United States, and of the medical officers serving at any foreign port. In compliance with these rules every master of a vessel destined for a port of the United States must be furnished with a certificate containing a detailed statement of the inspection of the vessel, cargo, crew, and passengers, and of the sanitary measures carried out at the expense of the vessel; or, if such measures are not carried out, instant warning is to be transmitted to the bureau. The bureau is charged with the investigation, both in this country and in others, if necessary, of the nature, origin, and prevention of infectious and epidemic diseases, as well as of the causes and conditions of particular outbreaks of disease in the United States, and with the publication and distribution of documents relating to the prevention of disease. The President is authorized, when requested by the bureau, to detail officers from the several departments of the Government for temporary duty, to act under the direction of the bureau without extra compensation; and when a detail of suitable officers cannot be made, the Commissioner may employ experts for such time and in such manner as the funds at the disposal of the bureau may warrant. The bill appropriates $75,000, to be disbursed under the direction of the Secretary of the Interior, on the requisition of the Commissioner of Health; repeals the law of 1879 establishing the National Board of Health, and is to go into effect sixty days after its passage, within which time the Commissioner is to be appointed.

THE HOUSE OF JOHN HUNTER.—Mr. John J. Merriman writes to the *British Medical Journal:* "The house which John Hunter built in 1764, on his own freehold at Earl's Court, Kensington, together with the grounds, dens, etc., so little changed since his day, will soon be obliterated; and those members of the profession who care once again to visit the home of 'the greatest man, in the combined character of physiologist and surgeon, that the whole annals of medicine can furnish' (Sir William Lawrence), should go to Earl's Court House without delay. When Frank Buckland visited this historical spot, on June 23, 1871, he wrote: 'I almost imagined I was in the presence of the great man himself, so little is the place changed.' A full account will be found in *Land and Water*, July 6, 1871, and also in Buckland's 'Logbook of a Fisherman and Zoologist,' 1875. The memory of John Hunter will always be kept up by his immortal discoveries in surgery, physiology, and natural history, by his Museum at the Royal College of Surgeons, and by the window in the parish church of Kensington, but many will lament the demolition of that 'Home' in which he worked so vigorously for nearly thirty years."

THE JOHNS HOPKINS UNIVERSITY AND ITS MANAGEMENT.—A correspondent in Baltimore writes us: "For some time past there has been considerable dissatisfaction with the manner in which the 'Johns Hopkins' bequest is handled. An effort was made by the minority of the trustees to have the University opened some months ago, but they were outvoted. The same gentlemen, knowing Mr. Hopkins' wishes in the matter, desired the University to be located at Clifton, the beautiful country residence that Mr. Hopkins donated for this particular purpose. Again were they voted down. A bill has been introduced into the State Legislature, asking that a committee be appointed to ascertain whether the wishes of Mr. Hopkins have been carried out or not."

A HEALTH DEPARTMENT FOR JAPAN.—A Health Department has been established in Japan under Dr. Mansanori Agata, Professor of Hygiene in Tokio, who studied for several years in Munich, Leipsic, and Berlin, and in particular worked for a lengthened period in the laboratories of Pettenkofer and Koch. Since his return to Japan he has carried out the German methods of bacteriological research, and has by this means investigated the disease beri-beri, which is indigenous to Japan.

VEXATIOUS DELAYS IN LUNACY CASES.—Dr. E. C. Spitzka, of this city, writes: "In regard to the letter of Dr. Hardy, published in your issue of January 30, 1886, and in which he states that he has not been subjected to 'vexatious delays,' that he has always found the judges 'agreeable and accommodating,' and in which he takes exception generally to some statements made in an editorial of THE MEDICAL RECORD of January 9th, permit me to state the following: (1) Dr. Hardy's statement is correct as far as most of the judges of the New York Supreme Court (particularly Judge Donohue, who actually goes out of his way to accommodate physicians) are concerned. (2) Dr. Hardy is known to the majority of the intelligent members of the bench (who do not necessarily constitute a majority) as the examiner in lunacy matters for the City Prison and Reception Pavilion of Bellevue Hospital, and naturally has privileges accorded him which the general practitioner seeks in vain. His experience with judges is therefore exceptional. (3) Dr. Hardy, if he desire to commit a patient before a judge of the New York Superior Court, will be compelled to fee the clerks of this court. The undersigned and one other physician are willing to make an affidavit to the effect that such a fee, as well as other compliances with an absurd and antiquated red-tape system, are required of him in the presence of the chief clerk of said court. (4) Individually, I am willing to make an affidavit to the effect that, in so far as the

Superior Court, through its clerks and other so-called officials, extorts fees from physicians as a condition of approving certificates of insanity, it does not do so in compliance with any legal enactment, or in obedience to any principle of common law or of common sense. Probably the judges know nothing of this practice, which is merely a collateral source of income for a pair of hungry clerks. The fact that the Supreme Court and the Court of Common Pleas approve such certificates without this absurd and mercenary routine demonstrates the truth of the above proposition. (5) The writer, like Dr. Hardy, has an intimate knowledge of law courts and some acquaintance with judges, and has had repeated occasion to express his gratitude to members of the bench for their complaisance and courtesy in cases where the urgent commitment of an acute or dangerous lunatic was required. But where does the general practitioner, although he be a qualified examiner in lunacy, come in? Who is compelled by law to do the legal part of that duty of which the physician is compelled to take the moral and (if sued) the financial responsibility?"

Reports of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Eightieth Annual Meeting, held in Albany, N. Y., February 2, 3, and 4, 1886.

FIRST DAY—TUESDAY, FEBRUARY 2D—MORNING SESSION.

THE Society convened in the Common Council Chamber, City Hall, and was called to order at 10 o'clock by the President, DR. ALBERT VANDER VEER, of Albany. Prayer was offered by REV. WALTER D. NICHOLAS.

The PRESIDENT then delivered his inaugural address, at the close of which he appointed the following

COMMITTEES.

Business Committee—Drs. W. W. Potter, of Buffalo, Daniel Lewis, of New York, and A. M. Phelps, of Chateaugay.

Committee on Credentials—Drs. S. W. Freeman, of Albany, W. B. Chase, of Brooklyn, and McFee, of Franklin.

INAUGURAL ADDRESS.

After thanking the Society for the honor it had conferred upon him, and making reference to the new law permitting the Society to regulate its own membership, the President recommended that every alternate year the meeting of the Society be held in some other part of the State than Albany, the place to be determined by the Nominating Committee; called attention to Dr. Jacobi's circular concerning collective investigation of disease; and that the power lodged in the Regents to confer the honorary degree of medicine should be a matter for consideration at this meeting.

He then referred to the humiliating action of the American Medical Association at its meeting held in New Orleans, with reference to the International Medical Congress, the result being that the meeting of the Congress has been rendered doubtful, or, if it meets, its success has not been insured. Reference was also made to the interpretations given by the American Medical Association as a step in the right direction, differing but little from our own view of the question.

He also acknowledged the receipt of a circular from the American Medical Association, concerning the securing of a law which would establish a State Board of Medical Examiners, and the President expressed the hope that we might soon see State control doing that good which has already been accomplished in other States.

He also urged that steps be taken to add to the medical library, and recommended that his successor continue a temporary Business Committee which had so greatly facilitated the work of the present meeting.

Special reference was made to the deaths which had occurred during the last year, and special mention was made of Norman L. Snow, of Albany, with Little and Elsberg, of New York, W. W. Porter, of Syracuse, W. B. Carpenter, and Dr. Van Dusen.

In conclusion, the President announced the serious illness of our honored Vice-President, Alfred C. Post, M.D., LL.D., of New York.

At the conclusion of the address, DR. S. OAKLEY VANDER POEL, of New York, offered a resolution expressing the sympathy of the Society with Dr. Post in his illness, and expressing the earnest hope that he may speedily recover, which was unanimously adopted.

DR. W. W. POTTER, Chairman from the Business Committee, recommended the appointment of a committee to invite the members of the Legislature, the Governor and Lieutenant-Governor, and other *ex-officio* honorary members, to attend the meeting of the Society.

THE PRESIDENT appointed Drs. W. C. Wey, of Elmira, H. G. Piffard, of New York, and W. E. Ford, of Utica.

The Business Committee also recommended the appointment of a committee on the President's inaugural address.

The Committee consisted of Drs. F. R. Sturgis, of New York, W. S. Ely, of Rochester, and H. S. Hopkins, of Buffalo.

INVITED GUESTS.

DR. S. B. WARD, of Albany, Chairman of the Committee of Arrangements, announced the following: Drs. J. L. Corning, Ephraim Cutter, Robert T. Morris, William Stevens, of New York; N. A. Powell, of Ottawa, Canada; Frederick Petersen, of Poughkeepsie; Samuel Morris, of Albany, and G. H. Pryor, of Buffalo.

COMMUNICATIONS FROM COUNTY MEDICAL SOCIETIES.

BIOGRAPHICAL SKETCHES.

DR. WESLEY M. CARPENTER, of the County of New York, presented biographical sketches of James L. Little, M.D., by D. B. St. John Roosa, M.D., LL.D.; and Louis Elsberg, M.D., by Morris H. Henry, M.D., LL.D., which were referred to the Business Committee and subsequently recommended for publication.

Dr. Carpenter also presented amendments to by-laws which had been adopted by the Medical Society of the County of New York, which were referred to the Committee on By-Laws.

REPORT OF THE COMMITTEE ON LEGISLATION.

DR. F. R. S. DRAKE read the report, which gave a brief review of the work done by the Committee during the year. It also appeared that the bill providing for a State Board of Medical Examiners had been again introduced into the Legislature.

The Act to enable the Medical Society of the State of New York to regulate its own membership had become a law. The report of the Committee was accepted and adopted.

An excess of $98.00 expended by the Committee was ordered paid.

The Business Committee recommended that the time for each reader of a paper be limited to *twenty minutes, maximum.* Adopted.

DR. C. L. STILES, of Owego, then read a paper containing the history of a case of

ABSCESS OF THE KIDNEY

occurring in a man fifty-seven years of age, the result of traumatism, and in which there was very notable increase

in the size of the tumor in twelve hours, without rigor or pain, attended by a small amount of pain and general disturbance during the illness, and accompanied by a sudden discharge into the bladder.

Dr. J. Leonard Corning, of New York, invited guest, read a paper entitled

THE CURATIVE POTENCY OF PROLONGED SLEEP,

and in which he also referred to the potent influence of scientific feeding. He spoke of three conditions, muscle rest, spinal rest, and cerebral rest, and while considering these conditions mentioned Weir Mitchell's method of treatment for these classes of cases as the most efficient, except for cases of cerebral exhaustion and irritability, where confinement in bed is positively harmful.

The paper was referred to the Committee on Publication.

Dr. B. F. Sherman, of Ogdensburg, then read a paper in which he reported

A CASE OF EMPYEMA

treated successfully by the use of the valvular drainage-tube and improved aspirator devised by Dr. A. M. Phelps, of Chateaugay, and presented to the Society *six* years ago. The patient was a male nineteen years of age, and complete expansion of the lung took place.

Dr. W. S. Ely, of Rochester, then read a paper on a cognate subject, that of

PULMONARY CAPACITY,

in which he spoke of natural and acquired defective chest expansion, and advanced the view that lung expansion can be relatively increased by a series of exercises which may be called pulmonary gymnastics; this can be accomplished by bringing into special exercise the auxiliary respiratory muscles. He believed that the subject was of sufficient importance to secure the attention of medical men, to whom such cases should be referred exclusively for the instructions proper to be observed in each case. The mode of management is not applicable to acute cases.

Discussion on both papers was opened by Dr. A. M. Phelps, who described his valvular tube, and gave the credit to Dr. Lee, of London, who published the same views a short time before he read his paper before this Society. The aim is to obliterate the pus cavity, which is accomplished by emptying it of its contents and then approximating its inner surfaces. In the case of empyema, the yielding surface is the lung, which is capable of expansion.

Dr. A. L. Loomis, of New York, said that the length of time the lung may be crowded up under the clavicle, and yet be restored to its normal condition, depended upon the amount of change in the pulmonary pleura; if there is no change the lung may remain compressed, and perfect expansion occurs when the fluid is removed.

With regard to the treatment which will result in the perfect expansion of the lung in cases of acute suppurative pleurisy, such as Dr. Sherman's was, if compression was removed within one or two months, certainly if within one or two weeks, we might expect complete expansion of the lung. In such acute cases the fluid should be removed as soon as it is formed, and aspiration is rather worse than no treatment, according to his experience. The only proper course is to make a free opening at the most dependent part of the cavity—a single one is usually sufficient, if made early—and the introduction of a drainage-tube. If the pus is not gangrenous, has no odor, he believed that washing out the cavity is entirely unnecessary.

With regard to pulmonary gymnastics presented by Dr. Ely, if applied when the person is below par, they enfeeble rather than invigorate. Pulmonary gymnastics for pleuritic adhesions, and in pulmonary diseases, is another question. With regard to prolonged muscular effort, such as rowing, etc., in young men developing, he believed, was laying the foundation of cardiac disease and of pulmonary phthisis in very many cases.

Dr. Jacobi, of New York, favored washing out the pleural cavity when the fluid contained flocculi, and said that if the operation in empyema was performed antiseptically, and the chest dressed with the same precautions, the dressings need not be removed oftener than once in three, four, or five days, perhaps longer, and in this way favored the reduction of the quantity of fluid in the pleural cavity.

With reference to Dr. Ely's paper, there was one class of cases in which such management was beneficial, namely, those in which ossification of the upper cartilages of the ribs occurred so as to narrow that portion of the chest. By such treatment the lung might be expanded considerably upward and downward.

The paper was further discussed by Dr. Fraser, of Camden, Oneida County, and Dr. F. A. Castle, of New York.

Dr. Herman Bendell, of Albany, read a paper on

THE TREATMENT OF AURAL POLYPI BY THE INJECTION OF CARBOLIC ACID,

which he regarded as a more satisfactory method than either operative procedures or the use of caustics and astringents.

Dr. Thomas R. Pooley, of New York, objected to carbolic acid because of the possible occurrence of pyæmia or septicæmia, and the difficulty of limiting the sloughing. He employs avulsion, and said that the hemorrhage attending this operation in his experience had been insignificant.

Dr. Sherman, of Ogdensburg, had used tannic acid in these cases with good results.

Dr. W. F. Mittendorf, of New York, said that the plan of injecting with carbolic acid originated with him about the year 1881, but he limited its use to cases in which the growth presented at the external meatus. The operation, however, had proved so painful that he had abandoned it entirely, and now resorts to the use of the snare.

Dr. O. D. Pomeroy, of New York, said that injection of aural polypi was destructive, painful, and also unnecessary, as there were other and better means for their removal. He uses the forceps and cauterizes the base with nitrate of silver.

Dr. D. B. St. John Roosa, of New York, read a paper entitled

RESULTS OF THE OPERATION FOR CONVERGENT SQUINT.

in which he stated his belief that the operation is permanently successful, if properly understood. There is, however, a division of sentiment on this question. The most favorable time for operation is between five and seven years of age, and vision can be rendered clearer by the use of glasses in a large proportion of cases. There is never any substantial improvement of the vision of the squinting eye by the operation for squint; the improvement in vision is not due to the operation, except in so far as it places the patient in a condition to wear glasses. The operation may successfully remove the deformity in seventy or eighty per cent. of the cases of convergent squint, and this percentage may be raised to ninety-five per cent.

Dr. Harvey Jewett, of Canandaigua, read a paper containing the history of

A CASE OF VESICAL CALCULUS

occurring in a woman sixty-eight years of age, and in which one stone weighing one hundred and eighty-six grains was expelled spontaneously, and another weighing three hundred and ninety-five grains was removed by forceps.

The Society then adjourned to meet at 2.30 P.M.

AFTERNOON SESSION.

The Society was called to order at 2.30 P.M. by the President.

COMMITTEE ON NOMINATION.

The following were reported as the persons elected for the Committee on Nomination by the meetings of the several Senatorial districts:

First District.—Laurence Johnson.
Second District.—H. R. Winter.
Third District.—William H. Bailey.
Fourth District.—Frank G. Buckbee.
Fifth District.—George Seymour.
Sixth District.—William C. Wey.
Seventh District.—F. M. Hamlin.
Eighth District.—John O. Roe.
Member appointed by the President.—S. Oakley Vander Poel, of New York.

DR. GEORGE R. FOWLER, of Brooklyn, read a paper entitled

COMPARISON OF THE MODERN METHODS OF TREATING UNUNITED FRACTURES,

included under two heads, non-operative and operative methods.

Of the non-operative there were fixed dressings, friction of the fractured ends, subcutaneous puncture, aided perhaps by injection of irritating fluids. All these are open to the common objection that they are not applicable in the vicinity of joints.

The percussion method of Thomas, of Liverpool, he had resorted to with good results in several cases. The method consists in placing a folded towel over the parts, and then hammer them until an active degree of inflammation is established.

Mention was then made of the use of ivory pegs, with results far from satisfactory, and the use of steel screws, a modification of Dieffenbach's operation.

INVITED GUESTS.

DR. W. S. ELY, of Rochester, reported the following: C. C. Rice, of New York; W. G. Tucker, of Albany; E. B. Bronson, of New York; James Craig, of Albany; W. S. Daly, of Ogdensburg; D. McFalls, of Gouverneur; C. M. Leffler, of Gloversville; S. E. S. H. Nott, of Erie County; O. D. Ball, of Albany; A. S. Newcomb and O. D. Pomeroy, of New York.

Dr. Ely also introduced as

DELEGATES FROM ABROAD,

T. J. Allen, of Montreal; William Gardner and James Stewart, of McGill University; and T. J. Alloway, of Montreal.

A paper by Dr. N. A. Powell, of Ottawa, Canada, on "Vesical Calculi in Children," was read by title and referred to the Committee on Publication.

THE COMMITTEE ON PRIZE ESSAYS

reported that only one essay had been submitted, and that in their opinion it was unworthy of the prize.

DR. C. H. PORTER, of Albany, offered the following

AMENDMENT TO THE BY-LAWS AFFECTING PERMANENT MEMBERSHIP.

To Article 1, Section 5, shall be added: "All persons now eligible, and who have not been nominated as permanent members, upon notifying the Secretary of this Society of their desire to become such, will become permanent members on complying with the By-Laws." Adopted.

DR. A. HADDEN, of New York, then read a paper on

RHEUMATIC AFFECTIONS OF THE JOINTS,

in which he spoke especially of the morbid condition in different classes of cases, their etiology and treatment.

DR. THOMAS R. POOLEY, of New York, read a paper which contained the history of a case of

SARCOMA OF THE ORBIT AND ANTRUM.

The patient was operated upon, the neoplasm removed, and he was discharged from his hospital at the end of about one week with the operative wounds nearly healed.

The paper was discussed by the President and Dr. E. Hutchinson, of Utica.

INFANT FEEDING.

DR. E. F. BRUSH, of Mt. Vernon, read a paper on the above subject, in which he pointed out some simple methods of feeding an infant when it has been deprived of the breast. He urged the claims of simple foods in preference to the so-called "patent foods," the composition of which was often unknown; he examined the composition of the once famous "Liebig's Food for Infants," and another popular food, and indicated the dangerous amount of alkali contained in them, citing Dr. Jacobi's warning that "we are not very careful in doses of alkalies in general," and Dr. Stillé's remark that alkaline treatment "lessens the amount of fibrin in the blood." He showed by the figures of an advocate of peptonized food, that the results of such feeding were not satisfactory.

Proceeding then to the immediate subject of his paper, he stated that one of the greatest elements of failure in the artificial feeding of infants was the desire to give one sort of food alone, under all circumstances, and hence the blind prescription of patent foods. He advised, on the contrary, the preparation of foods from simple articles within reach to meet the requirements of each case as they arise. When with food thus prepared there is a failure, the physician has at least the knowledge as to what the failure arises from.

Commencing then with the child at birth, Dr. Brush gave his formula for the best substitute for colostrum, and his further treatment if the cathartic effect was either excessive or defective. He then discussed what was the best staple food. He answered unhesitatingly, "cow's milk," which, however, was subject to many conditions that render it unfit, unless due care is exercised. In 1879, Dr. Brush had pointed out the difference between the milk of the ruminant and non-ruminant animals, as regards particularly the quantity and quality of the casein contained in them, and the difficulty experienced by the human young in digesting a milk intended for bovine young. When an infant vomits a hard curd, the indications are that the milk must either be prevented from coagulating in the stomach, or coagulated and broken up before entering the stomach. He showed that it was inadvisable to use an alkali to overcome the tendency to souring in the stomach, and therefore recommended the latter treatment of coagulating and breaking up the milk before feeding it. In other cases he recommended the addition of lime-water as the safest agent, as it did not, like other alkalies, keep the stomach in an alkaline condition, nor cause an acid condition of the intestines. In cases of diarrhœa in children fed on milk, the indications were to stop the milk immediately. The milk was usually the cause of the trouble, and the milk was rendered unfit by the physical condition of the cow, such as œstrum pregnancy, poisonous herbs, cruel treatment, and the like, to all of which states many cases of diarrhœa in infants could be traced.

In these cases of diarrhœa he recommended oatmeal water, which his analysis convinces him was somewhat similar to milk in composition. He insisted on the necessity of the medical attendant himself preparing and teaching the preparation of these simple foods. In all cases, however, the child should be put back on its ordinary milk diet as soon as possible.

As regards the kind of cow best adapted to supply milk, Dr. Brush prefers the common grade cow to the Jersey or fancy breeds; the latter are of a tuberculous tendency; the fat in the milk is not sufficiently emulsified, and they are of higher nervous temperament, while the

common cow ordinarily is gentle and a good feeder. She should always be stall-fed, as in hay even the poisonous weeds lose the evil properties by the desiccation of the volatile poisonous principle. When milk has been bought, that of one cow should always be avoided. In cases of constipation raw-malt water, carefully prepared as a diluent of the milk, is efficacious. In acute dysentery raw-beef solution is to be recommended. In all cases of dysentery the food should be warm.

The paper was discussed by Dr. A. Jacobi, of New York, who spoke especially of the following formula, devised by Dr. Rudisch, of New York, for rendering the curd of cow's milk flaky and soft:

Dilute muriatic acid (officinal), twenty-five or thirty drops; water, one pint; and cow's milk, one quart. Mix and boil.

Dr. A. Jacobi, of New York, then read a paper on

PAPAYOTINE

in the treatment of diphtheria. He had used it in the following mixture: *one* part of the remedy, *four* parts of water, and *four* parts of glycerine; applied locally, and with a good degree of success in softening and dissolving the membrane. Illustrative cases were reported. It can also be used one part to two of water and two of glycerine, and applied quite constantly.

Dr. Alfred L. Loomis, of New York, then read a paper on

GENERAL ARTERO-CAPILLARY FIBROSIS,

in which he discussed its relation to cardiac and renal disease. He regards it as a general condition which involves the vascular system, and manifests itself in a variety of morbid changes in different parts of the body. The effect of the fibroid degeneration is to diminish the calibre of the arterioles. It is to be recognized by the character of the pulse, it giving evidence of increased arterial tension. The relation which left cardiac hypertrophy has to the small kidney was discussed at length, and the relation which both morbid conditions sustain to a general fibroid condition of the arteries and arterioles was demonstrated.

Dr. H. R. Hopkins, of Buffalo, read a paper on

ULCERATIVE ENDOCARDITIS,

in which he discussed the question of its primary occurrence, its symptomatology, and its etiology. Whether primary or not is questionable. In the vast majority of cases it is secondary, especially to scarlet fever, pneumonia, and pyæmia. He thought one should be guarded with reference to expressing an opinion concerning the etiological relation existing between the disease and micro-organisms, although the relation of cause and effect was maintained by many observers.

The paper was discussed by Drs. Jacobi and Loomis, of New York; Ely, of Rochester; and Hopkins, of Buffalo.

Dr. Willis E. Ford, of Utica, read a paper on

THE EARLY MANAGEMENT OF CASES OF MENTAL DEPRESSION,

in which he presented two classes of cases: first, intellectual; and, second, emotional.

The paper was discussed by Dr. Roosa.

Dr. J. M. Bigelow, of Albany, read a paper entitled

HINTS ON THE TREATMENT OF DIPHTHERIA,

in which he referred to the successful use of pilocarpine, the topical use of carbolic acid, followed by the use of a solution of lactic acid, together with the internal use of the muriated tincture of iron.

INVITED GUESTS.

The following were announced: Drs. Maurice J. Levi, Daniel V. O'Leary, D. H. Cook, David Fleischman, and F. J. Classen, of Albany; James Ferguson, D. H. Goodwillie, and W. C. Phillips, of New York; James A. Sinclair, of Canajoharie; J. L. Heffron, of Syracuse; Hiram Wiggin, of Elbridge; and Dr. Layman, of Schoharie.

The society then adjourned to meet at 8 P.M.

EVENING SESSION.

The Society was called to order by the President.

In the absence of Lawson Tait, F.R.C.S., of Birmingham, Eng., Dr. S. B. Ward, of Albany, read his paper (see p. 141) on

METHODS OF DIAGNOSIS

Dr. W. Gill Wylie, of New York, then read a paper on

DISEASES OF THE FALLOPIAN TUBES,

reported cases, and exhibited characteristic specimens.

"Since May, 1883, I have operated on thirty-seven women for the removal of diseased uterine appendages, not including ovariotomies and other operations for large tumors of the ovaries. Twenty-five of these have been reported (fourteen January 15, 1885, and eleven June 19, 1885) in The Medical Record of February 7, 1885, and August 29, 1885.

"Of the thirty-seven, thirty-three recovered and four died. Two of the latter were complicated by pelvic abscesses at the ends of the tubes and around the ovaries; a third was complicated by hæmatocele attached to the left ovary; and the fourth, on account of extensive adhesions and degenerated state of the ovaries, required considerable exposure of the peritoneal cavity in operating. Thirty-four of the thirty-seven cases had marked peritoneal adhesions. More than one-third were well-marked cases of pyo-salpinx, and nine were either complicated by abscesses or the tissues about the tubes and ovaries were infiltrated with pus.

"Twenty-three were hospital cases, and were chiefly selected from three large dispensary clinics, where every year hundreds of women suffering from local peritonitis, the result of diseased tubes or septic poison reaching the peritoneal cavity through the Fallopian tubes, present themselves for treatment. If one would follow the text-books on gynecology, most of these thirty-seven cases would have been classed as chronic cellulitis; four or five would have been called cases of pelvic abscess, and quite a number would have been called ovaritis.

"With the exception of three or four cases operated upon for cystic degeneration, which was supposed to be the cause of hystero-epilepsy, almost all were at times bedridden by repeated attacks of local peritonitis. It is yet too soon to speak positively about the results of the operations in all classes of cases, but I can say without hesitation that, in those cases where the subjective symptoms were chiefly actual local pain and physical inability to go about without causing persistent pain—and almost all of the cases of pyo-salpinx would come under this head—the results were good and satisfactory both to the patient and doctor. In many cases the relief from pain was gratefully acknowledged at once.

"In those cases where the subjective symptoms were chiefly reflex, and of a nervous order, the immediate results were by no means always satisfactory, although many completely recovered after seemingly being unimproved for several months. I have repeatedly refused to operate on this class of cases, unless I could plainly make out by bimanual examination that the ovaries were enlarged by cystic degeneration. I have yet to see a well-marked case of hystero-epilepsy or decided hysteria operated on where the ovaries were not found in a state of cystic degeneration, or very much atrophied. And these are nearly always associated with an imperfectly developed or atrophied uterus.

"The class of cases which will not only test the educated sense of touch and practical ability to diagnose and skill to do a successful operation, but will also give many opportunities to actually save life, are to be found among those cases complicated by small pelvic abscesses. The

ability to diagnosticate will be shown by detecting them before they have either penetrated into the connective tissues below the peritoneum and formed large pelvic abscesses, or, what is of still greater importance, before they have broken through the layer of lymph thrown out by the peritoneum to shut the diseased organ and tissue from the peritoneal cavity, and caused general peritonitis and death. The skill in operating will be shown by either removing intact the diseased organ and sac of the abscess, or by removing most of the sac and washing and draining the peritoneal cavity to avoid septic poisoning and death."

The surgical pathology was given as recorded in THE MEDICAL RECORD, January 24, 1885.

These papers were discussed by Dr. Paul F. Mundé, of New York; the President, Dr. Hailes, of Albany; and Dr. W. B. Chase, of Brooklyn.

The discussion was closed by Dr. Wylie.

DR. DANIEL LEWIS, of New York, presented the subject of

THE PHYSICIAN'S MUTUAL AID ASSOCIATION,

which can now receive members from all the counties of the State.

DR. P. A. FURBECK, of Gloversville, then read a paper on

THE ESTABLISHMENT OF A STATE BOARD OF MEDICAL EXAMINERS.

The writer favored the creation of such a board, and the bill substantially which was approved by the Society at its last annual meeting; one of the chief exceptions being with reference to where the examinations should be held, believing it best that they should be conducted at the colleges.

The paper was referred to the Committee on Legislation for consideration.

A paper on cholera, by J. A. S. GRANT (Bey), of Egypt, was read by title and referred to the Committee on Publication.

The Society then adjourned to meet on Wednesday at 9 A.M.

SECOND DAY—WEDNESDAY, FEBRUARY 3d—MORNING SESSION.

The Society was called to order at nine o'clock by the President, and prayer was offered by REV. R. W. KENYON.

REPORT OF THE COMMITTEE ON BY-LAWS.

DR. W. C. WEY, of Elmira, Chairman of the Committee, reported that, concerning the communication from the Cayuga County Medical Society, the act passed by the Legislature relating to permanent membership, already reported to the Society, will relieve that Society from further vexation and grief; that they withhold their sanction from the amendments to by-laws, adopted by the Counties of New York and Yates, making provision for the dropping of members for non-payment of dues.

The report of the committee was, after limited discussion, adopted.

DR. R. H. DERBY, of New York, presented the subject of

COMMUNICABLE EYE DISEASES,

and the bill recommended by the New York Academy of Medicine. The communication was received and the bill endorsed.

DR. C. H. PORTER, of Albany, Treasurer, presented

THE TREASURER'S REPORT,

which was referred to an Auditing Committee consisting of Drs. J. E. Potter, of Delphi, Onondaga County; W. H. Craig, of Albany; and M. H. Turner, of Essex County. Dr. Porter also reported on the Merrit H. Cash Fund, which was excepted.

DR. H. G. PIFFARD, of New York, offered a resolution appropriating $300 for the use of the Committee on Legislation. It gave rise to discussion, and was lost.

DR. E. L. PARTRIDGE, of New York, from the Committee of Arrangements, reported the following

INVITED GUESTS:

George B. Dunham, of Plattsburg; S. J. Banker, of Fort Edward; C. L. Fletcher, of Dutchess County; J. H. Smith, of Dannemora; F. H. Bosworth, of New York; A. Ten Eyck, of Blooming Grove; L. Howe, of Buffalo; J. D. Featherstonhaugh, of Cohoes; F. H. Potter, of Buffalo; E. L. Keyes, W. E. Forest, of New York; and D. B. Simmons, of Poughkeepsie.

DR. A. R. SIMMONS, of Utica, read a paper on

ACUTE NEPHRITIS,

especially as following diphtheria, in which he discussed the cause and the treatment, making special reference to the germ theory.

DR. WESLEY M. CARPENTER, of New York, read a paper entitled

A CLINICAL NOTE ON ALBUMINURIA AND GLYCOSURIA,

in which he directed attention to a few clinical features present in two cases. The *first* was one which he saw in consultation with Dr. Charles H. Avery, of New York; of a woman fifty-five years of age, the mother of several children, who had been in good health up to one year previously, when she noticed that on some days she passed more than the usual quantity of urine. No other symptoms were developed until it was seen that her face was swollen under the eyes; slight swelling of the feet soon followed, with *difficulty of breathing*, and her attending physician then detected the physical signs of œdema of the lungs. The symptom which led to sending for the family physician was the rather sudden development of the difficulty of breathing. Dr. Avery examined the urine at once, and found that it contained a sufficient quantity of albumen to solidify nearly its entire bulk; the specific gravity was 1.010, and the quantity was diminished. Microscopical examination, made by Dr. Carpenter, revealed casts of nearly all varieties except blood, and in very great abundance.

A full dose of elaterium was administered, which operated freely; this was followed by the use of nitroglycerin—one drop of a one per cent. solution three times a day. The urine was examined chemically twice daily, and microscopically once a day; and at the end of two days only a trace of albumen could be detected, and it contained only a few casts. At the end of a week both albumen and casts had entirely disappeared; and at the end of two months the nitroglycerin was discontinued entirely. Examination of the urine was repeated at intervals from this time on, but with negative results.

At the end of three months it was noted that the specific gravity was above 1.020, and that the quantity had increased considerably. It was then tested with Fehling's solution, and revealed distinct evidence that it contained sugar. From that date forward, nearly two years, the patient had exhibited some of the ordinary phenomena of diabetes mellitus.

The chief points of interest in this clinical history were: first, the well-marked symptoms of kidney disease; second, their rapid disappearance under the influence of nitroglycerin; and, third, the appearance of glycosuria, which has thus far remained permanent.

Albuminuria occurs not infrequently with glycosuria, but in the case reported it seemed evident that changes existed in the kidneys far beyond a simple swollen and granular condition (Senator) of the epithelia of the uriniferous tubules.

The fact, however, that the albuminuria disappeared entirely, and that the urine has not since contained casts, favored the view that the glycosuria preceded the albuminuria.

CASE II.—In June, 1885, Dr. —— placed in his

hands an accurately recorded clinical history of his own case for one month, in which it was found that the urine contained sugar, but in general the patient had not suffered any special inconvenience on account of its presence. The interesting feature of the case pertained to the diet. The patient, immediately on discovering sugar in his urine, restricted himself to the usual diabetic diet, and the result was the prompt disappearance of sugar from the urine according to Fehling's test. The first compromise consisted in eating gluten bread, when he found that within two hours after he had taken it sugar was present in his urine. This experience seemed to agree with that obtained by a large percentage of those who had bought diabetic bread at some of the more popular establishments.

From this point the patient began to experiment with reference to his diet. He soon discovered that watermelons could be taken without being followed by sugar in the urine, and he therefore ate them very freely and with notable benefit. He also learned that he could eat raw peaches without limitation and with impunity. The doctor also discovered that the ingestion of any of the cereals, except buckwheat, was quickly followed by sugar in the urine. He has been able, during the last six months, to eat buckwheat-cakes without detriment, but recently he has noticed that their ingestion has been followed by a slight trace of sugar in the urine.

The most noteworthy fact concerning his diet is that potatoes do not produce sugar in his urine. This article has been particularly prohibited in diabetic diet-lists. Doubtless in most cases their use is detrimental.

Such cases verify the statement made by Pepper, that the governing principle is that starch and sugar should be excluded from the diet of diabetics; but, at the same time, no inflexible rule applying to every case can be made.

This patient has used the arsenite of bromine with the restricted diet, and his general condition remains good.

In connection with the examination of the urine by means of Fehling's solution, the writer of the paper directed special attention to the additional step in its application, proposed by Seegen, of Vienna, who described a method by which he claimed to be able to detect sugar in the urine when it could not be detected by the tests ordinarily made. The method has been revived by Dr. McBride, of New York, and is as follows: Take, for example, a specimen of urine from which sugar cannot be precipitated by Fehling's solution, and filter it through blood charcoal (not ordinary animal charcoal); then wash the filter with distilled water, and test the third and fourth washings with Fehling's solution, and if sugar is present it will be detected readily.

The explanation is that the urine contains certain substances which are capable of holding sugar in solution, that these substances are detained in the filter, and that by repeatedly washing the filter with water they are made to release their control over the sugar and allow it to be precipitated by the copper test.

A paper on "Tubercular Ulceration of the Vocal Cords," by Dr. J. P. Creveling, of Auburn, was read by title.

Dr. W. C. Wey, of Elmira, read a paper on

MEDICAL TESTIMONY AND THE HYPOTHETICAL QUESTION,

in which he clearly set forth the difficulties surrounding the task of securing competent medical evidence, and the embarrassments surrounding the hypothetical question. The expert medical testimony should be entirely under the supervision of the court.

The paper was discussed by Dr. Sherman, of Ogdensburg.

Dr. W. B. Chase, of Brooklyn, read a paper on

ANTISEPTICS IN MIDWIFERY,

the first portion of which referred to the germ theory, its general acceptance, the extreme views which have been held by foreign and American writers on the subject, and the second part considered the practical application of the accepted antiseptic principles before confinement, during and after labor.

A paper on "Ozena," by Dr. J. O. Roe, of Rochester, was read by title.

Dr. Lucien Howe, of Buffalo, made a communication on

[illegible] PLANTATION OF THE [illegible]-BALL,

and exhibited the rabbit upon whom he had performed the operation three days ago. The cornea was comparatively clear, and the iris was visible, and there was only slight conjunctival inflammation. But the cornea always sloughs, and the globe also, but the operation shows that a slight amount of circulation is established in the globe.

The paper was discussed by Drs. H. D. Noyes and W. F. Mittendorf, of New York, and Dr. Baker, of Niagara.

Dr. E. L. Keyes, of New York, read a paper on

THE RADICAL TREATMENT OF HYDROCELE AND VARICOCELE

by means of subcutaneous ligation of the veins in varicocele with carbolized catgut, which in his hands has uniformly been successful. Etherization is not admissible, because the patient must stand up, and he has used both straight and curved needles.

For hydrocele he uses pure carbolic acid by injection, suggested by Dr. Levis, of Philadelphia, with a glass syringe having an ordinary hypodermic point; first withdrawing the fluid, and then throwing in pure carbolic acid deliquesced with a few drops of glycerine—one drachm.

Dr. Weir, of New York, spoke of the caution necessary in the use of more than one drachm of the acid for a single injection in hydrocele. He had used the subcutaneous ligation for varicocele in twenty-two cases, with six unsatisfactory results. For small varicocele this method is the best; but for the large he truncates the scrotum, and ties the veins in one or two places.

Dr. Gerster, of New York, added his testimony to Dr. Weir's in the treatment of small varicocele, but for the large he favored complete exposure of the parts to be operated upon under antiseptic precautions.

Dr. Pease, of Syracuse, saw no reason why Dr. Keyes' method was not as applicable to large as to small varicocele.

The discussion was closed by Dr. Keyes.

Dr. Whitbeck, of Rochester, reported a case of

PELVIC ABSCESS

which illustrated the importance of drainage.

Dr. V. P. Gibney, of New York, read a paper on

THE MANAGEMENT OF CLUB FOOT,

in which he considered the abuse of tenotomy, the advantages of early treatment, how the mother may intelligently co-operate with the medical attendant, the delusion of "rapid cure," the value of plaster-of-Paris as an adjuvant, and also the extensive surgical operations sometimes adopted. The paper was discussed by Drs. M. Josiah Roberts, of New York, and A. M. Phelps, of Chateaugay.

The Society then adjourned to meet at 2.30 P.M.

AFTERNOON SESSION.

The Society was called to order at 2.30 P.M. by Dr. W. C. Wey, of Elmira.

The Committee reported the following

INVITED GUESTS.

Drs. E. A. Bartlett, John Thompson, U. B. La Moure, and H. S. Case, of Albany; A. A. Christie Perry, of Steuben County; L. D. Bulkley, of New York; L. E.

Blair, W. B. Sabine, Henry Lilienthal, Theodore P. Bailey; H. H. Fish, of Mecklenberg, Schuyler County.

REPORT OF COMMITTEE ON PRESIDENT'S ADDRESS.

Dr. F. R. Sturgis, of New York, read the report, which recommended, concerning increase in permanent membership, that hereafter, and immediately prior to the reading of papers at the sessions of the annual meeting, the names of those who are eligible to permanent membership by reason of having served three years as delegates, and who have signified their desire to become members, shall be read to the Society, and if objection is made to any applicant the case shall be referred for final adjudication to the Committee on Ethics; that no change in place of holding the annual meeting should be made; that it had no recommendation concerning honorary degree in medicine to be conferred by the Regents; that earnest honest efforts be made to secure the passage of the bill creating a State Board of Medical Examiners.

The report was adopted.

The report of the Committee on a communication from the New Jersey Medical Society, Dr. S. O. Vander Poel, of New York, Chairman, was read and referred. It related to preliminary education of medical students.

The Auditing Committee reported that the Treasurer's accounts and vouchers had been found correct.

Dr. R. F. Weir, of New York, then read a paper on

ANTISEPTIC IRRIGATION OF JOINTS FOR SEROUS SYNOVITIS,

and gave cases illustrating the value of this method.

The paper was discussed by Drs. Gerster and Gibney, of New York, and Dr. Hailes, of Albany.

TERM AND NUMBER OF DELEGATES.

Dr. C. H. Porter, of Albany, introduced a resolution which provided that the President should appoint a committee of three to report at the next meeting what, if any, changes should be made with reference to the number and length of term of delegates from county societies and other organizations.

Dr. Wm. Hailes, Jr., of Albany, read a paper entitled

BACTERIA: IDENTIFICATION AND CLASSIFICATION OF SPECIES,

as especially observed in his analyses of water.

Dr. W. F. Mittendorf, of New York, reported a case in which he removed with forceps

A PIECE OF IRON FROM THE EYE,

after making an opening opposite to the point of entrance.

Dr. Roosa, of New York, thought that with the brilliant result of this case we should reaffirm that the danger of sympathetic inflammation is not removed when the foreign body is taken away.

Dr. H. D. Noyes, of New York, gave his experience briefly in a number of these cases, in which he endeavored to remove the foreign body by means of the magnet. The eyeball can be saved, in some cases vision spared, and not in all cases do conditions follow which render enucleation necessary.

Dr. Maurice Perkins, of Schenectady, with reference to

STATE LOCAL HEALTH BOARDS,

believed that the civil service principles should be applied.

INVITED GUESTS.

Drs. F. N. Otis, of New York; Frank Merrington, John McAllister, James Mitchell, and William Shutter, of Albany.

Dr. L. D. Bulkley, of New York, read a paper on

NON-VENEREAL SYPHILIS,

referring to the cases in which the disease has been communicated by methods other than sexual intercourse.

Dr. F. N. Otis, of New York, read a paper on

THE LIMITATION OF THE CONTAGIOUS PERIOD OF SYPHILIS IN RELATION TO MARRIAGE, ETC.

According to the views entertained by the author of the paper there is no such thing, strictly speaking, as hereditary transmission of syphilis; that there is no well-authenticated evidence of communication of syphilis after the secondary stage has been completely passed; that after the absence of all symptoms referable to syphilis for one year, marriage can be entered into with safety; that communication of syphilis after the third year of its existence is rare; that tertiary syphilis is due to obstructive changes affecting the lymph-channels caused by the disease in its secondary stage; that spontaneous recovery from tertiary syphilis may occur, etc.

Dr. D. H. Goodwillie, of New York, read a paper on

THE TREATMENT OF TERTIARY SYPHILIS OF THE NOSE, MOUTH, AND THROAT,

making special reference to removal of necrosed bone by means of the revolving knives. A large number of wax models were exhibited illustrating cases successfully treated.

These papers were discussed by Drs. Sturgis, P. A. Morrow, and Jacobi, of New York, who criticised most of the points brought forward by Dr. Otis, who closed the discussion and further defended his position on this subject.

Dr. Bulkley, in closing the discussion on his paper, also criticised Dr. Otis' views.

Dr. Agnew, of New York, gave a synopsis of his paper

ON HYGIENE OF THE EAR,

in which he had collected 2,844 cases of consecutive diseases of the ear, and of which 2,183 were of the middle ear, 6 of the auricle, 362 of the auditory canal, 15 of the mastoid alone, 244 of the labyrinth, and 34 unclassified. The important etiological factor in the middle-ear cases was naso-pharyngeal diseases.

The President appointed as special committee on Dr. Porter's resolution: Dr. Charles H. Porter, of Albany, Chairman, Dr. W. C. Wey, of Elmira, and Dr. D. B. St. John Roosa, of New York.

The Society then adjourned to meet at 9.30 A.M. on Thursday.

Evening Session.

The Society convened in the Assembly Chamber and listened to the annual address of the President, for which he was tendered a vote of thanks. Subsequent to the address a banquet was given at the Delavan House which was largely attended.

Third Day—Thursday, February 4th.

The Society was called to order at 9.30 A.M. by The President.

Prayer was offered by Rev. Father Edward A. Terry. Dr. H. B. Conrad, of New York, was present as an invited guest.

Dr. F. C. Curtis, of Albany, presented the report of the Committee on Hygiene, and asked the individual support of members throughout the State in the work formulated by Dr. Stoddard, of Rochester, Chairman. The report of the Committee on Experimental Medicine was accepted.

Committee on Publication presented its report, which was adopted.

The Secretary acknowledged the receipt of a communication from the State Department at Washington concerning cholera.

The resignations of Drs. John Ordronaux and E. R. Squibb were accepted with regret.

Dr. D. B. Simmons, of Poughkeepsie, read a paper on

LEPROSY IN JAPAN,

in which he spoke of its distribution, prevention, clinical history, and treatment. He rejects the germ theory of its origin.

The paper was discussed by Dr. A. N. Bell, of Brooklyn.

The following papers were read by title and referred: "Abscess of the Liver," by Dr. B. C. Senton, of Whitehall; "Pin Operation for Deviated Septum," by Dr. W. C. Phillips, of New York; "Early Operations," by Dr. T. H. Squire, of Elmira.

Dr. W. H. Bailey, of Albany, read a practical and valuable paper on

HEMORRHOIDS IN PREGNANCY.

Discussed by Dr. W. S. Ely, of Rochester, who spoke of the benefit derived from upward elastic pressure by rubber bandage.

Dr. W. H. Thomson, of New York, read an elaborate paper on

PREVENTION OF HEMIPLEGIA,

and discussed the predisposing causes of arterial degeneration, heredity, influence of diet, and effect of climate.

Dr. F. C. Curtis, of Albany, read an interesting paper on

RINGWORM OF THE SCALP IN ASYLUMS AND PRIVATE PRACTICE,

and recommended chrysophanic acid in its treatment.

The paper was discussed by Dr. F. R. Sturgis, of New York

Drs. Charles Cary, of Buffalo, and W. M. McLaury, of New York, read papers in favor of cremation, which were discussed by Dr. D. B. Simmons.

A paper on "Excision of the Knee-joint," by Dr. A. M. Phelps, of Chateaugay, was read by title.

REPORT OF THE COMMITTEE ON NOMINATION.

Dr. S. Oakley Vander Poel, chairman; Lawrence Johnson, secretary.

President—William S. Ely, of Rochester.

Vice-President—Solomon Van Etten, of Port Jervis.

Secretary—William Manlius Smith, of Syracuse.

Treasurer—Charles H. Porter, of Albany.

Censors—Southern District: John S. Warren, of New York; Walter B. Chase, of Kings; E. T. Brush, of Westchester. Eastern District: Joseph Lewi, of Albany; Thompson Burton, of Montgomery; Leroy McLean, of Rensselaer. Middle District: Lansing Griffin, of Broome; Robert Frazier, of Oneida; I. N. Goff, of Madison. Western District: Theodore Dimon, of Cayuga; M. S. Gittinger, of Niagara; David Little, of Monroe. Medical College, Syracuse University: John Gerin, of Cayuga.

Committee of Arrangements—S. B. Ward, of Albany; E. L. Partridge, of New York; W. E. Ford, of Utica.

Committee on By-laws—W. C. Wey, of Elmira; H. G. Piffard, of New York; William Manlius Smith, of Syracuse.

Committee on Hygiene—E. V. Stoddard, of Monroe; F. C. Curtis, of Albany; A. N. Bell, of Kings; R. Loughran, of Ulster; J. P. Creveling, of Cayuga; E. Hutchinson, of Oneida; W. H. Bailey, of Albany.

Committee on Legislation—F. R. S. Drake, Laurence Johnson, and D. B. St. John Roosa, of New York.

Committee on Medical Ethics—A. Jacobi, of New York; Arthur Matthewson, of Kings; J. W. Whitbeck, of Monroe.

Committee on Prize Essays—George F. Shrady, Frank P. Foster, and Wesley M. Carpenter, of New York.

Committee on Publication—William Manlius Smith, Charles H. Porter, Alfred Merce, J. O. Roe.

Honorary Members—Lawson Tait, of Birmingham, England; E. N. Brush and J. G. Richardson, of Philadelphia; T. Hansen, of Copenhagen.

Delegates.—Canadian Medical Association: B. F. Sherman, of St. Lawrence; Albert Vander Veer, of Albany; W. W. Potter, of Erie; A. M. Phelps, of Franklin. Connecticut Medical Society: F. A. Castle, of New York; E. M. Hermance, of West Chester; C. E. Willard, of Greene County. New Jersey Medical Society: P. R. Furbeck, of Fulton; J. P. Creveling, of Cayuga; J. C. Hutchison, of Rensselaer. Ontario Medical Association: L. Howe, of Erie; F. Henkel, of Erie. Pennsylvania Medical Society: C. R. Agnew, of New York; Solomon Van Etten, of Orange. Vermont Medical Society: F. S. Low, of Oswego; W. O. Moore, of New York; Thompson Burton, of Montgomery. Massachusetts State Medical Society: E. H. Parker, of Dutchess; H. G. P. Spencer, of Jefferson.

Eligible to Honorary Membership.—J. A. S. Grant Bey, of Cairo, Egypt; Duane B. Simmons, of Poughkeepsie; Professor Fenwick, of Montreal, Canada.

Delegate to German Surgical Congress.—A. M. Phelps, of Franklin County, also delegate to British Medical Association.

Dr. S. B. Ward, of Albany, introduced resolutions of thanks to the President and Custodians of the City Hall, with substantial remembrance of the janitor, and to the railroads for reduction in fares, which were unanimously adopted.

INVITED GUESTS.

Drs. C. E. Annabel, of Cameron; C. E. Bruce, of New York; P. J. Keegan, Lewis Balch, and A. B. Huested, of Albany; S. S. Wallian, and F. D. Fisher, of New York.

Dr. J. P. Boyd, of Albany, read a paper on "Hemorrhage after Removal of Cervix Uteri with Galvano-cautery Wire."

Dr. F. S. Crego, of Buffalo, read a paper on "Migraine."

Dr. F. W. Hinkel, of Buffalo, read a paper on "Tubercular Ulceration of the Pharynx."

Dr. F. Petersen, of Poughkeepsie, read a paper on "A General System of Districting the State Asylums for the Accommodation of the Acute and Chronic Insane."

Dr. F. N. Hamlin, of Auburn, read a paper on "The Emission of Semen as a Means of Diagnosis of Death by Hanging."

Dr. A. B. Huested, of Albany, read a paper on "The Benefits arising from Laws Regulating Pharmacy."

Dr. S. S. Wallian, of New York, read a paper on "The Bacillus Ethicus Medicinalis."

The following papers were read by title: "Well-water in its Relation to Microspores," by Dr. F. E. Martendale; "The Free Dispensary System," by Dr. J. W. Howe, of New York; "The Treatment of Epilepsy," by Dr. C. L. Dana, of New York; "Ozæna," by Dr. J. O. Roe, Rochester.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, January 11, 1886.

STEPHEN SMITH, M.D., CHAIRMAN.

DIAGNOSIS AND TREATMENT OF INTRA-PERITONEAL WOUNDS OF THE URINARY BLADDER—THE LANCET OF ANÆSTHETICS IN CHRONIC BRIGHT'S DISEASE.

The Chairman introduced the first subject for discussion by stating that it was closely related to the subject before the Section at its last meeting, viz., "Laparotomy in Penetrating Wounds of the Abdomen." Although intra-peritoneal wounds of the urinary bladder are not very uncommon, there being somewhat over two hundred cases on record, there is no settled method of treatment. It was true, he stated, that all methods of treat-

ment had failed, as there now seemed to be but one well authenticated case of recovery on record, and on this account it was all the more important to determine upon a method of procedure which would rescue this accident from the category of fatal injuries. Dr. Stein, who has investigated the subject, and written a valuable memoir, will commence the discussion.

Dr. Alexander W. Stein continued the discussion (see p. 146).

Dr. Seneca D. Powell said he had seen one or two cases where the bladder was injured. He was present at the time when the man's bladder was ruptured in Bellevue Hospital, in the case to which Dr. Stein had referred. In that instance the organ was very much distended. A consultation was called of the house staff, and it was determined to perform external urethrotomy without a guide, though the opinion of some was that it would be better to tap the bladder through the rectum before administering the anæsthetic. The patient took ether very badly, and during his struggles it was noticed that the abdomen assumed a flat appearance, and that the pulse quickly became accelerated. Nothing was done beyond the operation of external urethrotomy. The bladder was empty, and the man died within a few hours. The post-mortem showed that the rupture took place in the upper and posterior portion of the viscus.

In the other two cases which he had seen the bladder was injured during the operation of laparotomy. In one case, which occurred only a few months ago, the bladder was drawn up by old adhesions. The other case occurred one or two years ago. The incision in both instances was about one inch long, and the opening in the bladder was closed by carbolized silk sutures, the stitches being passed through the entire coats of the bladder and secured in the edges of the abdominal incision. The laparotomy was discontinued. The patient recovered. Laparotomy was performed successfully at a later period by making the incision to one side of the median line and thus avoiding the bladder. He saw no reason, although he had had no experience, why we should hesitate, with our present knowledge of abdominal surgery, to open the abdomen and wash it out and sew up the laceration in the bladder. He thought if this operation could have been performed on the patient in Bellevue Hospital, that he would have had a fair chance of recovery, because it would have been done so soon after the occurrence of the injury.

In neither of the cases of laparotomy was urine admitted into the abdominal cavity.

Dr. A. Jacobi said that he had had no experience whatever on the subject, but there were some remarks in the paper which might bear a little discussion. One was the fact that a great many ruptures had taken place, not in a normal or in an atrophied bladder, but in hypertrophied bladders. Now, hypertrophy means in every viscus not exactly an increase of the normal tissue, which certainly would resist rupture better than the normal bladder, but it means hypertrophy produced by abnormal tissue. Thus we see hypertrophy in the bladder, after stricture, by over-exercise of the organ and secondary cystitis. We see it also in other cases of more or less primary or secondary cystitis. So it is true that the wall of the bladder, when it is opened, is very thick, the thickness being due, however, not to normal tissue, but to tissue changed by inflammatory process, and muscular tissue always in a condition of degeneration. Thus it is, as Dr. Stein has mentioned, we see rupture taking place in such hypertrophy of the bladder. In the same way rupture of the heart will take place more frequently in so-called hypertrophy, the result of old general myocarditis. There is thickening of the wall of the heart, but the thickness is produced by inflammation and granular degeneration of the muscular tissue, and there it is where the heart will rupture.

It was a question with him whether anybody would be found who would execute what Dr. Stein had proposed as possible, namely, making an incision into the peritoneum and reaching the bladder from that side. It was true that drainage could be established, but there would be no way of washing the urine out thoroughly and finally healing up the wound. As far as the latter was concerned, he would like to ask to what extent sutures in the bladder were well tolerated. Inasmuch as the experience of olden times, that of the period preceding modern antisepsis, might be regarded as of little importance, he hesitated to report a case; but otherwise he would like to lay some stress upon an operation at which he was present about twenty years ago, where the late Dr. Krackowizer performed pubo-cystotomy in such a way that the peritoneum above the symphysis pubis was not touched. The bladder was entered and the calculus removed. The late Dr. Sims was present, and it was only a short time after he had brought forward the merits of the silver-wire suture, and he suggested, in opposition to Dr. Krackowizer, who had expected to leave the wound open, the propriety of sewing up the opening in the bladder with silver wire. Dr. Krackowizer consented, and Dr. Sims applied the sutures. Dr. Jacobi believed that in consequence of the more protracted operation, perhaps in consequence of some irritation which was not attended with antisepsis, the patient died. As a rule, we do not expect patients to die on whom the high operation has been performed.

The next point which suggested itself to him while listening to Dr. Stein's excellent paper was this, the symptomatology of some of the cases is not always clear. Several modes of examination appear to give insufficient results; for instance, the introduction of the catheter into the bladder. The very fact that the catheter can be introduced into the bladder very high up does not prove that it is outside of the organ. He had seen a few instances in which there was no question at all, where he could feel the catheter in the neighborhood of the liver, and still it was within the viscus. In these cases there were congenital anomalies. In one instance he had to deal with the bladder in connection with an unclosed urachus, and the bladder extended all the way up to the umbilicus. Such a case might easily give the impression that the end of the instrument was outside of the bladder.

Another case was the following: A child, three or four years of age, had a tumor in the abdominal cavity. That tumor was in the median line, and extended as high as the region of the umbilicus, and it had two horns. There was also a depression in the median line, and at both sides the tumor extended pretty high up. It looked, therefore, like a bicorned uterus. Several diagnoses had been made, such as ovarian cyst, echinococcus, etc. But when he had the child under the influence of chloroform, for the purpose of examination, he found that he had to deal with the peculiar anomaly of a bicorned bladder, which extended far up to the left and to the right, with a little depression in the median line, with a very thin wall, and that when the urine flowed off entirely the tumor coincidently disappeared. In such exceptional cases one can very easily mistake about this symptom, the obscurity and insignificance of which Dr. Stein himself had emphasized. Dr. Jacobi asked if there was any particular danger in suturing the bladder.

Dr. Alfred C. Post said it had been done a number of times, and also successfully in a number of cases. The gynecologists were in the habit of sewing up the bladder in vesico-vaginal fistula, and their wounds united well. He remembered a case in which an operation for stone was performed through the rectum and the stone extracted, and the vesico-rectal wall sutured with success. He was unable to recall the name of the writer of the paper in which this case had been reported. He thought that in several cases of ovariotomy the bladder had been injured, and that sutures had been applied with success. If he remembered correctly, Dr. Thomas had reported one such case.

The Chairman said that so far as suturing the bladder

was concerned the wounds had shown a very decided disposition to heal, and he saw no reason why the wounds should not be sutured, and why the surgeon should not go even so far as Dr. Stein had recommended, and incise the edges so as to give clean-cut, smooth surfaces to be brought into apposition.

Dr. H. Griswold remarked that if the mucous membrane was not included in the sutures he thought there would be no difficulty in obtaining union.

The Chairman said it was a fact that in many cases of rupture of the bladder, where the patient had lived several days, there had been a decided effort at union of the wound, the urine being constantly drawn off and the edges of the wound simply being allowed to lie in contact. In some instances the wound had been entirely closed, especially where the urine had accumulated behind the bladder in the cavity of the pelvis, and the inflammation had been such as had circumscribed it, and there was no general peritonitis. In some of these cases the wound had been entirely healed.

Dr. Jacobi said this might occur the same as it might take place in the uterus after Cesarean section; the wound healing as the parts were in juxtaposition.

The Chairman remarked that there must be some difficulty in suturing wounds of the bladder, because the bladder might disappear under the symphysis. He had known of two cases of rupture of the bladder, occurring in the practice of country physicians, and in each the bladder had entirely disappeared, and had been found under the symphysis. In one case, of which he knew personally, the physician in his search was unable to discover the bladder, and reported it as one in which the organ had been entirely absorbed. The bladder had so thoroughly disappeared under the symphysis that it required a little search to find it, but it was finally found, and the rupture could be clearly made out. The Chairman would ask Dr. Post's opinion concerning the value of perineal section in these cases, which had been insisted upon by some writers as the best method of draining the bladder.

Dr. Post said it would drain the bladder more perfectly than could be done with a catheter. The introduction of a tube through the perineum would cause less irritation than would be produced by the introduction of a tube through the entire urethra, and, with reference to drainage, it would give more perfect drainage, because a short, straight instrument could be used, and no muscular effort would be required to effectually empty the bladder.

The Chairman closed the discussion, remarking that the diagnosis of intra-peritoneal wounds was sometimes very easy, and again it might be very difficult. In general there is evidence of a full bladder, shock, inability to walk, desire to urinate without being able, great pain in the hypogastric region, discharge of bloody urine through the catheter, and occasionally the passage of the catheter through the rent. But these symptoms may vary very much, or, for the most part, be absent. In one case a surgeon fell from a horse, and was so slightly injured that in the evening he attended a dinner-party, where he related the accident to another surgeon, who stated that the symptoms indicated rupture of the bladder, which proved to be true, as he died in forty-eight hours.

The ability of the patient to urinate voluntarily has frequently been demonstrated. The true indications of treatment have long been recognized, viz., drainage of the urine from the bladder as fast as it is secreted, and removal of the urine from the peritoneal cavity. In general the catheter retained in the bladder is relied on for drainage, but it cannot be relied on implicitly. Opening the urethra as in perineal urethrotomy has been advised. But a more effectual drainage is secured by incising the neck of the bladder as in lateral lithotomy. This operation was recommended by him in a paper published in 1851, in which was reported a successful case of lateral cystotomy for rupture of the anterior walls by Walker, of Massachusetts. Mason repeated the operation successfully. The advantages are evidently due to the paralysis of the neck of the bladder, and the direct drainage from the base of the bladder, so that no accumulation can occur. It has been proposed to siphon the bladder, but no result has yet been obtained by this method. The removal of the urine from the cavity of the peritoneum has been accomplished in various ways. In the first reported case by Bonetus, paracentesis was performed, but without success. Blundell, the obstetrician, recommended in 1825, sixty years ago, the opening of the cavity of the peritoneum, and the thorough ablution of the abdominal cavity and its contents by means of the free injection of *distilled* water at 98° F. or more. The operation, he says, should be continued prudently, no symptoms forbidding, till the water comes away without manifesting the urinary characteristics. This method of cleansing the peritoneal cavity is not unlike that now advised by Mr. Tait. He also advised that, after cleansing the abdominal cavity, the ruptured part should be drawn up to the abdominal opening, the laceration closed with a ligature, the parts beyond the ligature cut away, one end of the ligature cut, and the other brought out of the wound. With the exception of providing drainage from the bladder, Blundell thus early met the indications of treatment. In the only case of undoubted intra-peritoneal rupture which recovered, the means employed was, cleansing the peritoneal cavity and the drainage of the bladder by the catheter. The closure of the wound of the bladder does not seem, therefore, to be a necessary part of the treatment when drainage is satisfactory. There is no doubt that when the urine is constantly drained away, the bladder remains so firmly contracted that the edges are in proper contact for union. Still, there can be no objection to closing the vesical wound with suture, and if there is doubt about the drainage the wound should be closed of necessity. In regard to the best method of securing the escape of the urine as fast as secreted, he believed that incision of the neck of the bladder by lateral cystotomy was the most certain. He had recommended this method in a paper which he published in 1851, embracing notes of seventy-eight cases, and it had been performed by several surgeons with satisfactory results as regards drainage, and with recovery in at least three cases. He had operated in one case of perforation of the bladder by a foreign body; the drainage was perfect; the patient died twenty-four hours after of other injuries, and the bladder was found firmly contracted and empty. Perineal urethrotomy is no substitute for cystotomy, as the neck of the bladder retains its power of obstructing the flow of urine. The use of the ordinary catheter cannot be relied on, as it does not entirely evacuate the bladder with certainty; if retained, it becomes a source of irritation; if used at intervals, it does not prevent accumulations of urine which may escape through the wound, and which, at any rate, must cause contraction of the bladder, and thus prevent that complete rest essential to the rapid closure of the wound. If a catheter is employed for drainage, it should be the soft, velvet-eyed instrument, and be introduced just within the neck, so that the internal end rests on the base of the viscus. The proposition to siphon the bladder with one of these catheters, the external end being submerged and the catheter firmly fixed so that the eye of the instrument constantly rests on the base of the bladder, would seem to fulfil the indications well. He would summarize the course of treatment that would most effectually meet the indications as follows: 1, Laparotomy and thorough cleansing of the peritoneal cavity, especial attention being given to the pelvic cavity and the convolutions of the intestines; 2, suturing of the wound in the bladder, if it can be readily effected; 3, lateral cystotomy, or efficient syphonage of the bladder.

Dr. H. Griswold asked the Chairman if he had found that perfectly fresh urine produced much irritation of raw surfaces. He had found that, in operating for rupture of

the perineum, fresh urine did not irritate the wound very much.

The Chairman said it was a fact that the peritoneum in different persons and under different circumstances was much more readily irritated in one than in another. Whether the tolerance in some patients was due to change in the character of the urine was not always plain.

Dr. Post asked if the extravasation of urine into the peritoneal cavity, although it might be immediately washed out, would not probably prove a source of very greatdanger to the patient.

The Chairman replied probably not. The great difficulty was that patients did not have the benefit of medical attendance when the rupture occurred, and sometimes it was a matter of several hours, or even days, before surgical assistance could be obtained.

Dr. Wesley M. Carpenter read a paper (see p. 144) on

THE INFLUENCE OF CHRONIC BRIGHT'S DISEASE ON THE SAFETY OF ANÆSTHETICS.

Dr. Post referred to an operation which he saw performed by Dr. Bangs, at St. Luke's—a circumcision on a boy about ten years of age. The orifice of the prepuce was very small, scarcely admitting a probe. This patient had about five per cent. albumin in his urine, and, because of that, extraordinary care was taken in administering the anæsthetic. Respiration was not as good as usual, but the patient got through the operation safely. The question was raised at the time concerning the extraordinary care required in the administration of the anæsthetic on account of the kidneys not being in a sound condition. He had not met with a fatal case under the same circumstances.

Dr. S. D. Powell had seen one patient die after the administration of ether, and the autopsy showed disease of the kidneys. The patient was in the service of Dr. Hamilton, in Bellevue Hospital. He had, on several occasions, seen patients pass into a comatose condition after an operation, sometimes very slight, on the genito-urinary tract, and he had thought the condition was produced by the shock and not by the anæsthetic. He recalled one case occurring in the practice of the late Dr. James L. Little, where, without an anæsthetic, the passing of a catheter brought on, within one or two hours, coma, and it was only by the greatest care and attention that the patient's life was saved. There was a slight quantity of albumin in his urine, but no casts. He had thought that operations on the genito-urinary tract were more frequently followed by shock than operations upon other parts of the body, and had always looked toward the condition of the kidneys, no matter how simple the operation might be. He was inclined to attribute the condition to shock, combined with disease of the kidneys, rather than to the influence of the anæsthetic or the administration of ether.

Dr. A. Jacobi said the entire subject was certainly a very vast one, and therefore only a few remarks would be justified at that time. When there is albuminuria, with some form of so-called Bright's disease, danger arises from several causes. Patients may die from real uræmia; frequently they die from anæmia, and now and then of anæmia and œdema of the brain. Even in such cases where the large blood-vessels are very much filled, in fact the more they are filled the more apt they are to compress the brain tissue, and, therefore, while such a condition looks like one of hyperæmia, it is really one of anæmia. Thus in many of these cases the patient appears to die of actual anæmia. In one of the cases reported by Dr. Carpenter the patient certainly died of anæmia of the brain. There was stenosis of the aorta, and consequent insufficient supply of blood to the entire body. That man was operated upon, did fairly well, and yet eight hours after the operation he had left his bed and been to the water-closet, and it seemed to him that the fatal result was due to anæmia of the brain, as patients were seen dying occasionally in this manner. He recalled a case of pneumonia occurring in a middle-aged man, and the patient was warned against getting up, but he did get up, went through the room, sat down upon the water-closet, started to go back to bed, fainted on the way, and was soon dead. He had seen many such cases in children who had not suffered from chronic kidney trouble; and also quite a number of children who had been taken very suddenly from bed after suffering from a protracted illness, and in consequence had died suddenly.

The second case reported by Dr. Carpenter, therefore, appeared to him to have terminated fatally from anæmia of the brain, perhaps influenced by the ether; at all events due to the atheromatous condition of the arteries, which resulted in the insufficient supply of blood. In cases in which persons have a slight amount of albumin in the urine, and in middle-aged persons, or persons in advanced life, with or without perceptible heart disease, there exists frequently very well-marked nephritis, extending through both kidneys, resulting from exactly the condition of things which Dr. Carpenter has described; namely, atheromatous changes in the aorta and arteries in general. We should not forget one thing—namely, that when we reach middle life and have blood-vessels fully developed, from that time on, perhaps past thirty-five years of age, what might almost be called a normal atheromatous degeneration begins. Thus it is that between forty and fifty years of age so many persons die of apoplexy, the result of rupture of cerebral blood-vessels. It is the rule for every middle-aged man to have an atheromatous condition of the arteries; usually in the smallest arteries, sometimes in the largest ones, as has been described. Thus it is that the large majority of brain cases, occurring as such, will be explained by the anomalous condition of its arteries.

Now, when we come to speak of cases of heart disease with nephritis, it is not always easy to say whether the heart disease is the result of the kidney disease, or whether the heart and kidney disease are the result of one and the same general condition; that is, a general, almost normal, atheromatous degeneration of the blood-vessels. These cases of Bright's disease are sometimes those in which we find no albumin whatever; in most cases we find only a trifling amount of albumin. Still, there is nephritis which is progressive, and finally will prove fatal. When we know that all persons above middle age are no longer absolutely normal, that the arteries of the body are in the process of atheromatous degeneration, we need not wonder that anæsthetics may prove unfavorable.

Dr. Jacobi then spoke of the theory of the cause of death in chloroform narcosis as presented by Nélaton and Sims, namely, the production of sudden anæmia of the brain, and the method of counteracting it by lowering the head in order to favor an increased supply of blood to the brain. Although this theory did not hold in all cases, both the observation and the treatment were excellent. Thus it was that very often we should look to nothing more than the condition of the heart, as the reader of the paper had said, and it is very fortunate that many conditions of the heart can be detected.

The Chairman said that in Bellevue Hospital the rule was always to test the urine of every patient who was likely to have an operation.

The Section then adjourned.

Antipyrin in Acute Articular Rheumatism.—Neumann has employed antipyrin, in six or eight hourly doses of fifteen grains each, in the treatment of rheumatism, and believes that it possesses virtues equal to those of salicylic acid. He even prefers it to the latter drug in many cases, as the poisonous effects sometimes observed after the use of salicylic acid are, he says, never observed when antipyrin is employed.

Correspondence.

OUR PARIS LETTER.

[illegible]

A CASE OF HYDROPHOBIA—HOSPITAL STATISTICS—SIMULTANEOUS ADMINISTRATION OF BELLADONNA AND IODIDE OF POTASH.

[illegible]

Dr. Dujardin-Beaumetz lately read his report at the Council of Public Hygiene of a fatal case of hydrophobia that occurred at Colombes, situated just outside Paris, after a period of incubation of nineteen months. This appears to be the first authentic case on record, at least in this country, of rabies manifesting itself so long after the subject had been bitten. According to the report, the patient, who was twenty-six years of age, was slightly bitten in March, 1884, in the right hand, by a dog that did not seem to labor under any rabic symptoms. It was nevertheless killed, but no autopsy of the animal was made. Although the subject bitten entertained no fears about himself, yet he had the wound painted with the tincture of iodine and thought no more of the incident. On November 1st last, feeling some pain in the site of the wound, he consulted his doctor, who expressed his fears to the family as to the case being one of incipient hydrophobia. The doctor immediately communicated the circumstance to M. Pasteur, and called on him the next day to consult him on the subject, but the learned biologist said he could do nothing for the patient, adding: "I can preserve, but I do not cure." The symptoms of hydrophobia set in rather insidiously. On the 5th they became quite characteristic, and were accompanied by symptoms of paralysis—a rare complication in the human subject. On the night of the 7th delirium set in, and he expired in the most terrible agony. This case is interesting in many respects. In the first place, the unusual length of the period of incubation, though the physician who treated the patient under notice had met another case of fourteen months' incubation. 2. It shows the absolute insufficiency of the slight cauterization with the tincture of iodine. The red-hot iron would probably have prevented the introduction of the virus into the system. 3. The duration of the manifestations of hydrophobia: one entire week, from Saturday, October 31st, to Saturday, November 7th. According to Trousseau, death takes place in man constantly in the four days which follow the difficulty of swallowing liquids. 4. The setting in of pain in the right arm a week before the appearance of the rabic symptoms. It must be remembered that the bite was inflicted in the right hand. This case also proves that a person bitten by a mad dog from eight, ten, twelve months, and more, cannot be considered safe against the malady, and that perhaps the method of preventive inoculation as practised by M. Pasteur may still be applicable to such cases.

Apropos of the duration of the period of incubation, Dr. Dujardin-Beaumetz brought to the notice of the Council of Hygiene that since 1881 he was able to establish an average period of incubation of from three to four months in fifty-eight cases of human rabies that have occurred since that period.

You lately referred to the statistics of the hospitals of the United States. Perhaps a short account of those of the hospitals of France, which I extract from the official report just issued from the office of the Minister of the Interior, will be interesting to your readers. During the last ten years the annual average of admissions into the hospitals throughout the country was 410,000. In general there is a proportion of 90 per 10,000 inhabitants for the provinces alone. For Paris the proportion of patients treated in the hospitals has been 400 to 10,000 inhabitants. The average duration of treatment in provincial hospitals has been thirty-five and one-half days, for Paris it is only twenty-nine days. In classifying the average duration of treatment of the patients we find: Thirty-one days for men, forty for women, and forty-eight for children throughout the territory. As regards the issue of the results of treatment in the hospitals, there have been seventy-eight per cent. cured and nine per cent. of deaths in proportion to the number of patients treated, which would give an average proportion of nine times more cures than deaths. This is evidently a strong argument in favor of hospital establishments. The largest proportion of cures was among the men, and the smallest among the children, which may be represented thus: Eighty per cent. for men, seventy-five per cent. for women, and seventy-four per cent. for children. The mortality for the Paris hospitals alone is, like that of Vienna, one-fourth, and even one-third, of the total number of deaths of the population of these two cities; whereas in London and New York it constitutes scarcely one-sixth. There are in Paris twelve general hospitals and nine hospitals for special diseases, all containing 9,000 beds. There are also six asylums for the aged and infirm and five establishments for lunatics, containing 10,045 beds. The average cost of each patient in the Paris hospitals is about three francs per day; that for the provinces is about half that sum. Besides these establishments there is one for the "Enfants Assistés," which is a sort of a substitute for the old Foundling Asylum, the average number of admissions being 10,000 per year. The staff of the hospitals of Paris is composed of 99 physicians, 46 surgeons, 1,225 internes and externes, 18 pharmaciens, 108 internes in pharmacy, and 9 midwives (sages-femmes). The population of Paris is estimated at 2,239,928, and that of France over 30,000,000.

Dr. Aubert has lately published a short note on the advantages of the simultaneous administration of belladonna and the iodide of potassium. The author claims for this combination the prevention of iodism, which occurs in some people even in small doses of the iodide.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 24, 1886, to January 30, 1886.

Summers, John E., Colonel and Surgeon. Retired from active service, by operation of law, January 24, 1886. S. O. 20, A. G. O., January 25, 1886.

Waters, William E., Major and Surgeon. Granted leave of absence for one month and fifteen days. S. O. 5, Division of the Atlantic, January 23, 1886.

Banister, J. M., Assistant Surgeon. Ordered for temporary duty at Fort Warren, Mass. S. O. 16, Department of the East, January 23, 1886.

Hypodermatic Quinine.—Dr. S. S. Burt says in the *Quarterly Bulletin of the New York Post-Graduate Medical School*: "For those who are obliged to administer quinine subcutaneously, it is desirable that the solution should be as little irritating as possible. Lente's solution consists of bisulphate of quinine 50 grains, dilute sulphuric acid 100 mm., and carbolic acid 5 mm. to an ounce of water. He apparently did not know that the bisulphate is quite soluble in water without the addition of dilute sulphuric acid. Having made use of the following formula, I can recommend it:

℞.	Quiniæ bisulphatis	gr. lx.
	Acid. boracic	gr. ij.
	Morphiæ sulphatis	gr. ¼.
	Aquæ destil	ʒ j.

Sig.: For hypodermic use. One drachm contains seven and a half grains of quinine."

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 30, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
January 30, 1886.....	2	6	44	2	21	62	6	0
Deaths.								
January 30, 1886	0	1	10	1	1	32	1	0

TWENTY-EIGHT PER CENT. of imbeciles are left-handed (Dr. Ireland).

A SUGGESTION FOR THE TRANSFUSION OF BLOOD.—A St. Louis doctor cut off the tails of two lizards, and by sewing the ends of the stumps together made Siamese twins of the reptiles. Having thus demonstrated the feasibility of the operation, he suggests its utilization as a means of transfusing blood.

BOOKS BOUND IN HUMAN SKIN.—Following the example of Mr. Joseph Zaehnsdorf, who lately bound two Elzevir editions in human skin, another London binder has recently executed an order to encase a copy of Holbein's "Dance of Death" in the same material—assuredly a most appropriate covering for this work. These are the most recent instances of the use of human skin for such a purpose ; but they are far from unique, several criminals in olden days having been, after execution, despoiled of their integument in order that the book-shelves of some *connoisseur* of bindings might be enriched by the ghastly relic."

ALPHONSE KARR, one of the most charming of simple philosophers, tells us that "physicians, for a long time, applied the roots of fennel pounded with honey to the bites of mad dogs. At the end of three or four hundred years it was discovered that this had never cured anybody." For the older doctors, attributing virtues to plants based upon analogy, concluded that fennel must be an antidote to the bite of snakes, because, as Pliny says, snakes are exceedingly fond of it.

MEDICAL LIVERIES.—Writing on liveries the London *Evening Standard* says : "Some of the ways by which medical men announce their profession plainly come within the category of liveries. There are few survivors now of the old school, who always dressed in solemn black, with frock coat and deep stock, but specimens of this class are still to be met with in country places. In the towns doctors do not cultivate an eccentric style in dress, but an air of preoccupation and much learning indicates who and what they are. It is as easy to tell a doctor, as he drives through the street, as it is to distinguish a sailor or even a policeman. In his consulting-room, or at his patient's house, his personal idiosyncrasies —the familiarities he affects or which are natural to him —are seen in strong relief. He may be as bland as a deputation, or as peremptory as a police magistrate. He may flatter you into a belief in his own wisdom by appearing to concede everything to yours, or he may awe you by a dogmatic statement of opinion that makes no question of its own accuracy. There are many varieties between these types ; but types they all are, and to be classified as we classify the liveries of less learned men. There is a peculiarity about the names of doctors—particularly of specialists—which we have never been able to understand. If the physician we are advised to consult happens to be named Jones or Brown, the chances are ten to one that Providence, or some other benign agency, has given him another and more impressive name also, which forms an excellent combination with the simple patronymic. Dr. Jones is Dr. Phipps Jones ; Dr. Brown is Dr. Tibbs Brown. This sort of combination is so common—there is scarcely even a dentist without what looks like a distinguished prefix to his name—that we may be forgiven for questioning whether in all instances it dates from the baptismal font. If it does, then there is more in the doctrine of election and predestination than we have been accustomed to suppose."

STATISTICS OF THE LONDON MEDICAL CHARITIES.—From the "Classified Directory to the Metropolitan Charities" it appears that the approximate income of the 1,014 medical charities of London during the past year was £4,466,556 (above $22,000,000), of which the following are of a medical character : Nine charities for incurables, £47,348 ; three charities for idiots, £61,000 ; seventeen general hospitals, £321,930 ; eight consumption hospitals, £55,635 ; five ophthalmic hospitals, £9,399 ; three orthopædic hospitals, £5,236 ; three skin hospitals, £6,014 ; twenty-one hospitals for women and children, £64,933 ; six lying-in hospitals, £10,988 ; twenty-nine miscellaneous special hospitals, £108,470 ; thirty-three general dispensaries, £25,036 ; thirteen provident dispensaries, £10,094 ; two institutions for vaccination, £2,585 ; six institutions for surgical appliances, £14,336 ; forty-five convalescent institutions, £48,577 ; and fourteen nursing institutions, £3,030.

THE PRESERVATION OF ANATOMICAL SPECIMENS.—At one of the sessions of the Italian Medical Congress, held during September, 1885, Professor Angelo Comi, of Rome, described the method employed by him in the preservation of anatomical specimens. For producing a stony induration of organic bodies, he makes a soft paste of bichloride of mercury rubbed up in a mortar with linseed oil. Into this the substance which it is desired to preserve is put and kept for several months. At the end of this time it is removed, washed, and dried carefully, and then polished with a piece of agate. If the specimen has any cavities, these are first filled with a mixture of equal parts of finely powdered cement and bichloride of mercury. By this process the anatomical preparations acquire a stony hardness, and all their delicate lines are preserved in all the beauty and distinctness of the fresh state. When it is desired to keep the specimens soft and flexible, Professor Comi simply puts them in pure honey, the cavities being previously filled with tannin. In this way bodies may be kept perfectly fresh for several months.

THE COMMERCIAL RESULTS OF A NATIONAL MISUNDERSTANDING.—The pharmacists of the province of Galicia, in Spain, at a reunion held in October last, when the matter of the Carolines dispute was fresh, unanimously resolved to purchase no more drugs or chemical preparations from German houses, but to transfer their custom to French firms.

LOCAL APPLICATIONS OF COPAIBA IN VAGINITIS.—Dr. Baratier recommmends very highly the local use of copaiba in the treatment of various forms of vaginitis. He employs a suppository containing three-fourths grain of extract of opium and one and one-fourth drachm each of copaiba and cacao butter. One of these is passed into the vagina every second day and allowed to remain for twelve hours.

DEATH OF AN EMINENT HYDROLOGUE.—Dr. Benigno Villafranca y Alfaro, one of the most active members of the Spanish Society of Medical Hydrology, recently died at the age of fifty years. The society devoted one of its sessions to a eulogy of the deceased, and dedicated to his memory the November number of its annals.

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Original Articles.

COMMENTS ON PASTEUR'S METHOD OF TREATING HYDROPHOBIA.[1]

BY CHARLES W. DULLES, M.D.,

I HAD intended, as the notice of this meeting states, to discuss this evening the whole subject of the treatment of hydrophobia. But I have found that I could not cover so much ground at one time, and so I have decided to confine myself to that phase of the question which has been forced upon the notice of the whole world by the recent announcement of the discovery of a preventive method by M. Pasteur. If this method were trustworthy, it would eclipse anything which has ever before been accomplished in dealing with this mysterious and dreaded disorder. If, on the other hand, Pasteur's method is not to be trusted, it can only prove an obstacle to any real advance in our knowledge of a subject already too much encumbered with error.

For this reason it seems to me to be important that such a body as this should critically examine the evidence adduced in support of this method; so that if it appears to rest on a sound basis of reason and experiment we may adopt and recommend it; while, if it appears to be founded on untrustworthy experiments and unsound reasoning, we may reject and condemn it, in the interest of humanity as well as of science.

M. Pasteur's first communication on the subject of hydrophobia was made in a discussion before the Académie de Médecine, of Paris, January 18, 1881, when he announced that on December 11, 1880, he had inoculated two rabbits with saliva (or buccal mucus) from the mouth of a child supposed to have died of hydrophobia. The rabbits died in thirty-six hours, and in their blood he found a microbe in the shape of a figure 8, which he declared to be a new one, and to be the cause of a new disease (*Bull. de l'Acad. de Méd.*, January 18, 1881).

M. Colin, of Alfort, said this microbe had been described and figured ten years before, and that Pasteur should have searched for it elsewhere than in the saliva of persons dying of hydrophobia. He also said that Pasteur should have made control experiments to show that the inoculation of other sorts of saliva would not produce the so-called "new disease." To this Pasteur promptly replied with an interruption: "These experiments have been made without giving any results" (*loc. cit.*, p. 78).

Pasteur made his second communication at the meeting held the following week, January 25th, in a "Note sur la maladie nouvelle provoquée par la salive d'un enfant mort de la rage" (*Bull. de l'Acad. de Méd.*, 1881, pp. 91–130). In this communication he says that he had cultivated his new microbe and repeated his inoculation experiments with the cultivation as well as with the blood, a great number of times, the result being *always the same.*

These positive and unqualified declarations of Pasteur soon proved to be utterly erroneous. All that Colin had affirmed, and all that Pasteur had denied, was soon shown to be true. The microbe was not new; it was not peculiar to rabies; and the inoculation of other kinds of saliva, even that of a healthy adult, produced the same results. Pasteur himself had to acknowledge this in a letter dated March 22d, only eight weeks after his vehement and bitter repudiation of Colin's objection (*Bull. de l'Acad. de Méd.*, 1881, pp. 380, 381), and, as we know, his acknowledgments have been confirmed in this city by the experiments of Drs. Sternberg and Formad.

Pasteur's third communication was read May 31, 1881. It was entitled "Sur la rage," and was founded on experiments made with MM. Chamberland, Roux, and Thuillier (*Bull. de l'Acad. de Méd.*, 1881, pp. 717–719). In this communication he declared that "up to the present time the disease has not been communicated by the inoculation of the blood of those having rabies" (*loc. cit.*, p. 717).

In saying this Pasteur (who has never seemed aware of anything done by other experimenters, except a very few of his own immediate time and country) was, of course, utterly ignorant of the admirable and accurate experiments of Hertwig (published in 1828, in a supplement to Hufeland's *Journal*) in which the blood of mad dogs, rubbed into cuts made in healthy dogs, caused their death, after a typical incubation, in two instances, one of the dogs dying "fully mad." But he ought to have remembered that at the very meeting at which he had made his first essay in regard to hydrophobia, MM. Raynaud and Lannelongue made a detailed report of experiments, in which they had got their inoculating materials from the same patient which had supplied Pasteur with his, and that inoculations of the blood of a rabbit, dying after inoculation with the medulla oblongata of the child that had died of hydrophobia, killed two other rabbits, while the blood of one of these latter caused the death of a third. This, according to Pasteur's own standard of proof, constitutes a demonstration of what he calls the "virulence"—that is, the specific rabic nature of the inoculation material.

This evidence of ignorance on the part of Pasteur was followed up with an implied claim, which has grown stronger since then, that he and his assistants first considered the central nervous system as peculiarly involved and active in the development of the disease. Without discussing the value of this claim, or of the idea, it is interesting to observe that the evidence of its correctness rests upon Pasteur's statement that on inoculating the brain-substance of a mad dog upon the surface of the brain of another dog, by trephining, the symptoms of rabies appear after "a week or two," and that the dog *dies* in less than three weeks (*loc. cit.*, p. 718). Now, what Pasteur means by the "first symptoms" of rabies may perhaps be surmised from his statement in another place: "Nothing is more varied than the symptoms of rabies. Each case of rabies has, so to speak, its own peculiar ones" (*Bull. de l'Acad. de Méd.*, 1882, p. 1442); and again (speaking of rabbits), he determines the onset of the disease "by a change of temperature" (*Bull. de l'Acad. de Méd.*, 1884, p. 343). It is true that he says, in the communication of which I was speaking, that he got "sometimes dumb madness and sometimes furious madness," and that "none of the inoculations made in this way have failed;" but he omits to mention how many experiments he had made, or what proportion of them produced either form of rabies, or what he means by these terms.

The fourth communication of Pasteur in regard to hydrophobia was a paper entitled "Nouveax faits pour servir à la connaissance de la rage," in which the names

[1] Read before the Philadelphia County Medical Society, January [illegible], 1886.

of the same assistants appear, and which was read December 12, 1882, nineteen months after the last (*Bull. de l'Acad. de Méd.*, 1882, pp. 1440–1445).

In this he says that heretofore "the saliva was the only material in which the presence of the virus of rabies had been established," and that the inoculation of this was uncertain and tedious in its results. By experiment he had found that the central nervous system was the principal seat of the virus; that here the latter can be gathered in large quantity and "in a state of perfect purity," and that its inoculation on the surface of the brain causes rabies "promptly and surely." At the same time he declared that he and his assistants had "found the same advantages, with forms of rabies slightly different, in another method still more easily applicable, intravenous injection of the virus" (*loc. cit.*, p. 1441). To his assertion that the virus is found in the brain, he adds the statement that it is also found in the spinal cord, and often (note: it is only often, not always) in all parts of the cord. By inoculating either brain or cord on the surface of the brain, or by intravenous injection, rabies, he says, can be developed promptly and surely (p. 1443). By the latter method (intravenous injection) he got a rabies in which "early paralysis often occurs; fury is often absent; rabic howling is rare;" but, as a set-off to the lack of these characteristic signs of real rabies, he gravely asserts, "there is sometimes frightful itching" (!). He had also seen his animals with experimental rabies spontaneously recover; and, in some cases, seem to get well, and then have a recurrence of the disease two months afterward and die. (In passing, I may remark that such a course is diametrically opposed to all the history of this disease.)

In this communication we have also the only statement which I can recall as to the sources from which Pasteur has obtained his virus, viz., two dogs in 1880, since which time, he says, rabies had been kept up (*entretenue*) "without interruption" in his laboratory. At "different times" they had utilized dogs which had died of rabies in the Veterinary School at Alfort; and very recently they had received the head of a cow which had died on a farm "in consequence of bites received from a mad dog." It is interesting (as Pasteur says) to know that all the animals inoculated from various parts of the brain of this cow had already died of *rabies*. The sum of his experiments at this date was over two hundred, including dogs, rabbits, and sheep (*loc. cit.*, p. 1445).

Pasteur's fifth communication in regard to hydrophobia was made on February 26th, 1884 (fourteen months later), in his own name and in that of MM. Chamberland and Roux. It was entitled "Nouvelle communication sur la rage" (*Bull. de l'Acad. de Méd*, 1884, 337–344). In it he announced the theory that the difference between the form of rabies produced by intravenous inoculation and that produced by inoculation upon the surface of the brain, was due to the fact that in the former case the virus first becomes fixed and multiplies in the spinal cord. When he killed dogs at the moment of the "first symptoms of paralysis" (a most vague limit, especially when determined by such a man as Pasteur) he found that the cord, especially at the lumbar enlargement, might be "rabic" when the medulla oblongata was not yet affected (*loc. cit.*, p. 333). He claims that he had already demonstrated (we might say asserted) that the virus had its seat in the brain and cord, and that later he had found it in the nerves and in the salivary glands. The whole nervous system, he now declares, is capable of "cultivating" the rabic virus. But all his efforts to "cultivate" the virus of rabies artificially had failed.

When asked by M. Bouley if there were no *microbe* of rabies, Pasteur answered that he could only say that if shown two brains, one healthy and the other of a rabid could say from a microscopic examination: is rabic; that one is not;" adding, that "both brains would) exhibit immense numbers of molecular granules, but those of the rabic medulla are smaller and more numerous, and one is tempted to believe in a microbe of infinite smallness, having neither the shape of a bacillus nor that of a *microcoque étranglé*; they are like simple points." This very vague description of the supposed germ of hydrophobia was not even original; for M. Béchamp, of Lille, soon showed that he had already studied, and described under the name of "microzyme," what Pasteur spoke of as if *he* had first recognized it.

The next thing which attracts attention in this communication of Pasteur is the reassertion that inoculation by intravenous or hypodermic or intracellular injection is followed by paralytic rabies; coupled with the paradoxical statement that furious rabies can be produced "on the sole condition of using *very small* quantities of virus." "The less virus," he says, "employed for hypodermic or intravenous inoculations, the more readily is furious rabies obtained."

Now, in addition to the difficulty of comprehending how intravenous inoculation of small quantities of virus can produce the furious form of rabies, and larger quantities the mild form, what becomes of Pasteur's explanation of the production of the milder form by "fixation" as he calls it, of the virus in the spinal cord? If the ordinary quantities become "fixed," why do not small quantities become fixed too? Again, he says that the employment of small quantities of the virus may prolong considerably the length of the incubation, and that by pushing the dilution beyond a certain limit, which is not very high, inoculation of the virus is without effect (*loc. cit.*, p. 340). Now, in this same communication Pasteur declares that he judges the virulence of a virus by the relative shortness of its incubation. So he stands as asserting that a virus used in very small quantity is relatively weaker (as manifested by a lengthened period of incubation), while in the same breath he demonstrates that it is relatively stronger, since it produces more easily the most furious forms of rabies! In this connection we must not overlook the fact that these contradictions have been followed in his last communication on the subject by the astounding assertion of Pasteur that in his preventive inoculations in human beings the attenuation consists not in a reduction of the virulence (the key-stone of the former theories), but in a reduction in the *quantity* of the virus employed.

Again Pasteur here mentions an experiment in which a rabbit after inoculation by trephining had paralysis (*rabic*, he calls it) thirteen days later, and then recovered entirely; but forty-three days afterward the paralysis returned and the animal died in three days. The same, he says, he has also seen in dogs.

Here we note three discrepancies: 1, That inoculation by trephining did not produce the characteristic form of rabies *promptly and surely*, as Pasteur has so often said it will; 2, that it did not produce *furious* rabies at all! and, 3, that the rabies "recovered" and recurred—a thing which never happens in natural rabies.

It was at this time that Pasteur advanced the ingenious theory that inoculation of the hydrophobic virus in different animals (in series) produced a fixed degree of virulence, differing with the species of animals used, and declared that he had found "the practical way to obtain dogs refractory to rabies, in numbers as large as one could wish." He couples this statement with the reasonable assertion that to do this solves the question of the prevention of rabies in dogs and in man. But if this was true in February, 1884, how can we account for the fact that in the two years which have since elapsed not a single dog has been rendered refractory to rabies outside of Pasteur's laboratory?

Pasteur made his sixth communication in his own name and in those of MM. Chamberland and Roux, to the Academy of Medicine, May 20, 1884. It was entitled "Sur la rage" (*Bull. de l'Acad. de Méd.*, 1884, pp. 661–664). In this he announced that he believed he

could "surely bring about a refractory state in (human ?) subjects before the mortal disease breaks out, in consequence of a bite (*loc. cit.*, p. 663)." To a reporter of the *Figaro* he said at this time, "anybody bitten by a mad dog has only to present himself at the laboratory of the École Normale, and by inoculation I will make him completely insusceptible to the effects of hydrophobia, even if bitten subsequently by any number of mad dogs." And, again, "Whoever gets bitten by a mad dog has only to submit to my three little inoculations, and he need not have the slightest fear of hydrophobia." If we pass by the boastfulness of these statements and confine ourselves to a study of the ground upon which they rest, we find that it can be resolved to this: Pasteur claims that when he "extracts" his virus from a mad dog, and inoculates it by trephining upon a monkey, and then from monkey to monkey, it diminishes in intensity. Virus obtained by similar successive inoculations in rabbits increases in intensity. He obtains his attenuated virus, then, by inoculating a series of monkeys (and it is a lucky coincidence, since monkeys are scarce, that it requires only a few monkeys to get what he wants); after which he can grade it up to any point he chooses by transferring it to the rabbit, in series. Thus, by working first backward and then forward, he comes by an attenuated virus, with the weakest power of which he inoculates at the same time a dog and a rabbit; the second inoculation of the dog and a new one in a third rabbit is made from rabbit No. 2; a third inoculation of the dog is made from rabbit No. 3.

"By this time" (*ensuite*), Pasteur claims, "the dog is entirely refractory to rabies, either by intravenous inoculation or by trephining with the virus of dogs with ordinary hydrophobia" (*loc. cit.*, p. 662). In trying to understand this, we ask in vain how he extracts his virus? from what part of the animal he gets it? how he judges that his virus is getting stronger? since he had before asserted (p. 343) that it required a *series* of transmissions to fix the virulence of inoculated virus, and that before reaching this "fixed" point it "*varies ceaselessly.*" This certainly would imply more than three experiments before he could assume any trustworthy diminution or increase in intensity. I have figured it out that if he started with a rabbit dying after an incubation of ten days (the very shortest limit supposable), one experiment would require thirty-two days, four rabbits, and a dog. If his monkeys be supposed to enter into his practice, as well as into his theory, this limit would rise to not less (for three, we will say) than about three months in all, assuming that the weakening of the virus is judged in monkeys also by lengthening of the period of incubation. How many such experiments can we imagine that Pasteur has ever practised. I say "imagine," for he has nowhere given any hint in regard to it.

Once more, this communication contains the following sentence: "By inoculations of the *blood* of rabid animals, in determined conditions, I have succeeded in simplifying considerably the operations of vaccination, and in securing for dogs the most decided refractory state" (*loc. cit.*, p. 663). Here I call your attention to the appearance of blood upon the scene, and the fact that it simplifies matters so much; whereas, we have seen that Pasteur at first denied the inoculability of the blood, and we shall see that, without giving any reason whatever, he soon switches off to the spinal cord, and we hear of this "simplifying" blood no more.

Pasteur's seventh and last communication on this subject is boldly entitled "Méthode pour prévenir la rage après morsure" (*Bull. de l'Acad. de Méd.*, October 27, 1885, pp. 1431–39). In this, after a complacent announcement of the value of his earlier discoveries, he confesses that his previous method would only render refractory to rabies fifteen or sixteen out of twenty dogs. To ascertain the fact of refractoriness requires not less than three or four months, he says, which restricts very much the application of the method—and, I may add, indicates how few experiments he could have carried out to their conclusions.

He had, therefore, attempted to discover a method which he could "dare to call *perfect.*" "After experiments, so to speak, innumerable, I have," he says, "discovered a preventive method, which is practical and prompt, the successful applications of which to dogs are already numerous enough and sure enough for me to have confidence in its general applicability to all animals and to man himself" (*loc. cit.*, p. 1432).

This method may be summarized as follows: An attenuated virus is obtained by inoculating a rabbit, by trephining, with "rabic spinal cord" of a dog dying of ordinary rabies (*rage des rues*), and then a second rabbit with the spinal cord of the first, and so on in series. After a *very long* series it is found that a "virus" is obtained which kills rabbits in seven days. When this point is reached pieces of the spinal cord of one of the victims are removed "with precautions of purity as great as it is possible to secure," and suspended in small flasks in which the air is kept dry by a piece of caustic potash. With each day that it is kept such a piece of spinal cord becomes less virulent.

The treatment consists in taking a small piece of one of these cords and "dissolving" (*délayer*) it in sterilized veal-broth, and injecting a Pravaz syringeful under the skin of the dog. The age of the piece of cord used must be such that it does not endanger the life of the subject of the experiment. How to ascertain the proper age Pasteur says he knows from experience; but unfortunately he forgets to say how any one else may decide the matter (*loc. cit.*, p. 1433). The effect of this treatment Pasteur, when he made his report, had tried on one human being, the now famous Joseph Meister, nine years old, bitten July 4th by a dog supposed to be mad. His bites were numerous. The principal ones had been cauterized the same day with carbolic acid. At an autopsy the dog's stomach was found to contain hay, straw, and bits of wood; and on this fact alone the diagnosis of rabies in the dog rests to this day. Pasteur called Dr. Vulpian and Dr. Grancher to see the boy, and they said he was almost inevitably exposed to contract hydrophobia, "*on account of the severity and the number of his bites.*"

"The death of this child appearing inevitable," Pasteur then decided, "not without keen and cruel solicitude," to try his new method on him. He inoculated the boy with a half syringeful of spinal cord (he says, meaning no doubt diluted or *délayé*) fifteen days old. He made in all twelve hypodermic injections in ten days, each day using a fresher cord, and then sent the boy home cured, having "escaped not only the hydrophobia which his bites might have developed, but that with which I had inoculated him, to test the immunity due to the treatment, a hydrophobia more virulent than that of street dogs" (*loc. cit.*, p. 1436).

In commenting upon this communication there are two sets of objections to be raised. One relates to the case of the boy Joseph Meister, which has attracted such attention the whole world over. The other relates to the general statements made, regarded from a scientific standpoint.

In regard to the case of the boy, it may be briefly stated: 1st, Because there is no proof that the dog that bit him was mad (everybody ought to know that the contents of a dog's stomach are of no value as evidence of rabies), and because the boy's wounds had been cauterized, there is no reason to assume that he was in danger of having hydrophobia; and, 2d, if he was, it is by far too soon to say he is free from the danger.

When we come to compare the assertions in this communication with the evidence in support of them, we do not wonder that the prudent Jules Guérin begged the unwilling President to let him utter a word of protest before this announcement should go out to the world with the sanction of the Academie de Médecine. As usual, Pasteur, in this communication, speaks of his last ex-

periments as "always" successful (*loc. cit.*, p. 1432). Again, his experiments have been "innumerable, so to speak." Unfortunately, here as elsewhere (with one exception), the actual number is not named, and his vague statement will bear analyzing. The conclusions at which he has arrived could only properly rest on a number of *uninterrupted series* of experiments, each complete and successful from beginning to end. Now, I have taken the trouble to figure out what a single series would involve, and I find it means no interruption and no failure in experiments requiring one hundred and thirty or one hundred and forty rabbits, and a period of from about two and a half to nearly three years! An interruption anywhere would break up a whole series. Now—supposing no interruption had occurred—how many such series could Pasteur have been carrying on during the three years since, he says (*loc. cit.*, p. 1432), he began them? Again, what seems to me the most fatal objection to the idea that Pasteur's experiments could possibly have been trustworthy throughout these immense series is the fact that, by his own admission, *a full half* of the spinal cords, used in the crucial experiment on Joseph Meister, which gave him such "cruel inquietudes"—as well it might—*proved to have no virus* when tested on rabbits! Out of eleven, he says, five were without virus, five were virulent; and of one, singularly enough, he says nothing (*loc. cit.*, p. 1436). If this could happen in the only detailed experiment which Pasteur has ever recorded, and when everything seemed to depend upon the infallibility which Pasteur had so often claimed, what are we to think of the experiments done in the secrecy of his laboratory, of which no record has ever been given, and of which not a single witness has ever spoken except Pasteur?

Another matter to be remarked just here is that until now Pasteur had given no hint that the virus of hydrophobia could be attenuated so simply as by desiccating the spinal cord. And yet, if his own statements are true, he must have been far advanced in his experience with this method at the very time when he was startling the world with his backward and forward modifications of the virus in monkeys and rabbits, and presenting this as the way to obtain the virus for what he called his "three little inoculations." If we take the trouble to place side by side Pasteur's statements at different times, we see that they are so inconsistent that the cordial acceptance of almost any one of them seems to demand that the preceding ones should be banished from our memory. At first it was in the brain that the virus was to be obtained in perfect purity; then trephining and intradural inoculation was the sovereign method; then intravenous inoculations were said to simplify the matter; then blood was a good virus; then smaller quantities produced fiercer rabies; then inoculations in series modified the virus after many variations; then a few monkeys and rabbits did the work; then rabbits alone sufficed, while the virus was weakened by drying the cord. And, to crown all, forgetting the traditions of his own work in regard to charbon and chicken cholera, Pasteur says that the protective character of his virus depends upon a reduction in quantity and not in the virulence of the virus (*loc. cit.*, p. 1437).

What! And when we catch our breath, we cannot but recall what has gone before, and say: If the hypodermic injection of reduced quantities of virus was the means Pasteur found would most readily produce the most furious forms of rabies, in February, 1884, when he must have been half-way through the series of experiments upon which the present communication rests, how could the remaining half have sufficed to show that the same way of proceeding would exert a kind and protective influence on the same animals and on men?

But I must close my comments on this communication with the latest of Pasteur's theories. He actually intimates that the virus of hydrophobia "may be formed of two distinct substances, and that by the side of one which is animate and capable of germinating in the nervous system, there may be another, inanimate, having the power, when in proper proportions, to arrest the development of the former" (*loc. cit.*, 1438).

Since M. Pasteur made his last communication to the Académie de Médecine and to the Académie des Sciences, the enterprising *New York Herald* has given much space to discussing his method and its application. We have all heard of the four children sent from Newark to Paris after being bitten by a dog of which there is not the remotest evidence that it was mad, and of their return to America in apparently as good a state of health as is still enjoyed by the remaining two, who were bitten at the same time by the same dog, and who have never stirred from home. Three other Americans have gone over, viz., a man named Kaufmann, another by the name of Sattler, and a boy named Edward Bucklin. In regard to these patients there is equally little evidence that they have been exposed to the bite of a rabid dog. Indeed, in the case of one of them, it is denied that he was bitten at all. Pasteur is said to have refused to practise on him, and again he is said to have done so. All these seem to have maintained their health in spite of their bites, their fears, their long journey, and their inoculations with Pasteur's weak and strong viruses. One of M. Pasteur's patients, a girl, aged six, died of rabies while under treatment by him. This mishap Pasteur explained by saying she had come to him thirty-six days after being bitten, and that the virus in her system had made too great progress to be stopped. Its rapid action he explained on account of her youth—an assertion which is not borne out by facts—and because she had been bitten on the head, *i.e.*, near to the brain. This latter explanation is in accord with one of Pasteur's theories borrowed from Davaine; but it is also opposed to facts with which he should have been familiar; for, as lately as April 8, 1884, Dr. Dujardin-Beaumetz added, to what was clear enough before to any one who had carefully studied the subject, the confirmation of a report to the Academy of Medicine, of which M. Pasteur is a member, on the cases occurring in the Department of the Seine, in the three years 1881, 1882, and 1883 (thirty-four cases in all), which showed that there was no relation between the point of inoculation and the period of incubation.

On December 8th Pasteur said: "I am confident my treatment will be successful, if commenced *at any time before actual hydrophobia sets in*, even if a year or more elapses between the bite and the commencement of treatment." This was on the very day, I believe, on which the little girl died, and suggested to him that thirty-six days was a long time to wait, while on January 1st of this year he says that his treatment is efficacious *even* fifteen days after a bite!

The very last utterance of Pasteur on this subject is contained in the statement prepared for the *New York Herald*, under his direction, by his assistant, M. E. Wasserzug, on January 1st of this year. This embodies a good account of his last method, in which it is noticeable that while he specifies that he uses half a Pravaz syringeful of his mixture of rabic medulla and sterilized veal-broth for a child (as compared with three-quarters of a syringeful used for adults), he omits entirely—as he has *invariably* omitted—to say how much of the veal-broth is used to mix with a given quantity of so-called rabic spinal cord. This quite material omission is accompanied by two opposite statements: one, that his method is "very simple and very practicable;" and the other, that "outside of M. Pasteur, and of his laboratory, there does not exist a single person in the world capable of undertaking the treatment with certainty of success (*sûrement*)."

This must prove a disappointing *dictum* to those well-meaning men in New York who so hopefully incorporated a *Pasteur Institute* on January 2d; although it cannot be considered too harsh a judgment of the men in St. Louis, who, on December 31, 1885, "perfected

arrangements for the treatment of hydrophobia after the method followed by M. Pasteur," announcing that "in three weeks, at the outside, patients may be treated."

It is very true, as Pasteur declared, on January 4th, to an American in Paris, that in this matter our countrymen "go too fast"—although it seems a pity that he should have applied this expression to the men of New York who so trustfully relied upon his help; while he cannot have known of those in St. Louis who proposed to imitate him by accomplishing in about two weeks what he says requires two years. For the credit of our country let us hope that Pasteur will never hear of some of the New York men, whose names appear in the *Herald*, who proposed to cultivate the "bacteria" of rabies in "glycerine and agar-agar jelly." If he does, he may wonder that our scientific men do not know that he has never found a bacterium in this disease, or that he has never said a word about cultivating his virus in glycerine or agar-agar jelly.

And now when we look back over the whole of M. Pasteur's work in connection with the subject of hydrophobia, how shall we judge it? The final impression is —to say the least—disappointing. In spite of the distinctness of his assertion and belief that he has solved the problem of the cure of hydrophobia, or of its prevention at any time before its outbreak, when we try to follow the steps by which he has reached this conclusion we find ourselves in bewilderment. We seem to be in a maze, travelling blindfolded, cheered here and there by his assurance that all will be well. At length he seems to say, "Look about you, we are safe!" But when we look about, the safety does not appear. The proofs of it are still nothing but his bare assertions. When we examine these we find they are in part contradictory of each other, while in part they contradict facts of which he does not seem to be aware. When we seek for evidence that he is familiar with the clinical manifestations of what is called hydrophobia, or with its history in past ages, we cannot find it. It does not appear anywhere that he has ever seen a case of this sort or ever studied the descriptions which others have given of it. The same is true in regard to the work of others who have studied hydrophobia experimentally. He seems to be ignorant of, or he wilfully ignores, the labors of his own countrymen, never mentioning one as if he had contributed anything of value to our knowledge of the subject, and being doubtless utterly unaware that any one outside of France has brought patience, perseverance, and skill to bear on the intricate problem.

The very outset of his work in the beginning of 1881 is marked by a positive announcement of a new microbe and a new disease, and an angry repudiation of the suggestion of Colin that control investigations and experiments would show that neither microbe nor disease was new.

This announcement, however, was soon shown to be erroneous in every part of it. He next adopts the ingenious (but mistaken) notion of Davaine, that the nervous system is the channel, and its centre the goal, of the virus of hydrophobia; for which appropriation of his ideas Davaine soon appeared in the lists against Pasteur and joined the number of those who have questioned his honesty as well as his ability.

A year and a half later, December 12, 1882, Pasteur claims to have discovered that the virus of hydrophobia has its principal seat in the brain, and that it there can be gathered in perfect purity and inoculated with absolute certainty, its effects being "prompt and sure." We have not time to discuss the theoretical objections to this assertion, which are very many; it is enough to point out that although Pasteur has repeated it many times, it has never been confirmed outside of his laboratory, and it stands opposed to the experiments of a much more candid experimenter, Galtier, of Lyons, and that it is not true of what happens even in Pasteur's own laboratory, for some of his animals recovered spontaneously (*Bull. de l'Acad. de Méd.*, 1883, p. 1151).

He next announces the finding of the virus in the spinal cord, often in all parts of it. The evidence of this, as of the preceding assertion, rests upon Pasteur's opinion of what may be called rabies. This we have already seen to be elastic enough to cover almost any result of his experiments, and entirely too elastic to be trustworthy.

Fourteen months after this, Pasteur announced a new doctrine, viz., that when what he calls hydrophobic virus is introduced into the circulation it becomes "fixed" and multiplies, at first in the spinal cord, and that one part of the cord might contain the virus when the rest did not. This is, on its face, simply absurd; but it illustrates the boldness of Pasteur in filling up with an assertion a gap in his demonstrations. This very boldness has misled some who have followed with incautious and uncritical haste the rapid succession of brilliant discoveries announced by Pasteur. For example, when he passes smoothly over an admission that he has never discovered a microbe in his virus, that he is only "tempted to believe," in one of infinite smallness from the detection of certain *minute* granules, by which he claims to be able to distinguish a rabid brain from a healthy one, who pauses to reflect that, on the one hand, he has never demonstrated his skill in this mode of diagnosis; and, on the other hand, that such granules as he speaks of were described before he had thought of them, and are not peculiar to the brains of rabid animals at all?

Again, when Pasteur casually admits that he has never been able to cultivate or to isolate what he calls the virus of hydrophobia outside of the body, who calls attention to the relation of this admission to the fundamental principles of his own work in regard to anthrax and fowl-cholera? Again, who has lifted up a voice against the contradiction of these fundamental principles in Pasteur's assertion that he could produce the more grave and furious forms of hydrophobia on the sole condition of using a weaker virus, and less of it? And is it not new to-day, to ask how, if this be true, it can also be true that his so-called protective virus owes its protective character to a reduction in the *quantity* and not in the *quality* of the virulent material? or how this last statement can be believed at all?

The next theory announced by Pasteur was that inoculation of animals in series produced a fixed degree of virulence for each species; and for want of opportunity to experiment on man that monkeys could be considered a suitable substitute. This latter idea shows how Pasteur has been misled by the supposition that similarity of physical structure indicates a similarity in physiological nature—an error which has been admirably exposed (*apropos* of another matter) by M. Béchamp (*Bull. de l'Acad. de Méd.*, May 8, 1883).

In May, 1874, came Pasteur's announcement that by weakening his virus by transmission through monkeys, and by strengthening it by transmission through rabbits, he had obtained a virus which would prove protective in dogs, and the application of which would eradicate hydrophobia from the world. In regard to this claim I content myself with a single remark, viz., that in the two years which have elapsed since Pasteur made it, not a single dog has been made refractory to rabies outside of his laboratory; and that in his laboratory he has only succeeded in rendering "refractory," as he calls it, fifteen or sixteen out of twenty dogs!

The next and last announcement of Pasteur, made last October, was that he had devised a method to prevent the outbreak of hydrophobia after the bite of a mad dog. In this method we find him, without any explanation, dropping entirely the recent theory about monkeys as a part of the machinery for manipulating his virus, and passing by what he had declared to be a simpler mode of operating, viz., by intravenous inoculation, to take up hypodermic injection as the method of inoculating, pieces of spinal cord, rubbed up in an unstated quantity of veal-

broth as a virus, desiccation as a means of attenuation, with the astounding explanation that the protective character of his virus was due to a reduction in quantity and not in quality! It seems strange that Pasteur should not have noticed the mutual contradictions of different parts of this announcement; but it is still stranger that he should have failed to see the destructive inference to be drawn from the facts to which I have already alluded—that in his crucial test (in the case of the boy Meister) one-half of the inoculation afterward proved to contain no virus whatever!

Finally, we have Pasteur's positive announcement that his method would prove protective at any time before the outbreak of hydrophobia, even if one or two years had elapsed since the bite, which he stuck to until a case dying under his hands led him to reduce this long period at one sweep to thirty-five days, which was soon after cut down to about fifteen. How soon the short space of fifteen days may be reduced to fifteen minutes we may tremble to contemplate, in view of the rapid rate of reduction which has prevailed thus far.

One other point must not be overlooked in judging Pasteur's theories from a scientific standpoint, and that is, that he has utterly abandoned the only natural virus of hydrophobia, the only one which can be asserted to communicate the disorder from one animal to another—the saliva—and has used an artificial irritant, which probably has never produced rabies at all, but only a peculiar form of septic or simple inflammatory disease, of the significance of which his lack of medical education and experience make him unfit to judge, and which he has quite arbitrarily labelled hydrophobia!

The results of the application of Pasteur's method may be summed up as follows: One death under his hands, with a lame explanation; over a hundred persons to testify that his inoculations probably do no immediate harm; an almost equal number to illustrate the well-known advantage of having one's fears allayed—in all, no more than is credited to a host of nostrums. Besides which, the excitement it has aroused has brought about a senseless alarm in regard to dogs, and the killing of innumerable innocent and unfortunate animals to bear witness to the sharpening of men's fears and the dulling of their judgment.

In conclusion, then, I venture to express my opinion that Pasteur's so-called method of treating hydrophobia before the outbreak *does* appear to be founded upon untrustworthy experiments and unsound reasoning, and ought to be rejected and condemned, in the interests of humanity as well as of science.

But while I thus characterize this last work of M. Pasteur, let me not be misunderstood. Here, as in other theories and practices which he has presented to the world, there is much to criticise. Pasteur's arrogance, impatience of correction, ignorance or disparagement of what others have done; his secret methods, his hasty assumptions, his illogical conclusions—have made him many scientific and personal enemies. But, after all, Pasteur is the man who placed on a new and apparently secure basis our knowledge of the nature of ferments; who disproved the theory of spontaneous generation; who laid the foundation upon which rests the whole system of antiseptic surgery, for the establishment of which the name of Lister will be justly immortal. Such a man is Pasteur; and, whatever of error may seem to mar some of his best endeavors, and however the future may adjudicate their claims, he seems to me to deserve all the honor he has received for his unwearied labors, and his magnificent achievements in the cause of science.

His very achievements in the right direction, however, make any error on his part all the more dangerous to the cause of truth, and make it all the more the duty of thinking men to sift the evidence upon which he rests his extravagant claim of having discovered a means of preventing the outbreak of hydrophobia.

THE INTRA-CEREBRAL TRACTS.

Their Physiology, and Its Bearing Upon the Diagnosis of Lesions of the Centrum Semi-ovale.

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The diagnosis of lesions involving the mass of white substance lying beneath the cortex of the brain and above the level of the basal ganglia is involved in obscurity. . Such authorities as Nothnagel,[1] Charcot,[2] and Strümpell[3] admit that few rules for guidance can be given, and at present there are no definite symptoms assigned to diseases of the centrum semi-ovale.

The subject of lesions of this part of the brain has an immediate practical bearing. In the journals of the past year are recorded several cases of operations upon the brain for the evacuation of cerebral abscesses, and the excision of tumors. This is, doubtless, but a beginning of a brilliant advance in the department of cerebral surgery soon to be made.

And the surgeon is here dependent upon the neurologist; for he will not cut down until he is told where to cut down. Now we know that tumors and abscesses—the legitimate field for operation—lie chiefly in the centrum semi-ovale. Hence the diagnosis of lesions in this part is to-day one of the most pressing and important questions in the field of neurology.

The natural manner of approaching a subject of this nature is to follow the inductive method, and, by a collection of cases in which an autopsy has demonstrated the existence of a lesion, to collate the common symptoms and thus arrive at the diagnostic conclusions. But while this method does afford a certain number of facts of importance, it is, as we shall see, by no means as satisfactory as in the case of cortical lesions, in the investigation of which it has given such brilliant results. For lesions of the centrum ovale are not very common, and, therefore, are not often suspected during life. An examination directed toward the symptoms which such lesions might cause is therefore frequently omitted, and hence facts are wanting in the recorded histories which would serve to establish a symptomatology of these diseases. There are many symptoms in every case which must be sought for by the examiner, as they are of a character to escape the notice of the patient. Disturbances of the temperature sense, of vasomotor activity, of the power of locating the position of certain muscles, or of the exact limitation of the visual field, are all instances in point. It is evident, therefore, that some of the symptoms of lesions in the centrum ovale may have escaped notice because they were not properly investigated. And it follows that we must ascertain the probable nature of those symptoms from other data than those furnished by the recorded cases.

It seems to have been a constant fact in the history of progress in clinical medicine that, just in proportion to our knowledge of the anatomy and physiology of a part, does our knowledge of the symptomatology of its diseases advance. To bring symptoms into connection with lesions is the aim of scientific investigation, and this has been done chiefly along the lines of anatomy and physiology.

Hence, in investigating lesions of the centrum ovale, we may turn from pathology to anatomy for the information needed to establish the symptoms of such forms of disease.

The anatomy of the centrum ovale can be studied to the best advantage upon torn brains, which have been properly hardened in alcohol. A dissection made in this manner with care enables one to establish the fact that this part of the brain is made up of fibres only, and to distinguish easily three sets of fibres passing through it.

1 Nothnagel: Topische Diagnostik der Gehirnkrankheiten. 1879.
2 Charcot: Revue de Médecine, 1881. Localisations cérébrales.
3 Strümpell: Lehrbuch der Nervenkrankheiten. 1884.

These three sets have been named the *projection*, *commissural*, and *association* systems of fibres.

The *projection* system includes those fibres which connect a definite area of the cortex with parts of the nervous system lying below it. It therefore follows that but one termination of a projection fibre is found in the cortex, and hence the fibre, in passing through the centrum ovale, is either on its way to, or on its way from, some nervous mechanism in the basal ganglia, brain axis, or spinal cord. Indirectly, through the medium of such mechanisms the external world is projected upon the brain and reaches consciousness, and voluntary impulses originating in the brain are sent to and affect the external world. A dissection of the centrum ovale, prepared

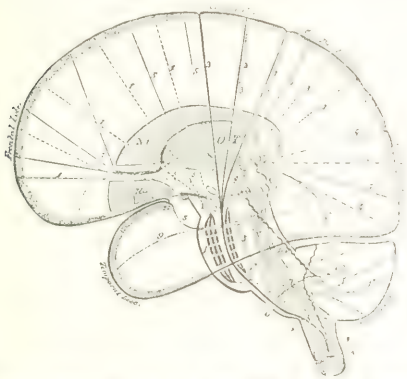

Fig. 1.—[illegible] (Modified after [illegible] cerebellum; 2, motor tract from central convolutions through capsule, crus, pons and medulla; [illegible] lobe through [illegible] way to the [illegible] capital lobe to optic thalamus; 5, optic thalamus radiation to all the lobes; 6, auditory tract from temporal lobe to optic thalamus; O. T., optic thalamus; N. L., lenticular nucleus; N. C., caudate nucleus; R. N., red nucleus of tegmentum; O, olive; C. D., corpus dentatum; 7, tract between O. and C. D.; Q. Corp. quadrigem

so as to show the projection system, demonstrates the existence of fibres from the entire cortex passing downward and gathering together within the hemisphere at the upper level of the basal ganglia, and either ending in the optic thalamus, or going on between these ganglia to the brain axis and spinal cord.

The majority of these fibres end in the optic thalamus, which is thus connected with all parts of the cortex of the brain (Fig. 1, 5). Of the function of these we know very little. Two large bundles, however, are separable from the mass. One of these passes inward and forward, from the occipital lobe and joins the pulvinar of the thalamus and the external geniculate body (Fig. 1, 4). This is now known as the visual tract, and conveys impulses received from one-half of each retina by the optic thalamus to the like-named occipital lobe, as has been proven by recent articles on hemianopsia.[1] A second bundle passes from the temporal lobe inward to the thalamus and internal geniculate body, lying just beneath the first at its point of entrance into the thalamus (Fig. 1, 9). This conveys impulses of sound from both ears to each temporal lobe, as the investigations of Von Monakow, by the atrophy method, have shown.[2] These are the only bundles of the thalamic radiations whose function is determined.

Some of the projection fibres pass on without communicating with the basal ganglia, and of these we know three distinct bundles.

The first is collected from the three convolutions of the frontal lobe, and passing between the caudate and lenticular nuclei in the anterior division of the internal capsule, descends in it to the base of the brain, and issuing in the inner third of the foot of the crus cerebri, passes down to the pons, where it terminates in nuclei lying in the ventral half (Fig. 1, 1). The nuclei thus reached by these fibres are also joined by other fibres from both hemispheres of the cerebellum, which enter the pons at its lateral surfaces in the middle peduncles. Thus it is evident that a connection exists between each frontal lobe and both cerebellar hemispheres, the crossed connection being greater than the direct one. In Flechsig's case of deficient cerebellum, the pons nuclei and the fibres to them from the frontal lobe were found.[1] In my case of deficient cerebrum the pons nuclei and the fibres to them from the cerebellum were found.[2] Therefore each half of this tract, if it is a continuous tract, may develop independently of the other.

Of the function of this tract we know nothing, and of the functions of the frontal lobes and cerebellar hemispheres we know very little. Therefore we cannot as yet connect any symptoms with its destruction.

The second bundle of the projection system, passing out of the base through the middle third of the crus cerebri, comes from the posterior part of the third frontal convolution, the two central convolutions, and from the paracentral lobule. Its fibres collect at the middle portion of the upper surface of the internal capsule, those from the lower parts of the cortex passing straight inward, those from the upper parts curving outward and downward to pass around the side of the lateral ventricle. Thus within the centrum ovale these fibres, if looked at from in front, appear like the sticks of a fan, and like those sticks their relative position is altered in the point of junction, where those passing inward from the lowest part of the cortex lie in front of those which pass downward from its upper part (Fig. 1, 2). Thus in the capsule the order from before backward is, *first*, the fibres conveying speech impulses to the pons and medulla; *second*, the fibres conveying facial motor impulses to the pons; *third*, the fibres destined to the arm centres of the cord; *fourth*, the fibres transmitting impulses to the leg centres in the cord. The impulses to the muscles of the trunk may lie behind or in front of those to the leg, as this is not yet determined. The fact that they are only implicated in severe cases of hemiplegia, and not in all cases, would indicate that they occupy the place back of the tract to the leg.

This is the great motor tract, whose course through the anterior half of the posterior division of the capsule is well known, and which can be traced through the middle third of each crus, through the pons, and thence by way of the pyramids of the medulla to the crossed pyramidal and anterior median columns of the spinal cord. It is evident, however, that the concentration of this tract is much greater in the capsule than in the centrum ovale, where the individual fibres are scattered among the other systems and occupy but a small area from before backward. Lesions beneath the third frontal convolution of the left side produce motor aphasia. Lesions beneath the central convolutions in the centrum ovale produce paralysis, which will vary according to the position of the lesion. The nearer the lesion lies to the cortex the more will the symptoms resemble those of cortical disease, monoplegia being the rule. The nearer the lesion to the point of junction at the capsule the more will the symptoms resemble those of capsule lesion, hemiplegia being the rule. There are numerous cases recorded in support of this statement.[3]

The third set of fibres of the projection system includes those which lie just posterior to the motor tract, and which pass inward from the parietal convolutions (Fig. 1, 3). These take a similar course to those of the motor tract, and fill up to a considerable extent the space between it

[1] Starr: The Visual Area of the Brain, American Journal of the Medical Sciences, January, 1884. Seguin: Hemianopsia, Neurological Society Transactions. Medical News, November, 1885.
[2] Arch. f. Psych., xii.

[1] Flechsig: [illegible] Journal of Nervous and Mental Diseases, July, 1884.
[2] Starr: [illegible] Journal of Nervous and Mental Diseases, July, 1884.
[3] [illegible]: Lehrbuch der Gehirnkrankheiten.

and the radiation of the visual tract, toward the occipital lobe. They are mingled with fibres which pass to the optic thalamus, but are separable from them, as Edinger has shown in fœtal brains,[1] and may be traced down through the capsule to the tegmentum of the crus, where they divide into a portion going to the lemniscus, and a portion going to the formatio reticularis. This set of fibres conveys the sensations of touch, pain, temperature, and muscular sense,[2] and lesions in its course will cause disturbance of these sensations. Like lesions in the motor tract, the rule obtains that the nearer the cortex the more likely is the lesion to cause an affection of a single limb, while the nearer the capsule the more likely is the symptom produced to be hemianæsthesia.

Looking, then, at the dissection of the projection system of fibres, it is evident that a lesion which lies in the centrum ovale at any point posterior to the præcentral fissure of the frontal lobe, may produce recognizable symptoms, for it must affect either the motor, or the sensory, or the visual, or the auditory tracts, or individual fibres of those tracts. In the latter case it will be necessary to examine carefully for symptoms, as they may escape a superficial notice.

The second system of fibres in the centrum ovale is the *commissural* system. This joins corresponding areas of the two hemispheres with one another. The commissural fibres between the frontal, parietal, and occipital lobes of the two sides pass in the corpus callosum, the view of Hamilton, of Aberdeen, that these fibres are not commissural being disproved by the researches of Spitzka and Beevor.[3] Those from the temporal lobes pass in the anterior commissure. The function of these fibres is to harmonize the action of the two hemispheres. This may be proven with regard to the fibres which join the central convolutions with each other, and harmonize motor acts. Every one knows that simultaneous movements of like nature can be made with great facility with both upper extremities. An attempt to swing Indian clubs is more difficult if each hand is executing a different motion. So, too, movements which are difficult when attempted with the left hand alone become easy when associated with corresponding movements of the right hand—as, for example, drawing a circle, writing one's name. But the motion, in order to be associated by the commissural fibres, must involve the corresponding muscles on both sides of the body. Hence, if the right hand moves to the right the left must move to the left to a similar degree in order to bring into play the aid of commissural association. Hence, such writing with the left hand will be backward, and can only be read by the aid of a mirror. Now, it is a very simple thing to test this power of symmetrical movement in persons, but I venture to state that it is very rarely done; so that no clue is usually obtained as to the condition of conducting power in the commissural fibres in cases of brain disease. It is the commissural fibres joining the motor convolutions only which can be thus tested. Failure to perform easily corresponding bilateral motions in face, hands or feet would indicate some obstruction to conduction in them. With regard to the fibres lying in the anterior part of the corpus callosum and joining the frontal lobes, little can be said except that in numerous cases of idiocy these fibres have been wanting. The cases of McBride (*Amer. Jour. Neurol.*, May, 1884) and of Erb (*Virchow's Arch.*, Bd. 98) of lesion of the corpus callosum presented no peculiar local symptoms. Nor have we any power of testing the integrity of commissural fibres lying posterior to the motor tract, though a theoretical statement will not be objected to, that those between the occipital lobes are very important, inasmuch as each occipital lobe receives impulses from but one-half of each retina. Hence, integ-

rity of both occipital lobes and simultaneous, connected, and harmonious action in both is necessary to the *perfect* perception of the *whole* of any object when the eyes are fixed upon one point of that object. The function of the anterior commissure is wholly unknown. Theoretically, a lesion of the commissural fibres should produce a lack of harmony in the simultaneous action of the two hemispheres, and if the lesion in the centrum ovale lay opposite to the two central convolutions this could be detected by appropriate tests.

The third system of fibres in the centrum ovale is the *association* system, and this requires a careful study.

It can be shown by careful dissection that each convolution is joined to the two adjacent convolutions by fibres which pass around the separating fissures. Also, that bundles of fibres exist which pass from each convolution to the convolution next but one, and so on. Hence, it may be stated that each convolution has a possible connection with every other. Besides this association of convolutions by small bundles of fibres, it is possible to find a distinct set of association tracts which pass between more or less distant regions. One such tract passes from the frontal lobe, collecting its bundles from all three convolutions, backward to the occipital lobe. Another tract joins the occipital with the anterior part of

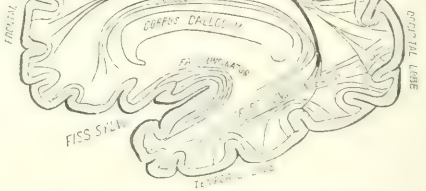

FIG. 2.—Association Fibres in the Centrum Ovale. (Modified after Edinger.) Fasc. arcuatus = fronto-occipital and fronto-temporal tracts; Fasc. uncinatus = temporo-frontal tract; Fasc. longit. inferior = occipito-temporal tract.

the temporal lobe. Another passes from the upper two temporal convolutions forward to the third frontal convolution, passing beneath the island of Reil. And a tract from the parietal to the posterior temporal area may also be found.

What can be the function of these association fibres? Without going very deeply into the subject of psychology, it may be suggested that they form the physical basis for the association of concrete memories.

Our concrete memories are reproductions of former rensations. But if the sensations are received in various saeas of the brain, as we must admit from the facts already stated regarding the function of the projection fibres, it is evident that the reproduced sensation which depends on the revival of the original sensation will occur in the same part of the brain in which the original sensation was received. A sight memory is located in a different part of the brain from a sound, or touch, or motor, or speech, or writing memory. And this fact will be readily admitted by those who have seen cases in which a single set of memories have been lost while others remain. The symptoms of word deafness, word blindness, aphasia, agraphia, alexia, are all symptoms dependent upon loss of a definite set of memories. And they are usually due to definite lesions of the cortex in different areas, which we are now able, by the aid of numerous autopsies, to specify. But no concrete memory can be said to exist without associations. The sight of a dog leads us at once to think of the form and appearance of other dogs, of animals resembling dogs, and of quadrupeds in general. Thus the impulse received in a memory area excites other memories of a *like* quality.

[1] [illegible]

[2] [illegible] cit. (Forty-two Cases with Autopsies).

[3] [illegible]; Beevor: Brain, October, 1885; [illegible] Amer. Jour. Neurol., August, [illegible].

Further, the sight of a dog might easily lead us to think of his bark, or, if we had once felt it, of his bite; and that because originally the simultaneous occurrence of the sight and sound of the animal had associated the two memories forever. Thus an impulse received in a memory area may excite other memories of an *unlike* quality. In fact, any one of our concrete ideas may be said to be made up of a number of associated memory pictures, all of them united into a definite whole. My idea of an orange is made up of my memory of the appearance of the orange, its color and form, of the memory of its odor and taste, of the peculiar feeling of its surface, of the sound which I know as its name, of the motion necessary in my throat and lips to pronounce the word which designates it, and of the movements necessary to write the word orange. And further, each one of these memories is joined not only to the next, but also to all the others, for if you show me an orange and ask me to say or to think or to write its name, I can do either at your will, and need not say it before I write it, or taste it before I can call to mind its odor.

These facts of concrete memory gained by introspection show how intimate is the connection between our various kinds of memories, and demonstrate *à priori* the need of just such sets of association fibres in the brain as we have found by anatomical dissection. It may be stated, therefore, that the association fibres of the centrum ovale have as a function the harmonizing of the activities of the various cortical areas. They are necessary to the union of different memories in a whole, to the formation of a concrete idea. I do not now allude to abstract ideas, or to processes of reasoning. I have spoken only of concrete ideas, for it is only regarding these that our investigation of cases of localized brain disease will allow us to speak. But if these association fibres pass through the centrum ovale, it is evident that the integrity of the centrum ovale is necessary to their proper action, and that lesions of the centrum ovale will lead to a separation or failure of association of ideas and memories formerly joined. If the fibre is broken which joins my memory picture of a familiar face with my memory picture of the sound or name associated with that face, I cannot call the person by name on seeing him. If I have lost the power of copying a page that is placed before me and which I can see, it is possibly because I no longer associate the sight of a letter with the motion of my hand necessary to write that letter, an association originally made by practice. If I can understand what is said to me, and can pronounce words distinctly, but talk jargon or replace one word by another, it is because the fibres which join corresponding auditory and motor speech memories are unable to perform their function. A patient whom I saw recently was asked to name the four of spades, a card which I picked up from the table at which he had been playing whist. He said at once five of telephone, and was much put out at his mistake. These are instances of a defective conduction between the occipital and temporal, between the occipital and frontal, between the temporal and frontal areas, and we have already seen that it is just between these very areas that great association tracts extend.

It is evident, therefore, that we have not only a knowledge of the anatomy and physiology of the association fibres of the centrum ovale, but also a set of symptoms referable to their destruction. But here, again, it must be emphasized that careful examination of cases in a proper way is necessary in order to detect a lesion of such fibres. In the case of the fibres associating the auditory with the motor speech areas, the symptoms to be elicited seem very simple. Can the patient talk correctly? Can he repeat at once a word spoken to him? These are questions which any one will ask who examines a case of aphasia. But this is not all. The patient must be further questioned. Can he read understandingly to himself, and tell what he has read? This will test the occipito-temporal tract. Can he read aloud? This will test the occipito-temporo-frontal tract. Can he write what he sees? This will test his occipito-central tract. Can he write what he hears? This will test the temporo-central tract. Can he write what he says, speaking to himself in a whisper? This will test his fronto-central tract. Can he name an odor or a color? Brill has recorded[1] a case of lesion of the cuneus associated with color blindness to green, and he states that the patient had difficulty in naming various colors on account of the presence of a slight degree of amnesic aphasia. This aphasia was most marked in regard to names of colors, not in regard to contours, for he would compare colors to the tints of common objects. The aphasia was limited to the names of those colors which were imperfectly perceived—green and violet. Can the patient write the name of an odor? Can he tell how a surface feels—smooth, or warm, or heavy? Such questions as these will suggest themselves at once to any one who studies the association of ideas subjectively, or who will tear out the association fibres between the various areas of the brain cortex, and, knowing the function of the areas, consider the probable use of their association fibres.

It is evident, therefore, that a lesion of the centrum ovale may give rise to three sets of symptoms, referable to projection, commissural, and association fibres. The important fact at once appears that these symptoms will be inevitably associated in any case of its occurrence. It is upon the fact of such *association* of symptoms that the diagnosis of lesions of the centrum ovale must depend. Monoplegia alone may be caused by cortical or centrum ovale disease. Hemiplegia may be caused by capsular or centrum ovale disease. But if in either case it is the centrum ovale which is diseased, there will be in addition to the paralysis a suspension of action of commissural and association fibres. The commissural fibres being destroyed, simultaneous bilateral symmetrical motions will be suspended. The association fibres being destroyed, certain mental associations will be affected. Take as an example a lesion in the centrum ovale of the occipito-temporal region. Such a lesion will produce hemianopsia because it involves the visual tract of the projection system. It may also produce a peculiar mental condition known as word blindness, in which the patient is no longer able to associate a word or letter seen with its corresponding sound, or with the motion necessary to write it. Charcot has reported a case of this kind, and as I had an opportunity to see and examine the patient under his direction, I may be excused for mentioning it in detail. The man, who was a very intelligent merchant, was suddenly seized with right hemianopsia while playing billiards, and was surprised to find that he saw but one-half of the ball and of the table. Soon after he had occasion to write a letter, and after writing it was surprised to find that he could not read what he had just written. He found, however, that on tracing individual letters with the pen or fingers he became conscious of the letter—a few letters (r, s, t, x, y, z), however, being an exception to this rule. When a book was given him to read, he would trace out the forms of the letters with some rapidity and thus manage to make out the words. If his hands were put behind him and he was asked to read, he would still be observed to put his fingers in motion and to trace the letters in the air. Speech was in no way interfered with, but reading aloud was only accomplished like reading to himself by the aid of muscular sense. Here, then, was an example of a lesion which had separated entirely the tract associating sight with speech, viz., the occipito-temporal tract, but had left intact the tract associating sight with muscular sense, viz., the occipito-central tract.

The first tract, the occipito-temporal, lies side by side with the visual, and its implication in the lesion which caused the hemianopsia is not to be wondered at. The

[1] American Journal of Neurology, February, 1885.

second tract, the occipito-frontal, lies much higher in the centrum ovale and evidently escaped (see Fig. 2). Now, had this patient been an unintelligent laborer, seldom called upon to read or write, such a peculiar symptom might have escaped notice, and although it might have been discovered that he had alexia, the possibility of his being able to read by means of his muscular sense would only have been elicited by proper investigation. This case also illustrates a possible point of differential diagnosis between lesions of the centrum ovale and lesions of the cortex. If the lesion is in the cortex, some one of the cortical functions, *e.g.*, sight or motion, will be suspended together with their memories; while in lesion of the centrum ovale it is only the association of two or more memories which will be impaired. Is it not possible that in cases of word blindness the symptoms are due to such a break of the association tracts when sight and speech are preserved? Certainly, in the numerous cases of lesion found, the centrum ovale just beneath the cortex, at the posterior end of the Sylvian fissure, has been involved as well as this cortical area, and it is just in this portion of the centrum ovale that the occipito-temporal tract lies.[1]

Such a case as I have related you may say is rare. Are we sure of this? Can we say that in the majority of brain cases a thorough examination of the powers of association is made? And does not the anatomy and physiology of the centrum ovale lead us to believe that its lesions might produce just such symptoms or others somewhat similar? Is it not worth while, in all cases of obscure brain disease, to examine *all* the functions of which we have any knowledge, trusting to the future to explain peculiar symptoms which may be thus discovered? There is a psychological deduction which occurs naturally from the study of the case just related. The man could see the letter so as to be able to trace its form, and yet the sight alone conveyed to him no idea. We have already seen in studying the association fibres, that a concrete idea must be considered as a complex collection of memory pictures. Is it not evident from this case that a single one of these pictures isolated from the rest is incapable of awakening a concrete idea? The patient only obtained the idea when he put into action the motor memory, whose connections with sight and sound and speech were all intact. We have spoken only of concrete ideas. If we conceive of abstract ideas as made up of a numerous assemblage of concrete ideas, as they possibly may be, brought into consciousness as a single concept by the aid of the name or word, is it not probable that lesions of the centrum ovale will give rise to a confusion of abstract as well as of concrete ideas? And is it not possible that the symptoms of mental confusion of that peculiar kind which occurs in diseases of the frontal lobes of the brain, may be ascribed to a suspension of action of association and commissural fibres which pass in all directions through the frontal lobes? Many cases are on record of extensive disease of the frontal lobes in which the patients have presented mental symptoms, not those of any form of insanity, but rather of a form of mental hebetude or bewilderment; so that they act rather after the manner of mutilated animals—careless of the wants of nature—regardless of all restrictions of society, morality, and decency—being in a state in which mental inhibition and mental activity were impossible. These symptoms cannot be assigned wholly to disease of the frontal cortex, for in the majority of cases on record the centrum ovale was involved as well, and in not a few it was in the centrum ovale that the lesion was most extensive. These, then, may be found to be symptoms of lesion of the centrum ovale beneath the frontal lobes.

Nothnagel, in his great work, "Topische Diagnostik," has said that there are no diagnostic local symptoms of lesion of the centrum ovale. Such symptoms as headache, vertigo, vomiting, mental inactivity, and optic neuritis being general rather than local symptoms, and common to affections in any part of the brain, may of course be present in disease of the centrum ovale. It is not to these that reference is made, but rather to symptoms whose presence would lead inevitably to the diagnosis of disease below the cortex and above the basal ganglia. Nothnagel's assertion may be repeated to-day, notwithstanding the labor that has been expended since 1879 on the study of localized brain disease. It seems to me that the way to solve the problem here is to reason from anatomy and physiology to the probable results of lesion in the centrum ovale, and then in every case to examine for the symptoms which theoretically might occur. In that manner it will be evident that no latent symptoms will be overlooked, and it is not impossible that, after a time, so many new symptoms now unsuspected may be educed and brought into connection with lesions found by post-mortem examination, as to warrant the formulation of certain diagnostic signs of diseases of the centrum ovale. If the suggestions here offered regarding a possible symptomatology prove of service, my object will be attained.

[1] See Amidon's Collection of Cases, N. Y. Medical Journal, January, 1886.

SOME CONSIDERATIONS IN THE DIAGNOSIS AND PROGNOSIS OF ABDOMINAL ANEURISM.[1]

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It is no uncommon thing to find at the post-mortem examinations cases in which death has occurred as the result of aneurism, and the aneurism very small. On the other hand, it is quite frequently found that a patient has died of an aneurism, the history showing the existence of such aneurism for a number of years, and the size enormous.

It is not always easy to explain why some persons tolerate an aneurism for a long time and to a great size, while others succumb in a short time and when the tumor is very small.

In many cases the diagnosis of aneurism affecting one of the large vessels of the abdomen is one of the easiest problems the physician is called upon to solve. If the physical signs are well marked, and ordinary care is observed in the examination, the diagnosis is easily arrived at; but in many cases the physical signs are obscure, or at least are not distinct. As all will testify, a growth lying across a large vessel in the abdomen may give rise to symptoms and signs so like those of aneurism, that the most skilled diagnostician cannot determine positively their significance.

In 1878, while I was one of the attending physicians at the Demilt Dispensary, Dr. Lockrow, another of the attending physicians, referred to me for diagnosis a case of abdominal tumor. The case had been seen by a number of physicians, and a variety of opinions had been expressed. The patient was a man, forty-three years old, intemperate, and an excessive smoker. He denied syphilis. His occupation, as long as he was able to work, was that of a farm-laborer. In 1873 he noticed a growth in the epigastric region, at first very small, but it gradually increased in size until, when I saw him, it nearly filled the whole epigastric space, especially to the right of the median line. He gave the history of repeated attacks of severe pain in the epigastric region, accompanied by slight fever, and severe enough to cause him to remain in the house, and sometimes to remain in bed. There had been but little change in its size after 1876, that is, two years previous to the time I first saw him. The tumor seemed to be pulsating, at least there was rise and fall with each pulsation of the artery; it was very irregular in outline. It was very hard and firm to the touch, and seemed, both by palpation and percussion, to be continuous with the right lobe of the liver. It seemed like a solid mass, very irregular in outline, quite

[1] Read before the Practitioners' Society of New York, January 8, 1886.

painful to the touch. There was no thrill and no distinct expansile pulsation. There was, on auscultation, a simple systolic bruit. The pulsation in the lower extremities was not as forcible as one would expect in a healthy person, yet it could hardly be called feeble. There was no change in the position of the tumor when the patient was placed in the knee-chest position. After three careful examinations, and excluding as well as I could its connection with any of the viscera, liver, stomach, intestines, pancreas, or abdominal wall, I concluded it was an aneurism of the abdominal aorta. I had seen within a short time a few cases of both thoracic and abdominal aneurism at the autopsy room at Bellevue Hospital, in which there was very great thickening of the serous coverings as the result of pleuritis and peritonitis. In the cases of abdominal aneurisms the tumors were matted together with the surrounding viscera by the much thickened peritoneum. It occurred to me that the patient I was examining may have had frequent attacks of peritonitis, and the peritoneum becoming much thickened in some places over the tumor, and less so in others, thus accounting for the irregularity in outlines. By careful questioning the fact was elicited that two months before he noticed the tumor he was kicked in the abdomen by a colt, and was, at that time, confined to the house for two weeks, but had never connected the two—the kick and the tumor. The frequent attacks of pain and fever were probably due to peritonitis. He died about one year later. Dr. Lockrow made the autopsy. There was an aneurism just below the cœliac axis as large as a new-born child's head, very irregular in shape, very thick layers of peritoneum over it—in some places much thicker than in others. Where the peritoneum was thickest there was least enlargement. Where the peritoneal covering was least marked, the tumor had expanded much more, and in some places pouch-like expansions had formed, making great irregularity in outline observed during life. While the peritoneal thickening obscured the diagnosis it seemed to me it played a very important part in the prognosis. It will be noticed the patient lived six years after the first discovery of the growth. Is it not probable that this very thickening of the peritoneum and the strong adhesions aided in the protection against rupture? Will not this very protection made, by the thickening of the serous covering as the result of inflammations, account, in many cases of both thoracic and abdmonial aneurism, for the much greater tolerance shown by some than others? I am well aware there are many factors which enter into the prognosis in any given case of aneurism. One of the dangers is from rupture. If the serous covering becomes very much thickened and covers the whole tumor, thus protecting it from expanding because of its over-weakened walls, it would seem quite probable this one danger, rupture, is delayed, even in some cases very much delayed.

I have a patient now under observation at the Bellevue Hospital whose history, and to a certain extent whose physical signs, illustrate this point in prognosis. It is a female, aged twenty-seven, a cook. She was in good health up to five years ago. At that time she had some uterine disease which kept her in bed five weeks. After her recovery she noticed a "sore spot" in her abdomen, just above the umbilicus. The pain in this sore spot gradually increased, and soon she noticed a small tumor in this situation which pulsated. Four months after this she entered one of the city hospitals, with very severe pain, which confined her to her bed for some weeks. She remained in the hospital over a year. Upon leaving the hospital she was free from pain, and her general health was good, although the tumor had increased in size and still pulsated. Nine months afterward she had another attack of severe pain, which caused her to remain in bed three months. At the end of fifteen months she had another attack of severe pain in the epigastric region, and was confined to bed for over a month. She remained comparatively free from pain after this until January, 1885, when another attack of severe pain sent her into Bellevue Hospital, where she remained in bed three months. She left the hospital April 1st, but returned May 19th, with still another attack of severe pain, and is in the hospital now. During all this time the tumor was steadily increasing in size, and the pulsation has become more noticeable. She denies syphilis and intemperance. She does not remember to have received any injury to account for the tumor.

There is a large, irregular-shaped, pulsating tumor in the epigastrium, just above the umbilicus, and over a surface two and one-half inches by three inches very distinct pulsation can be seen and felt. The expansile pulsation, so characteristic of aneurism, can be felt over this surface, and nowhere else over the tumor. Over the remainder of the tumor the surface is somewhat irregular and quite firm to pressure. There is no thrill and no murmur. There is no change in the position of the tumor when the patient is turned to one side, nor when put in the knee-chest position. The repeated attacks of pain were probably due to peritonitis, and with each attack the peritoneal covering has become more thickened. Over the surface where the distinct pulsation can be seen and felt the peritoneal covering is probably quite thin.

CONTAGIOUS OPHTHALMIA IN INSTITUTIONS.

By RICHARD H. DERBY, M.D.,

SECRETARY [illegible]

THE care and maintenance of dependent children is a duty which no community can disregard. Whether the beneficiaries have in the course of nature been deprived of their natural guardians, or whether in the struggle for existence, through lack of means for their support, they have been given up by their parents to others to care for, or whether, to save them from cruelty and neglect at the hands of those who should provide for them, the courts of law have interfered for their relief—whatever the history of the individual case may be, common humanity demands that a home or asylum should be provided for those helpless to look after themselves.

Either as objects of private charity or supported out of the public fund these children must be maintained. During the helpless years of child-life they must be housed, clothed, fed, and cared for in such a way that they shall become self-supporting. For the home or family life which has been denied them a substitute must be found. In every community the asylum or residential school for the care of dependent children has become a recognized necessity. In one way or another the support of such asylums falls upon the community in which they exist. Let us now consider what the duties of the city or State are in maintaining the charge of such children. That they may become self-supporting, and cease to be a burden upon the community in which they are to live, they must first of all be brought up with due regard to the laws of health, they must be trained to some useful pursuit that they may take their part in the battle of life. These propositions are so self-evident that it seems commonplace to insist upon them.

In an experience of many years as officer of one of the largest ophthalmic hospitals of the country, the writer has over and over again had children brought to him from some of our city institutions with their sight irreparably damaged, and with the sad statement, doubtless true, that before they were taken from their homes their eyes were perfectly sound. Annually in some of the asylums of the city and State of New York there are

[1] Committee appointed [illegible] consisting of Drs. [illegible] Derby, [illegible] John T. Mitchell, and Messrs. [illegible] Gallatin.

eyes lost, and children consigned to our blind asylums to be cared for their life long. Let us verify this last assertion before going any further.

Mr. William B. Wait, Superintendent of the New York Institution for the Blind, under date of January 27, 1886, writes as follows: "As we receive only those who are already practically blind, and as our work is strictly educational, and not curative, it is not essential for us to inquire into the cause or specific nature of the cases, or concerning the progress of the disease, or of the habitat where blindness supervened. I have, however, often had occasion to remark cases which have apparently originated in custodial institutions. It must sometimes happen that the committed children are suffering from eye disease when committed. An examination for a few years back gives the following result:

	Cases.
Randall's Island Nursery	11
Nursery and Child's Hospital, Staten Island	6
Roman Catholic Protectory	11
Foundling Asylum, 50 West Sixty-eighth Street	2
St. Joseph's Home, 65 East Eighty-first Street	2
House of Industry	2
Hebrew Guardian Society	1
Convent of Mercy, Newburg	1
St. Patrick's Asylum, Prince Street	1
Orphan Asylum connected with St. Peter's Hospital, Brooklyn	1
Dominican Sisters, Rockland County	1

"In one case the first eye was lost on Randall's Island and the second one at the Protectory; in another the first eye was lost at the House of Industry and the second one on Randall's Island. It is the duty of establishments which have the care of children to seek information and instruction on this subject, and to receive cheerfully, and enforce with care, such regulations as will prevent the inception and, when they do occur, the spread of eye diseases."

With a view to studying the conditions under which the dependent children of this great city are maintained, the asylums and residential schools have been visited. The local Board of Health has detailed medical inspectors for this purpose who have studied and reported on the construction of the institutions and the physical condition of the inmates, the method adopted for ventilating and heating the buildings, the plan and condition of the plumbing, the per capita allowance of air in dormitories and living-rooms, the construction of lavatories, the quality and quantity of food and clothing, the provision made for the treatment of contagious disease, and the care exercised in the reception into the institution of cases already afflicted with contagious disease; all these subjects have received careful attention, and the results of these investigations have been detailed in carefully prepared reports, an abstract of some of which accompany this preliminary statement and others are in process of preparation.

In connection with these inspections, conducted by sanitary experts, a committee appointed for this purpose by the New York Academy of Medicine has secured the services of men skilled in the treatment of diseases of the eye to accompany the inspectors of the Health Board, with a view to study the condition of the eyes of all inmates of these asylums. These ophthalmic surgeons, whose names are well known to the profession of the State and the country, have visited the fifty and more asylums of New York city and its vicinity. Drs. Agnew, Noyes, Loring, Roosa, Bull, Gruening, Pomeroy, Pooley, Callan, Andrews, Webster, Mittendorf, Emerson, Oppenheimer, Barker, Moore, Dennett, Isham, Lewis, Huntington, Hepburn, Carey, Bowles, and Ring have made careful investigations, and some of their reports accompany this brief informal statement.

These reports show, in the first place, the existence, in the asylums and residential schools which have been visited, of a disease of the eyes which can receive on the present occasion only a brief description. Contagious ophthalmia is characterized by an inflammation of the lining membrane of the eyelids, and a subsequent extension of the diseased process to the eye itself. From the parts affected there is a secretion, and this secretion is contagious. The secretion may be conveyed to healthy eyes by the water used in washing, by the towel or handkerchief, or even the air itself may be the bearer of the contagium. One peculiarity of the disease is that it may exist for months, and even years, in eyes which to the lay attendant, and even by the patient afflicted with it, have been thought to be perfectly healthy. In the case of some, if the subject is robust and the hygienic surroundings good, the eyes may escape without serious damage. In the case of many, after the disease has for a varying length of time been confined to the eyelids, it extends to the delicate structures of the eye itself, and the transparent cornea, or watch-glass covering of the pupil, becomes affected. The sight now is dimmed, ulceration or erosion of this membrane occurs, and, as a result, it is either permanently damaged or completely lost.

Of the dependent children cared for in the asylums of New York City, investigation has shown that one out of every four has contagious eye disease. It by no means follows that all institutions show so large a percentage of disease as this. As the reports will show, there are asylums where none or very few cases were found. There are, on the other hand, asylums in which more than half of the inmates have to-day eye disease of a very severe and dangerous type, and where, as the ophthalmic expert says, "it is a marvel to me that there is a healthy eye in the establishment" (report on St. Joseph's Asylum by Drs. Roosa and Ewing). The reports already received show many cases where one eye has been seriously injured, and many where the sight of both eyes has become permanently impaired.

Let us now see what light these reports throw upon the cause of this so generally prevalent eye disease, and what conclusions can be reached upon the proper methods to be adopted to stamp out so grave an evil. In the first place, as to the introduction of the disease from outside of the institution. Are the eyes of children and employees suffering from contagious ophthalmia examined before admission to the asylums? Let us examine our reports. Dr. Agnew tells us that in the Roman Catholic Orphan Asylum, at Madison Avenue and Fifty-first Street, the eyes of children are not examined before admission, and that the inmates of the institution who have diseased eyes are not quarantined. Dr. Roosa, who found in St. Joseph's Asylum 304 children, of a total number of 521, with diseased eyes, states that the eyes of the children are not examined before admission, and that no adequate quarantine is practised. Testimony of like character is furnished by many well-known authorities. Here, then, is a most prolific source of trouble, and to stamp out a disease so full of danger to the eyes of all housed in these institutions a rigid scrutiny of the condition of the eyes of all new-comers must be enforced.

Would it not be thought an evidence of criminal neglect if in an asylum provided for the young cases of scarlet fever, diphtheria, or small-pox were received and after reception allowed to come in contact with healthy children? What shall we say of the negligence of the board of management of an asylum which receives applicants suffering from contagious eye disease and provides a common dormitory, lavatory, and living-room for such cases, as well as those whose eyes are as yet healthy? Our reports give abundant evidence that such neglect as this is common. In many asylums all children who come, whether committed by the courts or brought by their guardians, are received by the non-medical attendants in charge of the institution. No medical examination of the applicant is made. The child, often suffering from disease acquired in its overcrowded, unhealthy tenement-house home, is assigned its bed in the already crowded dormitory. In common with other children, it is washed in the same lavatory, in which eigh-

teen children are provided with two or three towels per day (report of Drs. Loring and Stillwell). Have we not here at hand an explanation of the rapid spread of contagious ophthalmia?

It is not claimed that such a condition of things as this obtains in all asylums, but that the picture is not overdrawn we have the authority of Drs. Loring and Stillwell, Roosa and Ewing, Gruening, Callan, Andrews, and many others. How are evils such as we here recognize to be corrected? In the first place we hold that in each asylum and residential school of the State a medical officer should have discretion to receive or refuse to admit children. The responsibility for the sanitary condition of the building and of its inmates should properly rest with him. Each applicant for admission should be examined by such physician. No child suffering from contagious disease should be received. All children when received should be kept in quarantine for a reasonable period of time until it has been demonstrated that they are fit inmates of the asylum. More than this, it should be the duty of the medical officer to make frequent inspection of the institution and of all assembled there and report upon the same to the local Board of Health. This medical inspection should be thorough. First of all the dietary of the children should receive attention. Is the food-supply of the right character and sufficient? What do our reports say? In an asylum which shows perhaps the largest percentage of eye disease of any in the city Dr. Ewing tells us that in the nursery eighteen of the younger children had two quarts of milk per day—not two quarts each, but two quarts for the eighteen. We have the high authority of Dr. Agnew for saying that in one of the best-known asylums of the city the dietary is insufficient in both quantity and quality.

Again, the medical officer should examine the condition of the plumbing, sinks, water-closets, urinals, privies, and dormitories. That there is grave need for such inspection our reports give us abundant evidence. In the male branch of the Ladies' Deborah Nursery and Child's Protectory, Health Inspector Stillwell tells us, "the plumbing and lavatory accommodations are of the poorest kind. The urinal and school sink in the yard are dirty and offensive. In the cellar an abundance of rubbish, a dead cat, and a leaking Croton water-pipe saturating the earth surface with moisture. . . . The screw-cap of sewer-trap in cellar was off and gases freely escaping, also a drilled hole in the iron sewer-pipe adjoining this trap was open, allowing also an escape of gases. In the laundry (basement floor) the joint of tub waste-pipe with main waste-pipe was open, and the same condition occurred on the second and third floors, where within four feet of the children's beds the joints of sink waste-pipes were found open and the traps of said sinks unsealed by evaporation from disuse. . . . The lavatory accommodations are of the worst kind. In the extension on the first floor is a small room containing two bath-tubs, water is carried from here to the dormitories where the children wash in basins. In the nursery are eighteen children, to whom is allotted daily only three (and sometimes two) towels. On the beds one sheet was found, and in many instances this was dirty."

Again, in St. Joseph's Asylum Health Inspector Ewing reports: "The lavatories are very defective, being the trough and spigot plan, with a separate towel for each child, but the towels are hung in a row, with only four inches space between the towel-hooks, so that the towels themselves lie in contact."

In St. Joseph's Industrial Home, Dr. Stillwell reports: "Each child is given a towel daily, which, after use, is collected and dried without being washed, and oftentimes the same day is distributed to others."

In the New York Juvenile Asylum Dr. Stillwell states: "An objectionable feature of the plumbing work is that the water-closets and urinals thereto are in compartments that project into the general area of the dormitories. In some instances the urinals are poorly flushed, and the woodwork about them has become sufficiently impregnated with urine as to yield strong ammoniacal odors. . . . The boys' laboratory is supplied with running water and thirty-five roller towels daily for six hundred and fifty boys."

Especially should the medical officer examine and report as to the physical condition of the children and the existence of any contagious or infectious diseases, especially of the eyes or skin.

In St. Patrick's Orphan Asylum, female branch, Dr. Agnew found 203 cases of communicable eye disease among 409 children examined; of these 2 children had one eye and 22 both eyes seriously injured. In the male branch of the same institution, of the 357 inmates Dr. Noyes reports but 105 children with healthy eyes.

In the Ladies' Deborah Nursery Dr. Loring found, among 223 children, 50 suffering from contagious ophthalmia.

In St. Joseph's Asylum Dr. Roosa examined 521 children. He reports: "Contagious ophthalmia exists in all the classes of this Asylum. Its most severe form is seen among the younger children, although it exists among all. . . . No adequate quarantine is maintained in this asylum for those affected with contagious ophthalmia. Eight children had one eye seriously injured."

At the St. Joseph's Industrial Home Dr. Gruening reports: "I found 605 girls, ranging in age from three to sixteen years. Among these girls were 137 cases of chronic conjunctival blennorrhœa, making a percentage of 22.6 per cent. There were three children with one eye seriously injured, one with both."

In the Nursery and Child's Hospital Dr. Pomeroy reports: "Of the 461 children, 283 had perfect eyes and 178 had eyes more or less affected. Of the 64 adults, 14 had diseased eyes."

In the Mission of the Immaculate Virgin Dr. Pooley states: "Of the 372 boys examined, 127 were found with one or both eyes affected by contagious ophthalmia, making 34 + per cent. This number includes cases of all grades of the disease."

In the Catholic Protectory, of 2,137 children, Dr. Mittendorf found 871 afflicted with the disease, more than forty per cent. of the entire inmates. Dr. Mittendorf writes: "The cases were more frequent among the older inmates, and the longer a child remains at such a place the more liable it is to get the disease. . . . The principal cause is carelessness in admitting children that have diseased eyes and neglect to treat those that are diseased. Of the 871 children that I have examined and that ought to be treated, not one was properly attended to, nor were they isolated from the rest. The superintendent pretends to examine the children before they are admitted, but he must surely overlook many cases of granular lids, for three children were shown to me that had been admitted only a few days before I saw them, and they were afflicted with a most severe contagious form of granular lids; they were in the school-rooms and not isolated."

In the Five Points House of Industry Dr. Webster reports: "I found 155, or about 66.5 per cent. of the children affected with conjunctivitis in its various forms. . . . The worst cases, to the number of 26, were under treatment by the house physician in the eye wards." Dr. Webster found no evidence that the remaining 134 received any treatment whatever.

In the House of Refuge, at Randall's Island, Dr. Dennett found among 752 children 122 cases. He states: "The inmates wash thrice daily under running water, using about one hundred and twenty towels, which are changed every other day. Children with diseased eyes are admitted."

Dr. Andrews says of his examination of the Hebrew Sheltering Guardian Society: "The eyes of children are not examined before admission. Children with diseased

eyes are not quarantined. In the house at 360 East Fifty-seventh Street, are 76 children, 17 of whom have contagious eye disease. But there are really only 35 healthy eyes in the house; the remaining 24 children furnishing evidence in their eyes of the result of overcrowding and lack of proper breathing-space. Among 34 children there are but twelve towels, which are changed three times weekly.

At No. 320 East Fifty-seventh Street, which is a branch of the above-named institution, is a small, badly ventilated house; three children use the same towel, and ten children bathe in the same water. Here there are 52 children and 35 cases of contagious eye disease. There are also cases of contagious scalp disease (favus) among these children, who use the same hair-brush as the healthy children do.

"The percentage of contagious eye disease is most conspicuous in these two buildings, and while the floors and bedding are all that can be desired, and the people in charge seem to aim at making the children in their care comfortable and healthy; owing to their ignorance of the simplest rules of domestic and personal hygiene, they neutralize the good done in one direction by neglect in another. For instance, the rooms and bedding are clean and the food good, but the ventilation is very poor, and children with healthy eyes and others with diseased eyes play together, use the same towel, and wash in the same water. In conclusion, I desire to emphasize the circumstance that *these children go to public schools*. The evil attending this regulation, I need hardly state, is a very great one and must be self-evident." In a branch of this same institution at Eighty-seventh Street and Avenue A, Dr. Andrews found among 182 children 42 cases. He writes: "In this institution the children with healthy eyes mingle with those who have diseased eyes. When eye troubles become serious they are quarantined. But the majority of the cases of contagious eye disease in this and kindred institutions show no signs of eye trouble to a casual observer, and the disease is evident only when the eyelids are everted. And so such cases pass unnoticed, and spread the disease among the children, both in the institution of which they are inmates and in the public schools which they are permitted to attend."

The perils resulting from a neglect to quarantine cases of contagious disease occurring among the inmates of one of these asylums is well illustrated in Dr. Oatman's report on Mount St. Agatha, at Nanuet. In it he says: "Only three working sisters were in charge. Instead of limiting the number of children to forty, over one hundred, or all that could be secured, were taken. No physician was employed, but the writer visited the asylum weekly or oftener. Of the children admitted two only suffered from conjunctivitis. These were cases of chronic granular lids. The majority of these children were under four years of age, and during the entire winter and spring they were kept huddled together in the lavatory and passage leading to the water-closets. This was kept at a temperature of at least ninety degrees most of the time. The children never enjoyed out-of-door exercise. As the winter advanced cases of mild conjunctivitis appeared. These cases were taken to an old farm-house on the premises, as was any other case of sickness that developed; but no systematic quarantine or treatment was practised. Advice was resented and warnings of approaching danger laughed at. Dr. Agnew visited the place in May, 1885, and gave earnest advice in regard to the isolation of certain cases. This was unheeded. About this time I discovered in the old farm-house a case of malignant diphtheria among the children. I pronounced it such and gave most positive directions, but the managers deciding that it was mumps, did not pay any particular attention to it. Within one week ten children died from diphtheria. Two weeks later I visited the asylum and found thirty-two children in bed with fully developed purulent conjunctivitis. At this time I was employed to treat the disease. During the summer of 1885 I treated fifty-six cases of violent purulent conjunctivitis. Although several had a membranous form of the disease, one only had positively the diphtheritic form. This was fortunate, as diphtheria was at this time epidemic in the asylum. Several cases had, as is usual in such epidemics, been sent to Randall's Island for treatment. Two of these have since returned, each with one eye totally destroyed. Among those treated at Nanuet one eye was entirely lost. Two others suffered perforation of the cornea with resulting opacities. These accidents all occurred at one time, during the latter part of the epidemic."

After this sad story of neglect and culpable ignorance on the part of the board of management, let us see what careful management and the application of certain well-understood rules of preventive medicine can accomplish in dealing with contagious disease. In Dr. Emerson's report of the Sheltering Arms it will be seen that among 147 children 10 cases of conjunctival disease were found. Of the earlier history of this same institution, Dr. Pooley, its ophthalmic surgeon, writes: "The following account of an outbreak of contagious ophthalmia, which occurred in this institution, the measures resorted to to stamp it out and to prevent its return, I am enabled to give from my own and the matron's recollection of the facts. It began in October, 1872, soon after the admission of a girl with chronic trachoma, who shortly after her admission had an acute exacerbation of a purulent type. In a very short time there were 12 bad cases of purulent ophthalmia. Soon after this I was asked by the trustees to visit the institution, and found at least twenty cases of blennorrhœa of a severe form and nearly one hundred of a milder type. For several months I visited the institution as often as twice or three times a week, treating all the cases, and isolating the worst of them in a small building which was put at my disposition for this purpose. The disease lasted for ten months or more, and finally it became necessary to dismiss three or four cases, which were treated daily in the Dispensary of the Ophthalmic Institute in Twelfth Street. We were now comparatively free from the scourge, and from this time forth the following precautions have been rigidly observed:

"1. I examine the eyes of all children before admission, and none can enter without my certificate.

"2. If any child shows the least symptoms of eye disease we isolate him and treat him.

"3. We teach nurses and children to *watch* for it, and it is an unpardonable crime to use a towel, pillow-case, or handkerchief that belongs to any other child.

"4. I make it a point to visit the institution as often as I can, and to inspect the eyes of all the inmates, and Miss Richmond sends all suspicious cases to me for inspection.

"The cases mentioned in this report as at present in the institution are all receiving my attention."

Up to the present date, February 2d, returns have been received from 32 asylums, containing 10,264 inmates; of these, 3,322 had contagious ophthalmia, making 32 + per cent.

Our reports further show that many of the asylums are overcrowded. There are institutions where, in the dormitories, there is for each child less than one hundred cubic feet of air-space.

To meet the exigencies of the case the committee on contagious eye diseases is satisfied that legislation is needed, and to that end "an act for the better preservation of the health of children in institutions" has been drawn up.

The proposed act provides that every incorporated institution in the State receiving or caring for children (excepting hospitals) shall have attached thereto a regular physician in good professional standing, who shall carefully examine each child applying for admission to the institution, and shall give a certificate in writing, stating whether or not the applicant is suffering from any contagious or infectious disease, especially of the eyes or skin. No child suffering from any contagious or infectious

disease shall be allowed to enter or remain in any institution in contact with children not so affected, but shall be immediately isolated, or placed in a proper room or infirmary, which shall be provided for that purpose. It is made the duty of the physician to give notice in writing to the officers of the institution whenever any dormitory therein is so overcrowded that there shall be afforded less than six hundred cubic feet of air to each occupant. He is also to report regularly to the local Board of Health in regard to the sanitary condition of the premises.

Progress of Medical Science.

Habitual Abortion and Kidney Disease.—Dr. Fehling, some months before his death, read a paper on habitual death of the embryo in kidney disease. In the first case under his observation premature expulsion of a dead fœtus occurred six times, and there was no evidence of syphilis. At every pregnancy anasarca, albuminuria, and death of the fœtus, with severe cramp of the abdominal muscles, occurred between the fifth and sixth months; the dead fœtus was expelled from three to ten weeks later. In the second case similar symptoms appeared in a young unipara; the fœtus died, and thereupon the albuminuria abated. In the third case the patient had borne two healthy children. During her third pregnancy albuminuria and characteristic changes in the retina occurred, and during the fourth she was seized with hemiplegia; in both a decomposed fœtus was expelled at the fifth month, with subsequent decrease of the albuminuria. In the fourth case the patient, in her first pregnancy, aborted at the fifth month; then she gave birth at term to a recently dead child. In the third pregnancy great œdema and albuminuria supervened, the child was still-born, and the mother died of uræmia. Dr. Fehling believed that, in all these cases, kidney disease existed before pregnancy, which aggravated the renal symptoms. Winter had described two cases of premature detachment of the placenta, normally situated, where albuminuria existed. Dr. Fehling found atrophy of the villi of the chorion, with wedge-shaped or spherical infarcts in the placenta, in his cases, similar to renal infarcts. The infiltration of the chorionic villi and vessels of the umbilical cord with small cells, as seen in syphilis, was absent, nor did any of the embryo exhibit a trace of congenital syphilis.—*British Medical Journal*, November 21, 1885.

Ox-Gall in Typhoid Fever.—Dr. Samuel Lloyd reports that since the publication of the paper on "Ox-gall in Typhoid Fever," in the first number of this journal, he has had an opportunity of personally observing its action, and has found that the results obtained were similar to those claimed by Dr. Van Schaick. The temperature in his case, before the administration of the ox-gall, was ranging above 105, but after the exhibition of the drug it was successfully kept below 102, while all the symptoms gradually assumed a milder form. The preparation used was the Fel bovis inspissatum, which was administered in capsules of five grains each every two hours, unless an exacerbation occurred, when it was given more frequently. The taurocholate of soda was substituted at one time, but its action was very unsatisfactory, and a persistent increase in the diarrhœa and range of the temperature compelled a return to the former preparation.—*Quarterly Bulletin of the New York Post-Graduate Medical School.*

Abolition of the Patellar Tendon Reflex in Diphtheria.—The following are the conclusions of M. Bernhardt in an interesting paper on this subject appearing in *Virchow's Archiv*: 1. In a large number of diphtheritic affections there is observed an abolition of the patellar tendon reflex coming on some weeks after the attack, even in mild cases and in those which have been followed by no other paralytic symptoms. 2. The appearance of this sign some five weeks, more or less, after an attack of diphtheria should make the physician cautious in his prognosis concerning paralysis. 3. The absence of the patellar reflex may continue for five or six months and more, and in some instances the author was unable to assure himself of the return of the phenomenon to its normal degree. 4. Bernhardt admits that this symptom may be due to some nervous lesion of parasitic nature, and concludes by comparing the loss of the reflex occurring after diphtheria with the same sign when found in the initial stages of locomotor ataxia.

Salicylate of Lithia in Rheumatism.—In a paper read before the Academy of Medicine of Paris, on December 8, 1885, M. Vulpian gave the results of a number of experiments with salicylate of lithia, which he had found to be of great service in the treatment of all the forms of rheumatism. He said it was a mistake to suppose that the salts of lithia possessed any remarkable toxic properties: they were no more so than the corresponding salts of other bases, and the salicylate could be given in nearly as large doses as the salicylate of soda. In cases of acute rheumatism, joint pains, sometimes of very severe character, often persist for a long time after the swelling of the articulations has subsided. Salicylate of soda as well as tincture of colchicum have but little effect in quieting these pains, but salicylate of lithia, M. Vulpian said, causes their rapid disappearance. The drug acts especially well in those cases in which the fibrous tissues are affected. In the subacute and chronic forms also salicylate of lithia acts more promptly than the sodium salt. The drug should be given in doses aggregating one drachm per diem, but when more than seventy-five grains a day are given, toxic symptoms are apt to be produced. It causes headache and deafness, but never the whistling and ringing sounds in the ears which cause such extreme annoyance to the patient. Sometimes also, though rarely, intestinal colic and diarrhœa result. But all these unpleasant symptoms disappear quickly after the discontinuance of the remedy.

Iodol, a Substitute for Iodoform.—Iodol ($C_4 I_4 NH$) is the name that has been given to a new antiseptic recently introduced into use in surgery. It is described as being tetra-iodo-pyrrol, and is said to be prepared from pyrrol, obtained from animal oil, and made moderately pure, by precipitating it with a solution of iodide of potassium containing iodine. In appearance it is a light-brown powder, which under a lens is easily seen to be crystalline. It has a faint odor resembling thymol, but no taste. It is nearly insoluble in water, soluble in hot fixed oils, in three parts of alcohol, and freely in ether and chloroform. It is not precipitated by glycerine from the alcoholic solution. At 212° F. it gives off the vapor of iodine. The great advantages claimed for it are that it contains ninety per cent. of iodine, and has not the disagreeable persistent odor of iodoform. More than two hundred observations on various diseases have been made with it in the Royal Surgical Institute in Rome. It was used suspended in glycerine, dissolved in alcohol and glycerine, and as an ointment. Chancres were washed with water, dried, and then sprinkled with iodol powder and covered with silk-protective, the dressing being changed daily. In six days' time the base of the chancre began to granulate, and the edges to show signs of commencing cicatrization. Under like treatment open buboes soon improved and healed up. With single indolent ulcers it proved equally valuable. On the other hand, the remedy is found useless, and indeed harmful, in gangrene. Further, it is found to possess the power in a high degree of promoting healthy granulations, as is shown by its use in various forms of lupus and in chronic fungoid inflammation of the joints.

Oxygen has been found, by Prof. Laschkewitch, to be of benefit in hysteric and hystero-epileptic attacks. He thinks that it lessens nervous excitability.

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CONTAGIOUS OPHTHALMIA.

THE article by Dr. Derby, published in our columns this week, is virtually a review of the investigations made this winter by the Committee on Contagious Eye-disease appointed by the New York Academy of Medicine. This committee, consisting of well-known members of the Academy and representatives of the Society for the Prevention of Cruelty to Children, the State Board of Charities, the State Charities Aid Association, and the Society for Improving the Condition of the Poor, have caused all the asylums for the care of children in New York City and its vicinity to be visited. Together with inspectors detailed by the Board of Health, well-known ophthalmic surgeons have examined the eyes of the children and studied the causes of the alarmingly prevalent contagious eye-disease. Among the many startling facts elicited by these investigations none is more significant and full of meaning than this: That a group of thirty-nine children are to-day in the New York Institution for the Blind, who, during the past few years have been sent there from some of our best-known and most generously supported asylums. Children between the ages of six and sixteen are very unlikely to suffer from non-contagious eye-diseases entailing blindness, and blindness in children is very rarely the result of contagious disease which has received proper care and treatment. These children, wards of the city and State, were placed in the several asylums to be brought up with healthy bodies and taught some useful trade, that they might become self-supporting—to-day they are blind charges of the State. The report to which we have referred points out in language that cannot be mistaken that these blind children lost their sight through neglect of the simplest rules of hygiene and health on the part of those who should have cared for them. By the testimony of many competent witnesses the report shows that in many asylums of this city children with contagious eye-disease are received, and that the healthy eyes of children already there thus speedily become affected. The report shows gross carelessness in allowing healthy and diseased children to use the same roller-towel and wash in the same water. It shows an absence of any proper system of quarantine of children who are manifestly the bearers of contagium. It shows an entire laxity of medical care in providing healthful dwelling-places or proper treatment where it is sorely needed. To meet these and other evils the committee has prepared a bill for "The Better Preservation of the Health of Children in Institutions," and has secured the introduction of the same in the Legislature at Albany. This bill throws the responsibility for the medical management of the asylum upon its medical officer, and provides that he shall make frequent inspection of the institution and of its inmates, and report upon the same to the Board of Health. The bill provides that no child with diseased eyes or other contagious disease shall be admitted, and calls for an efficient quarantine of all children in the asylum who may become affected with contagious disease. It declares a neglect to carry out these provisions of the bill to be a misdemeanor. This is eminently wise legislation, and is going none too far. THE RECORD has already on other occasions urged the great importance of adopting stringent rules and regulations at our asylums to protect the inmates against a disease which entails so often such disastrous consequences.

"INSTINCT AS A GUIDE TO HEALTH."

AN interesting article with the above title appears in the February number of the *Popular Science Monthly*, from the pen of Dr. Felix Oswald. He briefly sketches the hygienic advances which have been made in the last two hundred years, and attributes them, as well as educational and social reforms, to a "restored trust in the competence of our natural instincts;" in other words, "many of the hygienic reforms of the last two hundred years could have been anticipated by the simple teachings of our senses." Many of the evil manifestations of our natures—the moral depravity of the theologians—are to be regarded not as the remains of "old Adam," but rather as the expression of abnormal appetites artificially acquired.

Hence, then, true instinct is to be regarded as the guide toward right physiological living. The "ward of instinct," says Dr. Oswald, does not need a temperance lecture to counsel him to shun alcoholic beverages; the repugnance of nature to such ingesta is unmistakably expressed, and it is only by repeated trampling upon her advice thus expressed that the repugnance is overcome and transformed into an actual longing. The natural movements of the developing child are a greater proof of the necessity of exercise and a more convincing demonstration of its utility than any labored argument to show that exercise is beneficial.

What, then, has interfered with the establishment of that hygienic Utopia toward which true instinct would long since have led? The answer is, a perversion of instinct, a nursing of unnatural appetites. "In some exceptional cases," says Dr. Oswald, "nature fails to advise us of perils which her warning could easily avert," and he groups these exceptions under the headings of perverted instincts, abnormal perils, and parasitic disorders. The perversion of instinct is often of obscure origin, and when exercised in regard to the ingestion of any poisonous substance may become "vehement and persistent in proportion to the virulence of the poison." Persistent disregard of instinct will often bring about this result. As between instinct and perversion thereof, it becomes a contest for the survival of the fittest, and finally nature gives up the struggle.

In regard to abnormal perils, "the foresight of instinct" seems to be deceived "in a way typified in the non-repulsiveness of certain mineral poisons. Nature has taken ample precautions to secure her creatures against the poisons of the upper world—hemlock, foxglove, belladonna—but failed to provide safeguards against such subterranean evils as arsenic."

The existence of parasitic disorders seems to go against the theory of the healing instincts of nature. But the cause of these disorders is generally plainly visible, and can be directly removed, whereas the causes of other ("symptomatic") diseases "is often aggravated by the suppression of its external manifestations."

One notable exception is mentioned, apparently in opposition to the conservatism of Nature. It is the fact that at certain stages of pulmonary phthisis the sexual instinct is stimulated to a degree hardly compatible with the best result to the organism. Salacious manifestations at the late stage of phthisis are by no means uncommon. Here we are told this tendency comes only in a late and hopeless stage of the disease, when "nature sacrifices the interests of the individual to those of the species." In such cases as these instinct would not be a true guide. Yet, on the whole, it is to be trusted. The rejection of food by the overloaded stomach, the yielding of the tired body to sleep, the unrest characteristic of lung diseases—and relieved by fresh air—all these, and many others, show how truly the instinct indicates the successful plan of treatment. We are not to believe that "our protective instincts at the most critical moments become false to their mission, and urgently warn us against the means of salvation."

COMFORTS FOR MEDICAL MEN.

It is quite possible that medical men, who above any other professional class are subject to exposures and all the discomforts and dangers attending, do not provide as much as they might for their own comfort and safety. Medical fashions and habits control the physician to such a degree that he is liable to slip into the routine of his fathers, without thinking whether it might not be possible to effect improvements and alleviations in his lot.

For example, it is, we believe, quite unheard of for the rural physician ever to travel in anything but an open wagon, or the regulation doctor's gig. This latter affords some protection from storm and wind, but not a very great deal, and the main reason for its universal use is that it is light, and can be propelled at less expense to the horse. In England, broughams and hansoms are very much employed, even outside the cities. These of course require a driver, but there are many physicians for whom it would be an economy to avoid the risks and hardship of winter exposure by hiring an extra servant.

But even the doctor who must use the gig can often make it a more agreeable and comfortable vehicle than is now the case.

Mr. T. Pridgin Teale, who has been discussing this subject in *The Lancet*, writes:

"A medical man who visits his patients in an open gig or carriage, whenever he enters a house, leaves a warm seat, and on returning in ten or fifteen minutes finds the cushion and rug cold. By the time he reaches the next house the seat and rug are warm again, and out he gets, to let them cool down before his return; in other words, he is perpetually parting with bodily heat, which in severe weather he can ill spare, and is warming up, to very little useful purpose, inanimate material. This may be obviated by having either a hot-water bottle (of stoneware, not of metal), or one of the still more convenient india-rubber hot-water bags with a woollen cover. On his entering a house the warmer is placed on a cushion and is covered by his rug; it is placed at his feet when he returns to his carriage. If he drives in a brougham, or in a carriage in which the driver is not at his side, it is better that the hot-water bottle should be pushed to one side, or kept on the seat, protected by the rug."

Mr. Teale makes another suggestion, viz., that medical men who are liable to be called up in the night should always have a fire in their bed-room. We think that this is perhaps an unnecessary hint to the American doctor, who is not accustomed to sleep in a fireless room with the temperature thirty degrees below zero.

In driving in the cold it is very soon learned that the first essential to comfort is to keep the feet and the wrists and hands warm. This does not appear to have been learned by our English brethren, who doubtless do not often have such instructive temperatures as are experienced upon this side of the water.

THE LATE DR. ALFRED C. POST.

Few men ever leave such a record of untiring and conscientious industry in their profession as did the late Dr. Post. His professional activity covered a period of two generations, and when he died he had outlived all his early contemporaries. Dr. Post was remarkable for his activity and professional enthusiasm even to within a fortnight of his death. He carried on his surgical practice, performed operations, attended societies, discussed and wrote upon the living topics of the day, with all the freshness and zeal of youth. Age, he would say, is not a matter of years.

Dr. Post's most salient and admirable moral trait was his rigid sense of duty. To this he was always faithful, at no matter what sacrifice. He was a man of firm religious faith, devout in his behavior, and an excellent theologian and biblical scholar. The two things, he is reported to have said, which he enjoyed most were a surgical operation and a prayer-meeting. This at least expressed the two leading motives in his life: devotion to his profession and to the Christian faith. The example which he set, of a man who lived a thoroughly earnest, unselfish, and useful life, cannot fail to leave a beneficent influence which will last long after the tireless worker himself has gone.

THE QUESTION OF THE EXISTENCE OF "NEURASTHENIA."

Sir Andrew Clark has recently made some observations upon so-called "neurasthenia" which are not in the least novel, but which, coming from so eminent a physician, will attract attention. Sir Andrew states that the term neurasthenia has, despite just opposition, won its way into medical nosology, and now receives notice at the hands

of nearly all systematic writers on general or neurological medicine. This condition of affairs he regards as unfortunate, since the word neurasthenia is applied to a mob of heterogeneous symptoms, and does not represent to the mind any distinct clinical entity, nor have for its basis any uniform pathological change.

Sir Andrew Clark appears to believe that there is such a thing as nervous exhaustion or asthenia, but he does not find that the symptoms resulting from it have as yet been clearly recognized, or explicitly described and circumscribed.

There is no question as to the truth of the view which the distinguished physician takes. We, in America, who can, perhaps, best appreciate the evils which are referred to, have long ago recognized them. There is, beyond any question, a functional nerve-disorder which can only be designated as chronic nervous asthenia, since both the causation and the symptoms point to a dynamic weakness of the nerve-centres. But, unfortunately, these states of functional asthenia run so closely into those of degeneration and irritation, that the establishment and separation of the neuro-asthenic group of symptoms have been attended with difficulty and confusion. The late Dr. Beard greatly overloaded his subject, and Professor Arndt, of Vienna, who has just written an elaborate treatise on neurasthenia, has fallen into the same error. The latter, like Sir Andrew Clark, seems to think that all the neurotic people in the world's history, from Julius Cæsar to the poet Heine, may be classed among neurasthenics.

We understand that the more careful neurologists in this country find that there is a group of symptoms very characteristic and well defined, to which no better name than neurasthenia can be given. Therefore the term is still used, and it is increasingly prevalent.

THE DEATH OF GENERAL HANCOCK.

With the sad announcement of the death of General Hancock comes the somewhat startling statement that the disease, diabetes, from which he died, was only recognized a few days before his death.

While this latter statement may not be true, and we trust it is not, the case will, at any rate, serve to enforce the lesson of a more thorough examination of the urine in all chronic cases that come to the physician's care. We fear that there is too great a tendency among many busy practitioners to be content with a squeeze of the pulse, a glance at the tongue, and a few raps on the chest. The examination of the urine should be made a routine practice in all cases.

The Mississippi Valley Medical Monthly.—When a local medical journal and a local medical college fall out, the results are likely to be unpleasant for the latter. The *Mississippi Valley Medical Monthly*, which is ably edited by Professor F. L. Sim, has opened its controversial fires upon the Memphis Hospital Medical College. The sympathies of the on-lookers, on general principles, must be with the journal in such cases, since local medical journals are helpful to the profession, while local medical colleges are sometimes so, but not always.

News of the Week.

Cocaine is now only threepence a grain in England.

The Journal of Cutaneous and Venereal Diseases is now edited by Dr. Prince A. Morrow.

Dr. Paul F. Mundé gave a brilliant reception to the members of the New York Polyclinic on Thursday evening of this week.

The Cost of Small-pox to Tennessee during the past five years is estimated by the State Board of Health to be $141,619.91.

The Only Daily Medical Journal in the world is, we learn, *La Riforma Medica*, published in Naples by Professor Cav. Gaetano Rummo, and now in the second year of its existence.

Virginia has not over fifteen homœopathic physicians in the whole limits of the State. Yet a bill has been introduced into the Legislature to create a Homœopathic Board of Medical Examiners.

A Bill to Regulate the Practice of Medicine in the State of Maryland will be presented to the Legislature during its present session by a committee appointed by the Medical and Chirurgical Faculty of Maryland.

The Madstone.—A correspondent asks if there is anything in the "madstone" as a preventive of hydrophobia.—No, but it may be an excellent remedy for hysterics, following the bites of dogs. The madstone is a form of faith cure.

Portrait of Dr. John C. Dalton.—By invitation of a very large number of his friends and former pupils Professor John C. Dalton is to sit for a portrait, to be painted by Eastman Johnson, and subsequently presented to the College of Physicians and Surgeons.

Reducing the Income of the Health Officer.—A bill has been introduced into the Senate at Albany fixing the fees of the health officer of this port at $10,000 a year, with $3,000 for the first assistant, $2,000 for the second assistant, and $6,000 for the expenses of administration.

A Commission to Investigate the Question of the Prophylactic Inoculations against Yellow Fever.—Dr. Joseph Holt, President of the Louisiana State Board of Health, is in Washington, urging the passage of a bill creating a commission to investigate the alleged preventive inoculations against yellow fever.

Conception after a Double Ovariotomy.—Dr. Schatz reports a case (*Centralb. für Gynäk.*) of a young woman from whom he removed the whole of the left ovary for a cystic tumor; he also removed part of the right ovary, which had undergone cystic degeneration. The patient menstruated regularly, subsequently married, and in May, 1885, was delivered of a daughter at full term.

Wanting a Real Arm.—A correspondent, who is a layman, and evidently has lost an arm, writes in all seriousness, asking us if there is not some surgeon in New York bold enough to try and graft a new arm on his stump. He states that he is willing to pay a convict or any other person who might be willing to contribute his arm to the cause.

Monument to M. Bouley.—The Veterinary Society of Grenoble has voted to solicit subscriptions for the erection of a monument to the memory of the late Professor H. Bouley, to be erected in the Veterinary School of Alfort. Subscriptions are requested from veterinarians, physicians, and all men of science who have benefited by Bouley's labors.

Prohibiting the Sale of Tobacco to Minors.—A measure, supported by voluminous petitions, is before the Committee of the Massachusetts Legislature on Public Health, to restrict the sale of tobacco to minors under the age of fifteen or sixteen years. It is claimed by the petitioners that both boys and girls in the public schools are addicted to the use of cigarettes to an alarming degree.

"The Southern California Practitioner," is the title of a new monthly medical journal published at Los Angeles, Cal., and edited by Drs. J. P. Widney, Jos. Kurz, and Walter Lindley. The gentlemen are also members of the Faculty of a new medical college, called the College of Medicine of the University of Southern California. This institution, we are told, opens with prosperous auspices.

A Proposed New Medical College in North Carolina.—The *North Carolina Medical Journal* states that the project of establishing a medical college in connection with the University of North Carolina is being seriously considered. The *Journal* wisely insists that such a college should not be started until sufficient money is pledged or secured to make the faculty independent of students' fees.

The Way They Do It.—We are requested to state that the advertising homœopathist referred to in our issue of Janury 30th, is not a member of the Homœopathic Society in question, and that consequently he cannot be reached by that or any other society, unless possibly by first enforcing the law requiring membership in some recognized county society, as the law makes no provision for ethical misdemeanors. He was nominated for membership of that society, but the nomination was opposed in open meeting—because of the facts stated in The Medical Record—, and he was not elected.

Liability of Hospitals for Mistakes or Acts of Employés. — Malcolm S. Daly, aged seventy-four, recovered a verdict of $1,700 in the United States Circuit Court, at Omaha, Neb., against the St. Joseph's Hospital, conducted by the Franciscan Sisters. The facts proved that Daly, occupying a room in the hospital while under treatment for cataract by an oculist, one of the nurses, by accident or mistake, dropped carbolic acid in his eye, which entirely destroyed it. Daly was a paying patient.—*Medico-Legal Journal.*

The Decline of Iridectomy.—"We note," says the *Medical Press*, "that M. Panas, of Paris, in advocating a new ophthalmic antiseptic, boasts that he has been able to do away with Von Graefe's method of cataract extraction (linear incision with iridectomy) and revert to the older flap operation, reserving the iridectomy for exceptional cases. . . . Ophthalmologists have recovered from the iris-snipping craze, are convalescing from the jequirity fever, and are down in the cocaine epidemic. Shall we not look back on the literature of the iridectomy mania and profit by the proof since given, that nine-tenths of what was then written in praise of iridectomy was nonsense—that most of the statistics of cures were cooked and utterly unreliable, and that we retain at the present day nothing gained from the ophthalmological perfect cure except its occasional use as a forlorn hope?"

The New York Odontological Society gave its annual dinner at the Hotel Brunswick, on Wednesday evening of this week. About two hundred gentlemen were at the table, among them E. A. Bogue, President of the Society; William H. Arnoux, Dr. Fordyce Barker; Drs. Thomas M. Markoe, J. C. Hutchison; Professor R. R. Andrews, of Cambridge; ex-Postmaster General James, Dr. William A. Hammond; Drs. A. F. Beard and Ernest Bent, of Paris; Drs. James McManus and George L. Parmele, of Hartford; Drs. Abraham Jacobi, Lewis A. Sayre, Dr. George F. Shrady, and Dr. Norman W. Kingsley. General Horace Porter, in speaking of dentists from a patient's standpoint, said that it was the first time that he had fallen into the hands of dentists when he found his mouth in a condition for speech-making. Other speakers were the Rev. Dr. Howard Crosby, Dr. J. Smith Dodge, and Professor J. E. Garretson, of Philadelphia.

Criminal Liability of Ignorant Doctors.—A physician, called to attend a sick woman in Worcester, ordered that she be clothed in flannel saturated with kerosene oil, and that the saturation be renewed from time to time. The direction was followed, and caused the death of the patient. The doctor was indicted for manslaughter and convicted. The case was appealed to the Supreme Court of Massachusetts; that tribunal has just given an opinion sustaining the verdict. The doctor offered some evidence, on the court trial, that he had prescribed similar treatment, with favorable results, in other cases, but that in one the result had been to blister and burn the flesh. His counsel asked the trial-judge to charge the jury that if the defendant prescribed with an honest purpose and expectation to cure he was not criminally liable for the death of the patient, however gross his ignorance of the nature of the disease or the probable effect of the remedy; that he could not be convicted of manslaughter without finding him guilty of "obstinate, wilful rashness." The judge refused to so charge, and the ruling is affirmed by the Supreme Court. It holds that it is not necessary to show "an evil intent" on the part of the doctor. If by gross negligence, recklessness, or foolhardy presumption he caused the death, he was guilty of culpable homicide. The defendant professed to be a physician. A physician of the most ordinary knowledge and experience is expected to know the probable disastrous effect of the remedy prescribed in this case. "The man who assumes to act as the defendant did must have done it at his peril. The defendant knew that he was using kerosene and saw from day to day how it worked. The jury has found that it was applied as a result of foolhardy presumption or gross ignorance, and that is enough."—*Medico-Legal Journal.*

Malpractice Suits and Their Prevention.—Another unsuccessful suit against a doctor is reported in the *Daily Commonwealth*, of Covington, Ky. About one year ago J. B. Garrard jumped from a moving train on the Kentucky Central Railroad, at Catawba Station, and broke his leg above the knee. He was brought to St. Elizabeth's Hospital, in this city, and treated by Dr. Charles Kearns, the Hospital Surgeon. He remained there for over three months, and his leg was mending nicely, when, contrary to the doctor's advice, he went home, resulting in a set-back of his injury, which eventually resulted in a shortened leg, and he entered suit against Dr. Kearns for $10,000 damages. The case was tried in the Circuit Court yesterday and given to the jury, which only took a few minutes to decide in favor of Dr. Kearns. In this connection we may publish a communication received from Dr. W. S. Parker, of Piqua, Ohio, suggesting a remedy for the useless and malicious prosecutions to which physicians are subjected. He says: "I would suggest the framing and passing of a law, the force of which would be to put the plaintiff under sufficient bonds to indemnify, in case of failure to sustain his charge, the physician or surgeon for all pecuniary loss said physician or surgeon may have incurred, as well as a fair compensation for any loss of time. Several suits have fallen under my own observation; I was once jeopardized myself, and in each instance the suit failed. In my judgment, were some such law in force, but few suits for malpractice would be instituted."

Obituary.

ALFRED C. POST, M.D., LL.D.,

NEW YORK.

When it became generally known, a few days ago, that Dr. Post was confined to his bed with an attack of his old complaint, cystitis, his many friends were anxious as to the result. Although blessed with a vigorous constitution, he had, within the past few months, shown to his intimate friends signs of failing health. He pluckily kept to his work, however, and was apparently contented in his ability to do so up to the last. Happily, his suffering was of short duration, and his end was a peaceful one. He was one of the old landmarks for the profession of New York. In actual practice for fifty-seven years! Who are they in the present generation who can reasonably expect such a life-experience, and who can use it to better advantage? Every one knew Dr. Post. Thousands have heard him lecture, have seen him operate, and have read his published papers. Not to have done either would imply the missing of something. Indeed, he was a remarkable man in many ways. At the age of eighty he combined the enthusiasm and freshness of youth with the stolidity and discretion of ripe experience. No truth was too novel for him, no fact too old for him. As a lecturer he was always impressive, terse, and explicit; as an operator he was bold, steady, and self-reliant; as a writer he was lucid, logical, and classical. In fact he took a just pride, at his advanced age, of being precise in everything pertaining to his daily walk and conversation. His memory was something remarkable, and many who presumed to question it on general principles were often brought up with a round turn by a timely reference to a published fact or an apt quotation from some classic poet. His rich store of scientific and classical knowledge was always at his command, and those who knew him best respected his views the most.

Dr. Post was born in this city in the year 1805. He was the son of Joel Post, an eminent merchant of the old firm of J. & J. Post, formerly in Hanover Square. Joel Post in his lifetime occupied as his country-seat the property known as Claremont, now forming in part the Riverside Park and embracing the site of General Grant's tomb. Much of this property still remains in the ownership of the family. Dr. Post entered Columbia College when less than fourteen years old, and, in fact, was prepared to enter college two years earlier. After his graduation, in 1822, he became a medical student in the office of his uncle, Dr. Wright Post, an eminent surgeon of a former generation. He also took the course of instruction in the College of Physicians and Surgeons, where he was graduated in 1827. He then went to Europe to complete his medical education, studying at Paris, Berlin, and Edinburgh.

On his return, in 1829, he began the active practice of his profession in this city, and continued it until the week before his death. Dr. Post, as early as 1836, was made one of the attending surgeons of the New York Hospital, and more recently was connected with the medical staffs of St. Luke's and the Presbyterian Hospitals. He was one of the founders of the medical department of the University of the City of New York, taking the chair of surgery and pathological anatomy, and at the time of his death was President of the Medical Faculty and Emeritus Professor of Clinical Surgery in that institution.

He was also at the time of his death Consulting Surgeon to the New York and Woman's Hospitals. His connection with the former institution extended over a period of fifty-one years, and was to have been made by the Board of Managers of that institution the occasion of a jubilee the coming spring.

He was a member of the New York Academy of Medicine, serving it as Vice-President; of the Pathological Society (once its President), of the County Society, the Medical Society of the State of New York, and of many foreign societies. Actively interested in the prosperity of all, he was always ready to contribute to their transactions by valuable papers and remarks. Few men have held so many positions of trust, and few indeed have filled them with more credit to themselves. Dr. Post was a quiet Christian, one who gave evidence of the fact rather by his works than words. He was a lifelong member of the Presbyterian Church, and at the time of his death was an elder in the Church of the Covenant. He was also President of the New York Medical Missionary Association, and one of the Directors of the Union Theological Seminary.

About the year 1832 Dr. Post married Harriet, a daughter of Cyrenius Beers, whom he survived nearly nine years. Of their children, three sons and four daughters survive their father. One of his sons, George E. Post, of the Presbyterian Mission at Beirut, Syria, has also reached great distinction as a surgeon.

The funeral services were held on Wednesday, February 10th, at the Church of the Covenant, and were largely attended by his numerous friends.

The Rev. Drs. John Hall and George L. Prentiss were the officiating clergymen, and the latter delivered a touching eulogy upon the deceased. Delegations from the County Medical Society, the College of Physicians and Surgeons, the Academy of Medicine, and the Medical Department of the New York University were in attendance, and the Church was crowded with professional and other friends of the dead man.

The pall bearers were Dr. Abraham Jacobi, Dr. D. Lewis, Charles Butler, Maurice M. Backus, Dr. William N. Blakeman, Dr. A. L. Loomis, Dr. A. S. Purdy, Dr. Stephen Smith, Dr. Charles Inslee Pardee, Dr. George F. Shrady, William A. Booth, and Ezra Kingsley. The family physicians, Dr. A. E. M. Purdy, Dr. R. F. Weir, and Dr. R. Abbe, were also in attendance. The interment was at Woodlawn.

Reports of Societies.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, January 8, 1886.

BEVERLEY ROBINSON, M.D., PRESIDENT, IN THE CHAIR.

DR. GEORGE F. SHRADY presented a patient, the subject of

SPINAL ARTHROPATHY.

The patient was sent to him four years ago, for operation, on account of what was supposed to be a tumor of the left knee. On examination the joint appeared much enlarged, especially on its inner aspect, was very irregular in outline, and was in a condition of lateral subluxation. The articular surfaces were denuded of cartilage, and the ligaments were so lax that not only could lateral deflections be made with the greatest ease, but the tibia could be rotated to a considerable extent on its longitudinal axis. All these manipulations were painless, nor did the patient complain when steadying herself upon the limb, notwithstanding the fact that the denuded joint surfaces would grate and grind into each other in a way that seemed to threaten the crushing of neighboring bone structures. What appeared on superficial inspection to be a tumor, was an expanded, osteo-porotic inner condyle of the femur. Other bony parts of the joint were similarly affected, but not to such a symmetrical degree. The synovial sac contained no appreciable amount of fluid; in fact, the joint as a whole gave the impression of being in a condition of dry disintegration. The left leg, naturally large on account of the patient's obese condition, was much increased in size by fibrinous infiltration of the soft parts, and hyperplasia of the osseous tissues. The condyles and lower third of the femur were similarly affected. At first he concluded that the case was an unusually marked one of rheumatoid arthritis, but inquiring particularly into the general history of the patient he changed his diagnosis to that of spinal arthropathy. The latter was reasonably confirmed by the co-existence of certain ataxic symptoms. These were not so marked in connection with the tendo-reflex as with the co-ordinating muscular power in the extremities, which was associated with a disease of the articular ends of the bone, due to a faulty nutrition, and dependent on central nervous lesions. The conclusion was at first forced upon him rather by excluding apparently similar local conditions from consideration (principally among these being that of osteo-arthritis) than by many of the more usual and positive symptoms associated with locomotor ataxia. Since this case had been under observation, however, the diagnosis had been confirmed not only by the progress of the local lesions, but by the development of marked tabetic symptoms. The joint itself had progressively degenerated, its articular extremities had worn away, become more expanded and unshapely, the ligaments had degenerated, and as a consequence luxations were produced by the slightest efforts on the part of the patient, rendering the extremity absolutely useless for purposes of locomotion.

A point in the diagnosis was that these changes had been going on symmetrically, there having been no nodosities developed, as is the rule in osteo-arthritis.

Pathologically, spinal arthropathy was in every essential particular different from purely arthritic degeneration. In the former the bone tissue was first affected by direct interference with its nutrition through the vaso-motor system; the destruction of the cartilages and synovial membranes, and the gradual absorption of osseous elements being secondary manifestations of the disease. In osteo-arthritis the processes were reversed, the soft tissues in and around the joint being the first to be attacked, and undergoing inflammatory rather than trophic changes. The general or ataxic symptoms were not so marked in connection with the absence of reflexes as with lack of the co-ordinating power in the extremities and in the eyes.

The left eye particularly showed marked disturbances of nerve influences, principaly as affecting the third pair of nerves, there being ptosis, divergent strabismus, and consequent diplopia. The latter symptoms had been, during the past year, slowly but markedly progressive. The other joints in the body were free.

This, then, was the case in brief. The disease of which it was an example was either very rare, or not recognized as often as it should be. He had seen but one other. Very many of his professional friends, of large experience, had not seen as many. In the other case to which he referred, which, like this one, was a hospital patient, the disease was also confined to the knee, both joints being nearly similarly affected, and associated with more pronounced ataxic symptoms, especially such as referred to the eye complications—ptosis, strabismus, and diplopia.

In both there was a history of specific infection, and in both the usual treatment for the same resulted negatively. The same might be said of medication generally in regard to these cases; the local lesions progress despite everything that had been tried to arrest them, and we were seemingly narrowed down to the simple expedient of giving support to the parts and thus reducing friction and pressure to the minimum.

DR. A. A. SMITH then read a paper (see p. 178) entitled

SOME CONSIDERATIONS ON THE DIAGNOSIS AND PROGNOSIS OF ABDOMINAL ANEURISM.

DR. W. M. POLK said he had had no practical experience which differed from that mentioned by Dr. Smith; in fact, he was obliged to go back seven years to recall any case of abdominal aneurism. They are not common, and the Society was fortunate in having the opportunity of hearing the three cases presented by Dr. Smith. But there was one thing which was a subject of congratulation for those gentlemen who had to deal with intra-peritoneal developments, and that is the prompt tendency which the peritoneum exhibits to resist the progress of any of these formations by throwing out plastic exudation. He should think that in case of aneurism this was a condition which might go on, perhaps not so rapidly as where the inflammation is more acute, but still might develop a membrane which would prove decidedly conservative in its influence upon the growth.

As bearing on the protective character of peritoneal adhesions he could recall an operation that illustrated what surgeons might be willing to do. It was a case of vaginal hysterectomy, and after removal of the uterus he did not close the opening, but simply stuffed it, after withdrawal of the uterus, with iodoform gauze, putting it in direct contact with the peritoneal surfaces, with the confident expectation that the excavation left would be closed over within forty-eight hours, and in that manner exclude percolations of any material which might not be absorbed by the gauze. He expected that the newly-formed exudation would stand guard between the abdominal cavity and the vagina. In the absence of septic influences he thought we might rely upon the peritoneum doing that very thing.

DR. H. F. WALKER gave condensed histories of two cases of abdominal aneurism which came under his care while he was visiting physician to Bellevue Hospital.

In the first case, the nature of the disease was recognized. In the second, there was such obscurity of symptoms, and such absence of the crucial signs of aneurism, that though that disease was daily in mind in the examination of the patient, the diagnosis was only made at the autopsy.

Patient number one, admitted July 12, 1875, was a man of forty, a laborer, whose previous health had been good. Nine months before, while driving, he had lost control of his horses, was thrown from the wagon, and struck his left side, in the lumbar region, against a lamp-

post. Six months after, a small tumor appeared, which since then has gradually enlarged. Its appearance and growth have been attended with dull and shooting pains.

The tumor, at time of admission, had its centre four inches to the left of the median line, one and a half inch above the crest of the ilium. It was seven inches in vertical, and seven and a half inches in transverse diameter. As the patient lay supine, its highest point was raised one and a half inch above the general surface. It pulsated with the radial pulse, but no bruit could be heard by careful auscultation, though ten days after admission an aneurismal bruit was detected. One month after entrance the tumor had greatly increased, especially in the transverse and antero-posterior measurements. These were, respectively, eleven inches transversely, and two and a half inches above the surface. The vertical diameter was seven and a half inches. The tumor continued to grow till September 3d, when the last measurements were made: vertical diameter, thirteen inches; transverse, fifteen inches; height of the tumor above the surface, six inches.

September 5th the patient died of asthenia, worn out by long-continued pain and inability to assimilate food.

The treatment had been the maintenance of the supine posture, and opium for relief of pain.

The autopsy was made September 6th, under supervision of the curator.

The abdominal cavity, left side, was occupied by a tumor which dislocated the kidney and the intestines. On its anterior or ventral surface lay the psoas muscle much flattened; on the lateral surface the first, second, third, and fourth lumbar vertebræ were much eroded, the intravertebral cartilages preserving their size and shape. The last rib also was eroded. Posteriorly, the tumor was covered by skin, lumbar fascia, and muscles. Its capacity was estimated at one and a half gallon. A probe passed from the heart through the descending aorta entered the sac near the origin of the cœliac axis. From below upward, along the external iliac artery, the tumor was entered between the mesenteric arteries. Between these two points, a space of about two inches, the coats of the artery exist. Between these points a sacculus extends across the spinal column, and presses against the transverse fissure of the liver. Its capacity is six ounces. It is formed of the arterial coats. A probe pressed against the posterior or lateral inner surfaces of the larger sac is not perceptible to finger outside. The tumor, on opening, is found filled with laminated fibrin and clots, making the solid thickness of the tumor, posteriorly, to be from six to eight inches. The coats of the artery cannot be recognized in this region, the sac here being formed of fascia and skin.

The growth of the tumor has been backward between the psoas muscle and vertebræ. Anteriorly, the sac of the tumor is formed of the thickened peritoneum. Liver flattened and compressed. Kidneys: both show chronic diffuse nephritis, and are studded with emboli. The left is compressed; there are clots in the renal arteries. Coats of the aorta atheromatous. Heart normal.

The second case is that of a woman, aged thirty-two, who was admitted to Bellevue Hospital October 3, 1882. She was anæmic in appearance, even phthisical. For three years she had been an opium-eater. For six months she had had chronic diarrhœa. To gain relief from this, and pain located in the back, running up to the spine of the scapula, she came for treatment. This pain was described as originating in the region of the liver, which was enlarged.

October 13th.—The diarrhœa is relieved, but the pain in the back is greater and attended with dyspnœa. Examination shows flatness, with loss of respiratory murmur and voice-sounds, over the right lung up to the ninth rib, and over the left to an inch above the angle of the scapula. The hypodermic needle introduced brought a small amount of blood-stained serum from the right side, and clear serum from the left. The heart gives a singular variety of murmurs.

[These in their variations were probably all from the aneurism, and none from the heart. Their character changed from time to time.]

The whole left side of the chest receives a forcible heart impulse. A loud systolic murmur, musical in character, is heard at apex, transmitted to the left. The apex impulse is an inch outside, and just above the nipple. A thrill is felt over the pericardium, and over the whole of the pericardial space a friction sound is heard, increased by the patient's bending forward, and not interrupted by her holding the breath.

October 28th.—The fluid is almost gone from the left side. The liver is now much enlarged, its increase in size having been gradual since the patient's admission to hospital. In the mammary line it extends nine and one-half inches, its lower border to an inch below the umbilicus. Posteriorly and in the lateral right hypochondriac region it gives a half-elastic, half-boggy sensation to the hand, as far down almost as the iliac crest.

[Because of this sensation, and because the patient had had diarrhœa of chronic character, the small needle of the aspirator was introduced into the side at several points in right side, in the hope of finding the pus of a hepatic abscess. This was done on several occasions, withdrawing only a trifling amount of blood and without subsequent attendant symptoms. A possible fecal accumulation was eliminated by tentative treatment also.]

November 3d.—The note in the history is that the pulse of radial carotid and femoral arteries is synchronous.

November 7th.—Friction-sounds over heart. Loud systolic murmur; its greatest intensity at the third intercostal space at the left of the sternum, transmitted toward the right. Diminished area of dulness over the liver. This diminution has been constant and gradual since the 3d instant.

November 12th.—A double murmur is now heard along the eighth rib, one and one-half inch each side of the sternum.

November 24th.—A swelling, the size of an egg, found in the back, on right side, at level of tenth rib, obscurely fluctuating. It gives to the hand the emphysematous crackle. The hypodermic needle draws only blood. The patient died this day. The autopsy was made by Dr. Welch, the curator:

"All the thoracic organs are pushed upward. The connective tissue over the pericardium emphysematous. Pericardium contains two ounces of fluid, but no evidences of recent pericarditis. Heart not hypertrophied; no fatty degeneration. Its valves competent, and there is no atheroma of thoracic aorta. Left pleura contains twelve ounces of fluid. The left lung somewhat compressed; the right, pressed upward, was carnified in the lower lobe and contained no air.

"Liver is six inches below the free border of the ribs in the mammary line. The pushing forward of the liver and the arching of the diaphragm gave the impression of great enlargement of the liver. The viscus is much thinner than normal, and a tumor lies behind it, to which it is adherent. The spleen is pressed to the left. The stomach is pressed upward and forward, the intestines downward; the right kidney compressed by, and adherent to, the tumor, the left normal. The aneurism is in the abdominal cavity, just below the diaphragm. Its size is twice that of a normal liver. The aorta enters the superior surface of the tumor just beneath the diaphragm, and issues from it at the level of the first lumbar vertebra. The tumor lies on each side of the vertebral column. Its anterior wall is made up of the coats of the distended artery, connective tissue to which adjacent organs are adherent, and of laminated fibrin. Its posterior wall is formed of the vertebral column, ribs, intercostal muscles, muscles of abdominal walls, and by a layer of laminated fibrin about *five inches*

thick. The abdominal aorta passed along the anterior wall of the tumor, the vena cava lying alongside and not compressed. Just below the diaphragm, half an inch above the cœliac axis, was an opening into the tumor on the posterior wall of the aorta one-half inch wide, two inches long. The wall of the aorta was clearly seen to spread out and be continuous with the wall of the aneurism. This tumor was hard, lined with laminated fibrin, four inches thick posteriorly. It contained ten ounces of clotted blood.

"The bodies of the eighth to the twelfth dorsal vertebræ, inclusive, were eroded. The cartilages were intact. The eighth, ninth, and tenth ribs on the right side were carious—the tenth being entirely separated from the vertebra. Over this point the external swelling which gave the emphysematous crackle had formed."

Dr. E. Darwin Hudson, Jr., remarked, with reference to Dr. Walker's observation concerning the escape of the intervertebral cartilages, that it was also the rule in thoracic aneurism that the costal cartilages remained unaffected while the ribs were absorbed. It is a singular fact, but he thought it of quite common occurrence, and attention had been directed to it by Hayden, and others.

Dr. Kinnicutt thought it could be quite confidently asserted that abdominal aneurism was of longer duration as regarded the life of the patient than thoracic aneurism, a fact which could be accounted for otherwise than by the protection afforded by peritoneal thickening. Such, at least, had been his experience.

Dr. Smith said the point which he wished especially to develop in his paper was the protective thickening of serous coverings in either thoracic or abdominal aneurism. He thought the very fact that it is protective in many cases might make the prognosis unfavorable in other cases; for, if the peritoneal covering is so thick as to protect the sac in one portion, it might allow the sac to dilate more readily at other points, and thus allow it to rupture more quickly unless protected in that particular region also.

In none of his cases was there any evidence of syphilis, and it might be that traumatic aneurism progressed more slowly, and the cases were more prolonged than those which occur with the degenerative changes affecting the blood-vessels due to the specific disease.

Dr. Walker said it seemed to him that thickening of the walls of the aneurism was more likely to be from internal deposit than from thickening of the peritoneum.

Dr. Smith said his paper did not refer to thickening of the inner surface of the aneurism, but simply to those cases which were protected by outside influences.

Dr. Polk asked Dr. Smith if he had any information touching the protective influence on abdominal aneurism exerted by the pressure of other abdominal tumors.

Dr. Smith replied that he had not.

Dr. Polk said the reason he asked the question was because Dr. Gillette recently reported an extremely interesting case of this kind. A woman about thirty years of age had a distinct abdominal aneurism. She became pregnant, and he was seized with the usual anxiety under those circumstances; but as the woman seemed to be getting along very well he allowed the case to progress without interference, and she finally went to term, suffering no inconvenience during her pregnancy, and passed through labor without accident. The result upon the abdominal aneurism was a marked diminution in its size and a marked amelioration of the symptoms, all of which Dr. Gillette attributed to the influence of the outside pressure brought to bear upon the aneurism, very much in the same way as pressure in Dr. Smith's cases from thickening of the peritoneum, although in an entirely different manner, and not so direct.

Dr. J. B. Hunter, as bearing somewhat upon this question, said he would mention the dense covering found in some cases of abscess. He had seen accumulations of pus in the peritoneum which had been there for years probably, and the sac was composed entirely of thickened peritoneum.

Dr. Smith remarked that he did not believe the condition which he had described would account for the long duration of the disease in some cases of abdominal aneurism.

The President queried whether iodide of potassium, the favorite remedy in the treatment of aneurism, exerted any effect in producing this protective influence.

Dr. Smith said that in his two cases there was an injury, and probably the first step of the process was an attack of peritonitis, localized, and the result of the blow. In the case of the woman now under observation there was no history of traumatism at all. The thickening is simply the result of repeated attacks of inflammation.

Infectiousness of Secretions in Purulent Catarrhal Inflammation of the Ear, Eye, and Nose.

Dr. Samuel Sexton said that a considerable number of children under six or seven years of age, especially those attending the public schools, came to his aural clinic at the New York Eye and Ear Infirmary with catarrhal inflammation of the upper air-tract, in which the ears, eyes, and nose were particularly affected, there often being purulent discharge from these organs. The cutaneous surfaces adjacent were frequently found to be the seat of dermatitis, or even of an eczematous eruption, due in part to the irritation of secretions. The dental irritation of this period was often found to be active, and in the run-down, cachectic children of the poor—usually but illy provided for in respect to food and clothing—catarrh of the head is of extremely frequent occurrence. These patients are often sent from one department of the Infirmary to another to receive treatment for the ears, eyes, and nose, and where there is also eczema of skin the distress is greatly increased.

Dr. Sexton asked what the views of members of the Society were in regard to the causation in this trouble; he himself has considered that it was due to the causes mentioned, which are of such general prevalence among the class of children in question, whether attending school or living in institutions, where, like the schools, there was overcrowding, and where hygiene was defective, rather than to contagion or the infectiousness of the purulent matter secreted; at least this seemed to be the case as far as the ears and nose were concerned. He was not informed as to why purulent secretions from the eye, however, were more infectious as regards that organ itself than those from the ear and nose, and would be glad to learn the theories offered in explanation.

Dr. E. G. Loring thought that any secretion from the eye which was purulent was contagious. It was a most remarkable fact that secretions from the ear were not contagious to the eye. Children with otitis media never get ophthalmia, so far as he knew, from becoming inoculated with the discharges from the ear. Probably there is some general condition of the system which favors this contagion.

Iron or Potassa?—Dr. John W. Taylor, of Crawfordsville, Ind., writes: "In The Medical Record of January 9th I notice a communication from Dr. Tipton, which provokes from me the above query. The Doctor ascribes all the curative virtue in the prescription to the iron alone, and leaves the potash and the glycerine out in the cold. Is this fair? Did not Seligmüller achieve the like brilliant results with the saturated solution of chloride of potash alone? If that drug was so efficacious in his hands, is it not possible that it is the curative agent in the prescription given by Dr. Tipton? I think it more than probable. For several years I have used Seligmüller's method exclusively, and have been so well satisfied with its work that I have come to rely upon it with the greatest confidence in every case in which there is sufficient vitality to respond to any treatment."

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 4, 1886.

A. JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. B. F. SHERMAN, of Ogdensburg, was introduced by the President.

DR. M. ALLEN STARR read a paper (see p. 174) on

THE INTRA-CEREBRAL TRACTS,

their physiology, and its bearing upon the diagnosis of lesions of the centrum semiovale.

DR. SHERMAN inquired of Dr. Starr whether physiologists had demonstrated what might be called a thermal centre, to which Dr. Starr replied by mention of the investigations in that direction by Eulenberg and others.

PERMANENT DRAINAGE IN ASCITES.

DR. AUG. G. CAILLÉ related the histories of two cases, and made them the basis of some remarks. About four years ago he saw an elderly gentleman suffering from cirrhosis of the liver, in whom the symptoms depending upon ascites were so marked as to urgently demand tapping and repetition of the operation. He was tapped nine times in the course of seven months, a pailful of serum being removed each time. Before the tenth operation Dr. Caillé determined to attempt permanent drainage, although the danger of exciting a peritonitis or other serious complication was fully appreciated. An incision an inch in length was made in the median line, half-way between the umbilicus and symphysis pubis, a trocar and cannula introduced, the trocar withdrawn and a rubber tube inserted. After withdrawl of the fluid the tube was allowed to remain, iodoform being put upon the dressing at the mouth of the tube, and the fluid allowed to drain and be absorbed by towels. Some eczema developed under the dressing, which disappeared under appropriate treatment.

After drainage had been established the œdema disappeared rapidly, the heart-action improved, the breathing was freer, the troublesome cough disappeared, the bowels became regular, the appetite improved, and the patient became able to go about, wearing all the while the tube. The rubber cannula remained *in situ* about nine weeks, when it was removed, and at the end of another four weeks the opening closed. The patient was able to be about his duties nine months, there being no return of the œdema nor of the ascites. After nine months his strength began to fail, and he finally died of heart-failure. Two weeks before death there was a return of slight œdema of the ankles. At the autopsy were found cirrhosis of the liver and fatty heart. Careful inspection of the peritoneum at the seat of puncture revealed no evidence of inflammation.

The second case was similar, and in addition there was marked purpura hemorrhagica, epistaxis, bleeding gums. The patient had no appetite and was unable to sleep. He was treated as was the other patient, in this case a rubber tube being employed to conduct the drainings from the rubber cannula to a bucket by the bed containing a carbolic solution. The tube was worn for seven weeks; the ascites and œdema disappeared; the appetite improved; there was, in short, improvement in all the symptoms. The patient was able to pass ten weeks with his family in the Catskills, and continued to live a comfortable existence until the spring of 1885, when he died suddenly, as was supposed of heart-failure, when attempting to get out of bed. There was no return of the ascites. An autopsy was not allowed.

In his general remarks Dr. Caillé considered four questions: First, what are the symptoms and dangerous mechanical effects of ascites? Second, how is the collateral circulation established in cirrhosis of the liver? Third, will the absence of intra-abdominal pressure, or pressure from ascites, promote collateral circulation and functional activity of important organs, and thereby prolong life and add to the comfort of the patient? Fourth, how is drainage best accomplished?

After considering these questions the author said he was inclined to believe, from this limited experience, that we need not fear peritonitis so much when ascites is present as under other circumstances. Too much importance, however, should not be attached to these two cases, for the number was too small to judge of the value of this procedure. It was his opinion, however, that it should be given a trial in cases of ascites which required two or more tappings for reaccumulation of fluid.

THE PRESIDENT said it appeared to him that Dr. Caillé had done in these two cases what might have occurred spontaneously. Probably some of the gentlemen present had seen cases of extreme ascites in which spontaneous rupture of the abdominal walls had taken place. He had seen some such cases. The place of rupture was usually in the median line, particularly at the umbilicus. In such cases there was, of course, a permanent fistula established, and instead of allowing it to occur at a spot which was not convenient or pleasant he thought it was better for the surgeon to make the opening where he wished it should be established. There was such a case in the German Hospital the past year, that of a heavy German, in whom spontaneous rupture took place at the umbilicus, allowing of the escape of the ascitic fluid. It healed and reopened several times in the course of a few months. The patient felt so well satisfied with his condition that he left the hospital, but naturally the shrinking liver and swelling spleen still remained.

The President then described a case of encysted ascitic fluid which occurred in his ward in the Bellevue Hospital last year, in which the physical signs were almost exactly those seen in a patient over twenty years ago. In the case seen long ago he made the diagnosis of ovarian tumor, and although post-mortem examination proved his error, he still thought that the diagnosis of ovarian cyst was the only one justified by the signs during life. He had this case in mind when contemplating an operation upon the patient in Bellevue Hospital, yet the signs were so plainly those of an ovarian cyst that an incision was made, when it was found that the fluid was ascitic, limited by adhesions. Permanent drainage was then established for a time, and the patient improved and left the hospital. He had since heard that the fluid had reaccumulated. There was a family history of tuberculosis, and it was probable she had tubercular peritonitis.

After hearing of the operation for permanent drainage in ascites by Dr. Caillé, the President had resorted to it in one case of cirrhosis of the liver in which there were signs of small liver, enlarged spleen, purpura, epistaxis, increasing dyspnœa, etc. The ascitic fluid was drained away through a tube passing between the patient's legs to a bucket. After a time the end of the rubber cannula was closed at night with wax. The patient was much relieved, but, as in all cases of advanced cirrhosis, death must finally ensue, and in this case the patient died of exhaustion not long after drainage had been established. The autopsy revealed no peritonitis. He was convinced that Dr. Caillé's operation was a good one.

DR. GARRIGUES asked a question with regard to the working of a drainage-tube and band exhibited, and DR. MEYER related a case which he thought went to show that permanent drainage might be established when the fluid in the peritoneal cavity contained pus, and that possibly the drainage might be made to take place through the vagina.

DR. LINDLEY raised the question of the medicinal treatment of cirrhosis of the liver, and said that among the Dutch in South Africa a popular remedy was hone taken daily. It might appear absurd, but he said he had tapped a man with ascitic fluid, and an old woman told him to give honey. The patient took a pint of fluid honey daily, and had no further trouble.

Dr. Sherman suggested that some medicinal property of the flowers from which the honey was made might have had the curative effect.

The President said that during the first part of his professional career he was opposed to the use of mercury except for syphilis. But during the past ten or twelve years he had gotten over that prejudice, and he was satisfied that corrosive sublimate given in small doses for a long period of time had a beneficial effect upon interstitial inflammations, whether they occurred as a cerebritis, a nephritis, a hepatitis, etc. He felt sure that it had stopped the progress of interstitial changes in a number of cases; and in patients in whom the disease had affected only a part of a vital organ this drug had the power of checking the progress of the disease and thus of prolonging life indefinitely.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

THE SOCIETIES—INCREASE OF WHITE BLOOD-CORPUSCLES IN INFLAMMATION—SUCCESSFUL REMOVAL OF A TUMOR FROM ROOTS OF LAST CERVICAL AND FIRST DORSAL NERVES—PROSTATIC CASTS—SIR WILLIAM DALBY—THE LONDON TEACHERS AND THE CONJOINT SCHEME—THE NEW M.D.—MR. HUTCHINSON'S LECTURES AT THE MEDICAL SOCIETY OF LONDON—SECONDARY AND TERTIARY STAGES OF SYPHILIS—THE ANTIDOTAL POWER OF MERCURY—THE COLLEGE OF PHYSICIANS AND ST. AUGUSTINE—DR. HEYWOOD SMITH AND THE ARMSTRONG CASE.

The societies have now resumed work since the Christmas vacation. The general character of their proceedings during the last week may be described as somewhat dry, but a few communications were of some interest.

The most noteworthy feature of the last meeting of the Royal Medical and Chirurgical Society was the reading of an elaborate paper "On the Increase in Number of White Corpuscles in the Blood in Inflammation." The paper was based upon numerous and laborious observations made on nearly twenty cases by the author, Mr. T. P. Gostling. The cases included examples of iliac abscess, pelvic cellulitis, empyemas, phthisis, typhoid, acute rheumatism, etc. The author concluded that white corpuscles are increased in number in suppurative inflammations, especially when accompanied by tension, the normal proportion (1 white to 333 red corpuscles) being doubled in many cases; that they are slightly increased in parenchymatous inflammations; and that they are not increased in inflammations accompanied by serous or sero-fibrinous exudation.

After the reading of Mr. Gostling's paper a short discussion took place, mainly as to the source of the additional white corpuscles. Some of the speakers thought they were due to reabsorption of white blood-corpuscles. A little sparring here took place between Dr. Money and Mr. Horsley, the former of whom maintained, and the latter denied, that white corpuscles might be absorbed by the lymphatics. The former is a young physician, and the latter now on the surgical staff of University College Hospital, in which institution they were formerly fellow-students.

The next paper was by Dr. Mitchell Bruce and Mr. Edward Bellamy, and was on a case in which a tumor growing from the roots of the last cervical and first dorsal nerves had been successfully removed. The operation was undertaken in consequence of the growth having caused acute pain and eventually complete paralysis of the arm. Some of the cords of the brachial plexus were found to be frayed out over the tumor, which was sarcomatous in nature. The former acute pain ceased immediately after the operation, but paralysis remained, though this also finally disappeared after persistent use of the constant current. The patient died from hemiplegia more than a year afterward.

At the Clinical Society Sir Andrew Clark related a unique case of acute prostatitis which had been seen by Sir James Paget and himself. During the whole course of the case the urine was found to contain hyaline cylinders and small flask-shaped hyaline masses, which were in some cases connected with the cylinders. The casts were of the same character as those found in the urine in cases of acute nephritis or acute congestion. An important diagnostic point was the presence of flask-like bodies attached to the hyaline cylinders. He regarded these as being probably moulds of the follicles of the prostate. The presence of prostatic trouble, and the fact that the urine was healthy, *plus* a little albumen, were the other conditions favoring the diagnosis of the prostatic origin of the hyaline casts. He had met with two other cases, which were similar but less acute. Sir Andrew Clark's communication evoked a good deal of interest. Professor Greenfield, of Edinburgh, referred to four cases he had met with, in which the urine contained concretions having some of the characters of corpora amylacea. Sir Andrew Clark remarked that in the urine of women he had always found starch-like bodies, and suggested that they might be due to their use of violet powder in the toilet. Urinary chemistry and microscopy, therefore, still abound in pitfalls for the unwary despite many advances. It is not very long since a hospital surgeon made a short communication to one of the medical journals, in which he narrated an experience he had just had. On examining some urine sent to him for the purpose he found some yellow crystals, which at first he supposed to be cystine. After about two hours' work he discovered them to consist of iodoform, and subsequently discovered that the patient's bladder had been recently washed out with a lotion containing some iodoform. The administration of drugs by the mouth is also likely in some cases to lead to difficulties in urinary analysis.

The shower of knighthoods to the profession continues in a somewhat inexplicable manner. Odd reasons have been suggested as to the *raison d'être* of some of them. Had, for instance, the conversion of Dr. James Sawyer, of Birmingham, into Sir James Sawyer, anything to do with Lord Randolph Churchill's recent candidature in that town? The latest medical knight is Mr. Dalby, Aural Surgeon to St. George's Hospital. Mr. —I beg his pardon—Sir William Dalby has produced a very fair book on aural surgery and has actively promoted the oral method of teaching deaf-mutes. I do not know what other claims he has to the distinction just conferred upon him, further than his possessing sufficient money to purchase the practice and house of the late Mr. James Hinton, and keep up the style of a West End fashionable specialist.

The London teachers are in arms against the Conjoint Board, or rather against the severity of its examiners. It is declared that last July eighty per cent. of the students were rejected, that a considerable number of these were really well up, and that a few very ignorant men got through, while in one case a certificate was actually sent to one candidate who never presented himself at all for the examination. In October the standard was dropped somewhat, but not enough, and in the examination now just concluded it has been still further lowered. The questions set by the examiners have been closely scrutinized by the authorities of the two colleges before being accepted. Moreover, meetings of teachers have been held with a view of censuring the conduct of the colleges, and the latter have appointed persons to re-examine the regulations, with a view of bringing them into harmony with the teaching of the schools. I am informed, on the highest authority, that the earlier examinations are likely to be completely remodelled, a majority of the Committee being fully decided to report in favor of such a

thorough change. I understand that the two colleges are fully resolved to follow up the subject of obtaining powers to grant the M.D. degree. Some doubts were felt at one time as to whether the College of Physicians would heartily co-operate, but these are now removed, and I now learn that the College is prepared, should the proposed Royal College of Medicine be formed, to appoint scholars from its own ranks to conduct the Arts examinations for the degree in medicine. This affords an ample guarantee that sufficient academic training will be exacted from the new graduates, as among the fellows and members of the College are many distinguished classical scholars.

The burden of Mr. Hutchinson's second lecture (Lettsomian Lectures "On some Moot Points in the Natural History of Syphilis") was the relationship between secondary and tertiary phenomena. He protested vigorously against the older doctrines that there was an essential difference between them, and that certain forms of disease could be named "secondary" and others "tertiary." Thus it had been considered that visceral lesions, gummata, deep ulceration, and periostitis were characteristic tertiary phenomena. But cases had been met with in which these affections had occurred very early. Mr. Hutchinson cited two in illustration. One was that of a young man aged twenty-one, who was admitted into the London Hospital with the remains of a hard chancre on him, being also covered all over with a papular eruption which was ulcerating in places. He died suddenly, and gummata were found in the testicles, spleen, and heart. Death had been caused by the softening and ulceration of the cardiac gummata. According to the patient, infection had occurred only four months previous to admission into the hospital. Another case was that of a young man, not fairly over the secondary stage of syphilis, who also died of diffuse gumma of the heart. Large visceral gummata, said the lecturer, were common in syphilitic infants who still had secondary eruption present. In adults, it was an everyday occurrence to observe symptoms implying periostitis, transitory nervous affections, or even visceral affections, during the secondary period. Such cases had been explained on the supposition that the disease had run an unusually rapid course. Mr. Hutchinson, however, repudiated this plea, and boldly claimed that there was no lesion whatever which might not happen, and no tissue which might not be attacked, during the secondary period. It was impossible to classify the symptoms as secondary or tertiary according to the tissues attacked. These terms should rather be used as applicable to distinct periods of time. With reference to the early occurrence of so-called tertiary symptoms, the lecturer remarked that the gummata of the early period were small and numerous, while those of the later one were large, and often few, or even single. Those of the early period easily disappeared, either spontaneously or under mild treatment, while those of the tertiary stage persisted and grew indefinitely, unless adequately treated. Speaking generally, it was still true that visceral affections, etc., belonged to the tertiary stage, but this was not constant.

Many things were omitted in the tertiary stage which were common in the secondary, but there were few tertiary conditions which did not find their representatives in the preceding stage. This, said Mr. Hutchinson, favored the view that tertiary symptoms were often relapses, so to say, of the secondary ones. There was a recrudescence of morbid tissue in tissues which had been damaged at a former period. Everything that was tertiary was local in a sense not true of any of the secondary lesions. Thus the tendency to symmetry diminished as time went on, and, except certain nervous maladies, concerning which there was much debate whether they were syphilitic or not, we might say that nothing in the tertiary stage was ever bilateral except by accident.

For clinical convenience, we might recognize an intermediate period during which, in many patients, there was an absolute abeyance of all symptoms. If symptoms should occur after a prolonged period of immunity, they were always definitely of the tertiary class, and almost invariably non-symmetrical, and, if on the external parts, remarkably amenable to local treatment only. As an illustration of this, Mr. Hutchinson cited palmar psoriasis occurring in the tertiary stage. This affected one hand only, and usually that which the patient used most in his occupation; there was usually a single patch of some size, and the condition often yielded readily to the local application of mercurials or of iodoform. The hand often suffered from psoriasis in the secondary stage, but then both palms were affected, and there were usually in each a number of separate circular patches. Such symmetrical and multiple patches were obviously due to blood-infection.

For convenience, we might say arbitrarily that the secondary stage ended with the second year, and that about this period the disease ceased to be capable of spreading by contagion, or of being transmitted to offspring. In many patients the secondary stage (thus defined) ended with the first year, while in a few it lasted beyond the second year. In many persons the stage intermediate between the secondary and tertiary stages was not one of immunity, but was occupied by conditions partaking of the characters of both stages.

Mr. Hutchinson then proceeded to discuss the influence of mercury. He has for many years been a strong advocate of mercurial preparations *given for some time in small doses*. His rule of practice, he said, has been to give a single grain of gray powder from three to six times daily, according to circumstances, and seldom for a shorter course than six months in the first instance. He considers that mercury possesses a true antidotal power. If it were stopped, in many cases a very remarkable proof of its antidotal efficacy would occur. An outbreak of symptoms would often occur within a few weeks of its suspension, showing that it was the mercury which had held the poison in check. Mr. Hutchinson asserted that he had never, in any single case of late years, seen a severe eruption on the skin develop itself after a mercurial course of the kind indicated had been begun. It manifested antidotal power, therefore, in that it could not only remove, but actually prevent, the most conspicuous manifestations of the disease. He could not make so strong an assertion as to some of the symptoms of the latter part of the secondary stage, for he had seen iritis and neuro-retinitis occur occasionally, and even with severity, in cases which had been well treated, and, in exceptional cases, he had observed disease of the arteries of the brain. In, however, a large majority of cases a course of small doses continued, as indicated, for half a year was sufficient for the complete and permanent cure of the disease. No relapses occur and the patients remain afterward in excellent health.

The examination for the membership of the College of Physicians, which began a few days ago, and is now in progress, has afforded the authorities of that body an opportunity of having another fling at Dr. Heywood Smith. The President and Censors examine for the M.R.C.P. In addition to an examination in medicine (written and practical), a certain amount of linguistic knowledge is required. For this purpose extracts from Latin and Greek authors (and of late years French and German ones also) are given for translation. These are mostly taken from ancient medical writers on medicine, but on this present occasion the classical scholars of the college have exercised their ingenuity, and have unearthed a passage from St. Augustine in which the wickedness and impropriety of making examinations of young girls is denounced. Readers of the passage will no doubt take its introduction into the examination paper as a hit at Dr. Heywood Smith, and such it is doubtless intended to be. Such an indirect shot is no doubt ingenious, but scarcely generous while the recipient is still smarting under the public reprimand lately administered to him by the Presi-

dent of the college (Sir Wm. Jenner) in the presence of the assembled Fellows. This was for Dr. Heywood Smith's conduct in reference to the now notorious Armstrong case. In a series of sensational articles, the editor of the *Pall Mall Gazette* (Mr. Stead) had asserted that girls (virgins) could be openly purchased for immoral purposes, and followed up this general assertion by narrating in detail the history of "Lily" Armstrong, who, he said, had been sold by her mother for immoral purposes. It subsequently transpired that Mr. Stead's agents had deceived him, and that the mother had been induced to part with her child under false pretences. Mr. Stead took the child to a midwife for examination as to virginity, and subsequently to a brothel, where he remained some time with her, though for what purpose does not appear, except probably to manufacture material for some more sensational paragraphs. From thence the child was taken to Dr. Heywood Smith's house, where she was again examined (this time under chloroform) by Dr. Heywood Smith, at Mr. Stead's request, with the object, avowedly, of protecting the latter against any charge which might be subsequently brought against him. For examining the girl under these circumstances Dr. Heywood Smith has been severely censured, both by the judge in the recent trial and by the President of his college. It certainly seems unjust and ungenerous to add indirect censures to those he has publicly received. He is widely known as a high-minded Christian physician, and no one doubts that, however imprudently he may have acted, his motives for his conduct in the Armstrong case were at any rate good. I wish all his detractors may be conscientiously able to say as much of their own.

WOMEN AND BEES.

To the Editors of The Medical Record.

SIR: A correspondent, in your issue of January 16th, p. 81, writes as follows: "If we go to the bee for information we find that the same egg, according to its environment, will develop into a neuter gender, the worker; or a fully developed female, the queen bee; or into a more highly developed being, the male or drone." It is to be regretted that your correspondent did not speak sooner, so that our text-books of physiology might have been differently compiled. "Herman's Handbuch," for one, need not then have been so radically wrong. In vol. vi., part 2d, p. 161, of this work, Hensen tells us that among bees unimpregnated eggs are those that produce males. The young queen who has never been fructified, and the old queen whose spermatic receptacle is empty, both produce broods consisting of drones only. We are told, further, that this result, humanly so desirable, is considered a disaster in the bee community, and that efforts to rear a queen by changed environment of the immature drone is then persistently but ineffectually made. Seibold also thought that he had observed that the ova which developed into drones contained no spermatozoa, while in those which developed into females spermatozoa were found. The reason why the impregnated female ever produced drones was, in his opinion, owing to the greater size of the drone's cell, which permitted the entrance of her ovipositor without compression of the abdomen. Into the other cells, on the contrary, she entered with difficulty, and by purely mechanical action semen would be expressed from its receptacle and impregnation occur.

Until the advent of your correspondent, among the bees, at least, the female was not considered an undeveloped drone. Whether her constitution were thereby dwarfed or complicated, she was the product of the egg capable of producing the drone, plus elements from without. The occurrence of hermaphrodite individuals among bees was even supposed to strengthen this view, and it was said that in this case the male development had already commenced before impregnation occurred, and hence its tendency could not be completely changed.

Another point in this connection is also somewhat new. Your editorial of December 2d credits Mr. Terry with saying that the existing and increasing excess of females over males in all the fully settled portions of the country is due to a gradual decline in the strength of the mothers. Quoting again from Hensen: In Europe, out of 5,900,000 births, boys were born in the proportion of 106 to 100 girls; and even during the past year, in this city, there were born 15,534 boys to 14,503 girls, or boys in the proportion of 107 to 100 girls. Evidently Mr. Terry does not live in New York. As you tell us that he has statistics to prove his point, it follows that there is a part of the country where girls are being produced in excess. To the future physiologist this will be an interesting fact.

The proposition that in the case of physical debility in the wife female children result, is another remarkable statement. By coupling this with the statement that the more sickly the wife the more debilitated the children, female and debilitated are made synonymous terms, and yet in a previous paragraph it has been already statistically proven that girls are comparatively hardy, while boys die of debility and marasmus at an excessive rate. Hensen is deficient in this matter also. He makes no mention of woman's increasing weakness as a cause of this disproportionate mortality of baby boys. Apparently he was misled by finding the same tendency among animals, such as the sheep, the dove, and notably among frogs. The brief life of the male insect also possibly had its influence.

Hensen says (p. 208) males predominate where the ova have less vital force. Spermatozoa antagonize this condition; they make the egg "entwickelungsfähiger," and increase the number of females. He says further (p. 168), impregnation has no part in the generation of the embryo. The spermatic bodies but assist or modify its development, and all are familiar with the fact that segmentation occurs in the sterile as well as in the impregnated egg.

Dr. Heitzman has suggested that where the male is developed more spermatozoa penetrate the ovule, and that where the female is developed fewer spermatozoa penetrate the ovule. Hensen takes the opposite position, namely, that more spermatozoa are utilized in the production of the female than the male. The impregnation which results in the male is supposed to occur later in the history of the ovule, while the impregnation which results in the female probably occurs shortly after the ovule's escape. This proposition is in harmony with Thury's law, and with the practice of many breeders. Dr. Heitzman's conclusion is based upon it, his deduction being, that because the ovule is at that time high up, but comparatively few spermatozoa will be able to reach it. Dr. Heitzman, however, ignores the part of the woman in the sexual act. The commonest complaint of the sterile woman is, "Doctor, I do not keep it. Ought I not to keep it? It runs away from me when I get up." The majority of intelligent women know when they become pregnant. This subject is a new one, but peristalsis of the vagina has been established; the uterus is known to contract under reflex stimulation, especially when applied to the anterior vaginal vault; and it only remains to suggest that the diaphragm is in a position to act as the piston of a suction-pump, the force of which would be exerted upon the contents of the uterus through the Fallopian tubes. Experiments showing how soon after intercourse spermatozoa can be found upon the ovaries will be needed to establish this function; but where all is guess-work it seems not improbable that, at least in the conception of girls, the semen is carried mechanically to the ovule and reaches it at an early date. It may be significant that the conditions at the time of ovulation are favorable to a successful orgasm from the general congestion of the parts.

Hensen's view is not opposed by the fact that the drone is longer in the cell and the male is longer in utero than the female. This retention can result simply from greater size. The horse also remains longer than the boy, and the elephant longer than the horse.

If it be borne in mind that orgasm in the woman is, as a rule, reflex, it will be seen that Hensen's view is not opposed even to the apparent action of Mr. Terry's law.

Hensen's view is also favored by the facts brought out by Dr. Stockton-Hough (*Am. J. Obst.*, February, 1886), namely: That illegitimate children are more frequently girls; that first children are often girls; that conception follows more closely upon marriage, as a rule, where a girl is conceived; also, that female births succeed one another more quickly than male births do. Each of these facts would be completely explained were it assumed that the mother was in a more responsive condition at the time of the intercourse from which the girl was conceived, and Dr. Hough's elaborate deductions would be rendered unnecessary.

Mr. Terry's explanations and Dr. Stockton-Hough's explanations will, however, undoubtedly carry weight, and if they are to result in facilities for the better physical development of any future mother, the present writer will not oppose them. She will simply call the attention of these reformers to a field for work. A contributor to the February number of *Harper's Monthly* tells us that manual training, such as wood and metal work, is being added to the common-school course for boys, and that sewing is being introduced in girls' schools in all grades. It is reported that the boys who formerly would break down toward the close of the term, now go through the year without suffering in health. It is not said what effect the sewing is having upon the girls. Being, as we have seen, pretty hard to kill, they will probably not break down, but will come out with but an exaggeration of the weak voice and the narrow flat chest of the present American girl. To make a seamstress they will have spoiled the mother of future men. If he thinks it over, Mr. Terry will realize that it is not deficient passion in the mother, but deficient breathing-room that cripples his boys. Their nourishment fails, not because her mammary glands are defective, but because her blood cannot furnish the materials from which milk is made.

Would it not be better to keep the sewing out of the schools and to put in its place singing, or something else which will increase instead of diminishing the working capacity of the chest? Properly clothed the girl can handle the plane and use the hammer with as good a result, so far as health is concerned, as the boy, and with as much pleasure in the work.

I will but add an extract from a letter recently received. I will explain that this letter is in the line of this discussion, as it has to do with the disposal of one or more of this surplus female population concerning which complaint has been made. The letter is from a woman, a recent graduate of medicine, and is dated from Bombay, India, where she went about six months ago on her own responsibility, and without promising allegiance to any missionary board. The letter reads: "I have safely arrived in Bombay, as you see, and like the city and climate very much. I find plenty to do. When I arrived here I had used nearly all my money up on the journey, but I soon got patients among the Europeans, although there are already two other women physicians here. I am now able to pay all my expenses, with carriage hire, etc.; but I learn that even here I do not do as well as I might up in the interior of the country. I think that others would do well here. Lady Dufferin is raising a fund to help women physicians to come to India. She can be written to as Her Excellency the Countess of Dufferin, Government House, Calcutta, India. In making an application, testimonials should be sent."

Mr. Editor, with your permission, I will sign myself,

A WOMAN.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from January 31, 1886, to February 6, 1886.

BROWN, H. E., Major and Surgeon. Granted leave of absence for six months on surgeon's certificate of disability, with permission to leave the Department of the Missouri. S. O. 29, A. G. O., February 4, 1886.

VICKERY, RICHARD S., Major and Surgeon. Assigned to duty in connection with the Army and Navy Hospital at Hot Springs, Ark. S. O. 24, A. G. O., January 29, 1886.

WHITE, ROBERT H., Captain and Assistant Surgeon. Granted two months' leave of absence, to take effect when his department commander may think proper. S. O. 29, A. G. O., February 4, 1886.

CHAPIN, A. R., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Robinson, Neb., and ordered to rejoin his proper station, Fort Laramie, Wyo. S. O. 11, Department of the Platte, February 2, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 6, 1886.

BABIN, H. J., Surgeon. Ordered to U. S. S. Vandalia.

DIXON, W. S., Surgeon. Ordered to Marine Rendezvous, New York, to relieve Surgeon Babin.

WHITING, ROBERT, Passed Assistant Surgeon. Ordered to U. S. S. Vandalia.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 6, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
February 6, 1886	1	6	52	2	7	89	5	0
Deaths.								
February 6, 1886.....	1	2	14	2	1	31	1	0

A CURIOUS CASE OF HICCOUGH.—Dr. Charles Liégeois reports a case of singultus occurring suddenly after mental excitement in a woman, and continuing day and night for over three weeks. Milk and bouillon which were given for nourishment were retained on the stomach. Various remedies were given without result, until, on the twenty-fourth day, Dr. Liégeois ordered large doses of chloral and hyoscyamine. During the sleep which followed the hiccough ceased, but returned as soon as the patient awoke. From this time it gradually became less troublesome, and finally ceased entirely, except for short periods following some mental excitement or the ingestion of food. Some months later an abscess appeared in the right epigastric region, and from the opening formed nine needles were extracted. From that time forward the patient was entirely freed from her attacks of singultus. She maintained that she had no idea how the needles had entered her body.—*Journal d'Accouchements*, December 30, 1885.

THE DEATH-RATE AMONG THE RICH IN LONDON is from 12½ to 25 per 1,000. Among the poor it is from 25 to 35½ per 1,000. The average duration of life of the well-to-do in England is 55 years; among the artisan class at Lambeth it was 29½ years.

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Original Articles.

BACTERIOLOGY AND THE GERM THEORY OF DISEASE.

BY JOSEPH LEIDY, M.D.,

"Nature is infinite, and yet every part of Nature most wonderful in the least of her creations." Truly no more fitting motto could herald the introduction to a subject which has of late seemed to grow in directly inverse ratio to the size of the objects it considers, and which leaves us to-day, after the accumulated evidence of centuries of observation and of painstaking work, just within the vestibule of a science with illimitable vista and boundless possibilities. Hinted at for many years by those whose genius or study lifted them above the plane of their scientific colleagues, it was met by ridicule, scorn and derision, rather than by argument and reason. Facts and theories were alike discarded as being totally unworthy of consideration, much less of belief, and the advanced skepticism of the day did not allow its votaries to entertain the possible truth of a doctrine which seemed, on the face of it, to have so little in its favor.

That the process of evolution, after having through many, many ages continued its undeviating, harmonious action for the highest development of its primitive forms, should have resulted in such an example of perfection as the human body, with its manifold wonders of mechanism and tissue change, was to the scientific mind evidence of the potency of a divine and simple law; but, until within the last few years, these same minds were not prepared to see the completion of that law in the return of the body to its inorganic elements through the restless activity of bodies whose dimensions are almost more than microscopic, and whose organism presents a simplicity of structure which ranks them with the lowest types either of animal or vegetable life.

To us, as physicians, the subject possesses an interest greater by far than the love with which every student of nature follows the new revelations of her mysterious processes. The medicine of the future, as has been well and wisely said, shall find its proper study in the prevention rather than the cure of disease, and we cannot remain indifferent to a study whose aim it is to show that many of the most disastrous morbid processes are so intimately associated with the growth of microscopic life, that we are as yet uncertain of the exact relation between the two. We are not in position to deny that the germ is the cause of disease, but we are not more able to absolutely prove such causal connection, and the most that has been gained for the present is the proof of the frequent, in some cases, constant, coexistence of microscopic organism, and some definite diseased condition.

It is always a matter of interest to trace from their earliest beginning the various steps through which any department of science has reached that degree of completion which makes it serviceable to man; and it would, perhaps, well repay us were we to devote our attention to this part of the subject; but the time is limited, and we are far more interested in what may be called the practical acquisitions—those parts of it which have already passed beyond the domain of speculation and now have secured a firm basis of fact—which are already employed in the detection and cure of disease, or give promise of being thus employed. But no study of the germ theory of disease, or of bacteriology would be complete which would omit a grateful mention of the names of Pasteur, of Lister, Tyndall, of Davaine and Koch. It is not that to these illustrious men is due the only credit, but their names stand out pre-eminently, and will ever be associated with this subject when many others, whose steady application and laborious plodding have contributed so much to its successful unravelling, shall have again been veiled in obscurity.

There seems to be but little relation between the preventive vaccination against *rabies* or *anthrax* and the laws of crystallization of chemical salts: the one being a purely physical process, the other dealing with the most intimate changes of living tissue, the hidden chemistry of the body; and it would have been a more than prophetic vision that would have declared, forty years ago, that there should grow from the laboratory of the Paris school a vast field of study with no lower aim than the successful solution of the causes of disease, and the no less successful discovery of a cure. It was at that time that Pasteur was making his studies of the paratartaric acid; it was at that time that he found that solutions of this salt could, under given conditions, be made to yield two kinds of crystals, one of which deviated the plane of polarization to the right, the other to the left; it was then, also, that he discovered that the introduction into the solution and the multiplication there of microscopic organisms would leave the solution entirely barren of *one* of these salts, which had evidently served as nutriment to the rapidly increasing organism. It was shown to be a constant phenomenon, and by thus first calling attention to the selective agency of these little organisms, it laid one of the great foundation-stones for the subsequent structure.

This discovery was followed, not long after, by the no less important one of the acetic ferment, the ferment of wine, of beer, of lactic and butyric acid. The idea first suggested was quickly followed out, and surprising changes effected by the discoveries in some of the most important and profitable industries of France. The wonderful results that followed the detection of the silkworm disease were not unimportant in their bearing on our subject, since they showed that a disease of the parent, due to the introduction of a living parasite, would manifest itself in the offspring by symptoms of impaired and rapidly-failing vitality.

At the same time that France was showing such remarkable advance in scientific inquiry, Lister, across the Channel, was pursuing a line of study widely different, to all appearances, yet leading to the same result. The process of fermentation in its relation to the development of micro-organisms, and at the same time to the development of unfavorable conditions in open wounds, occupying such a leading part in hospital management, was certainly not an unworthy subject of research. The work of Lister, as it bears upon the so-called antiseptic method, is really part of the medical gospel of the day. No text-book omits the mention of his name, and while increased experience has clearly shown the inutility of many of the details of his complicated method, the underlying principle stands fast as the great triumph of modern surgery. The exaggerated and overscrupulous care in the management of all solutions of

[1] Read before the [illegible] Medical Society.

continuity was necessary, perhaps, to arrest the attention of surgeons and of the general profession to the hidden danger that lurked in every breath of air, and it was reserved for Tyndall to clearly demonstrate the myriads of living forms that travelled in every sunbeam.

There followed then the fruitful studies of Pasteur and Davaine on septicæmia, and the researches of Koch on traumatic infectious diseases. Their bearing on the present aspect of the science cannot be overestimated; they furnished proof of undoubted connection between the disease that was consuming the organism and the parasite that was always found in the diseased tissue; they made the cultivation-experiments, and from their purely artificial cultures obtained the same results as those which followed the inoculation of the virus, clearly establishing the identity of the organisms under both conditions.

There is even a more remarkable tie that binds our present subject with one of older date, also seemingly widely apart from any such delicate manipulations. The discovery of the aniline colors may be really said to have given the greatest impetus to labors that, without their use, would have proved, almost certainly, barren of result; and again we find verified, in this particular, a saying of Waldeyer, that advance sin histology are marked by the introduction of new coloring matters, and the ultimate anatomy of any tissue is finally revealed to us through the agency of *the* particular staining fluid for which individual details have a greater or less affinity. To-day, with many other means of research at command, the peculiar reactions with different aniline dyes constitute an important element in the distinction of micro-organisms resembling each other in nearly all other particulars.

It is not our province to speak of the methods of cultivation, nor of the facts revealed in this way; and we enter at once upon the proper consideration of what is meant by bacteriology. To define it by an almost similar term, it is the science which treats of bacteria; and *bacteria*, according to the definition of Dujardin-Beaumetz, "including in this word all the microbes or figured ferments, are certain minute living forms, placed on the confines of the animal and vegetable kingdoms." At the present day the general view is to regard them, as first suggested by Cohn, as vegetable organisms. To simplify their study many schemes of classification have been suggested. The first and very incomplete one of Ehrenberg has been entirely discarded, and the view of Nägeli and Barry, that they were moulds, is at variance with that of Cohn, who regards them as more closely allied to the algæ than the fungi. The very elaborate classification of Cohn, resting upon a purely morphological basis will, in all probability, not hold for many more years; and until we shall know more of the so-called life-conditions, the circumstances which favor or retard their growth and reproduction, it will be impossible for us to give this microscropic world a comprehensive and rational scheme, like that which governs our study of other branches of natural history.

At the very outset, we encounter divergence of opinion on a most important point, as to the resemblance of parent and offspring—Klebs upholding the view that such resemblance always exists, Cohn holding that many different forms, depending for their individuality on surrounding circumstances, may owe their origin to the same parent. The physiological basis, that which treats of these bodies in reference to the results of their activity in and outside of the body, is the only one that offers itself as satisfactory, but our knowledge is too limited to enable us to make from this a comprehensive scheme.

Morphologically, Dujardin Beaumetz, whose valuable contribution has furnished much of the material of this sketch, recognizes six forms: (1) Monad, micrococcus, or moner, immobile point-like microbes, often regarded as spores. (2) Bacteridia and bacillus, immobile linear microbes. (3) Bacteriens, cylindrical mobile microbes, the end rounded, or the body indented in the centre, so as to form a figure of 8. (4) Vibriones, eel-shaped, undulating, mobile, and flexuous microbes. (5) Spirilla and spirochetæ, corkscrew-like, spirally moving microbes. (6) Capitated microbes, *bacterium capitatum*, being mobile rods, with one or both extremities long, globular, and more refractive than the rest of the body.

This classification has reference to the cells as seen singly or in very limited numbers, when aggregated so as to form colonies there are distinguished four forms:

1. Torula, in the form of a necklace, composed of micrococci.

2. Leptothrix, made up of bacteria, clustered end to end.

3. Mycoderma, immobile, composed of bacteria in sheets.

4. Zoöglœa, being masses of bacteria, immobile, inclosed in a sort of jelly which holds them together.

Pasteur again has divided into two grand classes all these little organs, the aërobiens, which are not ferments and require the ready access of free oxygen, the anaërobiens, or ferments which abstract from their culture-medium the oxygen necessary for their life, thereby giving rise to the fermentative changes, or decompositions; because in fermentation the resulting compounds are always simpler in chemical composition than the parent substance, liquid or solid. This theory as to the action of the ferments has, however, received some very severe shocks, and can no longer be deemed secure. Thus it was shown that in the fermentation of sugar the resulting products, alcohol and carbonic acid gas, etc., contain together as much oxygen as the sugar; moreover, purely artificial chemical action, as of an acid, will produce alcohol from sugar in the same way. In addition, too, to this, the process of fermentation always goes on most readily where there is abundance of oxygen admitted, so that large, flat vessels with considerable surface-exposure yield the best results. This should not be the case were the attraction of the oxygen of the culture-fluid for the bacteria of fermentation greater than that of free oxygen.

It is under the name suggested by Nägeli, "schizomycetes," that the bacteria which stand in an immediate relation to morbid processes in the human economy are now most generally known. The nature of this relation has not as yet been determined in any case, though it constitutes the key to the entire question. The schizomycetes are nearly all possessed of the power of independent movement, which is in some cases very rapid. Mühlhauser has measured it for the spirilla, and found it to equal one-third of a millimetre per second. Like nearly all other lowly-organized forms, they move toward light and air. The movement in many of these organisms is effected by a sort of cilia or flagellum, attached to one or both extremities, the mode of progression being usually by alternate flexion and extension of this process or of the entire organism; in the case of the spirilla by a helicoid rotation.

In the process of multiplication we find their numbers increase by simple fission. The parent organization divides into two parts, which may, or may not remain joined together, and each of these then undergoes a similar subdivision. When the separation does not occur, a number of single segments are united in a long chain, forming what is known as strepto-coccus or strepto-bacteria. In some cases, particularly where growth is very rapid, multiplication takes place by spores; when only one or two of these are formed, they are usually situated near the extremity of the parent organism and sometimes produce a sort of bulbous enlargement; if more numerous, they may be found throughout the entire length, and have under these circumstances given rise to the mistaken conception of a number of micrococci joined together. The spores seem to possess much greater powers of resistance than the parent; neither alcohol, boiling heat, nor compressed oxygen interfere in any way with their vitality.

These asexual spores or "corpuscle germs," are most prone to develop in just those conditions which render

the direct multiplication by fission difficult or impossible; and they thus, in a measure, constitute a safeguard against the extinction of the species.

The influence of temperature on the life processes of bacteria is most marked. Nearly all of them are destroyed in a very short time by high temperatures.

Koch and Wolffhügel, as the outcome of a number of most carefully conducted experiments, report the following conclusions:

1. Bacilli without spores are incapable of withstanding the influence of an atmosphere heated to 100° C. for one hour and a half.

2. Spores of the fungi require for their destruction a temperature of 110°–115° C. (220°–230° F.) continued for one hour and a half.

3. Spores of bacilli are only destroyed by remaining for three hours in an atmosphere heated to 140° C. (284° F.).

4. In a heated atmosphere the heat enters the objects to be disinfected so slowly that after exposure to 140° C. (284° F.) for from three to four hours, objects of moderate dimensions, such as a bundle of clothes or a pillow are not yet disinfected.

5. The application of such a heat, 140° C. (284° F.), for three hours or more, as is necessary for complete disinfection, is more or less injurious to most textile fabrics.

In another essay of the same collection it is stated that in all cases where heat is at all applicable as a means of disinfection, the method of employing steam and closed apparatus is much to be preferred to any other method. Generally, as stated by Dujardin-Beaumetz, the bacteria are destroyed by a temperature of from 144°–160° F.

The bacteria do not flourish equally well in all culture-mediums, and the differences in this respect have frequently been relied upon, where other criteria were absent, to decide the question of the unity or dissimilarity of otherwise similar forms. It has been argued that the same parasite will at all times thrive equally well upon the same kind of sustenance, and that, other physical conditions being the same, the results in culture experiments should be the same. Reference has already been made to the splitting up of paratartaric acid, and instances might perhaps be multiplied to show that if a given solution be prepared containing the proper food of a certain bacterium, and many other substances in addition, only that substance will be consumed for which the affinity of the organism is well established. Quoting from Dujardin-Beaumetz, "the differences between the respective living ferments, such as the alcoholic, tartaric, and acetic, etc., are of just this character, that each, according to its own constitution, thrives on some particular nutrient ingredient, which it assimilates and disassimilates at will, while it dies in another medium not suited to *it*, but which is perfectly suited to some other ferment organism. In like manner the pathogenetic action of the schizomycetes is limited to this power of organic disintegration, in which they act the parts of ferments in furtherance of their own nutrition."

It is not long since that Brieger discovered in the human cadaver a number of organic alkaloids to which he gave the name of Ptomaines, and which he found to possess the greatest virulence, and to resemble in chemical reaction many of the more powerful vegetable poisons. Now it has been found that such ptomaines are formed where bacilli are undergoing rapid proliferation, and the theory has been advanced to harmonize many antagonistic views, that the bacterium is the cause of disease through the intervention of the ptomaine, which is itself the product of the bacterium. This theory would explain many experimental results, such as those of Rosenberg in pyæmia, where a culture-fluid was artificially filled with bacteria, the fluid carefully filtered, the filtrate found to be devoid of living organisms, and yet when injected hypodermatically this same fluid was found to be as potent in the production of the characteristic changes of pyæmia as though the specific micrococci had been present. It would be easy to determine which of the two—the bacteria or its soluble product—is the cause of disease, were it possible to isolate the two completely; we can obtain the pure ptomaine in solution, but we cannot conceive of the bacterium freed from the ptomaine. Were we to accept this theory, we could also explain satisfactorily the results obtained by Koubasoff "on the passage of pathogenetic microbes from the mother to the fœtus, and their occurrence in the milk. He has formulated the results of his experiments in a note recently addressed to the French Academy of Sciences as follows:

1. Bacilli of charbon, of rouget, and of tuberculosis, when inoculated into a recently delivered female pass into the lacteal secretion.

2. When they have once appeared in the milk they remain there to the end of lactation and to the death of the mother.

3. Fœtuses nourished with milk containing the bacilli of charbon, of rouget, or of tuberculosis do not take the disease, and remain alive even when their mothers die of the disease.

4. The passage of microbes from the mother to the fœtus probably depends upon the existence of direct communication between the maternal and fœtal vessels in the placenta. It would not require the entrance of the formed organism to produce the fœtal disease, if, according to the view above indicated, a soluble poison passed with the nourishing blood by osmosis through the vessel-wall.

Bacteria of various kinds are constantly found, not only in the earth, air, and water surrounding us, but in all cavities of the body itself, and one enterprising observer, Stahl, found only twenty-five different and distinct forms of micro-organisms in the intestinal contents, including several varieties of mucedo, yeast, micrococci, and bacilli; and the author seriously states that if he had only tried he would probably have found several more.

I do not propose to enter into a separate and detailed study of the single diseases in which bacteria have been found to play a rôle; such a course would lead us far beyond the legitimate limits of this paper, and it will suffice to enumerate anthrax, chicken-cholera, the swine plague, hydrophobia, pébrine of silk-worms, flacherie of silk-worms, septicæmia, pyæmia, puerperal fever, malarial fever, recurrent fever, pneumo-enteritis of the hog, small-pox, glanders, sheep-pox, measles, scarlet fever, erysipelas, yellow fever, typhoid fever, cholera, croupous pneumonia, gonorrhœa, syphilis, diarrhœa and dysentery, ulcerative endocarditis and tuberculosis, to show that the list embraces quite a respectable part of those diseases which are of almost daily occurrence, and come under daily personal study. For a few of these, as for chicken-cholera, anthrax, and tuberculosis, the association of the bacillus and the diseased process is fairly proved; but for the others, a weight of most conflicting testimony can be gathered. I cite only two examples, syphilis and pneumonia. The idea of the parasitic origin of syphilis was strongly upheld by Lostofer, of Vienna, some twenty years ago, and it again falls to the lot of Vienna to claim the discoverer of the modern germ. On the 12th of November, 1884, Lustgarten reported to the Imperial Society of Physicians his discovery of the bacillus of syphilis; and subsequent researches seem to have confirmed its existence, if not its specificity. Such confirmatory evidence was furnished by Doutrelepont and Schütz, Lustgarten's later studies, by Giacomi, and finally the test-experiment of Babis and Leloir, which showed the presence of the bacillus in microscopic sections of chancre, mucous patches, and in the secretions from syphilitic sores, properly dried and stained.

No cultivation experiments to determine its specific identity had as yet succeeded, when Alvarez and Travel undertook a series of researches in the laboratory of Cornil. They examined a number of sections made from eight cases of syphilis (five hard chancres, two mucous

patches, and one gumma), and were not able to find the bacillus; and in twenty-two cases out of fifty-five preparations of syphilitic secretion the result was negative. Moreover, they discovered bacilli like the syphilis bacillus of Lustgarten in a number of non-syphilitic secretions, in cases of soft chancre, of genital herpes, of pemphigus of the thigh, and more especially present in the smegma. This bacillus of smegma has also a great resemblance to that of tuberculosis, especially in regard to its reaction with staining fluids. It differs from it in being thinner, less granular in aspect, frequently having an S-shaped incurvation, and in its polymorphism. Like other experimenters, Alvarez and Travel have not been successful in obtaining cultures.

We have here two opinions, or rather observations, that flatly contradict each other, on a subject that is constantly being most thoroughly studied. How is it with pneumonia?

In 1883 Friedländer described his micrococcus of pneumonia, or pneumococcus, as being a body of elliptical form and giving certain reactions with fuchsine and gentian violet In later publications he lays less stress on the form of the microbe, and attaches a pathognomonic value to a sort of mucous capsule which surrounds it, and which, he says, is always present in the microbes of frank or fibrinous pneumonia, but not present in other forms of pneumonia, where we may have micrococci but no capsules surrounding them. He even describes empty capsules, from which the coccus has escaped. And now comes Dr. George Sternberg, probably the most competent authority on the subject in this country, and sums up the data of a rather lengthy but interesting article as follows:

"The pneumonia-coccus of Friedländer is identical specifically with the micrococcus previously described by me, and which is commonly found in normal human saliva. The capsule, or mucous envelope, which sometimes surrounds this micrococcus, described by Friedländer in 1883, and photographed by me two years previously, *cannot* be accepted as a distinguishing character of this species, inasmuch as it is not constantly present, and the circumstances upon which its development depends have not been accurately determined. It is established that it is a pathogenic organism, so far as certain lower animals are concerned, and that its pathogenic power varies under different circumstances. It seems extremely probable that this micrococcus is concerned in the etiology of croupous pneumonia, and that the infectious nature of this disease is due to its presence in the fibrinous exudate into the pulmonary alveoli."

But this cannot be considered as definitely established by the experiments which have thus far been made on the lower animals. The constant presence of this micrococcus in the buccal secretions of healthy persons indicates that some other factor is required for the development of an attack of pneumonia; and it seems that this other factor acts by reducing the vital resisting power of the pulmonary tissues, and thus making them vulnerable to the attacks of the microbe. This supposition enables us to account for the development of the numerous cases of pneumonia which cannot be traced to infection from without. The germ being always present, auto-infection is liable to occur, when, from alcoholism, sewer-gas poisoning, crowd poisoning, or any other depressing agency, the vitality of the tissues is reduced below the resisting point. We may suppose, also, that a reflex vaso-motor paralysis, affecting a single lobe of the lungs, for example, and induced by exposure to cold, may so reduce the resisting power of the pulmonary tissue as to permit this micrococcus to produce its characteristic effects.

Again, we may suppose that a person, whose vital resisting power is reduced by any of the causes mentioned, may be attacked by pneumonia from external infection with material containing a pathogenic variety of this micrococcus having a potency, permanent or acquired, greater than that possessed by the same organism in normal buccal secretions; the author then supplements these statements with a number of experimental observations to show the identity of the two organisms. It must be clear from this that the micrococcus cannot be the determining cause, and if it be not, what have we gained from our knowledge of its presence? Many means have been devised to protect, if possible, the human body from the malevolent agency of this specific micro-organism, which enters, none knows how, and which does such grave and irreparable mischief. Experiments have multiplied without limit to illustrate the remarkably effective action of the various antiseptics, and while one has extolled bichloride of mercury, and another carbolic acid, a third has found in sunlight a powerful germicide. It is not easy to see what benefit the profession is to derive from the fact that a solution of bichloride of mercury, in the strength of 1 to 20,000, poured over an artificial culture of bacteria will arrest their further development. It would be rather uncomfortable, aside from the actual difficulties of accomplishing this result, to move about continually in a *nebula* of bichloride spray, as though every man were his own atomizer.

To the indefatigable, indomitable spirit of Pasteur we are again indebted for the only results worthy of mention in this direction. Triumphing over physical difficulties which would in another have constituted a crushing blow to all energy, he has lived to see the closing years of his life equalling, if not surpassing, in their usefulness, any former period of his existence. The method of vaccination with attenuated virus has astonished the entire scientific world by the accuracy and trustworthiness of its results. The pasture-field of Mélun was the Austerlitz of his scientific labors; the results obtained in the case of charbon were further strengthened by the successful vaccination against chicken cholera, which preceded them only a short time, and as third in the list we have the verdict of a commission of inquiry, appointed by the French Academy, that the report of M. Pasteur, as to the successful vaccination against rabies, is in every way satisfactory, and amply borne out by experiments submitted to the commission. Any one of these achievements would have sufficed to fill the measure of an ordinary life; taken together with his previous work, they constitute a record of devote l usefulness that few, if any, have ever equalled, and whose practical value each succeeding age will the more fully appreciate and honor.

It was slightly in the nature of a disappointment to read over the lengthy report of the proceedings of the second Cholera Conference held recently at Berlin. Scarcely any new developments have attended the studies of the past twelvemonth. A very large part of the discussion was taken up by Koch's refutation of the attacks of Finkler, Prior, and Klein. It was only natural that the bacillus dinner of the last-named observer should have wounded the sensibilities of the genial patron of the comma-bacillus, and should have led to a reassertion of priority in the discovery, as well as of the authenticity of previously asserted facts. It is a point of some significance that Koch himself admitted a doubt as to whether there was any permanent form of the cholera bacillus.

It would seem that his argument was not entirely convincing, for von Pettenkofer still adhered to his old view, that the bacillus could not be the cause of the disease, as proved by the history of various epidemics; that cholera was not in any sense contagious, and that the rise and fall in the level of the subsoil water were points of great importance in determining the occurrence and severity of epidemics.

In rejoinder, Koch stated that direct contagion was rare, but that germs required clothing or some other material to perfect their growth before becoming noxious. Virchow also opposed the doctrine of direct transmission to man from the soil, as in the case of malaria, and sug-

gested as a sort of compromise that bacilli might grow in the earth, in agar-agar, and soiled clothing.

Nor was there any new feature brought out with reference to prophylaxis. Koch advocated disinfection of clothing, careful cooking of food, cleanliness, and the free use of carbolic acid, which seemed to him the best disinfectant. Von Pettenkofer cited the history of the epidemic of 1836, very mild in its character, during which scarcely any precautions were taken by the people of Munich and Bavaria in general, as the disease was then regarded as non-contagious, and he did not see any cause for anxiety, even though thorough disinfection could not be carried out.

In a communication made to the *Progrès Médical* of last year, Babis states that in nine cases examined by him the comma bacillus was found almost every time in the fæces and in the material taken from the surface of the mucous membrane of the intestine. Artificial cultivations were made after the method of Koch, and on gelatinized plates, and it was found that the development begins at a temperature of 70°, fifteen to eighteen hours after the beginning of the experiment. After twenty hours we find the characteristic appearances. In the development the following appearances are easily recognized with a magnifying power of ten diameters: In the centre there is a point formed by a mass of dust, around it a first granular circle, and outside of this a second, more clearly defined, more granular circle. Between these two circles the gelatine is liquefied, probably the result of the chemical changes due to the bacilli.

These cultures have a more yellowish appearance than the cultures of other microbes of the fæces, they are more transparent, their circles are larger, their central point smaller. After thirty hours several cultures unite, and finally become entirely fused, the regular outline is lost, the gelatine is partially liquefied, and little flakes float in it If we inoculate a gelatine tube with platinum the culture appears two days later as a grayish mass, with excavated granular surfaces, conical in shape, the apex directed toward the base of the tube, with a whitish globular prolongation at its tip. If the gelatine be very concentrated, a bubble of air will always form at the surface, and the characteristic form appears below.

Cultures were also made on milk, coffee, meat, carrots, vegetables, eggs, bouillon, and potatoes. The bacillus does not grow on fresh, boiled, or dried fruits, on acid liquids, on beer or wine, on preserves containing but a small amount of liquid, on cheese, on salt or smoked meat. The bacilli, when dried on a slide, die after twenty minutes. Unless the culture-medium be thoroughly sterilized the bacillus develops badly or not at all.

By using agar-agar in place of gelatine, cultures can be obtained in ten hours, but these are less characteristic than the gelatine plates. Beef serum gives opaque, globular, but still characteristic cultures. Distilled water is not a favorable culture-medium, as neither bacilli nor other effects of inoculation are apparent after twenty-four hours.

In liquefied gelatine we find that after twenty-four hours the bacilli are animated, and perform very decided movements, oscillatory in character, like those of spermatozoa.

In regard to morphology, we find that they are readily colored by diluted methyl-violet (1 part to 200). After ten hours on agar-agar, the culture-bacilli, though smaller than the fully developed organism, are already curved. After twenty hours we find bacilli measuring 0.4 mm. to 0.5 mm. in thickness for 1.5 mm. in length. It is particularly by adopting this device that the bacillus looks like a comma with concavity and convexity; one end is often thrown upon the end of the next adjoining bacillus, so that the two frequently remain joined like the letter S.

I would especially refer to one sentence of this admirable description. "Unless the culture-medium be thoroughly sterilized the bacillus develops badly or not at all." Where in nature do we find sterilized media? What collection of water affords, under these conditions, a favorable nidus? For, according to Koch, it is the pollution of the water which is the principal cause of the spread of epidemics; and I refer just to this one instance to point out how little has been gained of the natural laws of life of these organisms, when left to those surroundings which nature has given them. Neither the soil, nor air, nor water are ever sterile, and yet, if we are to accept the bacterial origin of cholera, we must look to one of these as the temporary abode of the organism, where its development and multiplication occur.

In the introduction to the one hundred and first volume of his celebrated *Archiv*, Professor Virchow, in an article entitled "The Struggle of the Cells and the Bacteria," says: "The intellectual movement is now so active, the number of new questions daily coming to the surface so great, the multitude of experiences of all kinds so confusing, that it might seem indicated to issue a new watchword, to point the direction according to which this colossal accumulation of material shall be arranged." Referring to the tendency of all scientists to subvert every other doctrine to the action of physical and chemical forces, a doctrine which prevailed about forty years ago, when the *Archiv* first appeared, he says that then particular courage was necessary to think of life as something apart from purely physical or chemical processes. Further on we find the following: "It matters little what the explanation, if any, that some later day may bring of the ultimate cause of life on a physical or chemical basis; plants and animals, cells and tissues will still have to be acknowledged to be peculiar arrangements of complicated structure, entitled to be considered and judged of according to their own proper individuality." "The hereditary character of life is now the basis of every system of biology." "The natural consequence of the studies in cellular pathology was a certain personification of the cell." Speaking of the enthusiasm created by the discoveries of organisms in such processes as the muscardine disease of silk-worms by Bassi in 1835, the parasite of favus by Schönlein in 1839, of muguet by Vogel in 1841, of anthrax by Davaine, Pollender, and Brauell in the period from 1854 to 1857, of variola and vaccinia by Keber in 1868, and of recurrent fever by Obermeier in 1873, he says, and says well, that a number of youthful explorers at once entered upon the field, and soon the world was full of remarkable discoveries from this *terra incognita*. Each new species was promptly heralded and three questions always came up for answer. First, there was the question as to the actual discovery of the parasite; secondly came the study of its mode of life; and thirdly, most difficult of all, how does it produce the disease? This third inquiry always brings us back again to the old pathology, and the cellular doctrine, of which Virchow can justly speak with pride as his creation, again asserts its right to the foremost rank.

"The proof of specific organisms is still wanting for a whole series of diseases, particularly for those which are most common, infectious, and contagious. And were this proof given, it would be but the first step in the recognition of the morbid process itself. What have pathology or therapeutics gained in the simple demonstration of a micrococcus or bacterium? Do we know anything more of the nature of recurrent fever since we have found the spirillum?

"The reversion to the old pathology is well exemplified in the history of phthisis. When Koch had discovered the tubercle bacillus, many thought that all the laborious research of the past was vain and superfluous. There was unity of the bacillus, ergo—unity of phthisis. But this beautifully simple scheme was of short existence. Pulmonary phthisis remains as it was, a multifarious process, beginning in a number of ways—now in the mucosa of the air-passages, now in the interior of the alveoli, now in the parenchyma of the lungs, and resulting in a variety of products, either simply inflammatory or specifically tubercular; and he who wishes to understand it

must learn something more than how to stain bacilli. The bacillus has added so little to our knowledge of the subject that we are now again arrived at the examination of those two indispensable factors, predisposition and immunity."

Similarly with leprosy, nothing has been gained in the diagnosis, prognosis, or cure of this disease. We will do well to pause at these words of the great pathologist. Do they not convey to us a serious, thoughtful warning? Is there not too marked a tendency to neglect all else in the eager search for more bacteria, more bacilli, more specific organisms, and hence specific diseases? Dr. Jacobi, in some very pertinent remarks at a recent meeting of the New York Academy of Medicine, said: "Obermeier found a bacillus in relapsing fever at a certain period in the disease, but it had not been proven that it was the cause of the disease. It had not been found in the beginning of the disease; but even if it had been found at that period, it would be doubtful whether it was the cause or whether the disease was due to causes which were aroused by the bacillus, or whether the bacillus was the result of the disease. He did not believe we were justified in saying that the bacillus of relapsing fever was the cause of the disease."

With regard to other diseases, microscopists had been anxious to find bacilli, and thus Gaffky had his bacillus, and Klebs had his bacillus, and so on. So with reference to diphtheria, Klebs had his bacillus, which he assured us was the cause of diphtheria; Eberth discovered his bacillus, which he also said was the cause of diphtheria; and even so cool-headed and sound a man as Gerhardt was led to make the statement, only a few years ago, that undoubtedly diphtheria was a bacillus disease; but as Klebs had discovered one bacillus, and Eberth had found his bacillus, he declared that it was probable that two different bacilli could be the cause of diphtheria.

These are no idle comments, and they may be regarded as an expression of a weighty, conservative opinion, that sees but too clearly how, in the first intoxication of a supposed great victory, the tendency may be to the extreme, and may lead to neglect of serious and pressing work.

Continuing with the article of Virchow, it is stated that "the name of the Struggle of the Cells and Bacteria has been applied by the author to that circumstance the clearing up of which is the actual object of medical studies of this class of diseases We have here two living micro-organisms arrayed against each other. Both are endowed with independent life, independent activity, and independent strength. Which is the attacking party? How does it attack? These are the questions awaiting solution."

"It will be a problem for future study to determine more carefully than has yet been done the powers of resistance of the cells and the mechanism of their struggle for self-protection."

In closing he says: "We do not wish to underestimate the value of any pathological studies, but let no man forget that etiology is merely preliminary to the study of pathology, and pathology shall only be complete when the diseased process, that is, the entire course of the disordered vital activity, shall be clearly explained."

To those who have, like many of ourselves, regarded the rapid development of the science of bacterioloy with never-ceasing interest, and with as little bias as possible, though, at the same time precluded by outward circumstances from personally engaging in experiment, the many new discoveries have seemed almost bewildering. The difficulties were not lessened when experimenter No. 2 found some discrepancy in the experiments of No. 1, to be himself corrected and mildly denounced by experimenter No. 3, and so on; and it is only left for us to express the hope, while fully appreciative of all that has been done, while clearly conscious that enthusiasm is the main-spring of action in a field of study that begins and ends with the maxim "Patience," while eager, with the rest of the profession, to score another triumph for our modern medicine—it is only left for us to hope that an early day may witness the advent of that genius to whose clear and comprehensive intellect it shall be given to dispel doubt and darkness, and whose words shall be as the fulfilment of that first and greatest of divine commands, "Let there be light."

THE RADICAL TREATMENT OF VARICOCELE AND OF HYDROCELE,[1]

Reduced to what Appears to be Nearly Ultimate Simplicity.

By E. L. KEYES, M.D.,

NEW YORK.

In venturing upon a subject so trite as the radical treatment of hydrocele and varicocele, I have only to offer as an apology my own experience, and the uncomfortable road I took to reach a conclusion, and to state that the various reports of debates in societies,[2] the histories of cases, and articles in the medical journals upon these subjects that are constantly meeting my eye up to this date, show that the old-fashioned (as I consider them, clumsy) methods still prevail in the profession at large.

These minor maladies are annoying and of very common occurrence. Any one may cure them, and cure them radically, too; but to cure them neatly, promptly, and with little or no pain to the patient, a confinement of only a few days, perhaps no confinement, and with no annoyance to the surgeon—this end I believe has not yet been generally reached by the profession, and as an effort to attain such a result this paper is written.

I believe that any one who has enough surgical knowledge to make a diagnosis of the conditions I propose to consider, and enough mechanical ability to administer a hypodermic injection, can treat hydrocele and varicocele radically and safely by the methods I am about to advocate; and that those who have used other methods will find these more satisfactory to themselves and to their patients.

My personal experience is, as I have said, my reason for reaching this conclusion. I have been in close connection with the study and the treatment of the diseases of the genito-urinary apparatus in the male for the past twenty years. I have performed many, perhaps most, of those operations which are believed to be most suitable for the radical cure of the maladies we are considering. I have tortured my patients and have encountered, personally, annoyance, dissatisfaction, and discomfort in many instances while attaining the radical cure, until I adopted the methods I am now about to explain. Since then I have known comfort, and my patients have tasted peace.

To commence with varicocele. It would be idle for me, in the few minutes at my disposal, to enter at all deeply into the history of this malady, its causes or its symptoms, the innumerable operations proposed for its relief, or a consideration of such questions as the advisability of any operation at all, the risk of phlebitis, of atrophy of the testicle, and of failure to relieve the symptoms, even when the operation is carried to a successful issue. I must assume, in a given case, that varicocele exists, and that some radical operation is to be performed. What, then, is the best operation, and how is it to be done?

I must say here, however, that early in my professional life I was educated to look upon varicocele as a trifling physical irregularity, and its symptoms as mainly subjective in character, and due in great part to general nervous causes and to improper sexual hygiene. Added to this, I early encountered several cases where the radical opera-

[1] Read before the Medical Society of the State of New York, February, 1886.

[2] London Lancet, January 16, 1886, p. 139.

tion, performed by able hands, had failed in effecting a cure of the symptoms (of a nervous order) for which it was undertaken, and notably one case, in which ligation of the vessels by a competent surgeon had been followed by total atrophy of the testicle.

This deterred me for a time; but finally I was obliged to operate. My first efforts were directed toward curtailing the scrotum. This I soon abandoned. The patient had to be confined to his bed, generally for several weeks, and the final result was little better than what a suspensory bandage would afford; while the annoyance to the patient and surgeon were altogether too considerable to be repaid by the result. Then I went through several operations by ligature and silver wire, and by cutting open the scrotum and tying the vessels with catgut and dressing antiseptically; but the pain, or the suppuration, the annoyance, and the long confinement to bed, quickly dissatisfied me with all these operative manœuvres.

Then it was that I first attempted subcutaneous ligature of the dilated veins with catgut, led to it by my use of catgut in general antiseptic surgery; and since my first operation by this method I have never performed any other. I do not know who first ligated the veins of the spermatic cord subcutaneously, or when he did it. Doubtless many have done it, and probably before my first operation; I do not know. I have read somewhere that even carbolized silk was used on one occasion subcutaneously with good result, but I do not remember that I ever saw in print any description of any particular method of applying the catgut; and it is a method that I now propose to explain, since I personally have had a number of different needles made, and have applied the ligature in a variety of ways, and have found finally one method which I believe to be better than others. I have applied subcutaneous ligature with an ordinary straight surgeon's needle, and with various complicated double needles. In every case the operation has succeeded, but only one method has been satisfactory to me, and this I propose to describe.

My first operation was performed in the early summer of 1882. I kept my patient in bed a little more than a week. He recovered without suppuration or serious pain, and I sent him home to Pennsylvania during the second week. A year later he wrote, expressing thanks and attesting the satisfactory result of the operation.

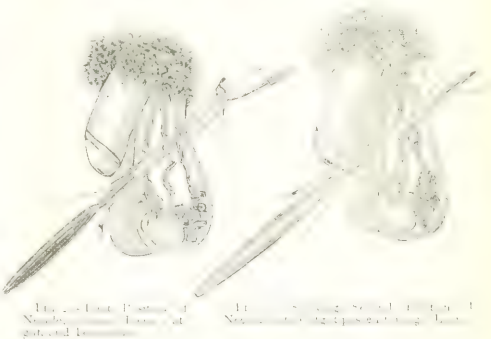
This encouraged me, and I began to feel a new confidence in the operation and to perform it occasionally as cases appeared. I have operated upon a number of patients since the autumn of 1883—all in private life, no hospital cases—and I have uniformly had the same experience.

After the ligature is applied some pain is experienced, a hard lump enclosing the veins appears in twenty-four hours, varying in size from half an inch in diameter up to the dimensions of a pullet's egg. There is usually some scrotal ecchymosis, and generally a little tenderness of the testicle upon handling. I have never seen a single drop of pus. I usually give no medicine except a laxative when required. I make no local application, simply swinging up the testicle by a bandage to take the weight off the cord. Some of my patients have left the bed upon the second day. I try to keep them quiet for five days, and rarely do I find it necessary to give any anodyne whatsoever during the treatment. The hard lump about the veins subsides with varying rapidity while the patient is about, wearing a suspensory bandage. It is practically gone in a month (in cases of moderate swelling), but traces of it may be felt for a year or longer. I believe the veins to be always permanently occluded. I cannot say that suppuration or other complication is impossible when this operation is performed, for my dozen cases (or thereabouts) cannot justify such a generalization. But I have not yet seen a complication, and I believe that, with care in operating, better success with less probability of complication is presented by this operation than by any other I know.

The operative method is as follows: I have always used carbolized catgut, one-half millimetre in diameter (but I am contemplating the use of the finer, tougher, and more flexible whale-tendon). I have two varieties of needles, both straight needles in handles (Fig. 1), about size 4 of the French urethral gauge in the shaft. One has a lance-shaped point, the other a point like a

hypodermic needle. The former I prefer when any of the thickened tissues of the cord have to be pierced, the latter when a single large vein can be isolated from all other tissues—as is sometimes the case. Both needles have a long eye. The needle is threaded with a loop of silk, or thin whale-tendon (carbolized), and a piece of carbolized catgut.

The scrotum is to be thoroughly washed with a solution of the bichloride of mercury, one in one thousand, and all instruments, ligatures, and the operator's hands to be soaked constantly in the same solution. Ether is not admissible, as the patient must stand up. A few drops of a four per cent. solution of cocaine, thrown under the skin near the point of proposed puncture, will nullify the pain in the case of exceptionally nervous patients. Many people feel faint when any operation is done about the genitals, the cause being seemingly more moral than physical; for the pain of this operation is not severe. After the first puncture, faintness on the part of the patient is no bar to a successful completion of the operation, for the patient may be then placed on his back and the operation finished, with a certainty that the dilated veins are included in the ligature, if only the first puncture has been successfully made.



The patient stands near the bed, in a good light. The veins which it is proposed to occlude are separated in the usual manner from the rest of the spermatic cord, at a point rather high up, where the separate dilated trunks may be made out as straight and not convoluted dilated channels. The big veins are pushed out toward the thigh of the affected side, and the scrotal tissues between the veins and the rest of the cord are tightly pinched by the thumb and finger of the operator's left hand, placed behind and in front of the scrotum.

Now the needle, properly armed, is boldly thrust through the scrotal tissues from before backward at the point pinched, leaving the veins on the outer side of the needle toward the thigh. The eye of the needle is made to emerge at the back of the scrotum. A tenaculum seizes the catgut ligature and pulls it out of the eye of

the needle, leaving it sticking out freely from the posterior wound alongside the shaft of the needle.

Now the point of the needle is withdrawn within the scrotum, leaving the catgut end outside. The veins are allowed to join the rest of the spermatic cord. The point of the needle is not to be withdrawn outside of the anterior point of puncture in the scrotum.

When the veins have passed internally to the point of the needle, the latter, still charged with its loop of silk or whale-tendon, is manipulated around externally to the veins under the scrotal integument, and is made to emerge accurately at the posterior hole, the original point of puncture in the scrotum. This is the most important step in the operation, and the only one at all difficult to execute nicely.

When the eye of the needle has emerged posteriorly charged with its loop of silk, the tenaculum again is called into play to loosen the loop and to draw through it the free end of the catgut which was left at the first puncture protruding posteriorly from the scrotum.

The parts are again dashed with the antiseptic bichloride solution, and the needle and loop (containing the catgut) are rapidly withdrawn.

Now it will be found that a few filaments of the dartos (or other tissue) just within the posterior wound in the scrotum are included in the catgut loop. These are torn away by simply holding the free ends of the catgut in front and pulling upon the scrotum behind (Fig. 4). The thin tissues will be felt to tear, and the patient will complain of a little pain.

Fig. 4.

Fig. 5.

Finally, the few hairs about the anterior wound are to be seized with the thumb and finger and pulled out—else they certainly will be tied into the knot and cause trouble—and the catgut (again drenched with bichloride solution) is tied tightly into a triple knot, cut off short, and the scrotum pulled away. The knot sinks out of sight, and the operation is terminated by placing small pieces of plaster over the minute points of puncture, if any blood exudes (Fig. 5).

If the operation is well done, in twenty-four hours it is difficult to detect the points of puncture.

The operation for hydrocele is even more simple, and is much easier to perform.

Again, I need not dilate upon the radical methods in common use—the injection of iodine, laying open the sac anteriorly with the knife, or its modern modification, the so-called Volkmann's operation. All of these and many others I have done frequently, and have been dissatisfied on account of the pain suffered by the patient, the dirtiness of the operation, or the necessary confinement to bed—amounting often to several weeks.

Since Dr. Levis,[1] of Philadelphia, some five or six years ago, made known the excellent qualities of pure deliquesced carbolic acid as an injection for the (comparatively) painless and very certain cure of hydrocele, I have employed no other material in any case of simple hydrocele of the tunica vaginalis, or of spermatocele, or of encysted hydrocele of the spermatic cord. I have never produced suppuration. I have never yet failed to effect a radical cure. I have operated in one instance upon five cysts of the cord (three on one side, two on the other), in a man of sixty five years, throwing in two and a half drachms, all told, of the pure acid, half a drachm in each cyst, keeping my patient in bed only two days, and curing him radically at one sitting. I have occasionally treated and cured a patient without sending him to bed at all, and I have not had any serious accident. I have occasionally seen considerable pain on the second day, with sharp inflammatory reaction and prompt re-accumulation of fluid, which I have considered it prudent to draw off with the aspirator; but this and a poultice has always relieved the inflammatory tension, and suppuration has never occurred, or any evidence of carbolic acid poisoning. I do not say that serious complication is impossible; but in various cases, in hospital and private practice, numbering more than fifty, I believe, although I have not kept strict account of the number, I never have had any serious accident or complication, and I think that great praise is due to Dr. Levis for introducing so valuable a remedy.

But here again I have to propose a method of operation which is the only one I have ever employed, and which seems to me to be simplicity itself. I do not use the cannula and long-nozzled syringe proposed by Dr. Levis.

The apparatus I employ is a glass syringe holding one hundred minims, having for its nozzle an ordinary hypodermic point, not the very smallest size. If the cyst is small this point is thrust into it and the clear contents of the cyst drawn out with the syringe. Then the latter is unscrewed from its point, rapidly and thoroughly washed, and promptly filled with the pure carbolic acid deliquesced with a little glycerine.

The syringe is now screwed again upon the point which has been left sticking in the cyst, and from thirty to sixty minims of the deliquesced acid thrown in. The point is now withdrawn and the whole operation terminated, with not much more trouble than it takes to give a hypodermic injection.

Generally, little or no pain is felt, no carbolic acid gets upon the scrotum or the operator's fingers, and the after-treatment is simply regulated according to the grade of inflammatory reaction produced. Sometimes there is no pain whatsoever during the entire course of cure, which (the cure) I have come to look upon as constant. I have operated in a hospital and my patient has walked away. I have at times operated in my office and sent the patient home; but I prefer not to do it. I have several times operated at home on very large hydroceles of the tunica vaginalis, and my patient has simply kept his room, not even gone to bed, and has gone about his business as usual in forty-eight hours. I have thus far always insisted upon this amount of confinement to the house.

When the hydrocele is large I modify the operative method as follows:

I first insert the hypodermic point and see that a drop of clear serum oozes from it. I now puncture the cyst at another point with a fine aspirating needle, empty the contents, and withdraw the aspirating needle. I then screw the glass syringe upon the hypodermic point first introduced and throw in the drachm of deliquesced acid, which appears to be all that is required to accomplish the cure.

Nothing is easier, no operation of minor surgery in my hands has been more satisfactory in its results.

[1] Read before the Medical Society of the County of Kings, [illegible]

The Dissemination of Small-pox.—In a bulletin from the State Board of Health of Maine, it is shown that there are eighty-six places in the province of Quebec known to have received the contagium of small-pox cases from the epidemic at Montreal.

REFLEX SYMPTOMS OF NASAL DISEASE.[1]

By HENRY SCHWEIG, M.D.,

THE tendency of late years to examine more critically into the causation of certain morbid phenomena, has resulted in a more thorough and efficient application of the various aids to diagnosis, as well as a better appreciation of the significance of existing pathological conditions in nasal disease.

I use the term "nasal disease" in its broadest sense, including in this category not only permanent structural changes, neoplasms, etc., but also those conditions, the existence of which can only be demonstrated under favorable circumstances and surroundings.

When we consider the extensive mucous surface directly continuous with the lining membrane of the nose, the many remote complications that may have their origin here find an explanation. The points of communication are many I may mention here the sphenoidal, ethmoidal, maxillary, and frontal sinuses, the lachrymal duct, the Eustachian tubes, the pharynx, mouth, œsophagus, larynx, etc. That these various tracts may serve as avenues for the extension of nasal diseases, and that nasal disturbances in their turn may cause remote effects by interfering with the proper functional activity of the contiguous parts, there can be no reasonable doubt.

Observations lately recorded by Hack, Bresgen, and others, make it evident that even parts having no apparent connection with, or relation to, the nose may be in sympathy with its various affections. The observations of Horace Green go far to show that, during the time when the laryngoscope was an unknown factor in the diagnosis of diseases of the upper air-passages, the possible connection between throat and pulmonary diseases was assumed to be more frequent than could be demonstrated.

Budd and Elsberg proved the frequent intimate relation between uterine and throat diseases, and their recorded observations show that rarely did one complication yield permanently, unless the other received its due share of attention. Chroback (1869), *Wiener Medizinische Presse*, calls attention to the respiratory neuroses accompanying some cases of retroflexion. Prosser James, in the London *Medical Times and Gazette* (1859), points out the apparent sympathy between the tonsils and the ovaries. The recorded cases of careful observers include as directly traceable to nasal diseases, dizziness, cough, dyspnœa, photophobia, frequent attacks of sneezing, hay fever (so called), loss of smell, toothache, facial and supra-orbital neuralgia, asthmatic attacks, spasm of adductors of the vocal bands, hemicrania, pharyngitis, laryngitis, swelling and redness of the nose, rhinitis, eczema of the upper lip, frontal headache, otitis, tinnitus, conjunctivitis, annoying lachrymation, disturbance of vision, etc. Hack mentions a case under his observation, in which a very marked œdema and redness of the wrist developed as a prompt result of cauterization of the nose for a hypertrophy of the tissue covering one of the inferior turbinated bones; and Elsberg (1870) calls attention to the frequent connection between throat diseases and dyspepsia

An endless array of cases showing cause and effect could be cited, and might serve to give color to many startling theories that have been advanced in regard to the subject before us; but calm judgment and a careful analysis often show that affections apparently directly reflex, may have been merely coincident with, and not due to, the nasal affection, and that even marked hypertrophic changes often fail to produce the characteristic symptoms supposed to follow in their wake. It is only by careful and unprejudiced observation, coupled with a tabulation of cases, that definite conclusions can be arrived at; and when individual observations agree in every particular with the observations of others, then only can deductions be drawn and facts established upon which a firm line of treatment can be based. The accuracy of examination and the ultimate proper diagnoses of cases is the all-important factor to which I desire to call special attention, for statistics become useless if one observer details the symptomatology of a case, and comparing it with other recorded cases finds, his own observations corroborated; while another perhaps, in precisely the same train of symptoms, examines his patient, and finds that appearances accepted as pathognomonic are conspicuously absent.

The too early acceptance of conclusions based on the first examination, however thorough this may be, is misleading, the causes operating to produce characteristic appearances being often absent. For example, the sudden enlargement of the surface over the turbinated bones, due to the inhalation of cold air or irritating vapors, will often readily subside on the inhalation of warmer or purer air; and cases of so-called anterior nasal hypertrophy, in which soft, yielding tumors of considerable size encroach on the lumen of the nasal passages, will, for some unknown cause (perhaps psychical), suddenly fail to present any of their characteristic appearances for a time; again becoming visible under predisposing causes.

The importance of carefully going over the whole field—that is, the successive examination of every accessible point, from the tip of the nose to the oro-pharynx, is strongly urged, and the rather superficial method of exploration, too often indulged in, where the first pathological factor that may present itself is accepted as the whole cause of an existing state, is to be strongly condemned.

We frequently meet with cases in which exist a number of pathological conditions, each one of which in itself would be sufficient to cause serious disturbance.

I recall the case of a gentleman who consulted me in September last, suffering from occasional nasal occlusion and, as he expressed it, a distressing "stuffy feeling" in the posterior portion of the nose. Patient stated that, a few months previous, he had consulted his physician in regard to the ailment, and a diagnosis of nasal polypus had been made, and verified by the removal of a mucous growth of considerable size. His symptoms, after removal, became rather worse than better, this being attributed to manipulation of the parts during operation. Applications of sedatives afforded only slight and passing relief. When patient consulted me I found no trace of polypus, and, in fact, nothing objective which would have warranted me in giving any opinion. Patient's statements, however, led me to believe that the erectile nasal tissue played an important part in determining his trouble, and subsequent examination verified this. Cauterization with the galvano-cautery effected a complete and speedy cure. Cases of deflected septum frequently exist with hypertrophy of the turbinated tissue on the opposite side. If we accept certain reflex phenomena as due to either one or the other of these conditions, and if only one be remedied, the other may still keep existing morbid phenomena active.

Nasal diseases causing reflex phenomena should be classed under four heads: First, neoplasms; second, deformities, either congenital or acquired; third, breach of surface; fourth, circulatory disturbances. I do not include syphilis.

The first three varieties have long been recognized as capable of affecting organs not immediately concerned in respiration, but the fourth has only recently received that attention which its great importance merits, and it is just this variety which requires the greatest diagnostic skill, and the clearest understanding of the main points in differential diagnosis. It should be determined, and that beyond a doubt, whether disturbed circulation exists

[1] Read before the Laryngological Section, New York Academy of Medicine, January 22, 1886.

merely on the surface—that is, whether we have before us a case of rhinitis pure and simple, or whether the underlying structures are involved, or perhaps both. Remedial agents differing materially in their effects are indicated in one or the other class of cases. In surface irritation the membrane is red, frequently tense, and comparatively non-compressible. The secretion of mucus is generally increased. The reflex phenomena that follow in the train of this class of cases are few in number, and their connection with the nasal complaint generally recognized. Deep circulatory changes, however, may exist with little or no modification of the secretory function of the mucous membrane, but with a train of accompanying symptoms as varied as they are interesting. Once recognized, there is perhaps no condition the treatment of which gives prompter or more brilliant results.

Rhinitis, pure and simple, requires only passing notice. The indications to be met here are, first, a thorough cleansing of the affected surface, and the application of that remedial agent which in the estimation of the operator may be deemed best.

Too much stress cannot be laid on the desirability of bringing the medicament selected in direct contact with the mucous membrane. It is not always an easy task to thoroughly remove the viscid or inspissated mucus covering the parts; and the negative results obtained in a proportion of cases are directly traceable to a superficial application made to the mucus covering the parts, and not to the *cleansed* surface. The recognition of the deeper circulatory disturbances—and I refer here mainly to the soft, yielding tumors marking the site of over-distended cavernous tissue—is frequently attended with much difficulty; but when the diagnosis is once fully established, the matter of therapy becomes clear.

I cannot give a better example of the effect of the over-distention of the cavernous sinuses than by detailing a case that came under my observation about one year since. Mr. J——, a pianist, aged twenty-two, consulted me in the winter of 1884. For about two years previous he had suffered from intermittent occlusion of both nasal passages, accompanied at the time of attacks by a profuse watery discharge, generally so copious as to materially interfere with his vocation. Sneezing at such times also became a prominent symptom, dyspnœa was more or less marked and violent, and hemicrania frequently compelled him to seek relief in small doses of morphia. Patient was of an exceedingly nervous temperament, and when I proposed to him to make a thorough examination of both nasal passages, he could only, after much persuasion, be induced to permit it. I discovered, on examination, hypertrophy of both inferior turbinated bones, the tissue on the right side touching the septum, an enlargement on the left side being almost as marked. Either enlargement could be readily made to disappear by gentle pressure with a flat instrument, but would promptly reappear as soon as pressure was relaxed. The mucous membrane itself did not participate in the disturbance, was normal in color, and not sensitive to the touch. Patient dated his trouble from a coryza which was slow to disappear, and which, at the time, was accompanied by a very high temperature and general disturbance. This patient exemplified in a marked degree the class of cases in which improper surgical interference is often productive of great harm, substituting for the original complication a condition almost as distressing as the one remedy.

I gather from the available literature that the tendency is, in dealing with enlargements like the one above mentioned, to use a broad flat burner, connected with a galvano-cautery battery, and to destroy the entire enlargement from the surface inward. This practice I cannot too strongly deprecate, as the enlargement is removed at the expense of impairment of the secreting function of the mucous membrane at the site of cauterization, the muciparous glands being destroyed. I have frequently seen large cicatricial patches in the nose, harsh in appearance, and covered with scales of dry mucus. Inquiry elicited the information that cauterization had been practised for the removal of hypertrophied tissue.

Large flat burners should, in my opinion, be condemned. I am personally responsible for one form of flat burner which I no longer use. Large hypertrophies can be more effectually removed, and the integrity of the nasal mucous membrane not interfered with, by another method, much simpler, less painful, and more rapid. I refer to the employment of a slender platinum wire point (connected with the galvano-cautery battery), which by changing its position can be made to destroy successively the various portions of any growth without materially enlarging the original point of entrance, which should generally be at the base, and anteriorly. Growths thus destroyed collapse in a few days, and leave no trace of their former existence, except perhaps a round cicatricial point about the size of the head of a pin. The mucous surface has been kept intact, and secretes as if no cauterization had been practised.

It is not my purpose to call attention to any new phenomena, or to evolve any theories regarding the interesting subject before us, but I prefer to content myself by strengthening existing material, and suggesting slight modifications in methods already known. That much mischief is done by the indiscriminate use in the nose of various destructive agents where reflex nasal phenomena manifest themselves, and that many an operative interference could have been dispensed with, we well know; but that also many conditions which we now refer to nasal disease, could in the past have been remedied had their cause been recognized, will not be disputed, and I think that any stimulus that will further closer observation in this field, not alone in the matter of cause and effect, but also in therapy, should be looked upon as a step in the right direction.

The recital on my part of numerous cases would not add much to our knowledge, but careful investigation, correct data, and above all therapeutic measures based upon correct diagnosis, will add much toward bringing the matter of rhino-therapeutics to the level of one of the exact sciences.

A NEW METHOD OF TREATING CLEFT PALATE.

By GEORGE ARTHUR, M.D.,

DEMONSTRATOR OF OPERATIVE SURGERY IN THE NEW YORK POLYCLINIC.

THIS method is adapted to those cases only in which the cleft involves the hard palate.

Although a reasonable degree of success has been obtained by the purely mechanical treatment of cleft palate, it has been, in almost every case, at the cost of long and persistent practice on the part of the patient, requiring an amount of intelligence and perseverance that are not always found in the subjects of the treatment.

Unless the artificial velum, when in position, permanently abuts against the posterior wall of the pharynx, which is not desirable, and even if it were, is likely to give rise to irritation and ulceration of the pharyngeal wall, a vacant space must be left between the posterior free border of the instrument and the back of the pharynx. Thus the superior constrictor muscles can learn to close, only after long practice, and in the most favorable cases, since they must be trained to supplement the defective palatine muscles in closing the upper part of the pharynx, by meeting and grasping the posterior margin of the artificial velum.

In many cases that are considered successful the characteristic unpleasant nasal timbre of the voice is not corrected, although tolerably clear articulation has been secured. This defect is due to the imperfect adaptation of the pharyngeal constrictors to the posterior border of the instrument, leaving a chink by which air can pass

through the nose, instead of being diverted completely into the mouth, as would occur with the normal palate.

Good results have also been obtained by the surgical treatment of cleft palate alone, especially when it has been done in early infancy and the defect is confined to the soft palate. In the greater proportion of cases, however, in which the cleft is extensive, necessitating the operation of uranoplasty, the results are by no means perfect; indeed, it is unusual, when the operation is done after infancy, that ever great improvement in speech is obtained.

The probable reason that the operations of staphylorraphy and uranoplasty do not furnish better results is, no doubt, because the velum is left too short and rigid to play its proper part in closing the pharynx, and effectually diverting the column of air through the mouth.

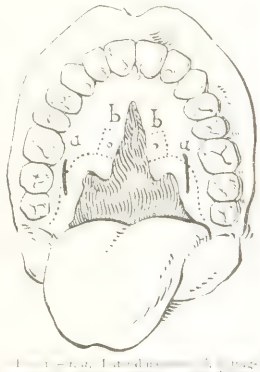
On the whole, the mechanical treatment seems so far to have been rather more successful than the surgical.

The great defect in the instruments heretofore relied on is that the mucles that normally raise the velum palati are not used at all. The tensors and levators of the palate, deprived of their normal insertions in the middle line of the velum and uvula, hang uselessly on either side of the artificial velum, and take no part in raising and otherwise manipulating it; hence the necessity for the increased and unusual action of the pharyngeal constrictors.

If the elevator muscles of the natural could be made to act upon the artificial palate, so as to make it imitate all the movements of the perfect normal velum, and lift its free edge upward and backward into contact with the back of the pharynx where the constrictors could easily and without unusual or special action grasp it, much better articulation would result, and this desideratum can be secured by the following method, in which the surgical and mechanical methods are combined, and the defects of both avoided:

The first step in the treatment is to unite the two halves of the uvula and soft palate as completely as possible.

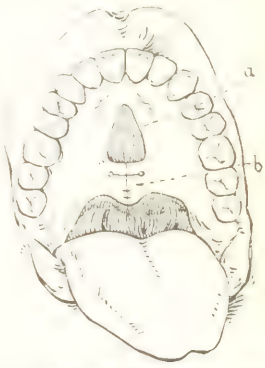
This may be done by freshening their edges and securing them together with sutures—preferably the perforated-shot suture. If the cleft is too wide for this to be done without undue tension of the parts, small portions of the posterior and internal borders of the free edges of the palatine processes, large enough only to furnish secure support for a silver wire to be passed through perforations drilled through their centres for the purpose, may be cut off with a fine, sharp chisel under the mucous membrane, which should be completely separated from their inferior surfaces with the periosteum, or fractured off after suitable guiding perforations have been made, as shown in Fig. 1. These fragments should be brought close enough together with a strong wire, to relieve the wound of tension.



If the above proceeding fails to relieve all tension on the wound, incisions, partly or entirely, severing the tensors and levators, as recommended by Langenbeck, may be made (Fig. 1, *a*, *a*), but it is advisable to avoid all cutting of these muscles, if possible, in order to preserve them intact for their future function.

It may also be necessary to divide the palato-glossi and palato-pharyngei muscles with scissors; but with the above precautions it is not probable that the healing together of the velum will be endangered, or even retarded.

When the wound has healed the condition of the parts will be as shown in Fig. 2, furnishing a soft palate, short and incomplete, but with points d'appui for the palate muscles that permit them to perform their function of manipulating what palate there is, as in the normal condition, instead of merely dragging the separated halves further asunder when they contract, as was the case before they were united.

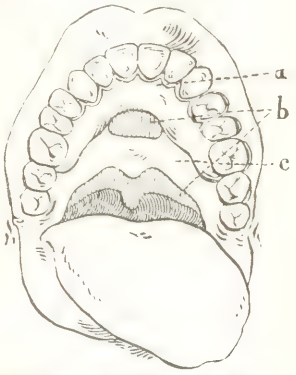


No attempt is made to close the hard palate, the object of the surgical part of the treatment being merely to remedy the defect of the velum and uvula. Indeed, it is rather an advantage to have a large opening in the hard palate, and this should be borne in mind when cutting or breaking off the fragments of bone as before described.

The parts are now ready for the mechanical appliance, which is to lengthen and otherwise supplement the deficiencies of the newly made natural velum.

A plate of suitable material—gold, silver, or hard rubber—is now fitted to the hard palate, extending nearly to its posterior margin, but not quite to the posterior end of the cleft. This plate must fit very accurately to the margins of the cleft, and slightly overlap them.

To the upper surface of this rigid plate is attached a flexible soft-rubber velum, which rests upon the natural



velum, and is shaped in moulds made from impressions and casts of the natural parts so as to fit them exactly, and imitating as closely as possible in contour the normal soft palate. This is attached to the artificial hard palate only in the median line from the anterior angle of the cleft to the posterior edge (of the artificial hard palate), filling up, when in position, that part of the cleft, or now, more properly, aperture in the natural palate which is left uncovered by the rigid plate, and continued beyond the free border of the natural velum as far as may be necessary to compensate for its defective length.

The portions of the flexible-rubber palate that are attached to the plate in the anterior part of the mouth, and that fill up the posterior part of the aperture in the palate, which it must do completely and perfectly, may be thick

and substantial, while the continued portion of it that rests upon the natural velum, should be light and thin, only sufficient thickness being necessary to enable it to recover its form when released from pressure, and to maintain it when the muscles that move it are passive.

The instrument is placed in position by doubling the flexible-rubber portion upward with a pair of long, light dentists' gold-pliers, and thrusting it upward and backward through the aperture left in the palate. The pliers are now withdrawn, and the hard-rubber plate is placed in position, so that the tooth-clasps, or atmospheric chamber, by which it is held, will take hold. When this is done, the flexible-rubber velum will have unfolded and adapted itself to the upper surface of the natural velum, as in Figs. 3, 4, and 5.

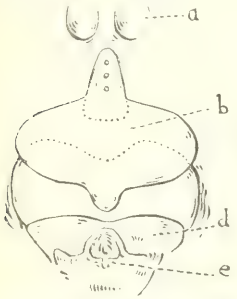


FIG. 4.—Posterior View of Fig. 3. *a*, Posterior nares; *b*, artificial velum; *d*, fibers of tongue; *e*, epiglottis.

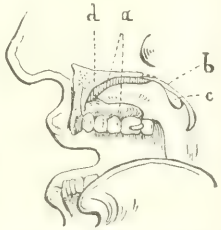


FIG. 5.—Lateral View of Fig. 3. *a*, Hard-rubber plate; *b*, soft-rubber velum; *c*, natural velum; *d*, natural hard palate, which in the figure extends too far posteriorly.

The plate and artificial velum are to be vulcanized in moulds made from casts of the natural parts as described by Dr. Norman W. Kingsley[1] and Mr. Coles.[2]

The impression of the upper surface of the natural velum and the adjacent soft parts, from which the casts and moulds are made, should be taken while the soft palate is passive and pendulous, or even depressed somewhat below the normal, so that the superjacent artificial soft-rubber velum shall tend to press gently upon it in every position, and closely follow its movements.

By this method an artificial palate is obtained which is under perfect control of the palatine muscles, and which is light and flexible enough to adapt itself to the changes in form of the tongue, pharynx, and palate, in all the movements of articulation, deglutition, and respiration.

36 WEST THIRTY-THIRD STREET.

EPILEPSY OCCURRING WITH OPTIC NEURITIS.—M. Galezowski relates the case of a young man who had had one eye destroyed by an accident while shooting. The anterior hemisphere had been removed, leaving the stump of the eye in its socket. Six years later the vision in the sound eye became poor, examination showed the presence of neuro-retinitis, and at the same time the patient began to suffer from epileptic seizures. The stump of the wounded eye was removed, and immediately the attacks of epilepsy ceased and the sight in the opposite eye began to improve. Taking into consideration the results of the operation and the connective-tissue degeneration and nerve atrophy found on microscopical examination of the stump, M. Galezowski assumed that the neuro-retinitis, and the cerebral trouble accompanying it, were due to a sympathetic reflex action. There was, he thought, in the meninges, or in some part of the brain, a lesion similar to that revealed by the ophthalmoscope in the engorged papilla of the optic nerve. —*Revue Médicale*, January 2, 1886.

[1] [illegible]. By Norman W. Kingsley, M.D. [illegible]
[2] On Deformities of the Mouth. By James Oakley Coles. Lindsay & Blakiston.

A CASE OF "DAYMARE."

BY T. M. HOLMES, M.D.,

ROME, GA.

MRS. ——, the wife of a clergyman, became a resident of this city in the summer of 1883, and soon thereafter she consulted me with regard to her health. I found her to be a very intelligent lady of about thirty years of age, a blonde, rather below the medium size, and of pleasant face, but bearing marks of anxiety, as one who was a subject of much mental or physical suffering. I soon discovered that she was of an exceedingly nervous temperament, and she informed me that for many years she had had frequent and very severe attacks of catalepsy. When a girl she had been troubled with similar attacks of a milder nature, but after her marriage they became more frequent and more intense, and seemed to be aggravated in an increasing ratio by each succeeding period of gestation. At this time she was the mother of five children, the oldest being about fourteen and the youngest three years of age.

She had been under the treatment of several prominent physicians in South Carolina, whence she had recently come, and had tested to the fullest extent every therapeutic agent usually employed in neurotic troubles. Nothing, she thought, had ever done her the least particle of good in the way of keeping off the attacks; and during the seizures themselves the hypodermic use of morphia was the only agent of relief, with any degree of permanency, that she had ever used. This mode of administration was very necessary, because of extreme nausea immediately following its internal administration, and the consequent failure to take effect.

I was soon called to see her in one of these distressing seizures. It was most severe and obstinate. She felt it coming on and had taken to her bed. On my arrival, I found her in the recumbent position, her hands clenched in each other as tightly as if held in a vise, and could not be separated. Her feet and legs were drawn backward, the former resting on their palmar surface. The face was like that of a woman straining in labor, with the exception of color, for she was quite pale, as in a nervous rigor. She presented a spectacle most pitiable to look upon. Her mind, as usual during these attacks, was perfectly clear, being cognizant of all that was going on around her. The pupils and respiration were perfectly normal, as was also the pulse, though the latter was hard to detect, because of the rigidity of the radial tendons. Her teeth were firmly clenched, so that it was out of the question to give medicine by the mouth, to say nothing of the rebellious stomach. I therefore proceeded to relieve her condition by the administration of chloroform, until the muscular contractility was completely overcome. This left her fingers quite white where they had pressed against each other, and purple at their extremities. This relief did not last long, for in a few moments the same symptoms recurred, and did not entirely disappear until the patient was thoroughly under the influence of morphia. Soon after complete relaxation was obtained she vomited. This was usual with her after these spells.

These attacks recurred from time to time, but she was not always in a position to secure recumbency. They were liable to come on while she was walking the streets, or the floor attending her household duties; or while sitting with her little ones around her, and whatever position she might be occupying, in that she would usually be immovably "fixed." However, if her limbs happened to be in a position in which some object was holding them, and that object were removed, they would immediately assume a position of extreme flexion.

On one occasion I was hurriedly summoned to see her, and on arriving found her walking the floor at a very rapid pace. Her hands were raised before her, and she was slinging them as if they were covered with a thousand stinging insects. She was evidently in great agony. With difficulty I administered hypodermatically one-half

grain of morphia, and entire ease and repose soon followed. On another occasion she felt an attack coming on while in church, and immediately left the building. On reaching the street it seized her, and she was forced to cling to the fence to prevent falling. There she stood, unable to move, being all the while in mental torture for fear the congregation would be dismissed and behold her in this very embarrassing position. From this humiliation, however, she was rescued by the appearance of a friend, who suspected the cause of her departure.

The timely administration of morphia would always keep off an impending attack. During these attacks there was never insensibility to pain or the touch. She was simply unable to speak or move. The pain was usually not great, and seemed to be solely the result of muscular contraction.

Diagnosis.—In speaking to her of her trouble, I retained the name to which she was accustomed—that of catalepsy; but while it was extremely cataleptiform, it was by no means the "catalepsia vera" of Ziemssen, Da Costa, Flint, and others. It was like a case reported by Sir Thomas Watson, which this eminent physician denominated "daymare." In the case described by him, there was total inability to move or speak; yet the patient was perfectly cognizant of everything about her. Now, according to Ziemssen, "catalepsia vera" has two pathognomonic symptoms—the "stiffening of the muscles," and the so-called "flexibilitas ceria"—the susceptibility to passive motion. That is to say, that the muscular tension may be sufficiently overcome by an attendant to admit of a change in the position of the limbs, in which position they will be "fixed" as before. This is impossible in "daymare," since there is not a moment's relaxation of muscles. There is also in catalepsy anæsthesia, analgesia, and sometimes suspension of consciousness, but none of these symptoms exist in "daymare."

Pathology.—Sir Thomas thought that in his case the seat of disease was the cerebral blood-vessels. If this were true, "daymare," as De Costa has suggested, would be a very grave affection; but in this opinion of the pathology of the disease I do not concur. At least I am quite sure that such was not the case with the subject of this article. From the history and symptomatology of this case I was led to believe that the origin of the trouble was in the uterus. To ascertain the truth of this, a specular examination was necessary, in which procedure I invited the celebrated Dr. Robert Battey to assist me. We found, as I had anticipated, a fearfully ulcerated and congested os. This was the "open sesame" to the whole trouble.

Prognosis and treatment.—We told our patient that by care on her part in abstaining from overwork and worry, which generally promoted the attacks, and by a persistence in our course of treatment, she might entirely recover. This treatment would consist of an application of iodized phenol once a week to the os and endometrium. In this way we hoped to relieve the congestion, allay the inflammation, obtund the sensibility, and so alter and tone up the diseased mucous membrane and relaxed muscular tissue as to restore the parts to their normal condition.

This treatment was persisted in for several months with but very little improvement, the seizures coming on at irregular intervals. The uterus was several times found to be so retroflexed that it was almost impossible to make the applications. Believing, therefore, that support would benefit the uterus while in this diseased and atonic condition, I supplemented our treatment with Tallíofera's cotton tampon, saturated with his usual preparation of iodoform, balsam of tolu, and glycerine. This gave the uterus such support that the patient experienced immediate relief, as if a load had been removed from the inferior pelvis. From this date she began to improve rapidly, both as to the frequency and severity of the attacks, and her general health was in a short while much improved. Her menstrual periods failed to appear some weeks before the institution of the tamponing, but I did not think it possible that conception could have taken place under such circumstances. Especially did I think it improbable when she informed me that they had failed to appear once before without developing anything more than an aggravation of her trouble. However, in this instance, we were destined to be undeceived. Her husband was called to another field of labor and in due season she gave birth to her sixth child. Since their removal I have been unable to follow up this most interesting case.

Clinical Department.

OPERATIVE TREATMENT OF CHRONIC VESICAL CATARRH.

In an elaborate paper read before the Dane County Medical Society, on September 1, 1885, Dr. A. F. Jonas, of Madison, Wis., argues with much force in support of the operative treatment of this obstinate and troublesome affection. A great many drugs have been recommended from time to time in the treatment of chronic catarrh of the bladder, some even being extolled by enthusiastic advocates as veritable specifics, but none has maintained its ground as a remedy of real value. The balsams, which deserve to rank among the first in point of efficacy, must often be discontinued before the desired result has been obtained, by reason of the disturbance to the digestive functions which they excite. Local treatment was first instituted, the writer says, by French surgeons, and the excellent results thus obtained demonstrated the importance of topical applications to the bladder. But, although this method was often successful, there were, nevertheless, numerous failures, due in many cases to the fact that solutions of sufficient strength to destroy the micro-organisms would be dangerous, either from their local action upon the vesical mucous membrane or from absorption. This method also demands the frequent passage of a catheter, with all its attendant dangers; and, furthermore, it is impossible to reach the whole inner surface of the bladder, since the mucous membrane lies in folds around the eye of the catheter, and the fluid passes out again after having moistened only the small portion of the lining membrane of the bladder which happens to lie in contact with the end of the catheter. Attempts to introduce a sufficient quantity of fluid to distend the bladder and thus secure contact of the solution with every portion of the mucous membrane, usually cause such severe pain as to necessitate their discontinuance. The conditions here existing the writer compares to a wound with many pockets and recesses, in which the secretions accumulate and decompose. The treatment of such a wound is perfect drainage, and the same principle should be applied to the management of chronic vesical catarrh. An incision should be made into the bladder and a drainage-tube inserted. Dr. Jonas states that Bouchardat, in 1803, was the first to treat this affection by incision, but that Willard Parker was the first to publish and advocate the method of treatment. The author reports a case in which he employed drainage with success. The patient, a man sixty years of age, had suffered from inflammation of the bladder for three years, and when coming under observation was greatly prostrated, and had a countenance indicative of great suffering. An attempt was made to irrigate the bladder, but it caused severe pain and had no effect upon the disease. Upon consultation with Drs. Coolige and Gapen, it was decided to operate. A median incision one inch in length was made in the perineum, and the membranous portion of the urethra then opened with a lithotomy staff for a guide. After some difficulty, the prostatic portion was dilated with

the finger, and a rubber tube with well-rounded edges was passed into the bladder after the viscus had been carefully cleansed. The perineal wound was packed with iodoform gauze, and the tube was passed over the side of the bed, its free extremity lying in a vessel containing a solution of carbolic acid. With the exception of a temporary rise of temperature, accompanied with delirium, on the sixth day, the progress of the case was favorable, and the patient made an excellent recovery. As regards the method to be employed, the writer prefers a median incision. The incision is not carried into the bladder, but the tube is passed through the prostatic portion of the urethra, thereby answering a good purpose in overcoming the spasm of the sphincter which is often so prominent a symptom. The tube may be removed when the urine has become acid in reaction, and the other symptoms have subsided. The operation, of course, should be reserved for those cases in which other measures have been proven by trial to be ineffectual.

THE NECESSITY OF REVACCINATION.

THE following cases illustrate well the wisdom of frequent revaccination, at least as often as the liability of exposure to small-pox occurs. Dr. E. A. Cobleigh, of Athens, Tenn., referring to some recent instances reported in THE MEDICAL RECORD, states that he has observed three cases in his own family in which the protection afforded by vaccination was lost after comparatively brief periods. He writes: "My father was vaccinated successfully in his fifteenth year, and had a large and typical cicatrix. At varying intervals thereafter he was tested by revaccination, and when I entered upon the practice of medicine (as it is my invariable custom to revaccinate all the members of my family whenever variola exists in the vicinity) I also tested him frequently, and without results until his fifty-sixth year, when an atypical and abortive vesicle followed my puncture. I repeated the test, a few weeks later, twice, and failed. When he was fifty-eight years old I had occasion to try him again, and it took as regularly and thoroughly as I ever saw it on an infant. I repeated the experiment on father several times during the next two years (till his death) with negative results.

"The next case I have to report is myself. When an infant I was successfully vaccinated. At seven years of age I had varioloid. After entering the profession I put scores of samples of vaccine lymph under my cuticle, and treated variola with impunity. This continued for eight or nine years when, much to my surprise, one of the vaccinations 'took' on me to perfection, and I had a large, typical vesicle, and a raging fever, the arm necessitating a sling for several days. My rule has long been to *repeat* my vaccinations as soon as the first has run its course, until saturation of the system is shown by the efforts failing. I did so in my own case, and have repeated the operation several times at intervals since, with no effect.

"The third case is a son. When he was a baby in arms small pox came pretty close to us, and I vaccinated him with humanized virus, getting three very nice vesicles. These ran their course, and I repeated the effort, but without effect. A year later I had occasion to once more test this same son's liability to take the disease, and again had three vesicles. Repetition at short intervals now also failed; but a year later, or thereabout, the same thing was gone through with, and this occurred for four years four several times. Now the susceptibillty ceased for four years, and then it again 'took.' Again, four or five years later he was successfully inoculated, since which time he has seemed thoroughly protected and proof against any further efforts. Of my other two children only one vaccination in infancy has been necessary for protection."

Dr. F. E. Porter, of Auburndale, Mass., reports the case of a man, sixty-five years of age, who had confluent small-pox in 1850, and still bears the marks of it on his face. He was vaccinated on December 30th with fresh bovine virus, and on January 8th Dr. Porter writes: "He carries to-day the typical vesicular circle and red areola, as in primary vaccination. Constitutional symptoms are now well marked, and the man is evidently going to have all the conditions, subjective and objective, that belong to vaccinia. The cases that I have thus far seen reported were, like the above, in persons who had had the disease many years before, and vaccination, as previously performed, had been with humanized virus. As far as it goes, this would seem to confirm what Dr. S. C. Martin said at a recent meeting of the Suffolk District Medical Society, to the effect that bovine virus induces a distinct disease which protects the system from an invasion of small-pox, while humanized virus does not do so."

Progress of Medical Science.

IODOFORM INJECTIONS IN KNEE-JOINT DISEASE.—Dr. Piltz reports the case of a woman, fifty-eight years old, who had suffered from pain and swelling of the knee for about a year. In spite of active treatment the disease progressed steadily until the patient's health began to suffer. An exploratory puncture showed the presence of thin, flocculent pus. The author determined, before resorting to incision and drainage, to try the method of iodoform injection recommended by Mikulicz in the treatment of cold abscesses. The joint was punctured with a trocar and about a pint of pus removed, and it was then thoroughly washed out with a three per cent. solution of carbolic acid. After this, about two ounces of a ten per cent. iodoform glycerine emulsion were injected and an antiseptic dressing applied. No elevation of temperature followed the operation. The general and local effects of the injection were described as wonderful. The pain yielded at once, and merely a slight burning was felt in the joint. The patient slept well that night for the first time in many weeks. At the end of six days a little pus had reaccumulated in the joint. The operation was repeated, a smaller quantity of the emulsion being injected. After this no more pus was found and the patient continued to improve, regaining the use of the knee and increasing in weight. The author believes that this method might be advantageously employed in all joint diseases of this sort in which there is no lesion of the osseous structures.—*Allgemeine Medicinische Central Zeitung*, No. 94, 1885.

THE HERPETIC DISEASES.—Dr. Luton writes in the *Bulletin Général de Thérapeutique*, of December 15, 1885, upon the treatment of herpes, pneumonia, and croup, which he regards as diseases belonging to the same category and amenable to the same therapeutic measures. The treatment consists in the administration of arsenic, preferably the double arseniate of sodium and potassium. This is given either by the mouth or hypodermatically. A solution is made of two-fifths grain in four ounces of water, of which a tablespoonful is given every two hours. When used hypodermatically, fifteen minims of a one per cent. solution are injected three times a day.

IMPERFORATE HYMEN.—At a meeting of the Surgical Society of Paris (*Gazette des Hôpitaux*, December 12, 1885), M. Segond related the case of a young woman, twenty years of age, who had apparently never menstruated, but who suffered periodically from severe abdominal pains. Various emmenagogues had been given, with the effect of merely increasing the difficulty. On examination, M. Segond found a large fluctuating tumor extending three fingers' breadth above the umbilicus. The hymen was found completely occluding the vagina, and greatly distended. The uterus could be felt of nor-

mal size. The patient was anæsthetized and a crucial incision was made in the hymen, permitting the retained menstrual fluid to drain away slowly. After the complete evacuation of the tumor, which required about forty-five minutes, a drainage-tube was inserted and the vagina washed out with a 1 to 2,000 sublimate solution. An antiseptic dressing was then applied. After a few days there was a slight stomatitis, requiring the substitution of carbolized injections for the sublimate solution. The patient experienced no untoward symptoms, and has subsequently menstruated regularly and normally.

Cold Bandaging of the Leg in Insomnia.—Dr. von Gellhorn has found the following plan very useful in inducing sleep in persons who suffer from insomnia. A piece of calico, about eighteen inches wide and two and three-quarters yards long, is rolled up like a bandage, and a third of it wrung out in cold water. The leg is then bandaged with this, the wet portions being carefully covered by several layers of the dry part, as well as by a layer of gutta-percha tissue, and a stocking drawn on over the whole. This causes dilatation of the vessels of the leg, thus diminishing the blood in the head and producing sleep. It has been found by Winternitz that the temperature in the external auditory meatus begins to fall a quarter of an hour after the application of the bandage, and the normal is again reached for from one and a half to two hours afterward. Gellhorn has employed this means of procuring sleep for several years, and finds it especially useful in cases where there is congestion of the cerebral vessels. Sometimes he has found it necessary to reapply the bandage every three or four hours, as it dried.

The Treatment of Winter-Cough by Pure Terebene.—During the last five years Dr. William Murrell has employed a method of treating winter-cough for which he claims excellent results. His experience extends to one hundred and fourteen cases. He says (*The British Medical Journal*, December 12, 1885) they were all treated with pure terebene, a substance prepared by the action of sulphuric acid on oil of turpentine. It is an agreeable remedy, being a clear, colorless liquid, with an odor like that of fresh sawn pine-wood. It will not mix with water, but, as the dose is small, it can readily be given on sugar. It is not the same as the patent medicine sold under the name of "terebene." One of the great advantages of pure terebene is that it is not a bulky medicine. An ounce bottle, carried in the pocket, will last for days, and is always ready for use. It is best to begin with five or six drops on sugar every four hours, and gradually to increase the dose to twenty minims. This is, for most people, the maximum quantity, but the drug has little or no toxic action, and one patient was so enraptured with his remedy that he insisted on taking a teaspoonful every four hours for a week. The only disadvantage Dr. Murrell has ever noticed from its employment is that it gives a peculiar and characteristic odor to the urine, a circumstance which patients never fail to mention. When used as a spray, from one to two ounces should be diffused and inhaled every week. In some instances he has tried giving it mixed with an equal quantity of olive-oil flavored with oil of peppermint. In twenty-five cases he gave the terebene in the form of an emulsion, made by mixing it with a little tragacanth powder, adding water and shaking well. Each ounce of the emulsion contained a drachm of the terebene, and it was usually given in half-ounce doses four times a day. The results were excellent, but not better than with the simple terebene itself, and he saw no reason for continuing the use of a more expensive preparation. In every case of winter-cough in which the terebene-spray was used systematically there was a marked improvement. In many instances it was noticed almost immediately; but in other cases, especially the very chronic ones, the patient had to continue using his remedy for some weeks. Even when there was marked emphysema, with little movement of the chest-walls, some benefit was experienced. He treated eighteen cases of phthisis by the same method, and the results were certainly most encouraging. It did most good when there was old consolidation, when no active mischief was in progress, and especially when there was no elevation of temperature. He has also used it as a dry antiseptic inhalation on the cotton-wool of a respirator in phthisis, and has been much pleased with the results. In one case, that of a young lady, the respirator was worn almost continuously night and day for nine months; and the right lung, which was breaking down, cleared up, the temperature becoming normal and the cough and other symptoms subsiding. He has no doubt that pure terebene would be useful in checking hemorrhage from the lungs, but on that point he has no experience. Many sufferers from winter-cough also complain of acidity and flatulence. The author soon found that the internal administration of pure terebene was an excellent remedy for this combination of symptoms. It checks the formation of flatus so quickly, and is so efficacious in expelling any that may remain in the stomach or intestines, that he constantly employs it in cases of dyspepsia when flatulence is a prominent symptom. Patients like it, and often continue taking it for months or years. It acts as an antiseptic, probably, in much the same way as glycerine, oil of cajeput, and oil of eucalyptus. Pure terebene is of such value in winter-cough that Dr. Murrell rarely experiences the necessity of resorting to other remedies.

Gelseminum Habit.—Dr. H. C. Caldwell (*Medical and Surgical Herald*) reports the following case: The subject was twenty-four years of age at the time the writer first met him. He was robust, had lived a life well divided between work on the farm, study, and rational recreations. Mentally he was of that type we style well balanced. He was, therefore, not such a person as we would expect to see become the victim of a habit. He contracted chills, rheumatism supervened, and he refused the frequent offers made him of chloral hydrate and morphia. His father had been addicted to the opium habit, and the son grew up with a horror of the very name of opium. In an attack of more than usual severity he took a large dose of fluid extract of gelseminum. Relief followed. The next day a repetition of the paroxysm called for a repetition of the dose. As with all quieting agents, the dose must be augmented, and during the year this increase was not very great. One hot night, in great agony, the sufferer took a very large dose and lay stupid until noon the next day. The experiences he had were, as he said, "wonderfully pleasant." Now the habit became fixed. The victim grew to using as much as a fluid ounce of the extract at one dose! What would once have produced death was now only a gentle palliative. Still the dose must be increased. He became pale, emaciated, listless, and, at times, strangely uneasy. He became the prey of strange terrors, and was subjected to some hallucinations of the senses. Looking fixedly at any distant object, he could discern all the colors of the spectrum; then darkness followed, and then a number of faint rays of light would precede the complete return of vision. His hearing became singularly acute. He was apparently regardless of what was passing; still, he could detect whispers uttered many yards away. Nothing could induce him to give up his darling drug. Seeing how the matter distressed his friends, he went away. During his stay of a year in Canada he increased the dose daily. He returned far more feeble, and at times seemed positively idiotic. He fancied ghosts were around him; he could hear the whispers of leering demons, and in his better moments saw the wings of angels hovering around his bed. After a year more of this strange habit, he sunk into a condition of hopeless idiocy, and died in the stupor induced by his idolized drug. The relatives of the unfortunate man never took care to prevent his obtaining the drug.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CHARITY REFORM IN LONDON.

IT would seem from recent statements in some of the London journals that discussion had begun in earnest concerning the reformation of medical charity, and that our transatlantic brethren were somewhat behind ourselves in actual progress made in this laudable direction. We are rather surprised to learn from a London letter to one of our cotemporaries that "an association of gentlemen has been formed to establish provident dispensaries in various parts of London, to which the poor are to subscribe so much a month or week, for themselves or families, so that they may receive medical relief, if necessary, at their own homes, in time of sickness." The fear is hazarded that "POSSIBLY some men who are in a position to pay a family doctor will subscribe to these dispensaries in order to avoid a doctor's bill."

Presumably human nature is alike in all countries, and we can assure these gentlemen that "certainly," and not "possibly," is the word to be used in this connection. Here, in New York, this plan has been tried. Its glaring inconsistencies, as evidenced at one particular institution, we have already pointed out. Weighed in the balances of justice to the profession, it has been found most lamentably wanting. We would advise our London friends to leave off before they begin. The experience of the last few years here in our midst warrants us in giving this advice.

It is somewhat interesting to notice a plan proposed in London to restrict the abuse of charity by the large hospitals. It is suggested that no patient should be treated in them whose credentials have not previously been passed upon by some dispensary. "It is proposed to affiliate several dispensaries to each large hospital, and practically to transfer the out-patient departments of the hospitals to the dispensaries."

We have been waiting for some time for a report from the committee appointed at the meeting held a few months ago at the Academy of Medicine, under the auspices of the Charity Organization Society. We hailed this step as a long-needed measure, and characterized it as the first-fruits of charity reform. We trust this committee is pushing this work vigorously. The time is ripe. Never before was so much interest manifested, both among and outside of the profession, concerning this question, and this interest must be kept up to the working point. A report merely of progress would be welcomed.

No close observer of human nature will ever expect that the world will become an Utopia, either in the dispensation or the acceptance of charity. The approximate toward this ideal is, however, our bounden duty. And this duty comes home to the dispensary physician as well as to the manager. To make one's dispensary service a field from which such cases as are suitable can be "run in" to one's office practice (and all who can pay anything are generally regarded as suitable cases), is not right. It is clearly a violation of those principles on which dispensaries are, ostensibly at least, managed. If the patients can pay anything, it should go to the dispensary treasury and not to the physician's purse. He "gives his services"—at least he says he does. Let the gift be in deed as well as in name. Unless it is so, a dispensary position becomes a place of money-making rather than a place for clinical study, pure and simple.

It is true that many among the working classes are able to pay sometimes and not at others; and as to their ability in this direction at any given time we have to take their word. Discretion must be exercised in managing such people, else we may pauperize them by a too hasty yielding to their importunities without looking with sufficient care into their circumstances.

THE YELLOW FEVER INOCULATION HUMBUG.

WE find that the evidence in favor of Dr. Domingos Freire's prophylactic inoculations against yellow fever is very slight, and that the probability is that we have again another inoculation humbug.

The New Orleans *Medical and Surgical Journal* has undertaken a vigorous crusade against Freire, and it states that "when we had fairly and honestly gone through the 650-page book of Freire and had found therein no evidence of the truth of his declarations, we regarded it as idle to think of investigating him in Brazil, and we felt that our friends, Dr. Holt and others, had gone into this commission-project without having made a critical examination of the scientific value of Freire's statements."

Our contemporary recalls the fate of two previous claims made for a prophylactic virus against yellow fever. One, made by Drs. Masuata and Fraschieri. They claimed that they could protect against yellow fever by the inoculation of "rocio," or dew, and they requested an investigation of their methods. Two members of the Havana Academy of Sciences reviewed and tested the experiments. The substance used was not a natural dew, but artificial, obtained by the condensation of the vapor of water contained in the atmosphere of the closed room of a yellow fever patient, collected on the surface of bottles. In one experiment made by them distilled water yielded "more remarkable results" than inoculation with "rocio." And yet this "rocio" had been much vaunted as a prophylactic against yellow fever—with just as much foundation, we believe, as the method of Freire.

Again, in 1854, a Dr. William Lambert de Humboldt, who claimed to be a nephew of the great Alexander Humboldt, notified the Captain-General of Cuba of his discovery of a sure means of preventing yellow fever, by the inoculation of the venom of an unspecified Mexican

snake. So much excitement was caused by his announcement that the Spanish Government appointed a commission to study the subject, and to test the experiments of Humboldt himself, and a French commission went to Havana from Martinique. "Two thousand four hundred and seventy-seven persons were inoculated from December 18, 1854, to June 28, 1855." No good results were obtained.

It is quite time that the medical profession should take a decided stand in protest against the methods adopted by these quackish claimants for notoriety. Medicine is discredited by the continual eruption of these El Mahdis of inoculative prophylaxis. It has been doubted whether it was wise to urge upon our National Government the appointment of a commission to investigate the claims of Dr. Freire and others. We have not opposed the project since such commissions sometimes learn facts of interest even if they discover no specific. We learn that the House Committee has reported, or will report, in favor of appointing a commission to visit Mexico, Central America, and Brazil, for the purpose of investigating the methods of prophylactic inoculation practised in those countries.

THE FEE QUESTION.

THEORETICALLY the physician, like the clergyman, is a philanthropist, and is actuated in the practice of his profession solely by the desire of doing good to his fellow-man, and possibly also by his love of science for science' sake. But candor compels us to assert that in neither case is theory strictly in accord with fact. Here and there may be found a physician or a clergyman who really seems to have a vocation for his calling, and to engage in it simply by reason of his devotion to his profession or of his love for his fellows, seeking for no pecuniary reward beyond what is necessary for his actual needs. But this class is not a large one, and, as a rule, the minister takes the church that offers him the largest salary, and the physician charges as high a fee as the circumstances of his patient, or the nature of the services rendered, will warrant. These reflections have been called forth by a letter from a correspondent in San Antonio, Tex., who complains of the low fees charged by many physicians of that city. He writes: "The average San Antonio physician has the reputation of being a fifty-cent doctor, and really there are men here who will make a visit for that amount, and, if they fail to realize that vast sum, will not hesitate to make a reduction. I have been informed that there are medical gentlemen here who will take an obstetrical case for five dollars cash, but if they have to wait for the money a fee of ten dollars is charged. This sounds ridiculous, but it is only too true. However, there is another class who have endeavored to raise medical fees somewhat; they charge fifty cents for office prescriptions, one dollar a visit, and fifteen dollars for obstetrical cases. . . . Still, to be just, we have a few men here who have put forth every effort to keep up the dignity of the profession—men who have labored for years to bind up the gaping wounds which avarice and quackery have made in our professional ranks—only to see every effort at reform fail."

We are sorry for our correspondent and for all the honorable physicians of San Antonio who have to contend against underbidders. But perhaps it would surprise them to learn that there are numbers of practitioners, excellent physicians and honorable gentlemen, right here in New York, who see patients at the office for fifty cents, and seldom receive more than one dollar for an ordinary visit at the patient's house, while they willingly attend obstetrical cases for ten dollars, and are sometimes glad to compromise for five dollars cash. Yet such is the case, and no one gets angry over it. Medicine is indeed a noble profession, yet it is also a means of livelihood—a business, in other words—and the great laws of supply and demand are just as inexorable in their workings here as they are in the other divisions of mental or physical activity by means of which we poor mortals earn our daily bread.

Our correspondent says that the West Texas Medical Association has as complete a fee bill as any society, but that it is totally ignored by the "fifty-cent doctors." Of course it is. The West Texas Medical Association might just as well attempt to regulate the price which its members should pay for their hats or shoes. There are all sorts of men in medicine, as there are in every calling—good, bad, and indifferent. And patients who have the means wherewith to pay for the services of a physician in whom they have confidence will not employ a poor doctor because he values his services fifty or seventy-five per cent. less. And, on the other hand, many an excellent physician is obliged to content himself with one dollar, or even fifty cents, for a visit, for the reason that those among whom he practises cannot afford to pay more.

Ours is a noble profession, brother, but, as regards the payment for services rendered, it is ruled by universal economic laws, and those laws we cannot evade.

HYPNONE AS AN ADJUVANT TO CHLOROFORM.

ALTHOUGH over forty years have elapsed since Horace Wells took nitrous oxide gas and, while under its influence, had a tooth extracted without experiencing any pain, we have yet to discover the perfect anæsthetic. Of the many agents which have been proposed and used for the production of general anæsthesia, none is without its inconveniences and its dangers, and, despite its disadvantages, ether still maintains its ground as, on the whole, the best anæsthetic which we possess. We do not, of course, forget cocaine, but although this has been used with marvellous results in certain operations in which a comparatively small extent of tissue is invaded by the knife, it is hardly probable that it can ever be made available for the more extensive capital operations. And even should it, there would yet remain cases in which the production of general anæsthesia and unconsciousness would be necessary.

The danger of chloroform has been shown to be in direct proportion to the degree of concentration in which its vapor is inhaled, and efforts have accordingly been made, especially by M. Paul Bert, to so dilute the gas that its inhalation may be absolutely without danger. But it has been found that this dilution cannot be continued indefinitely, for a point is at last reached beyond which anæsthesia cannot be produced. And this limit is still within the danger-line.

But it has been known for a long time that the action of the anæsthetics is rendered more prompt by the previous administration of an hypnotic, such as morphine or chloral, and advantage has been taken of this to push along a little further the limit of maximum dilution. M. Dubois recently stated, at a meeting of the Biological Society of Paris, that he had found the new agent, hypnone, of great service in increasing the anæsthetic effect of chloroform. When one centigramme of this drug was given to a dog by hypodermic injection, it was necessary to cause the animal to breathe only a four per cent. mixture of chloroform and air in order to anæsthetize him. A mixture of this strength, as has been shown by Paul Bert, under ordinary conditions produces no effect at all. And, furthermore, in the experiments made by M. Dubois, it was found that the animal would awake from his anæsthetic slumber in about an hour, even though he continued to breathe the diluted chloroform, thus showing conclusively the influence of the hypnone. The same result was obtained by giving two centigrammes by the stomach instead of hypodermatically. No trials have yet been made upon the human subject, but we can see no reason why the drug should not act the same upon man as upon the dog.

Further trials with hypnone may show that it is not a safe hypnotic, and it has already been found that it is not a perfectly reliable one, since upon some individuals it seems to exert very slight effect. But all drugs are more or less uncertain in their action, according to the idiosyncrasies of the individual, and if hypnone acts only in the majority of cases, and acts safely, it will be not without value as an agent to lessen the dangers of chloroform administration.

SUCCESSFUL ANTHRAX INOCULATIONS.

The disbelievers in Pasteur's method for the prevention of rabies, and especially his personal enemies, are wont to adduce in support of their arguments the failure of his inoculation method for the prevention of malignant pustule in sheep. The one class advances it as presumptive evidence that, having been mistaken in one case, he is in error also in the other; while his enemies assert that it is proof conclusive of his charlatanism. Some recent trials of charbon inoculation in Southern Russia would seem, however, to argue in favor of the value of this discovery. (*Allgemeine Medicinische Central-Zeitung.*) During the summer of 1885, Professor Zenkovski inoculated over thirteen hundred sheep on the estate of Bielaserka, in Kherson. As a result of the inoculations with vaccine matter of two degrees of strength, there was a mortality of from 1.8 to two per cent. A third inoculation with anthrax blood was without effect. In November a committee was appointed to test the protective efficacy of these experiments. They selected at random thirty sheep from the herd and inoculated them with anthrax blood, doing the same also to ten other sheep which had not been submitted to the protective experiments. Of the ten unprotected sheep nine died from anthrax, only one escaping. The thirty previously inoculated animals suffered for a few days a slight elevation of temperature, but none died. One was killed by dogs, and another died two weeks later from pleuropneumonia, but in neither of these were anthrax bacilli found either in the blood or in the tissues.

This would seem to be a fairly conclusive test of the protective value of inoculation, in anthrax at least. And as the annual loss among sheep from malignant pustule, in the Government of Kherson, is from twelve to twenty per cent., the reduction of the mortality to two per cent. is naturally regarded by the proprietors as a great gain.

INTUBATION OF THE GLOTTIS.

We have alluded on several occasions to the practice of intubation of the glottis as a substitute for tracheotomy in membranous croup. The operation was first successfully devised and carried out by Dr. Joseph O'Dwyer, of this city, and in his hands has been attended with some degree of success. Recently the instruments have been procured and used by Dr. T. E. Waxham, of Chicago, and by Dr. E. Fletcher Ingals, of the same city. The former, at last accounts, had tried them in eleven cases, with four recoveries. In the *Journal of the American Medical Association*, for February 6th, Dr. Ingals states that he has employed intubation in two cases, and although both patients died, he is favorably impressed with the possibilites of the tubes.

The operation can be done so easily, it is so free from danger, it so promptly relieves serious symptoms, that Dr. Ingals believes it will become established as a standard therapeutic procedure among general practitioners.

He says: "Looking at the intubation of the glottis from our present standpoint, it seems well adapted for the following cases:

"1. For diphtheritic and croupous stenosis of the larynx occurring in children under three and one-half years of age.

"2. For cases of the same affections in older children in which from any cause the physician wishes to defer the operation of tracheotomy.

"3. For those cases in which consent to tracheotomy cannot be obtained.

"4. For those cases in which proper nursing could not be secured.

"5. For severe cases of spasmodic croup in children less than ten years of age.

"6. For simple stenosis of the larynx, not diphtheritic, in children.

"7. With proper-sized tubes it might be of value in the treatment of various forms of laryngeal stenosis in adults."

The Association of American Medical Editors.—The next meeting of this body will be held the Monday evening preceding the opening of the next session of the American Medical Association in St. Louis, Mo. In view of promoting its success *The American Lancet* makes the following suggestions, viz.: "That instead of the usual gathering, for a few speeches, it be made more of a social affair. To make editors better acquainted with one another in a personal way is certainly desirable. To advance such acquaintance there is nothing so effective as a dinner. Hence it is suggested that the officers arrange for this in a proper way."

News of the Week.

Statues to the French Physicians.—The French, above any nation, appear anxious to honor the memory of distinguished medical men by erecting statues of them. Efforts are now making to raise money for statues to Bretonneau, Velpeau, Trousseau, and Bouley.

The Congress of German Surgeons holds its fifteenth annual meeting in Berlin, April 7th to 10th.

Oleo-resin of Kava Kava as a Local Anæsthetic.—Dr. L. Lewin, author of "Untoward Effects of Drugs," has been making some experiments with kavakava, during the course of which he has discovered a substance, residing in the oleo-resin, which he declares has similar properties, as a local anæsthetic to cocaine. At the suggestion of Dr. Lewin, Messrs. Parke, Davis & Co., have prepared an oleo-resin of the drug, and from experiments made with it at their laboratory, the reports of its peculiar anæsthetic action are likely to be corroborated by the profession.—*Medical Age.*

International Medical Congress.—We have received an article on the International Congress in which such gentlemen in the United States and the Canadas as withdrew from the Congress are characterized as "wide-mouthed soreheads," "monkeys," "parrots," "wild asses," "kangaroos," and "skunks." The author asserts that all "this noise and din about the Congress is but the expression of disappointed ambition on the part of a few conceited orang-outangs." At a recent meeting of the Philadelphia County Medical Society there were one hundred and sixty-nine members who voted against the Congress, as at present organized, to thirty-nine members who voted for it. "Orang-outangs" must abound in Pennsylvania. The communication is anonymous, and it is well for its writer that it is so.—*American Practitioner and News.*

The "Jaw-jerk" is the euphonious and alliterative term recently contributed by neurology to medical science. It is different from, but in a manner, correlative with, the "chin-reflex." The latter is a superficial or skin reflex, the former a deep reflex, analogous to the ankle-clonus, and obtained by suddenly depressing the lower jaw and putting the masseters on the stretch.

Dispensing Poisons.—A bill has been introduced in the New York State Legislature providing that after the first of next January it shall be unlawful to sell any sulphate or preparation of morphine or opium (except paregoric and preparations containing two grains or less of opium to the ounce) except from bottles or packages with scarlet labels.

The Pennsylvania League for the Protection of Scientific Research is the title of an association recently organized in Philadelphia, and having for its object the prevention of any new legislation regarding vivisection. Dr. H. C. Wood is President.

The German Government and Secret Remedies.—The Berlin Committee for the "Suppression of the Nuisance of Secret Remedies" have decided to present a memorial to Prince Bismarck with the following propositions: 1. In place of the imperial ordinance of January 4, 1875, there ought to be issued one which assigns the preparation, and the keeping and offering for sale, of all kinds of medicaments, inclusive of secret remedies and pharmaceutic specialties for sanitary purposes, in retail, exclusively to the apothecaries' shops. 2. For the restriction of the sale of secret remedies in the apothecaries' shops there ought to be instituted an imperial board, acting as a technical central office, having the function to examine and test every secret remedy before permitting it to be sold; to fix the price of such remedy; and to determine whether the drug or compound may be issued to the public otherwise than in the form of a physician's prescription. 3. To prevent an inundation of the market with foreign secret remedies and pharmaceutical specialties it is suggested that they should be subjected to a duty *ad valorem.*

Meat Lozenges and Meat Suppositories are the latest contributions to elegant pharmacy. It may be truly said that the druggist's art has made both ends meat!

A Neurological Society in London.—A neurological society has been organized in London, with Dr. Hughlings Jackson as President, and Drs. S. Wilks and Sir J. Crichton Browne as Vice-Presidents. The scope of the society includes physiology and psychology.

Medical Legislation Opposed by Homœopaths.—The daily papers state that at the monthly meeting of the New York County Homœopathic Medical Society last week, the Committee on Legislation reported against the bills about the appointment of a State Board of Examiners for the purpose of licensing physicians, especially that bill which provides that the board should consist of nine members, six of whom should be members of the regular school of physicians and only three of the schools of homœopathy and eclecticism.

College of Physicians and Surgeons.—We learn that Dr. J. C. Dalton, President of the College of Physicians and Surgeons, has filed with Superintendent D'Oench plans and specifications for the new college building in Tenth Avenue from Fifty-ninth to Sixtieth Streets. It is to cost about $250,000. The structure is to be four stories high and 140 by 182 feet. The front will be of terra-cotta and brick. W. W. Smith is the architect.

The Death of Dr. Amédée Dechambre, of Paris, is announced. He was editor of the *Gazette Hebdomadaire*, and was the *doyen* of the Parisian medical press.

Popular Prejudice against Physiology.—There is a curious popular prejudice against the teaching of physiology in the common schools. This has been illustrated by the story of the old lady who withdrew her daughter from a boarding-school because she "didn't want her to be taught about her insides." Reports state now that physiology is not a popular science in the rural districts of Pennsylvania. It is stated that in some parts of the State the school authorities find great difficulty in enforcing the law passed at the last session of the Legislature compelling the study of physiology and hygiene with reference to the effects of alcohol on the human system. Parents have objected in some sections to their children pursuing the study, and children have refused in others

under their parents' instruction. At Frankstown the school directors have encountered the latter difficulty, and a strong resolution has been adopted by the board with a view to meeting it, which they say they are determined to enforce.

Medical Practice Bill.—A bill to establish a medical board of examiners and licenses, and to regulate the practice of medicine and surgery in the State of Ohio, and to define the duties and powers of such board, will, says the *Cleveland Medical Gazette*, be presented to the Legislature of Ohio. Its provisions are much like those of the Minnesota law.

Dr. W. E. Johnston.—A cable despatch from Paris reports the death, February 14th, of Dr. W. E. Johnston, formerly of Sidney, O. Dr. Johnston was sixty-three years of age, had resided in Paris and practised medicine there since 1851, and had visited his native land only three times since first going to Paris. Dr. Johnston had been in feeble health for some time. He was one of the leading American physicians in Paris, and was well known to many of his countrymen and medical colleagues who visited that city. One of his latest letters to this country was directed to The Medical Record, and was upon the subject of the troubles of the International Medical Congress. Dr. Johnston was for many years a correspondent of the New York *Times* over the signature "Malakoff."

Died in the Discharge of Duty.—Another victim to the dangers of his professional work is reported in the person of Dr. James A. McCaughin, one of the volunteer staff at the Albany Penitentiary during the typhus epidemic. He was stricken with the disease about two weeks ago, and died on February 13th. Dr. McCaughin was about twenty-five years of age. He is the second doctor who has fallen there in the discharge of his duties. There are only three cases of typhus among the prisoners now.

The Latest "Habit."—People appear to be able to acquire any morbid habit, from eating pie t.i.d. to taking opium. The *Medical Herald* reports the case of a man who contracted the habit of taking gelseminum. This he followed until he was able to take a fluid ounce at a single dose. He finally sank into hopeless idiocy and died in a stupor. One curious physiological effect was that his hearing became singularly acute. Perhaps otologists can make use of the fact.

Another Malarial Germ.—In Friedländer's *Fortschritte der Medicin* is contained an original article by Prof. Marchiafava and Dr. Celli, of Rome, describing the results of their studies on the nature of malaria. Their work was conducted for six weeks in the most dreaded section of the Roman Campagna. As a result, something truly wonderful has been found, namely, a micro-organism that is situated within the red blood-corpuscles and there leads a parasitical life. This relation to the red blood corpuscles is an absolute novelty, the micro-organisms that have been so far described in the blood being suspended in the plasma. The researches of the gentlemen named dispose of the bacillus of malaria described by Klebs and Tommasi-Crudeli.—*Weekly Medical Review.*

Reviews and Notices.

Practical Human Anatomy. A Working Guide for Students of Medicine, and a Ready Reference for Surgeons and Physicians. By Faneuil D. Weisse, M.D., Prosector (1863–65) to the late Valentine Mott, M.D., LL.D.; Emeritus Professor of Surgery and Surgical Anatomy, Medical Department of the University of the City of New York; Professor of Practical and Surgical Anatomy, Medical Department of the University of the City of New York; Professor of Anatomy, New York College of Dentistry. Royal octavo, 468 pages of text. Illustrated by 222 lettered plates. New York: William Wood & Co. 1886.

An original work in anatomy is a conception quite difficult to realize. Dealing as it does with solid, incontrovertible facts, anatomy is a study which is generally narrowed to their systematic arrangement and detailed statement. Any departures from the ordinary routine must be made in one or both of these directions. From such a standpoint, Professor Weisse has given us a work somewhat original in design and thoroughly practical in its application of principles. Twenty years of teaching in practical anatomy have eminently fitted him for the task. Nature has been his text-book, and he has studied and reviewed its different pages with the single conscientious purpose of causing others to see with his eyes and interpret with him her many mysteries. It is clinical anatomy, so to speak, with the body on the table. His method of examining the body, and in detailing its appearances, is that of the skilled instructor who knows the wants of his students. They look over his shoulder while he makes his dissections, and the different stages of the study are fixed by the wonderfully realistic lithographic plates, prepared from elaborate sketches on the spot by the talented artist, Mr. Maximilian Cohn. So far as the dissections go, they make the study of anatomy as instructive and profitable as is possible without the actual presence of the body.

As before intimated, the plan of the work is in a great measure original. It is the outgrowth of a careful and loving study of the human body, extending over many years of careful preparation—the chart of a pilot who has personally sounded every fathom of his course. It is only possible to summarize an idea of its plan to enable the student to realize its scope and appreciate its excellences. Its basis is the division of the body into practical dissections, with their successive description and illustration. In other words, the different regions of the body are dissected and described in a natural order and practical manner, so that any student can appreciate the number and relation of the different organs in their respective planes. The illustrations include 153 full-page plates, comprising 51 plates of 132 original figures, 6 full-page plates from standard authors, 9 plates of 25 figures from other works, and 15 original text-figures. The descriptions of the dissections are systematic, terse, and thoroughly in keeping with the classical anatomical nomenclature of the day. They are indeed models of their sort, and leave nothing to be desired for the student who wishes to understand the subject in all its practical bearings. While saying thus much for the text of the work, we have much more of praise for the plates. They are indeed wonderful in their way, as faithful studies of actual conditions, and represent an amount of work on the part of author and artist which cannot fail to be appreciated by the student and practitioner. Especially will this be the case when it is known that the author has generously presented these plates to the volume, so that the price of the latter is no more than that for an ordinary text-book of its size. Typographically the volume is a model of its kind, William Wood & Co. having shared with the author the laudable ambition of making it the leading one in its department.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Stated Meeting, Wednesday, January 27, 1886.

JOHN C. PETERS, M.D., CHAIRMAN.

DR. ANDREW H. SMITH read a paper on

THE TREATMENT OF DROPSY WITH APOCYNUM CANNABINUM.

Apocynum Cannabinum (to use the preparation given by Dunglison), as employed in medicine, consists of the bark of the root of the plant having the above botanical name.

Popularly it is called Indian hemp, which name it shares with the utterly different drug cannabis indica. It is also called "wandering milkweed," and this name also it is compelled to share with another member of the same family, viz., androsæmifolium. This latter is often substituted for the apocynum cannabinum; and as it possesses active emetic and cathartic properties has probably contributed to discredit the diuretic virtues attributed to the latter by producing undesired and, indeed, untoward effects.

Apocynum cannabinum is an indigenous plant, and has long been known to the American profession. Its value in removing serous effusion from the pleural and peritoneal cavities so impressed Dr. Rush that he called it the "vegetable trocar." It was employed by the late Dr. Mott, but he considered it too active for any but sthenic cases. The attention which it has received in more modern times, scanty as it is, is due chiefly to the writings of Dr. Hervey Jewett, of Canandaigua, N. Y.

In a paper read before the New York State Medical Society, in 1869, and published in the "Transactions" for that year, he speaks in the most enthusiastic terms of his success in curing dropsy with this drug. He says: "As a tonic and diuretic I regard it as more efficient in the cure of general anasarca and in removing the accumulation from serous sacs than all other remedies known to the profession."

He recommends that in atonic dropsy, the patient being depressed and exhausted, small doses be given at short intervals. In sthenic cases, however, large doses should be employed, combined with potassium acetate or spirits of nitre. He adds: "If not complicated with organic kidney disease, there is invariably a rapid cure;" and "when incurable cardiac and other complications exist, and the effusion is the result of debility, it is the only remedy in my hands that has not disappointed me in giving temporary relief, promoting comfort, and prolonging the life of the patient."

Out of a large number of cases in which he had used this medicine successfully, Dr. Jewett cites three—one of cardiac dropsy, one apparently ovarian, and one in which there were hydrothorax, ascites, and general œdema. All were cured in a brief period. The preparation he employed was a decoction made with one drachm of the bark of the fresh root to eight ounces of water. Of this the dose was half an ounce every six hours.

At a meeting of the Medical Society of the County of Kings (N. Y.), in May, 1875, Dr. Hutchins read a paper, in which he referred to the experience of Dr. Jewett, and related a case of his own in which a man, sixty years of age, having general anasarca, complicated with pleuritic effusion and hydropericardium, was suffering from extreme dyspnœa, the result of the enormous distention. After the failure of all the expedients used to excite the kidneys, trials were made with the apocynum, using various specimens and preparations from well-known drug houses. All these were without effect, but when some of the drug was obtained from Dr. Jewett, of his own gathering, in forty-eight hours after the administration was begun, "the man who had been so frightfully distended was reduced to a skeleton."

Dr. Hutchins also relieved two cases of scarlatinal dropsy and one of phlegmasia alba dolens. He also spoke of the case of an old gentleman who was subject to attacks of dyspnœa from effusion into the pericardium, which were speedily relieved by very minute doses of the fluid extract frequently repeated.

For a letter received from Dr. Jewett by Dr. Hutchins, see MEDICAL RECORD, vol. x., p. 460.

In the discussion which followed, DR. ARMOR expressed the belief that the drug would be found useful chiefly in general anasarca, and in non-inflammatory serous dropsy. If the effusion was the result of serous inflammation, the lymph covering the serous surface would be a barrier to absorption. Dr. Armor had used apocynum with varying results, sometimes procuring a marvellously rapid reduction of the dropsy, and in other apparently similar cases obtaining no effect whatever. In these latter cases he had been equally unsuccessful with all other diuretic agents.

My own personal knowledge of the use of this drug is limited to its employment in three cases. The first was one at St. Luke's Hospital, some ten years ago, which I saw by the courtesy of Dr. McLane. This was a case of renal disease, with scanty urine and threatenings of uræmia. All the usual diuretic remedies had failed, when an infusion of apocynum excited profuse diuresis, and the danger was averted. The second was a case of my own, at the Presbyterian Hospital, in which the remedy was tried for the relief of cardiac dropsy. The result was not satisfactory, possibly owing to lack of care in the selection of the drug.

The third was one which occurred at the same hospital in October last. A woman, about forty years of age, had advanced chronic nephritis, with extreme incompetency of the mitral valve. There was general anasarca, including the face, with a large amount of peritoneal effusion, and the lungs were œdematous. There was extreme dyspnœa, the face was cyanotic, and the mind wandering. The daily amount of urine varied between six and twelve ounces. The usual list of diuretics had been exhausted with no benefit, and I remarked to the house staff that it seemed scarcely worth while to annoy the patient with further medication. However, as a last effort, a decoction of apocynum was prescribed, and with most gratifying results. In thirty-six hours the urine had increased to thirty ounces, and the urgent symptoms had subsided. Since then the patient has been fairly comfortable, and she is to-day in a much better condition than that of four months ago.

As to the mode of action of the drug, it would seem that it can scarcely be by direct stimulation of the glandular structure of the kidneys, else we should not find it valuable in scarlatinal dropsy, for instance, in which we suppose the kidney to be already in a state of irritation. Nor can it be through general increase of arterial tension, since apocynum has succeeded when digitalis and convallaria had failed. I would hazard the conjecture that the action is a special one upon the renal plexus, causing increased vascular tension in the kidney itself.

The drug has tonic as well as diuretic properties. Its taste is not disagreeable, though strongly bitter. It appears to me that it would have a favorable effect in atonic gout, with insufficient renal excretion as one of its factors.

In accordance with the rules of the Section the discussion of this important paper was postponed until the next meeting, but suggestions were made by Drs. Fox, Billington, Putnam-Jacobi, Fanning, Amidon, J. C. Peters, and others.

Then the discussion on the "Local and Dietetic Treatment of Chronic Rheumatism" was opened by Dr. Amidon.

At the next meeting a paper will be read by Dr. Billington on "The Treatment of Amenorrhœa with Permanganate of Potash."

Dr. A. H. Smith's paper will be discussed in full, and further discussion will take place on the treatment of chronic rheumatism. Physicians having experience with apocynum in the treatment of dropsy, will please communicate with Dr. A. N. Smith, or the chairman.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, January 8, 1886.

BEVERLEY ROBINSON, M.D., PRESIDENT, IN THE CHAIR.

(Concluded from page 141.)

THE PRESIDENT then reported two cases of

PERNICIOUS ANÆMIA.

CASE I.—Elizabeth K——, aged thirty, admitted to Dr. Robinson's service at St. Luke's Hospital, October 19, 1885. Dr. Mabbott, house-physician; notes furnished by Dr. E. B. Dench, Sr. The patient was a nursemaid. Her family history was negative. Denies venereal disease and the use of alcohol. Five years ago she fell and hurt herself. Since then the menstrual periods have been scanty, sometimes occurring every two weeks, sometimes every three or six weeks, and painful, the pain beginning two days before the flow, and lasting through it. Three years ago she had intermittent fever, tertian type, lasting about six months.

In December, 1884, she was exposed to wet and cold; does not remember whether during menstruation or not. Soon after had a chill; began to have severe pain over the hypogastrium and left inguinal region; vomited and had dyspnœa. For several days the temperature was 105° F., and for two weeks the symptoms, with the fever, continued. Then she got up for two weeks. At the end of that time (early in January) the pain, etc., returned, though the fever was less marked, and there was little vomiting. The urine was scanty, dark colored, burned when passed, sometimes had to be drawn, and once, for twenty-four hours, there seems to have been suppression. She had considerable pain in the back, much headache; had no œdema or ascites, no delirium; menstruation continued irregular and scanty; had much leucorrhœa. Had pain on pressure over uterus, and in left inguinal region. Thinks there was enlargement in hypogastrium. She remained as above stated until April, 1885, then got up. Two weeks later had a return of the symptoms, with diarrhœa; the stools often contained mucus, but no blood. For some time she was fed by rectum, retaining nothing on the stomach. There was much colicky pain and tenderness.

In July she was better for a week or two, then symptoms returned, disappearing about August 1st, to return about the last of August. She generally had considerable backache and leucorrhœa when up.

Two weeks ago pain and vomiting reappeared, though less severe. Has had no diarrhœa, no hemorrhages, no cough of importance. There is no history of pregnancy, abortion, or miscarriage. Has not menstruated since May, 1885.

On admission well nourished, anæmic, appetite poor, tongue somewhat coated; pulse, 96; respiration, 24; temperature, 98° F., P.M.; urine, 1.027, acid, no albumen, no sugar, contained urates.

October 20th.—Heart: Apex in fifth intercostal space, three and one-half inches from the median line. Distinct systolic murmur, loudest in second intercostal space, one inch from the left border of the sternum, also heard in the first and third spaces. Slight venous hum in the neck. Lungs negative. Moderate sensitiveness in epigastrium, and rigidity of rectus muscles. Slight sensitiveness in right ovarian region. Lower extremities negative. Vaginal examination: In the right cul-de-sac there is an indistinct outline of a soft body very similar in shape to an ovary, quite painful on firm pressure, of soft consistency. Same sensation not felt on left. Cervix quite far back in the pelvic cavity, os small, cervix conical—not enlarged. Uterus not distinctly movable, os points somewhat to left; uterus embedded in a mass extending in front of it and to the right, probably a pelvic cellulitis, probably double ovaritis with descent on right side; some anteflexion.

October 21st.—Began to menstruate.

November 3d.—Vaginal examination by Dr. James B. Hunter: Both ovaries probably constricted by the mass of exudation above the uterus, whence the pain and vomiting; mass felt behind the uterus is an ovary, not particularly tender, probably normal; uterus small, not retroverted.

The patient continued to vomit more or less, and complained of pain. The treatment was directed toward relief from these symptoms, and consisted in the adoption of a variety of measures.

On December 11th the attending physician examined the patient and the following note was made: Lungs: Dulness at right base; posterior breathing cannot be heard at right base; probably some effusion. Vaginal examination: Right vaginal cul-de-sac contains smooth, somewhat globular mass of infiltrated tissue, moderately tender. Left cul-de-sac free. Uterus somewhat movable. No mass felt per rectum except fundus uteri. Probably suffering from tubercular peritonitis. Examination of urine: 1.016, alkaline; albumen, small amount (three per cent); no sugar; few pus and epithelial cells, much ammonia urate. Urine drawn at 8 P.M., 1.018, faintly acid, albumen trace, many red blood-cells, few hyaline casts and sodium urates.

December 13th.—During the night was somewhat delirious. This morning pulse is rapid and feeble. Abdomen distended and tympanitic, patient semi-comatose. Patient remained semi-comatose during the day and died at 9.20 P.M.

Autopsy.—Body is emaciated, rigor mortis is faintly marked, no œdema. Bruise on forehead two inches by one and one-half inch in diameter. Diaphragm is at fourth rib at either side. Bowels very greatly distended. Peritoneum is normal. Pleura: Adhesions at left apex but no fluid in either cavity. Heart is small, valves are crepitant, muscular tissue yellowish, cavities moderately dilated. Lungs: Left is normal; right congested and moderately œdematous. Spleen normal. Kidneys are normal in size, organs lobulated, capsules not adherent; a good deal of fat in both organs, in the cortex. Bladder normal except a zone of intense hyperæmia about the orifice of left urethra extending up mucous membrane of the urethra about an inch. Ovaries are both normal, and the Fallopian tubes are normal. Uterus is normal. No evidence of pelvic cellulitis or cœliac peritonitis. Liver: Enormous amount of fat. Stomach: Mucous membrane is anæmic; common bile-duct is pervious. Intestines are enormously distended with gas and fluid fæces. Brain is intensely anæmic.

Microscopic Examination.—Heart: The transverse striæ are not distinct; the muscle-cells are granular, and in places distinctly fatty. The liver is so fatty that it floats in water; the liver cells can hardly be distinguished. Kidneys enormously fatty; fat everywhere within the tubes; there is no increase in the fibrous tissue.

CASE II.—J. B——, aged thirty-five, single, cook, entered St. Luke's Hospital, October 30, 1885. Family history negative. Had small-pox fifteen years ago; intermittent fever two years ago. Menstruation always regular; no uterine disturbance. Has always been strong, but complexion has been pale. For the last three years has had occasional feelings of epigastric oppression and slight pain shortly after eating, relieved by vomiting. Apparently the symptoms have not increased to any extent until the last illness. October 28th, about 6.30 P.M., suddenly felt dizzy; had feeling of great oppression over

epigastrium, but not much pain; severe pain in the back of head, and then had a large hæmatemesis of light fluid blood. Vomited blood, which became darker and clotted, at intervals, for three hours, entire quantity being about two quarts; was much prostrated; had severe occipital pain during the night and could not sleep. Vomited the next morning, and in the evening of October 29th had another small hæmatemesis. On the morning of the 30th she had a very dark-colored movement from the bowels. Never passed clear blood; never vomited blood before; never noticed any swelling of the abdomen, nor severe epigastric nor general abdominal pain. Neither has she emaciated at all. No pulmonary, cardiac, renal, or urinary symptoms. Patient drinks much tea and coffee, and moderate amount of alcohol, chiefly beer.

On admission, pulse, 114; respiration, 30; temperature, 99° F., 6 P.M.; urine, 1.024; faintly alkaline; no albumen; no sugar; pus and epithelium. Put on milk diet.

October 31st.—Examination by house-physician: Patient extremely anæmic, but not emaciated. Heart: Apex in fifth intercostal space, within nipple line; first sound over apex slightly impure; soft pulmonary systolic murmur; venous hum in vessels of neck. Lower border of liver, dulness two and a half inches above the free border of the ribs in right nipple line. Spleen negative. Abdomen everywhere resistant, but no sensitiveness in epigastrium, and no distinct mass made out. Slight fulness in epigastrium upon inspiration. Inguinal and axillary glands negative. Lungs negative. No œdema, minute varicose veins on lower extremities.

October 31st.—Examination by attending physician: Distinct abdominal pulsation one inch to right of median line on either side of umbilicus, and at least two inches below; force more marked on either side than elsewhere, more direct than expansile. Pulsation followed up to junction of right and left lobes of liver, and there is a feeling of hardness all along the line of pulsation over, above, and below umbilicus; with slight pressure of stethoscope a soft, blowing murmur heard, and above and to left of umbilicus distinct pulsation is seen.

November 1st.—Allowed beef-tea and eggs.

November 4th.—At 7.40 A.M. had hæmatemesis of nearly one quart of blood; fluid light-colored. Ergotin, gr. ij., hypodermatically. Internally, tannin, gr. x.; brandy, 3 j.; aquæ, 3 j., every half hour from 8 to 10 A.M. Ice-bag on stomach; cracked ice by mouth; nothing else by mouth. At 9.50 A.M. vomiting again, no blood.

November 6th.—Hæmatemesis of above four ounces.

November 12th.—4 A.M.: Temp., 104.6° F. 7 A.M.: Temp., 105.4° F. 9 A.M.: Temp., 104.4° F.

November 19th.—In the evening vomiting; temp., 10 P.M., 103.4° F.

November 20th.—About 10 A.M. patient went into collapse and died.

Autopsy, November 20th.—Body fairly nourished; rigor mortis absent; surface of body anæmic; no œdema. Peritoneum normal. Diaphragm normal on either side. Pleuræ: No adhesions; no fluid. Heart a trifle large, slight hypertrophy of left ventricular wall; valves competent. Lungs anæmic. Spleen rather small; otherwise apparently normal. Kidneys lobulated, surfaces granular, capsules adherent; cortices are a trifle thin, markings not distinct; organs extremely anæmic; fat and cysts in the cortices; suprarenal capsules normal. Pancreas firm; anæmic. Stomach: Mucous membrane thickened; organ anæmic. Intestines: Mucous membrane anæmic. Uterus and ovaries, anæmic. (The blood in the right cardiac ventricle was extremely thin and watery in appearance, more so, indeed, than I have ever seen. There was no ulceration or vascular opening upon the stomach-wall which could explain source of hemorrhages.) In small intestine was contained feculent matters colored with bile. In large intestine, and in small intestine for some distance above ileo-cæcal valve, was a fluid material very slightly colored with the bile and seemingly the remains of the enemata employed. There was no coating anywhere in the large intestine by undigested enemata, as sometimes occurs with beef-blood enemata. Example seen in St. Luke's Hospital several years ago, in which cæcum was filled with undigested beef blood, which apparently occasioned uncontrollable vomiting and death. Rise of temperature before death was supposed to be, (1) preagonistic, (2) due to sepsis, or (3) uræmic. Urine was examined and found to contain no urea some hours before death. Intravenous injection of saline solution had been thought of, and every preparation made for employing it, but the indications did not seem to be formal, in view of the small amount of blood lost in the latter days of life. Would it have been advisable—or, in such a case should intravenous injection of defibrinated blood (if any injection be made) be decidedly preferred? Blood examined under microscope after death showed no special change in relative number or appearance of red and white blood-corpuscles. Corpuscles were not counted.

Microscopical examination.—The following report has been furnished by Dr. Frank Ferguson:

1. Heart: Muscle-cells are unusually granular; transverse striæ are not plainly seen; some of the cells have undergone fatty degeneration. Organ very anæmic.

2. Liver-cells around the branches of the hepatic vein are pigmented; central veins are dilated; cells of the organ throughout are cloudy and granular. There is considerable fat at the periphery of the acini. Liver is anæmic.

3. The kidneys are very anæmic. Epithelium lining tubules granular very generally, and in places fatty.

4. The red marrow contains an unusual amount of fat.

Dr. Ball remarked that he was present at the post-mortem examination, and that there was no lesion found in the stomach to account for the hemorrhages. Taking into account the fact that the woman had been anæmic, he was inclined to the diagnosis of pernicious anæmia, that is, anæmia independent of any lesion apparent to the naked eye. The woman, when she was admitted to the hospital, had evidently lost blood and presented the appearance usually seen under those circumstances, and among the measures resorted to were rectal injections, which we all knew did not amount to much in the way of affording nourishment.

Dr. E. G. Loring said that in the eye, in cases of pernicious anæmia, large numbers of minute hemorrhages could be seen, and he thought that without very careful examination of the finer blood-vessels one could not say that rupture had not taken place.

Dr. Ball said that unquestionably there was rupture of blood-vessels in the stomach to give rise to that amount of hemorrhage, but to the naked-eye inspection the points at which they had ruptured could not be seen.

The Society then adjourned.

The Function of the Vermiform Appendix.—Dr. John H. Cipperly, of Troy, sends us an abstract of a paper read before the Rensselaer County Medical Society, in which he advances a novel theory concerning the function of the vermiform appendix. The ascending colon is supplied chiefly with longitudinal muscular fibres, while the cæcum has this muscular coat in less than one-half of its length, its lower portion being baggy and flabby. The intestinal contents are expelled through the ileo-cæcal valve into this baggy receptacle, and then are passed upward through the colon with much less rapidity. "Now," Dr. Cipperly says, "in the onward movement of this accumulation, when contraction takes place, the vermiform appendix, by the presence of air and gases in its calibre and secreting mucus, aids in the relief of this passage by averting a certain amount of suction on the walls of the cæcum, and thus modifies or prevents a commencement of intussusception."

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

A NEW THEORY OF THE ORIGIN OF DIABETES—THE DEATH OF JULES GUÉRIN.

PARIS, February 4, 1886.

AT a recent meeting of the Academy of Sciences, Dr. Boucheron read a paper, in which he enunciated a new theory as to the origin of diabetes and the diet best suited to the affection. Non-hereditary diabetics, said the author, are, like gouty subjects, those who make habitual use of a diet rich in albuminoid substances and in fermented liquors. A certain number of diabetics are also gouty, and they are nearly all azoturics. This observation corresponds with the experimental notion established long ago by Claude Bernard, that a diet exclusively albuminoid equally produces the glycogen of the liver and the glycogen diffused in the organism. Such are, for example, the experiments where dogs nourished exclusively with meat during several months presented hepatic glycogen, and larvæ of flies nourished exclusively with meat free from fat manufacture glycogen at the expense of the albuminoids. Hence it may be inferred that the albuminoid origin of sugar in animals coexists with the carbohydrated origin—the best known. In diabetes mellitus, the sugar derived from the albuminoids is as important, if not more so, than the sugar derived from the carbohydrates. In the therapeutics of diabetes, it is necessary to fix our attention to the sugar resulting from the albuminoids and that produced by the carbohydrates. Thus it would be useful to diminish the ration of albuminoids and that of the carbohydrates at the same time. The diminution of the albuminoids has the effect, not only of reducing the quantity of sugar and that of the collateral carbohydrates, but also of reducing the quantity of nitrogenous effete substances (urea, uric acid, ptomaines). The abstinence from carbohydrates only diminishes the sugar in leaving behind, sometimes to a great extent, azoturia with its dangerous effects; for the danger of diabetes does not exist principally in the sugar, which is but slightly toxic, since there exists a form of diabetes without sugar. The nocive substances of diabetes consist principally of the effete matters of the organism in a state of defective nutrition, which may be formed into two groups—the nitrogenous (urea, uric acid, animal alkaloids), and zoamines according to Boucheron, or ptomaines according to Selmi, or leucomaines according to Gautier. These irritating or toxic effete substances, in circulating in the vessels and impregnating the tissues, produce irritations of the nervous, circulatory, locomotor, digestive systems; lesions of the organs of sense, ocular and auricular diabetides, and lesions of the principal emunctories; lesions of the kidneys, of the skin, of the mucous membranes, of the glands, of the pancreas; finally, it produces toxic terminal effects. Their influence on the nervous system is undeniable. The therapeutical deduction from the above statements is that in limiting the carbohydrated elements, which is sufficient in a certain number of cases, it is well to limit also the albuminoids and alcoholic liquors. Oxygenation and active muscular exercise are necessary to promote combustion; drugs come next—alkalies, arsenic, the bromides, according to the symptomatic indications.

M. Paul Bert, the eminent biologist, has been appointed President-General of Tonquin, much to the surprise of many of his friends; for, whatever may be his merits as a scientist, and taking into consideration his political antecedents, he is regarded as anything but qualified for such an important post—but favoritism goes a great way under the present government of France. Such appointments almost always turn out unfortunate, particularly when, as in the present case, the candidate is a medical man; for, however eminent he may be in his profession, it does not at all follow that he would make a good diplomatist. In fact, the reverse has often been proved to be the case, for many men equally as eminent in the profession as Paul Bert had to relinquish high political posts to resume what they were evidently destined for. It is said that in going out to Tonquin M. Paul Bert will have a wider field for prosecuting his scientific studies than within the walls of the Sorbonne, but I am afraid that if he once gets out there he will have neither the time nor the inclination for such recreation; for, as suggested by your esteemed London correspondent, politics and medicine are quite incompatible unless the medical men who adopt the former will be content to proffer professional advice only. But even in this respect those who have undertaken such a task have, with rare exceptions, proved failures, as it is impossible for any man to do equal justice to two such important sciences as politics and medicine.

Jules Guérin, whose name has been familiar to the profession for more than half a century, died at Hyères, on Monday, January 25th, in the eighty-sixth year of his age. His health had been declining for some time, and he left Paris only a fortnight before his death to seek the rest that he was so much in need of. Dr. Jules Guérin was one of the oldest and most eminent members of the profession in this country. His discussions at the Academy of Medicine, of which he was a most distinguished member, are masterpieces of scientific reasoning, though it cannot be said that he was always in the right. He was a great sceptic, and he marked his place at the Academy as a vigorous disputant, but of the most eccentric character. He stoutly combated the modern theories of cholera and the microbian doctrine of disease. He was altogether sceptical as to the supposed discoveries of Koch and Pasteur, and particularly of the latter in regard to his inoculations for hydrophobia. Notwithstanding the eccentricity of his opinions, he was considered a great authority by his colleagues. He was the author of several important works on deformities of the osseous system, orthopædics, and subcutaneous tenotomy. He was the founder of the *Gazette Médicale* of Paris, and during the last three or four years of his life he was engaged in making out a catalogue of his books, of which he had a vast number, and of those of which he was the author he published, in the form of extracts, a quarterly review, which is a most interesting work, and well worth consulting.

VARIATIONS IN THE DIABETIC DIET.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The sufferer from diabetes who is condemned to use the ordinary gluten loaf must sometimes feel that he is on worse than prison fare. I annex certain recipes which were sent me by a devoted wife, whose husband was suffering from diabetes, and who was also skilled in the culinary art. I suggested to her that she should endeavor to evolve something palatable out of the gluten flour which was to form a principal article of his diet. The gluten is still there, but by turning the prism we practically change and vary the view. I give the directions mainly as they came to me.

Gluten gems.—Mix in a batter two cups of gluten flour, two cups of milk, two eggs, and a sufficient quantity of salt. The mixture must be baked in a *sharp* oven for fifteen or twenty minutes. The gem-pans must be hot and well greased when the gems are put in.

This same mixture may be used for pancakes; also baked in a pudding-dish and eaten for dessert. A sauce of equal parts of milk and water heated together, sweetened with glycerine and flavored with cinnamon, makes it very palatable. The addition of a little sherry wine, *if allowed*, is an improvement. The same mixture baked in jelly-pans and put in layers, with strawberries between each and also on top of the last, is a very fine strawberry

shortcake, or an excellent substitute for it. The *cup* referred to in this mixture represents half a pint. In connection with the matter of measurement, it is worthy of note that sometimes the flour is much heavier than at others and requires much less than two cups.

The almond flour has for some time been placed in the diabetic dietary. The formula beneath was sent me for the preparation of the almond bread.

Take one-quarter of a pound of almond meal and four eggs. Separate the yolks from the whites, and whip the whites moderately into a strong cream. Stir the yolks (well beaten) in lightly, add the almond meal, and bake in a tin in a slow oven. The oven should be as hot as for any other bread, and this quantity will bake in about thirty-five minutes.

Gluten biscuit, when well made, are far more agreeable to the taste than gluten bread. To make these mix together two cups of gluten flour, a scant even teaspoonful of baking powder, a "pinch" of salt, and a sufficient quantity of sweet milk. They are to be baked like other biscuit.

To the sick man diet is of more interest than pathology, and the diabetic patient will presumably derive more comfort from these formulas than from an exact diagnosis of his case, or positive information as to whether his disease be of nervous or glandular origin.

Respectfully,

F. A. Bureall, M.D.

[illegible]

"DR." OR "M.D."?

[illegible]

Sir: I would like to speak of a subject of medical etiquette that has puzzled me somewhat. It is customary for physicians, at least about Boston, to have their cards engraved with the prefix "Dr." to their names. This seems to me wrong, from a medical as well as social standpoint. From a medical standpoint, because the abbreviation "Dr." does not distinguish whether a man be physician, dentist, veterinary, lawyer, or divine, all of whom have the legal sanction, and the first three the sanction of custom, for the use of the term "Doctor." Social customs permit one to place upon his cards, if he so wish, whatever titles he may possess. Now, the term "Doctor" is merely part of a title, and aside from its ambiguity it contravenes the law of etiquette. If written at all before the name it should be thus: "Doctor of Medicine A——." The correct method would seem to be to sign, after the name, such letters as designate the title, as "M.D.," "D.M.D.," "LL.D.," etc.

R. Eugene MacDonald, M.D.

[illegible]

[Our correspondent is undoubtedly right. Physicians' cards should be printed with the title "M.D." after the name. We have heard the excuse given for the present custom that many people do not know what "M.D." means.—Ed.]

SKUNK-BITE AND HYDROPHOBIA.

[illegible]

Sir: Apropos of the present excitement relating to hydrophobia, I would call your attention and that of the profession to a report of an assistant surgeon, U.S.A., stationed at Fort Riley, Kan., in 1872, and published in a medical journal (the only one at that time), name and month forgotten, at Kansas City, Mo., in which he stated that of fifty cases of hydrophobia that he had collected, a part of which came under his own observation, they were traced directly to the bite of the skunk.

Perhaps some member of the profession, with a memory less treacherous than mine, can give the name of the author and the exact date of the publication of the article, or perhaps the journal referred to, can be obtained, if you give a little prominence to the subject. I know that the article impressed me very strongly at the time, as *almost* establishing the fact that this disease is caused by an inherent poison in the saliva of this odoriferous animal. The skunk referred to is the smaller of the two animals that pass indiscriminately under that name, but which on the prairies of this State are divided into skunks and polecats, the latter being more than as large again as the former, but imparting the same effluvia upon provocation; but, as I remember, the doctor referred to did not charge the polecat with this hydrophobic property.

A. G. Chase, M.D.

[illegible]

[The article to which reference is made was written by John G. Janeway, Assistant Surgeon, U.S.A., and will be found in The Medical Record, vol. x. (1875), p. 177.—Ed.]

New Instruments.

AN IMPROVED ORO NASAL RESPIRATOR.

[illegible] W. H. Glendenning, M.D.

After the publication of Koch's discovery of the bacillus tuberculosis, I tried the various apparatus which had been devised for antispectic inhalations, and found all of them more or less impracticable or useless. The best of them proved to be the so-called Blake-Mackenzie respirator, a modification of an instrument devised by Curschman, in 1880, and subsequently improved by Hausmann. But this instrument, notwithstanding its

great utility, being of metal, was heavy and cumbersome, and most patients preferred the neat little celluloid instrument of Meyer and Metzger, of London; but this being unprovided with the rim of soft rubber tubing, permitted the free passage of air between the instrument and the face instead of through the medicated sponge. It struck me that if this little instrument could be provided with the soft rubber tubing of the Blake-Mackenzie, we could have a neat and serviceable respirator; but on applying to the instrument-maker, I was met with the objection that there was no cement by which the soft rubber could be attached to celluloid.

Since then Messrs. Tiemann & Co. have made for me an instrument combining the advantages of the two, which, with the improvements I am about to mention, makes it the most perfect respirator that has as yet been devised, and one which, for antiseptic inhalations, is second only to the costly and often inaccessible pneumatic cabinet. By referring to the above cut, it will be seen

that in form it resembles the Blake-Mackenzie respirator; but, being made of hard rubber, it is lighter and less ungainly in appearance.

A serious objection to all the oro-nasal respirators that I have seen is, that the valves closed imperfectly, and being made of rubber cloth, would soon curl up and become entirely useless. To overcome this difficulty, I have provided the valves over the lateral openings of the instrument with brass springs which close tightly during inspiration, and thus force the air to pass through the medicated sponge contained in the anterior cup of the instrument. As the sponge or the absorbent cotton in this cup offers sufficient resistance to the passage of air during the expiratory act I have dispensed with the central valve as useless.

Should one of these springs break, and the valve become useless, it may be readily replaced by loosening the screw and inserting a new one, and this can be done at a very trifling cost.

The substances I have thus far used with the most advantage have been eucalyptus oil and the following formula, for which, I think, we are indebted to Mackenzie:

℞. Thymol ..... gr. xl.
Æther. acetic ..... ♏ xl.
Æther. sulph ..... ♏ v.
Creasot ..... ♏ xl.
Terebene ..... ad ℥ j.

Ten drops of either of the above should be dropped on the sponge or cotton. To be effective the instrument should be worn for several hours each day, suspending its use or shortening the duration of the inhalation if the patient complains of headache, or if the face becomes flushed.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 7, 1886, to February 13, 1886.

TILTON, HENRY R., Major and Surgeon (Fort Wayne, Mich.). Granted leave of absence for two months, to commence on or about March 1, 1886. S. O. 8, Division of the Atlantic, February 9, 1886.

SHANNON, WILLIAM C., Captain and Assistant Surgeon. Ordered for duty at Fort Warren, Mass., relieving Assistant Surgeon John M. Banister, who will return to his proper station (Fort Adams, R. I.). S. O. 27, Department of the East, February 6, 1886.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Ordered for field duty in New Mexico, with troop "K" Eighth Cavalry. S. O. 23, Division of the Missouri, February 8, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending February 13, 1886.

CRAWFORD, M. H., Passed Assistant Surgeon. Detached from the Shenandoah on the 8th instant to await orders.

RUSH, C. W., Assistant Surgeon. Detached from the New Hampshire on the 15th instant, and ordered to the U. S. R. S. Franklin.

THE TREATMENT OF SOFT CHANCRE by means of salicylic acid is highly praised by Dr. Falco, of Barcelona. The sore is washed twice daily with a carbolized solution, and then dusted over with finely powdered salicylic acid. In a number of cases treated by this plan, the average time required for a cure was five and one-half days.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 13, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
February 13, 1886	1	6	35	4	10	77	9	0
Deaths.								
February 13, 1886	0	3	13	4	0	48	2	0

THE OPERATION FOR THE ALLEVIATION OF DEAFNESS.—Dr. Jefferson Bettman, of this city, writes: "In a recent issue of THE MEDICAL RECORD, just to hand, an article treating of 'A New Operation for the Alleviation of Persistent Deafness' attracted my notice. It is merely in the interests of scientific accuracy that I disavow the claims of this operation as an 'innovation.' The operation, as described by Dr. Bates, accords completely with that practised and published by Professor Joseph Gruber, of Vienna, in 1873. The articles treating of this subject can be found in the *Allgemeine Wiener Med. Zeitung*, January 7, 14, 21, 1873, under the full title: 'Die mehrfache Durchschneidung des Trommelfells als Heilmittel gegen primäre oder mit Trübung einhergehende Spannung desselben.' The operation of plicotomy (the division of the posterior fold of the membrane) was, however, described a year previous to this by Lucae (Langenbeck's *Archiv*, Bd. xiii.). As the views of the two eminent Viennese aurists, Gruber and Politzer, militate in so many points of minor or greater importance, it is not surprising that the latter should have advocated the same operation (vide *Wiener Med. Wochenschr.*, 1871) in diametrically opposite conditions of the membrane, *i.e.*, flaccidity or relaxation. Since then much has been written on this subject, and those who are interested will find the complete bibliography in Schwartze's most admirable 'Handbook of Aural Surgery.' The improvement in hearing frequently following the operation (myringotomia multipl.) is almost unexceptionally but transitory in nature. This has induced the majority of experienced observers to abandon it of late. As experience has shown that most of these operated cases gradually lapse into their old state, it at the best requires one or two years to determine accurately the curative effect of the operation."

SUCTION OF THE TUBE AFTER TRACHEOTOMY.—Dr. Suñe y Molist uses a flexible catheter, to which is attached a rubber bulb, in order to remove obstructions in the trachea after tracheotomy. The eye of the catheter is cut off smoothly, and the instrument is then introduced through the tube, the bulb being compressed. The latter, by its expansion, draws the mucus and fluid out of the trachea. It is then removed from the extremity of the catheter, emptied, and again attached while compressed. This operation can be repeated a number of times very rapidly. In this way the dangerous expedient, which is sometimes resorted to, of sucking on the tube is rendered unnecessary. The catheter should be carefully disinfected prior to its introduction.

A NEW MODE OF ADMINISTERING THE PHOSPHATES.—Dr. Cano Quintanilla writes in *El Dictamen* that the phosphates, which theoretically ought to give good results, do not always do so, because of their insolubility. He says that this difficulty can be overcome by making use of cows or goats. He gives two ounces a day of

phosphate of lime, mixed in the feed, to a cow, or five drachms to a goat. In a few days the animals' milk becomes much thicker, and is found to contain a large amount of phosphate of lime in a soluble state. This milk may then be given to patients when the phosphates are indicated. The author has employed this method with success in rachitis.

Mental Strain and Menstruation.—Schrader has found amenorrhœa very common among young women studying midwifery—in one class of 114 students, 65, or fifty-seven per cent., being thus affected. In most of these menstruation ceased immediately after they began their studies, and the writer attributed it to the increased mental activity and the modification of the blood-supply occasioned by the greater demand of the cerebral tissues.

The Treatment of Constipation.—A correspondent sends the report of a case of obstinate constipation cured without medication by the formation of a habit of regularity in seeking an evacuation of the bowels. The first attempts were unsuccessful; but by making the effort at the same time every day, the patient finally acquired a regular habit and has never since been troubled with constipation. The writer says that by habituating the stomach to receive food at any certain hour, a habit is finally formed, and hunger comes at that time. In the same way the rectal nerves may be cultivated so that there is an effort at expulsion of the contents of the viscus at a definite hour.

The Prevention of Cholera.—Dr. A. S. Ashmead writes that when he was in Java, in 1874 and 1875, he was in the habit of using, in cases of diarrhœa, as a preventive of cholera, the mycoderma aceti, or mother of vinegar, in alcohol, with camphor-wood shavings. This was suggested by Pasteur's plan of rapid acetous fermentation with beech-wood. As there was no epidemic of cholera in those years, the value of the prophylactic could not be determined. The writer asks whether this remedy has been tried by others, and if so, with what success.

An Instance of Catalepsy caused by an examination of the ear is related by Dr. Medina, of Chili. The patient was somewhat nervous, and the introduction of the aural speculum was followed by a well marked attack of catalepsy, which was, however, of short duration.

Anatomical Lesions in Addison's Disease.—Dr. Jurgens has made a number of examinations of the abdominal nervous system in Addison's disease. In every case the terminal intestinal nervous plexus was intact; in some instances there was marked degeneration of the ganglion-cells of the solar plexus; and in every case, without exception, there was found gray degeneration of the medullary nervous fibres in the two splanchnic nerves. This alteration was sometimes primary when there was simply atrophy of the suprarenal capsules, and sometimes secondary or consecutive to lesions in the capsules or pancreas. In every case which came under Jurgen's observation, in which the lesions of the suprarenal capsules or pancreas were not accompanied by the bronzed discoloration of the skin, the roots of the splanchnic nerves were found intact.—*Revue Bibliographique des Sciences Médicales*, No. 21, 1885.

Quinine in the Treatment of Asthma.—Among the many drugs mentioned by different writers as occasionally of service in asthma quinine sometimes appears. But it is seldom spoken of as possessing any great value, and seems to be admitted to the list merely from the habit that many authors have of recommending quinine whenever all other remedies have failed. In an article in the *Rivista Clinica e Terapeutica*, for January, 1886, Professor C. Federici speaks much more favorably of the drug, and says that for a number of years he has placed his chief reliance upon it in the treatment of this troublesome affection. The paroxysms of idiopathic asthma occur ordinarily during the night, while the remissions take place in the day, and this periodicity, the writer considers, is sufficiently marked to offer an indication for the use of quinine. He usually gives the bisulphate, though occasionally the valerianate, in three doses of six grains each per diem. The first dose is given at dusk, and the two succeeding ones at intervals of one hour. When a patient is very nervous or is troubled with insomnia, even when the asthmatic paroxysms are absent, he adds half a grain of extract of opium or a third of a grain of extract of belladonna. When the paroxysms are overcome the dose of quinine is gradually reduced. If much bronchial catarrh is present the writer gives, in addition, some ipecac or carbonate of ammonia. Professor Federici claims to have obtained excellent results in the treatment of simple asthma by this method.

Pericarditis after Whooping-cough.—Dr. Racchi relates the case of an infant, aged four months, who was attacked with pertussis of very severe type, resisting the action of the various remedies used. Examination of the chest revealed the presence of capillary bronchitis, with emphysema of the anterior and inferior portions of the lung, but there were no signs of a cardiac affection. The child died, and at the autopsy were found the lesions of a well-marked sero-fibrinous pericarditis. In order to determine the relation of this affection to the whooping-cough, the author instituted a number of experiments upon rabbits. Microscopical examination revealed the presence of schizomycetes in the exudation in the larynx, minute bronchi, and pericardium. These were in the shape of round poli-nucleated cells, and of rods, both endowed with power of motion. Some of the exudation was placed within the larynx of each of those animals, one receiving that from the larynx of the dead child, another that from the terminal bronchioles, and the third the pericardial fluid. At the end of two or three days the animals began to cough, and in eight or ten days the cough assumed the convulsive character of pertussis. Then three other rabbits were similarly treated with the laryngeal exudation taken from those previously experimented on, and at the same time a healthy rabbit was placed in the cage of each one of those with pertussis. Each one of both these sets acquired the affection. An accidental occurrence also gave additional proof of the nature of the disease and of its contagiousness. Two children gained admittance to the room in which the rabbits were placed, and played with them for some time. In a few days each of these children began to have the characteristic cough of pertussis. Two of the rabbits died and two were killed; in one there was well-marked pericarditis, in the others the pericardium was intensely hyperæmic. The author was thus led to look upon the pericarditis as a direct result of the whooping-cough, the schizomycetes being carried to the pericardium through the medium of the general circulation, and finding there a soil rendered favorable by the constant slight traumatism caused by the act of coughing.—*Rivista Clinica e Terapeutica*, January, 1886.

The Philosophy of Drinking Largely.—Not very long ago those unhappy folk who go wearily and sadly, because, forsooth, they are waxing fat, were warned to leave off drinking largely and to minimize the quantity of liquid they consumed (*The Lancet*). Never before, perhaps, was there a more mischievous "fad" imposed on a too credulous public than this reduction of the amount of fluid taken. Now the obese are, by the rotary madness of the crazy in physic, counselled to drink deeply. This, at least, is a safe policy, and whether or not it does anything in aid of the removal of fat, it will certainly not produce the evil consequences which have in too many cases been brought about by the abstinence from solvents and diluents. Our concern is not with the "anti-fat" movement; with this we have no sort of sympathy, except in so far as an accumulation of

adipose tissue may chance to be morbid. Meanwhile there are physiological facts in relation to drinking which ought to be recalled by those who know them, and brought to the knowledge of the unskilled in medicine, because they concern the promotion of health. Thus it is essential that there should be constantly passing through the organism a flushing, as it were, of fluid, to hold in solution and wash away the products of disassimilation and waste. Those who do not recognize the fact that three-quarters by weight of the entire organism is normally composed of fluid cannot fully realize the great need which exists for a copious supply. If there be not a sufficient endosmose, the exosmose must be restricted, and effete matters, soluble in themselves, but not dissolved because of the deficiency of fluid available, will be retained. Take, for example, the uric acid; this excrementitious product requires not less than some eight thousand times its bulk of water at the temperature of the blood to hold it in solution; and if it be not dissolved it rapidly crystallizes, with more or less disastrous consequences, as in gout, gravel, and probably many other less well-recognized troubles. We only mention this particular excrement by way of illustration. In all, it may be fairly concluded that not less than three and a half pints should be consumed by any person in the twenty-four hours, and when the body is bulky four or even five pints should be the average. It is, moreover, desirable that the fluid thus taken should be in the main either pure water or water in which the simplest extracts are held in solution. When fluid taken "as drink" is itself heavily charged with solid matter, it cannot fairly be expected to so entirely rid itself of this burden in the process of digestion and absorption as to be available for solvent purposes generally, although the separation between solid and fluid ingredients of the food is doubtless fairly complete in the processes preparatory to assimilation. The aim should, nevertheless, be to supply the organic needs in this particular abundantly, and with such fluids as are not overloaded with solids, but simple and readily available as solvents. Another urgent reason for drinking freely of bland fluids is to be found in the need of diluents. This is something slightly different from mere solution. Many of the solids of the tissue waste are of a nature to irritate and even disorganize the kidney, if they be brought to that organ for excretion in too concentrated form. There is no reason to suppose that the kidneys are liable to suffer from overwork if the specific excreting power of the kidney-cells be not too heavily taxed. If only the products of disassimilation be diluted, so that they can be passed through the kidney by the simple process of exosmosis, the organ will discharge its function without injury or exhaustion. As a matter of fact and experience, those who drink innocuous and unstimulating fluids freely do not suffer from kidney trouble, but are almost uniformly healthy, at least so far as the excreting functions are concerned. It is a popular fallacy that the kidneys may and ought to be relieved by the determination of fluid to the surface of the body and perspiration. Except in cases of organic disease of the kidney, or where, as in the elimination of a special product, it is desirable to use the skin as an emunctory, the fluid diverted from the kidney is wasted so far as flushing purposes are concerned.

Registration of Veterinary Surgeons.—At a meeting of the New York State Veterinary Society, held in the Cooper Union last week, it was decided to send a committee to the Legislature to urge the passage of a bill compelling veterinary physicians and surgeons to register in the County Clerk's office. Persons not so registered are to be prohibited from practising veterinary medicine or surgery for compensation or reward. No person is to be entitled to register unless graduated from a legally chartered college or university, organized at least one year before the passage of the bill. Any person who has been in veterinary practice for a livelihood at least five years preceding the passage of the proposed bill, without having obtained a diploma from a college, may register upon depositing with the County Clerk affidavits concerning his term of practice. The book in the County Clerk's office is to be known as the "Veterinary Medical Register," and every man whose name goes on it must pay a fee of $2. Fraudulent registration or violation of the act is to be made punishable by fine or imprisonment, or both.

Inversion of the Uterus.—At a meeting of the Surgical Society of Paris, held on December 23, 1885, M. Defontaine reported the case of a woman who had suffered from inversion of the uterus for thirteen years. She had been confined at this time, and apparently everything had progressed favorably, but she soon began to suffer from metrorrhagia. A tumor was discovered, and diagnosed as uterine polypus, but upon an attempt being made to remove it with the écraseur it was found to be the inverted uterus, and the surgeon desisted from further efforts to remove it. M. Defontaine saw the patient one year ago, and after numerous attempts to reduce it by lateral taxis and Gariel's pessary, he determined to operate. He employed an elastic ligature, and at the end of twelve days the tumor became detached. The woman is now in good health.

Treating Dysentery with Cocaine.—We have received many letters inquiring about Dr. Winter's method of treating dysentery with cocaine. His treatment of a young child was as follows: Ten drops of an eight per cent. solution, in one drachm of water, were injected into the rectum, which relieved the tenesmus for two hours; then twenty drops of the same solution, in a drachm of water, were injected. This was repeated every five, six, or eight hours, according to indications.

Illegitimacy in Peru.—Dr. J. W. Kales, of Franklinville, N. Y., writes that the distinction which Lima enjoys, in respect to its number of illegitimate births, is apparently not of recent growth. He quotes the following extract from a work on geography published in Glasgow, in 1805: "In the province of Quito the Indians are said to have a custom of a very singular nature. A young man, instead of wishing to be the first to gain the affections of her whom he wishes to espouse, is seldom willing to accept her hand until she has been not only courted but enjoyed by another, alleging that it degrades him to marry a woman of whom no other man has endeavored to make a conquest. . . After marriage the women are remarkably chaste."

Providing for the Insane in Tennessee.—During the past two years Tennessee has been actively improving the accommodations for her insane. The hospital at Nashville, under the care of the distinguished alienist Dr. John H. Callender, has been overcrowded for several years. A new Asylum at Lyon's View, near Knoxville, in East Tennessee, is nearly completed, and was expected to be open for patients in December last. The State has also made an appropriation for another asylum in West Tennessee, and a commission is now engaged in selecting the most appropriate location.—*Journal of the American Medical Association.*

Deodorized Iodoform.—A correspondent asks us for something that will deodorize iodoform in powder. Herr Oppler recommends the following formulæ: Iodoform (pure), 50 grammes; roasted coffee, in very fine powder, 25 grammes; a few drops of spirits of ether; or, iodoform (pure), 2 grammes; paraffin, 10 grammes; roasted coffee, in fine powder, 0.3 gramme.

Delegates to the American Medical Association.—According to *Public Opinion*, published at Chambersburg, Pa., the County Society, which recently met and elected delegates to the next meeting of the American Medical Association, chose men who are opposed to the policy developed by the present and past managers of the International Congress.

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Original Articles.

MIRROR-WRITING AND OTHER PATHOLOGICAL CHIROGRAPHY OF NERVOUS ORIGIN.

[illegible] Handwriting, since it bears the stamp of personality more than handwriting, not even excepting speech, since that is evanescent. The written page exhibits the thought petrified. A sound, a word falls on the ear and is forgotten, or only recalled with endeavor; a thousand years may pass and the hieroglyphics of dead Pharaohs present their thoughts living and palpable to the children of to-day. The motto written by the Pompeian baker in the yielding dough of his bread remains unchanged to this very hour, eighteen centuries after its maker has crumbled to dust, overwhelmed by that terrible storm of Vesuvian ashes. It is through his writings that the philosopher or poet, scientist or savant, though dead, lives.

As the members of the body are the servants of the brain to carry out its will in motion, as the vocal organs express its thoughts in sound, so in the act of writing the hand embodies the subtleties of cerebral action. It is therefore in writing that we may find expressed deviations from normal nervous conditions, sometimes too slight to be indicated in any other way.

Before passing to a consideration of the pathology of handwriting, we will first glance at the physiology.

PHYSIOLOGY OF HANDWRITING.—Erlenmeyer, Bianchi and Poore[4] have analyzed the groups of muscles used in the act of handwriting. Says Poore, in the grasping of the pen, in the up and down motions of the fingers, in forming the letters and the swaying motion of the forearm in guiding the pen across the page there is scarcely a muscle from the shoulder to the fingers which is not brought in play.

1. *Act of prehension.*—The grasping of the pen is accomplished by the intrinsic muscles of the hand, the interossei, especially of the first two fingers, the abductor pollicis, the opponens pollicis, and the flexor brevis pollicis. The phalangeal angle of the thumb is maintained by the extensor primi internodii pollicis.

2. *Poising of the hand* is accomplished by the supinators, including the longus and brevis, and possibly the extensors of the thumb.

3. *Stroke movements* are accomplished by the long flexors of the thumb, the flexor profundus digitorum, the extensor communis digitorum.

4. *Movements from left to right* are accomplished by the extensors and triceps; right to left, by the pectoralis.

At no time in the act of writing are less than two nerves called upon to supply the impulse, often more. Marcé[5] was the first to suggest that there is in the cortex an independent centre for writing as well as for speech, with which it is intimately connected. Charcot,[6] Pitres, Lichtheim[7] evolved this idea of a writing-centre into a word-motor representation centre, situated at the base of the left third frontal convolution, near Broca's centre of speech. There are, moreover, the auditory centres, supposed to be situated in the temporal convolution, and the ocular centres, situated in the parietal; but the exact location of these centres and their inter-commisural tracts are problems yet to be solved, and which doubtless will be, as so much interest is felt in it and investigation is directed toward it.

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[5] Mémoire sur quelques Observations de Physiologie Pathologique tendant à Démontrer l'Existence d'un Principe coördinate de l'Ecriture et les rapports [illegible]

[6] Rev. de Méd., 1883.

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From the hieroglyphic writing of the ancients, from the sculptured signs of Indians and Mexicans, from numerous word signs, as of the Thibetans and Japanese, as numberless as the ideas and as the objects which they represent, our own modern handwriting has attained its peculiar form. Every people, says Bianchi, use the right hand, whether the characters traced are written from right to left, from left to right, or from above downward, or whether the letters flow in succession after each other or are written one by one. The cause of the use of the right hand, and that the formation of the writing should be obtained by a centrifugal movement, are matters which have also been discussed, more especially by Erlenmeyer and Bianchi, as well as others who have written on mirror-writing. Erlenmeyer maintains that the centrifugal motion, whether with one hand or the other, is that which is easiest and most natural. Gestures are so made. The pushing motion is stronger than the centripetal motion. The centrifugal motion is made with the right hand preferably because most motions are performed more readily with the right than the left hand. The cause of this, again, he thinks, resides in the fact that we are left-brained, the left brain is so much better nourished than the right.

However it has come about, we have a handwriting arranged to be written from left to right, with the right hand, either from careful education in the matter or from a deeper physiological underlying cause; a beautiful system, according to some writers, a flowering of our civilization, an elegant outgrowth from barbaric hieroglyphics.

Is this so? On the contrary—does not this writing strain the weakest muscles of the hands, and take four or five times as long as is necessary for the representation of a word? as is shown by the fact that when we wish to have what is spoken written as fast as it comes from the lips, we employ a stenographer. Why are we not all stenographers? Simply because we follow blindly the example set by our ancestors. If we vary, it is only according to some fashionable vagaries in rounding or pointing our letters, and following certain national characteristics. If one-half the pains were taken to teach a child phonography as is to hold the pen in a cramped, awkward position, such as is figured in books for improved penmanship, there would result not only a saving of time, which is something in these days of hurry and struggle for accomplishment of all that is to be done, but a great strain on the muscular and nervous apparatus employed in elaborating writing. In view of the increase of writer's cramp, due to the extraordinary amount of writing to be done by book-keepers, book-writers, teachers, and savants, a new method of writing should be intelligently discussed. That writing is one of the least cast-iron inventions of man is proven by the fact that within the last half century two entirely different methods of representing ideas by written symbols have been invented. These are the phonographic characters and the system of dots and dashes which are used in telegraphy.

It is not only that our present system of writing is too elaborate, our method of holding the pen to form the letters excessively taxing on the small and weaker muscles of the hand, but that the letters, because following each other as they do, necessitate a constant pendulum movement of the forearm from right to left. To write across the page, rather than from above downward, has been said to have originated first because it was easier to move the eyes in a horizontal rather than a vertical plane. Axenfeld [1] quotes the case of a young man who had read excessively, whose head would turn involuntarily to the right whenever he made the attempt to read, an instance which shows that reading from left to right is not wholly without its drawbacks. Is it not therefore greatly to be desired that a writing be devised in which the letters can be formed, as in phonography, unconnected, not requiring such precise and complicated motions to make them legible, and so formed that they can be written from above downward, or in any other direction, and with the left hand as well as the right.

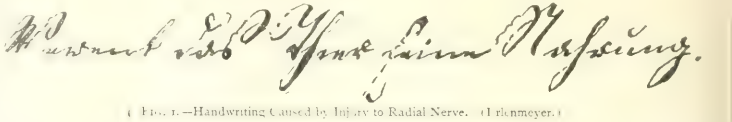


FIG. 1.—Handwriting Caused by Injury to Radial Nerve. (Erlenmeyer.)

Type-writers are an assistance. There is a gain in speed and relaxation of effort to make the letters clearly. They have not been in use as yet long enough to develop the objections which may exist against their use. I can see no reason why there should not be a type-writers' cramp after a while, as there occurs occasionally a telegraphers' and piano-players' cramp.

Many teachers in city schools now make their pupils practise writing with the left hand, as well as the right. Notwithstanding the apparent physiological basis for a right-handedness, I am convinced that in the matter of writing or any other skilled movement, it is more a matter of education than is generally believed. Many surgeons teach themselves, with little trouble, to be ambidextrous.

PATHOLOGY OF HANDWRITING.—Bianchi in Italy and Erlenmeyer in Germany are almost the only ones who have entered into the study of the pathological signification of the handwriting. The subject has been considered in a disconnected way as a symptom of some diseases treated of in various text-books. However remotely alluded to, there has been a general acknowledgment of the value as a diagnostic sign of the handwriting of disease, and an expression of regret that so little attention has hitherto been paid to it.

The handwriting may become pathological through the alteration of any portion of the mechanism involved in its production. This paper includes only a discussion of the changes produced by abnormal conditions of the nervous apparatus.

Alterations in handwriting may be mechanical or psychical, they may be ataxic or tremulous, or a mingling of the two forms. The ataxic is physiological when seen in childhood, before the power of coördination of muscles for the complex act has been acquired. The tremulous is physiological in the handwriting of the aged, in which also is seen a tendency to retrograde into the childish handwriting.

The principal pathological handwritings are:

1. Handwriting resulting from trauma to the nerves.
2. Mirror-writing and agraphia, caused by injury to the cerebral centres.
3. Handwriting of general paralysis, caused by alteration of cerebral tissue.
4. Handwriting caused by sclerosis, cerebral and spinal.
5. Handwriting caused by functional disturbance, including paralysis agitans and writers' cramp.

Traité de Névroses, p. 440. Paris, 1883.

1. *Handwriting caused by trauma to the nerves.*—Samples of handwriting can be shown occasioned by the interference with the conducting nerve-fibres. Erlenmeyer exhibits a very curious specimen in which there was injury to the radial nerve. The tremulousness, or, rather, interruption to the lines, especially of the up-stroke, is very peculiar (Fig. 1).

It is to be regretted that handwriting following injury to nerves has not been more studied, as much of interest from a physiological, as well as a pathological point of view might be attained.

2. The forms of handwriting caused by injury to the cerebral centres, especially after embolism of some of the cerebral arteries, are of two kinds, which have been described as *mirror-writing* and *agraphia*.

(1) *Mirror-writing.*—At present considerable discussion has been awakened with reference to mirror-writing. Ireland called especial attention to it by his paper on the "Brain" [1] in 1883, and by the republication of the same in his book, "The Blot on the Brain," [2] which he has just published.

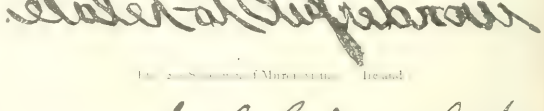


FIG. 2.—Specimen of Mirror-writing. (Ireland.)

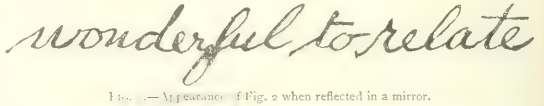


FIG. 3.—Appearance of Fig. 2 when reflected in a mirror.

Mirror-writing, lithographic writing, reversed chirography, the Spiegelschrift [3] of the Germans, is writing which is written from right to left, instead of from left to right, and which when seen in the looking-glass looks like ordinary handwriting. Hughlings-Jackson [4] and Buchwald first discovered it.[5] The latter reported three hemiplegics who wrote with their left hand. He thought it had a pathological signification. Ireland also believes that it is due to the fact that the perceptive centre of the left side of the brain having become injured, the perceptive centre of the right side of the brain gives this idea of writing. Experiments made by himself and Peretti [6] upon school-children and weak-minded, make them announce

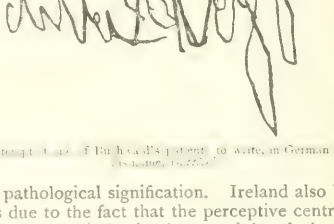
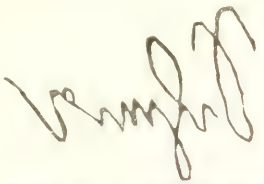


FIG. 4.—Attempt of Buchwald's patient to write, in German characters, his name, [illegible].

1 Brain, [illegible].
2 Blot on the Brain, [illegible].
3 Spiegelschrift bei Hirnkrankheiten, Berliner klinische Wochenschrift, January [illegible], 1885.
4 Guy's Hospital Reports.
5 Dr. A. B. Judson exhibited before the Surgical Section of the New York Academy of Medicine, November 14, 1885, a specimen of mirror-writing of a girl ten years of age who had had right hemiplegia, which he showed at the Neurological Society after the reading of this paper.
6 Uber Spiegelschrift von Joseph Peretti, Berliner klinische Wochenschrift, 1882, p. [illegible].

the discovery that mirror-writing is more common among such. Possibly there may be cases where there is a true reversal of the impression of the handwriting due to the false perception of the psychical centres. To such cases as these Erlenmeyer proposes the name of Retrographic.



As our handwriting is made to be written from left to right, and only in this direction, it would be impossible for one to write any other than the mirror-writing, if making the letters with either right or left hand in the reverse direction, that is, from right to left. Almost any person attempting this, combining the letters and writing without thought, will find that mirror-writing will be the result. I have had it tried again and again by way of experimentation. Since our writing is done with a centrifugal motion, one can see that in a certain number of

cases, even in most cases, the attempt to write with the left hand would be to write away from the body. The result would be a reversal of the writing as has already been shown. It is much easier to write in this manner, and the writing is more smoothly done for one unaccustomed to using the left hand. It may be suggested that figures, since they are disconnected, would form a good test as to whether the mirror-writing in right hemiplegics was a symptom of the disease. At first sight this would appear to be so. Buchwald in the case of one of his patients (Figs. 6 and 7) shows that some of the figures, especially 3, 5, and 7, were reversed, and that the hook of the number 5 was reversed even after the patient recovered. In experimenting to find out how one would write normally the figures from right to left with the left hand, and without thinking, I found that some of the figures would often be reversed. In a number of times in one person I found that 2 and 4 were very frequently reversed, as also 10.

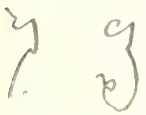


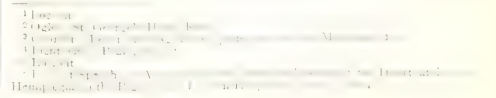
Fig. 7.

I have therefore arrived at the following conclusions with reference to mirror-writing: First, that mirror-writing may indicate a change in the perception of the nerve-centres of the brain, what Erlenberg would call Retrographia. The patient suffering from this would read the reversed handwriting certainly as easily, if not more so, than the normal. I have only found one mention in the cases reported as to this fact. Ireland says distinctly of an imbecile girl who wrote mirror-writing that she could *not* read it as well. This would be a means of diagnosis between a cerebral mirror-writing and mirror-writing from mechanical causes alone. Second, that from twenty-five careful examinations of the cases on record no indication has been found that the mirror-writing occurred from other cause than a mechanical one, that is, the person writing with the left hand could do so more easily in a centrifugal than a centripetal direction, the former association of ideas and muscular action making this so. Therefore, a person weakened by disease, weak-minded children, and left-handed, would write centrifugally, and if centrifugally, then from necessity the mirror-writing, as all persons would when not exercising care and forethought. The same holds true, though not to such a degree, of figures. The reason lies not in a pathological condition, but in a physiological, namely, that the muscular movements associated with writing are in a centrifugal direction, which makes it easier for one to write, sick or well, with the left hand, unless trained otherwise, in a centrifugal direction.

(2) *Agraphia.*—This subject has been much discussed of late with that of aphasia, first spoken of by Marce[1] in 1856. The name agraphia was suggested by Ogle,[2] who distinguished between the forms—the ataxic and the amnesic. There are a very few cases of agraphia uncomplicated with aphasia on record. It is only recently that the varieties of these two diseases have been analyzed, and that it has been shown that the conducting nerve-paths, sensorial and motor, the receiving centres, visual, auditory, and motor, may likewise come in for their share of trouble. Therefore in agraphia there may be word-blindness, word-deafness,[3] or a volitional motor disturbance resulting in inability to write. The investigators of the subject have also entered deeply into the discussion of the seat of the writing centre in the left hemisphere. The unilateral theory is not so fully endorsed as hitherto, and to the right brain is assigned important functioning power.[4] It is thought that the commissural fibres pass over to the main centres high up above the motor centre of speech in the medulla oblongata.

That these centres, like those of the special senses, with which they are intimately connected, will be more definitely settled as observations multiply with this purpose in mind, cannot be doubted. In consequence of the distribution of the complex act of writing among the different centres the disturbances may be varied; a person may be able to write perfectly and not to copy or write to dictation, or to copy, or *vice versa*. Very few cases of pure agraphia are on record. Almost always the speech centre is more or less involved. Pitres[5] published a case of a patient who, after apoplexy, suffered from agraphia. Speech, understanding of language, and writing were intact; while volitional writing, and writing to dictation were impossible, the faculty of copying was alone preserved. It was unilateral. The agraphia affected solely the right hand; he could write correctly with the left hand, and having so written he was able to copy it with the right hand. This is an uncomplicated case of pure agraphia. Charcot cites the case of a Russian officer who could speak fluently Russian, German, and French. He lost the power of language for a short time; could understand all these, but could only reply in Russian. At the time Charcot saw him he had recovered his power of speech, but was totally unable to write even in his native language. Generally in patients with aphasia and agraphia the power of speech returns first,[6] while the power of writing comes afterward and more gradually. Lichtheim calls attention to the fact that there may be instances of bilateral isolated agraphia, though the distinction has been overlooked heretofore. J. Hughlings-Jackson gives several cases of aphasia associated with agraphia. One of these illustrates well the amnesic agraphia. The case (Fig. 8) is that of a woman, who was able to talk, and only occasionally called things by their wrong name. A striking contrast, as the writer says, is seen between the ability of expression and the written words.

Another case (Fig. 9) shows the ataxic form though at the same time it is combined with the amnesic. The patient, a right hemiplegic, could only swear. Dr. Ham-



mond[1] also gives a specimen of ataxic writing even more characteristic (Fig. 10). The attempt is that of a gentleman to write his name, who, after a stroke of apoplexy, was unable to say more than three words: "speak," "saw my leg off," "certainly."

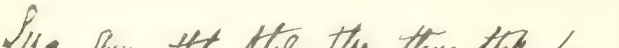


Fig. 8.—Specimen of Amnesic Agraphia. Shows tendency to repetition of combination of letters seen in handwriting of insane. When occurring in speech called "echo-symptoms." (J. Hughlings-Jackson.)[1]

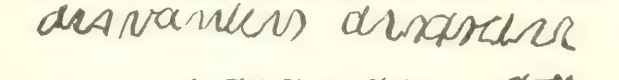
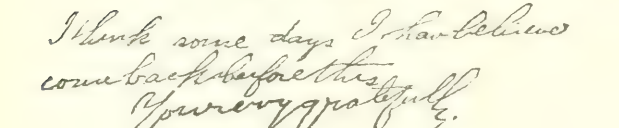


Fig. 9.—Specimen of Amnesic an[illegible]Ataxic Agraphia. (J. Hughlings Jackson.)[1]

Fig. 10.—Ataxic Agraph[illegible]



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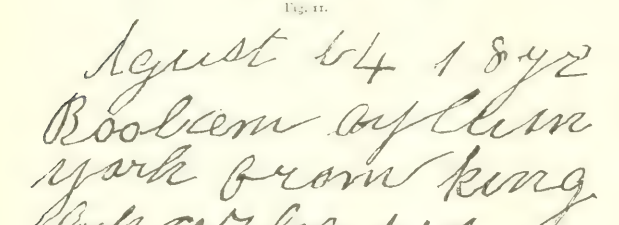
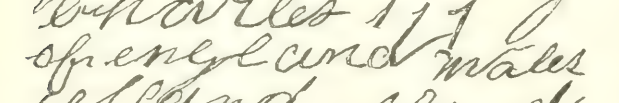


Fig. 12.



The diagnostic value of the handwriting in agraphia, is in the evidence it gives of the extent of damage done in these cases of hemiplegia to the brain tissue, and also an indication of the location of the trouble, as well as the common service in all localization, the giving hints to clear up the dark, mysterious problems which surround the physiological action of the brain.

3. *Handwriting of the insane.*—As far as the mechanical execution goes in the early stages of insanity there is little which denotes the incursion of the disease, but when patients begin to omit words and to spell badly in their letters, it should excite suspicion in regard to their sanity, and in many instances it is a sign of the beginning of general paralysis.[1] In examining specimens of the handwriting of those afflicted with this disease, its progress is shown by well-marked characteristics. It is the reverse of the progression made in childhood. The scattered pot-hooks and ataxic marks of a child first learning to write are seen in the latest stage, before that the coarse, irregular letters are combined to make words and intelligible sentences, which straggle in uneven lines, the forming of the line as seen in childish writing spoken of by Erlenberg. The first mechanical sign is a diminution of the handwriting, a running of the words together, and either not finishing the final letter or terminating it in an irregular line, or dropping it entirely. A shakiness of the letters is seen throughout. In this early stage frequent under-scoring occurs, and an irregular and plentiful besprinkling of capitals. Bucknill and Tuke remark that patients may recover their handwriting even after the worst stage.

In acute mania there is ample indication in incoherence, but the letters are not forgotten. A consideration of the vagaries of composition would be foreign to this paper. They take curious and diverse forms, a repetition of the letters often occur, as shown in the sample of the writing of the woman afflicted with agraphia (Fig. 8). Sometimes the letters are microscopic in their fineness, and figures and letters intermingle. Sometimes the lines are written across one another again and again, until there appears a criss-cross of unintelligible lines.

4. *Handwriting of cerebro-spinal sclerosis and locomotor ataxia.*—The handwriting of patients suffering from cerebro-spinal sclerosis is characterized by its tremulousness.[2] Hammond gives in his work on nervous diseases an interesting specimen, which exhibits a tremulousness in the lines, especially in the up-hand strokes, which contrasts in an interesting manner with the writing of paralysis agitans. Onimus[3] first called the attention of the profession to the

[illegible] (Pitchaill and [illegible] ters together, and incoherence of composition.

[illegible] III. of England. [illegible] advanced stage.

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[1] Psycholog. Med., [illegible] e, p. 488.

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peculiarities of the writing of these patients [illegible] motor ataxia involving the upper extremities. Hammond has confirmed his conclusions.

The phenomena exhibited in the hand writing are similar to those seen in the lower extremities. The changes are shown early when writing with the eyes closed, especially in round letters, c, a, and o, as well as in l and e. They are formed by straight lines, more or less extended, instead of curves. There no longer exists the synergy of muscles. When the disease is further advanced, the writing is ataxic, when the eyes are open, though not so much so as when they are closed; the letters are made with a jerk, and the hand has difficulty in limiting the trace. In p, for example, the line never ends

with a neat termination, and there is an impulse to continue; the pen catches and sputters, and the patient is

often obliged to use a pencil. Later, when the ataxy of the arm is pronounced, the attempt to write results only

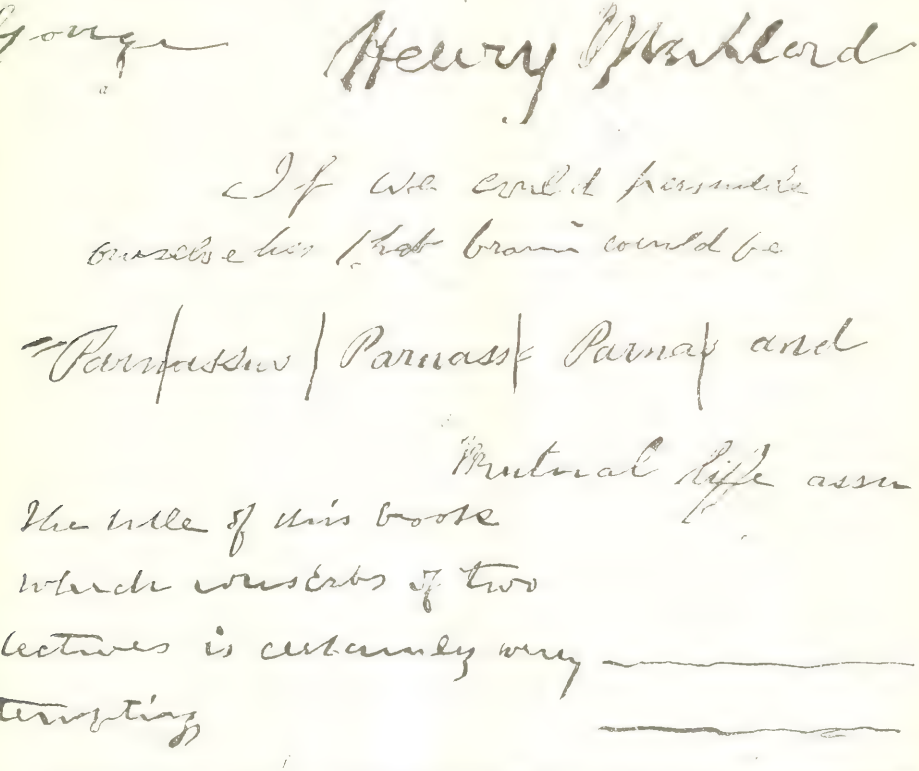

Fig. 1.—Specimen of Writing [illegible]

arm, & tremor and [illegible] also a neuralgic

in unformed traces without order; there is inability to write a single word. It shows the same march of the disease as is seen in the lower extremities.

3. *Functional disturbances of the handwriting.*—Under this head will be included the writing of paralysis agitans and writer's cramp, as might also be that of chorea and hysteria. In the two latter there is nothing of especial diagnostic value. The writing of paralysis agitans shows the tremor in the early stages. Although the handwriting looks normal to the naked eye, a glass will reveal the peculiar character given it by the trembling.[1] The long letters show it more than the others. The tremulousness of the lines becomes more pronounced as the disease advances, and there is a diminution in the size of the letters.

In *writer's cramp*[2] the writing shows many forms of disturbance, and were there no history and the story of the disease could only be gathered from the handwriting, it would be difficult to say whether we were dealing with some of the various forms of tremor, paralysis agitans, progressive muscular atrophy, locomotor ataxia, arthritis deformans hemiplegia, or disease of the motor nerves. A study of the handwriting will, however, reveal the nature of the disturbance, whether with the spastic, tremulous, or paralytic forms, as Benedict names them. Ross[3] thus describes the difficulties encountered in each of these: "In spastic form of the disease tonic or clonic spasms of one or several muscles occur. The spasms are limited to particular fingers, causing an irregular stroke in the writing. The pen must be held in a new and more or less grotesque manner. After a time the spasms become stronger, and are generally tonic in character, affecting usually the thumb and first finger. The thumb and finger may be suddenly extended, causing the pen to drop, or there is a spasmodic action of the opponens pollicis with abduction and flexion of the index finger, so that the pen is rapidly moved away from the paper. At other times a spasmodic flexion of the first three fingers, so that they are pressed tightly against the pen, which cannot then be moved further onward, or there may be movements of pronation and supination in the forearm so that the pen is raised from the paper and moved backward and forward in the most irregular manner.

"In the tremulous form of the disease the hand and forearm, or even the whole arm, become the subjects of well-marked tremors on any attempt at writing being made, so that the pen only makes undulating or angular strokes, and the writing becomes completely illegible. The strokes are coarse and imperfect and unequal, and numerous irregularities and false strokes are to be observed, and in the highest degrees of the affection the writing becomes a mass of undulating and zigzag strokes wholly illegible.

"The paralytic form offers a great contrast to the spastic and tremulous forms. It is characterized by great fatigue and weakness when the attempt is made to write, which vanishes when the pen is laid aside, to reappear as soon as it is taken up."

RECAPITULATION.—To recapitulate, then:

I. Mirror-writing may be, but is probably very rarely, indicative of nervous disease.

II. Of other pathological chirography the two great forms are the ataxic and tremulous. In many diseases these two are intermixed.

1. The *ataxic writing* is: (*a*) Physiological in childhood and with the untutored; (*b*) it is characteristic of alcoholism, cerebral, cerebellar, and spinal affections in which there is sclerosis or other alteration, and the paralytic and other diseases, with loss of voluntary power over the muscles, or of weakness and fatigue of the muscles; (*c*) it is characterized by large letters, often excessive in size, illegible, and extremely unequal and uneven.

2. *Tremulous writing:* (*a*) Physiological in old age; (*b*) caused by trembling of the hand and arm from cold, poisonous substances, as nicotin, tea and coffee, morphine, or alcohol; diffuse multiple sclerosis, rhythmical chorea, paralysis agitans; (*c*) its character varies from an almost imperceptible to a decided waviness of the line, occurring in only a few letters, or in all on up-strokes or down-strokes. It is legible, and the letters are of the same size, and usually small and well formed.

RHEUMATISM IN EARLY LIFE.[1]

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THE purpose of this paper is not to advance new theories concerning the rheumatism of childhood. It has seemed, however, to the writer that this subject has not received sufficient attention, especially in relation to its great importance. While some old and familiar diseases are being diligently restudied in the light of bacteria and micrococci, it may be profitable to call attention to a well-known affection in which no bacillus has been found, but that, nevertheless, is continually and hopelessly crippling children for life in such an insidious form as to be constantly overlooked. The facts, then, that are not always appreciated, may be emphasized by a clinical study of seventy-six cases that have come under my observation. And first it may be well to glance at some of the opinions of different writers concerning the frequency, or even the existence, of rheumatism in early life. While most of the older authors were skeptical as to the occurrence of the affection before puberty, the more recent writers generally acknowledge its existence at an earlier period, but do not insist with sufficient emphasis upon its frequency. In 1875, Jacobi published a paper contending that acute rheumatism in infancy and childhood was frequent and insidious. Meigs and Pepper state that the importance of the subject is not usually appreciated, and that rheumatism in children deserves careful attention not only on account of its frequency and peculiarities, but also on account of its marked tendency to cardiac complications, and of its recently established relations to chorea. According to Senator, youth and early manhood are especially liable to the disease, the favorite period lying between puberty and the age of thirty, that from the thirtieth to the fiftieth year coming next in order; children under four are scarcely ever attacked. Longstreth considers that from puberty to the age of thirty or thirty-five years' acute rheumatism is a very common disease, but that in early life rheumatism in any form is a rare affection. J. Lewis Smith says that rheumatism was formerly supposed to be rare in children, but more accurate observations show that it is scarcely less common during childhood than in adult life; it is frequently overlooked, especially under the age of six or eight years. D'Espine and Picot state that rheumatism is an affection less common among children than adults, and is rarely seen under five years. Descroizilles considers that while rheumatismal affections are not so frequent in children as in adults, yet they are less exceptional at an early age than was the opinion of the older pathologists. While not a few cases are found in children's hospitals, one would recognize them still more frequently if many of the little invalids were not treated at home by reason of the relative benignity of the symptoms which they present. Among 4,908 cases of acute rheumatism admitted during fifteen years to St. Bartholomew's Hospital, London, only 1.79 per cent. were under ten years, and 8.1 per cent. were between ten and fifteen years.

Henoch finds the majority of cases of acute rheumatism in childhood occur between the ages of nine and

thirteen years, while it is much rarer between the ages of five to eight years. Howard states that acute articular rheumatism is, *par excellence*, an affliction of early adult life, although no age is entirely exempt. Most authors, then, while of the opinion that youth and early adult life are the periods most frequently attacked, are not inclined to consider the affection as comparatively very frequent during childhood, although not denying its possibility. Yet I think that any child's clinic, if carefully studied, will produce relatively as many cases of rheumatism as are found in adult classes, but of a different type.

Among 76 cases that have come under my observation, the following are the ages: six months, 1; eleven months, 1; twenty months, 1; three years, 1; four years, 2; five years, 4; six years, 6; seven years, 3; eight years, 11; nine years, 9; ten years, 5; eleven years, 8; twelve years, 7; thirteen years, 9; fourteen years, 4; fifteen years, 2; seventeen years, 2.

During infancy the affection is not very common. Henoch treated an infant of ten months with well-marked rheumatism, complicated with broncho-pneumonia and pleurisy. Senator states that Widerhofer observed the disease in a baby twenty-three days old, and Stäger met with it in an infant four weeks old. My youngest case occurred in a baby of six months, whose father was rheumatic. The backs of both hands were swollen and inflamed for several days, accompanied by a general urticaria. In another case, a baby of eleven months had always been healthy until the right elbow-joint became swollen and inflamed; in a day or so the right knee was involved, and next the right side of the neck became enlarged and painful. The appearance of the joints was exactly like that observed in the adult. There was no cardiac complication. The family lived in a canal-boat, and the father had been subject to rheumatism. In another instance an infant of twenty months was taken with vomiting and fever on Saturday evening. The fever continued on Sunday, and she seemed disinclined to move. Temperature, 101¼°. On Monday morning the big toe and ankle of the right side began to swell and grow painful, followed in a few hours by the corresponding parts of the other limb. The affected joints were very slightly reddened. Recovery took place in about a week. The father had been subject to rheumatism for eighteen years.

The following typical case, taken from my note-book, brings out the points to be noted in this paper: Hester L——, aged twelve years. Her grandfather has had rheumatism, and the father is subject to pains in his ankles. The only diseases the girl has had are measles and varicella. Three years ago she had an attack of rheumatism, involving first the knees, then the ankles, shoulders, and hands. She was confined to bed for two weeks, and during this time was much frightened by a Board-of-Health physician calling to vaccinate, when her mother was out. Upon recovery from the rheumatism she was seized with a general chorea. Two weeks ago she had a second attack of rheumatism, involving only the ankles, attended by little pain and very slight swelling, but followed likewise by a general chorea. This time there was no history of fright or any nervous shock. The child has a mitral regurgitant murmur and is hydræmic. Her mother says she is subject to frequent attacks of painful and swelled tonsils.

An analysis of these various symptoms, shown in the comparative study of seventy-six histories, may prove of interest. And first, for heredity as a causative factor. While the exact nature and conditions of hereditary influences are not known, it seems to me an undoubted fact that some state of the system is transmitted from parents to children that will favor the development of rheumatism upon the presence of an exciting cause.

It has been argued that rheumatism is not hereditary, because, if so, it would appear earlier in life. The direct physiological heredity that manifests itself so early in life in the congenital variety of syphilis is different from the heredity that tends to develop rheumatism. In one case the actual disease itself has been transmitted; in the other, only the tendency to disease.

No matter how favorable its environment, the infant who has syphilis congenitally will develop the lesions of the disease in time; the child of rheumatic parents, on slight exposure, may develop rheumatism from a state of the system favorable to the complaint, but may escape if the exciting cause be absent.

A careful study of statistics in reference to the frequency and descent of rheumatism in families should enable one to reach correct conclusions in this matter. It seems to me that what Longstreth calls statistical heredity is just as valuable in showing tendencies to disease as physiological heredity is in predicting future constitutional lesions. A pretty certain proof of hereditary tendencies in rheumatism is seen in the trouble frequently developing as early as it does, before the hardships and exposures of adult life. Some exciting cause, as slight cold, brings on the rheumatism after the more careful nursing of infancy and very early childhood is abandoned. The practical deduction from such a consideration is, that when parents are rheumatic extra care should be taken in the raising of children to prevent an onset of the affection.

In looking over my note-book I find I could get distinct histories of rheumatism in the family in the following instances: Fourteen children had rheumatic fathers, and 13 others had rheumatic mothers; in 6 cases both father and mother had suffered from rheumatism; in 3 children both grandfather and father had suffered; in 1 case the grandfather alone; in 2 cases brothers, and in another case a sister, gave accounts of rheumatic attacks. Many more cases, not enumerated, gave strongly presumptive evidence of rheumatism in the family, but were not counted because of some uncertainty.

Thus, some parents had valvular disease, but denied ever having had rheumatism; in many instances a friend of the family brought the child, and could not tell whether its parents were rheumatic or not. In the great majority of cases in which I could get a full and intelligent history, one or both parents had suffered from rheumatism.

In early life rheumatism appears to attack girls more frequently than boys. I do not know of an explanation for this peculiar fact, as one would suppose that boys, being more exposed, would suffer more frequently. Among 69 cases tabulated by Goodhart, 42 were in girls and 27 in boys. Out of my 76 cases, 50 were girls and 26 boys. The peculiar and evanescent nature of the lesions, together with their shifting character, make it difficult to get an accurate history of the parts of the body exclusively affected in children.

In the majority of my cases some parts of the lower extremities alone were affected, and most of the instances in which the upper part of the body was attacked, were secondary. In 43 cases the lower extremities alone were invaded; in 23, some part of the upper as well as the lower, and in 3, some parts of the upper extremities alone were attacked. When the lower extremity was involved, the knees were affected oftenest, as noted in the histories of 40 cases; the calves of the leg are mentioned in 20 cases, the ankles in 17 cases, and the thighs in 18 cases. In the upper extremities, the elbows are noted as being affected in 10 cases, the shoulders in 7, the neck in 4, the wrists in 4, and the hands, principally on the backs, in 8 cases. Some children complained of general soreness and pains all over the body, without being able to locate them in any one particular spot. Many had pains of a more or less severe, irregular nature in various parts of the back and chest, and I have come to regard such manifestations as very suggestive of rheumatism, irrespective of pleurisy and cardiac inflammation. In 2 cases the plantar surface of the feet bore the brunt of the disease. The manifestations of rheumatism, as studied in these children, were very light as re-

gards the joints and limbs, with some exceptions. Swelling of the parts affected was always very slight, and in a majority of the cases entirely absent; when present, it would quickly disappear. Pain was likewise not very severe, and was noticed principally on exertion. In children old enough to give an intelligent description, there was frequently a complaint of stiffness and soreness upon exercising, rather than actual pain. With the exception of perhaps ten or fifteen cases who were confined to bed, the children were allowed to go about as usual, although constantly complaining. In most of the cases there was no redness or other particular sign of inflammation at the part affected; there was likewise, as a rule, little or no rise of temperature when the cases were brought to my notice. Fasciæ and muscles about joints were apparently largely affected. Many of the histories showed more than one attack of rheumatism. The tendency to a repetition of the trouble was shown as follows: In 22 cases there had been two attacks; in 4 cases, three attacks; in 1 case, four attacks; in 2 cases, five, and in another, 6 distinct attacks. It happened in many cases that it was impossible to get an accurate history of the number of seizures, as the parents would say that for one or two years the child had complained of pains every few weeks. Some of the children, indeed, seemed so saturated with rheumatism as to be complaining more or less all the time. A very general feature in these cases was the presence of marked hydræmia. Nearly all the children that I have treated for rheumatism have been in this condition, and it forms an important factor both in diagnosis and treatment.

The absorbing interest in connection with the study of rheumatism in early life relates to the heart. According to Senator, the younger the patient the greater the risk of the heart becoming affected, as this organ is implicated in fully one-third of all the cases occurring before puberty. Thus Vernay found that of 22 cases between the ages of fourteen and twenty, only 1 escaped endocarditis. D'Espine and Picot found in 47 cases of rheumatism in children only 10 cases in which the bruit of the heart was perfectly normal, and state that Vohsen found cardiac complications in 9 out of 20 cases. These authors further observe, that while it is not rare to see in children an endocarditis or a pericarditis with a very light affection of the joints, such inflammation may likewise accompany a simple torticollis. Descroizilles states that at an early age the central organs of the circulation have a particular aptitude for attack. He likewise states that Vogel, Steiner, and Roger agree that a considerable number of the lesions of the endocardium and pericardium have no other origin than rheumatism, affecting first the joints or muscles. Out of 76 cases that I have examined under seventeen years of age, 26 have had organic valvular disease of the heart. Of the 26 cases, 18 had mitral regurgitant murmurs; 2 had double mitral combined with double aortic murmurs; 2 had mitral regurgitation with double aortic murmurs; 1 had mitral regurgitation and obstruction; 1 had mitral regurgitation with an aortic direct murmur; 1 had a mitral obstructive murmur, and 1 had endocarditis, myocarditis, and pericarditis. Thus one-third of my cases gave evidences of organic heart disease when I saw them—the same proportion that is quoted above from Senator. But this number does not, I think, represent all the cases in which the heart was affected by endocarditis in these children. The heart is probably more often slightly attacked by endocarditis without leaving a permanent lesion than is supposed in the mild attacks of rheumatism from which children suffer. Palpitations and wandering pains over the cardiac region are very common in these rheumatic attacks, and doubtless sometimes represent an inflammation in which there has not been sufficient exudation to produce a bruit. I have likewise seen cases in which a murmur produced by an acute endocarditis has disappeared some time after the inflammation has abated. Thus, a boy of eight years was brought to me with rheumatic pain and swelling in his left elbow; the cardiac sounds were normal. The trouble left the joint, and in a week or so he began to complain of pain over the heart. An examination revealed a loud systolic murmur, heard plainest at the apex, and a diagnosis of acute endocarditis was made. His mother nursed him carefully, and now, about a year after the attack, the bruit has entirely disappeared, and the boy enjoys good health.

As far as I have noticed, acute endocarditis in children often appears to cause less local and constitutional disturbances than in adults, and thus is more liable to be overlooked. It is surprising how obscure the symptoms of acute heart trouble may be in children. Bouillaud states that in early life the heart comports itself like a joint with reference to the rheumatic poison. This simile is exemplified by the fact that in some attacks of rheumatism the cardiac inflammation may precede by several days the articular.

A girl of twelve years that I examined began her illness by some pains in the heart, shortness of breath, and a feeling of prostration. When this had continued a week she was seized with pains and slight swelling in the knees, ankles, and elbows, affected in the order named, the whole trouble lasting three weeks. She had a distinct mitral obstructive murmur, with accentuation of the pulmonic second sound.

An endocarditis is not infrequently the only lesion manifested in the rheumatism of children. A number of cases coming under my observation have exemplified this fact. The following history is a fair example:

A girl, fourteen years of age, whose mother is rheumatic, has never had any illness except measles and pertussis. She came to me complaining of pains and palpitations of the heart, loss of appetite, and failure of strength. Occasionally a little blood was coughed up. On examination mitral regurgitation was heard, without lesions of the lungs. There was no affection of the joints or muscles at any time.

In other cases the heart will be attacked some time after rheumatism of the joints, and at the time constitute the only manifestation of a rheumatic attack. Thus, I have recently examined a boy who suffered three months ago from an attack of rheumatism in the knees and calves of the legs, which were sufficiently painful and swelled to confine him to bed. He recovered without any trouble in the chest. Several weeks ago, after exposure to cold, he was seized with some distress about the heart, without pain in any other part of the body. As a result, there is now sufficient mitral incompetency to cause dyspnœa upon much exertion.

In most of the histories of valvular disease, as nearly as I could get at the facts, the cardiac affection seemed to come on after several attacks of rheumatism. It appeared as if the heart finally succumbed, unable to resist repeated attacks, just as one joint after another will yield to the disease. A girl, six years of age, first had rheumatism in the thighs, lasting a week. Some months afterward she had an attack involving first the feet and next the hands. After another interval of months she had a rheumatic seizure in the knees, followed by slight pain and constriction in the chest. When I examined the heart there was some enlargement and a mitral regurgitant murmur.

In another case a girl, eleven years of age, who had previously been healthy, began to complain at intervals of slight pain and stiffness in the knees, calves, and ankles, principally on exertion. No particular attention was paid to the affection, and she was sent to school as usual. After about eight months, during one of these attacks, she was suddenly seized with distress in the chest, followed in a few days by intense dyspnœa. Physical examination showed pericarditis. Death took place in a month from heart failure and œdema of the lungs. At the autopsy I found extensive endocarditis, involving

both the aortic and mitral valves, together with myocarditis and pericarditis. The mitral valves were retracted and partially bound down, and the aortic valves were covered with fine fibrinous vegetations. A general myocarditis was shown by a fatty condition of the heart-muscle, and the pericardium was adherent to about half its extent; where free, both surfaces were covered by thick layers of fibrin. I presented the specimens before the Pathological Society as exhibiting a case in which all the structures of the heart, with its envelopes, were completely destroyed after repeated insidious attacks of rheumatism that were so mild as to pass for growing pains. The lesson to be learned from these cases is that an early diagnosis should be made, and immediate, vigorous measures taken to combat the first manifestations of rheumatism in children, fearful that, although the heart may escape the first attacks of these mild pains, it may suddenly and unexpectedly become affected by an equally light manifestation of the disease. Goodhart states that it is impossible to say what proportion of heart cases occur as the direct outcome of one attack of rheumatism, or how far the damage results from some persistent state which slowly and surely cripples the valves. Congenital heart disease is rare in children, and naturally involves the right side, which is functionally most active during fetal life. Jacobi has called attention to the fact that in children simple hæmic murmurs are very rare. It is difficult to find out comparatively how much oftener cardiac complications of rheumatism are seen in children than adults. Different authorities do not agree as to the proportion of all cases of rheumatism in which the heart is affected. I quote the following from Howard:

"The gross proportion of heart disease of recent origin in acute and subacute rheumatism was, in Fuller's cases, 34.3 per cent.; in Peacock's, 32.7 per cent.; in Sibson's, 52.3 per cent.; in 3,552 St. Bartholomew's Hospital cases, analyzed by Southey, 29.8 per cent.; in Bouillaud's cases, quoted by Fuller, 5.7 per cent.; in Lebert's, 23.6 per cent.; in Vogel's, 50 per cent.; in Wunderlich's, 26.3 per cent." Of Fuller's cases 58 per cent., and of Sibson's 62 per cent., were under twenty-one.

With reference to the connection between rheumatism and chorea in children I presented some statistics in a paper read before the Neurological Society in 1883. In the histories of 38 cases of chorea given at that time 22 were preceded or accompanied by rheumatism. While it is difficult to determine exactly the relative influences these affections have upon one another, the study of a larger number of cases since that time has confirmed my belief in the close relation between them. It seems probable that the same morbid condition predisposes to both rheumatism and chorea in children, and that they may be different manifestations of the same affection.

Descroizilles says that the lesions engendered by rheumatism frequently propagate themselves to the heart, or better, transform themselves, and choreic convulsions replace the first phenomena. Soltmann, in his article on chorea, quotes Roger, who thinks that chorea and rheumatic affections of the joints, and heart affections, are members of one and the same pathological condition. Therefore, he makes a division into chorea rheumatica, chorea cardiaca, and chorea rheumatica cardiaca, and he is unable to state which process makes the commencement. Often the chorea is primary and the heart affection secondary, or *vice versa*, or the heart affection and the chorea appear at the same time. Again, the chorea may appear first, then the rheumatism, and lastly the heart affection; but generally the rheumatism is first, next the chorea, and the heart affection afterward. In thirty-five histories of rheumatism I found a connection with chorea, generally the chorea following some time after a rheumatic attack, but occasionally *vice versa*. Certainly rheumatic children are extremely liable to develop chorea. I could give many histories exemplifying this fact. In one case I treated a boy, eight years of age, who had six attacks of rheumatism, followed each time by chorea after a short period. There are seven cases in my note-book in which rheumatism has occurred after one or more attacks of chorea. Thus, in a boy, seven years of age, whose father was rheumatic, twitching began on the left side and soon became general. This was followed by rheumatism in the arms and legs. During the next two years he had three more attacks of chorea, but no return of the rheumatism. In another case a girl, nine years of age, with no family rheumatic history, had two severe attacks of general chorea, the latter followed by rheumatism in both thighs, the right shoulder, and neck. I have four instances of cardiac trouble following chorea without any previous rheumatic history. A girl, seven years of age, with no account of any rheumatism in the family, presented herself with chorea of the right side. The heart-sounds were normal, and she gave no history of rheumatism or growing pains. In a few days she appeared again with a loud, blowing murmur at the apex.

Another girl, eight years of age, whose mother had rheumatism, suffered from two attacks of chorea, the second followed by a mitral regurgitant murmur. Finally, I saw a boy, with Dr. Katzenbach, seventeen years of age, who had double aortic and double mitral murmurs, with great hypertrophy, from which he died. There was no rheumatism in the family, but he had several severe attacks of chorea. His mother told me his breathing never seemed right since he began to have the twitching. The nearest approach to rheumatism he had, was some lumbar pain about a month before he died. Parents with rheumatic tendencies may have children who develop chorea instead of rheumatism. As an example, a girl, twelve years of age, whose father had such severe attacks of rheumatism as to cause delirium, suffered a number of times from general chorea. She never had rheumatism nor growing pains. In many of my histories the chorea did not appear until after several attacks of rheumatism. Thus, a girl, eleven years of age, after two attacks of rheumatism, developed general chorea. She had a mitral regurgitant murmur which I was unable to trace as to the time of its inception. There are so many ways in which rheumatism, chorea, and cardiac trouble seem related, that the opinion of Roger as to their essential identity appears probable.

Rheumatism in children seems to have a tendency to attack mucous as well as serous surfaces, especially the throat. It may seem somewhat forced to seek any relation between throat, and especially tonsillar, affections and rheumatism, yet they occur frequently enough to suggest the possibility of some connection besides a mere coincidence. Bruce, in describing the invasion of rheumatism, says that sore throat, which consists in pharyngeal catarrh, follicular tonsillitis, or even acute suppurative inflammation, is remarkably characteristic. Goodhart says there is a growing frequency of assertion that tonsillitis is a rheumatic ailment, generally preceding the attack. Some other writers speak of the same connection.[1] I have fifteen histories in which tonsillitis

[1] [illegible] tarrh, but in many cases it takes the form of acute inflammation of the tonsils. The percentage of cases was about eighty. In some cases the throat and joints are affected simultaneously; and he has met with cases of relapse from acute rheumatism where the primary attack and the relapse have both been preceded by throat symptoms. The sequence of events is of too frequent occurrence to be explained on the hypothesis of a merely casual connection; that is, that a person having, through a chill, or some other cause, had a 'sore throat,' further exposure has brought on an attack of rheumatic fever. He believes that not infrequently amygdalitis is an early manifestation of the rheumatic diathesis, and that by so regarding it we may prevent the further development of that tendency. Bearing in mind the extreme prevalence of valvular affections of the heart, which in the young may generally be traced to fibrinous vegetations having formed on the valves during the attacks of rheumatism, any means which enable us to foresee, and possibly ward off, a disease causing agonizing pain, and often leaving behind it an irreparably damaged heart, are of great value. Early treatment is very important in acute rheumatism. The cardiac complications usually appear early in the case, and when once the patient has been got to bed the danger from that source is much lessened. So firmly is the author convinced of the truth of these facts, that he thinks seriously of a seemingly trivial throat affection, and in all such cases advises his patients to be on their guard against the slightest exposure to cold, and

was present before, at the time, or immediately after the attack of rheumatism. Thus a boy, nine years of age, came to my office with a severe follicular tonsillitis. He was sent home and went to bed. In three days I was sent for and found acute rheumatism beginning in the knees and back of the neck. Again, a girl, fourteen years of age, with mitral disease, whom I had repeatedly treated, had another attack of rheumatism, involving the wrists and shoulders. She was put to bed in a warm room, and, in several days, as the pain was leaving the parts affected, she was seized with an attack of acute tonsillitis. In another case a girl, thirteen years of age, was treated in summer for mild rheumatic pains in the elbows and chest-wall. The affection yielded to salicylate of sodium, but just as recovery was taking place she returned with an attack of acute tonsillitis. In histories of this kind it cannot, of course, be proven that there is anything beyond a casual connection between the two affections; still, the coincidence is such as to warrant further observation. In acute tonsillitis there is very constantly present general soreness and pains through the limbs, with an elevated temperature; hence the idea has been advanced that it is a constitutional disease. If so, it must be allied to rheumatic fever. It is well known that suppurative tonsillitis can sometimes be aborted by large doses of the salicylate of sodium given at the beginning. Dr. Gilbert, in the Louisville *Medical News*, reports a case in which the whole mucous membrane lining the mouth and covering the tongue was attacked with a follicular inflammation during a rheumatic seizure.

Rheumatism in children is occasionally accompanied or complicated by various affections. I could only detect marked evidences of pleurisy in about half a dozen of my cases. In quite a number of instances there were attacks of acute urticaria. Stiffness and contracture of the muscles of the neck are sometimes seen. Persistent indigestion and pains shortly after eating were often present in my cases, together with more or less headache. Rarely the inflammatory action in the joints and fasciæ will spread to the surrounding areolar tissue, and an extensive cellulitis be the result. In a few cases, in rheumatic children, anterior polio-myelitis was accompanied or shortly followed by rheumatism. As far as I have seen it, the rheumatism complicating scarlatina does not differ in its action from the ordinary attacks. It is often attended by endocarditis, but it is said that the murmur developed by the disease often disappears. In one case that I was able to watch, a marked bruit disappeared some time after the attack. Henoch regards the joint affections in scarlatina as due to synovitis rather than rheumatism. Other authorities, on the contrary, consider that the complications of scarlatina involving serous membranes, and even the kidneys, are essentially rheumatic. In one of my cases, a boy, nine years of age, had a marked attack of peliosis rheumatica, involving the legs, while suffering from mild rheumatic pains. This affection is exceedingly rare. R. Clement Lucas reports two cases in the *British Medical Journal*, in which infants were attacked by gonorrhœal rheumatism resulting from purulent ophthalmia. One baby was eighteen days old, and both parents had gonorrhœa; the other was three months old.

To make a diagnosis of an affection that is often obscure in its manifestation, especially where no one symptom can always be taken as pathognomonic, we must depend rather upon a collection of symptoms, one corroborating the other and collectively forming a clinical picture of the disease. Thus carefully studied and sifted, a correct diagnosis can sometimes be made out of vague and unpromising materials.

In recognizing rheumatism in children we must often depend on what Goodhart aptly calls the "composite" of the disease. In regard to the wandering pains, it is evident that a certain limitation and care must be exercised before considering them rheumatic. Simple bruises and sores must be eliminated, also the muscular weariness developed in weakly children by over-exercise, the products of tissue metamorphosis being imperfectly removed by the feeble circulation, with resultant irritation and pain. But rheumatic pains usually go from one joint to another, or from one set of muscles to another, and exist independently of any such factors as injury or over-exercise. A pain that attacks a knee, then an ankle, and next the muscles of the thigh or calf, is almost surely rheumatic, without other manifestation of the disease. Complete or partial disability may likewise be added to the pain in a part, without any swelling or redness. Thus a girl, eleven years of age, with rheumatic pains in the left shoulder and side of the neck, was entirely unable to lift her arm, although no lesion could be seen. There may be repeated, but evanescent, pains attacking a single joint or the fasciæ lining certain muscles. Other considerations will aid in recognizing the true nature of the pain. Thus, inquiries as to whether rheumatism is present in parents; a careful examination of the heart for murmurs and palpitations; the presence of chorea; marked hydræmia and indigestion, may all aid a diagnosis.

While rheumatism in children is more apt to be overlooked entirely than mistaken for other diseases, I cannot help thinking that symptoms referred to malaria in early life not infrequently have a rheumatic origin. Salicylate of sodium at times has relieved cases where quinine failed in my hands. Many of these cases of obscure rheumatism, however, are improved by tonic doses of quinine. A certain proportion of the cases of rheumatism in early life present the typical lesions seen in adults, and then, of course, the diagnosis is easy.

With reference to pathology, the acid theory affords to my mind the most satisfactory explanation of the rheumatism of childhood. The two principal sources of the collection of acid in the system are, first, lactic acid fermentation of certain kinds of food within the intestinal tract, and, second, the formation of sarcolactic and ethylene-lactic acids in muscular tissues as a result of their functional activity. As a matter of fact, most rheumatic children are improperly fed either in quantity or quality, and suffer from acid dyspepsia; also, the action of the skin, the principal emunctory of lactic acid, is checked by cold, from insufficient clothing. While the truth of this theory may not have been proven, it affords the most satisfactory working basis for treatment. Lactic acid appears to be very readily formed in early life from indigestion, and, during the first dentition, results, according to good observers, in the production of rachitis, the incipient stage of which is extremely common. It is not unreasonable to suppose that the same irritant produces the fugitive pains of rheumatism in older children.

Treatment.—In the majority of rheumatic persons the trouble has begun early in life, and, as one attack makes a future invasion of the trouble more probable, it is of the greatest importance to check the tendency as far as possible at its onset. Not only should the slightest suspicion of rheumatism in the child be subjected to careful inquiry and prompt treatment, but in cases of hereditary tendency the possibility of trouble should be anticipated and averted by careful hygienic training. All forms of indigestion and acid fermentation of food must be prevented. Children may sometimes be fed too largely and exclusively upon the saccharine and starchy foods. The condition of the skin with reference to warmth and normal activity must receive the needful attention. Many children would do better if they were clad completely in flannel, the thickness of which can be regulated by the season. If the flannel irritates, let the skin be protected by underwear of thin cotton. Most of the children I have treated at my clinic have had undershirts containing

to seek medical advice on the first appearance of pain in the joints. Brief notes are given of twenty cases of acute rheumatism recently under observation, in nineteen of which the articular affection was preceded by sore throat, and in twelve the heart and pericardium were affected. Reprinted from Progress of Medicine, New York Medical Journal, vol. xxxiii., 1881.

more cotton than wool, and often exclusively of cotton, during the cold, damp weather of winter and early spring. The first complaint of irregular pains on the part of the child should receive attention and investigation by the physician. If there is any proof, by means of a careful diagnosis, that the trouble is rheumatic, keep the children quiet and in a warm place. My treatment has been to start with a laxative dose of Rochelle salts, followed by a mixture containing oil of wintergreen and salicylate of sodium. At the same time the heart should be always carefully examined, and, if there is any evidence of a bruit, the most absolute and continuous rest in a horizontal position be enjoined. Here it is that permanent and fatal mischief may be avoided. In the first place, a child with slight rheumatism is allowed to go about as usual, exposed to all kinds of weather, until the heart becomes affected; then it sits around complaining of pain in the chest for a few days, when its active habits are at once renewed. This is the history I have frequently seen. The slightest consideration will show how fatally damaging bodily exercise must be to an inflamed heart. The difference in activity and strain put upon the heart in standing up and lying down may be the all-important factor in the child's future. It cannot be too strongly emphasized that the first inception of endocarditis or pericarditis must be recognized, so that all the quiet possible can be given the crippled organ. For this, absolute and continuous body rest afford the only conditions. Otherwise degeneration of the heart muscle, dilatation of the cavity, and crippling of the valves will surely ensue. Goodhart inquires, with pertinence and force, whether in the acute peri- and endocarditis of children a two or three months' recumbency is longer than is necessary for the repair of so damaged an organ.

"Is it too much to insist upon, when the future of a just-opening life depends upon it? The surgeon with the diseased joint makes light of a year of rest; yet who has not seen a child after acute pericarditis skipping about at the end of a month or six weeks as if nothing had been amiss?"

The comparison of the heart to a diseased joint is apt, when we consider Bouillaud's statement that this vital organ acts like a joint in the rheumatism of children. I have recently seen a girl, twelve years of age, brought by her mother to the clinic for pains in the knees. The child was pale, sick, and fainting—symptoms soon explained by the laboring heart and rough murmur that indicated an inflammation still in an acute stage. By dragging the girl about at this critical time her heart was being surely and permanently crippled.

There is evidence that if the heart can be rested for several months in every possible way permanent lesions may sometimes be averted after the endocarditis of children. Let the necessity of a quick recognition of the disease, followed by prolonged rest and nursing, be emphasized by the weight and authority of this Academy.

Even when valvular disease is apparently confirmed in children, vigorous efforts should be made to curtail, and, if possible, overcome, the difficulty. In addition to most careful hygienic oversight, the child should be put upon a prolonged course of iron and cod-liver oil. Occasionally digitalis and other tonics may be indicated. All forms of severe exercise or anything adapted to excite the heart must be scrupulously avoided. Under this treatment cardiac murmurs are sometimes lost sight of in children. With healthy growth and nutrition why may not slight exudation on the valves disappear? Children above an early age bear cardiac disease well from the perfect compensation. In many cases there are no symptoms at all.

I have been treating a boy, thirteen years of age, with double aortic and double mitral murmurs for the past two years, and he has never exhibited a symptom referable to the heart. It is a subject for careful inquiry whether, when young protoplasm is recuperative and growth healthy, more of these cases of valvular trouble cannot be overcome, by puberty, with proper treatment and training.

Descroizilles states that it is important to know that bruits and other stethoscopic signs noted in heart trouble disappear in certain cases in children, sometimes at the end of several weeks or months, sometimes at the end of many years.

Facts of this nature have been cited by Trousseau, Jaccoud, Péter, Roger, René Blache, and Meigs and Pepper. At any rate, valvular disease should be recognized as early as possible in children.

Hence the importance of a more careful study of the rheumatism of childhood, as both it and the cardiac disease induced are so frequently overlooked. We then only get the valvular trouble in the adult when compensation is failing and the prognosis bad. Any effort to lessen the large number of these confirmed sufferers is worthy of careful trial. The crippled lives, agonizing dyspnœa, and sudden death are saddening sights to the physician's life. If a single one of these distressing cases can be prevented by suggestions of early recognition and care, this discussion before the Academy will have served a profitable end.

SIZE OF THE HEART IN CHRONIC DIFFUSE NEPHRITIS.[1]

By GEORGE L. PEABODY, M.D.

In venturing to appear before the Section of Practice of Medicine to open a discussion upon this well-worn topic, it is proper to state that it is not the object of this paper to contribute any new theory of the cause of changes in the heart in chronic Bright's disease, nor even to explain why the heart is sometimes affected and sometimes not; but merely to add to the facts that we already possess some personal observations which have been conducted in the post-mortem room during the last eight years. In that time the number of autopsies has been large—so large that it has not been possible, in the intervals of active work, to glean from the entire number all that might bear upon this subject; but in the last few weeks I have carefully reviewed the records of thirteen hundred consecutive autopsies, with a view of ascertaining certain points which, it seemed, might be of interest to the Section. In these thirteen hundred cases there were recorded three hundred well-marked cases of chronic diffuse nephritis. Only those cases were selected for use in this paper in which the evidence was perfectly unmistakable—cases in which usually the prominent naked eye indications of the complex lesions of this disease occurred, such as a granular surface, with more or less well-marked atrophy of the cortex, together with cysts in the cortex, with or without marked decrease in the size of the organs, etc. In some cases, in which doubt could arise from the general appearances as seen by the unaided eye—and these were numerically but very few—the usual microscopical evidences were ob-

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Rheumatism, by Senator.

A Practical Treatise on the Diseases of Children. By Meigs and Pepper. Seventh edition.

Rheumatism, Gout, and Allied Diseases. By Maclagan. 1876.

A Treatise on the Diseases of Children. By J. Lewis Smith, M.D. 1880.

Acute Rheumatism in Infancy and Childhood. By A. Jacobi, M.D. Seguin's American Clinical Lectures, vol. i., No. 11.

Manuel Pratique des Maladies de l'Enfance, par D'Espine et Picot. 1884.

St. Bartholomew's Hospital Reports, vol. xiv.

Rheumatism. By R. P. Howard, M.D. System of Medicine. By Pepper. Vol. ii. 1885.

Leçons sur les Maladies des Enfants. By Hutinel.

A Guide to the Diseases of Children. By Goodhart. 1885.

Acute Rheumatism. By J. Mitchell Bruce. Quain's Dictionary of Medicine.

Manuel de Pathologie et de Clinique Infantiles, par J. Parrot. 1879.

On Gonorrhœal Rheumatism in Infants as a Result of Purulent Ophthalmia. British Medical Journal, July 11, 1885.

Some Peculiar Complications of Rheumatism in Children. By Dr. R. B. Gilbert. Louisville Medical News, November 14, 1885.

Articles on Chorea and Rheumatism. Gerhardt's Handbuch der Kinderkrankheiten.

[1] Read before the Section of Practice of Medicine, New York Academy of Medicine, January 21, 1886.

tained before the cases were used in the calculations to be presented to you. To be more specific, no cases are included in the three hundred in which the macroscopic appearances were at all doubtful, except such as revealed the well-marked evidences of diffuse nephritis with which we are made familiar by the microscope, such as increase in the intertubular connective tissue, thickening of Bowman's capsules, more or less complete atrophy of many glomeruli, together with fatty degeneration of much of the tubular epithelium and the presence of casts in many of the tubes.

Again, from this list of three hundred, sixty-five have been omitted for various reasons. Of these, twenty-five were cases of amyloid degeneration; eleven occurred in conjunction with aortic aneurisms. Some had valvular cardiac disease; in some the pericardium was adherent, and a few were left out of the calculation for such unusual lesions as cardiac aneurism, congenital smallness of the aorta, fibrous myocarditis, absence of one kidney, congenital or acquired, etc.

It is interesting, in passing, to note that in nearly every case of amyloid degeneration the heart was small in size, frequently smaller than normal, presenting the lesion known as brown atrophy. Moreover, it is very unusual in my experience to find hypertrophy of the heart in any way dependent upon aneurism. Still, for obvious reasons these classes of cases have been excluded from the calculations upon which the conclusions of this paper are based.

In estimating the size of the heart, many difficulties are encountered by the pathological anatomist. If we endeavor to be very exact, and, by measuring the thickness of the ventricular wall, to ascertain with mathematical precision any departure from the normal, we are liable to err in not allowing for the contracted condition of the muscle, which is frequent enough after death, and may cause any heart to simulate a condition of hypertrophy. Again, in the absence of this misleading condition, the thickness of the ventricular wall is not an indication of absolute, but only of relative, hypertrophy. Thus, the size of the cavities, a swell as the thickness of the myocardium, must be taken into consideration. The weight of the heart is said to afford the most accurate indication of absolute hypertrophy; and yet, without due regard to the size and weight, and general development of the body, an accurate knowledge of the heart's weight is of comparatively little value.

It has seemed to me, therefore, that, although it is open to the serious objection that the personal equation is necessarily a factor in the calculation, perhaps it is better, for those who are constantly making autopsies, to rely upon their own judgment, as based upon a multiplicity of observations, in drawing conclusions regarding such complex problems as the size of the heart. One gradually and imperceptibly progresses in his knowledge of pathological appearances, until after mature experience his unbiassed opinion in a given case, formed after due weight has been given to all the various contributing factors, is worth more than conclusions drawn by elaborate application of exact methods of any one kind, such as measurement or weight.

It is important, in this regard, that the opinion as to the size of the heart should be unbiassed by any knowledge of the condition of the kidneys, or, in other words, that the heart should always be examined and its condition recorded before the kidneys are exposed; and this rule has been followed in the cases that are to be laid before you. One more preliminary consideration must be presented to you before the figures are reached. It would be unfair and misleading if you supposed that this investigation has been carried on systematically during all the years that have contributed the facts upon which it is based. Such has not been the case. I have been, however, for a long time impressed with the frequency with which hearts of normal size have occurred in cases of well-marked chronic diffuse nephritis; but many of the cases of this kind were entered in my record-books years before it occurred to me that they were numerous enough for any such use as that to which you are allowing them to be put to-night.

The question of sex, important though it would seem to be in such a calculation as this, has been, however, excluded, because, for obvious reasons, it is of little value in drawing general conclusions as to relative frequency of any morbid conditions from our hospital record-books.

The three hundred cases are subdivided thus with reference to the size of their hearts:

	Cases.
With cardiac hypertrophy	135
Without cardiac hypertrophy	79
With cardiac dilatation, without hypertrophy	21
Omitted from calculation for various causes	65
Total	300

Thus, of the cases referred to, namely, three hundred well-marked instances of chronic diffuse nephritis in all stages, in seventy-nine the hearts were not increased in size. Of these hearts a very few were dilated to a slight extent, and showed, therefore, some decrease in thickness of the ventricular walls, especially the left. Many were distinctly atrophic, exhibiting the condition known as brown atrophy, and some illustrated well the lesion of fatty degeneration.

When we recall that sixty-five were omitted from the calculation for various reasons given above, we are met by the rather striikng conclusion that of the cases tabulated one-third did not exhibit the condition of cardiac hypertrophy. It is proper to remind you that the kidneys in these cases were by no means all *very* small. All, however, were good illustrations of chronic diffuse nephritis, and many of them were of the very small granular variety.

It has been conceded, I believe, that no satisfactory explanation has yet been advanced to account for the hypertrophy of the heart in chronic Bright's disease, unless it be the chemical theory of Dr. Bright, or that of the general arterio-capillary fibrosis, which seems to be steadily gaining ground. But it is beyond question that, with the co-existence of any chronic wasting disease, such as phthisis, the nutrition of the heart may be so lowered in conjunction with the general nutrition as to interfere with and prevent the possibility of its becoming hypertrophic. Accordingly, in view of the seeming disagreement of these results with usually received opinion, it seemed desirable to ascertain what, if any, accessory or contributing diseases were present in these cases; and, as will be seen from the table given below, more than one-third of these apparently anomalous cases did suffer from chronic wasting diseases in addition to the nephritis, such as tuberculosis, including Addison's disease, cirrhosis, abscess, cancer in various regions, etc. Still, this leaves a long number unaccounted for.

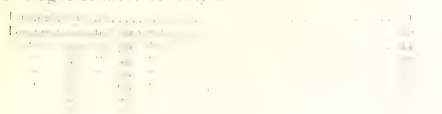
Table of Causes which Contributed to Death in Seventy-nine Cases Mentioned Above

Tuberculosis	15	Pneumonia	4
Addison's disease	1	Disease of liver	1
Cirrhosis	8	Fatty heart	1
Abscess of gall-bladder	1	Peritonitis	1
Ovarian cyst (no operation)	1	Multiple fractures	4
Epithelioma of face	1	Dysentery	1
Epithelioma of neck	1	Burns	1
Cancer of lungs, pericardium, etc.	1	Pericarditis	1
Sarcoma of scalp	1	Laceration of diaphragm	1
Sarcoma of kidney	1	Cerebral hæmorrhage	1
Cancer of stomach	2	Dislocation of knee	1
Pleurisy	8	Pyæmia	1
Fracture of skull	7	Myelitis	1
Stricture of pylorus, not cancerous	1	Pulmonary infarctions	1
Apoplexy	4	Penetrating wounds	1
Pulmonary hæmorrhage	2	Pertussis	1
Sunstroke	1	Intestinal obstruction	1
		Chronic gastritis	1
		No cause except nephritis	7
Total			79

It is interesting to observe in passing that four deaths from apoplexy occur in this list without the existence of cardiac hypertrophy, which is still, I believe, regarded

by some as an essential factor in the causation of that lesion.

The ages of these seventy-nine cases are as follows:



In the cases in which hypertrophy existed, namely, one hundred and thirty-five out of two hundred and thirty-five, the diseases which contributed to death were about equally numerous. I will not delay you by the introduction of another long list. It is sufficient to say that, in direct contrast with those in the previous category, chronic wasting diseases were of extremely unfrequent occurrence, and apoplexy was by far the most important factor, numerically speaking.

Apoplexy was responsible for twenty-two deaths, or more than one-sixth of the total number, a strikingly large proportion as compared with those traceable to the same cause (namely, less than one twentieth of those in the previous category), where there was no cardiac hypertrophy. Pneumonia stood next numerically, and existed in fifteen cases, or one-ninth of the whole. Pericarditis occurred about half as often. Fatty heart came next, with six deaths, and then came a long miscellaneous list of what may be considered indifferent causes.

The only prominent factor in the deaths of the twenty-one cases of dilatation without hypertrophy was pneumonia, which was responsible for one-fifth of them all. It is hardly fair, however, to classify the cases of dilatation by themselves, for the reason that they probably represent hearts that were at one time hypertrophied; and they should, therefore, logically be added to the list of hypertrophied hearts. This would swell the total number of this class to one hundred and fifty-six, a very large, but not unusually large, proportion of the two hundred and thirty-five that form the basis of this brief paper.

One element of doubt which will occur to your minds, and one to which due weight should be given, is the possibility that some of the above apparently anomalous cases may have been cases of amyloid disease in which the waxy changes passed undetected. I can only say that in all cases in which the gross appearance at all suggested the possibility of the presence of this material the usual chemical reagents were resorted to for its detection; and the fact that twenty-five of the sixty-five omitted from this calculation were omitted because they were cases of amyloid disease would lead one to believe that at least the usual proportion of cases of this lesion was recognized by the writer. Still it remains, however, beyond controversy that this lesion is present in chronic Bright's disease far oftener than was formerly supposed to be the case; in many cases to such a very minute extent that the microscope must be employed to render its detection possible; and it cannot be denied that it may have been present here in microscopic amount in some cases in which it was not recognized.

It must also be admitted that the total number of cases is very small for purposes of generalization; hence, the experience of the Section must be looked to for corroboration or correction.

The only important conclusion deducible from what has gone before, and the point in regard to which I hope to elicit testimony this evening, both clinical and anatomical, is that in this city hypertrophy of the heart is less common in chronic Bright's disease than it seems to be in Europe, so far as one can judge by contrasting the results of personal experience here with those which are derived from contemporaneous medical literature.

The *Popular Science News*, says, to obviate the hereditary tendency to disease in the young, "wash them, air them, and *iron* them."

ARE ANTIPYRETICS IN THE TREATMENT OF ACUTE DISEASES USEFUL AND SAFE?[1]

By A. A. SMITH, M.D.,

Interest has been specially awakened in the use of antipyretics in the treatment of acute, and even some chronic, diseases during the past few years. The reduction of temperature has been for many years occupying the attention of physicians, but special attention has been aroused since the publication of the German observers, in the last fifteen or twenty years, in reference to the use of cold in the reduction of temperature. Following this new interest in the subject, new antipyretics have sprung up, and have had many advocates and not a few opponents. At one time quinine had its advocates, and warm ones, too, in the reduction of temperature. With quinine, and the application of cold in its various forms, it was thought possible to so lower the mortality from typhoid fever, and prevent the complications and sequels, as to put in the shade all former plans of treatment, and practically to make it one of the most benign of diseases. This feeling extended to American physicians, and the cold-bath treatment received the sanction of eminent teachers and practitioners. This was but following the teaching of Brand. In 1851, in his first publication, he says: "If typhoid fever is treated from the commencement by cold water, there is in general nothing to fear, and even in cases the most grave, one may yet many times obtain cure by cold water."

Hear him again in 1863: "Every case of typhoid fever treated regularly according to my method takes on a light character, and almost never terminates in death, so that in fact we may say that clinical medicine is in condition to preserve with certainty the lives of all patients entrusted to its care."

And again in 1868: "The treatment by cold baths, methodically employed from the commencement, gives a success positively assured, and always enables one to ward off death."

A French physician of Lyons has summed up Brand's works in these words: "Every case of typhoid fever, treated regularly from the commencement by cold water, will be exempt from complications, and will get well."

When Liebermeister added his name and statistics to those of Brand, it seemed but natural that the medical world should be captured by this plan of treatment. Very quickly the cold bath came into use in this country, following the Germans, as we were formerly in the habit of doing much more than now, and much more than we shall probably ever do again, at least in the way of treatment. What is the result? The plan has been tried, and I venture the statement that to-day not one-quarter of those who were formerly its ardent advocates use it to any great extent. This is not due to the fact that other agents have taken its place, although I must admit this may be true to a certain extent. It is due, it seems to me, to the fact that the treatment as formerly advocated and used was under certain circumstances attended with danger. The application of cold, especially in the form of the cold bath, is an agent which requires great care and good judgment in its use. If properly used, and in properly-selected cases, it seems to me to be an agent capable of doing much good. If used indiscriminately, simply because the thermometer indicates a high temperature, and without regard to all the accompanying circumstances, it may not only do harm, but may be responsible for a fatal termination.

A high temperature simply does not constitute all the danger from a given disease. One patient will tolerate for a long time, and even quite comfortably, a temperature which in another would be accompanied by a train of morbid symptoms in themselves indicating danger. And yet, according to the advocates of the cold-

[1] Read before the Section [illegible] of the New York Academy of Medicine [illegible]

bath treatment, both patients must be treated in exactly the same way. Both must have the temperature reduced by the bath to a certain point regardless of the other effects produced. It has not been proven that high temperature is responsible for the changes which occur in some of the viscera and are found in them after death. It is much more likely these changes are due to the particular poison which produces the fever. In order to determine the usefulness and safety of cold baths in hyperpyrexia from any cause, many things are to be taken into consideration, and this remark may apply to all antipyretics. If a high temperature can be reduced safely, it is fair to presume it is useful. We must consider the general condition of the patient, the stage of the fever, the effects of the first few baths—especially the effects on the nervous system—and the effects on the cardio-vascular system.

If, after the patient is placed in the bath, and the temperature is reduced to, say, 101° F., and then placed in bed, he becomes more quiet, and less delirious (if he has had delirium); if he breathes more easily and less rapidly; if his heart's action becomes more regular and forcible, and the intensity of the first sound is increased; if he falls asleep, and the skin feels moist, he certainly is receiving benefit from the bath. If, however, the extremities remain cold for some time after the bath; if the lips are blue, and the countenance has a deathly hue; if the heart's action is more feeble, and the pulse more irregular, the respiration more rapid and sighing, then, it seems to me, the baths should be discontinued. The stage of the disease at which they would be contra-indicated is an important matter. Taking typhoid fever as a type of the long-continued fevers, I should say, in a general way, that the baths are contra-indicated after the tenth or twelfth day; and, taking pneumonia as the type of short-duration fevers, they are contra-indicated after the third or fourth day, in each case depending somewhat on the condition of the patient. Fever in advanced age contra-indicates them. They are contra-indicated in cases with heart enfeebled from organic disease. But the dangers I have referred to are not the only ones in connection with the cold baths. Congestion of the viscera may, in many instances, be attributed to the baths. I admit the great liability to error on this point, because in all continued fevers there is tendency to congestion of the viscera, more so in some than in others, and much more so in some seasons than in others.

It is rarely necessary to resort to the cold baths for the production of antipyrosis. In very, very rare instances would I advocate the use of the cold bath. I believe all the good to be obtained from the bath can be obtained by milder and less objectionable methods. Cold sponging, wet pack, ice to the head, the cautious and short-time use of the cold coil, and the careful use of ice-water rectal injections, will, in the very large majority of instances, accomplish all that the bath does in the way of good, and are attended with the minimum degree of harm. The greatest benefit, it seems to me, in the cold applications, is not the reduction of temperature, but is due to the profound modification in the functions of the nervous system (especially the vaso-motor). It is not always agreeable to patients (if they have their senses sufficiently to recognize distinctions) to have cold applied. Especially is this so with children. But very few patients will object to the application of tepid water by means of sponging, or cloths, or the wet sheet. It has seemed to me I have succeeded in even reducing the temperature more decidedly by the tepid applications than by cold ones. Certainly, the effects on the nervous system are, as a rule, more beneficial, and these beneficial effects on the nervous system always affect favorably the progress of the fever. Some observers have even gone so far as to assert that almost all the beneficial effects of baths, whether cold or warm, are due to the restoration of the functions of the vaso-motors in the cutaneous capillary network which are so profoundly disturbed in fevers. If this be true, then the tepid applications ought to influence the progress of the fever more favorably than cold ones.

But I have only touched one class of antipyretics, the refrigerants and the opposites.

Quinine in small doses increases the strength of the circulation; just how, we do not know, unless it be by its stimulating effect on the nervous system.

In large doses it diminishes the blood-pressure, by weakening the heart, and partly by paralyzing the vaso-motor centre, thus causing dilatation of blood-vessels.

The heart's action is weakened by large doses of quinine, from its action on motor ganglia, and probably also on the muscular fibres of the heart itself. In a discussion before the New York Clinical Society, two years ago, I raised my protest against the large doses of quinine in certain stages of fevers, and in any case with cardiac enfeeblement, as being possibly dangerous, and need only refer to such possibility here. Then we have the salicyl compounds—salicylic acid, etc., and the aromatic series, as represented by kairin, resorcin, thallin, hydroquinone, etc. And the latest, a nondescript, antipyrin. It is an agent which thus far gives better results than any other. It will reduce temperature in almost every case. It has already, with many, entirely displaced cold and quinine. In some instances it produces nausea and even vomiting, and occasionally cardiac depression, but these unpleasant symptoms have been produced only by very large doses. During my early use of it I followed the plan suggested by the German observers and gave it in large doses, thirty or forty grains every hour, until there was a decided fall of temperature. Now, I find it necessary only to give ten or fifteen grains, ordinarily, to reduce the temperature two or three degrees. On account of this tendency to nausea and sometimes vomiting, and occasionally cardiac depression, I soon fell into the habit of always giving a small quantity of alcoholic stimulant with each dose. Of late, I rarely ever see any unpleasant symptoms from its use. In children, I have observed sometimes a marked paleness soon after it began to produce its effects, but even in such cases a small quantity of stimulant quickly overcomes this unpleasant symptom. It can be given by the rectum, and by hypodermic injection. The objection to its use by hypodermic injection is that it gives much pain. I have used it in a large variety of cases, and consider it by far the most useful and the safest antipyretic yet discovered, if used in not too large doses, and if in connection with its use cardiac stimulants be given when there is any suspicion of cardiac enfeeblement. Whether it favors the tendency to visceral congestions remains to be proved. It seems certain that any antipyretic used to the point of producing great variations in temperature might produce unfavorable symptoms, visceral engorgements among the rest. If we would always resist the temptation to cause too great a fall of temperature, even though it be high, it seems to me we would be more likely to produce good effects and less likely to do harm.

Some Good Advice.—"Sound physiology must be the basis of sound practice"—a fact long recognized in Scotland, where physiology has always been taught as "The Institutes of Medicine." "Nitrogenous waste in the blood is the root of many evils." "Treat the heart as you would your horse: when the roads are heavy feed it well, else you may have a breakdown in a dark night on a miry road." "In lung disease death comes through want of air; therefore, beware of opium." "In painful abdominal diseases death comes through nervous shock, therefore hold on by opium." "Above all, beware of looking at a sign-post instead of looking at the road. If you find sugar or albumen in the urine, do not bolt off with the idea that your patient is fatally ill of diabetes or Bright's disease—that is to look at a naked post and see nothing at either side. Study your *patient*, not merely his *urine*."—*Fothergill.*

"IS ULCERATIVE ENDOCARDITIS ALWAYS A SPECIFIC DISEASE?"[1]

By T. E. SATTERTHWAITE, M.D.

An answer to the question "Is Ulcerative Endocarditis always a Specific Disease?" involves the entire subject of endocarditis, and I will therefore proceed at once to give my definitions of that disease in its various forms.

Through the irritative action of certain animal poisons there is set up within the substance of the cardiac valves, or in their annexa, certain inflammatory or degenerative changes, by which the tissues become swollen and infiltrated, chiefly with cellular and fibrinous exudates, the latter often undergoing molecular disintegration and giving rise to ulcers, upon which there may form, at a later stage, papillary or villous excrescences, and even membranes like those of diphtheria. Sometimes the new products calcify, either alone or with the original tissue; occasionally pus is intermingled with the deposits.

These alterations of the normal structures lead to a multiplicity of secondary phenomena in other organs of the body.

Endocarditis, in any form, is rarely produced by an injury, but in fully one-third of the cases we recognize certain antecedent conditions that are associated in our minds with the etiology of the disease, and the most prominent is acute articular rheumatism. Sometimes the two diseases occur together; probably not so often as we once thought. Sometimes the heart-lesion follows. Other, but much rarer, antecedent conditions are the puerperal state, scarlatina, measles, dysentery, and typhus; but how close the alliance between these several diseases and the one we have under consideration is a matter of some uncertainty. It is commonly said that pyæmia is one of the precursors of endocarditis; personally I have never known them associated together. In about fifty per cent. of the cases the cause remains unknown, although searching inquiries are instituted. But we judge from analogy that the disease is due to a poisonous condition of the blood; possibly to a prolonged high temperature, which has been thought by some to be competent to produce it. There seems to be evidence that tuberculosis also is occasionally the cause. Of this I have no personal knowledge. I do not include senile thickening of the valves among the inflammatory changes.

As for the locality, I am inclined to think that there is no very strict rule in reference to the valves that are elected. It is commonly thought that the left side of the heart is most frequently attacked in extra-uterine line, while the right is involved in the congenital disease. In my collection of forty-eight cases the aortic was somewhat more frequently diseased than the mitral; in twenty-six cases both aortic and mitral were affected; the tricuspid was never the only valve diseased, and only in four cases, always in association with two other valves; the pulmonary was only affected three times, and also in association with two other valves.

There seems to be no doubt that patients seldom suffer much from the simpler forms of endocarditis in their early stages. They often complain of some precordial pain, though even these symptoms may be due to an associated pericarditis, the irregular action of a hypertrophied heart, or pulmonary complications. In a large number of cases there is a noteworthy frequency of the pulse, which, however, is lessened when compensatory hypertrophy has been established—a pulse of 120 to 140 is not uncommon at first. Dyspnœa, orthopnœa, and palpitation also are of pretty regular occurrence. But it is the accidents and complications that are most dangerous to life. In a disease that in nine out of ten cases lasts for years (sometimes twenty, and thirty, and even more), it is natural that these accidents should occur; and we find them in the shape of infarcts in the kidneys, lungs, spleen, or brain, etc., in one-third of the patients. In the great majority they do not cause death—and yet it is these embolic phenomena that often produce the remarkable attacks of chills and fever that puzzle the attendant, because the exacerbations often occur, for some unknown reason, with a remarkable periodicity; but it need not be supposed that such peculiar attacks indicate a septic condition or any specific complication. They occur equally well when the infarcts are benign in character.

It is, however, these secondary phenomena—such as an embolic pneumonia, which only attacks portions of a lobe, never the whole lobe; the enlarged and tender spleen; and bloody urine, with albumen and casts—that should turn the physician's attention toward a possible cardiac disease, even if the physical signs and subjective symptoms have not suggested it.

But probably the most important complication is chronic diffuse nephritis, which stands in close relation to the main etiological factor, viz., acute articular rheumatism; for I have found the latter to precede the former in from forty to eighty per cent. of my cases. It is not strange, then, that about one-half of the cases of endocarditis die of uræmic poisoning in one of its many forms; either through cardiac or respiratory failure, laryngeal spasm, and œdema of the lungs, due to a suspension of the several functions; rather than to cerebral embolism, pulmonary infarcts, or secondary abscesses.

It follows, as a premise from what has already been advanced, that there is some tendency toward cure, even in destructive or deformative endocarditis; and, indeed, the process of cicatrization of the valvular cusps is often a very perfect one, so far as the healing of the ulcer is concerned. Naturally there is some loss of substance, and often a marked deformity.

But while I have thus briefly alluded to the acute and chronic forms of endocarditis, I have left for consideration a variety that has received the names malignant, infectious, diphtheritic, plastic, mycotic, etc., by a certain class of persons, and with these I wish to join in giving it a separate entity. Infective or suppurative endocarditis, as I would call it, rather than malignant or ulcerative, etc. is a comparatively rare disease, if we wish to view it from the narrow standpoint that I think is the only safe one., Pathologically, it is distinct from the others, in that it produces peculiar infarcts which have no tendency toward resolution, but rather in the direction of diffuse abscesses. I offer two such cases, and one that is possibly doubtful, as my contribution to this topic.

Case I.—Infective or suppurative endocarditis. J. C. A——, colored, aged forty-six, was admitted to St. Luke's Hospital, November 5, 1878. He was first taken sick on October 25th; had never before been seriously ill. He first experienced pain in his left knee, and about that time had chilly sensations, followed by headache, backache, and some fever. He took to his bed, where he remained until removed to the hospital. On admission there was found to be pain in the left side of his back, and in his left leg. His left wrist also was swollen, tender, and intensely painful; no fever, but great prostration. On November 28th, after showing no signs of improvement, he passed blood per rectum. Temperature was then found to be 102.4°. Probably there had been an evening rise of temperature for some time; it remained between 101° and 102° until December 3d, when further weakness, trembling of the masseters, and subsultus developed. Toward the end his temperature rose to 104°; pulse to 116; respiration to 46. At post-mortem examination the heart was not found especially hypertrophied, as would have been the case in old endocarditis. At the aortic orifice, beneath one of the cusps, was a verrucose growth the size of a small chestnut, while the valve itself was ruptured. On removing the brain, collections of pus were found in the meshes of the pia mater. At the wrist the first row of carpal bones was found necrotic. Duration of sickness about six weeks.

Case II.—Infective or suppurative endocarditis. The

[1] Read before the Section in Practice, New York Academy of Medicine, December 15, 1885.

history of the case and the specimens were sent me by Dr. Dorning, of the house staff at St. Francis Hospital. A patient of alcoholic habits, aged forty-one, was admitted to the hospital in November of 1882. It was said on his admission to the hospital that he had contracted a lobar pneumonia on October 30th. The sickness was characterized by high temperatures, but no cardiac murmurs were at first detected. Later on this point did not receive much attention, as other and apparently more important conditions obscured the cardiac disease. At post-mortem examination the aortic cusps were found extensively diseased, each segment exhibiting vegetations, while one carried a growth the size of a hickory-nut and was ruptured and ulcerated. An abscess was also found in the course of the coronary artery, and a sinus led from it to the fungating mass in the aortic valve. The spleen contained an infarction. Duration of illness about five weeks.

Case III.—Infective or suppurative endocarditis. A gentleman of this city was taken sick with an attack of fever that confined him to his room for four or five days. He then felt better and went down-stairs, but soon returned and took to his bed. During the first two weeks of his attack the temperature ranged from 98° to 100° F. His pulse also averaged from 140 to 150, sometimes reaching 160. During the last two weeks of his life it had a wider range (120 to 150), but the temperature remained higher (from 102° to 105°). At an early period the diagnosis of obstructive endocarditis was made out. The respiration was never embarrassed, except when the patient sat up. There was never any impairment of motion or sensibility; nor did he experience any pain except on one occasion, when his physician attempted to turn him on the left side. He then cried out suddenly, "You have killed me!" and placed his hand over the region of the spleen, groaning with pain. He recovered from this attack. The patient died with suppression, though no symptoms of renal disease had been made out during life.

Post-mortem examination revealed a stenosis of the aorta so great that I could hardly pass the first joint of my little finger through it. The surfaces of the cusps were marked by calcareous concretions and vegetations. The heart, and especially the left ventricle, was hypertrophied and dilated. The kidneys presented the usual appearances seen in the large variety of chronic diffuse nephritis, and contained both recent and old infarctions. The lungs also contained infarctions. The spleen, however, and the meninges showed the most important lesions. The first-mentioned organ measured about nine inches in length, and was the seat of numerous infarcts, and of various ages, some of them red, others brown, others yellow, while one had the point of origin for an abscess from which a pint to a pint and a half of dirty grumous offensive matter was discharged.

Emboli were also found in the meshes of the pia, but they had given rise to suppurative and not fibrinous or serous exudates. This acute attack was plainly engrafted on an old one of rheumatic endocarditis.

We have thus seen that a classification of morbid endocardial changes embraces the following varieties:

1. Simple acute endocarditis; 2, chronic endocarditis; 3, acute infective or suppurative endocarditis; 4, tubercular endocarditis; and 5, senile thickening.

And now for an answer to the question that has been proposed by this Section, "Is Ulcerative Endocarditis always a Specific Disease?" I venture to state that ordinary ulcerative endocarditis is merely an ordinary but late phase of acute or chronic endocardial disease, and a very common one—fatal only through its secondary complications, such as cerebral embolism and the like; recovery taking place in a large number of cases, with a more or less damaged brain, kidney, lung, or spleen, as the case may be. In a very limited range of cases—about six per cent. according to my figures—we have the infective or suppurative form, that appears to be uniformly fatal through its septic or quasi-pyæmic characters.

Naturally the diagnosis will not always be made; but it may be inferred with a reasonable amount of certainty where the diagnosis of acute endocarditis is possible, if the secondary involvement of the several viscera I have mentioned is associated with symptoms of a typhoid or pyæmic character in addition to those of simple endocarditis.

The disease appears to attack persons of middle age, lasts from four to six weeks, and the temperature gradually rises until death takes place.

50 East Thirty-first Street.

SOME MEDICO-LEGAL CASES.

By HENRY A. RILEY, Esq.,

New York.

The following curious case is found in a recent Illinois court. In an action for an assault and battery, a witness who was a physician was called to testify in behalf of the plaintiff on the trial, and stated that he was called to see the plaintiff professionally after the injury, and described the condition in which he found the patient. The witness was then shown a policeman's "billy," and asked if a blow struck with it on the head or near the temple would or would not be likely to produce upon the person receiving such blow a condition like that in which he found the plaintiff. The witness thereupon, without answering the question, made inquiry of the court whether it did not call solely for a professional opinion, and the court answered that it did. Witness then declined to answer until his professional fee of $10 had been paid or secured to him, and persisting in his refusal the court imposed a fine upon him as for a contempt of court. An appeal having been taken, it was held that the witness having already, and without objection on his part, stated the condition of the patient he had visited, he could not properly refuse to give his opinion as to the cause of the symptoms he discovered to exist, and that the payment of his professional fee could not be made a condition of his answering. The opinion sought was pertinent to the subject about which he had voluntarily testified.

The contest between the undertakers and the Health Board of Newtown, Long Island, where so many of the large cemeteries are located, is likely to be taken into the courts for settlement. The question has certainly two sides, and it is not altogether certain which side will be victorious. It appears that the extent of cemetery property, which is made not taxable by law, is so great that other lands are unduly taxed, and the price of property is depreciated in Newtown.

On the other hand, it is said that the action of the Health Board in fixing a charge of $1 for each burial permit is ostensibly based on the ground that it was a sanitary measure, and that the payment of the money cannot affect the question of health at all. Newtown is certainly not any healthier because all bodies are now interred at a uniform charge of $1, when some weeks since there was no charge at all.

It seems to be clear that the reasons for making the charge will have to be somewhat shifted, as the courts have in a number of cases recently overturned laws said to have been enacted as health measures. A notable instance of this was shown in the Tenement-house Cigar Bill, which forbade the manufacture of cigars in certain classes of tenement-houses. This law pretended to be a health measure, but the Court of Appeals said that it was rather a law to prevent injurious competition in business, and declared it unconstitutional. Some experiences like this may be in store for the Newtown authorities.

The annual report just filed by Dairy Commissioner Josiah K. Brown is an interesting document. He states that the execution of the laws against adulteration has been hindered by some decisions in the courts, particularly that of the Court of Appeals in the Marx case, where it was held that the law prohibiting the manufacture and sale of oleomargarine was unconstitutional. On this

point he says that "the decision has worked to the disadvantage of those who have been anxious to suppress the sale of spurious articles of the character mentioned. Dealers in imitations have in many instances boldly defied even the laws that are beyond question valid. Notwithstanding these objections much has been done to bring offenders to justice. There are now upward of two hundred cases in the courts.

"Many careful tests have been made of the milk supplied to the people of this State, and the results of these tests, [illegible] being, made throughout the State, which fully sustain the correctness of the milk standard established by the act of 1884. Although the sale of imitation butter has been reduced in this State, the sales in the United States as a whole have materially increased since 1883." Dr. R. D. Clark, of Albany, in a paper, included in the report, states that oleomargarine, in his opinion, is dangerous to health, because it is indigestible, is insoluble when made from animal fats, is liable to carry the germs of disease into the human system, and also because the manufacturers, in order to make the compound cheap, insert ingredients which are acknowledged to be detrimental to health.

There have been a number of cases mentioned recently in the daily papers where physicians were charged with indecent assault upon their patients, and it would seem as if there was either a great lowering of professional honor on the part of the physicians, or else a growing desire on the part of patients to take advantage of any opportunities to blackmail their medical advisers.

The latter is, we think, the more likely view, and so serious do many physicians deem the matter that some have adopted the rule not to see female patients except in the presence of a witness. One of the latest cases which has found its way into the courts is that of Dr. Heald, of Leeds, England, who was accused of indecent assault by a young schoolmistress who consulted him in reference to a cough. It was shown on the trial that the patient was subject to attacks of hysteria, and the jury considered the case one of hallucination, or worse, and acquitted Dr. Heald after a short deliberation of only ten minutes.

It will be remembered that about a year since Dr. R. A. Gunn, of this city, charged State Senator Coggeshall with seeking a bribe from him, for favorable action on a bill then before the State Legislature. Mr. Coggeshall denied the statement, but did not avail himself of the invitation extended by Dr. Gunn to sue him for libel. Senator Coggeshall did, however, bring a libel suit against the Rome (N. Y.) *Sentinel*, for publishing the statement of Dr. Gunn, and the proprietors of the paper have filed their answer, alleging that Senator Coggeshall's reputation as a bribe-taker warranted the assumption of the truth of the charge, and alleging further that he was given to intoxication.

HEGAR'S SIGN OF EARLY PREGNANCY.

By EGBERT H. GRANDIN, M.D.,

[illegible]

In the practice of the gynecologist, in particular, it is frequently necessary to be positively assured of the non-existence of pregnancy before instituting such local treatment as the exigencies of the case seem to require. In the absence of such assurance, the sole course open to him is to defer treatment for a variable period of time, until the rational history or repeated vaginal and conjoined examination lead him to think that the case is one where treatment, as far as the interior of the uterus is concerned, is contra-indicated, until the ovum, which he finally concludes is probably contained within this organ, has reached maturity and been expelled. Is there any diagnostic sign by means of which, at the first local examination, the existence of pregnancy may be determined with almost positive certainty as early, even, as the fifth week of utero-gestation? Such a sign is offered to us by H[illegible] and since [illegible] directed to it, fully eighteen months ago, I have had frequent opportunity of putting it to the test, and have, by means of it, been able to assert as early as the fourth to the sixth week that gestation existed. This statement, in face of the teaching of all our text-books that certainty of pregnancy cannot exist until the fœtal heart and fœtal movements are appreciated by the accoucheur, and that before this period all other signs conjoined are simply of presumptive value, undoubtedly appears strong; but my experience, so far as it has gone, justifies me in my belief.

Since my object is to call attention to this sign of Hégar's, and not to rehearse the signs which, in the early months of pregnancy, point to this condition, I proceed at once to its consideration; and, in order to make the sign clear, would call attention to the gross changes which take place in the uterus prior to the second month of uterine gestation: that is to say, before any classical physical signs—such as discoloration of the vaginal mucous membrane, softening of the cervix—have become at all marked. The early rational history I purposely leave out of the question, for such history our patients frequently falsify.

During the first six to eight weeks of pregnancy the changes in the uterus are practically limited to the body of the organ. The uterine body enlarges, especially in its transverse diameter (antero-posteriorly); the muscular substance becomes less dense. These changes are simply the result of the hyperæmic condition into which the corpus is thrown and kept by the engrafting of the impregnated ovum. As the result of such changes, the uterine body loses its nulliparous pear-shape; its contour no longer gradually diminishes as it approaches the uterine neck; the body, on the contrary, bellies out (if I may use the term) over the cervix in all the transverse diameters, in particular, antero-posteriorly, and the organ, instead of being pear-shaped, resembles very much an old-fashioned, fat-bellied jug. These two appearances I have tried to represent schematically below:

[illegible] Not impregnated [illegible] impregnated

The above changes in the consistency and shape of the body of the uterus constitute Hégar's sign, and so far, in at least a dozen cases, it has never failed me in early diagnosis. The obtaining of this sign requires, of course, a certain expertness in the bi-manual palpation, and familiarity with the sensation communicated to the finger by the nulliparous uterus, and the uterus altered pathologically in one or another way. I have found, however, in my clinical teaching, but little difficulty in making even inexpert fingers conscious of the change. In the vast majority of cases, owing to the normally slight anterior curvature of the uterus, the internal examining finger will note this sign to the best advantage in the anterior culde-sac. Here the finger, instead of following the line of the cervix in a gentle curve up on to the body, is at once conscious of the body swelling out to a greater or lesser degree, according to the date of impregnation, over the cervix, and at the same time, bi-manually, the body is faintly boggy, resilient, compressible. If such be the condition of affairs detected by the local examination, in the absence of rational history, in the absence of slight softening at the tip of the cervix (which may, if present, mean erosion), and of mammary signs and blue discoloration of the vagina (both of which, if present, may mean ovarian disease), I now unhesitatingly pronounce the patient pregnant. The question arises, Are there other conditions which may simulate the above sign? There

are two which, I can imagine, might—distended bladder and uterus distended by menstrual blood. Neither of these conditions ought, however, to give rise to error, for a necessary prelude to a careful bi-manual is evacuation of the bladder by means of the catheter; and retained menstrual blood in the uterus, if not accompanied physically by imperforate hymen or vagina, would necessarily be suggested by the history (no ground for falsifying here) before sufficient had collected to give rise to even faint fluctuation. Hyperplasia of the corpus uterus cannot simulate this sign, because in this condition the conjoined touch reveals density; sub-involution cannot, because here the uterus is increased in its longitudinal as well as in its transverse diameters, and conjoined touch, while revealing heaviness and softness, does not reveal resiliency and compressibility. The markedly anteflexed corpus uteri, hyperemic from obstructed circulation, is most likely to simulate Hégar's sign, but in case of such distortion the feeling of resiliency and compressibility is also lacking. In marked retroversion this sign is likely to fail on account of the difficulty of palpating with ease the uterine body. Rectal examination might assist here, but as yet I have had no opportunity to seek for this sign in case of this variety of displacement. Compes (*Berlin Klin. Wochen.*, September 8) ꝛg, ıw ıƨ ' ɥo, as far as I am aware, is the only observer who has published observations in regard to Hégar's sign, says that it may always be obtained to better advantage by means of the thumb in the vagina, the index in the rectum, and the other hand externally. He thus, he tells us, reaches the portio vaginalis with his thumb, places his index finger above the sacro-uterine ligaments, and when the external hand depresses the fundus, is able, to better advantage, to explore the lower uterine segment. I fail to see in what respect this manœuvre is superior to the vagino-abdominal method which I practise, aside from my belief that it must be only very exceptionally that the thumb can reach the cervix *per vaginam* while the index is above the insertion of the posterior uterine ligaments *per rectum*.

Since this paper has already exceeded the limits I had intended, I refrain from quoting more than one case in which I have noted this sign. I report this single case because it emphasizes strongly the value of Hégar's sign in diagnosis.

S——, aged nineteen, was brought to the Polyclinic by her mother in order that amenorrhœa of two months' duration might be accounted for. The girl was sufficiently anæmic to suggest this as a cause, especially as absolutely no rational history could be obtained, either from mother or daughter, which might suggest the physiological cause of amenorrhœa. Examination of the breasts revealed nothing distinctive. In Professor Mundé's absence, I examined the case before the class, and, finding Hégar's sign, pronounced her pregnant. The hymen was intact, the external os at its tip was soft, but this could be accounted for by an erosion resulting from a slight endocervical catarrh. Both mother and daughter were highly indignant, because three days previously a gentleman, whose opinion I should ever rank above my own, had pronounced the girl not pregnant. The assistants were inclined to laugh at my apparent discomfiture, but I clung to my diagnosis, and had the satisfaction of hearing a few weeks afterward that the assistant who had laughed the most had been called from bed, in the small hours of the morning, to remove an eight weeks' ovum from this young girl. As it was a charity case, he was amply paid for his laughter!

Seven of my cases were seen at the Polyclinic in the service of Professor Mundé; four were private, and in these, as well as in the clinic cases, the certainty of diagnosis was established by after-observation. In seven additional cases an early diagnosis was likewise made, but I do not use them in support of my belief in the efficiency of Hégar's sign, because none of these cases were seen a second time. It is in place to state that largely by means of this sign Dr. Mundé was able in one case to make a positive diagnosis as early as the fifth week, although both husband and wife assured him of its impossibility on account of the precautionary measure they were in the habit of taking.

In order to settle the value of this sign positively, it is of course apparent that others must note the result of their experience. As the matter now stands, Hégar believes this sign to be of great value, Compes regards it as positive, and I am inclined, from a limited experience, to consider it infallible.

52 West Thirty-third Street.

Clinical Department.

PAINLESS OPERATION FOR PHIMOSIS.

Dr. W. Rounds Barnes, of Binghamton, N. Y., writes that he performed circumcision upon a man forty-two years of age, after having previously applied a four-per-cent. solution of cocaine for twelve minutes to both surfaces of the prepuce along the proposed line of incision. The patient himself rendered good service in wiping away the blood, and in holding the mucous and cutaneous surfaces together while the sutures were inserted. The hemorrhage was very slight until sensation returned, which was not until the last suture was being put in. The patient remarked at that time that that was the first pain he had felt. The operation occupied thirteen minutes.

THE IMPORTANCE OF ANTISEPSIS IN MIDWIFERY.

Dr. Barton C. Hirst, of 219 South Seventeenth Street, Philadelphia, writes that during his term of service as interne in the University Hospital for Women, in Munich, under Professor Winckel, there occurred a case in the obstetrical wards which strikingly illustrated the importance of a rigid adherence to antiseptic principles in the management of a woman in labor. "The patient was a young primipara, and the labor was progressing favorably, when the interne in charge retired to his room for a few minutes' rest, leaving the case in charge of a student, with directions that he should be called as soon as the os was fully dilated and the child's head began to descend. This was not done, however, and on next entering the ward the interne found that the child had been born, and that the mother was almost exsanguine in consequence of a furious arterial hemorrhage from a torn perineum. The woman's condition demanded immediate action, so the wound was hurriedly tamponed without the usual antiseptic precautions, and the hemorrhage was finally controlled by deep stitches. An attempt was afterward made to disinfect the vagina and the wound with corrosive sublimate solution, but the patient developed all the symptoms of septicæmia, and after an illness of some weeks died. This was the only death from such a cause that had occurred in the hospital for a period of over three months and out of a number of more than three hundred cases."

GUNSHOT WOUND OF THE LIVER.

Dr. A. P. Frick, of Fort Thomas, Ariz. Terr., writes: "W. C. J——, a civilian, who was attacked by Indians at his ranch near Black Rock, Ariz. Terr., was admitted to hospital on November 30th, with three gunshot wounds, caused, apparently, by 44-calibre rifle bullets, which he had received the evening before. He was a large, muscular man, weighing about two hundred pounds, and about forty years of age. One ball had passed through the middle third of the right thigh, in front of the femur, and another had caused a compound comminuted fract-

ure of the lower portion of the left ulna. The third ball had entered the body one inch and a half below the lower end of the sternum, and one-half inch to the left of the median line. The bullet passed slightly downward and back to the right side, making its exit at a point midway between the anterior and posterior median lines of the body, and just under the free border of the ribs. It was at first believed that the liver might have escaped injury. All the wounds were dressed antiseptically, with drainage at the exit of the abdominal wound. On the second day a free discharge of bile came through the drainage tube, and the neighboring tissues were infiltrated with the same secretion. On consultation with my friend Dr. William L. Wardwell, of New York City, who is now visiting at this Post, it was decided that, without interference, the wound would inevitably prove fatal; and that there was but a forlorn hope in an operation upon the gall-bladder, with a view to arresting the flow of bile. This operation was accordingly proposed, but was not consented to by the patient and his friends. Death occurred at 11 P.M. on December 4th, a little over five days from the time of receiving the wounds. No post-mortem was permitted.

POISONING FROM THE EXTERNAL APPLICATION OF ACONITE.

Dr. Herman Gasser, of Platteville, Wis., writes that he was called to see a druggist who was suffering from rheumatism in the feet. The patient had been employing tincture of aconite as an external application, and had used up an ounce in this way in three days. As he was no better, Dr. Gasser ordered the discontinuance of the aconite and gave him salicylate of soda and colchicum internally. On the following morning he was much better and took a hot foot-bath, keeping his feet immersed without rubbing for about half an hour. At the end of this time he began to feel so "very peculiar" that the writer was sent for. He found him sitting in a chair and complaining of tingling sensations, starting from the hands and feet and extending over the entire body, and of nausea. The pulse was weak and slow, and the skin was cool and moist. As he was growing worse and was vomiting frothy mucus, he was put to bed, and hot-water bottles were applied to his body. Although he had taken no aconite internally, the symptoms were unmistakably those of aconite poisoning, and Dr. Gasser was about to give him a hypodermic injection of brandy and digitalis over the heart, when he was taken with a spasm, made a few jerking efforts at respiration, and then seemingly died of syncope. The heart had apparently ceased to beat, and pulsations could be detected neither by the writer nor by Dr. Buck, who was present. Although without hope of restoring the patient, the hypodermic injection was nevertheless given, partly for the reason that it was prepared. In about a minute he began to gasp for air, and the heart could be felt to beat. The injection was then repeated, hot wet cloths were laid over the heart, and an enema of brandy and digitalis was given by the bowel. Reaction was soon fully restored, the pulse and respiration became strong, and the skin warm, red, and covered with perspiration. This was followed by spasms, which were controlled by morphine and ether, and the patient then passed into a restless sleep from which he awoke conscious but dull. The following morning, though feeling rather stupid, he arose and ate breakfast with his family. Dr. Gasser offers the following explanation of the occurrence of poisoning:

"Tincture of aconite is a resinous solution in alcohol, and as fast as it was applied to the skin the alcohol evaporated and the aconite was deposited like a coat of varnish on the skin. (The limbs were bathed with it from the knee down.) The hot-water soaking caused a congestion and softening of the skin, and put it in the best possible condition for absorption."

Progress of Medical Science.

Iridescent Calculi.—At a recent meeting of the London Pathological Society (*The Lancet*, November 21, 1885), Mr. S. G. Shattock read a paper on "Iridescence in Calculi." He showed a group of fifty calculi of most varied form, and having sharp facets. The largest was two centimetres in its greatest measurement, the smallest about the size of a hempseed. A remarkable iridescent, lustrous, yellow color was evident in all. This property was confined to a distinct separable surface layer. The inner substance was phosphatic and composed of conical intersecting tufts of fine acicular crystals. The calculi were removed from the prostate of a man on July 20, 1843. Phosphate of lime and magnesia and ammonio-phosphate of magnesia formed, with carbonate of lime, the chief chemical constituents. A laminated nucleus was found in the centre. Renal and vesical calculi, pseudo-metallic in appearance, had been described in herbivora; these consisted of carbonate of lime. They were very rare in man. The only one he knew of was in University College museum, and was given to the late Mr. Liston by Civiale. Thin sections of the prostatic calculi showed two kinds of structure. The iridescent thin layer was composed of a large number of closely-apposed homogeneous concentric lamellæ, of great tenuity, and translucent. All the calculi examined had a distinct, compact, pale-brown, spherical, laminated nucleus. These were evidently identical with minute prostatic calculi. The porcellanous appearance of certain prostatic calculi was due to a similar disposition of the superficial lamellæ, which, however, were less regularly arranged; phosphate of lime with a small proportion of carbonate formed the bulk of the porcellanous surface. He remarked that all the calculi were made up of phosphate and carbonate of lime combined with a colloidal base. The colloidal base in this case had been found by Dr. Bernays. Mr. Shattock suggested that in all cases in which iridescent calculi were formed the urine contained albumen, though not necessarily albumen from the kidney. In support of this he referred to a case of iridescent calculi shown to the Society last year by Mr. Bilton Pollard, where the calculus was contained in the pelvis, and the urine contained pus. Dr. W. H. Stone had examined the iridescent calculi shown, and had found that the iridesence was a phenomenon of diffraction. In the discussion which followed Dr. Ord said that he did not regard the iridescence as due to diffraction, but to the same class of phenomena as Newton's rings. A typical colloid was the organic basis of such calculi, and the importance of carbonate of lime was great. In the ordinary pearl we had both these elements at work. These calculi must have been formed very slowly.

Spasm of the Sphincter Ani, and its Treatment by Forcible Dilatation.—From his experience in the management of spasm of the sphincter ani, Dr. T. Pridgin Teale (*Medical Times and Gazette*) concludes: (1) That spasm of the sphincter ani, as a cause of constipation, suffering, and ill-health, is often overlooked, and patients are allowed to suffer for years who might be cured in five minutes. (2) That spasm of the sphincter can be arrested by forcible dilatation more satisfactorily, more certainly, more scientifically, and with greater safety, than by division by the knife. (3) That in all operations on the rectum and anus dilatation of the sphincter is an essential, almost an indispensable, element in the treatment.

In Acute Catarrhal Conjunctivitis Dr. Bieloff, of Kiew, recommends the external use of bichloride of mercury in solution not stronger than 1 to 2,000, or gr. j to ℥ iv. of water.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE DOCTOR'S HOBBIES.

IT was, we believe, Sir Walter Scott who said that the architect who knew nothing but architecture was nothing but a carpenter; and Mr. Timothy Holmes, in his address to students, has said that "A man who is nothing but a doctor, is not generally first-rate at that."

It would, perhaps, surprise the profesion sa little, and their patients a good deal, if it were known what hobbies and curious diversions many distinguished and successful physicians have had. If we mistake not, however, it is between art, literature, and horses that physicians who seek some outside interest or means of recreation divide their attention. We have many eminent doctors who are skilled in music or drawing, perhaps good amateur painters or etchers; many are book-collectors or contributors to general literature. Very few, we imagine, take up any collateral branch of science, although we have some excellent botanists and naturalists. The chief drawback to the pursuit of medicine, says Mr. Holmes, "is the labor which it entails, a labor never ending, and which leaves its victim no repose, literally, night or day, and under which men are apt to degenerate into mere business-machines, and to care for nothin gexcept their profession. No doubt, this is a lesser evil than the listlessness which follows on idleness; still, it is an ignoble condition. It deprives a man of all power of companionship with the world at large, and shuts from his eyes many of the sweetest and loveliest things of life. It makes a man the slave of his business, instead of its master, and it confines his mental faculties to a groove, in which they wither, so that business itself soon becomes a dull routine."

The best antidote to all this is the cultivation of a taste for some worthy object. Mr. Holmes, who is himself an excellent Greek scholar, thinks that the best of all tastes is that for literature. To this he adds a recommendation of the cultivation of the art of conversation, an art which has the advantage over reading of being more social and unselfish.

"I believe," says he, "the art of conversation is said to be decaying. The more the pity, for it is a grand art, as well as a most delightful accomplishment, and, to a medical man, who has to associate with all kinds of persons, in all kinds of circumstances, is almost a necessity. But, whatever may be your taste, so that it is innocent and healthy, cultivate it when you are young, and it will help you to resist the pressure of business when you are old. I do not want you to waste your time as students; you have, in fact, not an hour to spare. But healthy recreation wastes no time. No one can study profitably without a large allowance of total rest and change; and in those happy hours it is well to mount your hobby, if only a tricycle, and drive him fearlessly along, forgetting that there is such a thing as anatomy or surgery. You will be none the worse anatomists and surgeons in the long run."

We would gladly second Mr. Holmes' recommendations, but we do so with the feeling that in many parts of this country the struggle for existence is so keen, and the competition so bitter, that the doctor often has not the heart or the opportunity for diversion. It is all medicine or nothing. Besides, it must be admitted that popular feeling is against the doctor who does anything but attend strictly to business. We have even heard of a well-known practitioner who removed all the books, of which he had a large number, from his office, because he found his patients thought that perhaps he studied too much, and was not, therefore, "practical." The man in any calling who has to earn his own living must be a slave, and this is especially true of the doctor. Still, everyone can find a way to prevent his "slavery" from being ignoble or wearisome, and, after all, the physician knows life and enjoys it as much as anyone.

THE GOLDEN RULE IN CONSULTATIONS.

So much has been written regarding the unpleasant side of doctors' consultations that it is a relief to read of the experience which Sir Spencer Wells had, when a very young man, still in his medical pupilage under Mr. Marsden, of Leeds:

"One evening a farmer rode up to Mr. Marsden's, who was the nearest medical man, to beg him to go at once and see a girl who was very ill. Marsden was not at home, so I offered to go. The farmer hesitated, but he was very anxious, so he said, 'Well, lad, get on my horse, and I'll go on for our doctor, Mr. Braithwaite.' So I rode to a small farm-house near Chapeltown, and found a room full of people, and a girl insensible on the bed. I remember having her clothes loosened and opening a window, and, when she began to shiver, trying to make her swallow a little brandy-and-water. Then Braithwaite arrived, and very soon took me into another room, after saying to her mother, 'Give her two teaspoonfuls more of that brandy-and-water;' but as soon as we were alone he said: 'It was very wrong to give her brandy-and-water. It is the first stage of some eruptive fever. But a teaspoonful won't make any difference, and it will show that I did not differ from you. If I had,' he said, with a kind smile, 'perhaps they would not believe either of us.' There was something in this way of treating a junior—so much good feeling mixed up with so much knowledge of human nature—that I have many times since, when consulting with juniors, followed, or tried to follow, Braithwaite's example."

There is no provision in the Code that covers this ground, yet it is an unwritten law for every gentleman who is inclined from purely conscientious motives to

deal fairly with his brother. In this respect he is avoiding even the appearance of evil intent. The consulting physician has, as a rule, every advantage in his favor. The patient looks to him as one eminently qualified to give advice, and the family physician honors him by calling him to help in time of need. The consultant cannot be too careful of his words and acts. His duty is, of course, to help the patient. This is best done by strengthening the confidence of the patient in the family attendant. Nothing is more indiscreet than to cause the patient or his friends to believe that the line of treatment is to be altered as the result of the consultation. When a change in this repect is demanded, it can always be done in a manner that will not reflect on the skill or judgment of the physician in attendance. We speak advisedly when we say that in nine cases out of ten there is no immediate necessity for a radical change. When the latter is agreed upon, no harm is done in allowing it to be understood that the suggestion comes from the family attendant, who may ask the consultant to indorse him.

For instance, here is a case in point. The patient is suffering from great prostration, and the amount of stimulation is apparently not sufficient. The consultant suggests privately to his *confrère* that more alcohol is needed, and perhaps an increase in the dosage of digitalis. The case is urgent, and time is precious. Both physicians appear before the family. The consultant is the spokesman. The patient is seriously ill, so the friends are informed. It has been decided to continue the same line of treatment, in a vain hope, perhaps, of its good result. The diagnosis has been confirmed, and nothing more seems necessary to be said, when the family physician asks the consultant why it would not be proper to try the effect of even increasing the stimulant, and of adding to the number of "the drops." The consultant, of course, thinks it would be well, and it is well for all concerned. The patient gets the benefit of the change, the consultant and family physician conjointly get all the necessary credit, and medicine, in the eyes of the patient, at least, becomes an exact science. In our fight against ignorance and prejudice, it always behooves us to fly a clean flag at our masthead.

THE NEW YORK ACADEMY OF MEDICINE.

Sufficient time has elapsed to show in a measure the results of the policy adopted by the New York Academy of Medicine in organizing into sections, and thus distributing its forces upon more special lines of work.

The question of the propriety and policy of this move, if not quite settled, is at least very nearly so. One or two of the sections only have been thinly attended, and these will probably be abandoned, and the work concentrated on those of which the need and usefulness have been clearly shown.

At all events, it is very apparent already that much good has been accomplished, and that the profession in this city was never more active or harmonious in its scientific work. The Academy is unquestionably doing a great deal for the profession of this city, and is constantly becoming an organization of greater prominence and helpfulness. Being now freed from debt, the possessor of an excellent building, a large working library and reading-room, and an energetic set of officers, there is every reason to predict for it a still more brilliant future.

DEATHS AMONG DOCTORS.

The popular view that doctors are healthy and long-lived (and mainly because they do not take their own medicines) is not borne out by some recent investigations of Dr. William Ogle, Superintendent of the Statistical Department at the office of the Registrar-General of Great Britain. Dr. Ogle finds, first, that the average annual death-rate among medical men is greater than that in any other learned profession, and greater than the average death-rate among males over the age of twenty of all classes, being at the rate of 25.53 per 1,000; secondly, he finds that the death-rate among physicians has steadily increased from the year 1860–61, when it was 23.60 per 1,000, and 1870–71, when it was 24.98 per 1,000. This increase is confined, however, to physicians over the age of forty-five. The mortality under that age is not so great in proportion as formerly.

Regarding the death-rates among doctors as compared with that in other callings, Dr. Ogle's figures show that this rate is 15.93 in the clerical profession, 20.23 in the legal profession, and 19.90 in the scholastic profession, while in the medical profession it is, as has been stated, 25.53. The rate in the medical profession is thus not only higher than in any of the other learned professions, but also compares unfavorably with the rates in most other trades and industries, and is indeed "only exceeded by the rates in certain trades and occupations that are notoriously unhealthy."

An investigation was made as to the diseases of which medical men die, and comparative tables are given showing the deaths per 1,000,000 among doctors and among all other classes respectively. From this table we find that among 1,000,000 doctors 59 die of scarlet fever, while among 1,000,000 of other men over twenty years of age only 16 die annually of this disease. The comparative figures for other diseases are, for doctors and all other classes, respectively, as follows: typhus fever, 79, 38; diphtheria, 59, 14; enteric fever, 311, 238; malarial fever, 46, 11; erysipelas, 172, 136; alcoholism, 178, 130; gout, 291, 78; rheumatic affections, 251, 215; malignant disease, 879, 790; diabetes, 284, 108; diseases of the nervous system, 4,565, 4,268; diseases of the circulatory system, 4,142, 2,934; liver disease, 1,744, 744; other diseases of the digestive system, 973, 632; calculus, 86, 30; diseases of bladder and prostate, 634, 287; other diseases of the urinary system, 1,520, 665; suicide, 363, 238. In regard to phthisis and diseases of the respiratory organs alone do medical men compare favorably with other classes.

On the other hand, they are more subject to all the infective diseases, except small-pox, protection from the last being undoubtedly a tribute to the efficacy of vaccination. The death-rate from accidents is disproportionately high, as is also that from suicide. We are even told that the suicide-rate is increasing. Thus, the annual rate for the six years 1878–83 was, for the clergy, 128; the lawyers, 354; the doctors, 464. Medical men pre-

fer to use poison in committing suicide, and they especially favor prussic acid.

The excessive death-rate from liver diseases is attributed by Dr. Ogle to the neglect by medical men, as a body, of those wise rules of diet which they lay down for the guidance of their patients. The excess of mortality from liver diseases in the medical profession is 134 per cent., and from urinary diseases 128 per cent.; while, on the other hand, the excess from diseases of the organs of circulation is only forty-one per cent., and from diseases of the nervous system only seven per cent., above the rate among the general population. The excess in the death-rates from diabetes and malignant diseases is attributed to the probability that the diseases to which medical men succumb are more correctly diagnosed and more carefully stated in the death-certificates.

The application of the mortality-rate among English medical men to those of this country gives us some interesting figures. Assuming that there are 75,000 active practitioners of medicine in the United States, the annual loss by death would be 1,912. On the other hand, the annual increment by graduations from medical schools alone has in the past three years averaged 4,000 doctors. There is thus an absolute gain of 2,000 doctors to the medical profession of this country annually. Of course, our profession loses by invalidism and changes to other pursuits. But it also gains a large numerical reinforcement from European schools and from irregular practitioners.

MUTUAL PROTECTION AGAINST BLACKMAIL.

In an address recently delivered before the Chicago Medical Society, Dr. E. J. Doering stated that suits for malpractice against physicians were on the increase. To this the cold world might say that it was an evidence that doctors are getting less skilful, or more careless. The testimony of lawyers, however, as well as the records of court decisions, show that such is not the case, but that a very large proportion of the suits in question are based on the flimsiest evidence, and are really only a form of blackmail.

If the profession, therefore, is every year being more and more systematically blackmailed through the inauspicious conjunction of rascally patients and shyster lawyers, the question arises, What can be done to prevent it?

Dr. Doering proposes to form a society for mutual protection against blackmail. "My plan," he says, "is to form an association composed of about two or three hundred members of the regular profession, all of whom shall be of acknowledged ability, possessing a good moral character, and standing well in the community. Said association to employ one of the prominent law firms by the year, to furnish the members such legal advice as they may desire, and defend any suit arising against the members in the discharge of their professional duties. From correspondence with lawyers I find that an annual due of five dollars for a membership of two hundred would suffice to cover the expense. An initiation fee of five dollars would create a sufficient fund for court expenses.

Letters from a number of Chicago physicians, some of whom speak with the deep feeling and large enlightenment of practical malpractice-suit experience, are printed. Out of the twelve gentlemen who write all but two or three are heartily in favor of the project. Legal opinions from two well-known lawyers support also its practicability.

The objections given to the scheme are: that the fact of membership in such an association would prejudice a defendant before a jury; that some physicians might prefer to trust their cases only to counsel of their own selection; and, finally, that a certain small proportion of malpractice suits are justifiable, and an association should not be asked to support and defray the expenses that result from ignorant and careless work.

On the other hand, the existence of such an association would, it is believed, tend to lessen very greatly the attempts at blackmail, and if the objects of the Society were enlarged and made to include the protection of professional secrets and confidences reposed in the physician by his patients, there would not be, according to legal opinion, any bias created in the minds of a jury, through reason of membership in such society.

The general principle involved in Dr. Doering's scheme should have unqualified endorsement. Distasteful as anything like "trade-unionism" is to many, it is a necessity of the day. Says Dr. Asche: "While other professions are laboring, organizing, scheming, for their own advancement and for the establishment of their own power over society, ours has so completely forgotten its common interest in individual sacrifice, that to this day it remains, as has been well described for all practical purposes, a disorganized rabble."

The medical profession must unite for its own protection, and the more it works together in such way the greater harmony and good feeling, as well as material prosperity, will result.

The question of the propriety or need of organizing a special association for mutual protection against blackmail will be answered differently in different localities. In most cases, as in this city, the machinery of the county society can perhaps be used with sufficient effectiveness to accomplish the purpose.

OUR ENLARGED NUMBER.

No better evidence of the activity in medical work can be given than in the present issue of The Record, whose columns are expanded into an enlarged number to give place to the great amount of valuable and fresh material which has crowded upon us. The large circulation of this journal tempts the leading authors throughout the country to send us their best productions, and while we labor under an embarrassment of riches we owe it to our readers to do the best in our power to give as well as receive. Notwithstanding our efforts to condense articles and economize space, our columns have become chronically overcrowded, forcing us not infrequently to decline the publication of papers which, under other circumstances, we should be glad to use if authors would make due allowance for time and opportunity. It may not be known to many of our readers to what extent our method of abstracting the pith of communications has been carried, as shown in the number of short items

which represent in many instances long papers. THE RECORD is already so large that it is difficult for our readers to digest its material in the intervals of its frequent issue, and no pains are spared to compress everything into the smallest possible space. With the best intentions in this direction we are still laboring against heavy odds, and ask authors and readers to be patient accordingly; our only comfort is that we are thus enabled to represent the best medical thought of the day in an attractive and available form.

News of the Week.

THE DOG AND HIS DAY.—Ten thousand dogs have been sacrificed to the hydrophobia scare in London.

A NEW MEDICAL SOCIETY, of a private character, meeting monthly, has been organized in the neighborhood of Yorkville, this city. The officers are: President, Dr. J. L. Morrell; Vice-President, Dr. W. A. Hume, and Secretary, Dr. Alpheus Freeman. It is called the Lenox Medical Society—why, we are not informed.

THE FIRST SUCCESSFUL EXCISION OF AN ENDOCRANIAL TUMOR was recently made by Dr. Durante, of Rome. The patient was a middle-aged woman, with a fusi-cellular sarcoma arising from the dura mater at the base of the left anterior lobe of the brain. The growth caused left exophthalmos, loss of sense of smell on the left side, and mental hebetude. The patient made a good recovery.

THE SIMS MEMORIAL FUND.—The following gentlemen have subscribed to the Sims Memorial Fund since our last published acknowledgment: A. E. Macdonald, M.D., New York City, $5; J. L. Morrell, M.D., New York City, $5; J. W. Howe, M.D., New York City, $25.

THE TREATMENT OF DIPHTHERIA BY THE GALVANO-CAUTERY is pronounced to be wonderfully effective by Dr. Bloebaum, of Coblenz. He has tried it both on animals and man. A single thorough cauterization causes a remarkable change in the character of the diseased surface.

LAPAROTOMY IN COLORADO.—The Denver *Medical Times* reports 34 abdominal sections performed by twelve Denver surgeons, with 18 deaths and 16 recoveries. Denver is still a little behind Birmingham.

THE IDEAL STATE OF THE PROFESSION, says the *Southern California Practitioner*, "would be with every physician a writer—at least, every one in active practice; for every man who takes the responsibility of human life upon his hands should neglect no means of educating himself for the conscientious and successful practice of his high calling, and the habit of thinking upon paper is possibly of all means the most productive in solid results." Our contemporary thus appears to believe that physicians should write as a matter of self-education, and from this point of view the further advice that he write on every-day matters is not bad. "A plain, carefully studied, carefully-reported case of phthisis, or of fracture of one of the large bones, will be of more profit to both writer and reader than an article upon morbus Addisonii or ligature of the common carotid." This may be true, but if every physician should begin to report his cases of phthisis and of fractures, medical literature would be somewhat prosaic and uninstructive, though of unutterable copiousness. There are very few phases of the troubles mentioned which have not been well and repeatedly described. We should say to the physician: Write for your own benefit as you will; the habit of recording cases leads to accuracy in thought and method, and often reveals to the physician unsuspected lapses in his knowledge and observation of the patient. When it comes to publishing, however, it must be borne in mind that cases are only worth presenting to the profession when they are novel and unique, and therefore interesting; when they illustrate some new or clear up some disputed point in the history of disease, or when they throw light upon the treatment.

THE POPULARITY OF COLD COMPRESS IN BERLIN.—The Berlin correspondent of *The Therapeutic Gazette* writes: "Among the therapeutic measures in vogue in Germany there is none which attracts the attention of the American physicians so eminently as the water-compress. It is no fable that the 'compress,' as it is briefly called, is prescribed for every affection of the throat and lungs; for a clinical experience of nearly three months in the Charité and other hospitals convinced your correspondent that it is the first thing ordered in nearly every ailment of the respiratory tract. A piece of linen, being of the size of a napkin if intended for the throat, or of the size of a towel if intended for the lungs, is dipped into cold—not lukewarm—water, applied to the desired locality, and retained *in situ* by means of a woollen shawl or oil-silk, and renewed every half-hour. A poultice is never exhibited for these affections. The compress, as may be expected, has also become the routine treatment in every household, and is quite familiar to every mother and nurse. Your correspondent has taken especial pains in tracing the therapeutic results of this procedure—which, of course, is often accompanied by medicinal treatment—and feels highly gratified with the results observed. The value of this hydriatic procedure consists in the frequent renewals and prolonged application—extending often over two to three days—of a medium which not only abstracts the surplus of heat in the part, and by its secondary physiological action dilates the vessels of the integument, and thus relieves the engorged internal parts, but which also has an undeniable invigorating influence on the nervous system. It seems superfluous to add that strict individualization is, as in all hydriatic procedures, an indispensable requisite in the application of the cold compress. If in a patient the nervous energy is profoundly lowered, the application of cold would naturally only deepen the existing prostration and lessen the resistance against the disease. If, however, we deal simply with a loss of innervation, the usual incumbent of nearly every affection, the application of cold would prove a powerful stimulant to the nerve-centres, and alongside of the above-mentioned local effects of the application, materially fortify the chances of recovery."

THE DEATH OF LUCHSINGER, Professor of Physiology at the University of Zurich, is announced.

DR. W. E. MILBANK, of Albany, is appointed a member of the State Board of Health of New York, to fill the vacancy caused by the death of the late Dr. John Savage Delavan.

A Small Infant.—A Utah physician announces, with considerable pride (in *The Weekly Medical Review*), that his wife has presented him with a full-term female infant, weighing, with handkerchief and shawl, only two pounds and six ounces. The child is plump and healthy. We suspect that the doctor is a homœopath.

The Canadian View of It.—What we maintain is, that many of the sections, as at present organized, are controlled by men who evidently have not the confidence of the scientific workers in the United States, and are unknown abroad. At present, the prospect is that the *peers* of the men who organized the London Congress will be absent from the Washington meeting—the men who, in the United States, occupy positions in the medical world corresponding to those held by Gull, Jenner, Wilks, Erichsen, Paget, Fraser, Flower, and others who made the gathering of 1881 so brilliant. As well may we suppose that the British profession could have made that meeting the success it was without men of this stamp as that the American profession can do without the co-operation of such men as Agnew, Bigelow, Hamilton, Da Costa, Pepper, Mitchell, Loomis, Bowditch, Billings, Dalton, Martin, Leidy, Lusk, Thomas, Barker, Jacobi, Wood, Bartholow, and others who remain irreconcilable. Bombast and bluster will not cover up the disagreeable truth which is quite evident to outsiders, if not to Dr. Brodie, that, unless the present executive of the Congress patch up this unseemly quarrel, the meeting of next year is doomed to failure. The recent attempts to effect a compromise do not appear to have been successful, and we can assure Dr. Brodie that, if matters remain as they are, "the most perfect and elaborate arrangements" will avail but little to attract foreigners in the absence from the sections of such a number of the men who have made American medicine and surgery what it is to-day.—*Canada Medical Journal.*

The Committee on Public Health of the House of Representatives has been abolished. Sanitation is evidently not a Democratic science.

A Fatal Error in Diagnosis.—The principal surgeons of the Hospital St. Spiridon, of Jassy, a city of Moldavia—Drs. Russ, surgeon-in-chief, and Scali, assistant surgeon—lately committed the unpardonable blunder of mistaking a case of seven months' pregnancy for one of cysto-sarcoma of the right broad ligament. An operation was undertaken for the removal of the supposed tumor, when a well-developed fœtus was found of the age before stated, and which lived several hours. The details of this shocking affair are given in the *Gazetta Medicala Jassy*, a journal edited by members of the hospital staff. The mother died on the eighth day after the operation. The surgeons concerned in this case were condemned by the Superior Sanitary Council, with the recommendation to the proper authorities that their licenses be revoked. They, however, appealed to the courts, and, after a hearing, were acquitted.—*Boston Med. and Surg. Journal.*

The Kansas City Medical Index appears in a new crushed-strawberry cover and a generally improved and attractive make-up.

Indiana Medical Practice Act.—The quarterly report of the Illinois State Board of Health says: "An act regulating the practice of medicine, surgery, and obstetrics was passed by the last Legislature of Indiana, the same going into effect on July 23d. While the law is better than none, it is yet very defective in that it leaves the county clerks the judges of the reputable character of medical colleges, thus placing a most important trust in the hands of officials who, however honest they may be, cannot have the special acquirements necessary to judge correctly regarding a medical school's standing; and it is to be feared that this provision of the law will stimulate the graduation of incompetent individuals."

An Alleged Specific for Diphtheria was recently announced by a Mr. Greathead, of Melbourne, Australia. Mr. Greathead revealed the secret of his remedy (which was simply sulphuric acid), and has appealed to the Colonial Legislature, and asked for an investigation of it by a committee of that body.

The Medical Profession in Congress, and in the British Parliament.—The new Congressional Directory gives the names of the physicians who are members of the present House of Representatives. The list comprises Drs. W. H. Cole and F. T. Shaw, of Maryland; Drs. I. M. Evans and L. E. Atkinson, of Pennsylvania; Dr. W. H. Ellsberry, of Ohio; Dr. John Swinburne, of New York; Dr. R. T. Davis, of Massachusetts; Dr. A. M Dockery, of Missouri; and Dr. J. H. Gallinger, of New Hampshire. The Medical Register and Directory of Great Britain gives a list of sixteen medical men now in Parliament. Some of these, says *The Medical Press*, are *recubantes in nominis umbrâ*. It appears that only two of these doctors are Conservatives, while ten are Liberals and four Nationalists.

The Insane and Defective Classes of New York.—The number of insane persons in the charitable institutions of the State, October 1, 1885, was 12,707, being an increase of nearly six hundred over the previous year. The State and other asylums are full, and there is an urgent demand for further accommodations. New York has 4,040 insane persons, and Kings County 1,350. The average number of blind in the State institutions is 373. The deaf and dumb pupils number 1,289; an increase over last year of 38. The number of patients in the hospitals is 3,397. The number of dispensaries is 43; of inmates of poor-houses, 70,501; and of outdoor paupers, 55,500.

The Ohio State Sanitary Association held its third annual meeting at Columbus, on February 24th and 25th. This is a volunteer sanitary organization, which is doing its best to make good the absence of a State board of health. The intelligent legislators of Ohio refuse to see the need of this, although thirty-one sister States now have health boards. Professor Edward Orton is president of the Sanitary Association; Dr. R. Harvey Reed, secretary.

Always Ahead.—American women menstruate earlier and cease to menstruate later than the women of the Old World, according to Dr. James R. Chadwick.

Reviews and Notices.

CUTANEOUS MEMORANDA. By HENRY G. PIFFARD, A.M., M.D., Clinical Professor of Dermatology, University of the City of New York; Consulting Surgeon to the Charity Hospital, and to the Bureau of Out-door Relief, Bellevue Hospital. Third Edition. New York: William Wood & Co. 1885.

THIS book is one of the series of Wood's Pocket Manuals. It is an excellent little work, written in a clear style, and illustrated by a number of well-executed woodcuts. There are many large works on diseases of the skin which contain much less information of practical use to the general practitioner than does this neat little volume.

MANUAL DE TECHNIQUE DES AUTOPSIES. Par MM. BOURNEVILLE et P. BRICON. Paris: A. Delahaye & E. Lecrosnier. 1885.

THIS little book is meant to serve as a guide to students and practitioners in the performance of post-mortem examinations, and it admirably fulfils its purpose. There are a few illustrations, which have the merit, that woodcut representations of anatomical preparations do not always possess, of distinctness.

DIE DIPHTHERITISCHE ALLGEMEIN-ERKRANKUNG UND DEREN BEHANDLUNG. Von DR. ED. SCHOTLIN. Berlin: A. Hirschwald. 1885.

THE author regards diphtheria as of a double character, existing as either a local disease, affecting only the external organs, and perhaps running its course without manifesting any general symptoms, or a general disease with local manifestations. In this monograph the latter form only is under consideration. The notes of a number of cases with local manifestations in various organs, both internal and external, are given in full, and the concluding chapters are devoted to the subjects of prognosis and treatment.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 22, 1886.

DANIEL LEWIS, M.D., PRESIDENT, IN THE CHAIR.

DR. JOHN C. PETERS read a paper on

THE PRESENT AND FUTURE WATER-SUPPLIES OF NEW YORK,

in which he set forth their deficiencies and dangers, by first describing the location and dimensions of the proposed Quaker Bridge Dam, the estimated amount of money which it will cost, and the length of time required for its construction. Further, the project of ponding a series of lakes in the region of the Mahopac, where the water can be stored subject to draught during low water in the summer season.

There is no doubt that the Croton supply is the purest supplied to any city, but before it reaches the city it becomes very much changed by exposure to unsanitary conditions along the course of the river, more especially along the east branch. The promise, however, has been made that this portion shall be thoroughly sewered. By proper protection against sewerage, the water-supply of New York may be the best in the world.

The Committee on Hygiene are unanimously in favor of the Quaker Bridge Dam, because of the immense increased supply which it will afford; and that the ponding of water and allowing it to run over the Croton Dam would not be best, because of the very great loss of water which would at times occur.

Dr. Peters then read from records furnished by the Board of Health, in which the results of special inspections were given, showing that the filth from slaughter-houses, dairy- and horse-stables, privies (1,879 in number), etc., are constantly flowing into the Croton River, in astounding quantity.

The correction of this tremendous evil is within reach of existing laws, and these nuisances should be swept away without delay.

The conclusions of the Committee on Hygiene were, that the Quaker Bridge Dam is unobjectionable from a hygienic standpoint; that the Sodom Dam should be constructed at once to furnish a quick water-supply; that means should be taken to improve the quality of the water; that asystem of sewers should be constructed to receive the sewerage from the Croton water-shed; that a safety strip of land one-fourth of a mile wide, to preserve the purity of the Croton River, should be bought.

DR. L. JOHNSON discussed the paper and directed attention specially to the fact that, in proportion to the shallowness of lakes is the impurity of the water, illustrated by records of dredging Seneca, Cayuga, and other lakes for shells. Vegetable matter is a growth of shallow water and high temperature, and he believed that stagnant water was unhealthy by reason of the presence of low vegetable organisms.

DR. PETERS suggested the appointment of a committee to appeal to the Croton Water Department, the Aqueduct Department, and to the Board of Health. The question was subsequently referred to the Committee on Hygiene, after the adoption of resolutions.

DR. JOSEPH A. ANDREWS then read a paper

ON CONTAGIOUS EYE DISEASES,

the object of which was not so much to propose any opinions which were absolutely new, as to refer to some views which have been already advanced by others, to support them by additional evidence, and apply them to a number of diversified facts in connection with simple catarrh, trachoma, diphtheritic conjunctivitis, and the ophthalmia of the new-born.

The paper was discussed by DR. ROOSA, who said there was no end of children who recovered from contagious eye diseases *while* in the asylums, but by the proposed law the breaking out of epidemics can be prevented, and the general condition of the eyes of all the children can be greatly improved. He does not approve of the use of nitrate of silver in the acute stage of purulent ophthalmia, but relies on cold applications and thorough cleanliness.

DR. DERBY continued the discussion and supplemented reports already made, in which it appeared that fifty per cent. of the inmates were suffering from contagious eye diseases.

DR. O. D. POMEROY referred to the fact that some children will never recover from their chronic eye disease except they are sent out of large institutions, and then they recover spontaneously. He advocated strict quarantine, although it is a difficult question to deal with.

DR. MITTENDORF spoke of the danger which the child carries home when removed from the asylum.

DR. WEBSTER spoke of the possibility of contagion without contact. He had never seen but one case which seemed to illustrate this possibility.

DR. LESZYNSKY referred to the fact that many of the children suffer from leucorrhœa in one public institution, and in a number of instances it seemed evident that the ophthalmia originated in this affection.

DR. WEEKS believed that it had been proved positively that gonorrhœoic ophthalmia is due to a micro-organism, and that what will kill the coccus will cure this ophthalmia.

THE PRESIDENT announced the death of Drs. H. Assenheimer and Alfred C. Post, after which the Society adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 18, 1886.

A. JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE Corresponding Secretary, DR. WESLEY M. CARPENTER, reported the death of their highly esteemed and Honorary Fellow,

ALFRED C. POST, M.D., LL.D.,

and the President was empowered to appoint a committee to prepare memorial resolutions.

DR. H. D. CHAPIN then read a paper (see p. 230) on

RHEUMATISM IN EARLY LIFE.

The discussion was opened by DR. JOHN C. PETERS, who agreed, in the main, with the views set forth by the author of the paper. It was the indistinct forms of rheumatism that lay the foundation of other diseases to which he had paid attention more especially, unattended with any acute joint affection; or, at least, the latter was secondary. Pains in the muscles, soreness on moving, stiffness on bending or stooping, etc., were the most common precursors of the more serious manifestations of the disease. Endocarditis could be recognized long before there was pain or palpitation, and so, also, did recovery take place perfectly so far as the general health was concerned; but relapses were common in the course of one or two years, and finally the patients die with cardiac hypertrophy and valvular disease.

He had seen several cases in which chorea and rheumatism were associated. Dr. Peters also believed in rheumatism of the mucous membranes; rheumatic affection of the muscles of the throat, indicated by pain in swallowing and redness; pleurisy and also pneumonia, rheumatic in character; and, with Todd and Murchison, maintained that the lithic acid diathesis was at the bottom of a number of acute catarrhal affections. He also believed that a large number of cases of nephritis were rheumatic in nature. He prefers the potash to the soda salts in its treatment. Tepid alkaline (potash) baths, rubbing the children with finely-powdered chalk in cases of excessive sweating, gave great relief. Of special value was the phosphate of soda, and it was the only soda salt he used. The debility attending rheumatism was best combated with tartrate of iron and potash.

DR. J. LEWIS SMITH gave a *résumé* of 73 cases observed within the last fifteen years. He recognized *two* particular causes of the disease—first, taking cold, and second, scarlet fever. Hereditary predisposition was present more frequently, he thought, than was generally supposed. In 18 of the 73 cases, one or both parents had suffered from rheumatism. The disease occurs rarely under the age of two years; undoubted cases, however, occur as early as *six months* of age. In most cases it is a mild affection when it occurs in children. It usually begins in the joints of the lower extremities and extends upward, attacking corresponding joints on the two sides. It is very seldom so painful as in the adult, and is not attended by so much swelling and redness, and may be regarded as "growing pains."

Under proper treatment the attacks are, as a rule, of short duration, and the pain and swelling disappear within a week. But, however mild the attack, it is a dangerous malady on account of cardiac complications. If the endocardium escapes during the first week, and proper measures are employed, it will not probably become inflamed subsequently.

In 46 of the 73 cases the mitral regurgitant bruit only was present, and when other murmurs were heard, the mitral was the most distinct. Aortic murmurs were present only occasionally. Pericarditis is much more rare than endocarditis; yet it occurs in all the forms of serous inflammation. It is more frequently overlooked than endocarditis by the general practitioner. He had not had any experience in rheumatic meningitis or pleurisy.

Of 68 cases of chorea that had been under his observation, 26 of the patients had had rheumatism, one or more attacks; usually the rheumatism preceded the chorea, but occasionally the chorea occurred as early as the rheumatism. Of the remaining 42, which gave no history of rheumatism, in *eleven* the parents, one or both, had had rheumatism, and in one other case a sister had had rheumatism.

Dr. Smith wished to emphasize the importance of early diagnosis, and the use of appropriate remedies as early as possible. He uses the salicylate of soda, and was inclined to the opinion that it had been given in too small doses. Given in doses of ten or fifteen grains to a child four or five years of age, on the first day, he believed would prevent cardiac complications. But if the case has been going on for a week or more, the remedy does not act as well as when given early in the disease.

He does not accept the theory that lactic acid produced by indigestion is a cause of rheumatism, because in infancy, when lactic acid formation is most abundant, rheumatism is very rare, while in childhood, when lactic acid fermentation does not occur with anything like the frequency with which it does in infancy, the disease is exceedingly frequent.

DR. MALCOLM MCLEAN believed that in every well-marked case of rheumatism occurring in childhood heredity could be determined as the cause of the disease. He also believed that the so-called growing pains were invariably rheumatic. He had noticed one important clinical feature, namely, accelerated action of the heart, continuing for many years after a rheumatic attack, without evidence of cardiac complication.

DR. L. EMMET HOLT believed that as a constitutional affection, which is the basis of a number of disorders, rheumatism is a common affection. The local manifestations, as pain and swelling of the joints, were rare in children. He thought that great emphasis should be laid on the question of heredity, and gave statistics from one of the London hospitals, which showed how large a percentage of the cases illustrated this predisposing cause. He also believed that there was a close connection between quinsy and rheumatism, but had not seen the same in follicular tonsillitis.

DR. S. KETCH spoke of the rheumatoid origin of some of the more chronic joint diseases, and of the differential diagnosis between tubercular and rheumatoid joint affections, with reference to which the literature was very scant.

THE PRESIDENT said that, up to 1880 nearly all the literature on the point mentioned by Dr. Ketch could be found in a book written by Montcarvo, of Buenos Ayres, who refers to an article written by an American, Dr. Mitchell, and published in the *American Journal of the Medical Sciences* in 1831, where, thirty-seven years before Charcot described arthropathies, the same disease was described.

With reference to congenital heart-disease, but few of these patients live very long. Heart-disease, under six or seven years, recurs very frequently, and there are only two causes: first, sepsis (not frequent), and second, rheumatism. If, therefore, disease of the left heart is found in children six, seven, or eight years of age, it must be the result of rheumatism, whether it was diagnosticated or not; and, as a rule, the younger the child the less developed will be the local manifestation of the rheumatic affection.

As to the growing pains, he would criticise Dr. McLean's statement that they are always rheumatic. They are frequently acute rheumatism; but there are two other causes of joint pains in children. First, neuralgic pains about the joints, and not unfrequently complicated with œdematous swelling. When we find painful joints with swelling the diagnosis of acute rheumatism is easily made, but when we find pain on gentle pressure *about*

the joint and the swelling is *about* the joint and not in the joint, it is not to be classed as rheumatism. In the other class of cases, the children that are growing fast have real growing pain. The long bones grow from both epiphyses, and when rapid there is unusual development, which means hyperæmia, and physiological hyperæmia is very apt to turn into inflammation. He did not in these cases refer to the rachitic diathesis at all. When there is such a condition, then the pain is in the epiphyses, and, as a rule, recovery ensues after a time; but sometimes suppuration occurs with diastasis. In such cases of rapid growth the pain is characteristic, lasts for a good length of time, and is real growing pain.

There is another peculiarity about growing pains. Sometimes it is said that children that have been sick with typhoid fever, scarlet fever, etc., have grown very fast while they were in bed. They do grow, and the number of the cases of so-called rheumatism in scarlet fever and typhoid fever, are really cases of growing epiphyses, where the pain is quite local. Not all are such cases, but there are such, and the two conditions have a certain amount of connection with each other.

Dr. J. Lewis Smith said there might be endocarditis without doing sufficient injury to the valves to give rise to a murmur. This would explain the accelerated heart action referred to by Dr. McLean.

The President said that undoubtedly a valvular murmur might disappear within a short time, and remain absent for many years. It might disappear within half a day or in a few days, and because it was not endocardial but simply rheumatic. There is a connection between articular and muscular rheumatism, and not unfrequently what is regarded as endocarditis is nothing more than rheumatism of the heart-muscle which will pass away very quickly sometimes, and afterward endocarditis may develop in these cases, and remain for a long time.

There are cases of endocarditis with murmur, in which the murmur disappears after years, because of cardiac compensation; the heart, however, is not normal, but is enlarged, and the compensatory development is usually best balanced at about the age of puberty in boys, in whom this disappearance of the murmur occurs most frequently.

There are many cases of endocarditis in which there is no valvular disease, but the large majority of cases are known by the valvular affection. There is one kind of endocarditis in which there is no valvular murmur, and that is *ulcerative endocarditis*. If the valves are affected the deposits are not upon the top of the valves, but at their insertion, which explains the absence of the murmur.

Dr. Sell mentioned a case in which, during an attack of rheumatism, decided evidences of endocarditis developed, numerous murmurs; recovery occurred, the murmurs were retained for a long time, the patient also had chorea; but later in life married, became the mother of eight children, and at present there is not the least trace of cardiac disease.

The Academy then adjourned.

SECTION IN PRACTICAL OF MEDICINE.

Stated Meeting, January 19, 1886.

Alfred L. Loomis, M.D., LL.D., Chairman.

Dr. George L. Peabody read a paper (see p. 235) on

THE SIZE OF THE HEART IN CHRONIC DIFFUSE NEPHRITIS.

Dr. A. Jacobi was invited to open the discussion, and said that the exposition which Dr. Peabody had given of his own experience compared very favorably with that given by most Europeans. Not long ago he read a paper by Schatz, in which the writer directed attention to the fact that although general hypertrophy of the heart was very common, he had been surprised at the additional fact that in a large number of cases it was the right heart that was affected, and not the left. It was a peculiar fact, however, in Schatz' cases, that the observations were not very carefully made, because he had omitted every allusion to the condition of the lungs, which probably would have given some explanation of the hypertrophy of the right heart.

Hypertrophy of the heart in nephritis is seen almost exclusively in chronic cases, but there are those which Dr. Peabody, perhaps, has not seen in hospital, but has seen in private practice, in which hypertrophy of the heart is an accompaniment of acute Bright's disease. Thus it appears that it is not necessary for a nephritis to be chronic in character in order to be accompanied by increased weight of the heart. In many of these cases its occurrence is explained in the same way as when found associated with chronic nephritis; that is, a large number are undoubtedly the result of myocarditis, and it is, perhaps, not so much the result of nephritis as it is merely co-ordinate with acute nephritis. Dr. Jacobi believed that in a number of cases, syphilitic, alcoholic, and otherwise, that the condition of the heart and kidney might be explained in the same way; that the heart disease is not the result of nephritis, but that both exist as the result of a general cause.

Dr. Francis Delafield continued the discussion, and said that the question of the condition of the left ventricle of the heart with chronic Bright's disease seemed to him to be an important matter, not only in itself, but on account of the bearing it had on the question of the condition of the vascular system in cases of chronic Bright's disease. So far as figures went, his experience was a good deal like that given by Dr. Peabody, that while hypertrophy of the left ventricle is found in some cases of chronic Bright's disease, it is not by any means a constant accompaniment. The only figures which he had represented the autopsies in cases of chronic Bright's disease which he made between 1866 and 1876. Of these there were 234 of which he was able to give a fair clinical history, and in all of them the kidneys and heart were examined, and in only 34 was there well-marked hypertrophy of the left ventricle. Of these 34 cases the atrophied kidney was present in 25, and the large white kidney in 9.

On the other hand, the number of cases was large in which valvular lesions of the heart, representing endocarditis, were associated with chronic Bright's disease. There were eighty-nine cases in which chronic endocarditis accompanied chronic diffuse nephritis.

There is always a certain amount of difficulty in comparing the experience of different places and countries. Although we have diseases which bear the same name, and which resemble each other closely, yet climate, race, and social conditions certainly make a great difference in the way in which these diseases present themselves to us. So far, however, as we can judge, hypertrophy of the left ventricle with chronic Bright's disease is not so common in New York as it is in some other places.

It had always seemed to him that in connection with the question of the relation between hypertrophy of the left ventricle and chronic Bright's disease, it was always necessary to take into consideration the condition of the arteries throughout the body. It had seemed to him doubtful, indeed, when hypertrophy was present, that it should be looked upon as the direct result of the kidney lesion, but rather that it is the result of conditions complicating the kidney affection, conditions of the arteries which may occur with or without kidney disease; and also that the kidney disease may occur without these changes affecting the arteries.

The morbid conditions of the arteries seemed to be of twofold character, and it was a matter of doubt as to which was the most important. One is the actual structural disease of the walls of the arteries, practically a chronic endarteritis, whether we call it that or call it

arterio-capillary fibrosis, or anything else. The second disturbance is the contraction of the walls of the smaller arteries, and perhaps of the capillaries, occurring from time to time for shorter or longer periods.

These two morbid conditions may occur separately or together. When they are associated the best possible conditions exist for the production of hypertrophy of the left ventricle, and the association of these two conditions is frequently found with chronic Bright's disease; it had seemed to him to be the explanation of the hypertrophy of the left ventricle when it does occur.

For that reason he could suppose that the difference between our experience and that of observers in other countries was not a difference in the character of the nephritis, as probably the kidney affection was the same, but that it was because there was a difference in the frequency with which the chronic endarteritis and the spasmodic contraction of the small arteries was associated with the nephritis. These conditions of the vascular system, although not unknown to us, do not seem to be as common here as in some other countries.

Dr. Beverley Robinson presented a tabular statement of the cases of chronic Bright's disease in which autopsies had been made at St. Luke's Hospital, Dr. Satterthwaite and Dr. Ferguson, curators. The table had been prepared by Dr. Tiemann, house physician, and was an abstract of necropsies, in which lesions indicative of chronic nephritis were observed with special reference to the size of the heart. In 63 of the cases the heart was enlarged; in 5 of these there was cirrhosis of the liver; in 2, aneurism of the aorta; in 16 there was distinct valvular incompetency; in 24, pulmonary disease, in 17 of which it was secondary, and in 7 primary.

In 11 cases the size of the heart was normal; in 2 of these there was cirrhosis of the liver; and in 3 pulmonary disease, 1 secondary and 2 primary. In 7 cases the heart was small; in 1 of these there was cirrhosis of the liver; in 1 aneurism of the aorta; and in 3 pulmonary disease, 2 secondary and 1 primary.

In 81 cases, therefore, of chronic Bright's disease, in the cases usually described as chronic diffuse nephritis, about three-fourths showed decided enlargement of the heart. In more than one-eighth of the cases the heart was normal, and in more than one-eleventh the heart was diminished in size. In the 63 cases of enlarged heart, 16 were affected with valvular incompetency (primary or secondary, was not determined), 5 with cirrhosis of the liver, and 7 with pulmonary affections, which were presumably primary or concomitant. It was fair to assume that three-fourths of the 63 cases of enlargement of the heart were connected solely with, or dependent on, or resulting from, the chronic renal disease. This would make about forty-five cases in all out of eighty-one cases referred to and in which the post-mortem examination of the heart was recorded, or somewhat more than one-half of the total number, where the enlargement of the heart was certainly more or less occasioned by previous or concomitant chronic kidney disease. Of course, in this analysis, all determining influences with reference to enlargement of the heart proceeding from occupation, habit, mode of life, blood condition, general disease, and nervous affections, etc., were not at all estimated. In more than one-sixth of the total number of cases the heart was normal or reduced in size, and despite the complications of cirrhosis of the liver and pulmonary disease, either primary, concomitant, or doubtful.

Dr. Wesley M. Carpenter alluded to the peculiar pathological fact of the absence of cardiac hypertrophy with amyloid kidney, and yet the amyloid kidney rarely, if ever, occurs independently of chronic diffuse nephritis, the morbid condition which at one time was believed to bear the relation of cause to hypertrophy of the left heart.

With regard to the factors to be taken into consideration in determining the existence of cardiac hypertrophy, Dr. Peabody had mentioned, with others, the size and general development of the body. On this point it might be interesting to refer to observations made by Dr. Alonzo Clark, who reached the conclusion that the size of the heart was not materially affected by the size of the adult, unless the distance between the tips of the shoulders was greater than the average.

The influence of occupation on the size of the heart, also, should not be lost sight of, as it was generally conceded by those skilled in physical diagnosis that in male adults who have followed physically laborious pursuits the area of cardiac dulness is almost invariably increased.

When all the sources of error are considered in estimating the existence of cardiac hypertrophy in cases of chronic diffuse nephritis, the conditions at once become so complicated that the observer is very liable to look toward the arterio-capillary system referred to by Dr. Delafield, or to some other general condition, for their explanation.

The Chairman said he had had the impression for a long time that Dr. Bright struck the key-note in this entire matter. Bright, in his earlier paper, directed attention to the fact that there was enlargement of the heart in a large proportion of cases of chronic renal disease, and made the statement that he believed it to be due to the condition of the blood, which either influenced the heart, causing an irritable action, or so acted upon the capillary vessels, or at least the smaller arterial branches, that greater force was required to drive the blood through the minute ramifications of the arterial system.

It seemed to him that the question of hypertrophy of the heart in Bright's disease could not be decided by post-mortem results, that if decided by anything it must be by the character of the pulse; it was a question altogether of arterial pressure. It was very well known that in a certain percentage of cases of chronic Bright's disease there is a continuous morbid arterial pressure, and that in all cases of acute Bright's disease there is temporary high arterial tension; that a patient with acute Bright's disease at the time when he is on the verge of a convulsion gives evidence of arterial tension, and after the disease has progressed a little this arterial tension is no longer present, because there are rapid blood changes, consisting of a deficiency in the nutritive condition of the blood, associated with great disturbance of the vasomotor system; that the heart has no longer, in its degenerated, debilitated condition, power to give high arterial pressure. Under these circumstances dilatation is liable to occur, affecting both ventricles, and when post-mortem examination is made it is difficult to determine whether it does or does not exist, unless more careful examinations are made than have yet been reported with regard to the condition of the heart in these cases. It is the degeneration which takes place that allows of rapid dilatation and great loss of muscular power in these acute cases. It was well known that frequently within a few weeks, in cases of scarlatinal nephritis, evidences of extensive cardiac dilatation were found, and dropsy developed, which sometimes depended on the condition of the heart and not upon the condition of the kidneys.

It seemed to him that we must break away from the old idea that in the kidneys were to be found changes which would explain all those conditions which were grouped under the term uræmia; that there was, strictly speaking, no such thing as uræmia; but that this change in the nutritive quality of the blood produced changes in the arterioles, and in all of the organs, and Bright's disease became a general disease; and that wherever we met with this condition there was a diseased process going on, affecting the vascular tissues of the body, and hence necessarily the glandular.

The statistics presented by Dr. Peabody would seem to point in this direction, for there was no hypertrophy of the heart in a certain proportion of the cases, and

probably because there was no condition of the general system to give rise to it.

Dr. Peabody, in closing the discussion, said that the association of amyloid degeneration of the kidney with chronic diffuse nephritis and the absence of cardiac hypertrophy was perhaps susceptible of an explanation. Undoubtedly the cause of the hypertrophy of the heart was an increased arterial tension, although it was not the purpose of his paper to enter into a discussion of the causes of cardiac hypertrophy. One evidence, however, that such was the fact was that long before we get the clinical evidence of hypertrophy of the heart the evidence of increased arterial tension could be easily obtained, and after it had existed for a considerable length of time, then there was evidence of cardiac hypertrophy. But in those forms of chronic Bright's disease in which the arterial tension was lowered by general œdema, such as usually shows itself with well-marked amyloid disease, the tension necessarily relaxes, and perhaps cardiac hypertrophy might disappear. Possibly this might explain the peculiar association of these conditions.

Without attempting to discuss the cause of cardiac hypertrophy, he simply wished to lay before the Section certain factors which showed that it was less common with chronic diffuse nephritis than was usually supposed, and that the common clinical teaching that the presence or absence of hypertrophy of the left ventricle would enable the observer to diagnosticate the presence or absence of chronic Bright's disease was mischievous, as it had no substantial basis upon which to rest.

He agreed with the Chairman that we could with propriety go back to the so-called chemical theory advanced by Dr. Bright, because it had been abundantly demonstrated that it was impossible by partial arrest of the arterial blood in the kidneys to produce hypertrophy of the left ventricle, for the reason that it had been distinctly proved that by ligating both renal arteries the arterial tension was not raised for any considerable length of time; it is temporarily elevated, but it immediately relaxes, and is not sufficiently prolonged in any kidney disease to produce hypertrophy of the left ventricle.

The topic for general discussion was the question:

ARE THE ANTIPYRETIC MEASURES AT PRESENT EMPLOYED IN ACUTE DISEASE USEFUL AND SAFE?

The discussion was opened by Dr. A. A. Smith (see p. 237).

Dr. A. B. Ball continued the discussion, and said that he should take it for granted that the reduction of temperature was desirable in very many cases, and, if means could be used to effect this end safely, that it would be useful. He then gave statistics, derived from Bellevue Hospital and St. Luke's Hospital, with reference to the use of antipyrin, where it had been administered in doses varying from fifteen to twenty grains, and repeated at proper intervals until the maximum quantity of ninety grains had been administered, in the treatment of typhoid fever particularly. The unfavorable effects of this remedy in the way of nausea and vomiting, as reported by some observers abroad, and also by some in this country, he thought had been due to the use of larger doses of the drug than was necessary. His conviction was that only small doses were required, and, besides, that it was not necessary to reduce the temperature to the normal, but to between 101° F. and 102° F. was sufficient, as in most instances it would continue to fall after this point had been reached. It could be administered by the mouth, by the rectum, or hypodermically. It was generally given by the mouth. When administered hypodermically it might excite considerable inflammatory action, and even abscesses, although the latter occurrence was rare. One advantage of the hypodermic use was the rapidity of its action. Sweating is usually produced; the temperature may fall without the appearance of perspiration. Sometimes the sweating is exceedingly profuse. The effect upon the pulse is not marked. The effect upon the tongue had been remarkable, changing it from the dry to the moist.

The most common drawback to the administration of antipyrin was the production of nausea and vomiting, which appeared in seven out of the twenty cases in Bellevue Hospital, and in two out of the fourteen in St. Luke's Hospital. In none of these cases, however, was it a serious matter. Chills occurred in St. Luke's Hospital in three cases, but in neither instance were they of a serious character. Collapse had not occurred in any of his cases, as had been noted by some observers, and perhaps it had been warded off by the administration of a small quantity of whiskey with the antipyrin.

An eruption had appeared which resembled very much the appearance of measles. A great variety of eruptions had been reported, and it might even become actually petechial. There was no evidence that it exerted any detrimental influence on the course of the fever.

He had always been very skeptical with reference to the use of antipyretics. His own experience in the use of the cold bath had never been entirely satisfactory. But with regard to the use of antipyrin, he had been abundantly satisfied that the patients went through their sickness with less disturbance, with less delirium, and with more quiet sleep than they would have done without the use of the drug.

His experience in the use of kairin had been unfavorable, and he had abandoned it.

Dr. Kinnicutt said that, in discussing the antipyretic powers of the so-called aromatic group (derivatives of benzol), two important points suggested themselves for consideration.

Whether the members of this group possessed certain essentials of true antipyretics, viz., the power to restrain or diminish increased tissue metamorphosis or organic combustion; secondly, whether their use was unattended with injurious effects upon the economy.

We were now in possession of a considerable number of careful observations, which seemed to demonstrate that during the use of kairin, thallin, hydrochinon, antipyrin, and other members of this group, the excretion of carbonic acid and urea was markedly diminished; in other words, that a certain control was exercised by these drugs over increased tissue metamorphosis. The exact method of this action had not yet been demonstrated. From experiments on animals with kairin it had been suggested that, being an easily oxydizable body, it withdrew oxygen from the hæmoglobin, transforming it into methæmoglobin, thereby lowering the oxidation in the tissues. On the other hand, antipyrin had seemingly little effect upon the hæmoglobin.

Although the members of this group, in all probability, possessed little power of controlling specific disease processes, nevertheless it was an interesting fact that the group furnished a large number of our most powerful antiseptics. In attempting to determine the second point, we must rely partly upon such experimental investigations as have been made on animals up to the present time, and partly upon clinical experience.

Morokhovez, of Moscow, had investigated the action of kairin on dogs. In large doses of one gramme injected into the saphenous vein or duodenum, the arterial blood became dark brown; spectroscopic examination showed the presence of methæmoglobin.

Intense dyspnœa followed, with marked lowering of arterial tension, and weakness of the pulse. These effects would lead us to use this drug with great caution in cases of pulmonary affection, heart disease, and anæmia. Clinical experience also, it seemed to him, should lead us to discard this agent in our therapeutics. In his own experience, rigors and chills, depression, and oftentimes partial collapse, followed its use. The same objections did not apply to thallin. The short duration of its effects, however, made it a less desirable antipyretic agent than antipyrin.

He had largely made use of hydrochinon and antipy-

rin, both in hospital and private practice. They appeared to act by dilating the cutaneous vessels, by increasing loss of heat, by diminishing organic combustion. Intra-arterial pressure was not appreciably modified by them, the frequency of the pulse diminished proportionally with the fall in temperature, the respiration was slightly, if at all, affected. Their utility in the treatment of continuously high temperatures, particularly in the specific fevers, must be recognized and greatly appreciated, he thought, by all who had had much experience in their use. He had rarely observed gastric disturbance, and never collapse, produced by either hydrochinon or antipyrin. That a certain amount of temporary depression might be caused by an incautious use of them, he was disposed to admit; at the same time, he believed it could always be successfully combated. The striking improvement in the general condition of the patient during their use, their control of many of the grave symptoms incident to high temperatures, gave them a place, it seemed to him, among the most important therapeutic discoveries of the present time.

In conclusion, he would add a word in regard to the proper doses of hydrochinon, as it was a drug little known in this country.

In a paper published by him last May he had stated his experience on this point. He would read the following extract from the paper referred to:

"Fifteen and twenty grains were the standard single doses adopted. A marked reduction of the temperature was obtained, *without exception*, in all the cases after each administration of the above dose. By repeated observations it was ascertained that after a single dose the temperature begins to fall, as a rule, within fifteen minutes. The minimum level is reached in two to two and a half hours; the temperature then again gradually rises, during another hour to two hours, to its former height. The degree of reduction was observed to vary somewhat, being dependent, apparently, rather upon individual idiosyncrasies than upon the nature of the disease. The minimum fall obtained was 1.5° F., the maximum 5.2° F. In cases where there was a tendency to a continuously high temperature, three or four single doses were given in the course of twenty-four hours, with the effect of maintaining the temperature at a moderate level."

Dr. R. C. M. Page said that he had but little to add to the discussion on the subject of antipyretics in the treatment of acute diseases. During the month of June, 1882, he visited the General Hospital (Krankenhaus, 2,000 beds) in Hamburg, Germany, with special reference to the fever wards. He was informed that they had abandoned quinine as an antipyretic in the treatment of typhoid fever, since it did no good, but, on the contrary, aggravated cerebral symptoms. Antipyrin and the like had not then become known. The water-bath was inconvenient, and treatment by means of the wet pack was tedious. But typhoid fever patients were simply placed on water-beds, each of which communicated at one end (head) with two tubes provided with stop-cocks, one for hot and the other for cold water. At the other end (foot) of the bed was a drain-tube with a stop-cock for letting off the water. A thermometer was attached to each bed so that the temperature could be regulated with precision to any degree required, by simply turning on hot or cold water, as the case might be. On such beds, also, the chances of acquiring bed-sores were reduced to a minimum. Death in the hospital from typhoid fever was exceptional, and then it occurred chiefly among those who, unfortunately, were brought there late in the course of the disease, and were suffering from previous want of care and attention.

Dr. Peabody said, with reference to the production of abscess by the hypodermic injection of antipyrin, that he would like to ascertain how frequently this complication had occurred, as he had used it a great deal hypodermically, and in no case had it produced an abscess. It had seemed to him that the best way to produce the most lasting effect of antipyrin was by the administration of a drachm by the rectum, the effect produced being as lasting as that usually secured by three doses given at regular intervals of one hour by the mouth. He had also failed to notice any evidence of weakening of the heart's action from the administration of this drug, although he was aware that it might be expected to occur from physiological reasons. He had administered it to an infant, ten months old, in doses of three grains at frequent intervals, without producing any depression of the pulse, and always with a happy effect. The child was suffering from broncho-pneumonia, complicating whooping-cough.

Its use in sunstroke had been alluded to, and it was his practice during the last summer to arm the ambulance surgeon of the New York Hospital with a solution of antipyrin, and direct him to at once administer to the patient suffering from sunstroke a hypodermic injection, and then to bring him to the hospital, where he could receive more active antipyretic treatment. In several instances patients had recovered after an unusually high temperature had been reached; in one as high as 111° F.

Dr. L. Emmet Holt referred to the administration of antipyrin in thirty cases occurring in quite young children, and he had yet to see any bad effects from its use He had always been satisfied with small doses. To children under one year of age he had administered two grains for three doses inside of an hour, and then stopped. To children from three to five years of age he had administered from three to five grains every half-hour until three doses had been given. The quieting effect on the nervous system in children had been very striking; so much so, that when a child's temperature was above 104° F., accompanied by an irritability which it had been impossible to quiet, even by the use of opium, two or three doses of antipyrin had succeeded in bringing down the temperature and relieving the other symptoms in a striking degree. With regard to the disturbance of the stomach, he thought it was exceptionally rare. Sweating in children after the administration of antipyrin was not a common symptom. The doses which he had mentioned had been sufficiently large to accomplish the particular object for which the drug was administered, and in the course of an hour the temperature had usually fallen one or two degrees, and subsequently two or three degrees lower. The cases in which he had used it had been typhoid fever, scarlet fever, dysentery, and cholera infantum.

Dr. Putnam-Jacobi referred to one observation which she had made, namely, the administration of fifteen grains of antipyrine to an adult suffering from typhoid fever, of not a very severe type, but which was followed by a sudden fall of temperature from 105° to 99° F. in the course of one hour, and then rising almost immediately. This sudden transit was not at all agreeable, and she had wondered whether it was very exceptional. Great range in the fall of the temperature seemed not to have been mentioned by any of the speakers. Dr. Ball had mentioned the fact that if the temperature fell one, two, or three degrees it might be taken for granted that such lowering was sufficient, but Dr. Putnam-Jacobi thought it might be well to emphasize the fact that when such a lowering of temperature had been secured we were doing all that was safe. She then referred to a case which occurred in Brooklyn, and which she had already reported in a paper read before the State Medical Society, in which the temperature was 106° F. and the child was kept in a bath until the temperature fell to 100° F. and then removed; but the temperature went on falling, and the case terminated fatally.

She would make an additional suggestion—that is, whether the value of an interruption in the course of the fever did not owe its fundamental value to some interruption in the life process which was being sustained in the infectious agent. A small degree of variation in the

temperature will greatly affect all micro-organisms, and perhaps might seriously interfere with the development of all micro-organisms which belong to the pathogenic group, a benefit which the patient would receive apart from that which we get from the direct effect produced upon the heat by the administration of the drug.

The Section then adjourned.

Stated Meeting, January 19, 1886.

ALFRED C. LOOMIS, M.D., LL.D., CHAIRMAN.

DR. F. P. KINNICUTT read a paper on

THE USE OF NITRO-GLYCERINE IN THE BRIGHT'S DISEASE OF NEPHRITIS,

in which he gave a number of interesting cases to illustrate the influence of this drug in reducing albumen. The general conclusion was that the remedy properly administered, was beneficial in the class of cases under discussion.

The discussion was opened by DR. W. H. DRAPER, who said that ever since his attention was called to the value of nitro-glycerine in angina pectoris, by the publication of Murrell's thesis, and subsequently to its utility in uræmic headache and asthma, he had had many opportunities of confirming its efficiency in relieving those symptoms.

The coincidence of the reduction of the arterial tension, which usually accompanies uræmic headache and asthma, with the relief of those symptoms which follow the administration of nitro-glycerine, is strongly suggestive of the explanation commonly given of its action, namely, that it relieves cerebral and pulmonary anæmia by relaxing spasm of the arterioles and flushing the capillaries.

The analogous action of amyl nitrite in preventing epileptic seizures seems to confirm this theory of its effects in the treatment of the uræmic accidents in which it has been most successfully used. There could be no question, judging from his own experience, of the very prompt and decided relief which nitro-glycerine affords to these distressing symptoms, and though it sometimes fails where opium succeeds, it is certainly for many reasons to be preferred to opium, where it gives relief. From his observation the cases in which it failed were those of advanced disease, in which the functional power of the kidney was well-nigh exhausted and the action of the heart was greatly enfeebled.

Concerning the principal point of Dr. Kinnicutt's paper, the utility of nitro-glycerine in controlling the progress of intrastitial nephritis, he had no experience to offer. Dr. Kinnicutt's investigations certainly seem to lend support to the view of Professor Rossbach, that the lowering of high blood-pressure rather increases than diminishes the urinary secretion. As to the effect of nitro-glycerine in diminishing the daily loss of albumen, it seemed to him that a larger number of observations were necessary to establish the uniformity of this effect.

In some observations which he made during his late service at the New York Hospital—less carefully made than those of Dr. Kinnicutt—the results were negative, the excretion of albumen varying from day to day while nitro-glycerine was administered, just as it did when it was withheld.

There was one effect of nitro-glycerine to which Dr. Kinnicutt alluded in speaking of the physiological effects of the drug, but to which, if he remembered rightly, he did not give much prominence from a therapeutical point of view, that is, its effect as a cardiac stimulant.

In the July number of the *Therapeutic Gazette*, Dr. Joseph B. Burroughs, of Manchester, N. Y., published an article recommending the employment of nitro-glycerine as a substitute for alcohol. He asserts that from an extensive experience he has found it of great value in the shock resulting from accidents, in the nausea and faintness following surgical operations, in the failure of the heart's action due to the administration of chloroform, in opium-poisoning, and in the collapse of typhoid fever.

Dr. Draper had used it as a cardiac stimulant with varying results, and was not prepared to say that it had the advantage claimed for it by Dr. Burroughs over alcohol, opium, or digitalis. In one case of shock from cerebral hemorrhage, in a young woman, after confinement, when death seemed imminent for some days from heart failure, he found it of the greatest service. Its effects were most carefully and intelligently observed, and there was no doubt as to its prompt and pronounced effect in regulating and strengthening the heart's action.

Dr. Kinnicutt states his conclusions in regard to nitro-glycerine with a caution as regards its utility in the treatment of nephritis, which is clearly demanded by the present limitations of our knowledge. Of its efficiency in relieving some of the most distressing symptoms which occur in the course of renal disease, he has brought some very conclusive evidence in the cases which he has related.

DR. C. L. DANA said that he had used nitro-glycerine chiefly in nervous diseases, but of late collected some observations on its efficacy in chronic nephritis and on its action as a diuretic. His cases were eleven in number, five of healthy persons, six of cases of nephritis—the five persons with healthy kidneys had had their urine for twenty-four hours measured. They were then put upon doses of one per cent. solution of nitro-glycerine in doses ranging from gt. j. every hour to gt. j. every two hours. The effects were, with one exception, to increase the amount of urine as follows, the first figure representing the daily urine without medication: Case I., urine 36 to 60 to 46 ounces; Case II., urine 72 to 81 ounces; Case III., urine 38 to 46 ounces; Case IV., urine 20 to 28 to 46 ounces; Case V., urine 62 to 72 ounces.

In the six cases of chronic or subacute nephritis the record was as follows:

CASE I.—Acute nephritis, supervening upon a chronic interstitial nephritis. Patient brought in in uræmic convulsions; urine, 1.025, smoky; albumen eighty per cent.; hyaline, fatty, and granular casts; blood-cells. Patient under treatment twenty-one days.

Nitro-glycerine ♏ ij. to ♏ iij. of one per cent. sol. q. 2 h. for three days, then stopped for three days, then given again in doses ♏ j. q. 3 h. to ♏ iij. q. h. for three days, when urine was found to be 1.008, pale; considerable albumen; blood, hyalin casts.

The nitro-glycerine on first trial did not affect the urine. Three days later, when tried again, it caused, in same doses, rapid increase in the amount of urine, up to 100 to 110 ounces daily. After it was stopped the polyuria continued to increase up to 140 to 150 ounces daily. It then gradually decreased. The nitro-glycerine did not clear the urine of blood or of albumen or casts.

CASE II.—Man, aged fifty-five; chronic interstitial nephritis; anasarca; urine light-colored, 1.011; trace of albumen; fatty and waxy casts. Placed on dry digitalis and pot. acet. for three days, then on nitro-glycerine, ♏ ij. q. 3 h. to q. 4 h. for nine days.

The nitro-glycerine caused an increase in the daily urine to over double the original amount (30 ounces to 62 and 80 ounces). The digitalis and potass. given for three days did not increase it. After discontinuance of nitro-glycerine the urine increased in amount for two days, then slowly fell. Patient discharged improved.

CASE III.—Febrile albuminuria. Patient male, aged forty-five; admitted convalescent, probably from typhoid; urine, straw colored, acid; 1.015; albumen, granular and hyaline casts.

For five days patient placed on digitalis and potass. acet., then medicine stopped. In two days renewed again for two days, then stopped, and patient was placed on nitro-glycerine for eleven days, in doses of ♏ j. q. 3 h. to ♏ j. q. 4 h. The urine under digitalis increased slightly. Under nitro-glycerine it did not increase, in fact had no perceptible effect. Patient discharged with only a trace of albumen in urine, but some fatty and hyaline casts.

Case IV.—Chronic nephritis, dating back three years; great anasarca dating back one week; urine smoky, acid, 1.014; albumen, hyaline; granular and epithelial casts.

Placed on nitro-glycerine ♏ j. q. 1 h. to ♏ iv. q. 1 h. for ten days, medicine stopped for ten days and patient put on dry diet. At end of ten days nitro-glycerine renewed, ♏ ij. q. 1 h. to q. 2 h., for four days.

In this case of acute nephritis supervening on a chronic disease, the nitro-glycerine when first given apparently caused the urine to increase in daily amount from 12 ounces to 40 and 50 ounces in two days. After this there was no increase in urine, and no diminution in œdema. Ten days later, while on a dry diet, the drug was renewed, and the urine increased rapidly from about forty to seventy ounces daily.

Case V.—*Chronic nephritis, cirrhotic kidneys, chronic bronchitis, emphysema.*—Woman, aged fifty-six; urine amber, 1.018, acid; trace of albumen; epithelial, hyaline, and granular casts; red blood-cells. Put upon nitro-glycerine ♏ j. q. 5 h. to ♏ iij. q. 2 h. for four days. Medicine stopped for two days, then renewed, ♏ j. q. 3 h. to ♏ ij. q. h., then medicine stopped two weeks. Here the drug increased the daily flow quickly from 32 ounces to 71 and 100 ounces. On stopping the medicine the urine continued to increase for next two days to 112 ounces. The medicine being renewed it fell to 75 and 70 ounces. Then, on stopping the medicine permanently, the flow increased to 133 ounces, kept high for a week, then gradually fell to 43 ounces. Patient improved.

Case VI.—Male, aged forty-four. Patient gave a history of uræmia and dropsy occurring a year ago, and recurring just before admission. No fever. On admission gave symptoms of uræmic poisoning, and had œdema of extremities. No cardiac symptoms, urine negative as to albumen and casts, 1.029, alkaline.

Placed upon nitro-glycerine ♏ j. t.i.d. to ♏ ij. q. 2 h. and kept up for nine days. Urine increased from 25 ounces to 45 and 50.

From his experience Dr. Dana concluded that nitro-glycerine was a powerful and rapidly acting diuretic, both in health and in certain forms of chronic nephritis; that it must be given, however, in frequently repeated doses of ♏ j. to ♏ ij. every two hours; that in acute renal congestion or inflammation it apparently did not act so well; that it did not appear to clear the urine of blood or greatly lessen the percentage of albumen; that in some persons it does not seem to have the diuretic effect very markedly, and that, after stopping the drug, the flow of urine may continue to increase for several days, and may keep quite high for a week.

Dr. Kinnicutt, in closing the discussion, directed attention to two points, namely, that many of the preparations of nitro-glycerine were unreliable, and that the physiological effects, as a sense of slight constriction about the neck, a slight intra-cranial fulness, and flushing of the face, should be recognized after the administration of a dose, in order that we might know that a reliable preparation was being used.

The topic of general discussion was the question

"IS ULCERATIVE ENDOCARDITIS ALWAYS A SPECIFIC DISEASE?"

and the discussion was opened by Dr. Thomas E. Satterthwaite (see p. 239).

Dr. W. H. Porter, continuing the discussion, said he had reviewed his records of autopsies, four hundred and fifty in all, and had failed to find one, with possibly a single exception, which could be properly placed under the head of infective endocarditis. In the exceptional case there was extensive ulcerative endocarditis, with softening of the ventricular walls, but the condition was apparently that of old lesions upon which an acute process had been grafted.

Dr. Wesley M. Carpenter said that the paper by Dr. Satterthwaite and the statistics by Dr. Porter showed that the form of endocarditis which the reader called infective was not of frequent occurrence. He was unable to give positive reference, but was able to recall at least two cases of ulcerative endocarditis seen in the autopsy-room at Bellevue Hospital during the last twelve years, and those occurred prior to the days of modern antiseptic surgery, and also during the existence of lying-in wards in that institution.

The lesion in those cases affected the aortic valves prominently, and the exudation upon the valves contained micro-organisms.

Of ulcerative endocarditis affecting the *right* heart he had seen one specimen, presented to the New York Pathological Society by Dr. Ferguson, and another case had been reported in the *Medical News*, but the name of the gentleman who reported he was unable to recall. These were noteworthy exceptions, so much so that one of the gentlemen regarded his specimen as unique. In the light of these facts, based upon observations made at autopsies, additional interest was given to recent articles concerning the essential nature of infective ulcerative endocarditis, and it might not be unprofitable to refer briefly to some of the work which had been done in this direction.

Orth, of Göttingen, reports that he has been able to produce ulcerative endocarditis in animals by first lacerating the aortic valves and then injecting micro-organisms into the circulation.

Ribbert, of Bonn, publishes that he has been able to produce endocarditis by injecting into the circulation the staphylococcus aurens, without first lacerating the aortic valves. Two points in his experiments are worthy of notice. First, to produce any effect, the injection of not less than a certain quantity of cultivated micrococci was necessary, and the best effects were produced when this material was considerably coarse. Second, the results obtained did not affect the aortic and pulmonary valves, but were seen upon the mitral valve, and also in the right heart upon the tricuspid valve. It seems, then, that the ulcerative endocarditis produced in animals artificially by the injection of micro-organisms does not involve the portions of the endocardium in which the disease has been seen by far the most frequently in the human subject.

Dr. E. Darwin Hudson, Jr., related the clinical history of an undoubted case of ulcerative endocarditis, in which there was evidence of long-standing mitral and aortic lesion. In the absence of any definite proof of the specific nature of the disease, the question arises whether degeneration of extensive vegetations is not entirely adequate to produce all the symptoms and determine suppurative results seen in various organs.

The Chairman said that he had been accustomed to recognize *three* forms of ulcerative endocarditis.

1. That which occurs primarily as a simple endocarditis in rheumatic subjects. These patients ordinarily give a history of exudative endocarditis which is not ulcerative, and they are in a depraved general condition.

2. The ulcerative endocarditis which occurs with chronic valvular lesions where we have had evidence of chronic insufficiency or stenosis. These subjects get debilitated, and at the seat of the old lesions ulcers occur, which give rise to emboli and infarctions attended by constitutional symptoms of a typhoid character. In some of these cases recovery takes place.

3. Inflammation at the valvular orifices, or in the endocardium, which results always in suppuration beneath the endocardium, followed by ulcer, emboli, and infarctions, which go on to suppuration, etc. It did not seem to him that there was necessarily anything specific in this class of cases, which were frequently seen in connection with diseases of the joints when the bones are involved. He thought that we should not look so much to the changes in the valves for the cause as to the general condition of the patient in this peculiar form of endocarditis.

Dr. Satterthwaite, in closing the discussion, said that he was very glad that Dr. Carpenter had spoken with

reference to the mycotic origin of the affection, as it was in the direction of what he believed—namely, that the pathologists who claim to have made out this origin have not yet proved their point. He was willing to say this after having read a most carefully written and exhaustive paper on the subject, and in which the author had given a review of what had been done in this field. It could be easily seen that there was no uniformity of opinion as to what kind of bacteria had been seen by different experimenters—one claiming that they were filiform in shape, another that they were round, etc., etc. Experiments had been made with cultivated bacteria, but the results had been that the experimenters had been unable to imitate the disease which occurs in the human subject. He thought, therefore, that physicians would do best not to pay very much attention to the mycotic theory in its present stage, but to adhere to the clinical symptoms, upon which a diagnosis must be made. The mycotic theory was interesting for the autopsy table only.

The Section then adjourned.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 4, 1886.

THE PRESIDENT, W. R. BIRDSALL, M.D., IN THE CHAIR.

DISCUSSION ON DR. HUN'S PAPER (SEE p. 221).

DR. E. C. SEGUIN said that in his practice he had frequently derived considerable help in diagnosis from the patient's handwriting. He thought the medico-legal aspect of pathological handwriting might, after further study, assume considerable importance. It would be of value to be able to say in a court of law whether a given specimen of handwriting were that of an aged imbecile, a general paralytic, or an intoxicated person.

DR. LESZYNSKY thought he could hardly say from the specimens of handwriting of paralysis agitans presented that they were characteristic of that disease. He had a number of specimens of handwriting of chronic alcoholismus which were almost exactly similar. Dr. Peckham had not mentioned the handwriting of epileptics, nor had he read of anything characteristic about it, but he could recall two epileptics whose handwriting appeared to be rather unique. In some epileptics there was the condition known as the echo sign, being a repetition of words during conversation. He had seen the same thing manifested in the writing in two cases. He had recently had a case of telegrapher's cramp, in which the movements were remarkably ataxic, being without any control.

DR. PUTNAM-JACOBI had been struck by the great varieties and peculiarities in the handwriting of persons in usual health. Some of the peculiarities supposed to be more or less characteristic of the handwriting of diseased states were also observable in the handwriting of certain persons in a state of health. For instance, Dr. Jacobi was unable, without giving special attention, to write in a direct line across the page; the line always sloped downward. The question had suggested itself to her whether in the case of the insane the tendency, especially after writing for a while, to slope the lines downward and to use capitals profusely, was not due to mental fatigue; and the use of capitals might be due to a desire to emphasize an idea, which a fatigued and feeble brain was incapable of correctly expressing.

DR. DANA said he did not think it would be practicable for everybody to learn short-hand instead of other writing, but he thought some modification of short-hand might be adopted. There would result, perhaps, greater facility of expression if present methods of writing were simplified, but there would no doubt be an increased amount of writing, which perhaps would be a greater misfortune.

Regarding mirror-writing he thought it was physiological. When we educate the centres to write with the right hand, we at the same time educate to some extent the automatic centres for left-hand, or mirror-writing. If a person put a pencil in either hand and attempt to write his own name, he will find that the left hand will write mirror-writing, while from the right hand the usual writing will result. If, then, by hemorrhage the centre for control of right-hand writing be destroyed, it would be perfectly natural for the centre controlling left-hand writing, if not corrected by the will, to produce mirror-writing.

DR. A. B. JUDSON presented a specimen of mirror-writing by a negro girl, eleven years of age, produced ten years ago. She had slight right hemiplegia, but was able to perform household work with her right hand, and she could also write somewhat with it. The writing with the left hand was a fine specimen of mirror-writing.

DR. PECKHAM closed the discussion, and said that the echo sign, the repetition of written words, was well shown in the third specimen presented, that of a woman who had right hemiplegia and amnesic agraphia. Regarding the use of capitals and the tendency to underscore by the insane, she thought it in harmony with their exaggerated ideas.

The Society adjourned.

Correspondence.

"CONGENITAL TORTICOLLIS."

SIR: Seeing in THE MEDICAL RECORD of January 23d an article by Dr. Hadra under the above caption, I send you the history of three cases similar to those there described, with recovery without myotomy. My own child, a daughter, when three weeks old, was found to have a tumor the size of a robin's egg, elongated, in the middle of the left sterno-cleido-mastoid muscle.

The child's head was drawn to the corresponding side. The muscle for an inch and a half above and below the tumor was tense, hard, and tendinous, rather than muscular, to the touch.

Hesitating to subject so small a child to the risks of an operation—always a serious thing in children—although none of the works consulted gave promise of relief otherwise, I submitted the case to an old practitioner, who bade me have no concern, as he had had two precisely similar cases, both recovering without operation.

I resolved to wait, at least, and see, continuing, meantime, the use of simple olive-oil with systematic rubbing three times a day. After four weeks the tumor was perceptibly smaller, and the contraction less marked. At the end of six months both the tumor and contracture had entirely disappeared, and to-day the child, a six-years-old, carries her head as erect as any one.

Such also was the outcome—one in five months, the other in seven—of the two cases described by my adviser.

"If the deformity of a congenital torticollis from contraction of the sterno-cleido-mastoid muscle," says our writer, "is due to a fibrous degeneration," etc.

Is not the question whether there was fibrous degeneration the very point to be decided?

"Degeneration," according to Dunglison ("Med. Dict.," art. Degen.), "is a degradation of intimate constituents." Virchow (ibid.) also uses a similar term, "necrobiosis," to express the same thing; while Conner says ("Inter. Ency. Surgery," vol. iii.): "The changes which may take place in muscular tissue are granular, waxy, fatty, and pigmentary degeneration"—never fibrous. And the facts would substantiate the statement, that the contraction in question, if anything, is not a degeneration, but rather a closely packed bundle of muscular fibre, the result of some intra-uterine inflammation of the sheaths of the muscle, producing cicatricial contraction of those sheaths and the muscle-fibres inclosed. While the results of operations in Dr. Hadra's cases place beyond cavil any other condition than a contraction, the possi-

bility of non-myotomic recovery seems not to have occurred to him.

Rheumatism, spinal malformation, and rachitis are excluded in my cases. The children were delivered by instruments, safely, and without discoverable injury. Granting, however, that the etiology here was traumatic, does it follow that the difficulty was less serious, or operative treatment less imperative? How are we to know, from any examination possible, that the contracture is *fibrous*, and consequently, in Dr. Hadra's words, "not amenable to orthopedic appliances, emollients, or massage?"

"The tumor may disappear," he further says, "but the contraction will grow worse if left alone." Dr. Hadra gives the results of two cases seen by himself, and their successful treatment, in accord with accepted authorities, by early myotomy.

I have given the history of three cases precisely similar, so far as it is possible to determine—the other two differing in no essential from the one detailed above.

These also recovered, and, contrary to the writer's sweeping assertion, *without* operation; and completely, as proven by the lapse of several years with no symptoms of return.

These instances suggest the inquiry: Might not a majority of the cases recorded as operated upon for torticollis have recovered without operation, using massage, and emollients, olive-oil, cosmoline, etc., instead?

We might at least give these little patients the benefit of the doubt, and wait a reasonable time before subjecting them to needless suffering and the dangers attending all operations upon the neck, with their not infrequent sequelæ, septicæmia and death.

This course commends itself the more, since delay in such cases is not dangerous, a crisis is not imminent, and haste, therefore, unnecessary. The operation can be performed at six months as well as, and with less real danger than, at six weeks. Mayhap by that time the scalpel will not be needed.

There ought to be earnest protest entered against this fast growing propensity to indiscriminate use of the knife. To men of experience, whose years of study and observation have brought caution and judgment, Dr. Hadra's advocacy of this heroic method can do no harm. It is otherwise with the beginner. To him there may seem no other remedy or method than the one recommended by Dr. Hadra, as it comes to him while anxiously studying his first case of torticollis. Should we not, although with the present weight of authority against us, say to him: Wait, and in the name of humanity stay the too ready hand, first using nature's remedies, and resorting to harsher measures only when all other resources have proven futile?

Thus only shall we approach the ideal physician—in uncertainty careful, in emergency self-possessed, in danger fearless, in all things honest.

F. D. BROOKS, M.D.

CLAYVILLE, N. Y.

JAPAN AS A FIELD FOR MEDICAL PRACTICE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I am constantly in receipt of letters from physicians in America who appear to consider Japan an El Dorado, inquiring as to the opportunities and prospects for medical emigrants to that country. A similar letter having been referred to me recently, by the American consul here, I indorsed it as below. It strikes me that by its doggerel form it may attract more attention in your columns than would the soberest and most professional statement of the facts, which are nevertheless truthfully put.

I must, however, request that names and exact localities be suppressed. Perhaps a few lines of editorial, as suggested, might do. Yours,

STUART ELDRIDGE, M.D.

The following indorsement, by the consular medical officer, appears upon a letter inquiring as to the laws regulating, and opportunities for, medical practice in Japan, addressed to an American consul in that country by a physician in the United States contemplating emigration. It is evident that whatever Japan may have been in time past, it is no longer a remunerative field for the foreign practitioner.

Respectfully returned. In this Rising Sun Land
There's a law, as elsewhere, of supply and demand,
Which applies unto doctors as well as to corn,
And forbids further import, as sure as you're born.
For the Japs have their own learned dispensers of pills,
And but rarely call *us* to prescribe for their ills;
And e'en when they do, at least when they call *me*,
Send me bad eggs, or sponge-cake, by way of a fee.
As to foreigners here—why, we've doctors enough
For a town thrice its size. Yes, completely *quant. suff.*
Did I say *thrice* its size? 'Twould be much nearer true
Had I made it six times; but then either will do
To explain what I mean, viz.: that doctors are plenty;
In proportion to laymen, say as one is to twenty.
And the twenty—good Lord! but how healthy they are!
And as poor as they're healthy, pleading "no biz" in bar
Of payment of bills, be these large, be they small;
Till in truth its scarce worth sending bills in at all.
"Did you call twenty times, Doctor? Seems to me not;
I never once dreamed that so low I had got.
To be sure I was sick. Once I thought I'd have died
But I might have been cured sooner had you but tried.
The times are so hard, and exchange is so high,
If it wa'n't for the funeral 'twould be cheaper to die.
I'm sure that 'night visit' was made after six,
And yet you've charged double. Well, say that we fix
This bill of yours thus: the amount is so large,
And each visit three dollars! here, here's half of your charge.
You can take it or leave it." 'Tis taken with glee
At recov'ring e'en half of our hardly earned fee;
For the doctor full knows (and the patient as well)
For a doctor to sue sends his practice to—Sheol.
Unless Dr. M——e has good greenbacks galore
To fling to the winds on this far-distant shore;
Or, unless he can live, like old Tanner, on air,
As he's safe in God's country—God! let him stay there.

YOKOHAMA, JAPAN, January 4, 1886.

OPHTHALMOLOGY IN PARIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I HAD hoped to find time to write to THE MEDICAL RECORD from Paris something that would be of interest to physicians. The auspicious moment, however, did not present itself; or, at least, so I fancied, and it amounts to the same. The Christmas holidays, being, like all other holidays, sacredly (?) observed by the Viennese—noted clinicians and all, so wonderfully do the exigencies of suffering mortals adapt themselves to periodical pauses—afford one an admirable opportunity of thinking on unfulfilled promises, provided he hasn't too many other such pleasant things to think about. Unfortunately (for my letter) I am not in Paris, that well-spring of originality in medicine. Fortunately (for me) I *am* in Vienna, a place which every man who can, particularly every medical man, should visit; besides, is not Paris but on the way back to America? It is never so satisfactory, either, to write or to read mere recollections in lieu of coeval things, and the only apology for a Paris letter from Vienna must be sought in the statement made at the outset, coupled with the fact that, while the material is drawn chiefly from memory, the subjects are mainly current ones. Though having as an essential mission abroad the looking up of matters relative to special branches, it certainly were not advisable to neglect the progress of the science in general, nor the noting of many other and quite extraneous matters. But if one expects on crossing the Atlantic to find every method an improvement on those to which he has been accustomed at home, he is doomed to be *most happily* disappointed. If he goes no farther than London, he will probably find nothing so good.

The very first thing by which one is struck on the Continent—which, by the way, is more forcible than pleasant or enlightening—is the bad air of rooms in which clinics of great men are conducted. The Frenchman, be he layman or professional, undertaker or hygienist, has a mortal

aversion to fresh air. The windows of his sleeping apartments are kept scrupulously and hermetically sealed, even on the most sweltering summer night, as otherwise it would be [illegible] to the room. What acts as a preventive of ocular maladies must of necessity be a prime factor in their treatment, so it would seem, for you might hang up your hat anywhere in any room about the Paris eye-clinics. To be sure, that of Professor Panas, one of the very best, held, as it is, on the ground floor of the palatial Hôtel Dieu, has the loftiness of the ceilings and general commodiousness to thank for being almost an exception. I have never seen its windows and doors open. The good result obtained amid such wretched surroundings is one of the strongest proofs of the efficacy of antiseptic medicine. And truly do they stand by the latter. The hateful, impish bacillus is hunted down most unrelentingly. If he lurks about the jaws of scissors or the blades of knives, he is suffocated in a twenty per cent. solution of phenol; if he alights on the site of a proposed operation, he is sponged out of existence with sublimate in water; if he hides in an Eustachian catheter, he is overwhelmed and eaten up by permanganate of potash (1 to 500); and in divers anatomical nooks and crannies, whither he betakes himself for mischief, he is shot dead with powder of iodoform. Not only are surgeons' and assistants' hands always washed in sublimate or boric water, and instruments immersed in carbolic, but these same precautions are religiously adhered to throughout all subsequent interference.

Another thing I cannot refrain from alluding to while it occurs to my mind. It is the tractability of patients in the Old World, particularly on the Continent. Our American freedom and independence, while they are a privilege and attribute in general greatly to be applauded and admired, may be found sadly in the way of those who seek the benefits to be conferred by disciples of the healing art—to say nothing of the inconvenience they may occasion the disciples themselves. All things else being equal, the European physician will ever accomplish the greater good so long as this difference in disposition remains thus in his favor. It is manifest even among the more juvenile classes. Only a day or two ago, I saw a young one of two years hold on tightly with both hands to its nose, while it bore without a whimper the probing and other gouging of an open, ulcerated mastoid.

As for anæsthetics, one who has been accustomed to the uniformly safe and efficient ether narcosis, when carefully conducted, cannot but wonder at the fearful predilection of the men of Europe for chloroform and its scarcely less treacherous admixtures. Fortunately, they evidence a high appreciation of the value of human life in the discretion with which these things are always administered. The almost universal medium is the Esmarch basket. Péan, however, the most taking, if not the most distinguished, of the Parisian surgeons, in his clinic at the hospital of St. Louis, resorts to the complicated apparatus of Junker, or a similarly constructed one. A word just here as to this gentleman (Péan) might not be amiss. The *personale* of the man, though something unique, owing to his appearing always at the hospital clad in a dress-suit, is most engaging, while his cleverness, skill, and the clearness of his demonstrations are nothing short of extraordinary. The costume referred to, if it be an eccentricity, is certainly a happy one. It must be infinitely less suggestive, if not more inspiring, than the butcher-like garb assumed in most instances. The patient, if, as usually the case, an anæsthetic is to be given, sees before him naught more direful than an elegant gentleman, and, accordingly, feels less like a victim. It is only at the moment of commencing the operation that an assistant ties behind the surgeon's neck a large napkin, sufficiently ample to protect his front—and for each case a fresh napkin.

One of the most striking differences thus far noted between methods at home and abroad relates to the extraction of cataract. Professor Panas has long since, in an excellent paper entitled "The Best Mode of Operating for Cataract," expatiated on the prevailing tendency to return to first principles and procedures; and many have come seriously to doubt if Graefe really did so much in this direction as to merit the world of fame he acquired. Take, for example, the clinic of M. de Wecker—his method consists in the following steps: Hands, instruments, etc., having been disinfected, and the sensibility of the eye annulled by cocaine (an anæsthetic is never given), an assistant lifts and fixes the upper lid, while the operator depresses the lower with the forceps by which he holds the eyeball; then, with a miniature model of Graefe's knife, puncture and counter-puncture are made as usual, but, instead of adhering to Graefe's method, he cuts straight out, with startling rapidity, either in sclero-corneal juncture, or slightly within the cornea, so that the incision is essentially that formerly made with Beers' knife. If, then, the iris promises no serious interference with the exit of the lens, he omits the iridectomy. His capsulotomy consists in one vertical incision. Here he takes the upper lid from the assistant with his left hand, and with spoon in right delivers the lens by gentle pressure. After waiting a moment for the accumulation of aqueous, he milks out, by careful manipulation of the eye through the lids, whatever soft portions of lens substance may have remained behind, in a similarly dextrous manner to that of Dr. Agnew. He then cleanses the wound, and, if necessary, replaces the iris; and it is here that his ingenious little hard-rubber spatula does such valuable service. The operation completed, he proceeds to dress the eye by first applying to the wound, with a small spatula, a paste of iodoform and solution of carbolic acid, very much after the fashion in which the plumber lays cement on a joint of drain-pipe. The rest of the dressing is not peculiar. These operations are all performed on a table in one of the ground-floor rooms, and the patients allowed, immediately afterward, to walk up-stairs.

M. de Wecker extracts alike ripe and unripe cataracts, only making for the latter a somewhat larger incision; and, out of some three hundred extractions yearly, acknowledges a most insignificant percentage of poor results. He considers three weeks sufficient time to elapse before the discussion of secondary cataract. The absence of the blepharostat is doubtless an advantage, since those popularly employed are, at best, but bungling and pernicious instruments. That of M. Landolt, which has no horizontal bar to place beneath the lid, and can be readily removed from position with one hand, seems best to meet the requirements. While touching on ophthalmology, much might be said concerning the telling work of the last-named gentleman, as also of the gifted Galezowski; but not wishing to furnish application for the fable relative to hay in a certain manger, I choose to refrain—your space is too valuable. Though, perhaps, if your readers shall ever sufficiently recover, why, in the language of the polished Landolt, "*un autre jour, un autre article.*"

C. H. B.

Vienna, [illegible]

A WESTERN BREEZE.

[illegible] of the Medical Record.

SIR: To be sure the medical profession in our country is in a sad plight. The bells of freedom are ringing out their invitations to the world: "Come and be merry. Here you can practise in an honorable profession without preparation and with abundant remuneration. Carpenters, blacksmiths, and farmers are permitted to prescribe for deadly ailments, receiving professional emoluments for their services." Why shouldn't they accept the invitation so freely given? The change from a London street-sweeper to an honorable American specialist is not an unpleasant one. Indeed, this glorious land of liberty is fast making slaves of us all through this mistaken notion of freedom. But here they come, butcher, baker, and fisherman, of

the poorest class, grasping a bottle and a pill-box, and all will soon be settled as wise European specialists. Who charges them with ignorance? Many patients will recover in spite of their maltreatment. How may the public know whom to choose, when death is inevitable, whether met by a Pasteur or a wonderful Chinese pulse-healer? The latter only makes mistakes, and so do we all. Can we blame an ignorant public for trying the new, when the old has ever failed? True, there are many other reasons for the hard times now being experienced by the medical profession in America. The Rebellion, while it lasted, opened a large field for the doctor. Physicians then made money rapidly, tempting young men to enter our ranks. In fact, the effects of the war in this direction are not understood even yet by hundreds who are just now entering our profession. Again, medical and hygienic literature are being scattered by the idle physician, and read by an increasingly intelligent public, so that thousands of well-to-do families need medical aid much less than formerly. This, of course, is a public benefit, and should not be decried. Hospitals and dispensaries are being located by hundreds. Money is being lavished upon these institutions by the rich; and it has come to pass that a man can often be better treated for nothing than by depleting his own pocket-book. Again, thousands of medical women—accoucheurs and professional nurses—are coming to the front, and are glad to work at greatly reduced rates. They once taught school for three or five dollars per week, and fifty cents for a prescription seems like rolling in riches, compared with their former condition. Another cause lies at the doors of the better class of the medical profession. Even when poor, we dress well, drive fine teams, and dwell in elegant residences. We even borrow money of intimate friends with which to carry on this deception, thus presenting to the young man about to enter business a picture of affluence and independence. We lie to the world by telling them we are doing well when we are doing nothing. By these false pretensions we induce thousands to join our ranks and divide up the already meagre profits. Truly a sad state of affairs! Fools in the profession quarrel, dog fashion, biting off each other's ears and noses. Knights of Don Quixote type shoot their brothers down. Prominent and skilful surgeons, who ought to be crowded with consulting cases, are forced to be constantly on the watch lest they lose a hard-earned reputation. Even in the growing West, where one would naturally expect to find good openings for physicians, financially speaking, every other occupation is superior. The common wood-chopper just over from Europe can save more money than the ordinary professional. Ox-teamsters with good habits often save four, six, and even ten thousand dollars, before forty years of age. I believe very few city or country physicians do better. The poverty of the Polish and the Russian physician stares us in the face unless we can improve our condition. What can we do? Quacks have always existed, and always will, if not legally, by evading the law. They may be exposed and crushed occasionally, but this can only be done by a united profession, such as we are far from being to-day.

The demand for physicians created by the war has ceased; and if we are only honest to the generation about us, and speak out and tell them that we are making nothing, and expect to make less, we may greatly diminish the increasing influx into the profession.

This we believe to be *the* remedy for our troubles.

More instead of less women are to be added to our ranks.

They have come to stay. Who blames them? If they cannot soothe the aching brow of a husband, or a son, they mean to stand by the bedside of the wounded soldier.

Hospitals will continue to draw our best families as long as they receive our skilled services for little or nothing. Patients of means prefer the attendance there to depleting their own pockets. Institutions for the needy poor are humane, but if we wish to eliminate all others we must charge more for services.

Instead of pulling down the skilled and the aged in the profession, as we fear is the rule to-day, we should help them. What we take from them goes often to the quack or to the novice. The struggling doctor of forty hints that the professional of fifty is antiquated in his practice, and in turn the former is soon submerged by his younger followers. If we can crush from the regular profession this selfish disposition, and render a helping hand to skill and experience, feeling sure of like support as we grow old, young men will find less encouragement, and quacks will lose their strongest support.

Then, again, one-horse medical colleges are becoming parasitic in nature, drawing life and energy from the body of the profession.

These are born in every hamlet by a few starving doctors, in order to thrust themselves more prominently before the public. A medical college in a sparsely settled community, with little capital and less talent, is a nuisance, and should be severely let alone. The metropolis alone should support medical schools. If this evil were abolished our better class of colleges would be more independent, receiving better pay for work performed, and able to withhold diplomas from all who are not capable and well instructed. As it is, medical colleges are in the same condition as the profession.

Can we not support our best schools and boycott the remainder?

It is time to act, if our profession is not to degenerate into worse than a trade; financially it is now beneath them all.

Undoubtedly this overcrowded state of affairs is the chief cause of the disgraceful attitude in which our once honorable body of national delegates now poses before the world.

Young men, and men of little experience and less skill, are struggling for existence, and must crowd out those of acknowledged ability and wisdom. Starvation or notoriety are the only alternatives; so the wise, who are few, are pushed aside by the inferior, whose number is legion.

Are there any remedies within reach for our disease? If not, woe unto our honorable body if it continue in the same course of degeneration it now follows.

In the West many of our best men are leaving the ranks for easier and more profitable occupations; more will soon follow, leaving the field to Chinamen and charlatans, unless our standing room can be enlarged.

Surely the cry of the pessimist is not without foundation! Is our diagnosis imperfect? If so, will some one please point out the mistakes. At least let us join hands, study the symptoms, search out the remedies, by experiment, if necessary, and apply them heroically. It is far better for the patient to die than live a life of abject misery.

A WESTERN SUFFERER.

THE MAN WHO IS ALWAYS DOING WELL.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: As you drew us a picture of the bore who always buttonholes you and pours into your unwilling ear the marvels of a very remarkable case I had the other day, there still remains another variety of the *genus homo* to describe. This variety is very common and is found in all climates, but whether he flourishes and grows fat is a doubtful question. This specimen seems to thrive when practice is dull and we have "the blues." He always assails our ears with "never busier in my life," "been going all day," "up five times last night," "had three labor cases yesterday," "old Smith paid me fifty dollars for delivering his wife," etc. What is the trouble with this individual? Are his vagaries to be taken as the early indications of some mental trouble, or does he really believe that he did do

all this, or is he actually in cold blood infringing on the commandment which forbids prevarication? The treatment for this complaint, when in good humor, is no doubt to swallow it, *cum grano salis*, to take away the disagreeable taste and to help its digestion. But when exasperated by dull times what must we do? We know that his "going all day" amounted to his buggy standing two hours before his office and two drug stores, plus the two hours he can take to tell us all this in our office. And as for old Smith, we have been there. We preceded Mr. Smith's previous accouchement, and the generous Smith's account still figures in only one column of our ledger, and if we believe what we hear his account is in unstable equilibrium on other ledgers. I say, what must we do, how must we treat this particular individual? Pray suggest something, for it was only yesterday that one of this genus flaunted a wallet in our face with the accompaniment, "Took in over two hundred to-day." Had we two been alone that wallet should have been ours at the risk of our life, not for its contents, but to show its emptiness. If any of your readers have met with such individuals their method of treatment is most earnestly requested.

Dr. [illegible]

THE PATHOLOGY OF INFLAMMATION.

[illegible] Medical Record.

SIR: In the editorial in THE RECORD of January 30th, concerning a "New Theory of Inflammation," you say, "Despite much opposition, the vascular theory of inflammation still maintains itself as the most satisfactory one yet offered." Virchow's suppuration theory which you refer to as his "inflammatory-stimulus" theory was given to the world in 1855. Cohnheim's migration theory, referred to as his "vascular theory," was made public in 1867. In your brief review of past theories of inflammation you make no reference to Stricker's tissue-metamorphosis theory published in 1869, in which he taught that the cells return to their embryonic state. This theory Stricker modified in 1874, and it was called by him his tissue-metamorphosis theory (see "International Encyclopædia of Surgery," vol. i., p. 27, Pathology of Inflammation). The fact that no reference was made to this theory in your editorial would seem to imply that it has no merit. Believing fully in the uniformity of nature's laws, and that the phenomena of the universe are best explained by the evolution theory, it being the best working hypothesis extant, I hold the opinion that the phenomena of disease, as a part of the phenomena of nature, are best explained by the law of degeneration, which is but a part of the great law of evolution, and that the pathologico-histological changes in all diseases are forms of degeneration.

Stricker defines his theory as a "metamorphosis of tissue; return to the embryonic condition; division into amœboid cells of the masses which have become movable; hence the destruction and the suppuration."

This theory of Stricker's seems to me to be in accord with what is known and taught by our best scientists concerning the law of evolution. Slight modifications of his views may be necessary as science progresses, but in the main I believe his theory will be proven to be true.

Degeneration may be defined as those changes from a higher to a lower form, from the complex to the simple, from the heterogeneous to the homogeneous, in which the organism becomes adapted to less varied and less complex conditions of life, in which there is suppression of form corresponding to the cessation of work. Reversion of structure toward, or to the embryonic state is one of the kinds of degeneration. Not that all degenerations are the exact reversed process of elaboration, but that some are, and the inflammatory process is, in many cases if not in all, this form of degeneration.

Stricker says: "Two features characterize inflammation, viz.:

"1st. An active hyperæmia.

"2d. An active tissue metamorphosis."

In active hyperæmia the blood-vessels become dilated because the stimulus, traumatic agency or influence, has induced an impaired function of the special nerves of that part definitely known as the vaso-motor nerves. That this impaired function of the nerves is a degeneration may be seen by recalling Herbert Spencer's well-known law of development and its converse, viz.: "When a wave of molecular transformation passes through a nerve there is wrought in the structure of that nerve such a change that a like succeeding wave will pass through with greater facility than its predecessor."

It seems to me that the converse of this law must be equally true, viz., when a wave of molecular transformation passes through a nerve with less facility than the preceding wave, there has been wrought in the structure of that nerve a change from a higher to a lower organization, and this is, at least, a temporary degeneration. In corroboration of this view experimental and clinical investigations have proven that these degenerative changes are characterized in the main by diminution and loss of the faradic and galvanic irritability, and this loss of power demonstrated by electricity is characterized as "degenerative reaction." Not that this can be easily demonstrated in inflammation, but that there are good reasons to believe it exists.

Stricker holds that the cardinal symptoms of inflammation, redness and heat, not always being present should be discarded as inaccurate, for when present both are fully explained by the active hyperæmia, the redness by the increased quantity of red blood-corpuscles, and the heat by the accelerated blood-current.

Pain, swelling, and impaired function are explicable only on the hypothesis of tissue metamorphosis.

Pain and visible swelling are not always present in inflammation. The swelling from infiltration and enlargement of the cells Stricker holds to be due to a more youthful condition of the tissues, the pain to tension or laceration of nerve-filaments induced by the swelling, and the impaired function to degeneration of the structures involved. These changes in the tissues are always degenerative at first, and when a stage of retrogression has been reached where cell multiplication can take place, the tissues may then be elaborated into their appropriate mature structure, or they may undergo still further degenerative changes which are destructive in character. Dr. Landerer considers "inflammation a conservative, protective, and reparatory process."

No doubt this is often the case, but not always. The forms of degeneration seen in inflammation are various; they no doubt vary with the nature of the exciting cause, and with the intensity of the inflammation, with the character and extent of the vascular disturbance, and with the nature of the tissue involved.

My object in writing these few lines is to invite attention to the "tissue-metamorphosis" theory of Stricker concerning the pathology of inflammation, and its truth or falsity, and to the value of the law of degeneration as explanatory of all pathological processes.

L. A. MERRIAM, M.D.

[illegible]

CONGENITAL DIAPHRAGMATIC HERNIA. M. Chevalier reports the case of a child born at seven and a half months, with marked ascites, who lived only an hour. At the autopsy, after an incision into the abdomen and evacuation of the fluid, an opening was seen in the middle portion of the right half of the diaphragm, through which the entire right lobe of the liver with the gall-bladder had passed into the cavity of the thorax. The hernia extended as high as the right clavicle, and was covered by a translucent membrane like the peritoneum or pleura. The right lung was compressed and pushed to the left.—*Revue Médicale*, December 26, 1885.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 20, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
February 20, 1886.....	2	7	45	4	6	65	3	0
Deaths.								
February 20, 1886.....	0	2	2	4	1	32	0	0

CLINICAL NOTES.—For dropsy due to anæmia, Professor Da Costa ordered Blaud's pill to be taken. Professor Da Costa frequently prescribes codeia in half-grain doses for cough. Professor Da Costa prescribes the centesimal solution of nitro-glycerine for asthma, commencing with one drop ter die. At Professor Parvin's clinic was a woman who had borne eighteen children at full term. She was accompanied by her sister, who had borne sixteen. Subnitrate of bismuth, mixed with glycerine, as thick as can be used in a syringe, is a capital injection for gonorrhœa (Bartholow).—*College and Clinical Record.*

DR. DA COSTA ON THE MEDICINAL TREATMENT OF DIPHTHERIA.—As to *medicines*, one of the earliest and best treatments is by potassium chlorate, 3 j. to 3 iss. per diem, in divided doses, well diluted. Next to this, either alone or combined with it, is tinctura ferri chloridi, gtt. x. every hour or two, for a child aged ten. The rising treatment now is with calomel. It consists in giving large doses frequently, not minding the free movements from the bowels. Give one grain every hour till twelve doses have been taken, then the same amount every second hour. This has been often tried in the *laryngeal* form, in larger doses, and is of especial utility in this variety of the disease. Corrosive sublimate, gr. $\frac{1}{20}$ to $\frac{1}{12}$ every hour, is a similar but hardly as effective treatment. Jaborandi is a very new remedy in this trouble. The idea is that when the patient sweats well the membrane will loosen. As it is very depressing, it is not safe unless the patient is quite strong. Locally, strong caustics have been abandoned. Cleansing, disinfecting gargles are the modern treatment. Carbolic acid, with borax and soda, may be used. Thymol holds a high place, never weaker than ten grains to the ounce. ℞. Thymol, 3 j. ; glycerini, f 3 iij. ; aquæ, f 5 iss. : M. Sig.—Gargle. Dilute, if necessary. Permanganate of potassium, a favorite with the English, equal parts of lime-water and glycerine, or two parts of the former to one of the latter, are very useful and grateful. When the patient is old enough these are best used in the form of spray. Equal parts of Monsel's solution and glycerine may be used when the redness and swelling are very great. Do not scrape the membrane. The most prominent among the solvents for the membrane are lime, bromine, and pepsine. Of lime it is difficult to get enough. Bromine is too irritating. The remedy that has done best is a saturated solution of pepsine in the form of spray. Lactic acid, jaborandi, and numerous other agents which have been used for this purpose, have some solvent power, but not enough.—*College and Clinical Record.*

SODA AND TEA.—The addition of bicarbonate of soda to tea-leaf, in the proportion of ten grains of the former to an ounce of the latter, has been found to remove almost entirely the injurious effect of tea on starch digestion.

IT NEVER RAINS BUT IT POURS.—The physician of King Alfonso, after having had the misfortune to lose his royal patient, narrowly escaped from the hands of a mob who made an attack on his carriage during the progress of the funeral procession in the Prado. But for the timely interference of the police the unfortunate physician's widow would probably now be meditating upon the fickleness of fortune.

MEDICAL SCHOOLS PROSPERING.—The medical schools of Charleston, S. C.; Atlanta, Ga.; Richmond, Va.; and the University of Virginia, report an unusually large attendance of students. We understand that the medical class of the Tulane University, of this city, is also much above the average.—*New Orleans Medical and Surgical Journal.*

THE SPINNING-WHEEL HAS BEEN PRESCRIBED AS A CURE FOR INSANITY.—It was introduced into the asylum at Douglas, Isle of Man, as something that might amuse the patients, and they forthwith became so interested in it, and in the idea of contributing to their own support by its use, that the direction of their nervous force was changed, and their condition greatly improved. Experiments are to be tried in other asylums.

DR. PLINY EARLE, the retiring superintendent of the State Lunatic Hospital, at Northampton, has a unique scrap-book in which he has preserved two hundred different envelopes received during his administration, spelling his name in as many different ways.—*Boston Med. and Surg. Journ.*

A RIPE OLD AGE.—Dr. Hipolito Fernandez Frutos, of Salamanca, Spain, has recently died at the age of ninety-three years. He was a professor at different times in the Universities of Salamanca and Valladolid, and was greatly esteemed by all who knew him for his intellectual attainments and natural good qualities.

RIGHT- AND LEFT-HANDEDNESS.—A correspondent writes in the *British Medical Journal* as follows concerning this subject : "The functional asymmetry which makes one hand stronger than the other must have some anatomical basis which ought to be discoverable ; but no one yet seems to have detected the cause. Many a time have I gone over the unilateral structures of the body, to consider if any one of them was calculated to influence its own side for good or evil ; but I was always accompanied in my search by this baffling forethought, that if I did succeed in finding some cause for a general excess of muscular nutrition in the right limbs, there would be a corresponding excess of nervous nutrition in the right side of the brain ; an advantage which, by the decussation of fibres, would be transferred to the left side of the body, and things would be equal again. Yet, in spite of this difficulty, I have been continually haunted by the idea that it is in the innominate artery, if anywhere, that we are to find the solution of the mystery. The innominate secures for its own subclavian and carotid those advantages over the subclavian and carotid which arise direct from the aorta on the other side. A tube of a given calibre is more effective than two tubes of half that calibre ; therefore, the innominate, besides serving as a kind of funnel-mouth to catch the stream, is a more effective channel than the subclavian and carotid together would be if arising from the aorta as two distinct tubes. Again, the innominate lies rather more in a direct line with the aorta than do the two equivalent vessels on the other side ; wherefore the innominate would have the advantage of lying more directly in the set of the stream. And the advantage of being a little nearer the heart, even if infinitesimal, is on the same side. Thus the 'bend sinister' of the aorta, and the existence of the innominate artery, tend to increase the blood-supply of the arm and brain on the right side. This fairly accounts for a slight excess of muscular nutrition in the

right arm; and a slight excess, by provoking use, would induce further development. But the right carotid has the same advantage as the subclavian; how is it, then, that equilibrium is not restored by an excess of nerve-force being sent across to the left of the body from the right of the brain? When we observe that ponderous muscular power can coexist with a comparatively small brain, as in the elephant and boa, whereas a large brain with small muscle by no means implies muscular power, it seems fair to conclude that an increase of muscle produces more physical effect than an equal increase of nerve-matter, and that consequently the advantages of the innominate tell more on the muscles of the right arm than on the nerves of the left side of the body. But this only accounts for the superiority of the right arm; what can be said about the remainder of the right side? In the first place, not all the right side is superior to the left; next to the arm, it is mainly in the leg that 'dexterity' is discernible. In the next place, the superiority of the right leg is not nearly so marked as that of the right arm, and may be due to the fact that a sense of power in the right arm inspires a sense of confidence in all else that is right, whence results more frequent use, and consequent development. Also, the advance of the right arm often necessitates the advance of the right foot, as in sword-exercise. But in numerous other cases the left leg, if left to itself, displays a degree of forwardness which excites a suspicion that its inequality is not natural, but induced. I have asked a considerable number of the London Shoe-brigade which foot their customers usually present first, and the replies have been that the left is first presented, almost invariably. The foregoing theory can be easily tested in several ways. Abnormal cases are occasionally noted where there is no innominate artery, the right subclavian and carotid arising directly from the aorta, like their fellows on the other side. I think that one or more such irregularities were observed last year in the dissecting-room of University College, Liverpool. It would be interesting to learn if there were a history of left-handedness in any of those subjects. Also it sometimes happens that the normal position of viscera is reversed, and all the organs are found to have changed sides. One such case is preserved in the College of Surgeons, and within the last few months another was reported from America. Some of the facts connected with right and left are curious and interesting. If one offer the right hand to a European adult, the propensity to extend the right hand in return is so strong as to be almost a reflex action. A Bokhara sheik who suspected Wolff of being a Frank, applied the test of offering him his hand; fortunately for himself, Wolff did not grasp the hand, but responded with a salaam in correct Oriental fashion. But in children this propensity is either not yet developed, or else is overcome by an innate law of least action. I have tried the experiment of offering my right hand to scores of little children; they invariably give the left, which is nearest, and do not cross the right hand over. If I offer my left, they return the right, again swayed by a law of least action. In sliding on ice, my school-fellows used to put the right foot forward almost invariably. Though the word Benjamin means Son of a Right Hand, yet the tribe seems to have been notoriously left-handed. The name may have been euphemistic, like Euonumos and Aristera. Von Miklucho Maclay says that Papuans are always left-handed. I should very much like to know something about the Papuan innominate."

The Diagnosis of Pregnancy.—Dr. Rufus B. Hall, of Chillicothe, O., writes that Dr. E. H. Grandin was mistaken when he said, in his paper read before the Obstetrical Section of the Academy of Medicine, and reported in The Medical Record of January 23, 1886, that an intermittent rhythmical contraction of the uterus, as a positive sign of pregnancy, "is referred to by only one authority (Lusk), and by him very briefly." Mr. Lawson Tait attaches great importance to this sign in differential diagnosis. Dr. Hall writes: "In my presence at the Outdoor Department of the Birmingham Hospital for Women, in December, 1884, Mr. Tait was able by this sign alone to diagnose uterine gestation in a patient that had been sent there by her physician for the removal of what he supposed to be an abdominal tumor. In the fourth edition of his work on 'Diseases of the Ovaries,' p. 211, he says: 'I need not here describe the evidences upon which we base a diagnosis of pregnancy, and shall allude to one only in detail, because it is one but little known as yet; and it is a sign more valuable, perhaps, even than that derived from auscultation, in that it can always be observed, whereas the fetal heart cannot always be heard—I mean the rhythmical contraction of the uterus. If the hands be placed on the abdomen of a case of suspected pregnancy and a fluctuating tumor be felt, that tumor will become quite tense and like a myoma if the examination be prolonged for a few minutes. Then, again, it will become flaccid and fluctuating, and this alternation will go on rhythmically at varying intervals. Once this sign has been felt and recognized, I think it will be impossible for the observer ever again to be deceived by a pregnant uterus.'"

A Chinese Materia Medica.—The work on materia medica of Lee Shee Chan is comprised in forty octavo volumes divided into fifty-two chapters. The introduction, divided into two chapters, fills no less than seven volumes. Then follow three or four volumes of lists of all the medicines used to cure disease, and after this the various articles are taken up singly and treated of in great detail. The last volume is devoted to a learned treatise on the pulse, which is the principal diagnostic aid at the Chinese physician's command. The properties of the articles discussed are considered in a very methodical manner, so that a student can turn immediately to any desired substance, and make himself familiar with its virtues at a glance. Thus the properties of the various parts of a horse are treated of under twenty-four heads, in which the qualities and efficacy of the viscera, hair, hoofs, and other structures are described most minutely.

Physicians' Prescriptions and Druggists' Commissions.—Dr. W. M. McPheeters, of St. Louis, writes: "Professor A. M. Wilder, of San Francisco, in closing a short communication on this subject, says: 'Is this evil confined to San Francisco? Does it not hold true of every large city of the country?' So far as St. Louis is concerned, I am happy to say that no such system obtains here. If it does, I, who have a pretty good knowledge of matters professional in this city, am ignorant of it. I do not believe that any respectable apothecary would offer such a bribe, or that any respectable physician would engage in such petty robbery of his patients." What has Chicago to say to this?

A Genuine Case of Faith Cure.—Dr. Robert T. Morris writes: "Not long ago, while I was seated in a country dentist's office, a farmer dropped in to have a tooth pulled. The tooth came out as hard as a sassafras-root, and the patient pranced around on one foot until the dentist said that he could stop the pain 'if the patient wished.' The patient was willing, and the dentist, taking up a dainty wad of cotton, dipped it in a solution of cocaine, and touched it for an instant to the region of blood, saliva, and pain. Then standing before the patient, with an expression of confident expectancy on his face, asked, 'Is the pain all gone?' The patient gave one glance at the countenance spread out before him, said that the pain had all departed, and began to talk cheerfully on some ordinary topic. Turning to me, the dentist remarked upon the exceeding value of cocaine in dental practice, and said that he believed it would come to be used by the general medical profession before long."

The Orthopedic Section of the Academy of Medicine.—A meeting was held on January 29th, at the rooms of the Academy of Medicine, to organize a section

on orthopedic surgery. Dr. A. Jacobi, President of the Academy, was in the chair. Dr. N. M. Shaffer was elected chairman, and Dr. T. L. Stedman secretary, of the section. Dr. Samuel Ketch read a paper entitled "Remarks on Lateral Curvature, with Special Reference to its Occurrence in Children." The paper was discussed by Drs. A. Jacobi, L. A. Sayre, V. P. Gibney, A. B. Judson, and others.

The Philadelphia Clinical Society.—A stated meeting of the society was held on January 22d, with Dr. E. F. Montgomery, President, in the chair. The following officers were elected for the ensuing year: President, Dr. John B. Roberts; Vice-Presidents, Drs. Clara Marshall and Daniel Longaker; Treasurer, Dr. L. B. Hall; Recording Secretary, Dr. I. G. Heilman; Corresponding Secretary, Dr. Rebecca S. Hunt; Reporting Secretary, Dr. Mary Willits. Dr. John B. Roberts reported a case in which there was a transudation of fluid on the cheek, in the region of the parotid gland, during mastication. On examination of the buccal opening of Steno's duct a muco-purulent fluid was expressed. A probe was introduced for an inch or more into the duct, and the canal was stretched. The following day the patient stated that the transudation was less profuse. The canal was again dilated with the probe, but on neither occasion was a calculus found. The speaker believed the exuded fluid to be saliva, but the patient returned to his home in the country before an examination to determine the fact could be made. Dr. Henry Hartshorne remembered having seen a case of this nature when he was a student of medicine, but he could not say whether the exudation took place only during mastication or not. Dr. Clara Marshall said that Ringer, in his "Handbook of Therapeutics," mentioned a case of excessive sweating of both cheeks, occurring only during mastication, which was cured by the use internally of ten drops of the tincture of belladonna thrice daily. She would not say, however, that in Dr. Roberts' case the fluid might not have been saliva.

The New York Orthopædic Dispensary.—The report of this institution for the year ending September 30, 1885, shows a total of 1,722 patients treated in the dispensary, and 48 cared for in the wards. There were 38 deaths in the outdoor department and 1 in the hospital. Six hundred and sixty-four braces were supplied to patients, in addition to plaster-of-Paris, felt, and other temporary forms of apparatus. The days of hospital care were, for free patients, 6,538; for paying patients, 1,437; total, 7,975. There were 10,252 visits made by patients at the dispensary, and 768 visits made by the surgeons at the patients' homes. The managers are very desirous of making the hospital department wholly free, and they appeal to the charitably disposed to aid them in attaining this end by endowng one or more beds, or by becoming annual subscribers.

The Penalty for Malpractice in China.—For engaging in the practice of medicine in China no license is required, but the lot of the unsuccessful physician is not one to be envied. The following is the two hundred and ninety-seventh section of the penal code which deals with these unlucky practitioners: "Whenever an unskilful physician, in administering medicines or using the acupuncture needle, proceeds contrary to the established forms, and thereby causes the death of the patient, the magistrate shall call in other physicians to examine the medicines or the wound. If it appear that the injury done was unintentional, the practitioner shall then be treated according to the statute for accidental homicides, and shall not be allowed any longer to practise medicine. But if he have designedly departed from the established forms, and have practised deceit in his attempts to cure the malady, in order to gain property, then, according to its amount, he shall be treated as a thief; and if death shall ensue from his malpractice, then, for having thus used medicine with intent to kill, he shall be beheaded."

Priority in Yellow Fever Inoculation.—Dr. Freire, of Brazil, is generally credited with having been the first to conceive the idea of inoculation as a means of prevention of yellow fever. But Dr. Carmona y Valle, of Mexico, claims the honor of precedence, having published an article on this subject in the *Gaceta Médica*, the official organ of the Academy of Medicine of Mexico, on October 26, 1881. The latter has very recently published an exhaustive monograph on yellow fever, dealing especially with the etiology and prophylaxis of the disease, which is a most valuable addition to the literature of this subject.

Vaccination in China.—It is stated by Mr. E. C. Bridgman that vaccination was entirely unknown to the Chinese until introduced in 1805 by Mr. Alexander Pearson, surgeon of the East India Company, who both vaccinated numbers himself and wrote a small tract in explanation of the theory and art. This tract was translated into Chinese by Sir George Staunton. From that time an efficient vaccine establishment was maintained at Canton, first under the care of Mr. Pearson, and subsequently under a native gentleman, He Qua, who was initiated and well instructed in the business by the founder of the institution. From Canton the practice spread into several, if not most, of the provinces of the empire, and the explanatory tract was also widely circulated, although the Chinese publishers took very good care to suppress all evidences of its foreign origin in order not to offend the prejudices of the natives.

Coryza of the New-born.—Dr. Semchenko claims to have obtained excellent results from the use of cocaine in infantile coryza. He instils two drops of a two per cent. solution into the nasal cavity six times a day, and says that four days usually suffice to obtain a perfect cure.

Vomiting of Pregnancy.—Dr. Federico Léon reports, in the *Gaceta Médica Catalana*, a case of obstinate vomiting of pregnancy, which, after all the usual remedies had been tried without success, was promptly relieved by rectal injections of hydrate of chloral.

Treatment of Cardiac Dyspnœa.—M. Sée recommends the following formula: Tincture of iodine, one-half drachm; syrup of horse-radish and syrup of poppies, of each two ounces. Three teaspoonfuls or more may be given per diem in cases of dyspnœa associated with heart disease. The syrup of horse-radish disguises very effectually the taste of the iodine.

Umbrellas and Abdomens.—A certain man in Bavaria, whose ordinary occupation was that of repairer of umbrellas, was consulted in a friendly way by a woman who had an intra-abdominal tumor. He said he could repair her just as well as he could an umbrella, and accordingly, his wife assisting, he cut open the poor woman's abdomen with a razor, found a tumor, cut that out, and then sewed up the wound and smeared it with some "healing salve." The woman did not do as well as an umbrella would have done under similar circumstances, and it was found necessary to call in a physician. The latter caused the arrest of the would-be surgeon and his wife. The patient is now improving.—*Allgemeine Medicinische Central-Zeitung.*

Death of Dr. Dechambre.—The death is announced of M. Amédée Dechambre, editor-in-chief of the *Gazette Hebdomadaire de Médecine et de Chirurgie* and of the medical encyclopædia which bears his name. The cause of his death was cerebral apoplexy. He was seventy-four years of age, but was in the enjoyment of excellent health at the time of his seizure.

Diaphoretic Boluses.—The following combination is said to be useful: Sublimed sulphur and bitartrate of potassium, each thirty grains; powdered resin of guaiac, fifteen grains; to be divided into four boluses. These may be taken at intervals during the twenty-four hours when it is desired to maintain a more or less profuse diaphoresis.

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SOME SURGICAL POINTS IN THE TREATMENT OF PERITYPHLITIC ABSCESS.[1]

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THE following case, in which a perityphlitic abscess was opened only forty-eight hours after the symptoms became acute and the patient took to bed, will serve as an introduction to the remarks I have to offer on the surgical treatment of this disease.

CASE I.—On December 5, 1885, I visited with Dr. Kinnicutt a gentleman, thirty years of age, who was suffering from very severe pains in the right iliac fossa, radiating down the thigh, with a temperature of 103° and pulse of 120. The abdomen was normal on examination except in the right iliac region, where over an area two inches square there was dulness and exquisite tenderness (so that percussion was very unsatisfactory), and a sense of fulness or increased resistance on palpation. These were the only signs of an exudation. He had been in bed but forty-eight hours, although for ten days previously he had experienced a steady dull pain in the inguinal region, with occasional paroxysms which were more severe. He was constipated for a week during this time, but the bowels moved naturally three days before I saw him. His symptoms were not sufficiently acute to deter him from a week's railroad travel, and on his return from this they presented the features mentioned above

Dr. Kinnicutt had suggested exploration, and it was done at once. The needle, thrust to a depth of three inches directly backward into the iliac fossa, produced no pus; nor was any obtained when it was thrust in front of and behind this site. A longer needle was then pushed from a point behind and above the anterior superior spine, toward the middle of the fossa, a depth of four inches, and through it the syringe drew some very offensive and bloody pus. The incision was made a few hours later, under ether, above and to the outer side of the middle of Poupart's ligament. The tranversalis fascia was thickened and grayish in color, the muscular layers absolutely healthy in appearance. An incision through the fascia evacuated about an ounce of pus, very dark from blood, and of characteristic odor. No foreign body escaped, and as the time of operation was so early I did not deem it wise to thrust the finger into the abscess cavity; but an elastic bougie showed that it extended from the centre of the incision about two inches toward the symphysis and three or four toward the lumbar region. The pain and fever disappeared next day. The rubber drain was removed on the tenth day, when the cavity was reduced to a sinus four inches deep, extending toward the loins. This was slow in healing, though its orifice was dependent in the erect position. A foreign body was detected in it at a depth of three inches, at the end of six weeks, and removed with dressing forceps. It proved to be a calculus, doubtless formed in the appendix. The sinus closed in a week. The concretion is as large as a white bean, calcareous in composition, the salts being arranged in concentric laminæ, and with no foreign body as a nucleus. Chemical examination has not yet been made.

In this instance the operation was performed at an earlier moment than in any case that I have seen recorded, and I think that the thorough exploration with the needle and hypodermic syringe was the chief factor in bringing it about. I have several times withdrawn pus from the iliac fossa, through a puncture made from the lumbar region downward and forward toward the middle of the iliac fossa, when punctures directly into the fossa or the tumor occupying it were fruitless. A good-sized needle is indispensable (No. 3 or 4 of the French scale for urethral instruments), and a "tight" syringe. These punctures are harmless, and should be made into the lumbar region as well as the iliac fossa. We are all familiar with their value as a means of diagnosis, but I would like to emphasize the advantage of making such thorough explorations as I have described.

But I desire to claim something more for the needle, and that is, that it is the only trustworthy means of ascertaining the presence of pus. Both the general symptoms and the local conditions mislead us in this respect. There are patients who are attacked with high fever, severe pain, chill, and even sweating, whose inflammation undergoes resolution; and there are others in whom the abscess reaches great proportions with trifling disturbance.

Dr. Robert F. Noyes, in a paper read before the Rhode Island Medical Society in 1882,[1] mentions a case reported by Dr. Edson, where the formation of abscess was "indicated by chills, pointing, and a temperature of 103.4°. The case terminated suddenly by absorption. There was no discharge from the rectum, and no external opening." In the following case I was lulled into a feeling of security by the absence of constitutional symptoms, and allowed a week to elapse before making an exploration with a needle, while an abscess of huge proportions was present all the time.

CASE II.—On August 28, 1885, I saw with Dr. U. G. Hitchcock a gentleman, aged fifty-nine, who had been sick for six weeks. His illness commenced with chilly sensations, fever, and slight pain in the iliac fossa, where there was found tumefaction. There was constipation, and the symptoms continued till, at the end of about two weeks, he was relieved of a mass of impacted fæces. Then he improved so as to be able to walk about, but there remained a slight pain in the iliac region, an evening temperature of 100° to 100½°, pulse of 90 to 100, and on my first visit there was a distinct tumor in the iliac fossa, not very tender, not fluctuating, giving dulness over an area as large as the palm of the hand. The abdomen was elsewhere normal, the abdominal wall over the tumor not involved, and the bowels moved naturally, and only a dull pain was complained of. But there had been no improvement for some days, and the general debility was sufficient to keep the patient in his room. I advised waiting a few days before making an exploration. A week later the condition was unchanged. A large hypodermic needle was introduced through the same puncture, thrust backward toward the brim of the pelvis directly downward, and also forward toward the symphysis. From the latter situation a syringeful of pus was drawn. The following day through the usual incision, three inches long, an abscess was opened, which contained at least a pint of pus. Its cavity reached forward beyond the line of the rectus muscle and backward into the connective tissue behind the ascending colon. There was no foreign

[1] A paper read before the Practitioners' Society of New York, February 5, 1886.

[1] Transactions of the Rhode Island Medical Society, 1882.

body seen. It healed completely in two months, but the patient was much prostrated in the fourth week by a pleuro-pneumonia of the right lung. This was succeeded by an arthritis of the first right metatarso-phalangeal articulation and a periostitis of the right eighth rib, from which he is slowly recovering.

These considerations lead to this conclusion: That in perityphlitis the general symptoms and the local conditions may furnish valuable indications of the presence of pus, but thorough exploration with the needle is the best means of diagnosis. Dr. Sands,[1] in 1880, expressed the same view. "Everything depends on an exact diagnosis, . . . and I would suggest a more frequent employment of the aspirator, as affording the most reliable test at our command for purposes of diagnosis."

Opening into the bowel has generally been followed by recovery; but it is sometimes followed by external opening, or burrowing of the matter into the lumbar region, or into some viscus as the bladder, for instance. In a collection of 67 cases which I made for an inaugural thesis in 1872 (*New York Medical Journal*, September, 1873), I found 15 in which the abscess burst into the cæcum. In 10 the cæcum alone was invaded, and 9 recovered. In 5, after the discharge into the bowel, external opening occurred three times with two deaths, and once into bladder, and once into bladder and externally as well. The two last cases recovered.

This tendency of the pus to burrow has not been seen after external opening by operation. The sinus left is stated by all writers to have closed promptly. In view, then, of the liability to continuance of the suppuration after a discharge of pus has taken place from the bowel, I would urge the wisdom of keeping careful watch over these patients, and to explore the lumbar region promptly and repeatedly with a needle, if the general condition do not improve; and I find in the uncertainty of the result after opening of the abscess into the bowel another argument in favor of the operation at the earliest possible moment.

The following case is one in which a large lumbar collection, which gave rise to dangerous symptoms, followed two discharges of pus per rectum. The local signs of abscess were quite masked by the presence of gas in the abscess.

Case III.—A gentleman, aged sixty, rather corpulent, with thick abdominal walls, was attacked February 28, 1883, with violent pains in the abdomen, a sharp chill followed by a temperature of 107°, and sweating. He was constipated, and vomited a number of times. The following day the vomiting stopped, the fever fell to 103°, there was general abdominal tympanites, the constipation continued, and the pain became located in the right iliac fossa, which was tender. There was no tumor. I saw him with Dr. George E. Moore, and called Dr. Kinnicutt. We regarded the case as one of perityphlitis, or typhlitis from impaction of fæces. With rest in bed, opium, and a mild laxative, there was marked improvement after a few days. The pain remained, but was less severe, the fever was only 100° at evening, the bowels moved, and on the tenth and twelfth days there was considerable pus in the stools. All the local signs of inflammation in the iliac fossa disappeared. Between the twelfth and seventeenth day, however, he grew worse. The fever remained about 101° in the evening, with a rapid pulse, and occasional delirium at night. The tongue was dry and furred, and the prostration extreme. No vomiting occurred, and the bowels acted after calomel was given; but the tympanites was very great. Locally there was nothing abnormal to be elicited save a slight tenderness in the lumbar region, and a suspicion of œdema of the subcutaneous tissue. Once or twice the integument showed a patch of erythema, which disappeared in a few hours. On the eighteenth day Dr. Draper saw the patient, and we made a puncture with a *small* aspirator-needle, which showed nothing. Through a large needle stinking pus was withdrawn. An incision was made on the nineteenth day, horizontal in direction, and nearer the crest of the ilium than the ribs. About two pints of pus came away, with several connective-tissue sloughs two or three inches in length, but no concretions. The cavity of the abscess extended nearly to the symphysis. With drainage and irrigation with weak carbolic solution it healed completely in four months. For a week or ten days fæces in small quantities escaped through the sinus.

The necessity of opening the abscess early—and long before fluctuation has occurred—has been insisted on with justice by a number of writers. I have but one suggestion to make on this point, and that is that in determining the *time* to operate, the *duration* of the illness should play a rôle subordinate to that of the results of exploration with the needle. It is certainly undesirable to operate too early, when the pus may not have formed, or the inflammation be going on to absorption. It is equally undesirable to defer the incision and subject the patient to the risks of an unfavorable course on the part of the pus. A sort of "time allowance" has been fixed by some surgeons. Gouley fixes the seventh or eighth day as the proper time for incision; Weber, "not beyond the ninth or tenth;" Sands,[1] from the twelfth to the eighteenth day. From this discrepancy it is obvious that the "time allowance" is of no use, and that it will be far wiser to be guided by the evidence afforded by *needle exploration*.

It may be well to mention the results of Dr. Noyes' investigation of one hundred cases of abscess, treated by incision, as the paper may not be accessible to all. Of these one hundred cases, eighty-five per cent. recovered. The mortality was but fifteen per cent. In the sixty-seven cases collected by myself in 1872, where no early operation was done, the mortality was forty-seven per cent.

I have yet to hear of a single operation which has led to bad results. Even when no pus was found, the incision has proved of use in relieving the pain and fever, and diminishing the tension, and directing the course of the pus toward the surface. Several such cases have been reported. In one instance I found pus with the needle, but could find none on incising the abdominal wall, and none appeared subsequently, except from the wound.

Case IV.—On January 27, 1885, a boy, aged seventeen, was admitted to my wards at the New York Hospital, who, two weeks before, had been suddenly taken with pains in the abdomen and vomiting. This was followed by fever, and there was great pain in the right iliac fossa and lumbar region. The bowels were regular, and the appetite good, but the pain and fever continued in spite of medical treatment. When admitted he had pulse, 120; temperature, 103° F., and the region just above the crest of the ilium on the right side was tender and painful. The abdominal wall was normal; there was no bulging, but an increased sense of resistance on palpation, and dulness on percussion between the crest of the ilium and the free margin of the ribs. There was trifling œdema of the subcutaneous tissue. A hypodermic needle was introduced just behind and above the anterior superior spine of the ilium, and a half-drachm of very offensive pus drawn out. Under ether an incision three inches long was made, parallel to the iliac crest and down to the peritoneum. Several punctures of this membrane in different directions discovered no pus. The wound was stuffed with iodoform gauze and carbolized fomentations applied. The following day there was no more pain, the temperature fell to the normal, and even the swelling and tenderness were not perceptible. No matter was discharged in the stools. The wound healed in two weeks and a half.

[1] Annals of the Anatomical and Surgical Society, [illegible]

"In this case the change in the patient's condition after the incision was most marked, and I see no reason to criticise it. In fact I feel convinced that in the aggregate of cases more good than harm would be done by an early incision, even if the needle detected no pus, provided only that the surgeons were led on by the indications furnished by the general and local symptoms.

Attention has been called by Dr. Burchard, of this city, to the cases of perforative typhlitis in which the cavity of the peritoneum is invaded early, with fatal result. Laparotomy has been rightly considered desirable in such cases. The following case bears on this matter.

A laborer, aged twenty-five, was admitted to my service at the New York Hospital, in this condition. His pulse was 120; respiration, 30; temperature, 103°, with considerable general tympanites and great pain referred particularly to the right side and iliac fossa, and radiating down the thigh. The right iliac fossa was very tender and offered an increased resistance on palpation. It was not dull. Two days before he had a chill, followed by high fever, and vomiting. He was constipated, but the bowels had moved once after an enema. The needle detected pus only in the lumbar region, where there was no tenderness. An incision was made there down to the very wall of the colon, and but a drachm of offensive pus found behind the colon. The finger was not introduced, but a probe, and a bougie as well, did not detect any softened tissue in any direction farther than an inch. The symptoms of general peritonitis persisted, and he died in two days. The autopsy disclosed a general suppurative peritonitis, perforation of the appendix in two places near the cæcum, and fæces in the connective-tissue or the iliac fossa, which was softened and necrotic as far up as the liver, but not yet broken down so as to form much pus, *and nowhere communicating with the peritoneal cavity.* The incision fell in the middle of this tract. In this case inflammation of the peritoneum, and of the connective tissue of the iliac fossa, must have been nearly coincident; and it is doubtful in my mind, since the process had involved so large an extent of tissue, if any operation would have effected a cure. But if a similar case should occur to me again, I would certainly pursue the investigation at the time of operation to the point of seeing the appendix and ascertaining its condition. I am supported in this conviction by the evidence of a somewhat similar case under the care of Dr. Richard Wiener, in which, after the symptoms of perityphlitis had lasted a day or two, those of general peritonitis supervened. The patient, a boy, aged fourteen, lived three weeks. On autopsy there was found general peritonitis, and an abscess behind the cæcum and ascending colon, which contained a pint or two of fluid fecal matters. The appendix was perforated in two places, but there was no communication between the abscess and the peritoneal cavity.

THE PREVENTION OF MAMMARY ABSCESSES.—Occasionally one is called to cases where abscess is on the point of forming, either from neglect or injudicious treatment, and where, consequently, something more is required. Under such circumstances, Mr. Philip Miall (*British Medical Journal*, November 21, 1885) states that he has repeatedly seen all the symptoms of a hot, heavy, inflamed breast, with redness of skin, throbbing and deep-seated pain, pulse being 120 in the minute, all disappear in the course of a few hours under fomentation of hot water and ammonia. An ounce of carbonate of ammonia is dissolved in a pint of boiling water, and when solution is effected the temperature will scarcely be too high for fomentation with cloths dipped in the liquid. These must be assiduously applied for half an hour at least, and repeated for two or three hours if necessary. It is well to protect the nipples, though Mr. Miall states that he has never known them to be injured. Relief is immediate, and more than three applications are seldom required.

THE MANAGEMENT OF BREECH PRESENTATIONS.[1]

By ROBERT A. MURRAY, M.D.,

[illegible] NEW YORK.

ALL writers in obstetrics admit that the mortality in breech presentations is great, very much greater than that of cephalic, and equalling that of the much less frequent presentation of the face. Up to the time of Ambrose Paré the presentation of the pelvic end of the fœtal ovoid was looked upon as preternatural, and cephalic version was always performed. Naegeli has, however, well shown that though attended with much danger to the child the risk to the mother was not greatly increased, and that the mechanism was strictly analogous to that of the vertex.

The pelvic extremity offers at the superior strait about once in 35 cases. Naegeli says that out of 100 labors 94 or 95 present by the head, 4 by the pelvis.

Dr. Rigby, in an analysis of 71,578 cases, found the breech present once in 78 cases, the feet 1 in 105 cases; the mortality of the infant 1 in 3.8, when the breech offered entire; when the feet were first it was 1 in 2.8.

The statistics of Madame La Chapelle show that in 804 presentations of this class 102 children are born feeble, and 115 are still-born, a large number of the former dying shortly after birth; the proportion of deaths to the whole being rather more than one-seventh, while in 266,698 vertex positions there were only 668 still-born, which gives one in thirty. When the buttocks advance first the number of deaths is 1 in 8½, feet presentations 1 in 6½, and for the knees 1 in 4½, or not quite one-fourth.[2] The breech may present entire, or one or both feet descend, the knee may also present, though that is very rare. When, at the beginning of labor, before the os is fully dilated, the presentation of the foot occurs, the results are unfavorable.

Professor Dubois, in an analysis of 80 cases observed by him, found 54 ordinary, and 26 in which the feet descended in advance, the presentation of the knees not being seen once.

The causes we find stated for the presentation of the pelvis are: contractions of the pelvis, excess of liquor amnii, allowing of great mobility of the fœtus, violent movements on the part of the patient, and peculiar formation of the lower segment of the uterus. It is remarkable the frequency of these cases in premature labor and multiple pregnancies.

Professor Simpson, from the observations of Dubois at the Maternity Hospital, has constructed a table, showing the presentation of the child at different periods of pregnancy which illustrates this point.

Period of Pregnancy	Total [illegible]	Presentations. [illegible]	[illegible]	Head
Before end of sixth month.....	121	5	32	84
During seventh month	113	6	34	73
During eighth and ninth months.	60	2	22	36
At full term.....	18	1	3	14

Those stated in the third line only represent cases where the child was born dead, and show how frequently, the child being dead, the loss of the tonicity of the spine and flaccidity of the tissues causes malpositions.

From this table Professor Simpson demonstrates that there is a constant tendency after the sixth month of pregnancy for the head to present.

From the statistics of Hegar and Spiegelberg, of 33,264 children 910 were the result of multiple pregnancy, and 659 were premature; of the former 227, or 25 per cent., and of the latter 148, or 22.4 per cent., were delivered by the breech, though the general average of breech pres-

[1] Read before the [illegible] New York Academy of Medicine, February [illegible]

[2] Cazeaux and Tarnier, [illegible]

entations to the entire number of births is only 2 to 2.5 per cent., or about 1 in 40.[1]

The breech, composed of the nates, feet, and knees, may present, according to Naegeli, in two primary positions, the dorso-anterior and the dorso-posterior, the latter less frequently than the former. Of 161 cases occurring at Heidelberg, 121 were dorso-anterior, 40 dorso-posterior.

The positions of the breech are analogous to those of the head, the sacrum being at the brim in generally one of four positions. The dorso-anterior with the left hip to the front and right, the sacrum to the left acetabulum, the right hip to the left posteriorly, the long diameter (bis-ischiatic) of the fœtus in the right oblique of the mother's pelvis is the most common, and is generally classed as the first position. Succinctly the mechanism is: First, under the influence of uterine contractions the breech molds to the contour of the brim, and very gradually dilates the cervix, the long bag of waters formed by the irregular character of the breech being very inefficient in this duty, so that the first stage of labor is usually very protracted. The breech now descends to the floor of the pelvis, the left hip being rotated to the pubic arch by the guidance of the right anterior ischial plane, while the right hip is guided to the hollow of the sacrum by the left posterior ischial plane. The child bends in a sigmoid form on its left side, the right hip is forced to the vulva and, unless the perineum is unusually resistant, is born first, the left hip being retarded by pressure on the pubes. The body now descends, and with the extension of the lower limbs is born. The shoulders descend in the same oblique diameter, perform the same movement of rotation, and from the arrest of the left shoulder at the pubes the right shoulder is caused by the pains to sweep over the perineum. The arms not infrequently at this stage slip up during the birth of the trunk, and are disposed at the side of the head. If the pelvis be contracted, or the head be not thoroughly flexed on the sternum, this is particularly likely to occur, and the arms may then be found behind the head on the back or neck, and cause a serious obstacle to delivery. The head descends in the right oblique diameter, performs the opposite rotation to that of the breech, turning from left to right under the arch of the pubes, the sub-occipital point becomes fixed, and under the influence of powerful uterine contractions, and particularly contractions of the voluntary muscles of the floor of the pelvis and vagina, the forehead is extruded over the perineum. Since the propulsive energy of the uterus acts at great mechanical disadvantage on the head, it is difficult to see how, but for the contractions of the vagina and pelvic floor, any pelvic labor could possibly be completed without the interference of art.

The second pelvic position being dorso-anterior is similar to the first, the rotation being, however, in the opposite direction.

The third position being dorso-posterior with the sacrum to the right sacro-iliac synchondrosis differs in its mechanism from the first and second in the greater rotation needed to bring the right hip and occiput to the pubes, which is the natural termination. Failing in this, the occiput rotates to the hollow of the sacrum, causing the labor to be prolonged and difficult. If the head descends without interference, the pains being strong and the pelvis large, the occiput is retarded by the perineum at the outlet, the chin, forehead, and face are forced out by a movement of flexion, the back of the occiput pressing on the perineum as a fulcrum. In rare instances the chin is caught on the back of the pubes; the head is then delivered naturally by a process of extension, the depression in front of the neck being the fulcrum; the occiput passes over the perineum, followed by the vertex and face.

The fourth position is analogous to the third, and generally is converted into the first as the third was into the second; but the same rotation of the occiput into the hollow of the sacrum may occur.

The management of the ordinary breech presentation consists in the first stage in the delaying, as far as possible, of the rupture of the bag of waters, so that the cervix may dilate fully to the size of the breech, and especially become soft, yielding, and dilatable.

This may be accomplished by avoiding unnecessary examinations which cause powerful voluntary contractions, and the finger-nail may lacerate the membranes. The membranes may be supported, and at the same time the vagina dilated by a full-sized Barnes' dilator or a Braun's colpeurynter in the vagina. As long as the breech descends we do not interfere, as the more full the dilatation of the parts the safer and more rapid will be the subsequent passage of the head. So soon as the trunk and lower limbs are born the critical period for the child approaches. Compression of the funis by the hard, unyielding head against the pelvic wall is likely to occur, and if complete and continuous, rapidly destroys the child by interrupting the placental circulation. We should now pull down a loop of the cord and pass it to the sacro-iliac synchondrosis at the side of the child's head. The child's limbs and trunk should be enveloped in a warm cloth and the pulsations of the cord watched; if interrupted or feeble in its pulsations we must immediately relieve the pressure, or the child will be lost.

If the head descends properly, and the pains are strong, we support the trunk with one hand and follow the uterus down with the other, making slight pressure to excite the uterus and voluntary muscles to contraction. The flexion of the head may be aided by raising the trunk upward. The arms are generally liberated in advance of the head.

If the pelvis be ample, the child premature or below the average, and the pains strong, the labor is not difficult; in fact, excepting a retardation of the head at the perineum, it is generally rapid, but if the child is mature and well developed a breech labor is by no means easy.

The difficulty arises from the nature of the presenting part, the condition of the uterus, and the position of the child. There are two principal conditions of breech presentation where the labor may become arrested or difficult.

Whether the position be dorso-anterior or dorso-posterior, the legs of the child may be disposed in two different ways. In the most common case, the legs flexed on the thighs approximate the feet to the nates, so that they become readily accessible; in the less frequent case, the limbs are extended upward over the front of the child so that the toes are near the face.

The breech is not nearly as large as the head, and though, as Madame La Chapelle states, its softness enables it to mould better to the brim, yet this very fact diminishes its dilating power over parts through which a larger body, the head, must pass. Indeed, the fœtal ovoid may be looked upon, as Prof. Barnes in "Obstetric Operations" (p. 173) well states, as a wedge. The breech, forming the apex of the wedge, does not open the cervix widely enough to let the base, formed of the head and arms, which often exceeds the capacity of the brim in mere bulk, to pass. Again, the rotation of the child on its long axis is difficult. The condition of the uterus must also be considered. The cervix only dilates proportionate to the body traversing it. The uterus contracts firmly on the parts in its cavity, but as the base cannot descend, a state of spastic rigidity in the cervix ensues, which, encircling the wedge about its middle, tends to lock up the head and impede both descent and rotation. A condition of inertia is also likely to be present.

If traction be now resorted to by means of hooks, the fillet, or forceps, and unsuccessfully, as it is likely to be, the apex is dragged into the pelvis, the cavity more tightly filled, the compression of the cord is increased, and the uterus has become more irritable. The only safe means

[1] Spiegelberg: Lehrbuch der Geburtshülfe, p. 140.

for the child and mother out of this difficulty is to bring down the foot.

The use of the blunt-hook is difficult ; it is apt to slip out of the groin on to the thigh, and fracture ensues on traction, it contuses the soft tissues and may lacerate the femoral vessels. If the child be living the blunt-hook should not be employed.

The fillet (formed of a skein of silk or a silk handkerchief) may be guided up over the groins by an elastic catheter or by Bellocq's sound, and affords a good hold for traction, but it may also cut into the tissues, and is not powerful enough to overcome the difficulty. The use of the fingers in the groin, as recommended by Smellie, a procedure of much service when the breech is low in the cavity, or to overcome the resistance of a rigid perineum, is of doubtful utility.

The obstetric forceps has been recommended, though condemned by most authorities. Hohl says the obstetric forceps to the breech is neither necessary nor effectual. Professor Lusk[1] says : The experiences of Hueter and Hooke have been favorable, though the latter only advises it where the breech is detained in the cavity, or at the outlet by the perineum." The forceps is designed only for the head, its cephalic curve does not adapt it for traction on the breech, and may injuriously press on the abdominal viscera.

The performance of cephalic version, as recommended by Spiegelberg, in the interests of the child, would only be possible in the first stage, before the waters had ruptured, and before the breech had become wedged in the brim or cavity. Even moderate contraction of the pelvis would contra-indicate it, since Professors Simpson and Thomas have demonstrated that the head can pass through the pelvis with less difficulty when brought down base first, this being due to the lateral pressure on the mobile parietal bones, causing the sutures and fontanelles to overlap and collapse. Again, Professor Barnes has shown that in head-last labors, with any contraction of the pelvis, the head is rarely or never seized in its widest transverse diameter, but at a point anterior to its greatest width, that is, in the bitemporal diameter, the biparietal and occiput finding ample opportunity for moulding in the freer space left at the side of the promontory. It may therefore be considered as demonstrated that the head coming base first passes the contracted brim more easily than coming crown first. And if the head comes through more easily it may be inferred that the child has a better prospect of being born alive.

These observations I believe are pertinent to all head-last labors.

To make an error in mensuration of a mother's pelvis, or the presence of a little larger sized child than the average, would in many cases condemn the child's life by craniotomy, after failure with the forceps, when the proper treatment might have saved it. I have seen many cases lost by the delay incident to the employment of these measures, before their inefficiency was demonstrated. I have never needed to apply the forceps to the breech at the brim. The clear indication is to break up or decompose the obstructing wedge. This is done by bringing down one foot.

Having determined the position of the breech in relation to the pelvis by the ordinary diagnostic points, sacrum and anus behind, the genitals in front, and the ischiatic protuberances on either side, the hand is passed into the os uteri in front of the breech, where the feet lie. Seize one by the instep and bring it down. Generally the breech will soon descend. One foot is all that is necessary, as the breech still retains its rotundity and the cord is better protected than when both feet are brought down. The foot nearest the pubes is the best, as traction, if necessary, can more easily be exerted. If the case be not urgent from other complications it may now be allowed to proceed naturally. Where the feet are extended up to the face over the front of the child the operation is much more difficult. If the breech fill the brim or is forced into the cavity, but little space is left for the operator's hand, and in this case the hand must be passed fully to the fundus uteri to reach the foot. No ordinary case of version involves passing the hand so high. Here it is essential that anæsthetics be given to the surgical degree, the rectum and bladder emptied, and the patient placed on her back.

The hand is gradually and gently passed by the breech that one being used whose palm will touch the abdomen of the child, until the foot be reached, preferably the anterior, when it is seized by the instep and drawn down so as to flex the leg on the thigh ; and in withdrawing the hand bring the foot out of the uterus and vulva. During the operation the uterus is steadied by the other hand or by an assistant. The case may now be left to follow the ordinary mechanism of breech cases. If inertia uteri be present, or resistance of the soft parts, or if prompt delivery be demanded in the interests of mother or child, we have attained, in the hold on the leg, a security for the further progress of the case.

The operation of extraction of the breech may be divided into three acts : Drawing the trunk through the pelvis, liberation of the arms, extraction of the head.

1. Traction on the leg should be carefully made, coincident with the pains, downward, and backward in the axis of the brim, external pressure being made by an assistant till the breech has fairly entered the cavity ; when the buttocks appear at the vulva, raise the leg toward the abdomen to release the posterior hip. When the breech is delivered, the cord should be looked after, the pulsations carefully watched, and if not feeble or interrupted, it should be placed at the sacro-iliac synchondrosis. The trunk should is kept warm by enveloping in a towel, and when traction is made, should be held lightly to afford opportunity for rotation of the shoulders.

2. Liberation of the arms. Liberation of the arms may be necessary if the pelvis be at all contracted, and also if traction on the trunk be too rapid or has not been accompanied by external pressure on the uterus.

The sacral one is most accessible. Lifting up the body of the child toward the pubes causes the sacral shoulder to descend, when with the fingers the arm is brought down over the front of the child. The pubic one is caused to descend by reversing the manœuvre ; carry the child's body backward over the coccyx. This brings down the pubic arms. Should this fail where the arms have been displaced backward, grasp the child's body above the hips and rotate it a little backward ; the arms are prevented by friction on the brim from following the trunk in its rotation ; the pubic arm is thrown across the breast, and now can easily be released.

The sacral arm is freed by the same manœuvre, but the rotation must be made in the opposite direction. Care should be taken that these axial turns be limited, or the head not following the trunk the spinal cord may be compressed by the rupture of the atlo-axoid articulation.

3. Extraction of the head. The mere friction of the child's body on the bed, as well as the loss of the expulsive power of the uterus, from its cavity being emptied of all but the head, and the subsidence of pain due to a protracted labor, demand the aid of the accoucheur. Besides, this is the stage of chief danger from compression of the cord.

Where the head has entered the pelvis and the only resistance to be overcome is that from the floor of the pelvis and the perineum, Smellie's method may be employed. Wrap the trunk of the child in a warm napkin and place it astride the arm ; pass the hand into the vagina, the middle and index fingers on the canine fossæ at the side of the nose, and at the same time make pressure upward by the fingers of the other other hand on the occiput. Now raise the trunk of the child over the abdomen of the mother; the head flexes around its suboccipital point, the face thereby being carried over the perineum.

[1] Science and Art of Midwifery, p. [illegible]

If sufficient flexion be not obtained the fingers may make pressure on the alveolar process of the lower jaw, making traction at the same time on the occiput. Where the occiput lies in the hollow of the sacrum, the chin should be flexed by the fingers, and with the back of the child on the operator's arm the traction should be made downward to the coccyx; the head flexes around, the occiput resting on the perineum and the face is born.

Smellie's method may be employed, the head being at the brim as recommended by Schroeder.

The Prague method, Scanzoni's, consists in seizing the feet with one hand while the fingers of the other hand are hooked over the shoulders. Traction is made downward in the axis of the brim simultaneously by both hands—external pressure on the head being made by an assistant. As soon as the head enters the cavity the extremities of the child are raised over the mother's abdomen, the hand on the shoulders acting as a fulcrum, the friction of the occiput on the pubes forces the face to descend into the hollow of the sacrum and sweep over the perineum.

In all cases of breech presentation the forceps should be at hand to extract the after-coming head. Care should be taken in its application that the cervix be not lacerated during its introduction. At the outlet it should be applied under the abdomen of the child, occipito-anterior, and the handles raised to flex the head when the child is reflected over the mother's abdomen. Where the occiput is posterior it is applied under the back of the child and draws the occiput into the hollow of the sacrum. The making of a gutter of the hand up to the face, to admit air, or passing a large-sized catheter into the mouth, will frequently allow the child to live when delay in extraction occurs.

PERMANGANATE OF POTASSIUM IN AMENORRHŒA.[1]

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The claims of permanganate of potassium to a high rank among emmenagogues are so recent, the testimony on which these claims are based is so convincing, and the questions which naturally arise as to its mode of action are so interesting that the topic seems a suitable one for the consideration of this Section.

The physical and chemical properties of this salt, its beautiful purple color, and its unpleasant taste, its ready solubility in water, its richness in oxygen, and the liberality with which it yields up that oxygen as oxygen and as ozone, and its resulting value as a deodorant and antiseptic, and in many important chemical and local therapeutical uses, are too well known to require detailed repetition.

On the skin and healthy mucous membranes it is innocuous; on surfaces denuded of epithelium it acts as a caustic. In the stomach it causes irritation and pain in doses of more than two or three grains, and not infrequently in those doses. The United States Dispensatory of 1883 says: "Internally, the medicine has been used in diphtheria, scarlatina, and various zymoses and in dyscrasia. It has even been claimed that in doses of half a grain to a grain it has cured pyæmia. It is plain that any moderate amounts of the permanganate must be decomposed by the organic matters of the mouth, œsophagus, and stomach before absorption, and there is no reason for believing that it is of any value as an internal medicine."

In the London *Lancet* of January 6, 1883, Drs. Ringer and Murrell announced that they had found permanganate of potassium to be a very valuable remedy in certain forms of amenorrhœa, this announcement being based on the results of their treatment of sixty-nine cases with this medicine alone, without accessory treatment.

The kinds of cases included in their enumeration are as follows: Their most striking results had been obtained in the case of young women between the ages of eighteen and twenty-five, who from some accidental or trivial cause, such as catching cold or getting wet, had missed once or twice after having been regular. "In these cases the administration of the drug for a few days before the expected period will bring on the flow almost to a certainty." In some instances the periods were brought on after the patient had ceased menstruating for over a year. In the case of country girls who had seen nothing for a month or two after coming to town, the treatment succeeded admirably. The permanganate often succeeded well after the failure of other emmenagogues.

In those cases in which the patient had menstruated only once or twice, and had then entirely ceased for some months, the menstrual discharge was re-established, and thenceforth proceeded normally. In girls of fifteen or sixteen, who had never menstruated at all, the result of the treatment was less certain; but even in these cases it not infrequently brought on the flow at once. In other instances in which the general health was bad, it failed at first, but succeeded after the patient had been sent into the country for a time, and in some others it failed altogether.

In cases of scanty menstruation, lasting only a single day or a few hours, the administration of the permanganate prolonged the flow.

In the case also of women between thirty-five and forty years of age who, as the result of many pregnancies and much suckling, had ceased to be regular, it succeeded almost equally well.

In the amenorrhœa of advanced phthisis it failed, but in some cases of arrested phthisis it proved successful in re-establishing regular menstruation.

In cases of chlorosis it not infrequently brought on the menstrual flow.

Drs. Ringer and Murrell administered the remedy either in the pharmacopœial solution or in pills, in doses of one or two grains three or four times a day, generally beginning with the smaller numbers, and gradually increasing to the larger, the latter doses sometimes succeeding when the former had failed.

They usually gave the permanganate only for the three or four days immediately preceding the expected period, but when it failed to produce the desired effect, the patient was directed to continue steadily taking it. Sometimes one or two doses succeeded, and in some cases it was taken continuously for nearly three months.

Their patients generally preferred the pills to the solution; the latter in some cases produced nausea and even vomiting.

One curious symptom frequently followed the taking of the permanganate in either form, viz., a persistent pain over the upper part of the sternum, "as if something had stuck fast there and would not go down."

Since the publication of this article occasional reports from other physicians have appeared in this country and in Europe of the results of their employment of this remedy, and while there have been in these reports some minor differences, there has been in all which I have seen a striking concurrence of testimony to the main fact of the therapeutical efficacy of the drug in the same kinds of cases as those just mentioned, or in similar ones.

Dr. Franklin H. Martin, of Chicago, in The Medical Record of September 29, 1883, besides strongly corroborating the above statements from the results of a considerable experience with the remedy, added that he had also found it efficacious in a case of amenorrhœa with phthisis of four months' duration, in a case of irregular menstruation accompanying prolonged digestive trouble, and in certain forms of menorrhagia and metrorrhagia, dependent on atony.

[1] Read before the Section on Materia Medica and Therapeutics of the New York Academy of Medicine, February 17, 1886.

Dr. Bartholow, in *The Medical News* of November 22, 1884, mentioned that Dr. S. M. Lvaff, a Russian physician, reports having obtained seven successful results with the permanganate in ten cases of amenorrhœa; and that another, Dr. A. V. Vargunin, has relieved by its use dysmenorrhœa with scanty menstruation and anæmia.

Dr. T. G. Thomas, in his address before the New York State Medical Association, November 10, 1884, said: "It is, I think, the best emmenagogue yet discovered."

Dr. E. J. Doering, of Chicago, published in *The Chicago Medical Journal and Examiner* of April 18, 1885, a list of fourteen carefully tabulated cases of amenorrhœa, showing eight successes and six failures. But in five of the six cases in which it failed it appears that the permanganate was given in doses of only one grain three or four times a day, while in the successful cases the doses were two, three, and four grains three or four times a day. Dr. Doering found that the larger doses produced, in every instance, epigastric and substernal pain.

Dr. P. M. Deas, of Exeter, England, reported in *The British Medical Journal* of April 18, 1885, his having employed the remedy with success in several cases of amenorrhœa associated with mental derangement, in which both conditions had been the result of mental shock or fright.

Including with the kinds of cases which are mentioned in the foregoing statements those which may properly be classed with them, it would appear that permanganate of potassium is quite generally applicable as a remedy to purely functional amenorrhœa, occurring in any stage of menstrual life, in diverse systemic conditions, and due to a great variety of causes, and also to some forms of dysmenorrhœa, menorrhagia, and metrorrhagia.

I have employed the remedy under consideration in four cases only—a number which, standing alone, would be insignificant, but taken in connection with the statements of Drs. Ringer and Murrell, have impressed me as illustrating in several respects their accuracy, and therefore as being worthy of brief relation. Those cases all occurred in my private practice.

Case I.—A young girl, of German parentage, eighteen years of age, was brought to me by her mother, in June, 1884, suffering from chlorosis greatly aggravated, if not originally caused, by malarial poisoning of a very obstinate type. Having previously been regular, she had failed to menstruate at the two periods next before I saw her. Among her other morbid symptoms was great gastric irritability. Various anti-malarial and tonic remedies were employed with but little benefit to her condition. She missed a third monthly period; and one week before a fourth one was due I prescribed the permanganate of potassium in solution, in two-grain doses three times a day. It caused her great gastric distress and nausea, and at times vomiting; but she persevered heroically in taking it, and, when the period arrived, menstruated normally. This was followed, however, by no improvement in her general health. She was sent to the seashore for six weeks, during which time she passed another period. She returned in somewhat improved health, and the permanganate was again prescribed. This time her stomach utterly refused to retain it, and its further employment was abandoned. Slow improvement and ultimate recovery of her health followed, but it was several months before her catamenia reappeared.

It will be observed in this case that the only menstruation which took place in eight or nine months was on the sole occasion when the patient had taken the permanganate; that this was not accompanied with improvement in the condition of toxæmia and chlorosis, and that the remedy was extremely irritating to the stomach.

Case II.—In November, 1884, I was called to see a school-girl of good family, aged about seventeen, who had previously been a type of perfect health and had menstruated regularly. I learned that while spending the previous August in the Catskills, she had received a wetting by being caught out in a shower. Since that occurrence her menstruation had taken place only in the form of a scanty, almost colorless, discharge. Her health had also been declining. She had suffered from frequent and persistent headaches, with coldness of the extremities, loss of appetite, shortness of breath, palpitations, etc. The bloom of her cheeks and lips was replaced by pallor, and the vivacity of her expression by languor and depression. Besides other remedies, indicated by her symptoms, I prescribed permanganate in two-grain capsules, to be taken three times a day, beginning one week before the time of her next menstrual period. She found it impossible to take the medicine on account of the gastric distress and nausea which it caused, and the menstruation which followed was of the same imperfect character as before. The following month, the condition of the stomach having in the meantime been improved by appropriate remedies, the patient was able to take the capsules without much difficulty, which was followed by a normal menstruation and a rapid return to perfect health.

Case III., which came under my care in October, 1884, was that of a young lady, aged about eighteen, surrounded by every circumstance promotive of happiness and health, but who from no discoverable cause had been for two months lapsing from her previous good health and menstrual regularity into a pitiable condition of anæmia and vital depression with amenorrhœa. The only explanation which I could arrive at was a possible hereditary tendency, as her mother, when she brought her to me, told me that she herself had been much troubled in the same way when at her age. The patient suffered from the worst symptoms of chlorosis—almost entire loss of appetite and digestive power, extreme feebleness, so that she had palpitation and shortness of breath on walking a short distance, occasional fainting, etc. For three months I prescribed for her a variety of ferruginous tonics, with quinine, nux vomica, arsenic, and aloes and myrrh, and enjoined outdoor exercise, amusements, nutritious food, and alcoholic stimulants. By January her appearance and her strength had somewhat improved, but still there was no menstruation. I then prescribed permanganate in two grain capsules, one three times a day. They produced no effect in January, but a repetition of the treatment in February was followed by a normal menstruation—the first in seven months.

Since that time she has taken the permanganate for one week before the date of every menstrual period, except during a three months' absence in the country last summer, when she did not take it, and did not menstruate at all, though her health was in other respects greatly improved. With this exception she has continued to menstruate about every alternate month, her health in other respects having been for some time fairly good.

In this case, while other remedies have failed to restore the menstrual function, the permanganate seems to have succeeded, but not invariably. I suspect that the reason of its not having succeeded completely is that the dose has been less than has been found necessary, in some cases, in order to produce the desired effect. I have directed this patient to take two grains, four times a day, before her next period—with what result remains to be seen.

Case IV. presented itself on Friday, January 29th, in the person of a young girl of rather anæmic appearance, aged sixteen. Her mother brought her to me because she suffered from palpitation and shortness of breath on making any exertion. She told me that her daughter had begun to menstruate one year before, since which time she had menstruated only four or five times. She had missed her period in December, and another one due on January 23d, or five days before I saw her. I prescribed twenty two-grain capsules of permanganate, to be taken, one three times a day, and requested her, when

she should have taken them, to report to me. On the following Monday morning she returned to ask me if she should continue to take the capsules, as they had produced the effect. She said that she had obtained them only on Saturday morning, and had taken three on that day, and that the flow had come on that night.

This patient also mentioned that she felt "as if something were sticking there"—pointing to the upper part of her sternum. The same curious symptom had also occurred on one occasion in the preceding case.

Mode of action.—Of the mode of action of this remedy Drs. Ringer and Murrell say "that the effects described are due to the manganese, and not to the potash in the salt, is shown by the fact that manganate of soda and binoxide of manganese are equally efficacious in the treatment of amenorrhœa. The manganate of soda was given in two-grain pills, two four times a day, and the binoxide in four-grain pills, one four times a day. It may be thought that the manganese acts by improving the condition of the blood, but this is not the case. The treatment succeeds equally well in the plethoric and in the anæmic. Given in cases of chlorosis, the permanganate not infrequently brings on the period without in any way improving the anæmia."

Dr. Bartholow, in the interesting and suggestive article on the action and uses of permanganate of potassium previously referred to, maintains that the chief, if not the only therapeutic effects of the salt are due to its oxygen, including in the term oxygen its nascent and peculiarly active form, ozone, this element being, in the light of modern researches, "a vital stimulant and an agent promoting the combustion process in all parts of the body." To the prime objection to this theory, viz., that the permanganate cannot act as such beyond the stomach on account of its speedy decomposition therein, Dr. Bartholow replies that there are reasons, which he has elsewhere given, for supposing that the diffusibility of this salt is so rapid that it has some action on the blood. As an example of such reasons, he cites the local use of the permanganate in the bites of venomous serpents, in which the poison is destroyed, notwithstanding the organic matter in which it is inclosed.

In considering this theory it would seem pertinent to inquire, Has oxygen or has ozone, in any of the other forms or modes in which it has been administered, been found to have any such prompt and special action upon the menstrual function as that which the permanganate of potassium has been shown in some cases to exert? If any evidence to that effect exists I have not met with it.

In the absence of such evidence this theory would require that the permanganate of potassium should bring on the catamenia by improving the condition of the blood and acting as a general invigorant; but we have seen that this is not the fact, since in some cases it effects the one object without at all accomplishing the other, and when it does both, the former result is often remarkably speedy, while the latter must be comparatively slow and gradual, so that either must be regarded as independent of, and distinct from, the other.

In regard to the question, whether the permanganate or manganese in other forms does act as a general tonic and blood-restorer in anæmia and chlorosis, the testimony is, as on so many others in therapeutics, conflicting. Ringer, for instance, in the latest edition of his "Therapeutics," denies that it has that action. Other competent observers, among whom, as will presently appear, is an eminently trustworthy one, answer the question in the affirmative.

It appears to be an obstinate chemical fact that permanganate of potassium, on account of the rapidity with which it is decomposed by organic matters, cannot possibly act as such beyond the stomach. This is positively stated in the latest edition of Ringer's Therapeutics. In the paper of Dr. Doering, to which reference has been made, is included an opinion of Professor N. Gray Bartlett, a well-known chemist of Chicago, to the same effect. Professor Bartlett adds that in all probability the manganese of the permanganate separates in the stomach in the form of the hydrated manganese dioxide. If this be true, it follows that for all therapeutical purposes outside of the stomach itself the internal administration of the permanganate of potassium is simply one mode of the administration of binoxide of manganese.

The question next presents itself, Is the binoxide of manganese an equally efficient emmenagogue with the permanganate of potassium? On this point published testimony is not as yet abundant. In the article of Drs. Ringer and Murrell, from which we have quoted, the answer was, as we have seen an affirmative one. Dr. Franklin H. Martin in a recent communication [1] refers to the binoxide as having proved, on account of its insolubility, almost inert. Dr. T. G. Thomas, on the other hand, informed me, a few days since, in answer to my inquiry on the subject, that the binoxide, in the form in which he employs it, has seemed to be equally efficient with the permanganate, and much better tolerated by the stomach.

Dr. Franklin H. Martin, of Chicago, in his very valua ble contribution to the literature of this subject, first referred to, states that his observations have led him to regard manganese in any form as a direct stimulant to the uterus and its appendages; that though it acts as a general tonic it has a special predilection for those organs. He suggests that it may exert that influence by acting as a direct vaso-motor nerve stimulant to the vascular system of the parts, or by stimulation of the sexual nerve ganglia, or even possibly of the sexual nerve-centres. He calls attention to the fact that as long ago as in 1868 Dr. Broadbent, after experiments performed by him, and recorded in the "Proceedings of the Clinical Society of London" for that year, says: "Manganese seemed to have a special influence in promoting the return of the catamenia, and nickel a special property of checking leucorrhoea."

Mode of administration.—The administration of the permanganate in solution is, as we have seen, ineligible, on account of its liability to cause gastric irritation, and in compressed tablets has been found nearly as much so; although that tendency is shared in a minor degree by all other modes of employing it.

In making it into pills with ordinary excipients there has been found to be liability to decomposition and combustion. Ringer therefore suggests, as a suitable basis for the composition of pills, kaolin and cerate of petroleum in equal parts.

Mr. Angelo has lately shown me specimens of tablets which he prepares with cocoa-butter. They are pleasant to take, will dissolve readily in the stomach, and may, perhaps, be found preferable to the form last mentioned. There is, however, probably no better mode of administering the remedy than in gelatine capsules.

The permanganate is commonly best tolerated by the stomach when taken soon after meals.

Binoxide of manganese may be given, in pills or capsules, in doses of from two to four grains three or four times a day.

The administration of manganese, in either form, in amenorrhœa should usually be begun about one week before the time of the expected menstruation. Should it then fail of effect its use may be continued through the interval to the next one, or it may be suspended and resumed at the corresponding period of the following month.

For those patients, at least, who are unable to swallow pills or capsules, the following suggestion of Dr. Franklin H. Martin [1] may be found valuable. Of a twenty per cent. solution of the oleate of manganese let one drachm be applied to the abdomen or the inner surface of the thighs of the patient, and its absorption promoted by vigorous rubbing with the hand until it

[1] [illegible]

has disappeared. In cases of amenorrhœa this is to be done every night for a week preceding the time of the expected menstruation. In cases of menorrhagia or metrorrhagia it may be applied in the same way, but in smaller quantities, until the desired effect is produced.

The principal questions for consideration in connection with this topic are the following:

I.—Is permanganate of potassium an efficient emmenagogue in certain forms of amenorrhœa?

II.—To what forms is it applicable?

III.—Is it also remedial to certain forms of dysmenorrhœa, menorrhagia, and metrorrhagia?

IV.—To which of its component elements is this action due?

V.—What is the nature of this action? Is it specially exerted upon the organs of menstruation, or is its effect upon them only incidental to its general action? Is it mainly through the blood or the nervous system? If the latter, in what way?

VI.—Does the permanganate of potassium, or manganese in any form, improve the blood condition in anæmia and chlorosis?

VII.—Is the binoxide of manganese an efficient therapeutic agent?

VIII.—What are the best modes of administering the salts of manganese?

I am confident that the imperfections of the preceding paper will be condoned in consideration of my having been kindly permitted to present to the Section, in connection with it, the following very interesting statements on this topic from the large experience of Drs. Fordyce Barker and T. G. Thomas:

"DEAR DR. BILLINGTON: I regret extremely that a previous engagement, from which I cannot get free, will prevent me from accepting the courteous invitation of Dr. J. C. Peters, the chairman of the Section of Materia Medica and Therapeutics of the Academy of Medicine, and of the pleasure of listening to your paper on the 'Treatment of Amenorrhœa.'

"I am happy, however, to comply with your polite request to give you 'a *résumé* of my experience' in the use of the permanganate of potash in this affection.

"For many years, as you perhaps may know, in my lectures to medical students I was accustomed to express my incredulity as to whether any article, known in materia medica, could be regarded as possessing the property of a direct emmenagogue. Of course, in common with all other physicians who have been some years in practice, I have had my full share of experience in the use for this purpose of iron, aloes, myrrh, savine, rue, and other agents of this character, and I have often seen menstruation return, apparently as a consequence, but I never was convinced that this result was due to a direct influence on the uterus or its functions. For some fifteen years or more, I found more success in the use of capsules of apiol, two or three times a day, commencing three days before the menstrual period. But this often failed, and I was never able to determine the precise conditions where it would be successful or where it would fail.

"I therefore only prescribed it empirically, hoping for success.

"I think that it was about five years ago that I was told by a physician in London that Dr. Sidney Ringer had found the permanganate of potash a very efficient emmenagogue. I was prepared to receive the statement favorably, from the well-known property of the different preparations of potash of rapid diffusion through the blood, and from my experience in the great value of the chlorate of potash in the treatment of chlorosis associated with amenorrhœa, as in my clinical lectures I taught for many years.

"The past four years I have used the permanganate of potash exclusively when an emmenagogue is indicated, except in a limited class of cases of sudden suppression, to which I will subsequently refer.

"As you will doubtless discuss fully the action of the permanganate of potash in its scientific aspect, I will restrict what I have to say to my clinical experience; and this can be more clearly illustrated by referring to groups of cases.

"I first prescribed the permanganate in September, 1881, to a lady, thirty-six years of age, who had resided in Europe for the previous nine years. Some two years before an obscure form of disease of the nervous system followed a severe moral shock, and she was under the treatment of Dr. Brown-Séquard for several months. She finally became insane, and was in a *maison de santé* in Paris for ten months.

"She left this institution in March before I saw her, rational, but morbid, irritable, and so suspicious as to make the life of her family a burden, particularly several days each month. Her general health was pretty good, but she had not menstruated for twenty months.

"While I gave general directions as to her health, in the use of laxatives, diet, and open-air exercise, etc., I prescribed for the amenorrhœa two grains of the permanganate of potash three times a day. In four days menstruation came on and lasted three days. This was followed by such an improvement in her condition, physical and moral, that I ceased my attendance. Seven weeks after I was again called, and found her very nearly in the same state as at my first visit. She did not menstruate the previous month. The permanganate was again repeated, with the same happy result. This treatment was resumed the three subsequent months. Since then this lady has been physically well and morally happy, making her family also happy.

"This success led to a further trial of this agent, and since that time I have used it in comparatively a large number of cases. I say 'comparatively,' because I think no man can say that he has treated really a large number of cases of amenorrhœa.

"In order more clearly to illustrate my views, I will divide the cases which I have treated with this remedy into three groups, mentioning them in the order of their frequency.

"First. Young ladies between the ages of fourteen and nineteen, who come from the country 'to finish their education.' Home-sickness, entire change of life in its habits and associations, overtax of their brain-power from the ambition of themselves or their teachers to accomplish more in a given time than they ought to attempt, not unfrequently leads to an arrest of menstruation. I see ten or fifteen such cases every winter.

"Second. Ladies, both young and married, who suffer severely from sea-sickness, that have left some European port within a few days of the menstrual period. With such, amenorrhœa of longer or shorter duration is almost sure to follow. I am consulted by at least eight or ten such every year.

"Third. Ladies, between thirty and forty years of age, generally married, some of whom have borne children, who rapidly begin to gain flesh, grow stout, and at the same time menstruation decreases in both duration and quantity, until at last it is only a mere pretence. This is generally attended with annoying nerve disturbances, pelvic weight, sometimes hemorrhoids, and often with moral depression from the apprehension of growing old prematurely.

"Now it requires some moral courage on my part for me to boldly avow that, never, where in either of the above classes of cases I have prescribed the permanganate of potash, have I *known* it to fail.

"But this assertion requires explanation. The cases of this kind for which I have prescribed have, with but two exceptions, not occurred in my family practice or that of Dr. A. A. Smith, but have come to me for the special treatment of amenorrhœa, many of them from out of the city, and from other parts of the country.

"In all prescriptions for the permanganate I write to the druggist, 'Return the prescription,' and direct the patient to continue the medicine, if necessary, for at least three months, and especially urge her to report to me, either personally or by letter, if the end be not accomplished. Many such have reported that all was right; many others from out of town I have not heard from; and perhaps I am wrong in believing that the treatment was successful. I must add, that with this specific treatment I endeavored not to neglect any other measures necessary to keep up a healthy and regular action of other functions.

"I will add, in regard to the third class in my group, that every patient was a resident of this city. I presume that every medical man who has been long in practice has met with some such. In all these I have known, from personal interviews, the result; that there has been a satisfactory return of menstruation, although in two cases it was necessary to continue the remedy for five months. In all there has been entire relief of the cerebral, pelvic, and, in some, thoracic nerve disturbances, cardiac and pulmonary. One was quite cured of a periodic asthma from which she had suffered monthly for three years.

"Of course I never prescribe this agent in cases where the amenorrhœa is due to some grave constitutional disease; nor do I rely on it for the relief of sudden suppression, due to cold, moral shock, or an acute disease. In this class I think that pulsatilla, opiates, and local agents, such as fomentations and large hot rectal enemas, are generally successful.

"In my early experience I found great difficulty in getting the permanganate put up by druggists in such a way that patients could take it without great repugnance, and it often produced severe gastric pain, from its rapid decomposition. Mr. Angelo for a time put it up for me in a peculiar capsule, which did better than anything else, so far as the taste is concerned, and the pain was prevented by swallowing immediately a half tumbler of water, not cold. Latterly I have found two-grain tablets do quite as well, if the same quantity of water is swallowed at once. Fraser & Co. have recently prepared it in grain pills, but I have not yet had the opportunity of trying them.

"That all may judge how much weight should be attached to my clinical experience, I will add that I find on the stubs of my office prescription-book I have prescribed the permanganate of potash forty-four times since November 17, 1884, which exactly represents the number of cases of amenorrhœa of the groups mentioned before, as in this time I cannot recall an instance where I have made a domicile visit for this disease.

"I think you may well congratulate the Section that I am not able to be present at the meeting, as they will be saved the bore of a speech—one talks so much more diffusely than he writes. Very sincerely yours,

"FORDYCE BARKER.

"24 EAST THIRTY-EIGHTH STREET, February 14, 1886."

"MY DEAR DR. BILLINGTON: You ask for my experience with manganese and its salts as an emmenagogue. I have used them freely ever since they were first recommended by Ringer.

"Thus far no perfect emmenagogue has been discovered, but I regard manganese as the best that I have met with. It should be styled a regulator of menstruation rather than a pure emmenagogue, for it is useful in absence of the menses, irregularity of their recurrence, and even in excess of flow.

"The preparation which I now employ is McKesson & Robbins' pills of the binoxide of manganese. Of this preparation I give two grains three times a day throughout the month and during the period.

"I also employ manganese in chlorosis and anæmia, and I think that by its use I obtain better results than I have heretofore done by iron.

"Knowing how apt the medical mind is to give way to enthusiasm with reference to new remedies I have spoken guardedly of this one. But I do not wish to 'damn it by faint praise.' While I recognize that it is like all other medicines, very uncertain in such cases as I have mentioned, I look upon it as a very valuable addition to the Pharmacopœia.

"Sincerely yours,

"T. GAILLARD THOMAS.

"294 FIFTH AVENUE, February 9, 1886."

A BIOGRAPHICAL SKETCH OF THE LATE ALFRED C. POST, M.D., LL.D.[1]

BY JOHN C. PETERS, M.D.,

NEW YORK.

HORACE tells us it is well sometimes to plunge boldly into the middle of the things we have to tell. In accordance with this advice I will commence with the middle period of Dr. Post's life, which also marks the commencement of his membership in this Society. He joined it in 1851 when he was forty-six years of age. He became our president in 1861, when he was fifty-six years old, and in his very prime, although that would seem almost great age for the majority of men.

He had been preceded in the presidency by Drs. John A. Swett, Willard Parker, James R. Wood, Thomas M. Markoe, William H. Van Buren, C. E. Isaacs, John T. Metcalfe, Robert Watts, E. R. Peaslee, John C. Dalton, and Ernst Kracowizer. Of these only Drs. Markoe, Metcalfe, and Dalton are left with us. Two are in excellent health, and long may they remain so. The other is an invalid.

Dr. Post was elected by the votes of Drs. Isaacs, Batchelder, Gilman Bolton, Willard Parker, McNeven, Bowen, and Robert Watts (7), who have passed away from us, and by those of Sayre, McCready, Van Arsdale (?), Purple, George F. Shrady, and Alonzo Clark (6), who are still with us.

In those times, twenty-five years ago, the attendance at the Society occasionally fell as low as six or seven. Often only ten or fifteen members were present, but frequently we had twenty or thirty, and occasionally from thirty to forty-eight, which I believe was the highest number.

The modest annual dues were still $1, but the first microscope, costing $150, was purchased in 1851. It was a good one, furnished with lenses by Nachet, of Paris, and Powell & Leland, of London. Dr. Post was already working with the microscope and specimens were often submitted to him for examination. But Drs. Dalton, H. B. Sands, Gouley, Draper, and others, were the principal microscopists, although everybody was discovering fibro-plastic tumors and caudate cells.

During the ten years that Dr. Post was a member of this Society before he became president, his contributions were already characteristic of what was to come in later years. He exhibited the results both of the boldest and most delicate operations, such as extirpated thyroid, parotid, and cervical glands, rectums, and ovarian tumors, exsections; he made artificial anuses, opened abscesses of the liver, performed tracheotomy for croup, removed parts of the omentum in strangulated hernia, large and small urinary calculi, and then came down to little slivers of bone, remarkable only for their small size and the great amount of long-continued irritation they had caused; also calculi, so small that they could scarcely be handled, yet had caused much suffering for five or more years; and little supernumerary fingers and toes, small encysted tumors of the scalp, and tiny subcutaneous neuromatous tumors. No operation was too great or too small for him.

During Dr. Post's presidency in 1861, one hundred

[1] Read before the New York Pathological Society, February 24, 1886.

and thirty-five specimens were presented before this Society. The principal exhibitors were Gurdon Buck, A. C. Post, Foster Swift, Voss, George T. Elliott, Sewell, Lente, J. R. Wood, Willard Parker, D. S. Conant, and William H. Van Buren, who have been taken away from us; and Alonzo Clark, A. L. Loomis, J. C. Dalton, George A. Peters, Dr. Finnell, Dr. Baner, J. T. Metcalfe, H. B. Sands, Robert Weir, William H. Draper, J. Lewis Smith, George F. Shrady, A. Jacobi, D. B. St. John Roosa, Cornelius R. Agnew, Lewis A. Sayre, Drs. Briddon, and Austin Flint, whom we still have with us.

Dr. Post's communications in 1861 did not differ much from those already recorded. Dr. Alonzo Clark was still holding that great lead in the Society which he had maintained so long, and was still developing his views about large hearts, perforations of the vermiform appendix, thrombosis of the arteries, diseases of the suprarenal capsules, and Bright's disease. Drs. Loomis and Draper were exhibiting specimens of abdominal tumors, fatty degeneration of the heart, abdominal and thoracic aneurisms, pericarditis, and tumors of the cerebellum.

Dr. Sands was performing some of his brightest operations, and discovering fibro-nucleated tumors. Drs. Roosa, Agnew, and Shrady were hospital surgeons, reporting intracapsular fractures of the femur, ruptures of the spleen, ulcerations of the bowels, and scirrhous mamma.

Dr. Jacobi and J. Lewis Smith were discussing diseases of infants, and cases of intussusception and tracheotomy.

George T. Elliott was reporting ovarian tumors, cancers of the uterus, fatty placentas, and infant monsters caused by their mothers being frightened by elephants.

Drs. Kracowizer and Voss were teaching us about dermoid cysts of the uterus, neck, and other parts; obstructions of the coronary artery, osteo-myelitis, osteo-sarcomas, etc.

This will serve to give a faint outline of the general labors of the Society in 1861, which, with the exception perhaps of the microscopical work, was almost as good as ever has been done in it. Still, I may add that Drs. J. R. Wood, Sayre, and George A. Peters were re-and excecting bones and joints, tying for popliteal and other aneurisms, reporting diseases of the periosteum, varied with records of ruptures of the appendix vermiformis, cancers of the stomach, and trephinings of the skull.

Dr. Post's presidency was marked by two sad events. The first was the death of our well-beloved President, Dr. Charles E. Isaacs. The Society adjourned in respect for his memory, which was very unusual then, and has been since, and drew up resolutions expressive of its sincere regret. Guided by hard scientific instincts, this Society scarcely ever takes any notice of the deaths of its officers or members, however distinguished they may be, unless their bodies also furnish interesting pathological specimens.

The character and services of Drs. Isaacs and Post were so similar, and the proceedings of this Society were so sincere and dignified at the death of Dr. Isaacs, that they may well be repeated here. Like Dr. Post, Dr. Isaacs was a distinguished anatomist, surgeon, and pathologist. He lived in Brooklyn, and a joint special meeting was held by the Pathological Society and Academy of Medicine in the Mayor's office there, to take proper action about his decease and to attend his funeral.

"Dr. William H. Van Buren offered the following preamble and resolutions:

"WHEREAS, It has pleased Almighty God to remove from among us our beloved and respected colleague and late President, Dr. Charles E. Isaacs, whose extensive learning, high professional attainments, and singular purity of character have won for him the warm personal regard of all who knew him; it is therefore, in respectful tribute to his memory,

"*Resolved*, That in the decease of Dr. Isaacs these Societies have lost one of their ablest and most industrious members, whose anatomical and pathological researches have enriched our transactions with some of their most valuable papers, and placed their author in the foremost rank of the cultivators of medical science.

"*Resolved*, That in the performance of the practical duties of his profession, in which he was no less honored and successful than in the cultivation of science, we recognize the conscientious fulfilment of obligations and the considerate skill which have so justly gained for him his high position in this city and the devoted attachment of his many friends, to whom and to his immediate family we respectfully and sincerely tender our great sympathy for their severe loss.

"*Resolved*, That whilst we admire the learning, and respect the ability of our departed colleague, we recognize also that he possessed in an eminent degree the qualities of the amiable and honorable Christian gentleman: as gentle in manner and pure in thought as a woman and yet possessing all the courage and energy of a man: considerate to the feelings of all; speaking slightingly of none; singularly diffident of his own high powers, and yet employing them earnestly for the benefit of others, rather than for himself.

"It may be said of him with literal truth

> [illegible]
> None named him but to praise.

"(Signed) GEORGE F. SHRADY, *Secretary*."

A more just and elegant tribute was never paid to any member of this Society, and it applies as well to Dr. Post as to Dr. Isaacs. I am glad to revive the memory of Dr. Van Buren also.

The second sad event was the death of Dr. Post's oldest son, in sorrow for which the Society adjourned. Afterward Dr. Post filled the chair at every meeting during his presidency, thus setting an example of fortitude and respect for duty which is characteristic of conscientious and scientific men.

During Dr. Post's presidency in 1861, the so-called great unpleasantness, or the late huge civil war broke out. From that time till 1865 Dr. Post went down from time to time, with many other New York surgeons, to take care of the wounded of both armies. His religious side had long been dominant, and we can imagine him silently praying with his favorite Horace:

> Our new-raised troops be thy peculiar care
> Who to the dreadful South our banners bear.

He was at that time especially impressed with the benefits of bromine in hospital gangrene, originally suggested by one of our founders, Dr. Middleton Goldsmith.

At this middle period of his life Dr. Post had been surgeon to the New York Hospital since 1836, or from the time he was thirty-one years old. He was one of the founders, in 1843 I believe, of the medical department of the University of the City of New York; an active member of the New York Medical Missionary Association; one of the directors of the Union Theological Seminary, and an elder in the Church of the Covenant. Hence it was with no irreverent spirit that he said the two things he enjoyed most in this life were a surgical operation and a prayer-meeting.

His religion was never obtruded on his colleagues, but he often made pleasant little hymns for young children, and conducted the simple religious services in the Nursery and Child's Hospital. Although often a little grim, he could enjoy paraphrases of Watts' Hymns, such as:

> He forms our surgeons for the field
> With all their dreadful skill;
> He gives them awful knives to wield,
> And makes their hearts of steel.

It may be said with almost literal truth that Dr. Post never passed his middle and prime age until he was nearly eighty years old. It was only a few months before

his decease that his friends detected signs of failing health and strength. Up to that great age, like the patriarch of old, his eyes were so little dimmed, and his natural force so little abated, that we rarely realized he was an old, old man. During the last ten years of his life he was performing some of the most skilled and delicate feats of plastic surgery, and only four months before his death he performed an ovariotomy in forty-five minutes as successfully and skilfully as only much younger men can do, and at a later period extirpated the rectum, an operation requiring an hour and a half, and then showed no signs of fatigue. If he had not been taken away by sudden and sharp sickness he would have lived many years more, and might have gone on operating until he was near ninety, and certainly would have been praying till the last moments of his life. *Laborare est orare.*

Horace also says, after having exhausted the middle and end of a history or biography it may be well to commence at the beginning.

Dr. Post commenced his classical education in Columbia College when he was only fourteen years of age. His memory was something remarkable and apparently never at fault. He was always as ready to give the derivation of a word as he was to perform a major or minor operation, and he never forgot, but always increased his store of the Greek, Latin, French, and German languages. He could have said

> The Greek and Roman languages are mine,
> With all their curious words and strains sublime.

He commenced his medical studies with his uncle, the celebrated Dr. Wright Post, in 1822, and graduated from the College of Physicians and Surgeons in 1827, after five years' study. He then went to Europe for two years, visiting London, Edinburgh, Paris, Berlin, and Vienna, to complete his medical and surgical studies.

He was the second American medical student who went to Vienna and studied pathological anatomy under Rokitansky. Dr. Gurdon Buck was the first, and John C. Peters the third. I brought back portraits of Rokitansky and letters of remembrance from him to Drs. Buck and Post in 1843.

The history of Dr. Wright Post is nearly like that of Dr. Alfred C. Post. Dr. Wright Post was one of the most accurate anatomists and accomplished surgical men that New York has ever produced. A beautiful portrait of him has long hung, and still hangs, in the lower hall of this College. He was born in 1766, so that the professional services of the Post family have stretched well over a century of time, and are still upheld worthily by Dr. George E. Post, son of Alfred, now long a medical missionary in Syria.

Dr. Wright Post had been a student with Dr. Richard Bailey, at that time one of the most celebrated and skilful surgeons in New York, whose memory is never omitted in the medical histories of this city.

Dr. Wright Post graduated and went to London in 1784, remaining two years and a half, coming back an excellent anatomist and an equally good surgeon. Dr. Valentine Mott says his skill with the scalpel and bistoury was masterly. He commenced at once to lecture on anatomy in the New York Hospital, and in 1792 became Professor of Surgery in Columbia College. He then went again to England and returned with a large and rare collection of anatomical specimens, which remained the best in this country till 1823, and parts of which are still in this college.

He also came back with a thorough knowledge of operative surgery and soon attained the highest rank in this city. Even his early operations were marked, not only by great mechanical skill, but also by that freedom of thought and action which a minute acquaintance with anatomy and of the principles of surgery alone can give. He tied the femoral artery in 1796, and soon performed two successful operations for carotid aneurism. He was the second to tie the external iliac for inguinal aneurism; and he was absolutely the first in this country to tie the subclavian on the scapular side of the scaleni muscles for an aneurism high up in the axilla. He was also the first to give large doses of opium in peritonitis and other inflammations of serous membranes.

Dr. Wright Post lectured till 1813, or more than twenty years, with Dr. Bailey on surgery, Samuel L. Mitchell on chemistry, Hammersley on theory and practice, and Hosack on materia medica. All these are still household medical names in New York.

In 1813 the medical faculty of Columbia College was united with the College of Physicians and Surgeons, and Dr. Wright Post became associated with Drs. John Augustine Smith, MacNeven, John Bard, De Witt, Stringham, and Osborne, all of whom also figured largely in the annals of the County Medical Society.

Dr. Wright Post lectured and operated for over forty years, and Dr. Valentine Mott says he had no superior in all that time. He was distinguished for the clearness and accuracy of his teachings; he was always painstaking, and finally became peculiarly terse and apt in his instructions. His elocution, though plain and simple, was ready and natural; he never sacrificed accuracy to the graces and elegancies of diction.

Few professional men ever enjoyed a larger share of the public confidence and esteem. He was also remarkable for his great punctuality, and his deportment was uniformly considerate and more than usually correct; he was without major or minor vices; he was scrupulously pure and delicate; he was the friend and counsellor of young doctors; he was religious and strict in his attendance upon the Episcopal Church; he became a vestryman and finally senior warden of Trinity Church; he was a trustee of Columbia College and of the Historical and Philosophical Societies. He was for thirty-five years a surgeon and consulting surgeon of the New York Hospital, and for several years president and an active officer of the Medical Society of the County of New York; finally, he became President of the College of Physicians and Surgeons.

He had been the personal friend and correspondent of Percival Pott, Sir Astley Cooper, Charles Bell, and Drs. Fordyce, Home, Abernethy, Cline, and Blizzard.

He was greatly adverse to writing; and with the exception of a few papers descriptive of his most interesting surgical cases, he left no literary work behind him.

To sum up: As an anatomist he was accurate; as a surgeon, dexterous and bold; as a man, exemplary; as a leader and officer, masterly. He died in June, 1828, and his mantle and influence fell upon Alfred C. Post in 1829.

If I had not repeated the name of Dr. Wright Post again and again, even his best friends would have been easily misled into the belief that I was treating them to a biographical sketch of Dr. Alfred Charles Post.

I have only to substitute the Presbyterian for the Episcopal Church; to add the names of St. Luke's and the Presbyterian to that of the New York Hospital; the Medical Department of the University for that of Columbia College; and say that Alfred labored fifty-one years as a lecturer and operator and Wright only forty years, and the similitude, with the exception of a few minor personal differences, will be complete.

Then almost all that I have said in favor of Wright Post can be truly said of Alfred; and the biographical sketch of one may honestly be transferred to the other.

If we believed in the transmigration of souls we could say that Drs. Wright and Alfred Post were as one man, who had lived and worked well and gloriously for a full century. And we can add that this beautiful strain of honest, religious, and scientific men is continued in the son, Dr. George E. Post: he is a medical missionary in Syria; and at last the religious element of the Post family has overtopped, but not submerged, the surgical and medical.

Dr. Wright Post was more delicate and fragile as a

man, and is said to have been more elegant in his person, manners, and operations, than Dr. Alfred.

But Alfred was a well favored man. We will all long recollect his not large, but very well proportioned, sturdy, remarkably compact and squarely erect figure, with not an ounce of extra fat, or an inch of unusual height.

His head, face, and beard were strikingly like those which have come down to us in the portraits of Hippocrates. He was never absent-minded, but always seemed absorbed in reflection; still he was ever on the alert, hearing, seeing, and pondering everything, without any of that common and eager expression of strained attention which is so often noticed in less mature and less well-balanced men. His mouth was in repose decidedly firm, or almost hard, with a slight approach to grimness. But no one will forget the bright twinkle of his small gray eyes, or the genial smile which broke over him when he greeted his numerous friends, or took part in a discussion. In the latter his air was always that of one who was pleasantly, easily, and confidently assured of his mastery over the subject. If any one was tempted to challenge his memory or his knowledge he was generally brought to a standstill by timely quotations from published records, or by truthful reference to his own or others' experience. Then his smile quickly faded away and he again seemed in complete repose: thus he combined the stolidity and discretion of age with the enthusiasm and freshness of youth, and changed from one to the other at will. His command of language and of his temper was so great that it never seemed necessary for him to use angry or bitter words; but his replies at times were incisive, as keen as his knives, and as crushing as his lithoclasts.

No one ever heard him make an intentional misstatement, and few ever have known him to make a grossly incorrect statement; he was almost invariably accurate and always truthful. He never argued for the sake of argument, and yielded quickly as soon as convinced of any error, even if his opponent had been discourteous.

As a speaker and writer he was always clear, terse, logical, and impressive; as an operator he was always bold, but exceedingly careful, and as painstaking as he was self-reliant. He never sacrificed safety to speed. He often seemed dry and hard, but the choicest treasures of literature and poetry always seemed at his instant command, and his charity for all never failed him.

Next to his religion and surgery Dr. Post was an earnest temperance man, and a great example of the benefits of total abstinence from alcohol and tobacco. He had no

> Mellow casks of gentle wine
> Of equal age with mine.

But only

> A surgeon's beverage, pure and cheap,
> Should e'en Mæcenas be my guest.
> No rich vintage of the luscious grape,
> But only sober cups shall crown my feast

He was also extremely frugal and could honestly say,

> Nor ask I more than sense and health
> Still to enjoy my modest wealth;
> From age and all its weakness free,
> O Son of God, preserved by Thee.]

We have seen that Dr. Post had many more than the usual advantages of medical men. He was the son of an eminent and prosperous merchant, Joel Post; his primary and classical education were more than good; his professional education was excellent, both here and broad.

He was led on by Wright Post and the New York Hospital; he had many friends and early patrons; he always had an abundant field for exertion; he had a vigorous constitution; he was never a "medical orphan," which in olden times was defined, "as one who had no uncle in the New York hospitals;" he had all the opportunities and abilities which go to make a great surgeon and an accomplished man, and used them unceasingly.

We can all agree that the example which he has set, of a man who lived a thoroughly earnest, unselfish, Christian, and most useful life, cannot fail to leave an excellent influence which will last long after this tireless worker himself has gone

His end was finally quick and peaceful, in the fulness of time; and no one can say, "If he had died earlier his reputation would have been greater." We can imagine his last message to us to be:

> My friends, the funeral sorrow spare,
> The plaintive song and bitter tear,
> Nor let the voice of grief profane
> With loud laments my happy home.

Progress of Medical Science.

Nephrotomy for Total Suppression of Urine.—Mr. Clement Lucas performed this operation in Guy's Hospital on October 29th (*The British Medical Journal*). A woman, from whom he had removed the right kidney for total destruction of its secreting structure by large calculi and hydronephrosis about four months ago, and who had made a rapid and complete recovery, was suddenly seized with great pain in the left kidney, followed by vomiting, headache, and suppression of urine. She passed urine last on Sunday morning, October 25th, between eight and nine o'clock; and from that time till the operation, on Thursday afternoon, no urine passed and vomiting was persistent. Her medical attendant, correctly interpreting the meaning of her symptoms, placed himself in communication with Mr. Lucas, and the patient was brought to London on Wednesday, October 28th. It was thought that the effect of diuretics in flushing the kidney might yet be tried while the patient was watched. These proved of no avail, and on Thursday afternoon, the patient having become drowsy and much weaker, Mr. Lucas cut down on the remaining kidney, and removed from the pelvis a conical calculus, measuring seven-eighths of an inch by one-half in its greater diameters. Total suppression had then lasted one hundred and two hours. A free flow of urine took place at once through the wound, and the patient was relieved of her vomiting and drowsiness. Five days after the operation she was doing well and feeling comfortable.

Herpes Tonsurans and Favus.—In some stages it is very difficult to distinguish between herpes tonsurans and favus. Dr. G. Behrend, of Berlin, has recently discovered a method which enables one at once to recognize which of the two diseases is before him. Behrend employed the reaction, observed by him and by Duckworth, which chloroform produces on hair attacked by trichophyton, the fungus causing herpes tonsurans. Whenever such hair is moistened with chloroform it shows, after the evaporation of the drug, which occurs within from two to three minutes, a perfectly white color, while normal hair experiences under its influence no alteration of color whatever. This change of color in the diseased hair proceeds only so far as the fungus had penetrated. The cause of this color-change is to be looked for in the splitting of the hair, and in the entrance of air through the clefts in consequence of this splitting. Though the hair is also split in favus, this never happens to such a high degree, and the chloroform reaction has no influence at all on favus. The same test cannot be used to determine the beginning of a cure, as the change of color cannot be so easily observed while the hair is in situ on account of the clear skin; but if a few hairs are extracted, and then subjected to the action of the chloroform, the same alteration of color will at once be observed, if the fungus is still present, while no such change will occur if the trichophyton has been destroyed.—*Centralblatt fur Chirurgie.*

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THE RELAPSES OF TYPHOID FEVER.

THE subject of the relapses of typhoid fever has hardly received the attention it deserves from American writers. We take occasion, therefore, to present some facts regarding it, collected in part by Dr. R. Longet, and published in *L'Union Médicale.*

The frequency of relapses in typhoid fever is very variable. Among German and Swiss observers we find the following statistics given, showing the percentage of relapses: Liebermeister, at Basle, 7.4 before using baths, 9.8 after; Ziemssen, at Munich, 13; Pfeurer, at Munich in 1856, 3; Gerhardt, at Würzburg, 6.3; Griesinger, at Zurich, 6; Griesinger, at Leipsic, 8; Immermann, at Basle, 15 to 19; Henoch, at Berlin, 16.6; Nothnagel, 30. In France: Jaccoud, at Paris, 9; Daga, at Nancy, 7.7. In England and Scotland: Murchison, in London, 3; Maclagan, in Dundee, 10. Schroeder, in St. Petersburg, 2.5.

In this country we are not aware that any extensive collection of statistics regarding relapses has been made. The belief is common that such accidents are rare. Dr. James H. Hutchinson met with 5 relapses in 80 cases, which makes a percentage of 6.25.

Very few physicians have ever seen double or triple relapses of typhoid. Ziemssen states that among 2,140 he met with 4 cases in which the relapses occurred twice. Bucquoy and Ziemssen claim to have seen the typhoid relapse occur a third time.

Typhoid relapses rarely if ever occur in patients who have reached the age of forty, according to Steinthal; and, as a rule, the patients have not passed the age of thirty-two. Sex does not seem to have any influence on the tendency to relapse.

Nearly all authorities are agreed that in at least three-fourths of the patients who have relapses the primary attack is of a mild type. This may be accepted as an established fact.

The duration of the relapse is, in the majority of cases, shorter than that of the original attack. This was true in about four-fifths of the cases reported by Jaccoud, Schroeder, and Steinthal.

The question arises whether there is anything in the character of the primary attack, or in the symptoms after its decline, to indicate that a relapse may occur. Numerous indications and means of prognostication have been suggested, but of them all only one, we believe, deserves any confidence, viz.: the continued enlargement of the spleen after the close of the primary attack and during the interval of apyrexia. This should make it imperative for the physician to map out and mark the boundaries of the spleen, and to watch any changes in its size. The application of Ehrlich's diazor-benzole test will be a help in telling the nature of the pyrexia.

The duration of the apyretic interval ranges from one to forty-six days, but in nine-tenths of the cases the relapse occurs before the fifteenth day. If that day is reached without fever, the danger of relapse is practically passed.

The relapses occur either sharply, with perhaps a chill, or gradually, with an ascending febrile curve like that of the primary attack. The two types are about equally divided as to frequency. It appears, however, that when the relapse comes on briskly, its duration is likely to be shorter. Steinthal believes that if the patient have a dicrotic pulse during the first attack, and it be also marked in the relapse, the prognosis is bad.

The pathognomonic sign of the fever, *i.e.*, the roseola, is observed in from one-fourth (Jaccoud) to one-half (Steinthal), or even three-fourths (Ziemssen), of the cases. The eruption appears early; perhaps, on the average, about the fifth day, although it may be earlier or later.

The general character of the relapses, as is well known, is as a rule mild. Severe cases are very exceptional. The mortality in relapses was with Ziemssen 2.8 per cent.; with Schroeder, of St. Petersburg, 5.5 per cent.; with Steinthal, 8.8 per cent.

None of Hutchinson's 5 cases died. On the other hand, Murchison had a mortality of 7 among 53 cases, or nearly 14 per cent.; and Ebstein lost 3 out of 13 cases, or about 24 per cent.

The diagnosis of a relapse is not always made without difficulty, and no doubt mistakes have often occurred. A number of French writers have described pyrexial attacks occurring after typhoid, lasting one or two weeks, and having none of the symptoms of typhoid fever. Bernheim calls it a fever of convalescence, and ascribes it to "a habit of the nervous system." There is no doubt that mild septic or malarial fevers may follow typhoid and excite alarm. Of the nature of the second attack there is no uncertainty. It is a genuine typhoid fever, and in fatal cases a second set of intestinal ulcers is found.

The attempts to explain the pathology of the second attack have excited many discussions. It is most probable that there is simply a reinfection.

The practical question, whether a relapse can be prevented, seems to have excited very little interest as yet. We learn of no measures which are systematically recommended for an accident that occurs, on an average, in seven out of every hundred cases. It appears to be shown that active hydrotherapeutics tends to increase the per cent. of the relapses. A careful attention to the patient's discharges, to securing a plentiful supply of fresh air, and to the diet, is to be observed. The use of naphtholin, as recommended by Rossbach, disinfects the bowels, and may very likely be of advantage.

HEREDITARY SYPHILIS.

MR. HUTCHINSON, of London, in his third and final Lettsomian lecture, took up the vexed subject of hereditary syphilis, and discussed it in his usual clear and con-

vincing style. Almost all our knowledge on this point is of comparatively recent acquisition. It was not very long since it was held that the mother could convey syphilis to her child only by contagion at the time of parturition; and even when intra-uterine infection was admitted, there was still great scepticism as to whether the father could transmit the disease. As regards the whole subject of hereditary syphilis, the evidence is almost always circumstantial, and that which leads us to believe that a father could transmit syphilis independently of the mother is peculiarly of this kind. In any given case it is next to impossible to prove that the mother had never suffered. When, however, we find the history repeated hundreds of times, that a man known to have had syphilis marries a woman apparently healthy and believed to have been chaste, and a syphilitic child is produced without any obvious illness in the mother, we are forced to believe that inheritance from the father is not only possible, but common.

Exactly the same kind of proof was offered by Mr. Hutchinson in respect to the influence of an infected fœtus upon a previously healthy mother. He referred to a series of cases he had published many years ago, which illustrated the assertion of Ramsbotham, Harvey, and others, that the fœtus might infect its mother. The fallacy in all these cases is the obvious one that the mother might have had syphilis herself. There is, however, a limit to the acceptance of that explanation. Proof is wanted of two things: (1) That a woman may carry a syphilitic child without herself suffering in any obvious manner; (2) that she does really receive a taint, although showing no symptoms. Of the first the proof is abundant. That of the second is, perhaps, less convincing. It consists in the facts: (1) That women often present tertiary symptoms who have never had primary or secondary ones; and (2) that they are not susceptible to infection by their infants. Mr. Hutchinson said he had adduced many instances of the former; and, as regarded the latter, he certainly thought that Colles' law (that a sucking infant cannot infect the nipple of its own mother) stood the test of time. He had never seen an exception to it. He had seen cases in which women contracted chancres on the nipple from the mouths of infants they had suckled, but in no case was the infant which conveyed the infection the offspring of the woman who acquired the chancre.

About two years ago he had met with an apparent exception to Colles' law. A mother who was suckling her infant had a chancre on her nipple, and her child also showed symptoms of syphilis. On careful inquiry, however, the child was found to be the subject of primary acquired syphilis, and not of inherited taint.

Is it possible for a mother who acquired syphilis during her pregnancy to infect her fœtus? Mr. Hutchinson said that, as a matter of inference, he should be inclined to reply that, if sufficient time were allowed, she must almost necessarily do so. He had himself met with several cases which appeared to be very conclusive as proof of its occurrence, one of which he narrated.

Respecting the influence of inheritance from one or the other parent, Mr. Hutchinson said his conviction was that it made no difference. The inheritance was as certain or uncertain in one case as in the other, and he had not been able to trace any difference in the severity. Nor did he believe that the fact of both parents having suffered made any difference in the severity of the disease in the child, though it made the occurrence of the disease more certain. He then went on to discuss those cases in which syphilis was transmitted to several children in succession. He combated the generally received notion that the elder children always suffer most, though he admitted that interstitial keratitis is met with in first-born children in very disproportionate excess. His own belief was that there was no reason for thinking that the transmission of syphilis was ever a matter of degree, but rather that, if a child inherited any taint, it inherited the whole malady.

It is an interesting speculation whether the sex of the infant influences its liability to suffer. The speaker said he had endeavored in vain to find any law in respect to difference of severity of inherited syphilis in the two sexes. He remarked, however, that it was established by statistics that a majority of those who suffered from iritis in infancy, and from keratitis when adolescent, were girls.

As this whole subject is one which Mr. Hutchinson has made peculiarly his own, his opinions are necessarily regarded by every one with great respect, even when they cannot be accepted without qualification, and they are certain to excite interest and to furnish abundant food for thought.

NEW HYPNOTICS.

THE chemical and pharmacological laboratories of Germany are competing with the flora of California for the honor of getting out the most new remedies. The latest contribution is an ethyl-ether, first used by Schmiedeberg. It is called urethran; it has the formula $NH_2 CO_2C_2H_5$, and is an ethyl-ether of carbonic acid. It occurs as a white crystalline body, easily soluble in water, and having a not unpleasant taste and no odor. The narcotic properties of urethran were first noted by Schmiedeberg on animals, and by Jolly on men. Dr. Kobert, of Strassburg, suggested its possible value as a hypnotic to Dr. R. v. Jaksch, of Vienna, the physician who first introduced thallin to the notice of the profession. It seems not unlikely that in urethran Dr. Jaksch has given us a drug of some value. To him, at least, belongs the credit of first thoroughly testing it. This he did first upon animals, and then upon twenty patients, making in all one hundred and ten separate tests. His experiments upon rabbits showed that, even in doses of seven grains to the kilogramme of body-weight, no toxic effects were produced. Jaksch began by administering the medicine in doses of four grains. This produced no result. He then gave it in half-gramme doses, with feeble hypnotic effect. The dose was then increased to one gramme (fifteen grains), and found to act with certainty and satisfaction. Urethran appears to act like chloral upon the brain, but it is a milder hypnotic. It does not affect the peripheral sensory apparatus, and therefore does not relieve directly cough or neuralgic pains. Jaksch concludes that urethran is very well borne by patients, causing no nausea, and having absolutely no disagreeable after-effects. The sleep which it produces is a natural one. The drug is without danger, and for this reason

he thinks it will be found very useful in children's troubles.

Hypnone, or methyl-phenyl-acetone, is a substance introduced into therapeutics by Drs. Dujardin-Beaumetz and Bartet. It is a liquid which crystallizes below the ordinary temperature in beautiful white needles, boiling at a temperature of 198° C. It has an odor resembling somewhat both that of the bitter almond and the orange-blossom. This odor renders the capsule of gelatine the most acceptable form of its administration. Popof and Neacke have shown that it is transformed in the system into carbonic and benzoic acids, and have detected its final transformation in the urine as hippuric acid. In the adult a dose of from five to fifteen centigrammes (gtt. i.–x.) produces sound sleep.

In order to obtain a well-marked hypnotic effect, the quantity proportioned to the age and temperament of the patient should be administered in a single dose. One of the inconveniences attending its use is that it communicates a disagreeable odor to the breath, being eliminated, like most volatile bodies, through the respiratory organs. M. Limousin recommends that it should be administered in doses of two drops mixed with a few drops of almond-oil in gelatine capsules. M. Vigier has given the following form for a syrup: Hypnone, one drop; alcohol (60°), one gramme; syrup of orange-flowers, six grammes. Of this mixture a teaspoonful corresponds to one drop.

Reports appear to show that the hypnotic effect of hypnone is not great, and that it is only of service in certain forms of nervous or alcoholic insomnia.

THE LAPAROTOMY EPIDEMIC.

The *Medical Press and Circular* has aroused considerable discussion over the subject of the prevalent fondness, in certain hospitals, for performing laparotomy for the removal of the uterine appendages and other purposes. Comment was first caused by publishing a statement of Dr. F. Durlach, who said:

"Every Monday, at 2 o'clock, I see out-patients at the Hospital for Women. If, unable to attend, I were to tell the nurse to send into hospital those women who suffered most and had been longest ill, out of ten sent in, seven or eight would have some chronic inflammatory disease of the uterine appendages, and most of them would prove to be incurable without surgical treatment."

This, it was thought, was as much as to say that over half of chronic uterine cases need to be spayed.

The *Press* says that a crowded meeting of the members of the Liverpool Medical Institution was held on the 4th ult. to discuss this subject. The result of the discussion was that a resolution bearing on the subject was proposed by Dr. Grimsdale, and carried unanimously: "That in view of the large and increasing number of cases of abdominal section in the Hospital for Women in this city, as shown in their Annual Medical Reports for the years 1884 and 1885, this meeting is of opinion that a select committee be appointed for the purpose of investigating the grave questions of practice and ethics involved in the performance of these operations."

Whatever be the merits of the particular controversy stirred up in England, it is beyond question that laparotomy is now being performed with extraordinary, and probably unnecessary, frequency both in Europe and this country.

Every young gynecologist is ambitious to remove the tubes or the uterus, or at least an ovarian cyst; the older ones are equally anxious to remove a hundred.

It is not borne in mind, as it should be, that it is a most serious thing, morally, to unsex a woman, and that it is still a most dangerous thing to open the abdominal cavity. The small percentage of mortality attained by such men as Keith, Tait, and Schede is the result, in part, of an extraordinary manual dexterity which few possess naturally, and fewer still ever can get the opportunity to acquire. There are very few men who really understand even the technique by which the operation is made so free from danger. The mortality from the laparotomies of most American and English surgeons is comparatively high, and serious harm has, we fear, been done by the wide heralding of the extraordinary success of a few adepts.

CALOMEL REDIVIVUS.

We hear, in a somewhat regular periodicity, of the old Kentucky doctor who said (usually on his death-bed) that there were only four medicines in the Pharmacopœia, all the rest helped the druggist but hurt the patient. These medicines were opium, quinine, a purgative, and calomel. The last-named drug has been greatly abused, but there is no doubt that it deserves its position in the medical tetrarchy above mentioned, and in the last decade it has been used more and more extensively. We have occasionally discussed its alleged virtues in "sedative" doses in diphtheria and pneumonia. We cite below some recent recommendations of its use in various other fields:

Dr. Jendrássic has found, in cases of cardiac dropsy, that calomel in appropriate doses causes well-marked diuresis, a "sort of diabetes insipidus," by which the results of want of cardiac compensation, dropsy and œdema, are dissipated. The effect comes on within twenty-four hours; one and a half grain of the drug being given three to five times a day. No diarrhœa is usually produced; but, in some cases, it had to be prevented by the administration of laudanum. Salivation and stomatitis were obviated by the prescription of a chlorate of potash gargle from the first. The result, in all cases in which the treatment was adopted, was beneficial, no unfavorable depressing symptoms being noticed.

Professor Sacharjin has recently recommended the employment of calomel in a number of disorders beginning with affections of the bile-ducts and hypertrophic cirrhosis of the liver. "Those cases," he says, "are especially suited for calomel treatment that present as marked features constant pain in the hepatic region and fever. The calomel should be given in doses of one grain, at hourly intervals, until six doses are taken. Thereupon the powder may be administered every two hours. Not more than twelve successive doses should be given. Thus no diarrhœa of any serious consequence happens. It is advisable to attend strictly to cleansing the teeth at frequent intervals, and chlorate of potash is suggested as a mouth-wash."

Calomel used as above is recommended in erysipelas

occurring in elderly persons with a tendency to heart-failure. Also in the first week of typhoid fever if no diarrhœa exists.

In acute lobar pneumonia digitalis, quinine, salicylate of soda, and cold water do not accomplish as much as calomel, which we are told should be administered early.

Acute Bright's disease is another condition that Sacharjin has treated with calomel, with the result of reducing the fever, relieving pain, and rendering the urine less albuminous. Profuse diarrhœa and great feebleness are to be considered as contra-indications.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

THE latest authentic accounts pronounce matters all quiet since the election of delegates from the Philadelphia County Medical Society to the American Medical Association. We are informed that the action taken at that time represents the sentiment of the great majority of the best physicians of Philadelphia, and that those who have talked most about "packed meetings" have not moral or numerical strength enough to venture on a protest.

THE QUESTION OF VAGINAL INJECTIONS.

IT would be highly interesting to learn how many of the women who go away from the doctor's office with orders to use hot vaginal injections carry out the orders, and also how many carry them out properly. The percentage of conscientious and skilful injectresses, if we may be allowed the word, is certainly extremely small. This is partly due, no doubt, to the somewhat elaborate and unpleasant gymnastic performances that, we are told, are necessary for carrying out efficiently the hot-water treatment.

Rubber cloths, or patent pans, syringes, buckets, chairs, boiling water, and medicating powders are the necessary factors in the treatment, and the collection and symphonic arrangement of these particulars form a considerable task to the head of a household. If women do not absolutely dislike these hot-water calisthenics, they certainly are not fond of them, and give up the practice on the slightest excuse. Whether it is the general complexity or the ungraceful horizontalness of the process which is most repugnant to woman, we are not prepared to say.

In a recent communication in the *Journal of the American Medical Association*, Dr. W. Thornton Parker seems to think that it is the posture which most modest women object to. And he comes to their relief with the statement that an injection given in the sitting position may be just as efficient. He recommends that the woman use the bidet, which is "a triangular stool about sixteen inches high, containing a porcelain basin. This is filled with hot water, and the patient, sitting astride of it (the bidet), injects the fluid with a Higginson, English, or Parker modified syringe.

The *Weekly Medical Review* comments somewhat sarcastically upon Dr. Parker's plan, and defends the old method. No doubt this latter is better when properly and thoroughly applied, but we are inclined to think that women will take more kindly to the simpler and more æsthetic process suggested by Dr. Parker. And in most cases the bidet method, systematically used, is better than an irregular and spasmodic indulgence in the conventional saturnalia of buckets, blankets, pans, stools, and so forth.

SPECIALLY TRAINED MEDICAL MISSIONARIES.

IT is announced that "to train young men in the practice of medicine and surgery, so as to fit them for work in China, India, or Africa as medical missionaries, the New York Medical Missionary Society requires, during the present year, $5,000." Of this amount $1,400 has already been subscribed, Mr. Cornelius Vanderbilt contributing $600 and his brother, George, $300. Five other gentlemen have contributed $100 each. In order to assist in raising the balance, a meeting was held at the Broadway Tabernacle during the past week, at which the matter was presented and appeals for help made. Fifty applicants desire to be educated as medical missionaries, but the society can only pay for nine. With such a surplus of young graduates in medicine as is furnished every spring, we confess that we are at a loss to see the need of special funds for specially educating medical missionaries. Of the four thousand annual graduates in medicine, we only need two thousand. All the rest might very well be employed in disseminating the gospel in foreign parts.

ADVICE TO HARVARD STUDENTS.

PROFESSOR T. R. EDES JACKSON gave one of a series of lectures on the professions to the students of Harvard College this week. He presented the subject of success in the medical profession.

"One great drawback to the profession," he said, "lies in the fact that the law offers it no protection, as it does in other countries. It is a curious fact that, in the United States a certificate of insanity is the only thing which requires an education of a physician; in nothing else does the law interfere. The consequence is that the country is overrun with people who call themselves physicians, but who are such only in name. This state of things, instead of turning educated men away, ought to bring them to the profession. By this means can the line be drawn deep and wide between the real and the sham physicians. What is needed most is men of learning and practical knowledge to elevate the profession in the eyes of the public."

Professor Jackson does not seem to have described the opportunities offered by the medical profession to educated men in strong enough light. We believe that there is no better opening than medicine for thoroughly educated young men, who have any kind of aptitude for getting along.

Professor Jackson is mistaken also in saying that medicine necessarily requires an entire and exclusive devotion beyond that demanded by other pursuits. This is an old commencement oration myth, and it is time it were laid on the shelf.

M. PASTEUR'S SUCCESS.

M. PASTEUR has announced to the Académie des Sciences that his inoculation-method against rabies has been successful in 325 cases. The 325 cases include, we presume, the Newark children, who were not bitten by mad dogs at all, and probably a number of other perfectly

healthy people. One must take from the 325 also the seventy-five per cent. of people who, although bitten by mad dogs, yet never get rabies; and finally, we must take out those in whom there has not yet been time—now only about four months at the furthest—for the disease to develop. With these necessary depletions, Pasteur's figures become of very insignificant proportions.

News of the Week.

The Health of Working Women.—According to the Commission on Labor Statistics for the State of New York, the health of working women is in the main fairly good—as good, perhaps, as the health of women generally. Working women are rarely subject to the diseases resulting from injurious trades like those of painting, working in mercury, etc. As a rule, work in factories is more healthful than work in houses.

M. J. B. Baillière, who recently died at the venerable age of eighty-eight, was the leading medical book-publisher of Europe for many years. The numerous eulogistic notices and addresses which appeared after his death have been collected into a memorial volume, a copy of which has reached us. It forms an eloquent record of a well-spent life.

Free Burial is granted in all cities to the paupers, but the mortuary rites are so extremely simple, and the funeral supplies so painfully meagre (being limited to a pine box and a contract shroud), that no one who can possibly raise enough money for the undertaker will allow a relative, friend, or acquaintance to be buried at public expense. Undertakers' charges are, however, often a serious tax on the poor. We recall a case in which a patient died of acute phthisis, the disease lasting about two months. The doctor's bill was $33, the undertaker's, $125. The city of Basle, Switzerland, has recently passed a law providing free burial to all its residents. The State provides the grave, coffin, pall, hearse, and sufficient employés for attendance at the funeral.

The International Medical Congress.—The prevailing feeling here regarding the Congress now is one of profound apathy and indifference. The news from abroad is equally discouraging. Almost the only smiling face is published at Chicago weekly. We hope for better news after the St. Louis meeting.

Billroth and Esmarch on the Study of Latin and Greek for Those Intending to Study Medicine.—Professor Billroth has written a letter upon the above subject to Herr V. Pirquet. Billroth states that he entirely agrees with the already expressed views of Professor Esmarch, viz., "that medical language is so filled with Latin and Greek words that some knowledge of those languages is absolutely necessary for medical students; and nothing shows the parvenu more plainly than his use of foreign words of which he does not understand the meaning. Although Latin and Greek are no longer international languages of the learned, they help to make scientific men of different nationalities understand each other, and to-day all new scientific terminology is still formed from the Greek." Billroth thinks that it would be sufficient for the student to study Latin and Greek grammar, and read, in Latin, Cæsar, some of Cicero, Ovid, and Virgil; in Greek, Xenophon and Homer. Professor Esmarch's views coincide with those of Billroth.

Pasteurization for the Prevention of Diphtheria.—The news is cabled from Paris that M. Pasteur believes that he can prevent or cure diphtheria by a process of inoculation.

John Hunter's House under the Hammer.—On February 16th and 17th the old house at Kensington once occupied by John Hunter was sold at auction. Among the articles advertised for sale was "the historical copper, coving and fittings, used for the purpose of boiling the remains of the Irish giant, Byrne O'Brian."

The Association of Physicians and Pathologists.—A national association under the above name is in process of organization. Two preliminary meetings have already been held in this city, at which it was decided that the association should be organized with a membership limited to one hundred; that it should hold an annual meeting at Washington in June, and that the first meeting should he held in that city June 16th and 17th in 1886, under the presidency of Dr. Francis Delafield.

A Sarcomatous Tumor Made to Disappear by an Attack of Erysipelas.—A girl, aged eight, had a sarcomatous tumor larger than a hen's egg, involving first the left tonsil, and later nearly the whole posterior half of the buccal cavity. Tracheotomy had to be performed. The patient then caught erysipelas from another patient, the disease lasting six days. At the end of this time the tumor was reduced to two nodules, the size of a pea, which were excised. Two months later, says Dr. D. Biedert, who reports the case, the disease had not returned.

Cocainization by the Cataphoric Action of the Electric Current.—At a recent meeting of the Royal Society of Physicians of Vienna, Wagner announced that by saturating the positive pole of the galvanic battery with cocaine, and placing the two poles on the surface of the body near each other, the cocaine is carried into the tissues, producing inter-polar anæsthetization. This has been tried by several physicians in this city some time ago, but with no results of practical value.

The Next Meeting of the American Medical Association.—The organization of the next meeting of the American Medical Association, to be held in St. Louis, Mo., on May 4th, 5th, 6th and 7th, is announced as follows: Practice of Medicine, Materia Medica, and Physiology: Dr. J. T. Whittaker, Cincinnati, O., Chairman; Dr. B. L. Coleman, Lexington, Ky., Secretary. Obstetrics and Diseases of Women and Children: Dr. S. C. Gordon, Portland, Me., Chairman; Dr. J. F. Y. Paine, Galveston, Tex., Secretary. Surgery and Anatomy: Dr. Nicholas Senn, Milwaukee, Wis., Chairman; Dr. H. H. Mudd, St. Louis, Mo., Secretary. State Medicine: Dr. John H. Rauch, Springfield, Ill., Chairman; Dr. F. E. Daniel, Austin, Tex., Secretary. Ophthalmology, Otology, Laryngology: Dr. Eugene Smith, Detroit, Mich., Chairman; Dr. J. F. Fulton, St. Paul, Minn., Secretary. Diseases of Children: Dr. W. D. Haggard, Nashville, Tenn., Chairman; Dr. W. B. Lawrence, Batesville, Ark.

Secretary. Oral and Dental Surgery: Dr. John S. Marshall, Chicago, Ill., Chairman; Dr. A. E. Baldwin, Chicago, Ill., Secretary. "A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements, at least one month before the meeting."—*By-Laws.* Committee of Arrangements: Dr. Legrand Atwood, St. Louis, Mo., Chairman.

Amusing the Insane.—Praiseworthy efforts are being made at the Hudson River State Hospital for the insane to carry out the modern idea of keeping the insane patients occupied and amused. Statistics show that a very large majority are kept employed more or less of the time in work or amusement. One of the novel features is the establishment of a day-school which about sixty men and forty women attend. The efforts to secure musical entertainment have their humorous side. Dr. Atwood, one of the Assistant Physicians, in his report, says: "An attempt was made to organize a band, or orchestra, and six meetings of all patients and attendants possessing any musical ability were held in the amusement hall for rehearsal. The leader of the proposed band, however, having by this time run away, and the B flat cornet becoming unusually disturbed, the drum and bass-horn were considered scarcely adequate in themselves to please the public, and the idea was postponed until our corps of employés is increased, and we have our accommodations for the chronic insane."

The Pathological Future of the Negro.—The Florida *Medical and Surgical Journal* draws a graphic but gloomy picture of the negro of to-day, and predicts for him physical decay and moral ruin. It is intimated, also, that the Southern doctors do not take so much interest in the negro's condition, since "the rattle of the planter's shekels" is no longer behind him. Some hopes of improvement are expected from the educated negro doctors, who have already done good work among their fellows. We share in these hopes, and, with all respect to the cloth, think that if one-half the colored clergymen were asphyxiated and their places taken by intelligent medical men, the negro's condition would be vastly improved. The negro is not dying out, however, for though the death-rate is enormous in cities, it is more than balanced by the high birth-rate and low death-rate in the country.

A Pernicious Anæmia may be caused by the presence in the intestine of the parasite *ankylostonum duodenale*. This fact, first discovered by Perroncito and Corseoli among the workmen in the St. Gothard Tunnel, has been confirmed by later observers. Recently Dr. Edwin Snyers, in the *Progrès Medicale*, reports several cases occurring among workmen in a brick-yard near Cologne.

Cremate—Cremation—Cremationist—Crematorium; these are the new words introduced by a new journal called *The Modern Crematist*, published at Lancaster, Pa., and devoted to cremation. It includes, under a sub-title, "Cremation Gossip." A dealer advertises "cinerary urns," and a crematorium company announces its constant readiness to receive and incinerate bodies. If friends accompany the body, they are advised to "buy a regular ticket, and check casket as baggage." The knowledge that mourning children can check their parents as baggage, and get a trip to Pennsylvania at practically reduced rates, is of interest, and shows that cremation has passed the sentimental stage, and got upon a solid commercial basis.

Railway Hospitals for Injured Employees.—Most railroads do not attempt to care for injured employees. We learn from Dr. F. R. Lewis, in the *Kansas City Medical Index*, that the Wabash, St. Louis, and Pacific Railway Company have established a surgical service for the benefit of their employees. These latter have to pay a small percentage of their wages to form a hospital fund. With this two hospitals are supported, one at Springfield, Ill., and one at Kansas City.

A Plea for the Madstone.—A Washington physician writes to the Washington *Post* a plea for the madstone. The physician in question states that he feels a debt of personal gratitude toward the mystic mineral because his grandmother was cured of rabies by it when a girl. This, no doubt, gives a little bias to the correspondent's opinions. He says that he has witnessed the application of the madstone to wounds caused by the bite of a rabid dog. The adhesion of the stone was so strong that it remained *in situ* even when the wound was turned down. Well! folly dies hard.

A New Neurological Journal has appeared in Chicago. It is called the *Neurological Review*, and is edited by Dr. J. S. Jewell, who established, and for some years edited, the *Journal of Nervous and Mental Diseases.*

Medical Advertising in the Daily Papers.—Another flagrant instance of medical advertising in the daily papers has appeared in Auburn, N. Y. The operation described was the common and simple one of wiring the bones in a case of reunited fracture, but it was heralded as "a remarkable surgical operation" which "for nerve and nicety has hardly been equalled." The young seeker after notoriety who procured this notice is doing things "unworthy of a physician and a gentleman."

The Mad Dogs of Newark.—The dog that bit the Newark children who were sent to Paris to be inoculated by Pasteur also bit seven dogs, which have been kept in seclusion ever since. On March 2d the dogs were released, none of them having developed rabies. The probability is very great, therefore, that the dog which bit the Newark children was not rabid, and, consequently, that the excitement aroused over the subject of hydrophobia in that city was uncalled for.

Rush Medical College held its Forty-third Annual Commencement on February 16th, and graduated a class of one hundred and fifty-six.

Dr. N. S. Davis.—We are sincerely glad to learn that Dr. Davis has, in a great measure, recovered from his attack of hemiplegia.

All Preparations of Morphine lawfully sold in the State of Georgia must be wrapped in a scarlet paper, and marked with a scarlet label naming the contents of the package in white letters.

Does it do any Good to Support the Perineum during Labor?—A correspondent writes, citing the statement made that perineal lacerations are very rare in the Vienna Hospital, and asking whether there is any demonstrative evidence that supporting the perineum does any good in ordinary cases of labor. Judging by the frequency of perineal lacerations either support does no good, or the practice of supporting the perineum is not very prevalent.

There is not a hospital in London which is not expending more each year than it receives. So says *The Hospital Gazette.*

American Veterinary College.—The Eleventh Annual Commencement of this institution was held at Chickering Hall on Monday, March 1st, before a large audience of the friends of the college. Twenty-eight graduates received the degree of Doctor of Veterinary Surgery.

A Statue to Claude Bernard has been erected in the garden in front of the College of France, and was unveiled on February 7th. Addresses were delivered by M. Paul Bert, Professor Chauveau, and M. Dastre.

Homœopathists Seeking Representation on the Staff of the Massachusetts General Hospital.—The *Boston Medical and Surgical Journal* says: "The trustees of the Boston City Hospital gave a hearing Friday evening, February 19th, to the remonstrants against the petition that homœopathy should take part in the medical and surgical treatment of patients at the hospital. Members of the hospital staff were present by special invitation of the trustees."

The Death of Dr. Wm. Wetzel, of this city, is announced. Dr. Wetzel was a graduate of Carlsruhe, in 1846, but had practised medicine in this country for many years.

What Should be Done at the St. Louis Meeting of the American Medical Association.—The Kansas *City Medical Index* says: "The St. Louis meeting will do the profession no credit, unless the wiser and more considerate members from both factions get together and frame a compromise to be submitted without debate. By some such mode of settlement as this the Congress may have an eminently creditable meeting in the end. In order to save the American profession from disrepute, harmony must be restored at the St. Louis Association meeting. Concessions should be made by both factions, and the whole matter quietly settled by a fairly constituted council."

The Nashville *Journal of Medicine and Surgery* says: "The topic of the International Medical Congress will be the absorbing question for discussion, and will, we hope, be definitely settled, at least so far as it relates to the Association. Of late years this Association has appeared to degenerate into a body merely medico-political, and it is time something were done to elevate it to a proper standard and make it what the British Medical Association is to the profession in England—representative and national. Political intrigue and trickery have too long held sway in this Association, and it is time the profession saw to it that it be no longer thus degraded, and be brought back to the place it occupied in its palmiest days. We hope, therefore, that all who can will make an effort to attend the coming meeting.

The Late Dr. Alfred C. Post.—At a special meeting of the Medical Board of St. Luke's Hospital, held February 20, 1886, the following was unanimously adopted:

Whereas, It having pleased God to remove from our ranks our beloved associate, Dr. Alfred C. Post, who was from the first organization of the medical staff till his death—a period of twenty-seven years—one of the consulting surgeons of St. Luke's Hospital, we desire to record our appreciation of our loss.

Dr. Post was the oldest member of our board. Up to within a few days of his death he was a constant attendant and much valued adviser at all important operations. His vast experience, his extensive knowledge on all topics connected with our professional work, his sound judgment, and his readiness to assist others, make his loss to our hospital staff almost irreparable. He brought to our councils the surgical knowledge of a former generation, and complete information with regard to the results of the most recent scientific investigations. Dr. Post's whole life, moreover, social as well as professional, bore the impress of a rarely honorable and Christian character. His loss will be deeply felt by the entire community, in which he spent a long and eminently useful life. We desire, also, to tender to the members of his family our deep sympathy with them in their affliction.

Robert Abbe, M.D.,
Charles McBurney, M.D.,
A. B. Ball, M.D.,
For the Medical Board.

Reviews and Notices.

A Guide to Sanitary House-Inspection; or, Hints and Helps Regarding the Choice of a Healthful Home in City or Country. By William Paul Gerhard, C.E., Consulting Sanitary Engineer; Author of "House-Drainage and Sanitary Plumbing," "Hints on the Drainage and Sewerage of Dwellings," and "Diagram for Sewer Calculations." New York: John Wiley & Sons. 1885.

The family physician is very often consulted by his patients as to the healthfulness of their dwellings, or is led to inquire into the sanitary conditions of a house by reason of the occurrence of disease among several members of the same family. And it is safe to say that he is frequently no better qualified to pass judgment upon these matters than is the householder himself. In such a predicament this little book will prove very useful to him, by pointing out the most common defects and enabling him to detect them if present. It contains just enough to give one an intelligent idea of the essentials of house-inspection without wearying the reader with minute details. And not only the physician, but every one who cares for the health of himself or his family, will find this practical little work of service.

Alpine Winter in its Medical Aspects, with Notes on Davos Platz, Wiesen, St. Moritz, and The Maloja. By A. Tucker Wise, M.D., L.R.C.P., M.R.C.S. Second edition. London: J. & A. Churchill. 1885.

The attention that has been given of late to high altitudes in the treatment of disease makes the work of Dr. Wise a timely one, though more especially so for European physicians. The book contains a few chapters on the physiological effects of high altitudes, cold, ozone, etc. The rest is devoted to descriptions of the Alpine resorts, and to plain, practical directions as to how to dress and live in these places. An excellent map prefaces the book

Reports of Societies.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, February 5, 1886.

BEVERLEY ROBINSON, M.D., PRESIDENT, IN THE CHAIR.

NERVOUS DEAFNESS.

DR. SAMUEL SEXTON presented a case of nervous deafness, occurring in a case of supposed poliomyelitis. The patient was a Swedish sailor, who, after a difficult cruise around Cape Horn, was exposed to the heat of a tropical sun. This occurred five years ago. Immediately afterward he became "blind" while in the harbor of Rio Janeiro. Four months later on, while on board ship, the lower limbs became paralyzed, then the upper extremities and face. Five months later *he became suddenly very deaf.* He now states that for the past three years he has been drifting about in foreign hospitals, with, possibly, some improvement in the hearing. His appearance is peculiar, especially the facial expression, there being paresis of the region below the eyebrows. He gives no history of syphilis or accident, and there appears to be no anæsthesia or paralysis of the bladder or rectum. He has had no pains in the head or marked vertiginous symptoms.

Present condition of the hearing organs.—The drum-heads do not indicate any serious departure from health, but he is very deaf to ordinary conversation, in fact hears loud voice only. He takes cognizance of what is said to him hesitatingly, and is, therefore, "slow of hearing," so to speak.

Dr. Sexton drew attention to the method of employing the tuning-fork as a means of differential diagnosis, as between affections of the transmitting apparatus of the middle ear and those of the perceptive tract of the inner ear; thus, he showed that in applying the vibrating fork to the vertex, the result was negative; to the globella, a sensation was imparted which the patient said was rather felt than heard; while vibrations propagated from contact with the teeth are, though best conducted of any, heard but faintly. Granting that the middle ears are fairly normal in this case, we should, of course, have defective perception from bone conduction, as well as from aërial; but since the defect in this case lies almost exclusively in the perceptive tract of the ear, the sounds are better heard aërially when the vibrating fork is held close to the ear. Were the transmitting apparatus of the middle ears only affected, the patient would hear the vibrations of the fork through the tissues loudly.

The patient was brought before the Society on account of the extreme rarity of "nervous" deafness, and to obtain from the members suggestions as to the diagnosis of the brain trouble and the treatment of the case.

DR. WILLIAM T. BULL read a paper (see p. 265) entitled,

SOME SURGICAL POINTS IN THE TREATMENT OF PERITYPHLITIS.

DR. GEORGE F. SHRADY said he agreed in the main with what Dr. Bull had said. There was no argument against the evacuation of pus as soon as it could be discovered, and the needle gave us the surest indication. The presence of pus indicated the walling-in process by adhesive inflammation; and while it was well to operate early, it was well, also, to be sure that the time for operation had come. He had been led to believe that, occasionally, some of the early symptoms were masked. In fact, the first case reported by Dr. Bull seemed to be one of that kind, as it was not a case in which pus had formed within forty-eight hours. The rule given by the late Dr. Parker as to the time when the incision should be made was between the fifth and the twelfth day. He also advised the early use of the needle. In one case in which an incision was made on the sixth day a burrowing abscess formed, and a second operation was performed five or six days afterward.

With regard to perforation of the intestine, he had had one well-marked case, occurring on the tenth day in a farmer who had the characteristic symptoms, as pain, vomiting, localized swelling, dulness on percussion over the right iliac fossa, and œdema of the integument—which he had noticed in four or five cases, and had come to regard as rather pathognomonic of deep-seated inflammation. On the seventh day he prepared to operate, but the patient had a movement from the bowels, and there was pus found in the stool, which indicated that the abscess had ruptured, and recovery took place without operation.

Dr. Shrady thought it important, in cases of typhlitis or perityphlitis, to keep the patient perfectly quiet, and give nature an opportunity to wall in the abscess. He knew of two cases in which death took place, where due regard to these points had not been observed. In one, rupture of the abscess occurred while attempting to get out of bed, and in another, vomiting broke up recent adhesions. He believed in an early operation when a positive diagnosis could be made and the presence of pus could be ascertained, and the needle was the only sure guide.

DR. GIBNEY thought the argument given by Dr. Bull for early operation was very convincing. If he understood correctly, Dr. Shrady thought it advisable to wait for the walling-in of the abscess to take place.

DR. SHRADY thought the abscess was, as a rule, already walled in before we got a chance to attack it. In fact, plastic lymph was almost invariably thrown out before the pus was formed. It was wiser to wait a reasonable time for these adhesions to become firm than to run the risk of breaking them up by operating too early.

DR. GIBNEY said the cases reported by Dr. Bull were extremely interesting; but especially the one in which he made an incision after finding pus with the needle, and without finding any more pus, and the boy recovered. The query arose, Where did the pus drawn by the needle come from?

DR. BULL said he did not know. No pus could be discovered after the incision was made.

DR. GIBNEY said he asked the question for the purpose of leading up to another; that is, whether an abscess might not exist, and even the patient walk about, and yet make a recovery with apparent resolution. He had seen a number of cases in which there was apparently idiopathic perityphlitis; that is, simply a cellulitis about the vermiform appendix not depending upon any foreign body in the appendix. He had seen quite a number of children, varying in age from eight to ten years, who presented the characteristic deformity of hip-disease, yet who exhibited but little constitutional disturbance except a localized cellulitis. There was, however, no spinal disease, and these children made a good recovery with resolution taking place, and at the same time he had thought he was able to detect fluctuation. He was not allowed to go further in the way of diagnosis, because it was against the rules of the institution with which, at that time, he was connected; and he had wondered what became of these patients. He would ask Dr. Bull whether they could not have been ambulant and stil have perityphlitis, or whether there was such a thing as primary idiopathic perityphlitis recognizable.

DR. G. L. PEABODY had had a somewhat melancholy experience, and the result had led him to be more radical than even Dr. Bull had expressed in his paper. He had made a large number of autopsies in such cases, and had made five within the last four months. He was convinced that many lives could be saved by early and radical interference, even where pus could not be detected by the needle. He recollected distinctly the case of a child who presented all the usual symptoms of this disease, and where the needle did not detect pus, although freely and skilfully used; but the autopsy revealed a small abscess behind the cæcum, which perhaps might have been relieved by more extensive operative procedure. Such

an operation was as likely to do well as any other incised wound, provided vital structures were not injured. He had seen quite a number of deaths from general peritonitis in which he believed life could have been saved if the operation had been resorted to early.

In the five cases in which he had made autopsies within the last four months, one had several accumulations of pus, such as could not be reached by a surgical procedure. He thought that the physical signs of dulness and sensation of resistance were rarely directly proportionate to the amount of pus which the tissues contained. In such a case as Dr. Bull had reported there were dulness and a sense of resistance in the region of the cæcum, and, although the needle detected pus, it detected only a few drops; but an operation, quite radically performed, did not reveal any considerable amount of pus, yet there was a necrotic condition of connective tissue around the cæcum all the way from the rim of the true pelvis to the diaphragm, without forming much of a collection of pus. If that patient had been operated upon early perhaps the inflammation could have been cut short.

He thought we were a little apt to be led astray by finding acute general peritonitis at the autopsy, which might lead to the supposition that the pus was not sacculated; whereas such an inference could not be properly drawn, because the general spread of inflammation may have been a secondary affair, and in consequence of the operation having been delayed too long or the patient moving about too much.

He made an autopsy several years ago in which there was no collection of pus near the cæcum, but there was pus about the peritoneal cavity, and the deduction was that the operation would not have done any good. But Dr. Peabody's inference was that if the operation had been performed early very much good would have been done.

In only one of the five cases was there any considerable quantity of pus in the peritoneal cavity, but in two there was acute general peritonitis, with pus sacculated about the vermiform appendix and behind the cæcum.

It seemed to him that in the hands of skilful surgeons, as Drs. Bull and Shrady, the operation was quite devoid of danger, and he would not turn aside from it because pus was not reached by the needle; for small collections of pus might be missed by the puncture, whereas a more extensive operation would evacuate an abscess.

Dr. A. B. Ball remarked that the symptoms of general fatal peritonitis as the result of perforation might run their course in from eighteen to thirty-six hours, and develop in the midst of perfect health.

Dr. Peabody said that even in such cases surgical interference should not be precluded.

Dr. Sexton asked concerning the difficulties of diagnosis in protracted cases of this kind.

Dr. Ball thought that Dr. Shrady had partly answered the question, because he had called attention to the fact that people do have large collections of pus and yet are actually able to walk about, and present only very trifling symptoms. He did not remember to have seen such a case, except once, a good many years ago, and that was an abscess following a stab-wound in the lumbar region. The man was sent out from Bellevue Hospital, supposed to be perfectly well. He walked as far as the corner of the street, and was thrown off from the street car, and died a few hours afterward, and it was found that there was a large peri-nephritic abscess which had burst into the peritoneal cavity. He did not believe that such occurrences were very common, but he certainly believed that they existed. So far as local signs of abscess were concerned, they could be questioned, because there might be a certain quantity of gas within the cavity which did away with dulness on percussion.

With regard to ambulant cases, he recalled a remarkable one of this kind which occurred several years ago, where a young lady had been ill in the country with what her attending physician said was inflammation of the bowels. She convalesced, and finally came home. She was able to sit up in the cars, and rode from the depôt in a carriage, and passed a very comfortable night after reaching her home. In the morning she came down to breakfast, and after her breakfast played on the piano. About two hours afterward she was suddenly taken with severe coughing, accompanied by a sense of suffocation and profuse expectoration of pus. Dr. Ball saw the patient within fifteen minutes after this occurrence, and found her dying, and she did die within a few minutes. The autopsy showed that the girl had had an immense perityphlitic abscess which had burrowed, formed a large collection of pus between the liver and diaphragm, and had burst into the right lung. At the time of the autopsy more than one pint of pus was found between the diaphragm and the liver.

Dr. Gibney said that he would not oppose early operations or exploration, but he simply spoke of the cases which he had mentioned, because patients do sometimes go about and resolution occur. He would not wish, however, to go so far as Dr. Peabody recommended, nor so far as Dr. Bull had advised.

Dr. Kinnicutt said that according to his experience, and he thought it was also that of all the gentlemen present, attacks of inflammation in the region of the head of the colon were very common, and yet he thought it was often quite impossible to determine what was the source of irritation or inflammation. He was taught that in a certain number of cases distention of the cæcum from accumulation of fæces was one of the causes, but he had not been able to convince himself that such was the case. One reason why it had been so taught, probably, was because the evidence of tumor had been obtained, and it had been regarded as a tumor formed by fecal accumulation; but he believed that it was simply a tumor produced by inflammatory exudation, which in many cases undergoes spontaneous resolution. He was firmly convinced, however, that if, after a period of a week, at most ten days, some elevation of temperature was maintained, with constipation and evidence of tumor in the right iliac fossa, an exploration should be made. He had not seen a case go beyond ten days without suppurative process existing, and if it does exist the sooner an exploratory incision is made the better it is for the patient. He would ask if the experience of the other members coincided with his own, in that after a period of ten days, with evidence of distinct tumor in the right iliac fossa and elevation of temperature, suppuration did not exist.

Dr. Peabody said he had seen one case in which all these symptoms were present, and where repeated puncture failed to detect pus, but fever continued; yet the result showed that conservatism was wise, because the boy got well. It was a case, however, in which the symptoms were not very well marked, yet they were so distinct that three competent men who saw the patient agreed that they were present.

Dr. Kinnicutt said that perhaps he should have been more definite, by including only cases in which evidences of tumor were perfectly distinct. There was another point to which he had not heard reference made, and that was the tendency to recurrence of this trouble in patients who had had it once. He had seen a patient with three recurrences, and in each instance resolution took place.

Dr. A. A. Smith asked if any of the members present had noticed any relation between this disease and mental depression. He had seen three cases following very great mental depression, one occurring in a gentleman who met with great reverses in business; one in a lady who suffered from mental depression; and another in a gentleman who was afflicted with loss of both family and fortune.

Dr. Ball said that he had seen about fifteen cases, and he had not observed this element.

Dr. Gibney suggested that mental depression might

interfere with digestion, and that indigestion might be a predisposing cause to such intestinal trouble.

Dr. Smith regarded the two conditions as merely coincident in his cases.

Dr. Ball referred to a point of some importance, namely, that perityphlitis sometimes runs its entire course without elevation of temperature; that suppuration may occur within the first few days of the disease, after which the fever subsides, while the suppurative process goes on. He saw a case three years ago, occurring in a little boy, where, after three or four days, the fever subsided entirely, tenderness disappeared, and there was such a marked amelioration of symptoms that both he and Dr. Sands, with whom he saw the patient in consultation, regarded it as a case in which there was no suppuration. The boy, however, was very suddenly seized with abdominal pain, fell into collapse, and died within ten hours, and on examination it was found that the abscess had ruptured into the peritoneal cavity and excited a fatal peritonitis. There were in this case the usual symptoms of perityphlitis, with the existence of tumor and distinct resistance on palpation. The needle had not been introduced.

Dr. Shrady referred to a case in which resolution took place and in which there was tumor, fever, and limited dulness on percussion. The symptoms continued seven days. The patient was a lad twelve years of age. The mother objected to the use of the exploring needle. The patient was kept quiet, and is alive to-day. He could also refer to the case of a medical gentleman, who had had two attacks from which he recovered without an operation. He believed that in both these cases perfect rest gave nature an opportunity to cure the disease by resolution.

Dr. Peabody thought that one such case as that related by Dr. Ball, where the boy died of rupture of the abscess, was sufficient to counteract the force of a hundred such cases as had been brought forward by Dr. Shrady.

Dr. Shrady merely referred to these cases as exceptional ones. There was, however, never any argument against the evacuation of pus, wherever it might be. He believed that the introduction of the aspirating needle could always settle the existence of an abscess of any size.

Dr. Ball said the question arose whether or not it was proper, in cases of perityphlitis, to thrust in a needle within forty-eight or seventy-two hours.

Dr. Peabody thought it was not, and yet he thought it would not do any harm.

Dr. Bull said that if the disease was ushered in with acute symptoms, and the patient was evidently going to the bad, it would be undesirable to delay the insertion of the needle. He thought it was not desirable to insert the needle if there were no local symptoms whatever. The operation itself was harmless, and with the application of cocaine was not painful.

The point which he wished to make was, that the general symptoms were not to be looked upon, and that the allowance of time, either of ten days or forty-eight hours, should be left entirely out of the question. Given a person with sufficient fever, with local signs which point to the existence of an exudation into the iliac fossa, the rule should be to explore with the needle at once, and he thought he should agree with Dr. Peabody, that in a case in which the pain was severe, accompanied with fever, and the attack a sharp one, make an incision, even if the needle found no pus whatever. He believed that by this somewhat aggressive kind of surgery more recoveries would be secured than by avoiding the operation.

Dr. Kinnicutt said that he only meant to be understood as saying that he thought the operation should not be delayed beyond ten days. He thought it frequently was indicated, and he certainly would not object to its being performed much earlier. He believed that frequently suppuration occurred very early.

Dr. G. L. Peabody presented a

GALL-STONE

passed per anum by a woman thirty-two years of age. It measured a little more than two by one inches. She had a good deal of pain in the region of the liver, and it was thought that she had colic; but she was not relieved by the medicines usually administered in such cases. She insisted that there was a stone inside of her, as she could feel it move about. The specimen was presented to him by the eminent dermatologist, Dr. George T. Jackson.

Dr. Ball referred to a case in which a gall-stone as large as an average sized potato produced fatal intestinal obstruction.

Dr. W. T. Bull presented photographs which illustrated a plastic operation for the relief of

DEFORMITY OF THE NOSE.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, January 28, 1886.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

Dr. Malcolm McLean presented the sloughed portion of intestine in a case of

INTUSSUSCEPTION,

which occurred in a boy five years of age, who, when he first saw him, was suffering from all the ordinary symptoms of acute dysentery. After a few hours, on account of extreme tenesmus and some evidence of shock, he concluded that it was a case of intussusception. Began treatment, but did not succeed in reducing it. Dr. Rudisch was called in consultation, who agreed with regard to the diagnosis and treatment, but recommended that the abdomen be opened, to which Dr. McLean objected, on account of the general condition of the patient, and excessive tympanites, etc. The case went on for ten days with complete obstruction, and with continuation of bloody discharges from the anus, and on the eleventh day a small fecal movement occurred, containing a large piece of intestine. The patient since that time has been doing well, although he had had what appeared to be an attack of peritonitis. The interesting clinical features of the case were—complete obstruction for this period of time, with no vomiting whatever. The treatment adopted was the use of large injections of flaxseed tea, the child being inverted and the abdomen kneaded, and afterward inflation. He was able to inject twenty-one ounces of the tea, which was evidence that the obstruction was high up.

In answer to questions Dr. McLean said that he did not use carbonic acid gas, as recommended by Dr. Forest, because he did not think it had any special preference over common air; also, that there was a marked tumor on the left side; and that he did not anæsthetize the child preparatory to injecting the warm flaxseed tea.

Dr. J. H. Ripley thought simple water was as likely to succeed in reducing an intussusception as any effervescing fluid, although a number of cases had been reported of success in the use of the latter. He thought that the administration of an anæsthetic aided wonderfully the use of water.

With regard to abdominal section, he thought that the operation, in most cases, had been performed on the adult.

Dr. H. Griswold said that Dr. Sands operated in one case for him, and the child died of shock at the end of about two hours.

Dr. A. Jacobi said there were two or three cases on record in which laparotomy had proved successful; the number, however, was very small. The only baby on whom he had operated was a child eight weeks old, an unusually young subject. The operation could be completed, but the baby died a few hours afterward.

Dr. J. Lewis Smith then read a paper on

THE TREATMENT OF ACUTE INFANTILE BRONCHITIS.

The subject was considered under two heads: (1) mild, and (2) severe bronchitis. He believed that simple bronchitis could be aborted, or rendered milder, by an emetic employed when the first symptoms appeared. For this purpose ipecac was probably the best. Measures designed to abort the disease, however, were not usually indicated when the patients were first seen; to be employed with success they must be adopted very early.

The treatment for mild, uncomplicated, primary bronchitis was very simple. A favorite mixture of the late Dr. Jackson, of Boston, consisted of equal parts of almond oil, syrup of squills, simple syrup, and mucilage of gum arabic. Of the mixtures in the dispensatory the mistura glycyrrhizæ composita was the best. The compound syrup of ipecac of the French Pharmacopœia was a most elegant mixture.

When the temperature was 102° F., and above, and the respiration correspondingly accelerated, he had been accustomed to use a mixture consisting of sweet spirits of nitre, syrup of ipecac, and syrup of balsam of tolu.

Severe bronchitis.—When the inflammation involved the smaller bronchial tubes localized atelectasis was liable to occur, and also catarrhal pneumonia, which was one of the most dangerous diseases of infancy.

The indications for treatment in a severe case of bronchitis were to promote expectoration, to diminish inflammation, to strengthen the action of the heart, and prevent exhaustion.

In reference to cough there was safety in it, and he seldom added opium to any of his prescriptions which were designed to relieve cough. Although children did not expectorate, the bronchial tubes were as effectually emptied when the sputum was swallowed. To facilitate expectoration two remedies had been used largely, namely, carbonate and muriate of ammonia; the latter was preferred in most cases, except in the advanced stages, when the former might be advantageous as a stimulant.

A favorite formula for the use of muriate of ammonia with him had been muriate of ammonia, one drachm; balsam of tolu, two ounces. When there was great dyspnœa and indications for clearing the bronchial tubes of mucus, this remedy should be administered every half hour. Dr. Smith had not witnessed any marked benefit from the use of senega or squill. To get rid of large quantities of mucus an emetic was sometimes proper.

To sustain the patient and reduce the fever.—He had not noticed any marked reduction of the temperature by the use of quinine, but it seemed to him that it had been useful as a heart tonic administered in small doses. For a child one year of age, half a grain to one grain. Antipyrine might be of service, but care should be exercised in its use. In a vigorous infant, suffering from bronchitis without or with only a very slight amount of pneumonia, it might be used. Digitalis as a heart tonic was one of the best which could be employed. Alcoholic stimulation was necessary in severe cases; two or three drops of whiskey in water, for each year of age after three months, given hourly or every second hour.

External treatment.—Leeching and vesication have been abandoned. Slight irritation of the surface affords relief, and for this purpose he had been accustomed to use a flaxseed poultice, first rubbing the chest with camphorated oil in young children, and using a mixture of mustard and flaxseed, one to sixteen, in older children, enveloping the chest with the poultice and covering it with oil-silk. In those cases in which there was hurried respiration, accompanied by continued moaning, to cover the chest posteriorly and anteriorly with a poultice, and over the whole place an oil-silk jacket would afford marked relief.

In robust children the application of cold to the chest during the acute stage, as recommended by Henoch, of Berlin, might be of more service than poultices. For all infants under six months of age, however, poultices were preferable.

Change in position of the child he regarded as a most important element in the treatment—laying the child first upon one side and then upon the other, and upon the back.

The Chairman invited Dr. A. Jacobi, to open the discussion, who said that whenever Dr. Smith read a paper very little, if anything, remained to be said. There were some points which he would like to impress upon those present who had not seen a great amount of practice, and who would doubtless see more of these cases hereafter. One of the principal points to which allusion had been made, and of which he wished to speak, was the use of *opium* in these cases. We could not do well without opium in many of them, because there was so much irritation; but he would emphasize the necessity of giving as little as possible. If it was to be given at all, give a good-sized dose at night, for the purpose of securing a number of hours of sleep. He would express his conviction that in no small number of cases of capillary bronchitis and acute pneumonia in adults, the patients died in part of their disease, in part of the influence of opium. Certainly opium would suppress expectoration, and without expectoration bronchitis and pneumonia were almost invariably fatal.

There was one great expectorant which Dr. Smith had not mentioned, and that was *water*. Where was the expectoration to come from unless there was fluid in the body? It was all well enough to give muriate of ammonia and expect it to liquefy the expectoration; but the liquefaction could not take place without plenty of water, and the chief danger was that water was not supplied in sufficient quantities to young infants, older children being able to ask for it.

Another important point was the regulation of the temperature and moisture of the atmosphere in the room; this is especially important in all cases of so-called dry bronchitis.

With reference to the use of *digitalis*, he believed that two or three large doses in twenty-four hours were preferable to small doses frequently repeated. A child one year of age would take one grain of digitalis, three times a day, for as many days as would be required, and the effect would be much better than if the remedy was used as it was usually employed.

Another exceedingly valuable expectorant was *camphor*, the effect of which was permanent, and it was more easily taken than carbonate of ammonia. A child one year of age might take one-quarter, one-half, or even one grain of camphor, rubbed up with glycerine as often as every hour or every two hours, and in bad cases of bronchitis or pneumonia where expectoration was wanted he had not seen any expectorant which had served him a better purpose.

Turpentine, also, by inhalation, was an excellent expectorant. Put a tablespoonful or two tablespoonfuls of spirits of turpentine into the kettle of water which is kept in the room to moisten the atmosphere, and the air will be impregnated with the vapor of turpentine, which will greatly benefit the patient.

The Chairman invited Dr. John H. Ripley to continue the discussion, who said that he should take issue with Dr. Smith with regard to aborting bronchitis by the administration of an emetic. The inflammation might be shortened, but he did not think it possible to abort it. That, however, was a matter of experience.

With regard to the temperature, it seemed to him in cases of bronchitis limited to the large air-passages, or

involving only the smaller tubes, that a temperature never occurred sufficient to demand antipyretics. If there was a temperature of 102° F. plus, he should search for some other cause for its explanation than the bronchitis. His experience had been that bronchitis rarely afforded a temperature of 102° F., except during its onset.

As to opiates, Dr. Smith and Dr. Jacobi had condemned their use, and he also wished to condemn their use to any very great extent; but, at the same time, he should always think of giving opium to some extent if the cough was frequent and harassing. He did not think it was necessary for a child to keep coughing to prevent collapse of the lung. It was necessary that the child should take deep inspirations, to be sure, which generally would be sufficient, with the use of a small quantity of opium, and the cough, when modified by opium, was sufficient to keep the bronchial tubes open.

Many years ago he learned a lesson from Dr. Jacobi—not the only one by any means. Jacobi said:

Spasm the baby,
Make it cry,
Loud as you can,
The baby will die.

With regard to expectorants, he did not agree with Dr. Smith in beginning their use at the outset of the disease. We should wait until the bronchial tubes began to secrete before administering them.

He thought the best prescription at the beginning of an attack of bronchitis was a combination of veratrum viride and the spiritus mindereri. When the case reached the stage of expectoration he agreed with Dr. Smith that one of the best expectorants which could be employed was the muriate of ammonia; and another good mixture to be used with it was the mistura glycyrrhizæ composita of the dispensatory. Also, he did not know of an expectorant of more value than turpentine, particularly if the larynx was involved.

With regard to quinine, he did not use it at all in the treatment of bronchitis. Dr. Ripley then spoke of bronchitis occurring with rachitis, in which cod-liver oil, but better, linseed oil, was of special service. He also spoke of a form of circumscribed capillary bronchitis, and what might be denominated a malarial bronchitis, in which quinine was the remedy *par excellence;* but to be used effectually it must be given in large doses; for a child one year of age, fifteen grains daily.

Dr. Ripley advocated the use of poultices, and employs thick poultices. The object of the poultice was to afford protection from the air and to give moisture and heat, and he therefore used at least a pound of flaxseed meal, which made a thick poultice that would envelop the chest of a child, and would not need changing oftener than every five or six hours.

Dr. John C. Peters was asked to continue the discussion, and said that one remedy, which was the best of all expectorants, and which allayed the cough, had not been mentioned, and that was potash. The form in which he usually prescribed it was the liquor potassæ, one drachm to four ounces of water, and he very frequently used anise-seed water, which of itself was somewhat soothing. All of the alkalies, but more particularly potash, increased the ciliary movement of the bronchial epithelia, the only way in which expectoration was brought forward where it could be reached by cough. Besides, a solution of potash would dissolve mucin, while simple water would not. He had almost abandoned the use of ipecac, except perhaps in small tonic doses. When there was great congestion and dyspnœa the administration of small doses of calomel, sufficiently large, however, to move the bowels, would relieve the heart and lungs, and render *digitalis* more active than it otherwise would be.

With reference to external treatment, he had used flannel chiefly, perhaps covering the chest with cotton. He thought that the frequent changing of poultices exposed the infant too much.

With reference to change of position, he had been in the habit of placing the child on the face, and had found it very beneficial.

He never used quinine as an antipyretic, but thought it beneficial in preventing the migration of leucocytes.

Dr. Joseph E. Winters said that while, perhaps, acute bronchitis could not be aborted, the inflammation certainly could be minimized. During the time when the congestion was limited to the bronchial artery, remedies which reduced the force and frequency of the heart's action would reduce the inflammation, and for this purpose he employed veratrum viride, already mentioned by Dr. Ripley, or aconite; as a reliable article of veratrum viride was somewhat difficult to obtain, he frequently used the latter agent. This expectation, however, was realized only in cases of acute primary bronchitis.

After this his method of treatment was to use derivatives, and then mild cathartics, consisting chiefly of alkaline mixtures.

The second indication was to prevent accumulation of catarrhal secretion, as here occurred all the deaths. For the prevention of the accumulation of this secretion he used stimulating expectorants, and they varied according as to whether the expectoration was thin or viscid. In this condition cough also became remedial. During the catarrhal stage he combined camphor with other agents in a sufficiently concentrated form to excite a cough, which would, in part, be voluntary. Besides, he applied stimulating liniments to the surface of the chest, which would provoke deep inspiration. For this reason he thought that large poultices were dangerous, and that putting a pound of flaxseed, mixed with water, upon the chest of a child one year of age, would materially interfere with respiration. He preferred the oil-silk jacket, or, perhaps, spongiopylin, with cotton batting and oil-silk. The oil-silk was generally sufficient, with the use of a stimulating liniment, applied by putting the hand under the jacket, without exposing the chest of the child at all. He always insisted upon the following order in most of these cases: First, make the external application, then administer the expectorant, which would excite a cough, and then administer an emetic, and do all this at bedtime.

Opium became a dangerous remedy in young children, and he thought chloral did equally as well. When the secretion was watery and excessive, camphorated tincture of opium might diminish cough and secure rest, but it was not often indicated.

As to whether capillary bronchitis existed independently of broncho-pneumonia, he had his doubts, because when capillary bronchitis was found at autopsy it was associated with more or less of broncho-pneumonia.

Dr. H. D. Chapin made special reference to the use of bromide of sodium, which he had used with good results. The use of opium had been pretty well condemned by the speakers by whom he had been preceded; and even in the doses recommended he had seen, it seemed to him, unfortunate results due to its use. In rachitic children he had noticed a more rapid and a more marked narcotic action produced by opium than in otherwise healthy children. In one case he felt quite certain that the brown mixture, regarded as perfectly safe in ordinary cases, nearly caused the death of his patient. For some time, therefore, he had used the bromide of sodium, and although it did not act rapidly, yet by giving it continuously it produced a sedative effect which had seemed to him to be safe and beneficial. He would be more afraid to use chloral than opium.

With reference to cases of mild bronchitis, he thought one of the best remedies was to put the child to bed at the outset, and when this was done the large majority of children would get well without special treatment.

Dr. J. H. Fruitnight spoke of the use of iodide of potassium in the second stage of the disease, especially when the secretion was viscid, administered in doses of one-fourth to two grains, according to the age of the child. He favored the use of oil of turpentine combined

with balsam of fir, and the use of small poultices, containing mustard in the proportion recommended by Dr. Smith.

Dr. Goelet spoke of the administration of medicines to children by means of a medicine-dropping tube, by which one or two drops could be given at a time, and in this manner the entire dose could be administered, thus securing a more uniform effect of the remedy.

Dr. L. Emmet Holt spoke of bronchitis occurring in children suffering from malaria, in which the bronchial affection yielded only to full doses of quinine. He was indebted to Dr. Ripley for first calling attention to these cases.

The amount of spasm of the bronchi which occurs in some of these cases he had looked upon as one of the signs of rachitis, and in the cases in which he had had opportunity to make an autopsy he had rarely failed to find evidences of rachitis. In these cases the amount of the catarrh is very small, and the amount of spasm is very large, and they are rarely benefited very much except by cod-liver oil and general tonic treatment.

At one time he was averse to the use of ipecac in the treatment of bronchitis in children, but a further trial of the remedy had given, in some cases, very much benefit. A very useful agent, according to his experience, was a hot mustard foot-bath. He had used camphorated tincture of opium, but not in large doses. Chloral, administered in small doses, had been beneficial in nearly all cases.

Dr. Winters wished to emphasize the matter of change of position, of which he had omitted to speak previously. It had been his custom to place the child prone, and he regarded change of position as one of the most important measures in the management of infantile bronchitis.

Dr. Jacobi made additional remarks with reference to those cases in which there was more spasm than bronchitis, referred to by Dr. Holt, and in which the ordinary treatment was of but little avail. There were a number of cases in which a diagnosis was very difficult indeed. When either a child or an adult was seen with all the symptoms of bronchitis, when nothing is known of the beginning of such an attack, and the question arose whether the case was one of bronchitis or simple asthma, it turned out in many instances to be asthma, such as was seen in adults. The fact was that asthma occurred very much more frequently in infancy and in children than we had been aware of. Such attacks would come on very suddenly, and were relieved by the administration of a narcotic, just as it was when it occurred in an adult. Thus a good dose of chloral or opium would do all that was temporarily necessary; afterward the treatment began, and it consisted of measures intended to remove the peri-bronchitis, which was almost always present in these cases. Here the iodide of potassium deserved all the credit which it had ever had in the cure of asthma. In such cases it was also well to study the condition of the nose, especially where there was not much known of the history of bronchitis and peri-bronchitis.

With reference to the association of constitutional diseases with bronchitis, syphilis gave rise less to bronchitis than to interstitial pneumonia. Rachitis might enumerate among its first symptoms hypertrophy of the bronchial and tracheal glands. It was not necessary that the cervical glands be enlarged, but those behind the clavicle were swollen. Again, the thymus gland, which normally had disappeared when the child had reached the fifth or sixth year of age, remained large in rachitic children, and in the majority of cases in which chronic bronchial catarrh existed in children under six or eight months of age, and which did not get well under normal treatment, it was probable that in nineteen out of twenty cases dulness on percussion could be elicited behind the manubrium, due to the large thymus and swollen tracheal, bronchial, and mediastinal glands.

Dr. Smith, in closing the discussion, said that it was difficult, of course, to determine positively whether or not bronchitis could be aborted; but he had seen some cases in which he felt quite certain that the disease had been aborted.

With reference to the use of expectorants from the beginning, he had stated in his paper that only in some cases he believed it to be advantageous to begin their use at the outset. As to the use of opium, he recommended that it should not be used in combination with the expectorant, but that occasionally it might be necessary, and when used he had combined it with the bromide of potassium, as he saw no special advantage in the use of bromide of sodium. He had hoped that the use of cold applications to the chest would have been touched upon by some of the speakers.

Dr. Ripley then referred to the use of cold water in the treatment of pulmonary affections in Bellevue Hospital, many years ago, under the direction of Dr. Alonzo Clark, and also Dr. Thomson, but the results were such as made them abandon its use. This referred to the use of cold water in adults.

The Section then went into executive session.

Stated Meeting, February 25, 1886.

Alexander S. Hunter, M.D., Chairman.

Dr. Robert A. Murray read a paper (see p. 267)

ON THE MANAGEMENT OF BREECH PRESENTATIONS.

The discussion was opened by Dr. H. J. Garrigues, who said that the general management of breech presentations was so well understood that he would direct attention to only a few points on which there was still difference of opinion, and on which the experience of the members would be interesting.

It was a mooted point whether or not the forceps should be used in delivering the head. Most authorities reject the forceps under these circumstances. Where the child was dead he had found the use of the forceps advantageous.

The temptation, in a case of breech presentation was, almost always, to do too much. If there was no disproportion between the child and the pelvis the delivery was very easy, and the best thing to do was to let the case take its natural course. But if there is even a slight disproportion between the child and the pelvis, the proper thing to do was to pull down a foot, which placed the case within the control of the accoucheur, who could thereby deliver the child at once and at any desired time.

When the breech has entered the cavity of the pelvis, a fillet should be passed across the groin, and thus the operator was given control of the child. The blunt-hook was altogether too severe an instrument to be used here. Some had advocated the use of the forceps under these circumstances. That was largely a matter of experience, and it would be interesting to hear the experience of the members on this point.

Dr. Charles Jewett, of Brooklyn, thought that the profession at large was not sufficiently familiar with the technical methods of the management of breech presentations, and were practitioners more familiar with the management of breech presentations version might be resorted to more frequently than it was, and with much better results than the use of the forceps.

The method of managing the head, which he practised most, was the Smellie-Beak, forking two fingers over the neck, and placing two fingers of the other hand in the canine fossæ. When this fails, he uses the forceps, to the cautious use of which he could see no objection.

With regard to the application of the forceps to the breech, his impression was that it was not in the disrepute which might be inferred from what had been said. On the other hand, he thought that the application of one blade over the sacrum and the ilium, and the other over the posterior surface of the opposite thigh, that which lies anteriorly as the thighs are flexed, had proved a satisfactory method in good hands. He repudiated the application

of the forceps over the trochanters. He had depended mainly on the manual methods of extraction, the most effectual being the fillet, when a foot cannot be brought down. As to the difficulty of passing the fillet, it had occurred to him that the Elliot uterine repositor might be used with advantage for passing the tape with which it was to be drawn into position.

He recommended it as good practice to visit the patients a week or so before expected confinement, make an examination of the abdomen, and, if a breech-presentation was detected, to change it into a cephalic presentation at once. He referred to a recent case in which he changed the presentation three weeks before labor.

Dr. Egbert H. Grandin referred to a paper by Olivier, who recommended application of the forceps in cases of breech presentation in which the legs were completely extended on the ventral surface of the child. He had not seen such a case, but should he encounter one he should be tempted to use the forceps rather than introduce the hand to the fundus in search of a foot.

He also would apply the forceps over the trochanters rather than make traction with either the fillet or the blunt hook.

With regard to examination of patients before labor, he regarded it as something which all should do, and if it was found on abdominal palpation that the breech was presenting, and it was about the end of the eighth month, it would usually be easy to change it to a cephalic presentation.

Dr. Malcolm McLean said that the highest rate of mortality for the child in breech cases he had been able to find reported was *two* per cent. A few years ago he took occasion to obtain the personal experience on this point of a large number of eminent obstetricians in this city, and the result was at variance completely with the statistics given in the text-books. One gentleman told him that there was no necessity of losing any children in cases of breech presentation. The late Dr. Elliot taught that one in five children would die in these cases. So far as his own experience went, he had not lost a child, and he had had twenty cases.

If there was danger to the child, as great as represented by the statistics in Dr. Murray's paper, Dr. McLean thought that the presentation should be regarded as an abnormal one and be dealt with accordingly.

But if the mortality was only almost the same as in cephalic cases, why perform cephalic version before confinement? He held that it was unnecessary. If delivery by the breech can be made almost as safe as with cephalic presentation, he regarded the *meddling* as the cause of the death of the child.

His plan of management had been, in every case in which the measurements of the pelvis were apparently good, but the mother was becoming exhausted, to introduce the whole hand into the vagina, measure the pelvis thoroughly, ascertain the exact position and presentation of the child, and in breech presentation bring down a foot, which could almost always be done without difficulty. Any pelvis which will allow the body of the child to come down into it will permit the passage of the hand alongside the child. He regarded the fillet and the forceps operation as troublesome, if not dangerous. He was opposed to the use of the forceps to the breech of the child. The foot gives something with which to make traction, and with which to make traction at the exact time when traction should be made. When the breech of the child is well through the pelvis, *traction should cease*, and the child should be delivered by pressure from above.

As to the delivery of the head, the moment the body of the child is sufficiently delivered to get hold of it, the temptation to pull is so great that up goes the chin and is locked, and then comes the struggle, and the child dies, not of suffocation, but as the result of traction on the spinal cord. The instant the arms are brought down he depends entirely on external pressure over the uterus. If the head locks in the pelvis, it becomes a question whether or not forceps should be used.

Dr. H. J. Boldt favored bringing down a foot, and had not seen the necessity for using the forceps, and in the only case in which he used the fillet, the child was lost.

Dr. J. H. Fruitnight referred to a case in which he applied the forceps over the trochanters, delivered the child safely and without injury to the mother. He published the case about ten years ago, in the *Virginia Medical Monthly*, and it was the first in this country in which this method had been adopted. At the meeting (Northwestern Medical Society) when he first reported this case, Dr. T. H. Burchard related two cases in which forceps were applied to the breech; in one of them by mistake, as it was supposed to be a case of cephalic presentation.

He has discarded the blunt-hook in these cases. He believed that the chin was frequently locked under the pubis by ill-advised traction. He referred to a case in which he found a combination of spina bifida and breech presentation that had given rise to difference of opinion concerning the presentation.

Dr. Garrigues thought that the use of the fillet and the forceps were to be compared, and not the bringing down of a foot and the use of the forceps. When the child is not far enough down to get hold of it with the fingers, but in the cavity of the pelvis, he prefers the fillet to the forceps; if unable to apply the fillet he uses the forceps.

Dr. Fanning referred to a case in which he completed delivery of the head with the forceps, with safety to the child and the mother. He also referred to recorded statistics of nine hundred cases, in which there were fifty of breech presentation, with one death.

Dr. W. E. Forest saw no reason why the forceps should not be applied every time the head was delayed at all in delivery, and was unable to see why it was not safer and speedier than to rely upon pressure from above. As soon as he discovers that he has to deal with a breech presentation, he sends at once for his forceps, and when the body and arms have been delivered and the head is not delivered immediately, he uses the forceps; the long forceps without handles, devised by the Chairman. He was thoroughly against traction on the body of the child, and equally strongly in favor of the use of the forceps for delivering the delayed head.

Dr. Goelet had seen the fillet produce injury, which, if not dangerous, was exceedingly disagreeable.

Dr. J. H. Emerson asked concerning the time when the change of presentation by external manipulation should be effected.

Dr. Jewett thought that in most instances it should be done near the time of labor, and Dr. Grandin said certainly in the eighth month, and he would prefer to make the change earlier.

Dr. F. A. Burrall suggested that exactness, with regard to the management of breech cases, would be promoted if the main diameters of the child's head and the approximate diameters of the mother's pelvis were given.

Dr. Murray, in closing the discussion, said that if the child was well-shaped, and the pelvis not extraordinarily large, there would be difficulty in delivery in breech cases. At the same time he felt that Dr. McLean had accepted his view that where there is delay at the brim, the proper course to pursue is to bring down a foot, and certainly that would give control over the head, which is larger than the breech. If traction is made, it should be coincident with pains, and with it continuous pressure over the uterus, if the woman is under an anæsthetic. He did not believe that pulsation in the cord could cease for more than five minutes and the child survive, and if the attendant cannot extract the head promptly, the forceps can be applied.

With regard to changing the presentation before labor, he regarded the time as immaterial, if it be done before

the membranes have ruptured, and the method should be the bipolar of Braxton Hicks.

With regard to the application of the forceps to the breech at the brim, he regarded it as not advisable, and the proper operation would be to bring a foot down. When the breech is in the cavity, a fillet may be used, but if the breech is between the superior and inferior straits, and one finger can be got into the groin, the fillet is of no use.

With regard to the method of introducing two fingers into the mouth, he did not believe that they did much in way of flexion, and that the real flexion was obtained by upward pressure made upon the occiput.

The Section then adjourned.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 27, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
February 27, 1886.....	5	5	45	2	5	73	4	0
Deaths.								
February 27, 1886.....	0	0	7	2	1	34	4	0

POLYMAZIA.—Individuals having one or more supernumerary breasts are not such rare beings as is generally supposed. In France, Puech collected the records of 77 cases, in 46 of which there was one extra mammary gland, in 26, two, and 2, three. When there is one supernumerary breast it is usually situated below one of the others or in the axilla; when there are two they are most commonly found in the axillæ; and if there are three, the other one is in the neighborhood of the umbilicus. In very rare instances the superfluous gland has been seen on the shoulder, thigh, or back. Men, as well as women, have been found the subjects of this anomaly.—*La Riforma Medica.*

DEODORIZED IODOFORM.—We gave recently the formulæ of Herr Oppler, who makes use of roasted coffee in order to disguise the unpleasant odor of iodoform. A still more simple means is that employed by Brunelli. He mixes one part of finely pulverized camphor with three of iodoform, and claims that in this way the characteristic odor of the latter is completely masked.

AN EXHIBITION OF CEREBRAL TUMORS.—Quite a novel exhibition was one of specimens of cerebral tumors held at a recent meeting of the London Pathological Society. There were twenty exhibitors, and more than fifty specimens were shown. The collection illustrated in a remarkable way the fact that cerebral tumors may occur in any region, and the clinical histories given of many taught only too plainly the lesson that in the great majority of cases the symptoms are diffuse and the lesion cannot be localized. Many of the specimens showed very well the tendency of gliomata, when occurring in the cortex, to remain limited to the gray matter, and their infiltrating tendency when occurring in the white substance.

TREATMENT OF HYSTERIA IN CHILDREN.—As to the direct therapeutic treatment of hysteria in children, Dr. Herz agrees with Henoch, the acknowledged highest authority on children's diseases, that there is no specific remedy for it. Henoch prefers the hydrate of chloral to all other medicines, though he regards morphine as almost equally valuable. The former he prescribes in 0.5 to 1.00 doses (7½ to 15 grains); the latter, both internally and hypodermically, in 0.005 to 0.01 doses ($\frac{1}{12}$ to $\frac{1}{6}$ grain). Inhalations of chloroform, though ordinarily exerting only a transient salutary influence, will be found requisite in the occasional paroxysms involving the laryngeal organs. Arsenic and quinine are highly prized by some practitioners, but they possess likewise no constant value. In view of the so frequently underlying anæmic base, small doses of iron and arsenic, continued systematically for a long period, will invariably be found useful. Warm baths, applied frequently, and lasting fifteen to thirty minutes, fresh air, and nourishing food, are always highly commendable in every case.—*Therapeutic Gazette.*

THE MODE OF ACTION OF ANTIPYRETIC DRUGS.—As a general conclusion to Maragliano's valuable researches, we can advance the theory that antipyretic remedies act by being able to eliminate the two most important pathogenetic causes of fever. In other words, they prevent vascular contraction, and the thus resulting storing up of animal heat, and increase the heat-discharge; besides, they combat successfully the increase of heat-formation by reducing the intensity of the oxidizing processes of the economy.—*Therapeutic Gazette.*

COMPARATIVE ADVANTAGE OF DIFFERENT FORCEPS.—Among the changes which have recently taken place with regard to the forceps, there are two, however, which, I venture to think, require further consideration. The first is with regard to the early period of labor at which instrumental assistance is now advocated by some authorities. The second is with regard to the complicated form of forceps introduced by M. Tarnier, and since variously modified and largely employed by modern obstetricians. For my own part, I can see no reason for instrumental assistance before the os uteri is fully dilated, except in certain cases of complex labor, where immediate delivery may be necessary for the safety of mother or child, and in which it must be unhesitatingly resorted to as soon as the os uteri is sufficiently dilatable. But if obstetric practitioners should ever come to regard it as a safe rule of practice to apply the forceps as soon as the os uteri can be sufficiently expanded to admit its introduction—which in some instances may be done before the occurrence of any true labor pains—it is very probable that the ill results of the indiscriminate and injudicious employment of this practice will outweigh all the possible benefits of its right use. The preference generally given to Tarnier's axis-traction forceps by many British as well as by nearly all French obstetricians, over instruments such as Barnes' original double-curved or my own short forceps, appears to me to be a mistaken one. In operative midwifery, as I have before observed, as in any mechanical problem, it is obvious that there should be a due proportion between the power used and the resistance to be overcome, and that the force employed should be the minimum necessary to accomplish the desired effect. This certainly is not the case in Tarnier's forceps, which I cannot but regard as a needlessly complicated, unwieldy, and, for the purpose for which it was designed, an ill-contrived piece of mechanism. Hence, in my opinion, this instrument is by no means equal to Dr. Barnes' forceps for any cases of difficult labor where the head is detained above the pelvic brim; nor, I will venture to add, to my own short forceps in those still more frequent instances in which the head, having entered the pelvic cavity, assisted delivery may be expedient, as I have found in upward of two hundred and fifty cases in which I have now used this instrument.—*Dr. T. M. Madden.*

THE PHYSICIANS OF GERMANY.—Although the number of physicians in Germany averages 1 to 3,025 inhabitants, their distribution is very uneven. The cities and watering places are especially well supplied. In Bonn there is 1 doctor to 440 inhabitants, in Wiesbaden 1 to 558, in Berlin 1 to 1,063.

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Original Articles.

A CONTRIBUTION TO THE NATURAL HISTORY OF PULMONARY CONSUMPTION.

EMBRACING THE CAUSATION AND SYMPTOMATIC EVENTS. BASED ON AN ANALYSIS OF FIFTY-NINE CASES OF THE DISEASE.

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THE clinical observations which form the basis of the following analytical study were made during the past summer at the chest-class of the Out-door Department of Bellevue Hospital, and at the Clinic for Diseases of the Chest at the New York Post-graduate Medical School. They were begun June 11th and terminated September 19th; with few exceptions the cases were presented to the Class in Physical Diagnosis at the Post-graduate School during the summer session of 1885. It was intended, at the beginning of the summer, to note also the results of therapeutic measures, but the extreme irregularity of the patients in attending the clinics interfered to such an extent with my observations that I was forced in a great measure to abandon this line of research; hence, I have preserved records only of facts relating to the causes and symptoms. These, with unimportant modifications, are presented to the readers of THE MEDICAL RECORD in the subjoined table, in about the same shape in which they were obtained from the patients themselves in the clinic rooms. In regard to the table, it may be said that the facts which it contains, though presented in a brief form, will serve to elucidate the points of inquiry about as clearly, and perhaps more satisfactorily, than separately and fully detailed histories of each case. In a few instances, however, the subjects of investigation seemed to warrant rather more space than could be allotted them in the table; they will be given their proper places in the text.

Before proceeding with our analysis it would seem appropriate to call attention to the following facts:

1. The observations made were in a few instances the result of one examination, opportunity not being afforded to make subsequent ones; in most cases, however, the patients repeated their visits at irregular intervals and the examinations were gone over a second, third, or even a fourth time. Almost without exception the original replies which they gave to my questions were steadfastly adhered to, repeated examinations yielding essentially the same results.

2. In order to guard against lapses of memory and to facilitate the taking of the histories, all of the subjects for investigation were written down for reference at the dispensaries and each patient questioned on each subject, with occasional exceptions, *seriatim*.

3. The notes were made with as much care and precision as were possible, each patient being allowed ample time to reply to the interrogations proposed to him. Nothing was jotted down at hap-hazard, and no case about which there was reasonable doubt is included in the list. The diagnosis in each case was based on a good rational history of consumption, confirmed by a careful physical examination.

It should also be stated that in addition to the cases contained in the table, reference is occasionally made to others which have come under my observation, and of which incomplete records have been preserved, also to statistics of phthisis at the Bellevue Dispensary for the past two years which I have compiled.

In our study of these cases the numerical method of analysis inaugurated by Louis,[1] and so ably followed by Professor Austin Flint,[2] will be observed throughout.

FACTS PERTAINING TO CAUSATION.—*Age.*—The first object of investigation will be with reference to the possible influence of age in the development of consumption. Besides the 59 cases in the table I have preserved records of the ages of 82 additional cases which have come under my observation at the clinics of Professor Burt at the Post-Graduate School, and of 776 cases[3] taken from the clinic-book of the chest class of the Out-door Department of Bellevue Hospital for the years 1883–84. The entire number (917 cases) will be considered collectively. The ages by decades were as follows:

From [illegible] year of age	26
" [illegible]	92
" [illegible]	317
" 40 "	157
" [illegible]	42
" [illegible]	18
" 50 [illegible]	9

These figures represent the ages of the patients at the date of application for treatment; the time of the first appearance of the symptoms, if given, would, of course, increase the earlier decades to some extent at the expense of the later. It should also be stated that these cases were treated at clinics to which children are not admitted, those under twelve or fourteen years of age being referred to the children's classes. The foregoing numerical data accord very nearly with those obtained by previous observers (Walshe, Pollock, Flint, Theodore Williams, Reginald Thompson). Leaving out the first decade, they would seem to indicate that the liability to consumption increases from the tenth to about the thirtieth year of life, and progressively diminishes thereafter. Exactly such a conclusion has been arrived at by nearly all writers on the subject. With due deference to the opinions of many eminent authors, I would express the belief that this conclusion is based on erroneous premises. It has been the experience of medical officers of life insurance companies that the *individual* liability to consumption, instead of diminishing, increases after the age of thirty, reaching its maximum at a period beyond the seventieth year of life.[4] The results of an exhaustive investigation into the subject by A. Wuerzberg, Librarian of the Imperial Health-Office at Berlin, amply corroborates this deduction. The methods of study pursued by Wuerzberg are too elaborate to be considered here; but the following extracts from his report will be sufficiently striking: 1. Out of 10,000 persons between the ages of twenty and twenty-five, $30\frac{2,4}{0,0}$ die annually of consumption. 2. Out of 10,000 persons between the ages of twenty-five and thirty, $36\frac{7,3}{0,0}$ die annually of consumption. 3. The proportion continues to increase, until *out of* 10,000 *persons between the ages of sixty and seventy*, $93\frac{1,8}{0,0}$ *die annually of consumption*[5] (the italics are my own).

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[1] Ch. A. Louis: Recherches Anatomiques, Pathologiques et sur la Phthisie. Paris, 1826.

[2] Clinical Studies Pulmonary Consumption. [illegible]

[3] The data contained in the 776 cases [illegible] were kindly furnished me by the attendant auscultators at the clinics, Drs. S. S. Burt, A. P. Zemansky, W. H. Katzenbach, and Francke H. Bosworth.

[4] *Vide* article by Edgar Holden, M.D., Ph.D., MEDICAL RECORD, July 12, 1884.

[5] American Journal of the Medical Sciences, July, 1884, p. 102

FACTS HAVING REFERENCE TO CAUSATION.

Number	Sex	Age	Social condition	Occupation.	Nativity.	Heredity or family history.	Opportunities for infection or contagion.	Pregnancy.	Miscarriage.	Alcoholics.	Syphilis.	Rheumatism.	Pneumonia.	Pleurisy.	Other antecedent diseases.	Where living when first symptoms appeared.	Time of commencement	Duration of illness.	Cause assigned by patient.
1	M.	17	...	Jeweller's apprentice.	United States.	None.	None so far as known.	...	...	Moderate drinker.	Has never had it.	Has never had.	Has never had.	Has never had.	Diphtheria 2 years ago.	New York City.	Spring, 1884.	Not noted.	Assigns none.
2	M.	44	...	Stevedore.	Italy.	Unknown.	None so far as known.	...	...	Moderate.	Unknown.	Never had.	...	...	None.	...	A year or two ago.	"	Exposure.
3	M.	20	...	Carpenter.	United States.	Mother died of consumption.	None.	...	...	Hard drinker.	Never had.	Has had muscular.	Had it in January, 1885.	...	Gonorrhœa.	...	January, 1885.	"	Pneumonia.
4	M.	28	...	Bricklayer.	Ireland.	None.	None known.	...	...	Occasionally.	...	Never had.	Never had.	...	None.	...	June, 1884.	"	Exposure.
5	M.	28	...	Machinist.	United States.	Unknown.	None.	...	...	Never drank.	...	...	Had it ago.	Had it with pneumonia.	...	Nebraska.	1884.	"	Pneumonia.
6	M.	24	...	Compositor.	Newfoundland.	Mother died of consumption.	None.	...	...	Hard drinker.	...	...	Never had.	Has never had.	...	New York City.	April, 1884.	"	Assigns none.
7	M.	36	...	Laborer.	Ireland.	None.	Wife died of consumption.	...	...	Moderate.	Has had.	...	Had two years ago.	...	...	...	Two years ago.	"	Pneumonia.
8	M.	24	...	Hatter.	United States.	None.	None.	...	...	...	Never had.	...	Never had.	...	...	...	May, 1885.	"	Assigns none.
9	M.	36	...	Factory employee.	Ireland.	None.	None.	...	...	...	Has had.	...	...	...	...	...	July, 1885.	"	Ballast.
10	F.	18	S.	None.	United States.	Mother died of consumption.	None for six years.	Never pregnant.	...	Never drank also holies.	Never had.	...	...	...	...	...	Spring.	"	Heredity.
11	M.	29	...	Express driver.	" "	None.	None.	...	...	Hard drinker.	Has had.	...	...	...	...	...	Two years ago.	"	Assigns none.
12	M.	38	...	Diver.	Wales.	Mother has consumption.	Lives with mother.	...	...	Moderate.	Never had.	...	...	Had eight yrs ago and since then.	...	...	Seven years ago.	"	Occupation.
13	M.	...	...	Plumber.	United States.	None.	None.	...	...	Unknown.	...	...	...	Has never had.	...	...	December, 1884.	"	Assigns none.
14	F.	34	M.	Housekeeper.	Ireland.	None.	None.	Has had five children.	Not noted.	Never drank.	...	Muscular rheumatism.	...	...	...	...	Several years ago.	"	Hard work.
15	M.	47	...	Laborer.	"	Unknown.	None.	...	...	Moderate.	...	Articular, several times.	...	...	H'morrhoids.	Greenpoint, L. I.	Spring, 1884.	"	Assigns none.
16	M.	21	...	Boilermaker.	United States.	None.	None.	...	...	...	...	Never had.	...	...	None.	New York City.	June, 1885.	"	"
17	F.	42	M.	Sewing.	" "	Mother died of consumption.	None.	Has had five children.	Never had.	Hard drinker.	...	Muscular.	...	...	Dyspepsia.	...	Two years ago.	"	Hard work and anxiety.
18	M.	28	...	Carpenter.	" "	None.	None.	...	...	Drinks no alcoholics.	...	Articular, 8 or 2 years ago.	...	...	None.	Pennsylvania.	Seven yrs. ago.	"	Assigns none.
19	F.	27	M.	Housekeeper.	Ireland.	Father died of and sister has consumption.	Lives in house with sister.	One child four years old.	Never had.	Doesn't drink.	Unknown.	Never had.	...	...	...	New York City.	June, 1885.	"	Ballast.
20	M.	21	...	Truck driver.	United States.	None.	None.	...	...	Not noted.	...	...	Probably had	Has had it.	...	...	Last, 1885.	"	Exposure.
21	M.	34	...	Laborer.	Ireland.	Mother died of consumption.	None so far as known.	...	...	Drinks moderately.	Has never had.	Muscular.	Has never had	Has never had	Severe dysentery.	Chicago.	May, 1885.	"	Heredity.
22	F.	23	S.	None.	"	None.	"	Never pregnant	...	...	...	Has never had.	...	...	None.	New York City.	May, 1885.	"	Staying in doors too much.
23	M.	30	...	Laborer.	"	Suspicious. Father died of lung disease.	"	...	...	...	...	...	Pneumonia three years ago.	...	...	Philadelphia.	Oct., 1885.	"	Pneumonia.
24	M.	33	...	Blacksmith.	United States.	Brother has consumption.	Lives with brother.	...	...	...	Has had it.	Muscular.	Never had.	...	...	New York City.	Slight cough a month or two. Hemorrhage last week.	"	Occupation.
25	M.	26	...	Painter.	" "	Both parents died of consumption.	None for several years.	...	...	Doesn't drink.	Never had.	Has never had.	...	...	Gonorrhœa.	...	Mar., 1885.	"	Heredity.
26	M.	29	....	Laborer.	Ireland.	None.	None known.	...	...	Drinks occasionally.	...	...	...	...	None.	...	Jan., 1885.	"	None given.
27	F.	44	M.	Housewife.	"	None.	"	Has had several children.	One miscarriage.	Hard drinker.	Contracted from husband.	...	...	...	Dyspepsia.	...	Three yrs. ago.	"	"
28	M.	29	....	Hod-carrier.	"	None.	"	...	...	Not noted.	Never had.	...	...	...	Malarial fever.	...	Apr., 1885.	"	"
29	F.	40	M.	Housewife.	England.	None.	"	Has had six children.	One last year	Never drank.	...	...	...	...	Malarial fever.	...	Aug., 1884.	"	Bad treatment, hard work, and miscarriage.

30	F.	48	M.	Housewife.	United States.	Mother died of consumption.	None known.	Never pregnant.	... .	Never drank.	Never had.	Muscular.	Never had	Has never had.	None	New York City	Three yrs.	Not stated	Change of life.
31	M	21	.	Printer	" "	None	"	... ...	... .	Drinks moderately.	"	Never had.	Has had	"	"	"	Aug., 1884	"	Apoplexy.
32	M	44		Fishmonger.	" "	Suspicious.	"	... ...	..	Hard drinker	Has had it.	"	Never had	"	"	"	Sept., 1884	"	Epilepsy.
						Mother died of "asthma."													
33	M	26	...	Truck driver	" "	None	"	... ...	...	Not much	Never had	"	"				Jan., 1884	"	Apoplexy.
34	M	17	..	Carpenter	" "	Both parents died of consumption	Nursed mother	... ...	...	Doesn't drink	"	"	"		Laparotomy	.	Sept., 1884	"	Recovery.
35	M	21	.	Brass finisher	" "	Six parents. Uncle died of "chronic bronchitis."	None known.	... .	...	Drank moderately	Had it three years ago	"	.	Had it three years ago	None	.	Dec., 1884	Recovery.	Recovery.
36	M	17		Machinist.	" "	Unknown	"	.		Doesn't drink	Never had.	Articular rheumatism two years ago	Never had	Heart disease.	Heart disease.	.	Dec., 1884	.	Heart disease.
37	F.	[illegible]	M.	Housewife	" "	Mother and aunt died of consumption	Nursed aunt	Never pregnant.	.	"	"	Never had.	Never had	Never had	Laparotomy for ovarian tumor	.	April, 1884	Recovery.	Laparotomy for ovarian tumor.
38	F.	43	M.	Housekeeper.	" "	Sister died of consumption.	Living with sister when she died.	Has had six children.	Three—last six years ago.	"	"	Never had. Rheumatism in childhood.	.	.	None	.	Jan., 1885.	Recovery.	Laparotomy.
39	F.	41	M	"	Ireland.	Mother and son died of consumption.	Nursed son	Has had nine children.	Two	"	Subject to rheumatism	Muscular	.	.	"	.	April, 1884	.	Fibroid of uterus. Laparotomy. Recovery.
40	M	[illegible]	.	Laborer.	"	Six parents. Father died of "paralysis."	None	.	.	Drinks moderately.	Never had.	.	Has had	.	Laparotomy for ovarian tumor	.	[illegible]	.	Laparotomy.
41	M.	30	.	Printer	United States.	Father died of consumption.	None—father in California.	.	.	Drinks moderately.	Has had rheumatism.	Had rheumatism two years ago.	Has had	.	None	Brooklyn, N. Y.	Dec., 1884	Recovery.	Laparotomy.
42	F.	24	M	Housewife	.	None.	"	Has had three children	Never had.	Never drinks.	"	Never had.	.	.	Laparotomy for ovarian tumor	New York City	May, 1884	Recovery.	Ovariotomy.
43	M	[illegible]	.	Printer	Germany.	None	"	.	.	Moderate	.	Muscular	Never had	Never had	Laparotomy for ovarian tumor	.	[illegible]	.	[illegible]
44	F.	[illegible]	M.	[illegible]	[illegible]	Unknown.	.	Has had two children	Has had three miscarriages.	.	.	.	Never had	Never had	None	.	[illegible]	.	[illegible]
45	M.	41	.	Coachman.	.	Brother died of consumption.	None in many years.	.	.	Moderate.	"	Never had	Had it in the shoulders, back and knees	Had it with rheumatism	Married. Laparotomy for ovarian tumor	.	Dec., 1884	Died	Peritonitis, exploration, and drainage. Recovery.
46	M.	[illegible]	.	Laborer	Austria	None	None so far as known.	.	.	"	"	Articular rheumatism two years ago	Never had	Had it two years ago	Had it with rheumatism	.	Aug., 1884	Died	Laparotomy for ovarian tumor.
47	M	21	.	Cigarmaker.	United States.	Mother has consumption	Lives at home with mother.	.	.	Doesn't drink	"	Never had	.	Never had	Has had Laparotomy for ovarian tumor	.	[illegible]	.	[illegible]
48	F.	17	N.	Chambermaid	" "	Mother died of heart's consumption.	Lived with mother	Never pregnant	.	"	"	"	"	"	Laparotomy for ovarian tumor	Williamsburg, N. Y.	Dec., 1884	.	Recovery.
49	M.	4	.	Printer	New Brunswick	None	None known	.	.	Hard drinker	Has had it	.	Has had it	.	None	New York City	Jan., 1884	.	[illegible]
50	F.	38	M.	Housewife	Germany.	Brother died of consumption	"	Never pregnant	.	Moderate	Unknown	Muscular	Never had	.	Laparotomy for ovarian tumor	.	[illegible]	.	[illegible]
51	F.	[illegible]	.	Professional equestrienne	Austria.	Sister died of consumption	"	Has had it. Never had child.	.	"	Never had	Has had it	Has had it	None	.	.	April, 1884	Died	.
52	M	[illegible]	.	Apprentice	United States.	Uncle died of consumption	"	.	.	"	Unknown	Muscular	Never had	Never had	Laparotomy for ovarian tumor	.	Jan., 1884	Recovery.	Laparotomy.
53	M	[illegible]	.	Keeps apple stand	Ireland	None.	.	.	.	"	"	.	.	.	None.	.	[illegible]	Died	[illegible]
54	F.	[illegible]	M.	Housewife	United States.	Mother died of consumption, brother and sister have it	Lived with parents a great deal	Has had three children. Has had two miscarriages.	.	Hard drinker.	Has had it	Never had	.	.	.	.	Dec., 1884	.	Recovery.
55	F.	[illegible]	M.	Weaving	Ireland	None	None known	Never pregnant	.	Moderate	Unknown	.	.	.	.	.	[illegible]	.	[illegible]
56	M	[illegible]	.	Weaver	Germany.	Father died of consumption.	"	.	.	"	Never had	.	.	.	Laparotomy for ovarian tumor	Germany	Dec., 1884	Recovery.	Laparotomy.
57	F.	[illegible]	M.	[illegible]	Ireland	None	"	Has had two children	Never had.	Never drank.	"	.	.	.	Laparotomy for ovarian tumor	New York City	[illegible]	.	[illegible]
58	M	49	.	Tailor	United States.	Two brothers died of consumption	Nursed one who died of consumption	.	.	Hard drinker	Has had it heavily years ago	"	.	.	None	.	Feb., 1884	.	Recovery.
59	M	[illegible]	.	Cutter	England	Father died of consumption.	Never known	.	.	Moderate	Has had it	"	"	Never had	Laparotomy for ovarian tumor	Hungary. Made	Mar., 1884	Died	[illegible]

Number	Initiatory symptom or event	Cough	Expectoration	Dyspnœa	Hæmoptysis	Pallor.	Emaciation.	Pain	Stomach or intestinal disturbances.	Night-sweats	Appetite	Digestion	Condition of tongue.	Appetite with regard to fats.	Bulbous fingers and incurvated nails.	Œdema of feet and ankles.	Mental condition	Menstruation.	Laryngitis and pharyngitis.	Pulse.	Respiration.	Temperature.	Complications	Condition of lungs.
1	Dry cough	Has cough	Slight	Very little	One attack	Marked.	Some	None.	None	Frequent.	Good.	Good.	Coated.	Eats with relish.	Neither	None	Buoyant.		Neither.	96	24	100½	None.	Consolidation upper part of left.
2	Cough	"	Variable.	Extreme	Often	"	Extreme	"	"	Severe.	Bad	Very poor.	"	Never liked	"	Slight	Hopeless		Laryngitis.	120	30	99	Extreme muscular debility.	Cavities in both
3	Pneumonic attack	"	Profuse	Considerable.	Frequent	None	A little.	A little.	"	Has often	Poor.	Good.	"	Doesn't like	Slight clubbing	Some	Depressed		Neither.	76	20	99⅘	Facial neuralgia and toothache.	Fibrous phthisis; consolidation and bronchiectasis left.
4	Dry cough	"	Considerable.	Considerable.	Yes.	Not much.	Marked.	Slight.	"	"	Good.	Fair.	"	Relishes	Neither.	None	Cheerful		"	68	20	98⅘	None	Cavities left; catarrh apex right.
5	Pneumonic attack	"	Yellow and abundant	Has only ceased.	"	None	Some.	A little.	A little.	"	"	Occasional diarrhœa	"	Can't eat.	"	"	Depressed		"	100	25	98	"	Cavity right apex.
6	Dry cough	"	Abundant	Great.	"	Well marked	A little.	None.	None.	"	Poor.	Costive.	"	Likes.	Both	"	"		"	110	22	103	"	Acute phthisis; consolidation and cavities left
7	Attack of pneumonia	"	Heavy	Has more or less.	Has never had.	Well marked.	Very little.	Some	Not noted.	Very profuse.	Bad.	Constipated	"	"	Neither.	"	"		Both.	92	22	99⅘	"	Catarrh right lung.
8	Dry cough	"	Very slight	A little	Yes.	Well marked	Some.	None.	None	None	Good.	Good.	"	"	"	"	Cheerful	.....	Pharyngitis	120	24	102	"	Catarrh both apices.
9	Cough	"	Profuse.	Some.	Two attacks	Well marked	"	"	"	Very profuse.	"	Fair.	Not noted.	"	Some incurvation.	"	Depressed	.....	Both.	100	36	100	Abdominal neuralgia	Consolidation and catarrh in both.
10	Hæmoptysis and cough	"	"	Great	Almost every day.	Extreme	Marked.	"	"	Yes.	Bad.	Bad	Coated	Can eat	Neither	"	Cheerful	Stopped entirely	Neither	120	28	103	None.	Consolidation right; catarrh both; acute phthisis.
11	Hæmoptysis	"	Considerable	Some	Frequent	Marked.	Some.	Fugitive	"	None.	Fair.	Diarrhœa	"	Likes.	Both slightly.	Some	Buoyant.	.....	Both.	120	28	100	"	Consolidation right.
12	Hæmoptysis	"	Not noted	"	Occasionally.	"	"	Slight.	"	Never had.	Good.	Occasional diarrhœa.	Not observed	Dislikes.	Neither	None	"		Has had "sore throat"	134	40	High, not taken	Old pleurisy.	Cavity left.
13	Cough.	"	None.	None	Never had	"	"	Some.	"	Yes.	"	Poor.	Coated.	"	Both.	"	Low spirited		Neither.	116	23	100	None.	Consolidation left.
14	Vertigo, sick stomach	Says she never had	A little occasionally	Some.	"	"	Marked.	"	"	"	Bad.	Bad.	Not noted.	"	Neither.	Some	Low spirited	Scanty.	"	88	21	Not taken.	"	Consolidation right.
15	Cough	Has cough	Not noted	Considerable.	Yes	"	"	None.	"	Has had.	"	Vomits often.	Coated	Can't eat.	"	None	Hopeful.	.....	"	102	22	99⅘	Hæmorrhoids, neuralgia of 6th left rib.	Consolidation and cavity left.
16	"	"	Scanty.	Not noted.	Never had	Some	A little.	Some.	"	Yes.	Good.	Costive	"	"	"	"	Quite cheerful	.....	"	92	22	99	None.	Catarrh left apex.
17	Pneumonic attack	"	Considerable	Some	Two attacks	Slight.	Some.	"	"	"	Bad.	Frequent vomiting.	"	"	"	Not noted.	Depressed	Ceased.	Pharyngitis.	96	24	100	Indigestion.	Catarrh both.
18	Cough	"	Variable	"	Has had	Some	None.	None.	"	Has had.	"	Fair	"	"	Slight clubbing	Not noted.	"	.....	Pharyngitis.	120	30	102⅘	Lumbago.	Catarrh left
19	Intermittent fever	"	Slight.	"	Never had	"	Some	"	"	Yes.	"	Vomiting spells	"	"	Neither	None	"	Not noted.	Neither.	112	22	Not taken	None.	" "
20	Attack of pneumonia	"	Profuse.	"	Occasionally.	Marked	"	"	"	"	"	Variable	"	Not noted.	Both.	"	Cheerful.	.....	"	Not noted.	Not noted.	98⅘	Chronic pleuritis.	Catarrh left apex; thickening of pleura.
21	Cough	Yes.	Scanty.	Yes.	Yes	"	Yes.	"	"	"	Poor.	Bad.	"	Doesn't like.	Neither.	"	Depressed	.....	Laryngitis.	132	23	101	None	Consolidation both apices.
22	"	"	Profuse in morning.	"	Never had	Some pallor	"	"	"	"	"	Very bad.	"	Can't eat.	"	"	Hopeful.	Missed last period.	Neither.	134	36	101	"	Consolidation right apex.
23	Pneumonia	"	Variable	"	Yes.	Marked.	"	Great.	"	Has had	Good.	Costive.	"	Doesn't like.	Slight clubbing of fingers.	"	Cheerful.	.....	"	136	28	101	"	Consolidation left lung, cavities
24	Patient thinks hæmoptysis	"	Bloody.	None.	"	None	None.	"	"	Yes.	Poor.	Bad	"	Not noted.	Neither.	"	Low-spirited.	.....	"	112	24	101⅘	"	Catarrh left.
25	Dry cough	"	Slight.	Yes	"	Yes	Very much	Used to have.	Not noted.	"	Fair.	Good.	"	Relishes.	Both a little	"	Buoyant.	.....	"	104	38	100	"	Catarrh left apex; cavity right lung.
26	Dry cough and fever	"	Considerable.	Slight	Never had	"	A little.	Wandering pains.	None.	"	"	"	Slightly coated.	Can eat.	Neither	"	Indifferent	.....	"	120	30	101⅘	"	Cavity left lung.
27	Cough	"	Profuse; yellow	Yes.	Has often.	"	Yes.	None.	"	"	Pretty good.	Vomits often.	Coated.	Can't eat.	Not noted	"	Cheerful.	Diminished; irregular	"	138	34	100	Chronic dyspepsia.	Consolidation and cavities left lung.

28	Dry cough	Yes		Not much	Always a little	Never had	None	Yes	Slight	None	Yes	Poor	Bad	Slightly control.	Can't cough	Neither	None	Depressed		Lethargies	114	99	10	None.	Catarrh right apex						
29	"	"		Variable	None	Three attacks.	Marked	Extreme	None	"	"	None	"	Control	Doesn't care	Both	"	"	Stupid and drowsy	Neither	108	92	Not taken	Improvement	Catarrh right apex						
30	"	"		Profuse at first	Yes	Yes	Yes	Yes	Pain on cough	"	Occasionally	Fair	Good	Not much	Fairly	Neither	Hysterical	Variable		"	85	21	Not taken	None	Catarrh right apex						
31	"	"		Profuse	"	Several attacks	"	"	None	"	Yes	"	Fair	Slightly control.	Can't cut	Neither	"	"		"	104	120	110		Consolidation right apex						
32	Cough	"		"	"	Yes	"	"	"	Slight	Hacking	Poor	Gestures	Control	Cares	Neither	"	Depressed		Very much depressed. Lethargic	104	4	97	Very much lowered	Cavity right lung						
33	"	"		"	"	"	"	"	"	None	Yes	"	Not noticed	"	Declares	"	"	Depressed		Neither	110	2	Not taken	None.	Catarrh right apex						
34	Cough and laryngitis.	Very slight		Profuse	Variable	"	"	Variable	"	"	"	"	Good	Slight control	"	"	"	Very cross		"	100	2	100	"	Catarrh right apex						
35	Hemoptysis	Yes		Slight	Extreme	"	None	Yes	Several attacks	Variable	"	Poor	Fair	Control	Loses	"	"	Cheerful		Hysterical "sinking about heart"	92	26	Not taken	Nephritis	Catarrh upper and right lung						
36	Pain about heart			Profuse	Marked	"	Yes		Pleuritic pain	None	"	Poor	Gestures	"	Can't eat	"	Yes	Hopeless		Neither	112	34	97	Marked pleurisy	Cavity apex						
37	Doesn't cough.	"		Profuse at first	Great	Frequently	"	"	Lancinating pain	"	"	"	Varies	"	Eats a little	Both	Sighs	Careless	Stupid and drowsy	"	110	24	Not taken	"	"						
38	Rad. 11.	"		Gives an unpleasant smell.	None	Never cough.	"	"	Pain	"	"	"	"	"	Declares	Neither	Voice	"	Stupid and drowsy	Delirious	124	1	Not taken	None	Catarrh right apex						
39	Pocket-handkerchiefs get wet	"		Scanty		Several attacks	"	Very much	Pain	Slight	None	Variable								Neither	120										
40	Pneumonia.	"		Profuse	Severe and constant	Often	None	Yes	Constant sound pain	None	None	"	Gives	Good	Can't eat	Both	Sighs a little	Careful		"	124	1	Patient died	Extensive consolidation, with pleurisy	Extensive consolidation, with pleurisy						
41	Attack of bronchitis	Has cough		Variable	None	Yes	"	"	Some	"	Occasionally	Good	"	"	Neither	None	Careful			"	112		Not taken	None	Catarrh right apex						
42	Dry cough.	"		Profuse at first	Marked	Very often.	Marked	"	Pain on testing pulse	"	Yes	Poor	Gestures	Control	Careless	"	"	Depressed	Stupid and drowsy	"	124		Not taken	Pleurisy also	Cavity left apex. Catarrh left apex						
43	Hemoptysis	"		Frothy and bloody	None	Yes	Occasionally	Slight	Lancinating	"	"	Fair	Gestures	Control	Yet much	Both	Sighs	Careless		"	120	24	Not taken	Hysterical	Catarrh left apex						
44	Cough	"		Changeable	Marked	"	None	"	None	"	Occasionally	Good	Gestures	Control	Careless	Neither	Voice	Careless		Neither	120			None	Pleurisy						
45	Pleurisy from measles	"		Profuse at first	Yes.	Never had	Extreme	Marked	Yes.	"	None	Good	"	Declares	Eats	Both	Cough	Depressed		Lethargic	120	4	"	Empyema	Consolidation with lung						
46	Pleurisy	"		Slight at first	Extreme	Hemoptysis	None	Extreme	Pain over chest and chest	"	Very	Fair	Gestures	Slightly control.	Can't eat	Both	Sighs	Lowering		Hysterical	120	2	"	Hemoptysis	Cavity apex						
47	Dry cough	Has a few days	Very slight	None	Had at first	"	Yes	Pain in cough	"	Yes.	Good	Good	Clean.	Declares	Sighs	"	Depressed		Neither	124	27	97	Dyspnœa	"						
48	A few days	Has cough	Variable	Yes	Yes	A little	Slight	Pain in left arm	"	None	"	Gestures	"	"	"	"	Stupid and drowsy			120										
49	Pneumonia	"	Profuse at first	"	Often	Frequently	Extreme	None	"	"	Fair	Good	Gestures	Declares	Eats a little	Yes	Careless		Neither	120			Not taken	Consolidation with cavity right lung						
50	Dry cough	"	Profuse	Extreme	Never.	Frequently	Yes	Pain on cough	"	Extensive	"	Variable	Declares	Eats	Both	Sighs	Careless	Stupid and drowsy	Slight	120			None	Catarrh right apex						
51	Pneumonia and pleurisy	"	"	Very much	Not noticed	Yes.	"	Pain in back	"	Yes	Peculiar creaking	Clear	Gestures	Neither	Eats	Both	Sighs	Careless	Stupid and drowsy	Both	124	Not noted	32	Consolidation left apex							

FACTS HAVING REFERENCE TO SYMPTOMATOLOGY.—*Continued.*

No.	Patient.	Hæmoptysis.	Cough.	Expectoration.	Hæmoptysis.	Pallor.	Emaciation.	Pain.	Sensation of throat clearing.	Night sweats.	Appetite.	Digestion.	Condition of tongue.	Appetite with regard to food.	Habits as to eating and intoxicating drinks.	Condition of feet and ankles.	Mental condition.	Menstruation.	Larynx, trachea and bronchi.	Pulse.	Respiration.	Temperature.	Chest.	Condition of Lungs.
52	Cough.	Not noted.	Has cough.	Considerable.	Not noted.	Yes.	Slight.	Great pain.	None.	Yes.	None.	Costive.	Heavily coated.	Likes.	Neither.	None.	Depressed.	. .	Slight pharyngitis. Laryngitis.	136	36	99⅘	None.	Consolidation right lung.
53	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
54	Hæmoptysis.	.	Frothy.	.	Yes.	None.	Yes.	Great pain.	.	Yes.	Poor.	.	.	Doesn't like.	Neither.	A little.	.	Stopped four months.	Neither.	.	.	.	.	Catarrh right and left apices.
55	Dry cough.	.	Profuse.	.	Never.	Yes.	Much.	None.	.	Never had.	.	Costive.	Slightly coated.	Dislikes.	Slight.	None.	Cheerful.	.	.	130	32	99⅗	.	Consolidation right; catarrh left lung.
56	Hæmoptysis.	.	Not noted.	.	.	.	Extreme.	.	.	Never had.	None.	Variable.	Coated.	Can eat.	Incurvated nails.	.	Depressed	.	.	120	32	99⅘	.	Fibrous phthisis; recent bronchitis both.
57	Hæmoptysis.	.	Profuse.	Extreme.	Frequent attacks.	.	Yes.	Yes.	.	Has had.	Poor.	Costive.	.	Can't eat.	Incurvated nails.	Mark-ed.	.	Stopped last month.	.	128	36	99⅘	.	Catarrh both apices.
58	Hæmoptysis.	.	.	Severe.	Yes.	.	Lost 50 pounds since March, 1885.	None.	Slight	.	None.	Good at present.	.	.	Both.	Yes.	.	.	Quinsy.	160	17	100	.	Tonsilitis, recent; and small cavity right.
59	Dry cough.	.	A little in morning.	None.	.	Considerable.	.	On right side.	None.	Yes.	Fair.	Good.	Slightly coated.	Likes.	Neither.	None.	Variable.	.	Neither.	160	22	100⅘	Tertiary syphilis.	Catarrh right and left apices.

If further evidence be needed to sustain this view of the subject, we may consider the statistics of the New York City Almshouse, an institution the average age of whose inmates is over sixty years. According to the Warden's report for 1878, there died in the Almshouse during that year 229 persons.[1] Out of this number pulmonary diseases entered into the cause of death in 151, or *more than sixty-five per cent.* of the cases. It has been my personal experience that upward of forty per cent. of the deaths in this institution are induced mainly by phthisis. It need hardly be said that such a proportion of pulmonary diseases will not be found in a general hospital to which persons of all ages are admitted.[2] The number of cases over sixty years of age in the foregoing table will not seem so insignificant when it is remembered that but a small proportion of persons of that age are seen at dispensary clinics. For example, in 450 unselected cases of all diseases at the Post-Graduate School, only 34, or about 7.5 per cent. had attained that age.

The apparently contradictory results which have been obtained by different students of this subject may be reconciled by a moment's reflection. I cannot do better than to quote the words of Dr. Holden[3] in this connection: "A far greater number of persons are living between the ages of thirty and forty (or the earlier decades) than between fifty and sixty (or the later decades), and consequently there is a far greater harvest for this most prevalent of diseases." From this study of the subject the following conclusions would seem to be justified: 1. The greatest *aggregate* number of cases of consumption are developed between the ages of twenty and thirty years. 2. The greatest *relative* frequency of the disease is far later in life, probably between the sixtieth and seventieth year.

Sex.—Of the 59 cases in the table, 40 were males, 19 were females; of 82 additional cases which I have noted, 51 were males, 31 were females; of 411 cases treated at the Bellevue Dispensary in 1883, in which the diagnosis of phthisis is stated in the clinic book, the numbers were, males, 250; females, 161; in 1884, of 365 cases treated at same institution, 207 were males, 158 were females. We thus find the males in excess in every instance. In the total 917 cases, we find 548 males and 369 females, the males being 179, or more than nineteen per cent. in advance of the females.[4] These results agree very closely with the statistics of the Royal Infirmary of Edinburgh,[5] where the males were greatly in excess of the females every year from 1833 to 1865, the date of the latest report of the institution. For example, in the years from 1843 to 1846, inclusive, the males were 356, females, 217; in 1865 the males were 126, females, 64.

From these facts, then, it would seem that phthisis is considerably more prevalent among males than among females.

Social condition.—This point of enquiry will be of interest only as regards the female patients. It will be considered under the head of *pregnancy*, etc.

Occupation.—Investigations with respect to occupation were made in all the tabulated, and in 22 additional cases, making a total of 81. In four instances no occupation was given. In the remaining 77 cases, 41 occupations are represented, being distributed as follows: General laborers, 11; housekeepers, 11; drivers, 5; machinists, 3; coachmen, 2; plumbers, 2; boiler-makers, 2; carpenters, 2; painters, 2; printers, 2; apprentices, 2; factory employees, 2; sewing work, 2; clerks, 2, and one each of the following occupations—blacksmith, compositor, hatter, street-sweep, expressman, dyer, hod-carrier, fishmonger, fisherman, brass-finisher, cigar-maker, profes-

[1] Nineteenth Annual Report of Commissioners of Public Charities and Correction of the City of New York, 1879.

[2] Some of the inmates of the almshouse, no doubt, have phthisis when admitted, but this fact does not militate against the argument: the institution is designed especially for *old people*, whether suffering with consumption or not.

[3] Loc. cit.

[4] I am informed by Mr. McGowan, the assistant apothecary, that sixty-five per cent. of all the patients treated at the Bellevue Dispensary are females.

[5] Reynolds' System of Medicine, vol. ii. Philadelphia, 1880.

sional equestrienne, stand-keeper, store-keeper, weaver, baker, school girl, porter, boatman, tobacconist, sawyer, telegraph operator, stone-cutter, horse-shoer, wheelwright, night watchman, and musician.

The nature of their occupations would indicate that 42 worked in-doors, 27 out-doors, while 8 (as carpenters, painters, etc.) were engaged both in-doors and out-doors. This shows a considerable preponderance of in-door occupations. It must be remembered, however, that among urban populations, especially in cities as large as New York, a considerable majority of the *total number* are engaged at in-door occupations. In verification of this statement I have made an analysis of 78 unselected male patients with various diseases at the Medical Clinic of the Post-graduate School, with reference to this point. The result was as follows: In-door occupations, 43; out-door occupations, 23; both in-door and out-door work, 16. In the phthisical cases it was observed that the patients who were engaged at out-door work were inclined to attach far more causative significance to their occupations than those who worked in-doors. It is questionable whether the machinist at work in his dusty shop is more liable to consumption than the 'longshoreman or the car-driver who must face alike the burning summer suns and the chilling blasts of winter. Out-door exercise under proper counsel is beyond question one of our most valuable adjuncts in the treatment of this disease, but it is equally as certain that undue exposure to the changeable climate of the Atlantic seaboard in this latitude is as cogent a factor directly or indirectly in its production as the confinement of the factory, the machine-shop, or the schoolroom.

Nativity.—Under this head in the table we find the patients distributed as follows: United States, 29; Ireland, 19; Germany, 3; England, 2, and Austria, Wales, Australia, Newfoundland, and New Brunswick each 1. When compared with the total number of patients attending the clinics during the summer, these figures show a slightly greater proportion of Americans suffering with phthisis than of Irish, and a very much smaller proportion of German cases than of either. One of the natives of the United States was a negro, and this I may say is the only case of phthisis in a person of African descent which I have met with among several hundred consumptives.

Heredity, or family history.—Many of our text-books exhibit a proneness to discredit the statements of hospital and dispensary patients with reference to their family histories. It strikes me that an unjust discrimination is made against this class of patients. They are, as a rule, from the lower grades of society, it is true, and perhaps not up to the average of intelligence, but this does not imply a want of filial regard, and I see no reason why their statements with reference to the diseases or causes of death of their parents may not be trusted, especially when they relate to so easily recognized, and usually so prolonged a disease as the one under consideration. Each of the fifty-nine cases in the table was carefully questioned with regard to his father and mother, brothers and sisters, and other near relatives. The following results were obtained, which, I believe, represents the truth as far as the knowledge of the patients enabled them to state it. In 18 cases direct hereditary histories were obtained; either one or both parents had consumption at the time, or had died with it. Several of these also stated that they had lost other relatives with consumption. In 32 cases no direct heredity could be traced, although several of the patients had lost near relatives with the disease. Four of the cases are marked "suspicious," each of them having lost a parent from pulmonary disease (such as "asthma," "pleurisy," etc.). Five others did not know of what disease their parents had died, and were unable to state whether or not there was consumption in the family. Admitting, then, only the cases in which one or both parents were affected with phthisis, we find that 29.91 per cent. gave direct hereditary histories. These results conform quite closely with those of Walshe,[1] who found twenty-six per cent. of hereditary cases. Loomis[2] found eighteen per cent., Reginald Thompson[3] thirty-six per cent., and Theodore Williams[4] forty-eight per cent. of cases in which heredity or family predisposition was traceable. It has been claimed by some authors that in many cases of consumption heredity is merely a coincidence, that its influence is greatly overrated, and that its frequent occurrence among those of the same family is due to the vicious methods of rearing children in certain families.[5] In order to test some of these statements, I interrogated 34 patients with other diseases with reference to their family histories. Of this number 4, or 11.7 per cent., stated that one or the other parent had consumption, or about eighteen per cent. less than patients with a similar history among the consumptive cases. This difference is too great to be resolvable into coincidence or chance—the result strongly corroborates the theory of a congenital predisposition. It is commonly stated that hereditary cases are developed earlier in life, as a rule, than cases without a congenital predisposition. An analysis of the 18 cases with hereditary histories in the table shows the following results by decades: From ten to twenty years of age, 3; from twenty to thirty years of age, 6; from thirty to forty years of age, 5; from forty to fifty years of age, 4.

We find from the table that 9 of the patients were under, and 9 over thirty years of age; the average age of the 18 cases was about 30.60 years. As far as they go, then, these data would not indicate that hereditary cases are developed with greater proportionate frequency in the earlier decades than cases without an inherited tendency.

The results of Dr. Reginald Thompson,[6] who analyzed a large number of cases with reference to this point, are slightly different from these. The appended table will show the result of his analysis:

	Before thirty.	After thirty.
Non-hereditary [illegible]	[illegible]	173
Hereditary [illegible]	[illegible]	123
Hereditary [illegible]	[illegible]	100

Dr. Thompson concludes that the period of greatest vulnerability is about five years earlier in hereditary than in non-hereditary cases. His figures also indicate that phthisis inherited from the mother is developed earlier in life, as a rule, than when the father is at fault. In forming an estimate of these results, however, the fact laid down under the caption *Age* must not be lost sight of, viz., that the total number of persons living under the age of thirty is far greater than the number over this age.

Extending our inquiry into the influence of heredity further, some interesting facts are developed. In the 18 cases with hereditary histories we find that the mother was at fault in 12, the father in 4, and both parents in 2 cases. Ten of these were males (out of a total of 40 males); 8 were females (out of a total of 19 females), or twenty-five per cent. of the former against more than forty-two per cent. of the latter. This would indicate that the mother is much more apt to transmit consumption to her offspring than the father, and that females are more susceptible to hereditary influences than males.

To be continued.

THE SOCIETY OF THE RED CRESCENT is an association in Turkey corresponding to the Red Cross Society of the Christian nations of Europe. The organization, which had become nearly extinct, has recently been revived through the efforts of Dr. Mavrogheni Pasha, physician to the Sultan. It is expected that it will soon be in condition again to send ambulances into the field in case of war in the Grecian Peninsula.

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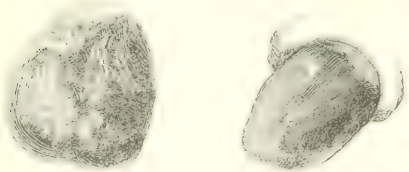
[1] British and Foreign Medico-Chirurgical Review, January, 1[illegible].
[2] Text-book of Practical Medicine. New York, 1[illegible].
[3] London Lancet, [illegible].
[4] Ibid.
[5] Loc. cit.
[6] J. Hughes Bennett, Reynolds' System of Medicine.

INSTANTANEOUS PHOTOGRAPHS OF THE HEART IN MOTION AND OF PERISTALSIS.

By WILLIAM GILMAN THOMPSON, M.D.,

NEW YORK.

In so far as I am aware, the application of instantaneous photography to the study of the movements of the heart and intestines has not heretofore been undertaken. For some time I have sought a satisfactory method to measure the degree of alteration in size and form of the living heart between systole and diastole, both normally and under the influence of drugs. The methods I have attempted were: 1. To adapt various forms of linear measures, discs, etc., to the contour of the heart. 2. To encase the beating heart in a chamber of some plastic material which soon hardens and is impervious to serum. The chamber communicates with an upright graduated glass tube, and if the portion of the chamber not occupied by the heart be filled with serum, the latter will be driven into the tube at each pulsation with a force proportionate to the strength of the systole. The volume of serum displaced represents the change in size of the heart. The evident difficulty is to make the plastic material fit tightly about the great vessels of the heart without compressing them too much. Moreover, this method only measures changes of the heart in bulk, not in form, and is so difficult as to be wholly unsatisfactory. 3. To throw a magnified image of the pulsating heart upon a screen by a modified magic-lantern ("panopticon"). A scale marked upon the screen serves to measure changes in size, or a ground-glass screen can be used, upon which the heart can be drawn. Any one who has studied the living heart is convinced of the difficulty of making drawings of it while in motion which are at all accurate.



A B

Fig. 1.—Rabbit's Heart in Motion. *A*, full diastole. *B*, full systole.

Cardiographic tracings are useful, but their showing is limited. Hesse has published[1] observations upon the changes in form and size of the pulsating heart. He encased it in a plastic material, which moulded itself about the heart, and hardened so as to give a cast of the greatest expansion. The cast could then be bisected, removed, and used itself as a mould to make solid plaster casts. The heart was afterward artificially hardened by chromic acid, and casts were taken of it in its greatest contraction. Obviously, no intermediate stages between full systole and full diastole could be thus obtained, and, moreover, the systole was not a natural one.

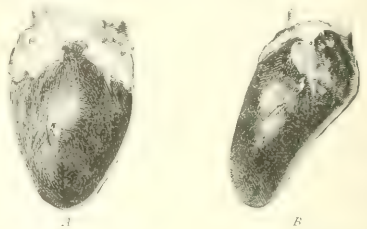
The details of the photographic process with which I have recently experimented cannot be cited here. It is sufficient to say that the photographs were taken indoors in November and December, with direct sunlight illumination, and with an instantaneous drop-shutter giving an exposure of about one-sixtieth of a second. To throw the heart into relief from surrounding tissues which are not distinctly colored, I find it convenient to slip behind it a little piece of celluloid. This affords a good white background, and is easily cleansed of blood, etc., by the common spray of physiological salt solution, which is used to keep the heart moist.

I have taken a large number of instantaneous photographs of the hearts of different etherized animals beating *in situ*, and they demonstrate the following points:

1. For students, and those who have not inclination or facility to study the living heart for themselves, they give a clearer conception of its phenomena than any other method.

2. They are more accurate than drawings or casts.

3. The heart is as nearly in a natural condition, both as to systole and diastole, as is possible with an open chest-wall. Artificial respiration may be easily maintained, and, with assistants, kymographic and other observations may be simultaneously recorded.



A B

Fig. 2.—Pigeon's Heart in Motion. *A*, full diastole: *B*, full systole, produced by application of hot salt and water.

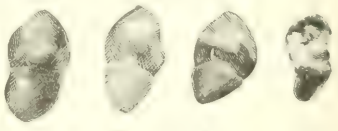
4. A series of photographs may be taken between full systole and full diastole which can be compared and studied at leisure.

5. The photographic method shows more than simple linear measurements, for it gives an accurate periphery as well as diameters, and by perspective gives a fair idea of changes in bulk as well as in form.

6. The movements of the heart as a whole, and the forward and upward movement of the apex, which occurs in many animals, is clearly demonstrable.[2]

7. In addition, the most practical application of the method is the illustration of the changes in the form of the heart produced by drugs. Thus instantaneous photographs of normal systole and diastole are taken, then an injection of digitaline is given and the effect of increased force of the systole is photographed and compared with the normal. The effects of doses of varying strength may be thus compared. The contraction produced by dropping a one per cent. solution of glonoin upon the heart shows exceedingly well in a photograph as contrasted with normal systole. I have also obtained photographs of the transverse section of the ventricles in relaxation, and in the contraction that follows thermic stimuli, even after the heart is cut in two. Any experimental work upon the heart while beating *in situ* may be accurately photographed, and many details become apparent when studying the photographs at leisure, which are otherwise almost impossible to observe, or quite impossible to record at the time of observation.

8. The negatives, placed in a magic-lantern, show admirably upon a very large scale.



A B C D

Fig. 3.—Frog's Heart in Motion. *A*, normal diastole: *B*, normal systole: *C*, increased systole produced by hypodermatic injection of digitaline: *D*, increased systole produced by local application of glonoin, one per cent. (The lower half of [illegible] the background.)

The series of instantaneous photographs which I have taken of peristaltic movement in the intestines show plainly the effects of progressive degrees of contraction of both longitudinal and circular muscular fibres, and the effects of stimuli, chemical, thermic, mechanical, etc.

[1] Fr. Hesse, Beiträge zur Mechanik der Herzbewegung. Archiv f. Anat. u. Physiol., S. 328, 1880.

[2] In the cuts the darker and lighter varying shadows exist by the moving heart which make the [illegible] photographs have been omitted.

Thus in the elaborate researches of Nothnagel, with saline cathartics, he says that certain salts of potassium produce a localized peristaltic wave, while certain salts of sodium produce a wave which travels toward the pylorus. Such facts can be made very real by, for instance, placing a little potassium tartrate upon the surface of a portion of mesentery, and taking a series of photographs of the changes in form and position of the intestine which ensue as soon as the drug is absorbed.

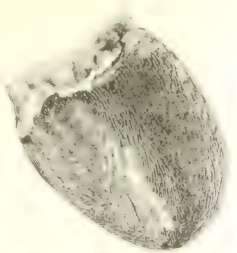


FIG. [illegible] tole (

It is difficult to follow accurately with the eye at one time the changes that take place in more than a single loop of intestine, but the camera records the progressive changes occurring in a number of loops, both above and below the one experimented upon.

The application of instantaneous photography may be further extended to the study of the contractions of the stomach, bladder, and diaphragm, and possibly to the study of the movements of the uterus in pregnant animals, and the lungs in artificial respiration.

The method is so easy and so accurate that I trust it may prove of permanent value in enlarging our knowledge of the action of drugs upon the cardiac and intestinal viscera, and possibly other organs.

CÆSAREAN SECTION ON ACCOUNT OF FIBROID TUMOR OF CERVIX UTERI.

By J. K. WEIST, M.D.,

RICHMOND, IND.

On September 6, 1885, I was summoned by Drs. J. B. and J. M. Clark to see Mrs. S——, and deliver her by abdominal section. The following history of the patient was furnished :

"Native of Indiana, aged forty-three ; seven years married ; never before pregnant ; had been for many years delicate and anæmic ; menstruation irregular until about one year before conception, then regular until November 4, 1884 ; no reappearance after this date, the usual signs of pregnancy being present. A fibroid tumor in the posterior wall of the cervix uteri was discovered two years ago ; this grew slowly until pregnancy occurred, then grew rapidly. It now fills the entire pelvis. On March 1, 1885, violent pain appeared in the right side of the pelvis, and continued for two months, half a grain of sulphate of morphia being required each twenty-four hours to make it bearable. Pain subsided at the end of two months, and the use of morphia was discontinued. General health rapidly improved, and she continued well until August 7th, when a free discharge of amniotic fluid occurred. This continued to flow moderately each day until the 14th, when the discharge was greater than at first. After this date the amount was small. Labor pains first appeared on the 28th, and continued—except when quieted by anodynes—until the present time.

"Dr. Clark was called on August 29th, and found the pelvis blocked up as described. The os could not be discovered. On September 5th a consultation was held, and the patient and her friends informed that natural delivery was impossible ; that abdominal section afforded the only chance of life to either mother or child. The desperate nature of the case was fully explained, and consent to the operation obtained."

I saw the patient at 10 o'clock A.M., September 6th. She was weak, yet in other respects in pretty fair condition. I found the entire pelvis filled with a hard and immovable growth, and could not reach the os. It being clearly impossible to do either laparo-elytrotomy or ovaro-hystorectomy, it was decided to make the Cæsarean section at once, all the medical gentlemen present concurring. Before the administration of ether, one drachm fluid extract of ergot was given.

Throughout the operation careful antiseptic precautions were taken. When the uterus was exposed, a very thin-walled cyst was found growing from it, pyriform in shape, about three inches long and two inches in diameter, attached to the peritoneal covering of the uterus, to the right of the middle line, at the middle and upper third of the organ, by a pedicle an inch long and one-fourth of an inch in diameter. A ligature was placed on the pedicle and the cyst removed. Its contents were semifluid and translucent, and greatly resembled thin jelly. At a corresponding point on the left side of the uterus another cyst, as large as an almond, and apparently of similar character to the larger one, was discovered. This was not disturbed. An incision five inches long was rapidly made through the uterine walls, the membranes ruptured, and the child found in the position of a first vertex presentation. The feet were seized, and a living male child, weighing about ten pounds, quickly delivered. Before the delivery of the child the hemorrhage from the divided uterus was much less than expected, but it was very alarming a little later, owing to imperfect contraction. No constriction of the neck of the uterus could be made because of the tumor in its walls. The cut edges were as firmly compressed as possible by the hands of myself and assistant, while hot sponges were placed inside the organ. During the few moments this state of affairs continued, ergotine was administered hypodermatically. Contractions soon came on, the placenta was detached and removed, after which there was but little bleeding. The uterine wound, probably owing to the influence of the tumor, gaped widely when the organ was contracted. The os was sought for from the inside of the uterus, and found as a narrow slit under the pubic arch. The growth was in the posterior wall of the cervix ; it filled the pelvis and was immovable. After the cavity of the uterus was cleansed, it was closed by the deep and superficial Sänger suture. It was not found necessary to dissect up the peritoneum, or to remove any section of the deeper structures, as the outer coat slid readily over the muscular layers, allowing it to be readily inverted, and welted into the uterine wound.

In cleansing the abdominal cavity the omentum was found contracted into a hard, nodular mass, adherent to the lower border of the right lobe of the liver. It was evidently in a state of malignant degeneration.

The wound in the abdominal walls was closed with silver sutures. Although for a few moments during the operation the loss of blood was alarming, the total loss was not very great.

At the conclusion of the operation the pulse was one hundred and ten, and of fair strength. Consciousness was quickly regained, and there was no appreciable shock. A small quantity of blood escaped through the vagina. The condition of the patient continued favorable for five hours, then severe pain in the epigastrium appeared ; this was followed by vomiting and great thirst ; pulse became weak and feeble, the vomiting continuing until near the end. She died twenty-four hours after the operation.

No post-mortem examination was made. The child, now four months old, is healthy.

The probably fatal delay of the operation in this case cannot be charged to the medical gentlemen in attendance. They were fully informed of the nature of the case, and of the necessity of early interference, and it was against their advice the operation was delayed.

Probably the full term of gestation had been reached when the membranes were ruptured—from the date of the last menstruation two hundred and seventy-six days. The first labor pain appeared at the end of two hundred

and ninety-seven days, and the operation was on the three hundred and sixth day, thirty days after the membranes were ruptured, and nine days after the pains of labor began.

A NEW APPARATUS FOR FRACTURE OF THE CLAVICLE.

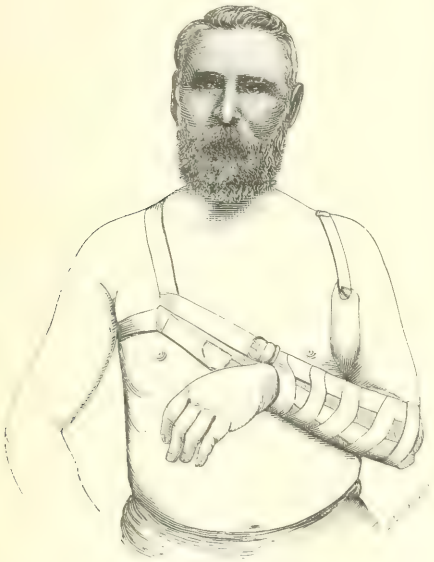
By JOHN C. MORGAN, M.D.,

PHILADELPHIA, PA.

The triple indications in fractures of the clavicle, viz., to hold the injured shoulder upward, outward, and backward, is fulfilled with various degrees of accuracy by the varied apparatus in use by surgeons; but the misfortune is, that with each, the amount of discomfort appears to be nearly proportional to this efficiency.

For instance, Fox's bandage is eminent in both respects, while adhesive plaster straps rival it in both.

Recently, the writer treated a prominent gentleman, with whom both forms of dressing were successively employed and found equally intolerable after a short time. The



plaster caused an eruption like that of croton oil, and the "bandage" soon became transformed into knotty ropes, cut the back, the axilla, and all other parts pressed upon, necessitating the interposition of pads, which constantly required renewal or readjustment. Moreover, during the hot weather, the sling excoriated the inner forearm, and this was only made tolerable by frequent bathing with alcohol. The many bitter complaints and demands for "something wider" than tapes, and less distressing than the now broken-down ring of cotton upon the sound shoulder and axilla, where the principal stress must be borne, led me to devise an apparatus which, while fulfilling perfectly every indication, appears to be entirely new in several important particulars. It is, in brief, a combination of bands of one and one-eighth inch suspender webbing, centring in a scalene triangle at the sound side, which completely takes the place of Fox's ring, and, unlike that, does not draw up under the head of the humerus at all, but lies flat upon the side of the chest by the base of the triangle, the short side applying itself to the scapula, at nearly a right angle with its spine, the third, or longest side, passing over and to the front of the shoulder, the whole enclosing this member somewhat as a horse's bridle accommodates the animal's ears, and quite as comfortably.[1]

The *stress of retention* is evenly balanced between the three angles aforesaid, by five bands of the same webbing, two in front, buckled to the inner and outer corners of the sling (of which and its construction more anon), and three behind, the uppermost going across the back to the top of the injured shoulder, to hold up the axillary pad, the fulcrum of the leverage of extension, and also drawing the shoulder backward, with the intervention of a buckle to regulate its length, ending in two narrow bands, diverging to be inserted into smaller buckles at the upper corners of the pad. The remaining two of the three back bands pass to the posterior end of the sling—*i.e.*, to the elbow, the upper and lower portions respectively—and are there buckled. The lower may seem superfluous, but it is the only tractor upon the posterior inferior *angle;* hence, it is necessary to a perfect *balance of force* in the whole triangle, whereby the latter is maintained in proper bearing position as the *counter-extending* agency, and at the same time kept comfortably applied, without slipping upward. Finally, the *sling* is made of the same webbing in open work, consisting of equidistant combined longitudinal and transverse strips. (The latter may, with suitable fitting, be semi-elastic.) Two non-elastic longitudinal ones pass, each in one piece, from the wrist back around the lower end of the humerus, returning to the wrist, one at the upper and one at the lower border of the forearm, as the foundation of the sling. About these, leaving the upper space open, are sewed the transverse strips. This forms a ventilated support, and when in place completes the means of leverage upon the fracture in extension. Four buckles (on the corners of the sling) receive the corresponding bands described above.

Napkins or strips of one thickness of linen torn from an old table-cloth interposed to absorb perspiration, and to keep the bands and pad clean, are very useful, but not indispensable.

[1] The phrase "scalene triangle" may need modification—as, when applied, it would, to some, appear to be practically almost a quadrangle; or, more exactly, perhaps, in the language of trigonometry, it is an "oblique spherical triangle." Straps taking the place of lines (without breadth), and applied to surfaces far from agreeing in any plane, the figure is not easy to describe mathematically. It is best compared with parallel lines one and one-eighth inch apart, drawn upon a man's coat, in the same directions, and it has the same contour as that particular portion of this garment. It is best, indeed, to fit it to the individual patient when making it up.

The practical working of this apparatus when applied to the patient left nothing to be desired, which, every surgeon knows, is saying a great deal. The extension, counter-extension, and retention, were entirely satisfactory, although using his hands constantly, and as to his personal comfort, it is enough to add that from the moment of its adjustment all complaint ceased; in short, he became thereby a happy man, and in due time was made free also, through the excellent completion of the cure. The simultaneous saving of time and trouble to the surgeon was not the least of the advantages obtained in this important case.

Clinical Department.

CONGENITAL MALFORMATION OF THE HANDS.

Dr. W. J. Middleton, of Steelton, Pa., reports the following case of congenital deformity, seen in the person of a negro, now twenty-one years of age. He writes: "Each hand has a thumb and three fingers, while the middle finger is absent. The only bones lacking in the right hand are the last two phalanges of the middle finger. The proximal phalanx exists, and is of normal size, but instead of presenting in a straight line, it inclines toward the ring finger and articulates with a second phalanx common to both of these proximal phalanges. Both bones are encased in one integumentary covering and form but one finger. The metacarpo-phalangeal articulation of the middle finger is very loose, and flexion leaves an interspace at the knuckle. The extremities of the two phalanges are not united into one bone, but are movable upon each other. The left hand lacks all the bones of the middle finger, and is cleft to the carpus. The two almost equal halves of the hand can be approximated and separated at will. The index finger of this hand has a veritable double joint at the knuckle. This joint has the usual forward flexion motion, and an almost equally perfect lateral flexion toward the ring finger. This motion results from the introduction of a sesamoid bone into the joint, a wedge-shaped bone larger on the thumb side of the joint. The finger is as nearly straight as is usual. The man says that his parents and brothers are perfectly formed, and he knows of no reason for the deformity. His hands, notwithstanding the malformation, are large and strong. His business is to carry pig iron from the cars at the Bessemer works."

A CASE OF ASCITES DEVELOPED IN UTERO.

Dr. F. M. Crandall, of this city, writes: "On December 9th Dr. W. Gill Wylie was called to attend a patient in labor. The head and shoulders of the child were born with comparative ease, but great difficulty was experienced in delivering the rest of the body, owing to the enormous size of the abdomen. This was found distended, very tense, the superficial veins prominent, and upon percussion flat at the sides and tympanitic above, with distinct fluctuation. There was marked cyanosis and embarrassment of respiration, evidently due to pressure. Clear amber fluid, which was not urine, was withdrawn by the hypodermic syringe. The child was large, and apparently sound in every other way. There was slight jaundice, but no more than is frequently seen in young infants. The mother seemed perfectly healthy. The father has consolidation at the apex of one lung, but is otherwise healthy. I saw the child at night, intending to aspirate, but as it was then more comfortable did not do so. I failed to pass a catheter, having none small enough, but on the following day a small catheter passed easily, and an ounce of normal urine was obtained. The urine was always passed naturally. On the following day there were three very large passages, black and tarry in appearance from the bowels, and at the same time the child had convulsions and rise of temperature. A few minute doses of calomel were followed by profuse natural movements and return of appetite. On the eighth day there was an attack of thrush, accompanied by diarrhœa and a papular eruption on the chest and extremities. It yielded easily to treatment, and both the thrush and eruption had disappeared in a week.

"The abdomen gradually became less distended and tense, the veins less prominent, and by the fourteenth day the fluid had nearly disappeared. During the first week the child had rapidly lost flesh, and became pale and pinched in appearance. This look had now passed away, and the child was growing and making rapid improvement when it was seized with capillary bronchitis, from which it died in five days. There was at that time no evidence of fluid. The abdomen was normal in appearance and size. No autopsy could be obtained."

A TOOTH GROWING IN THE NOSE.

Dr. E. Hanson Griffin, of New York City, reports the following case: "Patient, G. I——, aged thirty-two, applied to the Bellevue Throat Clinic, complaining of a sore throat and a pain in the back of the head of two days' duration.

"An examination of his throat showed that there was a cleft of both the soft and hard palate. In examining the upper gum I noticed the root of the second incisor tooth in the tissue, while an examination of the nose showed the tooth in a perfect state of development projecting from the floor of the nostril upward into the nasal cavity. He said the tooth had been there for years and gave him no trouble. He never remembered suffering any particular pain when it was growing, in fact did not know anything was the matter with his nose till one day while putting his finger into it he noticed something hard, and looking into a mirror found it to be a tooth. As it gave him no trouble he did not apply to a physician. He does not think the tooth has grown any of late years. He was a twin, but his sister's throat was in a perfect condition, and her nose free from any defect. The patient was opposed to any operation for the removal of the tooth, and as his sore throat was of a trivial character and not dependent upon his trouble, I did not urge a destruction of one of nature's whims."

DISPLACEMENT OF THE LARYNX CAUSED BY GOITRE.

Dr. J. W. Gleitsmann, of this city, presented the following case at a meeting of the Laryngological Section of the New York Academy of Medicine, January 22, 1886: Patient, male, fifty-two years of age, had a hard, fibrous goitre, causing displacement of the larynx to the right side and rotation on its vertical and antero-posterior axes. The upper part of the left thyroid plate was nearer the median line than the lower left part of the larynx, which was almost one inch removed from it. The whole larynx was also so turned on its vertical axis that its anterior part with the junction of the thyroid plates looked toward the median line, while the posterior part with the arytenoid cartilages was deflected outward.

The laryngoscope showed diagonal position of the vocal cords and glottis, running obliquely from left to right, and being located altogether on the right side of the throat. The cords approximated well, which fact accounted for the comparative clearness of the patient's voice. The lower part of the larynx being pushed further out, the left arytenoid cartilage had to make excessive movements to meet its fellow on the opposite side. The deviation of the larynx from the vertical line explained the fact that the right half of the larynx, especially the right cord, appeared to be in a somewhat higher plane than the left cord.

THE DECLINE OF IRIDECTOMY.

Dr. C. E. Nelson, of New York, writes: "A news item, with this heading, appeared in The Medical Record of February 13th. Frequent changes are made in operations on the eye, notably in that of cataract. In the quotation from the *Medical Press* emphatic language is used regarding the innovation of iridectomy, as well as other medical fashions. But I will simply give a retrospect of the history of iridectomy. Before 1861, von Graefe, son, announced the *rationale* to be the relief of tension of the globe, as the iris being lessened, from shrinking back, its secreting surface poured out less aqueous humor. Bowman considered that iridectomy permitted a more direct communication to be opened between the aqueous and vitreous regions, allowing the morbid fluidity to come forward. Hancock, of Charing Cross Hospital, London, stated that glaucoma is due to spasm of the ciliary muscle; he therefore divided it; but Bowman dissected glaucomatous eyes, where there was completele atrophy of that muscle. The old surgeons, Antonius, Nucks, Johns, and Meckren, used to tap the globe; also Wardrop, in 1813. In our own day, paracentesis of the sclerotic has been advocated by Desmarres and Hancock.

"According to Bowman, glaucoma depends on inflammation or congestion of the choroid, the ocular pressure being a secondary condition. Von Graefe's operation is only calculated to remove the effect of the disease; it has no power whatever over the original cause of it—the inflammation (Nunnelly). As to the operation, Nunnelly entirely refutes von Graefe's statements, and substitutes an operation of his own, cutting through the constricting band, or junction of the different coats with the cornea. This operation is superior to Hancock's. All these operations are merely a form of paracentesis, with this difference, that ordinary paracentesis through the sclerotic does not relieve.

"Magni gave a theory opposed to that of Graefe. A subsequent theory was that instead of there being increased tension caused by increased production of fluids in the globe (from irritation of the ciliary nervous system), the glaucomatous tension was caused by an increased density of the sclerotic, which prevented exosmosis; therefore the treatment consisted of making a simple incision through the sclera. Wecker used to insert a fine gold wire—also in cases of separation of the retina by effusion.

"Galvanism has been recommended for glaucoma."

DISLOCATION OF THE UNGUAL PHALANX OF THE THUMB AND OTHER INJURIES.

Dr. Horace E. Marvin, of Brighton, England, writes: "Reading in The Medical Record of January 16, 1886, a case of 'Dislocation of the Ungual Phalanx of the Thumb,' I am led to refer to a somewhat similar one which came under my care but a few days ago. E. B——, about fifty-five years of age, while intoxicated, fell down a long flight of stairs. I was summoned just after the accident, and upon examination found a compound dislocation of the left thumb. Both articular surfaces of the joint were exposed, the ungual phalanx being bent backward at a right angle with the proximal phalanx, and the wound extended quite across the palmar surface of the joint. The dislocation was easily reduced *secundum artem*, three sutures were introduced, and the thumb was put up in an extemporized pasteboard splint. The patient had complained only of his thumb, but when this was attended to he said he thought the right elbow was not all right. Upon examination it proved to be a multiple, probably T, fracture of the lower end of the humerus. While examining this I noticed a deformity of the right shoulder, which proved to be a dislocation of the head of the humerus into the axilla. Under ether I reduced the dislocation of the shoulder and confirmed the diagnosis of the fracture."

Progress of Medical Science.

Jejunostomy.—At a recent meeting of the London Clinical Society (*The Lancet*, December 5, 1885) Mr. Golding-Bird related a case of jejunostomy. The case was that of a man, aged forty-six, who had had symptoms of pyloric obstruction for ten months. When admitted into Guy's Hospital a tumor could be felt at the seat of the pylorus, and the man's general condition was one of extreme emaciation, through inability to retain the food he took, and his voluntarily abstaining from eating on account of the pain he suffered. After three weeks' treatment under Dr. Carrington by drugs and washing the stomach out, he passed into Mr. Golding-Bird's hands, and when all the risks had been explained to the patient, and all methods of palliation had failed to improve his condition, arrangements were made to explore the diseased parts and remove them if expedient. Mr. Golding-Bird, therefore, on October 25, 1885, cut down on the pylorus with a view to performing pylorectomy, following the lines laid down by Billroth; but, finding the tumor adherent to the liver, he determined to go no further with the radical operation, but to convert it at once into a palliative one of opening the jejunum—in other words, of performing jejunostomy. Having seized the jejunum two inches from the duodenum, it was held up on a pair of tongue-forceps, while the wound in the parietes was united; to the lower or right end of this wound was the jejunum now stitched by interrupted sutures. The patient suffered in no way as the result of the operation. He was fed partly by the rectum, partly by the mouth, until the third day, when the bowel was opened and food administered solely through the fistula. It was observed that as long as the meal amounted to a pint or nearly so, the patient each time he was fed had a severe attack of indigestion, but that this ceased when the meal did not exceed ten ounces. On this the author founded the suggestion that some cases of indigestion were due to the pylorus allowing too free passage of chyme, rather than to disturbance of the gastric or pancreatic secretions. Everything went on perfectly well till the ninth day, the patient gaining flesh; but on that day, through an error in feeding him, some food passed into the peritoneum, and he died in twelve hours. The post-mortem inspection showed such adhesion to and infiltration of the liver of the cancerous pylorus that pylorectomy could not have been performed. Except the narrow track made by the probe, and along which the food passed into the peritoneum, the adhesions of bowel and parietes were perfect. The author then reviewed the operation of pylorectomy, speaking in favor of it in suitable cases, and the operation of gastro-duodenostomy, as performed by Wölfler, and pointed out the great drawback in this operation, that the stomach is not relieved of its physiological duties at all, the pylorus not being required to act. For the operation of jejunostomy, as he termed the one that he detailed, he claimed that, while it possessed the same disadvantage as gastrostomy, in that the patient had to be fed through the fistula, it was otherwise the best palliative operation for pyloric cancer, inviting less risk than gastro-enterostomy and requiring less interference, in its performance, with the other viscera. By duodenal digestion, he also pointed out, full nourishment could be assured and there was, for physical reasons, less chance of regurgitation of food than after gastrostomy, regurgitation in these cases being a serious drawback to that operation in œsophageal constriction.

Double Congenital Displacement of the Hip: Description of a Case with Treatment Resulting in a Cure.—Dr. Buckminster Brown, of Boston, has placed on record a remarkable case, and for this reason it is worthy of notice in these columns. Seven or eight pages are devoted to the history of the mechanical therapeutics of this intractable deformity. The author quotes

from standard authorities enough to establish the recognized incurability of the ailment. He gives sufficient reference to the few reported cures, and shows how worthless much of the advice and many of the forms of apparatus are, when submitted to a critical investigation. He has not omitted a reference to coxectomy as practised by Margary, E. Rose, and C. Reyher. All surgeons have recognized the obstacles to retaining a displaced head in a shallow or imperfectly developed acetabulum. All have felt that if a new acetabulum could be formed, in place of the one impaired or completely deficient, a cure might result. Hence the attempt on the part of surgeons who possessed the character of boldness to make, by operative interference, the cavity so much desired. The results of these operations have not been sufficiently brilliant to encourage an extensive resort to the practice. The case here described is a well-authenticated instance of the entire formation of new acetabula in the places selected for them. In this respect it probably is unique. The profession, therefore, is indebted to Dr. Brown for recording a case with such candor and with such an admirable result. His patient was a girl, four years of age, in whom the deformity was well marked, and his description is sufficiently graphic to enable one to make the diagnosis. The treatment was begun December 30, 1882, and the first stage of treatment extended to January 6, 1883, during which time warm poultices were employed in order to relax the muscles. Direct extension was now made, the object being to tire out and stretch the pelvic muscles. After ten or twelve days there was sufficient relaxation to allow easy manipulation of the bones, and they were placed in natural position each morning. The tendency to slip, however, was still very great. By the middle of February this tendency had greatly diminished. Another stage was now begun, the object being to excavate a socket by absorption; the limbs were strongly everted, with the thighs flexed to nearly right angles to the body. It was necessary to secure the limbs in this position, but it could be borne for only two or three hours in the course of the day. At no time was the extension remitted, and the last time a displacement of either hip occurred was March 28, 1883. It was not until July 20th that any attempt was made to test the result, when there was found firm resistance in each direction, thus demonstrating the perfection of the newly formed sockets. In January, 1884, for the first time in thirteen months, the patient sat up in bed. The further progress of the case was exceedingly slow, and various devices were resorted to in order that no violence should occur to the reparative processes. On May 25, 1885, "the child's walk is normal and she enjoys walking; she steps with natural firmness and vigor. Like other children she takes a special pleasure in running." The brochure is well illustrated, with exact reproductions of photographs representing the different stages of treatment, the apparatus employed, and the different positions of the limbs during the course of treatment. It is impossible to give the details of treatment in a notice of this kind, and hence we must refer those interested to the little volume itself. A perusal of the same will call forth admiration for the persistence with which the surgeon carried out the treatment under such discouraging circumstances.

Contributions to the Physiology and Pathology of Digestion.—Drs. Ewald and Boas have recently endeavored to throw some new light on the physiology and pathology of digestion (*The Lancet*, December 5, 1885). The investigations of Leube, Riegel, Ewald, and others, on the secretory activities of the gastric glands leave much to be desired. Indeed, in the present state of knowledge, it does not seem clear that any certain indications can be drawn from the chemical and physical condition of water that has been used to wash out the stomach—a method that has usually been followed in physiological investigations on man. The quantities of pepsin and free hydrochloric acid thus obtained vary so much, even in physiological circumstances, that a precise application of the results to the determination of pathological states is impossible. Again, Leube thought the secretory activity of the gastric glands might be inferred from the duration of gastric digestion, but experiments do not appear to support this view, for different observers have given different times as the duration of normal digestion. Then the influence of the motor and absorbent functions on the gastric secretions is altogether conjectural. In carrying out some fresh observations, Ewald and Boas have made use of some cases in the *Frauen-Siechen-Anstalt* in Berlin. One of the cases was that of a hysterical girl, aged twenty, who ever since the age of fourteen had been subject to vomiting, which regularly followed every meal. The particular time at which the emesis occurred appeared to vary proportionally to the kind of food ingested. If fluids were given, vomiting came on immediately; whereas if solids were administered, the stomach was not emptied for from two to four hours. As the result of several hundred observations on this girl, Ewald and Boas found that during fasting the contents of the stomach were free from the remains of food, as a rule neutral, and contained neither free hydrochloric acid, lactic acids, nor peptones. Schultz and Leube have stated that during fasting the reaction of fluid withdrawn from the stomach is strongly acid. According to the authors, it would appear that there is no foundation for the belief that lactic acid is necessary to the construction of hydrochloric acid. The main facts that have been elicited by Ewald and Boas are, first, that lactic acid tends to disappear as digestion goes on; and, secondly, that its disappearance is the more rapid the more active the digestive process is, but is also largely dependent on the kind of food. The earliest appearance of free hydrochloric acid and peptone is the third question that has been investigated. The experiments show that the process of peptonization begins almost immediately after the ingestion of food, and that in a mixed diet the process is directed at first rather by the lactic than by free hydrochloric acid. The curves of peptonization and the formation of hydrochloric acid go precisely together, attaining their summits at the same time, and falling synchronously. The summit of the curves does not coincide with the termination of digestion, but corresponds with the period at which the digestive activity is at its height; so that the formation of hydrochloric acid and peptonization attain their maximum some time before the disappearance of the contents of the stomach. The final question to which the authors address themselves is the part played by fat in gastric digestion. As a rule fat hinders the activity of gastric digestion. Fat remains a long time in the stomach, and no doubt leads to the formation of fatty acids, which cannot be without influence on the physiological processes. It had been found that on a pure white-bread diet, after fasting, the lactic acid could be detected for sixty minutes, after which time only hydrochloric acid could be found. But when fat or butter was also added, the duration of the digestive process was increased to two and three hours, according to the proportion of fat. In these experiments it was also found that hydrochloric acid was present in but small quantity, while lactic acids existed in abundance. To the deficiency of effective hydrochloric acid Ewald and Boas attribute the prolongation of digestion. This series of experiments also confirms a point already alluded to, that when the digestion is prolonged the lactic acids are slow to disappear. The chief conclusion to be drawn from these investigations is that the prolongation of digestion is the most certain sign of impairment in the process. This prolongation may be brought about as the result of mechanical disturbances and chemical alterations. The therapeutic indications to be gained from these considerations would appear to be the removal of all those influences which prevent the proper locomotion of the stomach, and the due performance of its chemical work, or that hinder its absorbent powers in any way.

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RECENT PROGRESS IN HOSPITAL CONSTRUCTION.

THE hospital is the product of an advanced and Christian civilization, and the good that has been wrought through its agency is incalculable. We are realizing now, however, that hospitals in the past must often have been most bungling instruments in relieving disease and suffering. In ninety years, for example (1741 to 1827), the proportion of cures to deaths in St. Bartholomew's Hospital increased fivefold; and even in the present century the death-rate in Bellevue Hospital was for forty years twenty per cent. on admissions, instead of the present number, ten. It was partly owing to the imperfect construction and ventilation of hospitals that the death-rate for all amputations used to be nearly forty per cent., while now it has been reduced more than one-half. There is plenty of evidence now to show how imperfect in construction and administration our hospitals used to be, and, to a large extent, still are, undoubtedly. The victims of bad hospitals are greater in number than those of war and pestilence.

For many years hospitals have been built according to conventional methods, and with no particular reference to sanitary laws. It is only in recent times that the laws of hospital building are becoming known, formulated, and followed. The main principle in modern hospital construction is that of the one- or two-storied pavilion, water-closets and administration offices being separate from the wards. Dr. A. C. Heffinger, U.S.N., has recently given (*Boston Medical and Surgical Journal*, February 4, 1886) an interesting account of what he believes is a still further step in advance, viz., the circular pavilion ward.

Dr. Heffinger says: "The great advantages of circular structures, especially when surmounted by domes, seem to have been first discovered by Dr. McKenna, a Scotchman, who happened to be in South America about forty years ago during one of the many revolutions which have repeatedly convulsed the petty republics of that continent, and who had the care of a number of wounded. The patients were treated in convent rooms, which were always rectangular, and in convent churches, which were always in the form of domed circles. Those patients treated in the churches did so much better, indeed marvellously better, than those cared for in the rooms, that he was struck by the difference, and induced to make a close study of the matter. This clever Scotchman soon became convinced that circular structures with domed ceilings were far superior to any other tried form for housing the sick.

"Sir Andrew Clark, who recalled the views of Dr. McKenna before the Hospital Association of London in December, 1884, also related at that time how he had accidentally discovered the automatic ventilation characteristic of the domed circle, while inspecting the grand domed circular tomb at Delhi, in hot, calm weather. He inadvertently let fall from his card-case a small slip of tissue-paper, which, to his amazement, instead of falling slowly to the floor was steadily wafted upward to the centre of the dome. Afterward he made repeated experiments of the same nature in various parts of the circular domed temple at Calcutta, and always with the same result. It is quite evident that there are natural air-currents directed upward from all parts of a room thus shaped, though the governing philosophy is by no means clear.

"The circular ward was also originated independently by M. Baeckelmans, of Antwerp, in 1873, and Professor John Marshall, of London, in 1878."

Dr. Heffinger states that he also independently conceived the idea that circular wards were the best. At present the Antwerp Civil Hospital and the Miller Memorial Hospital are the only completed types of this form of hospital. There are, however, several hospitals in France built upon the *Système Pollet.* These are one-storied pavilions, with arched Gothic roof, and have, perhaps, some of the same capacity for natural ventilation.

It saves lives to build hospitals according to the best sanitary principles. Still it is often impossible from lack of money to do this; and it cannot be denied that by scrupulous cleanliness almost as good results can be gotten by the surgeon, at least in old-fashioned hospitals, as in the most scientifically constructed edifices.

In this connection we may add a notice of a most ingenious field hospital recently invented by Mr. William M. Ducker, of Brooklyn. It may be remembered that about a year ago international competition was solicited, through a prize offered by the Empress of Germany for the best design of a portable field hospital useful for the work of the Red Cross Society. The exhibition of the inventions called forth by this imperial order occurred at Antwerp, Belgium, not long since, and a silver medal was awarded to Mr. Ducker, who, in addition, has been honored with a message from the Emperor, congratulating him upon the excellence of his invention.

In an account of it given in *Harper's Weekly*, it is said:

"When it is borne in mind that this structure, which is entirely weather-proof, can be erected without the driving of a single nail; that its weight when taken apart and packed for transportation is only about two thousand five hundred pounds; that its cost, completely furnished, is from two hundred to two hundred and fifty dollars; and that two men can easily erect it in a little more than an hour's time—its points of superiority over the hospital tents hitherto used in the field will begin to become apparent."

We have only space for the following facts regarding its construction: "The main structure is thirty-four feet long and seventeen feet wide, the height from the floor to the ridge-pole being ten feet three inches. The whole

is built in sections which are so arranged with keys and slots as to lock into one another. The sides of the structure consist of six double sections, which may be roughly described as strong wooden double trays."

THE GALVANO-CAUTERY IN DIPHTHERIA.

As startlingly severe as this means of therapy may seem, it yet has been tried by one or two bold physicians on the Continent, and, as was to be expected, they are enthusiastic in its favor. It appears to have been used nearly thirty years ago, but we can easily fancy that in spite of reported cures it was not tolerated and speedily fell into disuse. Nor do we believe that it will ever become, with parents at least, a popular remedy in the treatment of our most powerful foe, diphtheria. They will look upon it just as they would regard the actual cautery—as a "red-hot iron"—much as they now regard tracheotomy, as "cutting the child's throat."

The only definite information concerning this measure is by Tedeschi, of Trieste, and Bloebaum, of Coblenz. The latter had used this agent in similar pathological conditions in ophthalmological practice. He assured himself that the galvano-cautery (the wire loop) does not produce inflammation, but is an antiseptic, leaving the necrosed parts harmless and powerfully stimulating the underlying tissues to healthy growth. He regards it as the only true and certain parasiticide.

Tedeschi gives a well-written account of the actual application of this method of cure. The pain inflicted is slight. A cocaine spray has not been deemed necessary. When the pseudo-membrane is touched with the heated wire loop it curls up, finally sloughs off, and the ulcerated surface left does not reproduce the patch. If the whole exudate is removed in this way, the process does not extend beyond the limits of its former margins. After the above procedure, the fever, œdema, and glandular swelling all disappear. The period of the coming away of the eschar varies from the eighth to the eighteenth day. The immediate after-treatment is limited to swallowing chipped ice. Later, benefit may be derived from the customary steam and lime-water sprays and gargles.

The great advantage claimed for this method over the use of chemicals is in its perfect localization. Any solutions to be of great power must be so concentrated as to irritate surrounding tissues. Toleration by the latter necessitates a solution so weak as to be practically useless. A specific ulcer is by the cautery converted into a simple one—so say the advocates of the new method.

It will at once be seen that this idea premises a view of the nature of diphtheria which is still under discussion, and by many competent minds rejected, namely, that the disease is primarily a local one, and that constitutional symptoms arise from septic absorption through the lymphatic channels. Whether this be true or not, we know that many cases present themselves in actual practice where there can be no doubt as to the diagnosis, and yet where the throat does not present any exudation—in other words, where there is no indication for the use of the cautery. We do not think that under any circumstances the cautery method of treatment will become popular in American medical practice. It must be looked upon as a therapeutic curiosity, and rather a forbidding one at that.

PHYSIOLOGICAL EXPERIMENT AND ITS RELATION TO THERAPEUTICS.

It is gratifying to observe the large amount of really practical work which physiologists have accomplished during the past four or five years in a branch of research which offers constant temptations for wide theoretical digressions, and for the accumulation of endless data which can be turned to no practical account. Especially prominent in their value as a contribution to medical science are the classical experiments of Matthew Hay upon the action of saline cathartics, and the experiments of Professor Martin upon the isolated mammalian heart, which was kept beating for many hours while it was made to exhibit the effects of alterations in both venous and arterial tension upon the work of the heart.

The admirable work of Lauder Brunton upon therapeutics gives the most instructive summary of recent practical physiology, and is in itself an irresistible argument for the continuance of properly conducted vivisections. A valuable and interesting contribution to the methods of physiological research is briefly outlined in another column by its discoverer. It is an ingenious application of the process of instantaneous photography to the study of the action of drugs upon the living heart and intestines, which possesses the advantage of reducing the errors of personal observation to a minimum, besides affording a graphic method of enlivening many facts of materia medica which prove so difficult for students to acquire. We have had an opportunity of personally examining several hundred of the photographs, as well as of seeing the negatives enlarged by a stereopticon, and we are convinced that this method of demonstration could be made of great value for instructors in physiology and therapeutics.

PYROGALLIC ACID IN THE TREATMENT OF SKIN DISEASES.

Pyrogallic acid is just now the vogue among many dermatologists, and there is considerable evidence as to its especial utility in certain skin diseases. Dr. Charles W. Allen, of this city, has given a very complete account of the uses of this drug in an article in *The Journal of Cutaneous and Venereal Diseases* for January, 1886. Introduced by Jarisch, of Vienna, about seven years ago, it has been extensively used since then by Kaposi and Neumann, of that city; by Schwimmer, of Buda-Pesth; Besnier, of Paris, and others, including several physicians in this city.

The diseases in which it has been tried have been chiefly psoriasis, lupus, epithelioma, and chancroid, but there seems to be no doubt that it is against lupus that pyrogallic acid acts best. The method of using it here, as described by Schwimmer, is as follows:

"Vaseline is first applied for several days, or as long as necessary to remove all secondary morbid products, scales, secretions, and dirt, a ten-per cent. pyrogallic ointment is then applied during from four to seven days, being renewed two or three times daily. Vaseline is now to be applied again for one day to remove all of the acid. The entire suppurating surface is now to be covered with mercurial plaster, under which healing takes place in from ten days to two weeks. This process may be gone through with several times until no more tubercles appear. Professor Schwimmer says the

treatment of a case seldom exceeds three or four months. A speedier and much better resolution of the most advanced and wide-spreading lesions are found to take place under this combined plan of treatment than could be accomplished by the combined treatment of scarification and the thermo-cautery."

Occasionally some toxics effects are observed from the use of pyrogallic acid, but this is rare and only occurs when it is very extensively applied. It has not supplanted the use of chrysophanic acid in the treatment of psoriasis.

THE TREATMENT OF CHRONIC GONORRHŒA WITH CANNELLATED SOUNDS.

DR. LEOPOLD CASPER, of Berlin, states that he has succeeded in curing thirty cases of chronic gonorrhœa with the "cannellated sound." Fourteen of these had already been treated for over a year and a half, and six for over a year by various other measures. Despite the assurances of some specialists to the contrary, there is often nothing more difficult to cure than a long-standing case of gonorrhœa. The use of sounds and urethrotomes, of deep injections and cauterizations, of salves and medicated bougies, will all fail at times, while the patient is liable to become the prey of quacks or to relapse into hypochondriasis.

Dr. Casper starts out with about the same confidence in his new cure which is expressed by all who devise a new therapeutic measure for the relief of urethral and sexual difficulties. There is something in the nature of this department of medicine which makes its therapeutics untrustworthy, and we are very much disposed to distrust the assertions of Dr. Casper. In the first place, it is the general experience of those who make a specialty of treating mucous membranes, in whatever part of the body, that medicated cerates, ointments, etc., are not very efficient agents. Despite much pushing, the use of soluble bougies, for example, in the treatment of vaginal, uterine, urethral, and nasal troubles has not attained any great foothold. It is true, however, that the application by sound of Unna's salve in chronic gonorrhœa has been occasionally effective, and Casper's method is rational in that it combines the use of mechanical pressure and chemical action upon the diseased part. His cannellated sounds are of the ordinary shape, with six grooves, one and a half millimetre deep, running from the handle to within five centimetres of the point. These grooves are filled with a mass which is solid at the temperature of the room, but melts at the temperature of the body. The formula given is as follows:

℞. Olei theobrom.	100.0
Ceræ. flav.	2.0–5.0
Argenti nitrat.	1.0
Balsam. Peruvian.	2.0

In the beginning a three per cent. resorcin ointment is sometimes used, but the silver is believed to be better in obstinate cases. The sounds used are of "neusilber," and no chemical action occurs through the presence of the nitrate.

If the patient has a stricture of small calibre it is dilated with bougies up to No. 18 Charrière, and then the cannellated sounds are used, increasing their size up to No. 23. The sound should be allowed to remain in the urethra for from a few minutes to half an hour, the longer the better, provided it is not too painful to the patient. An average of about ten applications was found necessary to cure the cases.

Dr. Casper considers it important to locate the gonorrhœa, and gives some indications for diagnosticating between an anterior and a posterior gonorrhœa. Most of his cases were situated at the junction of the bulbous and membranous parts of the urethra. Of 100 callous strictures 70 were in this location, 20 in the fossa navicularis, and 10 in the remaining portion of the pars spongiosa. When the disease is limited it is not necessary to fill up the grooves of the sound their whole length with the medicated ointment.

SYPHILIS AND VIRGINIA CIGARETTES.

CERTAIN Southern tobacco firms have undertaken to advertise their wares by distributing photographs of the young women in their employ. The scheme is ingenious, and we doubt not commercially advantageous to photographers, cigarette-makers, and the cigarette girls. The majority of the pictures in question are of young women posed in positions calculated largely for the display of their lower limbs and neatly striped hosiery. With the morality of the policy which aims to sell cigarettes by exhibiting the legs of the female employees we have nothing to do. But it should merely, from a business point of view, eventually turn out to be a bad one. For only one thing can be thought of the women who consent to have themselves thus photographed. The Virginia firms are in effect informing the people, their customers, that some loose women are concerned in making their cigarettes. Now such women are constantly liable to have syphilis, and while syphilitic to roll cigarettes. It would be quite possible for infection to be sent with the articles upon which they work. It is well known that syphilitic cigar-makers have infected their cigars, and the same thing may happen with cigarettes. At any rate the intelligent customer will hardly care to purchase cigarettes made by those whom he may reasonably think are prostitutes.

BEER AS A CAUSE OF DISEASE.

THE State Board of Health has had an analysis made of various samples of beer, four hundred and seventy-six in all. The State analyst, Dr. F. E. Engelhardt, who made the examinations, found substitutes for malt in about one-fourth of the samples. He found no specially deleterious substances in the beer from the breweries, but did find glucose and bicarbonate of soda. Beer from retail dealers is more likely, it is said, to be adulterated, the substances used being burnt sugar, quassia, cocculus indicus, etc.

It was also found that the sanitary condition of some breweries was very bad. A law was recommended providing that beer shall contain only hops and malt, or their constituents, and that the breweries and beer itself shall be constantly subject to State inspection.

Some three years ago the *Mail and Express* collected a large amount of testimony from medical men as to the deleterious effects of ingredients of beer, and the subject has been again revived in its columns.

The facts alleged against beer are that its consumption is enormously and alarmingly increasing; that it is often adulterated with injurious matters, and that its excessive consumption causes disease of the kidney, fatty liver, and "biliousness," fatty degeneration of the heart, and other degenerative changes.

It is estimated that the total amount of malt liquors brewed annually in this country and Europe is three billion gallons, of which six hundred million are brewed in the United States. The average amount consumed annually per capita, in our country, is now about eleven gallons, while forty years ago it was only one gallon. The annual increase in the production of beer is from six to seven million gallons. The number of breweries is now two thousand two hundred and thirty.

The very rapid increase in the production and consumption of beer is beyond a doubt, but it is not safe to found any alarmist statements on this ground, for it appears from figures given by Mr. Samuel G. Child, of Boston, that the total amount of alcohol consumed per capita in the United States is not increasing, but rather the contrary. Thus, assuming that the amount of pure alcohol in spirits, wine, and beer is fifty, eight, and five per cent. respectively, the table which he gives is as follows:

GALLONS ALCOHOL CONSUMED PER CAPITA.

	Distilled spirits of fifty per cent.	Wine at eight per cent.	Beer at five per cent.	
1840	1.200	.023	.069	1.[illegible]
1850	1.115	.022	.070	1.[illegible]
1860	1.430	.028	.[illegible]	1.620
1870	1.[illegible]	.026	.[illegible]	1.[illegible]
1880	.620	.017	.[illegible]	1.[illegible]
1881-82-83-84 ..	.[illegible]	.[illegible]	.[illegible]	1.[illegible]

As for adulterations, the additions of glucose and soda are comparatively harmless. The other additions, of which long lists are given, are found by the State chemist in small amounts or not at all. By far the most serious adulteration, and practically the only one, is that of alcohol. The exact extent of this adulteration cannot yet be determined, but that it is made there is little doubt. Fusel-oil and cheap corn alcohols have been used; but lately, as we are informed on good authority, methylic or wood spirits have been employed. In lager-beer the alcohol amount is small, and is much less often fortified with impure spirits.

The injurious effects of beer come on slowly and insidiously, if at all. They are very marked in persons who drink continuously and excessively. The excessive ingestion of fluid causes a plethora, then hypertrophy of the heart and fatty degeneration of its muscle. In Munich the normal male heart, for example, weighs more than elsewhere, and it is often found to be fatty.

The charge that the habit of beer-drinking causes Bright's disease or serious liver disease is not very strongly suppported; still, it has some facts in its favor. Since 1870 the consumption of beer in this country has doubled. In New York City the ratio of the deaths from Bright's disease has changed from 3.40 per cent., on the total annual deaths in 1874, to 5.40 per cent. of the total deaths in 1884. Here is apparently a very striking increase; still, of course, no positive deductions can be drawn from such data alone.

News of the Week.

REMARKABLE FECUNDITY.—Dr. C. L. Fletcher, of Wing's Station, N. Y., writes: "In the medical items of THE MEDICAL RECORD of February 27th mention is made of two women presenting at Professor Parvin's clinic who had borne respectively eighteen and sixteen children. A woman residing in this town has given birth to twenty-five children. She is hardly past the prime of life, and is now in good health, having recently recovered from an attack of scarlet fever. When the writer was in practice in Northern Vermont he often had occasion to prescribe for the different members of a family in which the mother had given birth to twenty-five children, having three pairs of twins in the crib at one time. The same woman had two sisters who had borne respectively twenty-two and eighteen children, making a total of sixty-five from the three sisters. It is needless to say that all the families are poor in the financial sense."

DR. GASPAR GRISWOLD.—The medical community was greatly shocked to learn of the sudden death, on March 4th, from peritonitis, of Dr. Gaspar Griswold. Dr. Griswold was only 29 years of age, but he had already given promise of a brilliant career. He was born in this city in 1857. He graduated from Columbia College in 1876. While in college he was prominent as an athlete, and was a member of the famous crew which in 1874 won the intercollegiate regatta at Saratoga. In the course of his professional studies he served a term as house physician at Bellevue Hospital. Subsequently he went to London, where he took the degree of Fellow of the Royal College of Surgeons—an unusual honor for a young American. On his return to this country he became associated professionally with Dr. Fordyce Barker. He also became Demonstrator of Anatomy at Bellevue Hospital College, and held that position at the time of his death. He frequently contributed articles of value to the medical journals. Dr. Griswold was socially a most agreeable man, and was very popular with all who knew him. He left a wife, but no children.

THE DEATH OF DR. GEORGE MCINTOSH MACLEAN of Princeton, N. J., in his eightieth year, is announced.

THE BALTIMORE MEDICAL COLLEGE held its Annual Commencement on March 4th, graduating a class of sixteen.

THE NEW YORK POLYCLINIC.—The report of the Secretary at the annual meeting of the Directors and Faculty of the New York Polyclinic, held at the College Building on January 28, 1886, showed an attendance upon the clinics in that institution, since the opening, on November 7, 1882, of seven hundred and nine physicians. Of this number, one hundred and fifty-six had taken out the general ticket, which admits the holder to the lectures in all the departments taught at the school.

The ratio of attendance upon the various departments is shown in the following list of tickets sold since November, 1882, up to January 28, 1886: Gynecology, 461; surgery, 412; medicine, 313; throat, nose, and ear, 300; children, 273; eye, 250; skin. 234; mind, and nervous system, 207; physiological chemistry, 173;

obstetrics, 163; pathology (laboratory only recently opened), 15. Total, 2,801. The attendance for the present session is in excess of any previous term.

Intermittent Uterine Contractions.—Dr. E. H. Grandin, of New York, writes: "In the issue of The Record for February 27th, you quote from a letter from Dr. Hall of Ohio to the effect that I was mistaken in saying that 'an intermittent rhythmical contraction of the uterus, as a positive sign of pregnancy, is referred to by only one authority (Lusk), and by him very briefly.' And then follows reference to Mr. Tait as being further authority. Had your correspondent read the abstract of my paper in your journal carefully, or had he waited till he had seen the paper in its entirety, he would not have himself fallen into the error of charging me with making any such statement as the above. Every writer on obstetrics refers to the value of intermittent uterine contractions in the diagnosis of pregnancy. The point I endeavored to make, and which is clearly made in my paper, if not in the abstract referred to, was simply that this sign was of peculiar value in the *differential* diagnosis between *two* varieties of pregnancy—the uterine and the abdominal—and that in this connection the sign is not referred to as of value by any obstetrical writer except Lusk. It would appear, therefore, that after all, Dr. Grandin was *not* mistaken.

"N. B.—This sign is particularly of value in differential diagnosis, because, in case of abdominal pregnancy, all other signs of pregnancy may be present, and this one alone being absent, the differential diagnosis is at once made."

The Origin of the Montreal Epidemic of Small-pox.—The sub-committee appointed by the Civic Health Board to inquire into the origin of the late small-pox epidemic have submitted their report. From this we learn that previous to the beginning of 1885 there had been no small-pox in Montreal for several years. There is some disagreement as to the origin of the epidemic, but it seems probable that the disease was brought to Montreal from Chicago by an infected Pullman car conductor; that this man was admitted as a patient to the Hôtel Dieu, and not being carefully isolated, he communicated the disease to attendants and other patients, causing an epidemic in the hospital. The hospital was then closed, and the inmates leaving, distributed the disease through the city. The local health authorities are severely blamed by the Canada *Medical Record* for not having any provision for receiving and isolating small-pox patients.

The Western Pennsylvania Medical College is the name chosen for the newly organized college in Pittsburg, Pa. We are informed that it has been liberally endowed, and will begin lectures in October next.

Dr. Daniel G. Brinton, whose work in American Ethnology was recently very favorably criticised in the *Atlantic Monthly*, has been made laureate of the Société Américaine de France for 1885, and has been awarded the medal of the Society for his works on the aboriginal tongues of America.

The Blind in Russia number 1 in 125, while in most European countries the proportion is only 1 to 1,000 or 1,200. The ratio given for Russia, however, applies only to young male adults, and not for the whole population.

Recognition of Italian Women Physicians.—The first official recognition of female medical practitioners has just been made by the Italian government. The recipient of this distinction is Signorina Terne, M.D., whom Queen Marguerita has appointed one of her physicians in ordinary.

The Medical Department of the University of Tennessee held its Annual Commencement in Nashville, on February 26th, and graduated a class of 57 doctors and 13 dentists.

There is a Bill before the Virginia Legislature for a "Homœopathic State Board of Examiners," and as there are only fifteen homœopathic practitioners in the State, according to the *Virginia Medical Monthly*, it is proposed that the homœopaths appoint a committee to examine in materia medica and therapeutics such candidates as signify an intention to practise homœopathically.

Emetic Doses of Ipecac in Suffocative Cases.—Dr. L. Emmett Holt, of New York, writes: "In your report, in the last issue, of the discussion at the Academy of Medicine on 'Infantile Bronchitis,' I am reported to have said that at one time I was much averse to the use of ipecac, but on further trial thought it beneficial in selected cases. The point was not regarding the *use* of ipecac, but *emetic doses* of ipecac in the suffocative cases."

The Hospital Cottages for Children at Baldwinville, Mass., are about to be enlarged by a building to be devoted entirely to the care and treatment of epileptic children. It is to be completed by the middle of June, and will accommodate thirty-five patients.

M. Pasteur has been knighted with the "Grand Cross of the North Star" Order by His Majesty King Oscar of Sweden.

Emeritus Professor C. G. Santesson, of Stockholm, the famous anatomist and surgeon, died of paralysis of the heart in his sixty-fifth year.

Nominations for Health Officer and Quarantine Commissioners.—Governor Hill, of New York, has sent to the State Senate the following nominations: Dr. Charles H. Phelps, of New York, for Health Officer of the Port of New York, and Dr. J. Douglas, Marshal B. Blake, of New York, and Charles S. Higgins, of Brooklyn, as Quarantine Commissioners. The medical gentlemen named—Drs. Phelps and Douglas—will make good appointments, and will carry with them the respect and endorsement of their professional brethren in this city. Dr. Phelps is one of the representative surgeons of this city, and holds many positions of trust with great credit to himself. He has been for many years, and is still, surgeon to Bellevue and St. Vincent's Hospitals. Dr. J. H. Douglas is widely and favorably known as one of the physicians who attended General Grant, and will bring to his new office those sterling qualities of a skilled physician and upright gentleman for which he has been noted by his many friends. As we go to press the nominations have not been confirmed, although there are good reasons for beleiving that they will be.

Seven Deaths From Foot-ball have been recorded in the English journals during the past season. The last victim was a young man twenty-five years of age, who was kicked in the stomach.

German Doctors with Bogus Diplomas.—It is reported that proceedings are about to be instituted in Germany against a number of persons styling themselves "Doctor" on the strength of diplomas purchased *in absentiâ*. In Berlin alone there are said to be 3,400 of these "doctors," either of medicine, philosophy, or law. *The Lancet* states that all the bogus diplomas were purchased in America, but this is hardly fair.

Ligaturing the Subclavian with Catgut.—At the meeting of the Academia Médico-Quirúrgica Española, on January 12th, Señor Ustariz described a successful case of ligature of the subclavian artery with a catgut ligature, prepared with corrosive sublimate, for an axillary aneurism of the size of an orange. The patient left the hospital cured fifteen days after the operation.

The Nomenclature of Brain Diseases.—In pursuance of a resolution passed at the Medical Congress on Brain Diseases, held during the last summer at Antwerp, by which it was suggested that local conferences should be held to draw up trustworthy international tables of statistics on insanity, a conference of Austro-Hungarian specialists will be held at Vienna on the 26th and 27th inst., with the object of revising and extending the nomenclature of mental disorders. Invitations to the conference have been issued by four leading medical men of Vienna.

A Strike among Medical Students.—The medical students of the Brussels University have for some time refused to attend the lectures or continue their studies. Their return to the University does not seem probable at present. The reason they advance to explain their conduct is the dismissal of the clinical professors by the administration of the hospitals, in order to replace them by others of their own choosing. The Brussels University is quite independent of State protection.

Very True.—The distinguished President of the American Medical Association writes to the *Canada Medical and Surgical Journal*, with regard to the International Congress, that "when the medical savants of Europe come to Washington they will be much surprised at the scientific papers presented, and the discussion had upon their own papers." We quite agree with the eminent correspondent.

Nitrous Oxide as an Anæsthetic.—M. Laffont, in a recent communication to the Paris Société de Biologie, stated that nitrous oxide is a most dangerous anæsthetic. He has since further prosecuted his experiments, and at a subsequent meeting confirmed his previous statement. He has found proof that nitrous oxide is not an anæsthetic, but an asphyxiating agent, as MM. Jolyet and Blanche have proved. When this agent is used by dentists to produce anæsthesia, hyperglycæmia and glycosuria result. M. Laffont has verified these phenomena by personal experience. He has also ascertained that in animals these results take place before anæsthesia, during the period of deep breathing.

The Initial Stage both of Mumps and Measles is highly infectious, according to Dr. William Squire, in *The Lancet*.

The Medical Department of the University of the City of New York held its forty-fifth annual commencement on March 6th, and graduated a class of 173. The Hon. Wayne MacVeagh delivered the address to the class. The medallists were: Dr. S. Green (gold medal), Dr. T. D. Merrigan (silver), and Dr. M. L. Ford (bronze). Drs. E. J. Lorenze, W. T. Gibb, D. D. Jennings, and G. H. Coombs took hospital appointments; Drs. J. L. Babcock, D. H. Sprague, and B. F. Pierce took the faculty prizes. Dr. J. J. Quigley delivered the valedictory.

Chenopodium and Rupture of the Stomach.—A girl, aged twelve, living at Trenton, N. J., died suddenly of rupture of the stomach, as *post-mortem* showed. She had been taking a mixture containing chenopodium in considerable quantity, and the friends brought suit against the doctor in attendance, Dr. E. Rogers, claiming that the medicine caused the rupture. This, of course, was not sustained, and the jury returned a verdict exonerating the physician.

A New Society in Boston.—A therapeutical society has been organized in Boston, with Dr. A. F. Pattee, President; Dr. Albert Day, Vice-President; Dr. W. F. Mead, Treasurer; and Drs. A. H. Wilson and J. W. Johnson, Secretaries.

"The Nightingale" is the title of a new periodical, published in the interests of nursing, and edited by Dr. Sara E. Post. There seems to be an excellent field for such a paper, and its first issue is a creditable one.

The Medical Department of the Arkansas Industrial University held its Annual Commencement on March 5th. The valedictory was delivered by Professor T. E. Murrell.

The Health Officer's Fees.—Health Officer Smith has made a report to the State Senate with regard to the work of his office. It appears that in the past four years he has received $203,140, and disbursed for expenses $93,923, leaving a balance of $109,217, or about $27,000 per year.

Resolutions in Memory of the Late Dr. Alfred C. Post.—*Whereas*, It has pleased an All-wise Providence to remove from our midst Dr. Alfred C. Post, his former colleagues of the Medical Board of the New York State Woman's Hospital have unanimously

Resolved, That to the life and services of Dr. Post, and to their long and intimate association with him, they look back with grateful remembrance, while the memory of his many virtues and his constant devotion to duty adds to their sense of his loss.

Resolved, That during an exceptionally long and busy career, he never lost sight of the higher interests of the profession; and he discharged his duties, even in the smallest detail, to the various societies, hospitals, and institutions of learning with which he was connected, with rare fidelity. In his connection with the Woman's Hospital, as senior consulting surgeon and president of the medical board, he took an earnest interest in that insti-

tution, and was ever ready to aid his colleagues with his experience and his counsel.

Resolved, That these expressions of affectionate respect for Dr. Post's memory be printed in the medical journals of New York, and be respectfully transmitted to his family.

JAMES T. HUNTER, M.D.,
CHARLES CARROLL LEE, M.D.,
For the Medical Board.

March 8, 1886.

DR. MIDDLETON GOLDSMITH'S BEQUEST TO THE NEW YORK PATHOLOGICAL SOCIETY.—The following note, addressed to Dr. John C. Peters, will explain itself:

DEAR PETERS: I hereby agree to give in trust to the New York Pathological Society (when incorporated) ($2,000) two thousand dollars, in money or securities, as the Society may elect, and promise to give by will ($3,000) three thousand dollars more, payable at the death of my wife and myself. This promise, I am assured, is good in law. Yours very sincerely,

M. GOLDSMITH.

RUTLAND, VT., March 3, 1886.

Reviews and Notices.

DISEASES OF THE LUNGS (of a specific, not tuberculous, nature). By PROFESSOR GERMAIN SÉE, Physician to the Hôtel Dieu, Paris, etc. Translated by E. P. HURD, M.D. Pp. 398. New York: William Wood & Co. 1885.

THE subjects discussed under the above heading are Acute Bronchitis, Infectious Pneumonia, Gangrene, Syphilis, Cancer, and Hydatids of the Lungs. It goes without saying that the tone of the discussion of these topics is throughout dignified and convincing. Perhaps the most interest will centre about the chapters on Pneumonia. In order that a frank fibrinous pneumonia may develop, "it is necessary that a specific agent, a special microphyte, shall be brought in contact with the pulmonary tissue and there multiply. Ordinary frank fibrinous pneumonia, then, is an infectious disease, not in the sense of being a general disease, but in the sense of being a parasitic microbic disease." The author regards an etiological unity as existing between sporadic pneumonia and epidemic pneumonia. Pneumonia remains local as long as the parasite does not pass beyond the bounds of the pulmonary parenchyma; but when it diffuses itself, and pervades the general circulation and various viscera, either by the blood-channels or the lymphatics, it becomes an infectant disease.

Part III. treats of the general therapeutics of the broncho-pulmonary inflammations, and is a general *résumé* of the various methods presented by different epochs in the history of medicine.

In the chapter on Syphilis of the Lungs, three queries are made concerning those pulmonary lesions whose syphilitic nature is still under dispute: 1. Can syphilis determine, in the pulmonary tissue, lesions similar to cirrhosis of the lungs? 2. Is pulmonary cirrhosis frequently associated with visceral syphilis? 3. Do there exist special characters attributable to syphilitic pulmonary cirrhosis? To the first a full, and to the second a partial, affirmative answer is given. The third point is regarded as still under dispute.

The translator's preface is a concise statement of the present aspects of the germ theory of disease. He has been able to secure, as appendices to the volume, an article on Bacteria, by Dr. Dujardin-Beaumetz; also a reprint of Dr. George M. Sternberg's article on the Pneumococcus of Friedländer. The latter may or may not be regarded as having confirmed the main thesis of the author of the chapter on Pneumonia; they (Dr. Sternberg's studies) certainly have opened up a most interesting line of inquiry as to the possible morbiginous influence, under certain conditions of depressed vitality, of bacteria which are occasional components of healthy animal fluids.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M.D., LL.D., assisted by LOUIS STARR, M.D. Vol. II.: General Diseases (continued), and Diseases of the Digestive System. Pp. 1312. Philadelphia: Lea Brothers & Co. 1885.

THE present volume concludes the general diseases, including rheumatism, gout, rachitis, scurvy, purpura, diabetes, urethritis, scrofula, and hereditary syphilis. Drs. R. Palmer Howard, William H. Draper, A. Jacobi, Philip S. Wales, I. Edmonton Atkinson, James Tyson, John S. Lynch, and G. William White are the gentlemen who treat of these topics. Dr. Howard's article on the various forms of rheumatism is very complete, and in descriptions of the various theories of pathology and of treatment he exhibits excellent judgment. Perhaps one might say here, as we said in commenting on the previous volume, that there is too much discussion and not enough of definite opinion. Yet it must be allowed that it requires considerable self-confidence to write dogmatically upon rheumatism. Dr. Howard appears to give in his adherence to a neuro-humoral view of rheumatism. He believes in the salicylates, and rightly inculcates their value in large doses in chronic rheumatism. He inclines to the neurotic view of the pathogeny of rheumatoid arthritis. It appears to us that he lays rather too little stress upon the value of electricity in rheumatic complaints. Dr. Draper's article on gout is a clear and scholarly presentation of this subject. He recommends a nitrogenous diet in the gouty dyscrasia. Dr. Jacobi's learned article on rachitis is concluded with an interesting description of the best methods of feeding infants. The author condemns infant foods entirely, and recommends the familiar oat-meal and barley-water diluents. Dr. Jacobi believes that small doses of phosphorus are useful in rickets. Dr. Tyson gives us, on the whole, a very good monograph on diabetes mellitus. This includes the description of a number of tests for sugar and several diet-tables that will be found useful. The description of the clinical history of diabetes is somewhat meagre, especially as it is well known that the disease has several somewhat distinct types. The loss of the tendon-reflexes and the peculiar relations of diabetes to tabes also do not receive notice. Dr. Welch's articles upon ulcer of the stomach, cancer of the stomach, hemorrhage from the stomach, dilatation of the stomach, and minor organic affections of the stomach, are among the best in the book, particularly from the pathological point of view. A large number of valuable statistics and other data have been collected, so that the articles have more of freshness and originality than is the case with many of the other contributions. Of the articles on diseases of the intestines, by Dr. W. W. Johnston, Dr. Lewis Smith, Dr. Wales, Dr. Whittaker, Dr. McGuire, and Dr. Atkinson, we have not space to speak. Dr. Alonzo Clark's article upon peritonitis will be read with interest. It is perhaps the best monograph that has come from Dr. Clark for a long time. Dr. Bartholow's articles upon diseases of the liver are written in a clear and attractive style, and together furnish a very complete account of the disturbances of this important viscus.

THE RATIONAL TREATMENT OF RUPTURE. A Study of the Causation, Pathology, and Varieties of Hernia. By DR. A. H. PARKER. Chicago: Shea, Smith & Co. 1885.

A BOOK describing a form of truss devised by the author for the relief of inguinal, femoral, or umbilical hernia.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Anniversary Meeting, January 13, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

REPORT OF THE COMMITTEE ON MICROSCOPY.

DR. WALDSTEIN reported that the specimen presented by the President at a former stated meeting was a tubercular testis; also that the small tumors presented by the President, removed from the antitragus, were cartilaginous growths. In both instances the diagnosis was corroborated by the microscopical examination.

Dr. Waldstein also remarked that since the presentation of the latter specimen he had seen two children, one six and the other three or four years of age, in whom there were small cartilaginous growths before the antihelix, but not sufficiently large to be of special importance.

DR. A. G. GERSTER presented a specimen of

PERIOSTEAL SARCOMA OF THE THIGH,

removed by amputation from a girl, twenty-six years of age, who about three years ago fell down stairs, but was not aware, at that time, that she received any severe injury. From that date, however, she began to notice a slight disturbance of the function of the knee-joint, apparently due to the development of a swelling corresponding to the external condyle of the right thigh. The disturbance of function was not so much from pain as from mechanical difficulty in bending the knee, especially in ascending stairs. When she presented herself to Dr. Gerster he found a hard, non-movable tumor occupying the site of the external epicondyle. Puncture with the hypodermic needle was negative, and the tumor gave no parchment-like crackling sensation, but it was noticeable, at one portion in the popliteal space, that it was rather movable. Dr. Fluhrer and the other surgeons regarded it as possibly a group of infiltrated glands. The shaft of the femur corresponding to the internal epicondyle was perfectly intact, and the entire tumor was superimposed upon the cortex of the bone. If it had been a central sarcoma the tumor would have been spindle-shaped. Another interesting feature of the specimen was that the movable mass regarded as lymphatic glands had been demonstrated to be such as was diagnosticated. The new growth was confined strictly to the diaphysis.

Dr. Gerster assumed that it was malignant in character, but he invited Dr. Markoe, who had had a large experience in the observation of the class of tumors known as enchondromata, to see the patient with him, whose opinion, after a complete examination, was rather strongly in favor of the tumor being an enchondroma. He thought they might have to deal with one of those osseous growths with a pedicle and a mushroom-shaped top which could be easily chiselled away and the limb of the patient saved. The puncture, however, made it evident that the tumor had a soft centre, and the fact that there was in the inguinal region of the affected side a group of glands somewhat more enlarged than those on the opposite side, with the additional fact that the general condition of the patient had suffered severely, led Dr. Gerster to regard it as undoubtedly sarcomatous, and amputation was at once performed.

Dr. Gerster also presented a specimen of

MYXO-SARCOMA OF THE TESTICLE,

removed from a patient thirty-two years of age. The cause was obscure, as there was no history of traumatism or inflammatory process. The tumor was about the size of his fist.

UNDESCENDED TESTICLE—HERNIA—OPERATION—CURE.

Dr. Gerster also presented a specimen removed from a man, thirty years of age, who since childhood had noticed only one testicle in his scrotum. When he was about eighteen years of age a hernia appeared, and when an attempt was made to wear a truss the patient found that the pressure of the instrument caused excruciating pain, whereupon the truss was removed, and the hernia since that time had developed into large proportions. Gradually during the last four or five years a rather hard body had descended into the inguinal region and vicinity of the external abdominal ring, alongside the hernia, painful on touch, and if he kept on his feet attending to business the pain would become so severe as to compel him to stop work. Dr. Gerster found on examination that he had to deal with an undescended testicle, and also a hernia in which there was a considerable portion of omentum which could not be replaced completely. Consequently he concluded that the omentum had become attached to the hernial sac by inflammatory process. He advised the patient to submit to a radical operation on the hernia, which was performed in the Mount Sinai Hospital, and, when the sac was exposed, it was found that external to it there was situated a body composed of fatty tissue, resembling a lipoma, containing in most of its parts a rather small proportion of connective-tissue elements, except at the upper extremity, which was close to the inguinal canal, where a rather hard mass of tissue was found which appeared to him as possibly sarcomatous in character, but it was found to be composed principally of the remains of an inflammatory process.

The sac was opened, and it was found that it was occupied by a large portion of omentum which was adherent almost the entire length of the sac in the inguinal canal. It was dissected up without much trouble, deligated in several pieces, cut off, and the stump placed in the abdominal cavity. The sac was transfixed with catgut suture in a way which might be compared to the string of a purse; it was tied, and then cut off, and the stump was placed in the inguinal canal. The pillars of the external ring were brought together with stout catgut, leaving a little slit for the exit of the spermatic cord. The atrophied testicle was removed.

There was no elevation of temperature after the operation, and the entire wound healed by first intention. On the fourteenth day slight hemorrhage occurred when the patient attempted, contrary to orders, to lift a body of some weight. The hemorrhage was due apparently to the severing of the deeper portion of the newly formed cicatrix. A slight sinus remained which required slitting open, but which then healed readily, and the patient was dismissed cured, with the advice to wear a light truss.

Dr. Gerster believed that the radical cure of inguinal hernia was doubtful, but at the same time the operation does some good, as it enables the patient to wear a truss, perhaps in a way which will prevent the return of the hernia. The so-called radical cure by means of injections of astringent solutions, Dr. Gerster thought did not deserve the name of radical cure.

RETENTION-CYST OF THE SUBMAXILLARY GLAND.

Dr. Gerster also presented a mucous cyst, removed from the floor of the mouth of a man twenty-six years of age. It had been diagnosticated as a ranula, and an incision was made into it from the oral cavity by another surgeon. It was a large tumor when filled, and interfered seriously with deglutition and even respiration. The tongue protruded from the mouth, became dry, and the patient was unable to attend to his business on account of the unsightly appearance of his face. Incision and drainage practised by the former surgeon did not result in cure. The tumor collapsed but the drainage-tube could not be retained, and was removed, and the wound healed; but a short time afterward a reappearance of the tumor was noticed, whereupon he presented himself at Dr.

Gerster's clinic, when he found a fluctuating tumor from which he withdrew fluid which proved to be mucoid in character; a turbid liquid containing a rather large proportion of pus-cells. Extirpation was advised, and was performed in October in the Mount Sinai Hospital, and the tumor was found to be a retention-cyst of the submaxillary gland. The specimen showed the body of the gland, and the sac of the cyst formed a continuation of the glandular capsule. One peculiar fact concerning the tumor was that it grew toward the median line, thus producing the impression that they might have to deal with a dermoid cyst. The dissection for its removal extended downward to the hyoid bone. The oral cavity was not invaded, as it was possible to exsect the sac of the tumor from the old cicatrix left by the preceding operation of tapping and drainage. This rendered the case much simpler than it otherwise would have been. The submaxillary, the facial and the lingual arteries were deligated before removal of the cyst.

THE PRESIDENT said, concerning radical cure of hernia, that Dr. Gerster's experience was the same as his own, with regard to the result of these operations. He had operated about twenty times. He knew he had cured one patient, and there was another in whom he had suspected a cure had been effected by Heaton's operation, performed on a boy ten years of age. It must be admitted, however, that a cure can frequently be effected in a patient of this age by wearing a truss, which exerts a sufficient degree of pressure. He always advised patients to wear a truss after any operation for radical cure has been performed.

DR. CHAS. H. KNIGHT presented a specimen of

FIBROMA OF THE VOCAL CORD, REMOVED WITH MACKENZIE'S FORCEPS,

accompanied with the following history:

J. M——, aged fifty-seven, iron moulder, family history good. Patient has always been well. Two years ago first noticed trouble in speaking; voice became husky and occasionally "cracked;" unable to sing as formerly. Dry cough. No history of any treatment.

With the laryngoscope a neoplasm the size of a French pea was seen at the junction of the anterior and middle thirds of the right vocal cord, perfectly round and smooth, of a livid red color, in striking contrast with the white vocal cord to which it was attached. It had a very short pedicle and during phonation it rested between the cords, being attached just at the margin of the right. There was a moderate degree of laryngitis, the left cord was almost normal, the right being especially congested, not in the vicinity of the growth, but at its posterior extremity.

The larynx was very capacious and tolerant. After thorough spraying of the fauces and larynx with a four per cent. solution of cocaine hydrochlorate, two unsuccessful attempts were made to remove the growth with Mackenzie's laryngeal forceps. One week later the growth was removed with the forceps on the second trial. There was very little hemorrhage. Six days after the operation the vocal cord was found to be perfectly smooth and normal, with the exception of slight congestion. The voice was almost natural and the patient said he had even been able to sing. It has since been learned that the patient had been under treatment for nearly three months, and that several attempts had been made to remove the tumor with chromic acid, with forceps, and with the sponge probang by the method of Voltolin's. The specimen was referred to the Committee on Microscopy.

DR. T. MITCHELL PRUDDEN presented a specimen which illustrated

CONGENITAL ABSENCE OF THE LEFT KIDNEY.

The specimen was removed from the body of a man twenty-two years of age, who had given no symptoms of renal disease, and who died of *phthisis pulmonalis* and *tubercular meningitis*.

On the left side the supra-renal gland was in about its normal position and was somewhat broader than usual. The left kidney and ureter were absent, there being not even a rudimentary trace of those parts. There was no left renal artery.

The right kidney was moderately enlarged, measuring twelve centimetres in length, and was a little thicker than normal. The right ureter was slightly wider than normal.

There were no other malformations in the body.

Microscopically the right kidney is normal in structure. The cortex tubules and glomeruli are plump and large, but without careful measurements it would not be possible to say that they are actually hypertrophied.

The case seemed to him worthy of presentation and record, not only because it was an excellent example of this form of malformation, but because, owing to the greater frequency of the operation of removal of the kidney in late years, a more exact statistical knowledge of the frequency of this malformation was for obvious reasons desirable. Up to 1883, according to Guttmann, there were within twenty-five years about seventy cases on record in which one kidney was entirely absent or represented by a mere rudiment.

DR. WESLEY M. CARPENTER remarked that two or three years ago he saw in the post-mortem room at Bellevue Hospital at least three cases in one winter with only a single kidney present. If memory served him correctly, one of those was an operation case, in which the only kidney the patient had was removed. One specimen, brought to the Wood Museum, was removed by Dr. Welch from the body of a late distinguished surgeon of this city. He also had in his collection a single kidney which, at the time of removal, weighed twenty-four ounces, and which was the seat of simple parenchymatous nephritis. He had not seen cases of single kidney prior to nor since that date, covering a period of twelve years; thus showing that their frequency was not very great.

THE PRESIDENT remarked that he once directed considerable of his attention toward the viscera of the abdomen with reference to abnormalities affecting the arteries, and of the many bodies which he examined for this purpose, he had no recollection of encountering one in which there was only a single kidney.

DR. W. P. NORTHRUP said that out of a thousand autopsies made on babies he had not encountered one in which there was only one kidney.

DR. GERSTER said that, among the first operations which he performed in this country, was one on a child with imperforate anus. During the operation he encountered a hard body which resembled in appearance a portion of intestine, and it was incised and urine came from the bottom of the wound. The child died, and it was found that it had but one kidney. The explanation of the case was found in the fact that one ureter was distended so much that it resembled a small intestine in size and in thickness of its walls, having been occluded where it should have entered the bladder.

ACUTE MILIARY TUBERCULOSIS.

DR. L. EMMETT HOLT presented the lungs, liver, kidneys, and spleen of a male child four months of age, which died at the New York Infant Asylum on January 8th.

The parents and other child were healthy, and no history of tuberculosis could be traced in the family. The child was the smaller of a pair of twins, and had always been plump and well nourished, being nursed at the breast.

The child had symptoms of an ordinary mild bronchitis for a week or ten days prior to January 4th, when its first marked rise of temperature occurred, it reaching 102°. Up to this time it had not been above 99°. With the fever all the symptoms were much aggravated. The respirations were 64 and the pulse 180. There were

now the signs over the whole chest, the signs of bronchitis affecting the larger and medium-sized tubes.

The temperature rose the next night to 103°, and on the two succeeding nights to 105 and 104 respectively. On the morning of January 7th, the child was much better in its general symptoms. The temperature had fallen to 100°, the respirations to 60, and the pulse to 160. A small spot of bronchial respiration was found at each extreme apex behind, but no dulness and no signs elsewere in the lungs of consolidation. The râles were less numerous. The case was regarded as one of severe bronchitis, going on to broncho-pneumonia. Very unexpectedly it grew worse, and died the next morning, January 8th, after four days of febrile symptoms.

The autopsy was made thirty-two hours after death. Body plump and well nourished. Brain carefully examined, but no tubercles found anywhere, and no signs of disease. Thorax: There were no pleuritic adhesions. Both lungs showed widespread tubercular changes. At the extreme apex, and along the posterior borders of both sides there was a narrow strip of consolidation which widened out in the lower lobes to involve perhaps one-third the lobes. On section these consolidated portions were found studded with miliary tubercles. The rest of the lungs were pretty thickly sprinkled with tubercles, the surrounding lung tissue being, for the most part, healthy in appearance. There was no lymph on the pleura anywhere. The bronchial glands were enlarged to the size of an ordinary bean, but not cheesy on section. No tubercles were seen in the pericardium. The liver showed a small number of tubercles scattered over its surface, and was slightly fatty. The spleen weighed one ounce and a half more than double the ordinary size. It was studded with miliary tubercles, and had many round cheesy masses on its surface from one to two lines in diameter. The kidneys presented nothing abnormal except a very few tubercles on their surface. Mesenteric glands slightly enlarged, not cheesy. No tubercles seen in the peritoneum.

The case was an illustration of what is not at all infrequently seen, that a child, previously healthy, may die unexpectedly from tuberculosis, where neither the symptoms nor physical signs, during life, have given the slighest reason to suspect its existence.

Dr. W. P. Northrup presented a specimen with the following history:

DIPHTHERIA—CROUP—O'DWYER'S TUBE—DOUBLE PNEUMONIA—DEATH.

The patient was an inmate of the New York Foundling Asylum, aged three and one-third years, female.

Previous to present illness her condition was good, no previous disease. The history is as follows:

December 24th.—Croupy cough. 8 P.M.: Pulse, 138; respiration, 20, temperature, 103° F.; moderate obstruction in respiration. 10.30 P.M.: Marked obstruction, very restless, coughed up membrane. Dr. O'Dwyer inserted his croup tube. (Tube here shown to the Society.) Ten minutes later patient sleeping quietly. All obstructions gone, tube causing less irritation than usual.

December 25th.—Condition good. No dyspnœa. Takes food well. A.M.: Pulse, 168; respiration, 28; temperature, 103° F. P.M.: Pulse, 180; respiration, 36; temperature, $104\frac{8}{10}$° F. Coughed up membrane.

December 26th, 1.30 A.M., twenty-seven hours after insertion, tube removed. 3 A.M.: Marked obstruction again, croupy cough and respiration. 8 A.M.: Pulse, 178; respiration, 42; temperature, $104\frac{6}{10}$° F.; albuminuria, thirty-three and a third per cent., by bulk.; no casts. 6 P.M.: Severe paroxysm of dyspnœa. 6.35 P.M.: Marked obstruction, cyanosis, restlessness.; tube inserted by Dr. Dillon Brown, the house physician—prompt relief. 7 P.M.: Pulse, 168; respiration, 44; temperature, $103\frac{2}{10}$° F.; quiet, color good, bright, bronchial râles both sides.

December 27th.—Slept well. Condition best for three days. Cheeks flushed, nostrils dilating. 6.30 P.M.: Pulse, 168; respiration, 48; temperature, $104\frac{6}{10}$° F.; asleep for first time to-day; pus and fibrin exudate on both tonsils for the first time. 9.45 P.M.: Tube removed, obstruction marked. Tube was removed to see if possibly there might be some laryngeal obstruction—tube quite clear. 10.15 P.M.: Tube reinserted. Patient continued to fail rapidly with symptoms of pneumonia, and died quietly at 10.30 P.M.

Autopsy, December 28, 1885. Body well nourished. Pharynx: Pseudo-membrane on tonsils and posterior wall. Larynx, trachea, bronchi, to the finest possible to trace, show a thick tenacious, continuous, hollow cast of pus and fibrin exudate. This is the most tenacious and extensive ever seen at asylum dead-house table. Lungs: Extensive pneumonia of both; color mahogany, punctate hemorrhages into visceral pleura. Bronchial glands enlarged and dusky, firm. Heart normal; muscle teased fresh, no degeneration of its fibres. Liver and spleen normal. Kidneys: Moderate parenchymatous change. Stomach and intestines normal.

In presenting the tube developed by Dr. O'Dwyer, it was not the purpose here to give his complete records, but to speak casually of his last twelve cases at the New York Foundling Asylum. In all there was albuminuria; in all the tube was put in and relieved promptly the laryngeal obstruction. In all it was withheld till the signs of urgent dyspnœa were present, viz., cyanosis, restlessness, marked recessions on inspiration. This was to place it on a footing with tracheotomy, a later resort. Three of the twelve have recovered. One other lived to the sixteenth day, and on autopsy, tuberculosis with recent pneumonia was found.

Certain questions will certainly arise, and the answers in anticipation may be summarized as follows: The tube has never failed to relieve laryngeal dyspnœa. There is no ether, no wound, no shock. To insert the tube requires but a few seconds. The tube cleans itself. It is so made as to be coughed out if, by chance, any membrane plugs it from below. This has occurred. In a case of Dr. Northrup's in private practice, the tube was removed by Dr. O'Dwyer after fifty-eight hours, and found entirely clear.

The insertion of this tube requires some manual dexterity. Every practitioner will agree to pass a catheter into the larynx, but this is less difficult. It does, however, require practice. In conclusion: "To those who remember their first experience in taking care of a tracheotomy case after the operation, the continuous watching at the bedside, their constant manipulations with feather and solvents and inner tube, their continual anxiety, I may say that in this simple device the patient is relieved, and the doctor's life is not quite miserable."

The following is a cursory survey of sixty-one recorded cases of children dead of laryngeal diphtheria or membranous croup, showing extent of pseudo-membrane:

Extending from pharynx to finest bronchi, 22; pharynx to bifurcation of trachea, 9; larynx to first division bronchi, 21; larynx to second division bronchi, 4; larynx to fourth division bronchi, 3; pharynx and trachea, 2; croup first symptom, 49; membrane in pharynx first, 12; pneumonia occurred in 44.

Dr. C. H. Knight asked if the tube had been known to produce erosion of the vocal cord.

Dr. Northrup said the rule at the Asylum had been to remove the tube at the end of twenty-four hours, and allow the child to cough and clear out the trachea, and then put the tube back. In one case in which it was allowed to remain in position nearly all the time for four days there was a slight superficial rubbing off of the epithelium, but he had never seen any ill effects produced on the vocal cords as the result of the wearing of the tube; the slight erosion occurred at the end of the tube.

Dr. Holt asked how long the tube had been allowed to remain.

Dr. Northrup replied that in one case it was permitted to remain about one week, and without any detriment whatever.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 4, 1886.

Abraham Jacobi, M.D., President, in the Chair.

The Corresponding Secretary announced the death of

ASHBEL SMITH, M.D.,

of Texas, a Corresponding Fellow of the Academy, which occurred on January 21st, of pneumonia, in the eightieth year of his age. He held prominent positions under President Houston, when Texas was a republic, and was the most eminent medical man in the State.

Dr. D. B. St. John Roosa read a paper entitled

LIMITATIONS IN THE VALUE OF GLASSES FOR THE IMPROVEMENT OF VISION AND THE RELIEF OF DISEASE,

in which he first referred to the system of test-letters presented to the medical profession in 1854, in England, by Alfred Smee, and in Germany by Edouard Jaeger.

This was the first attempt to arrange an accurate method of estimating visual power. But these were very insufficient, and afterward came Snellen's test-types, which virtually solved the problem of making a register of visual power.

With Jaeger's test-types, which are still used as the standard test of capacity to read, and Snellen's letters for the determination of vision at twenty feet, about as accurate an account as is necessary of a given person's vision can now be given.

The ophthalmoscope was invented in 1851; yet, as late as 1854, little more than mention was made of the instrument in text-books, as well as of the necessity of the correction by test-glasses of the numerous anomalies of refraction and accommodation. Indeed, all this sprang from Helmholtz's discovery. Without the ophthalmoscope the determination of the refraction with accuracy was impossible.

Donders' great work was made accessible to the English-speaking people, by Dr. Moore's famous translation, in 1864. Through all these stages has come the ophthalmic science of to-day, and now a large part of the time of specialists is spent in adjusting glasses for impaired or weak vision. Beyond this, glasses are worn when there is no evident impairment of sight. Patients suffering from headache or from vertigo are now very often sent to the oculist to determine whether these symptoms may not depend upon a lesion of refraction or accommodation.

But it must be stated that defects of sight are often only one, and sometimes only a temporarily acting, factor in the production of neuroses.

Too much stress should not be laid upon the curative power of the correction of the error of refraction, as we shall often meet with cases that we can with difficulty reconcile with theories of their sole influence, or that of a want of equilibrium of the ocular muscles.

Blepharitis ciliaris, styes, epiphora, have also come to be considered by many authors as intimately associated with, if not caused by, optical conditions of the eye, and one writer, at least, goes a step beyond anything as yet indicated, and considers the eye as a prolific source of reflex irritation. This writer inquires "if an irritation originating in an injured or degenerated eye may also give rise to disturbances in distant organs—for instance, the heart, the kidneys, or the muscles of the extremities"—and he answers this inquiry in the affirmative and cites illustrative cases which are thought to prove this. Neuralgia, chorea, insomnia, and epilepsy are diseases which the writer just quoted enumerates as those which may be caused by "difficulties in performing the function of sight."

All this is far beyond what Donders claimed for spherical or cylindric glasses when he issued his book. Donders recommended glasses for hypermetropia, astigmatism, and asthenopia, as well as for myopia and presbyopia, and Graefe made great use of prisms for the correction of muscular asthenopia dependent upon insufficient power of the internal recti; but neither of these men appears to have dreamed of glasses as a cure for headaches, epiphora, epilepsy, chorea, or uterine disease—for all of which they are now, in some instances, advised.

It is hard to overestimate the value of Donders' work in tracing the frequent source of asthenopia to hypermetropia. He stopped such practice as division of the external recti to relieve what was supposed to be spasmodic contraction of these muscles. His investigations have permitted thousands of young people to become educated men and women—young people who, before the days of convex glasses for hypermetropia, were condemned to sheep grazing and cattle ranches, without the benefit of light reading.

With a full appreciation, then, of the value of glasses in the improvement of vision, and even in the relief of disease, Dr. Roosa proceeded to speak of some of the limitations in their value, which prevented him from believing that the whole domain of reflex disease comes naturally under the care of the oculist, or that even all cases of apparently pure and simple asthenopia may be cured by glasses. He gave a series of fifteen cases, taken from his note-book almost without selection, which illustrated his subject, and which he hoped had been made clear enough to convey to the minds of his hearers the working theories under which he had been led to prescribe glasses. He could not accept all that was claimed by some authorities on the one hand, while, on the other, he feared that even after these years since the publication of Donders' work, the whole profession was not fully alive to the value, especially in cases with symptoms referred to the head and eyes, of properly adjusted glasses.

Uterine asthenopia, or the asthenopia so often found in women suffering from serious uterine disease, he had never been able to materially alleviate. Neither had he seen any benefit, other than very temporary, in the correction of trifling errors of refraction in neurotic hysterical subjects; nor from the weakness of ocular muscles, so often one of the early symptoms of locomotor ataxia.

That glasses will cure organic disease, or that the want of them will allow it to occur in parts remote from the head, he was not yet prepared to believe, and yet errors of refraction and accommodation are sometimes the cause of serious functional disturbances beyond those of vision; still, hypermetropes may live to become presbyopes without asthenopia Only when the failure of accommodation occurs from senile decay will they become aware, by the need of very strong convex glasses for close work, and the failure of distinct vision also, that they started in life with eyeballs of less focal power than many of their fellows. Some myopes go through life without ocular symptoms, while a long eyeball in others becomes a prolific source of evil.

While the correction of errors of refraction and accommodation, and the unburdening of overloaded ocular muscles, will do much to alleviate the asperities of human existence, these things are not as yet a panacea even for neuroses, much less for inflammatory diseases. In our hopes for cure in employing these methods, we still require to avoid scepticism on the one hand and excessive confidence on the other. *Medio tutissimus ibis.*

Dr. David Webster accepted all of Dr. Roosa's statements, and regarded his contribution as one containing a most excellent picture of the every-day work of ophthalmologists. Nearly all persons have some error of refraction; probably not more than half a dozen in one hundred have perfectly normal eyes. Why, under the same ocular conditions, some persons need glasses and others do not, probably depends, in most cases, upon the general condition of the person. He believed, with Dr.

Roosa, that there is a limitation to the value of spectacles, and that such affections as cataract, glaucoma, opacity of the cornea, diseases of the lids, etc., cannot be cured by glasses, as had been claimed by some doctors; that is, according to the statements made by the patients.

With regard to reflex neuroses, he had seen many patients cured by division of ocular muscles and the proper adjustment of glasses, and others relieved by the use of atropia and glasses.

Dr. Webster recalled cases of functional nervous disturbance in which the patients had been relieved by the use of prisms. In one case the patient suffered almost constantly from headache and other nervous symptoms, and he found insufficiency of the *externi* for distance, with a slight degree of hypermetropia, $\frac{1}{12}$. He ordered + 72 spherical, with a prism of 1° base toward the temple, over each eye, and to his surprise and gratification, the patient was relieved at once, and had worn glasses ever since. He had also used the Faradic current, as an adjunct, with benefit.

Dr. C. S. Bull said that his views coincided with those set forth by Dr. Roosa.

Dr. Gruening had frequently prescribed ordinary plain window-glass for the good eye, and ground for the deflected eye, in cases of dizziness and perhaps diplopia, and with benefit. Many such cases were ataxic, and the neurologists did nothing for the double vision.

Dr. W. O. Moore referred to a case of epilepsy which illustrated the limitation in the use of glasses.

Dr. R. W. Amidon agreed with Dr. Roosa concerning the universal application of glasses for neuroses, and thought that, perhaps, he would limit their use even more strictly. The use of window-glass for diplopia, under the circumstances mentioned by Dr. Gruening, had long been practised by neurologists.

With reference to headache, he had found that the frontal was very likely to be associated with errors of refraction, while the occipital came more frequently from insufficiency of ocular muscles.

He had seen wonderful results follow constant and temporary use of prisms, especially in cases of insufficiency of the interne muscles.

Dr. Roosa said that he had been pleased to hear that those who had participated in the discussion, both oculists and neurologists, entertained substantially the same doctrine which he had advocated, and especially so because they had been accused of falling behind the age in their appreciation of what can be done with glasses for the relief of human ills. He was unwilling to admit that there was any new pathological fact, or therapeutic agent, permanently successful, which was unknown to men working in the regular way in these two departments of medicine.

Dr. H. G. Piffard then exhibited

A NEW ELECTRIC LIGHT,

which was manufactured by the Galvano-Faradic Company, and was portable, fairly constant, and could be obtained at a moderate expense.

The Academy then adjourned.

Ambulance and Hospital Huts (Döcker's System), Copenhagen.—As may be known to our readers, a prize of 5,000 francs was offered by the Empress of Germany, at the International Competition of the Red Cross in Antwerp this year, for the best constructed ambulance hut. The special committee finally awarded the prize to the Danish Portable Döcker Huts made in Copenhagen. These huts are built of wood, so prepared as to be both water and fire proof; they are easily taken down and put up, being at the same time strong, and are portable; and can be easily cleaned and disinfected when necessary. The air space allowed per bed is from 12,836 to 14,170 cubic metres. They can be used singly, or several placed together, so as to form a larger building.

Correspondence.

OUR LONDON LETTER.

(From our [illegible] Correspondent.)

ENTERIC FEVER AT SUAKIM—DISCUSSION AT THE MEDICAL AND CHIRURGICAL SOCIETY—THE SURGICAL TREATMENT OF ACUTE NECROSIS—HUNTER'S HOUSE AT EARL'S COURT AND WINDMILL STREET—A NEW VIEW OF INFLAMMATION—A PRIVATE MEDICAL SCHOOL—THE COLLEGE OF SURGEONS.

[illegible]

The last meeting of the Medical and Chirurgical Society was entirely occupied in discussing the subject of enteric fever, the so-called typho-malarial fever, and their mutual relations. The discussion was based upon a paper read by Dr. J. E. Squire, and having for its title "Enteric Fever at Suakim, with some Cases of Malarial Enteric or Typho-malarial Fever." The author, a young London physician, had charge of a division of the Base Hospital at Suakim, and had observed eighty cases of fever. Seventy were of the ordinary enteric fever type, this being verified by necropsies on two cases. Of the remainder, some were so modified by climatic causes as to deserve the name of malarial enteric. Two or three showed stronger evidence of malaria. In one of these, which was believed to be enteric during life, no enteric lesions were found post-mortem. Dr. Squire thought that the term typho-malaria might be restricted to such cases. In two of the fatal cases subconjunctival or subcutaneous hemorrhages occurred. These were not due to scurvy, as the troops had fresh meat and vegetables. There was no typhus. Diarrhœa was a marked symptom in all cases of fever. As regarded the causation of the enteric fever, he thought the disease was imported from Cairo and spread by aërial infection. The exclusive use of condensed water for drinking and cooking purposes excluded water as a source of infection. The author concluded by pointing out that, contrary to the theories of some Indian and army medical authorities, the seasoned troops were attacked earlier than those unused to tropical climates, and the mortality was not higher among the younger soldiers.

Several medical officers belonging to the services were present and joined in the discussion. Surgeon-Major Meyers was inclined to think dysentery was at the bottom of a good deal of the fever at Suakim. Surgeon-General Marston maintained that recent arrival in a tropical country increased the susceptibility to enteric fever. He did not think there was any evidence of typho-malarial fever being a distinct disease, though, of course, a malarious subject might be attacked with typhoid fever and exhibit symptoms of both diseases.

Dr. Drewitt suggested that we had to do with a chemical union of typhoid and malaria and referred to some narratives in Dr. Whipham's "History of the American Rebellion." Dr. S. Thomson believed that the form of enteric was determined by the nature of the soil. He distinguished two types of typhoid: (1) abdominal, when water was the source of the poison; (2) diphtheritic, when the disease arose from inhaling sewer-gas. In the latter case the throat was more affected, and nervous symptoms were prominent. Brigade-Surgeon Don reiterated the military view, that enteric fever can originate *de novo*. Brigade-Surgeon Gribbon had no doubt that the cases at Suakim were enteric. Suakim, he said, was not a malarious place. Dr. Broadbent then spoke at some length. He said that the fact of the occurrence of enteric fever at certain ages and on recent arrival in a country, taught nothing as to the specific nature, or otherwise, of the disease. He was convinced that there was some other fever met with in tropical and sub-tropical climates, distinct from, though simulating to a certain extent, the course of typhoid fever. The second tropical fever could hardly be enteric fever modified by climatic and other con-

ditions. Experience had shown that we required some distinct name to express this second affection, and, perhaps, "typho-malarial" was the best term for a fever which was even more protean than enteric fever in its clinical course.

A brief but animated discussion followed the reading of a paper, at the last meeting of the Medical Society of London, by Mr. Bernard Pitts, Assistant Surgeon to St. Thomas' Hospital, on "Subperiosteal Section in Cases of Acute Necrosis." Notes of two cases were read. In the first, the patient, a girl of fifteen, was admitted with pain and swelling in the lower end of the right tibia. The patient was very prostrate and had a temperature of 102°. An incision had been made above the ankle, giving exit to a large quantity of matter. This was freely enlarged, and the patient's condition at once began to amend. But the improvement did not continue, and a month after admission a further operation was undertaken, and the lower two-thirds of the tibia removed, when it was found extensively necrosed. The epiphysis was almost entirely destroyed. Care was taken to save the periosteum. The astragalus was scraped and the epiphyseal remains removed. Some months later a small residual sequestrum was removed and a sinus in the foot was opened. The patient finally did well, and possessed in the leg a very useful limb, with but slight shortening. In the second case, a boy aged seven, the site of the disease was the same. An incision over the internal malleolus allowed the escape of some exudation. Later on, separation at the epiphysis was detected and two and a half inches of the tibia were excised. The bone was quickly regenerated and the patient was up and about in two months. When seen some months later, the limb presented but little deformity or shortening. Mr. Pitts said he divided cases of acute necrosis into five classes, as follows: (1) Acute necrosis of the entire shaft, with separation at the epiphyses; (2) where one or both joints are implicated also; (3) limited necrosis; (4) acute necrosis of either end of a long bone; and (5) acute necrosis with total destruction of the epiphysis and involvement of the joint. As to the treatment which, in his opinion, was advisable in these several cases, he said that in (1) the dead shaft should be removed. In (2) early interference is more imperatively demanded, but in some cases amputation is needed. In (3) we might usually give time for complete separation of the sequestrum. The second case he had described was an example of the treatment to be adopted for (4), and the first case an illustration of (5) and its treatment.

Mr. Clutton said Mr. Pitts' first case proved that the surgeon need not hesitate to remove living bone with the dead, for a good result could still be obtained. Mr. J. H. Morgan and Mr. Walter Pye narrated similar cases. Mr. Pearce Gould rather opposed the too early removal of sequestra, for much new bone might be removed. The final result of many cases showed that the sequestrum was frequently very small, compared with what we might have expected.

Another interesting historical memento is about to disappear. I refer to John Hunter's residence at Earl's Court. The house and grounds have been acquired for building purposes, and Hunter's former residence is to be pulled down forthwith to make way for some dozen modern flimsily built stucco villas. The old materials are to be sold by auction in a few days, and by the time these lines appear in your columns the British workman will have done his best to obliterate the traces of Hunter's presence. Earl's Court is now really a part of London, being within an easy walk of the museums at South Kensington, but at the time the great anatomist lived there it was different. The neighborhood was then unbuilt on, and Hunter's mansion, with its extensive grounds, stood adjoining the fields and within easy reach of the open country. Here it was that Hunter kept his famous menagerie of wild beasts. Curiously enough, Hunter's town residence is also at present under sentence of demolition, having been acquired by the Metropolitan Board of Works in connection with the street improvements now being carried out by them at the West End. This stands in Great Windmill Street, just at the top of the Haymarket, in a position which no modern surgeon would select as his residence. The street, however, is one of many which have fallen in status during the last fifty years. The house is a very good one, being a large double-fronted building of good elevation. Here it was that Hunter lived and practised for years. His private medical school was at the rear of the house, being, however, also approached separately through a narrow paved walk alongside the house, with a gateway in the street. The private house has been for years a French restaurant, in which I have ere now eaten a humble lunch. The medical-school premises have also undergone conversion, having been used as printing premises for twenty years or more. One of our weekly medical journals has been printed there for years. The top floor, a spacious room well lighted by skylights, which was Hunter's dissecting-room, has been used by the printers as the composing-room. I have been over the premises, and it is with a pang of regret I hear of their approaching destruction.

We are often reminded that, even in the most familiar fields of research, the ground is by no means exhausted, but that much rich material still remains to reward the diligent observer who knows how to look for it—and that, too, in apparently the most unpromising situations. Mr. Treves' Hunterian Lectures for 1885 were an illustration of this, and showed that, even on such hackneyed ground as the naked eye, anatomy of the intestinal canal and peritoneum, there remained valuable facts still to be gathered up even in this nineteenth century. Mr. Sutton's recent lectures at the College of Surgeons exemplify the same thing in the sister field of pathology. Inflammation is a subject which scarcely lays itself open to the suspicion of affording anything very striking or novel, but in his second "Erasmus Wilson" lecture, Mr. Bland Sutton brought forward a number of facts, observed by himself and other workers, which enable us to view the subject from an entirely fresh aspect.

Mr. Sutton defined inflammation as "the method by which an organism attempts to render inert noxious elements introduced from without or arising within it." In vertebrata the most important feature in the inflammatory process was the vascular disturbance. What originated this? If we extended our observations to the invertebrata we became quickly impressed with the important functions played by active motile cells. There were three points to which it was necessary to draw attention: (1) The capacity of certain cells to effect a change of place and form. This was an acknowledged fact in biology. Wharton Jones showed in 1846 that the leucocytes of human blood possessed this property. (2) Their power of taking into their interior various substances with which they may come into contact (pigment granules, etc.). (3) The property they possessed of decomposing organic material which had been taken into their interior, or was in contact with their protoplasm. This was termed intra-cellular digestion. Mr. Sutton described in detail numerous observations on this subject by himself and others. Metschnikoff, he said, had shown unquestionably that the wandering cells can digest organic substances. If fluids containing bacteria were injected beneath the skin of bipinuaria and others, or if they developed spontaneously in the wounds of such animals, they would soon be found within the substance of many amœboid cells. In many cases the bacteria lost their motility and became so delicate as scarcely to be visible. In vertebrates, in bacterial affections such as anthrax, the bacilli were taken up by the leucocytes.

Mr. Sutton then referred to a curious phenomenon presented by amœboid cells, viz., that two or more cells fused together to form a larger mass of protoplasm. Such masses were termed plasmodia. Metschnikoff had

watched their formation, and regarded them as equivalent to giant cells. In all cases in invertebrates they had arisen around foreign bodies, and always by fusion of separate cells. There was good reason to believe that giant cells in the higher vertebrata, when they occurred, arose from the fusion of leucocytes. Mr. Sutton referred to the observations of Metschnikoff on the absorption of the tails of larval batrachians. In the early stages numbers of amœboid cells were present within which were seen remnants of nerve and muscle fibres. These cells were in reality leucocytes engaged in devouring the tail of the tadpole, and had thus been named "phagocytes." The same observer had witnessed combats in the daphnia between the white blood-cells and bacteria, and, when one cell was not sufficient to attack the invading bacterium, two or more would fuse together, surround, digest, and thus rid the daphnia of the intruder. Could these facts be applied to mammals? If a rabbit's cornea were irritated, the tissue became red and hazy in a few hours, due to escape of leucocytes from the vessels to repel, or, if possible, to destroy the offending material. Draw a fine thread across the interior of a vein, and leucocytes soon swarmed around it. In tubercle, leprosy, perlsucht, or avian tuberculosis, the characteristic lesions swarmed with bacilli. These were often taken up by cells, and especially by giant cells. These facts seemed to show that in the giant cells we had the counterpart of the fusion of phagocytes, etc., and that it was in reality an effort of the blood-corpuscles to rid the blood of noxious elements. The "osteoclasts" seen in bone undergoing absorption must be placed in the same category.

These observations showed that the process of inflammation was one of normal physiology, but when in excess it came within the domain of pathology. Summarizing the story of inflammation as we read it zoölogically, it should be likened to a battle. The leucocytes were the defending army, the blood-vessels were the roads and lines of communication. In the conflict cells died and were eaten up by their companions. Frequently the slaughter was so great that the tissues were burdened by their dead bodies in the form of pus. These dead cells, like the corpses of soldiers who fell in battle, later became hurtful to the organism they had in life been anxious to protect from harm, for they served as breeding-grounds wherein the bacteria might germinate, and, like a pestilence and scourge, devastate the individual.

A serious accident has befallen Mr. Thomas Cooke at his private school of anatomy. A destructive fire has occurred and utterly destroyed a large number of valuable anatomical preparations representing many years of patient toil. Mr. Cooke's school of anatomy is a modern representative of what was common enough in former days, viz., a private medical school. It is the only representative of such an institution that we have in London, though "Minto House" is a somewhat similar one in Edinburgh.

Since facilities for dissection have been afforded by the passing of the Anatomy Act, dissection has been almost exclusively confined to the dissecting-rooms of the recognized medical schools. Mr. Cooke established his present school—which, by the way, is fully licensed—about fourteen years ago, and has continued to teach practical anatomy, physiology, operative surgery (on the dead body), and other branches of medical science ever since, with popularity and success. His course on operative surgery has received official recognition from the University of London. Many students and practitioners who owe some measure of their success in their examinational career to a course at "Cooke's" will regret to hear of the misfortune which has overtaken their former teacher.

The controversy at the College of Surgeons still, like a wounded snake, drags its weary length along. The members are about to petition the Queen in Council, and the Fellows are "down upon" Mr. Hutchinson on account of his motion to widen the basis on which the Fellowship can be obtained. This proposition appears to please nobody. The Fellows object to the cheapening of their diploma, and the members regard it as a sop at which only a few of them can get a bite.

SKUNK-BITE AND HYDROPHOBIA.

[illegible]

SIR: I notice in a recent issue of THE MEDICAL RECORD a communication concerning skunk-bite and hydrophobia. An experience covering several years, while connected with the United States Army in Kansas, Colorado, New Mexico, the Texan Panhandle, and the Indian Territory, has convinced me that the popular impression that the skunk-bite in the sections just named is liable to be followed by hydrophobia is a correct one.

Several instances have come under my personal observation, not only where men have been bitten at night while camped on the open prairie, but where the skunk has invaded tents, and even houses, inflicting the deadly bite upon one or more of the sleeping inmates. The poisonous bite is not always given in anger by the skunk, but the animal, searching for food, gnaws the face or hands of the sleeping person.

Between the North Fork of the Canadian and Fort Supply, Indian Territory, I camped one night with an escort near a house occupied by cattlemen. During the night a skunk entered the house and crawled under the bed, where he remained until morning, when he seized a man's leg as he put his foot out of bed; hydrophobia followed the bite in the man.

When travelling with my family by ambulance, and camping on the open prairie, I was very careful to have the sides of the tent well sodded down at night, and at the tent entrance I tied my dog to protect my family from the intrusion of skunks, more dreaded by me than the rattlesnakes.

I think I may safely state that the general impression is, that the bite of the skunk on our Western prairies is, to say the least, very dangerous.

Hydrophobia exists among these pests to a very considerable extent.

The bite of the rattlesnake is, on the other hand, in my experience, not particularly dangerous. Of course, much depends how and when the bite is given by the snake. If his fang-duct is empty, no poison is imparted; if the poison is absorbed by cloth or other absorbing materials before it reaches the wound, then, too, the bite cannot be dangerous. The snake is not always prepared to bite dangerously. For these reasons it is not easy to determine how fatal the rattlesnake bite may be, but it is generally understood by frontiersmen that the rattlesnake of the great prairies is not a very dangerous reptile, and is honest enough to give fair warning before he strikes.

A friend of mine, in an expedition which crossed the plains in 1867, was bitten by a rattlesnake under the following circumstances:

We were camped that afternoon on the Arkansas River. After supper my friend walked outside the camp for a short distance. He had pulled off his cavalry boots and had on a pair of thin slippers. A rattlesnake bit him, as he was descending a little hill, on the inner side of the right foot. My friend deliberately sat down and shot the snake through the head with his six-shooter, and brought the reptile back to camp. The wound was cauterized, and a large dose of whiskey immediately administered. The patient slept that night very soundly in the ambulance, and the next morning was all right, except for the effects of the large doses of whiskey. No trouble followed from poisoning, and the wound healed rapidly. In this case it is possible that either the poison-duct in the snake was empty, or that the leather of the slipper or the stocking prevented the poison from reaching the

wound. Whiskey on the frontier is the remedy *par excellence* for snake-bites, and it is very frequently taken by many as a preventive, and as such is remarkably popular. Very respectfully yours,

W. THORNTON PARKER.

NEWPORT, R. I., February 20, 1886.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from February 28, 1886, to March 6, 1886.

WILLIAMS, J. W., Major and Surgeon. Ordered for duty as post surgeon, Vancouver Barracks, Wash. Ter. S. O. 31, Department of Colorado, February 20, 1886.

MUNN, C. E., Captain and Assistant Surgeon. Ordered for duty as post surgeon, Fort Cœur d'Alene, I. T. S. O. 31, Department of Colorado, February 20, 1886.

WOOD, M. W., Captain and Assistant Surgeon. Ordered for duty as post surgeon, Fort Walla Walla, Wash. Ter. S. O. 31, Department of Colorado, February 20, 1886.

TREMAINE, WILLIAM S., Major and Surgeon. Leave of absence extended for six months on surgeon's certificate of disability. S. O. 50, A. G. O., March 2, 1886.

MCELDERNY, HENRY, Major and Surgeon. Leave of absence extended for one month. S. O. 49, A. G. O., March 1, 1886.

SPENCER, WILLIAM G., Captain and Assistant Surgeon. Ordered for duty at Fort Yates, Dak. Ter. S. O. 17, Department of Dakota, February 23, 1886.

To be Assistant Surgeons, with the rank of Captain, after five years' service, in accordance with the act of June 23, 1874:

ARTHUR, WILLIAM H., Assistant Surgeon, February 18, 1886. Circular, A. G. O., March 1, 1886.

BUSHNELL, GEORGE E., Assistant Surgeon, February 18, 1886. Circular, A. G. O., March 1, 1886.

BIRMINGHAM, Henry P., Assistant Surgeon, February 18, 1886. Circular, A. G. O., March 1, 1886.

WYETH, MARLBOROUGH C., Assistant Surgeon, February 18, 1886. Circular, A. G. O., March 1, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 6, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
March 6, 1886.....	2	8	57	4	4	80	7	0
Deaths.								
March 6, 1886.....	3	3	10	4	0	37	0	0

THE DOSE OF TINCTURE OF NUX VOMICA, according to Dr. Musser, should be from thirty to forty drops for adults from fifteen to forty years of age. Old people should be given smaller amounts.

DEATH FROM EXPOSURE was the verdict recently rendered by a Helena (M. T.) jury on the body of a horse-thief who had been hanged by vigilantes.

DR. MCGILL'S LETTER ON THE HOT-WATER TREATMENT OF WOUNDS.—Dr. Robert T. Morris, of this city, sends a reply to the communication of Dr. McGill in THE MEDICAL RECORD of January 23d, which we are unable for want of space to insert in full. He writes: "Dr. McGill asks for information as follows: 'Where can any modern operator show results equal to those obtained by Alanson in 1779—thirty-five successful cases of capital amputation safely piloted to recovery,' and I would inform him that any work on scientific surgery—Cheyne's, MacCormac's, or Neuber's, for instance—will not only give him statistics of much better work in amputations, but they will show that in all probability the majority of Alanson's amputations were unnecessary operations. Bardenheuer's report (MacCormac's 'Antiseptic Surgery,' p. 29) on the results gained through antiseptic surgery at the College Infirmary in one year runs as follows: Forty-one amputations through bones, 10 amputations at joints, 53 resections, 23 cases of removal of wedge-shaped pieces of bone, 5 operations for badly united fracture, and 1 case of trephining—altogether 133 operations involving bones, without a single death. Cheyne, on page 511 of his work on 'Antiseptic Surgery,' adds together the figures presented by several workers, and shows a list of 1,239 compound fractures treated antiseptically, with but 5 deaths, or less than three-fourths of one per cent. Volkmann reports two deaths among 135 successive compound fractures which he treated antiseptically. One of these deaths was due to delirium tremens, and the other to fat embolism. Schede, at the late Copenhagen Congress, reported 50 successive osteotomies, not done subcutaneously, which healed without the formation of one drop of pus. . . . Here is another quotation from Dr. McGill's letter: 'To some otherwise sane and rational medical scientists Listerism is a veritable *ignis fatuus*.' Mrs. Cadwallader says that we have all to exert ourselves a little to keep sane and to call things by their right names, and it seems to me that *ignis fatuus* is not the right name here, because we have had the thing actually in our possession for several years. Listerism is rather an *ignis fatuus* (if you would accept the term) for the men who have done good travelling in their day, but who are now able to run only in saw-horse fashion. . . . Another part of the letter reads: 'To that famed and most odoriferous drug—that remorseless exterminator of germs—carbolic acid, supernatural powers are attributed.' This is a little mistake on the part of the writer of the letter. The natural power of carbolic acid to kill microbes is like the natural power of salt to kill grass. Nothing more. . . . Speaking of experience at the St. Francis Hospital of Jersey City, Dr. McGill says: 'Listerism had been given a fair trial—the attention to detail so earnestly enjoined by its originator had been faithfully carried out—but the results were not such as would warrant a continuance of its use. Possibly it may have been due to some fault in my use of the method,' etc. If instead of 'possibly' the author had written *undoubtedly*, he would have struck the nail such a blow on the head that the resounding thump could have been heard from Hoboken to Weehawken. That it is hard for some men to comprehend antiseptic doctrines I have no doubt. The trouble arises from our educational methods in medicine, which develop not so many scholarly scientific men as they do artists—artists of the impressionist school particularly. All men who know how to work antiseptically do so."

THE HARVEST BEGINS.—The Buffalo Medical College graduated forty-three students on February 23d.

A NEW JOURNAL, called *Death*, devoted to suicide, homicide, funerals, etc., is, we learn, soon to be published in Chambersburg, Pa. We presume it will be short-lived.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

THE TREATMENT OF VARICOCELE.[1]

By ROBERT F. WEIR, M.D.,

CLINICAL PROFESSOR OF SURGERY, COLLEGE OF PHYSICIANS AND SURGEONS; SURGEON TO THE NEW YORK HOSPITAL.

IT is not intended to present an exhaustive account of the many methods of treatment that have been resorted to in the cure of varicocele, but rather to give in a brief manner the results of personal experience and observation, especially that obtained since the beginning of what may be called the antiseptic era. Prior to this latter period operations for the relief of varicocele were comparatively rarely adopted, and the employment of suspensory bags and other less reliable contrivances was more largely advocated than now. All the operations in the past and present, however, have had as the end in view either to obliterate the distended veins or to shorten the scrotum and thus effect a more complete support.

In the first category comes primarily the plan of Gagneles who was the first, according to Sédillot, to pass a silk ligature subcutaneously across the scrotum in front of the veins and then back again, through the same skin openings, behind them, and thus to encircle the distended vessels in the subsequent ligation. This we all know was a good method, but the material, silk, was faulty and often provoked and kept up suppuration until it either dissolved or was discharged from the punctures. Ricord endeavored to obviate this by his *serre-nœud*, and passed a double-looped silk ligature behind the veins, and another in front and ran the end of one through the loop of the other so that a running reef-knot was formed, which by traction of an outside horse-shoe ratchet cut through the veins and was then extracted. These were the two best methods in vogue, and the evolution of this idea impelled Mr. John Wood, of London, in 1875, to adopt silver wire with spring pressure to cut through the veins or to temporarily constrict them. This instrument, which is herewith shown, did fairly good work; however, its long arm, which afforded the counter pressure to its spring portion, often embedded itself in the scrotal tissues and gave rise to suppuration and abscess, and the ends of the encircling loop of wire emerging from its one opening, as in Gagneles' method, frequently became twisted and prevented its withdrawal when the surgeon desired it. To meet these objections, after using Wood's instrument a few times, I contrived and used for a limited period a little elliptical spring,[2] to straddle the scrotum that it might pull upon loops like Ricord, but of silver wire; and in order to withdraw them before they had cut entirely through (which, with Wood's instrument and this and others of like design, will take place in from ten to fifteen days), the device of the late Dr. Washburne, of this city, was adopted, to have a third wire passed around one of the loops before it was drawn home, to serve as a retractor. This was quite ingenious and serviceable, but recently I found, to illustrate the old adage, that Tufnell,[3] of Dublin, had made the same suggestion some twenty-five years ago. The further use of silver wire as a means of ligating the dilated veins in a varicocele received a decided advance in the method advocated by Barwell, which, though set forth in 1869[4] by this surgeon, attracted more attention since the publication of his article on the same subject in 1875.[5]

Barwell did away with the projecting pieces of mechanism, and thrust the ends of his wire loop, which was passed in the customary manner, through a perforated plate of metal or hard rubber, and tied or twisted the ends fast to little uprights on the outer side of the shield. These wires could be easily tightened from day to day, if deemed advisable. In a very recent article by this surgeon a *résumé* of 100 cases of varicocele thus treated is given. In 16 there was suppuration, in 71 there were no complications. The duration of the treatment is unfortunately not given.

This plan of operation has been followed with quite satisfactory results by my colleague, Dr. Markoe, who, in seven cases treated by him at the New York Hospital, has had suppuration three times, and the average duration of the treatment has been thirteen days. Dr. Markoe also informs me that his larger experience in private practice has been excellent.

But the use of catgut sublimated or junipered as a ligature for varicose veins was the natural outcome of Listerism, and in 1879 I made my first trial[6] of it in the treatment of varicocele, but had soon unsatisfactory results, in two instances having used, with the erroneous idea that such was needed, the chromicized catgut, which in one of these cases failed to dissolve, and after three weeks of suppuration was extracted, and in the second the ligature came out at the end of sixteen days. Since then I have resorted to it in hospital and private practice twenty-two times with generally a satisfactory result. I regret I cannot tell exactly in how many cases suppuration followed, but this occurred from time to time, and especially was it more apt to follow when two or three ligatures were placed around the venous mass, and most particularly was trouble likely to come if the ligature was placed too close to the testicle. Taking it comprehensively, I feel that one is justified as placing this plan of treatment so far, as one of the best, safest, and quickest in its result, and the more so when its application is confined to tolerably small varicoceles—that is to say, where generally one ligature will suffice; in such, twelve in number, the average duration of confinement was eight days. In six out of these twenty-two cases there was dissatisfaction with the results, because either that the symptoms continued, or that other veins increased in volume, or that the undue size of the thickened tissues failed to please. Two of the six, which were all large varicoceles, submitted with advantage to a subsequent ablation of a part of the scrotum.

An anæsthetic has been seldom administered in this catgut ligation of the veins, and then only at the patient's request. The little operation is generally performed with the patient in the erect position, leaning against the edge of a table or bureau, and, after pushing aside the readily felt vas deferens, an ordinary surgeon's needle[4] armed with a strong sublimated or junipered catgut is thrust through the scrotum behind the bunch of veins,

[1] Read before the Surgical Section of the New York Academy of Medicine, February 2, 1886, in opening a discussion on this subject.

[2] A diagram of which was contained in plates to Barnes' and Tait's classic work on Venereal Diseases, p. 127, 1872. As somewhat similar idea, I have been informed, was set forth by Dr. O. A. White, in 1871.

[3] Dublin Quarterly Journal, 1861.

[4] Lancet, p. 211. [5] Ibid., p. 820.

[6] Gurlt-Stromeyer, in the Austrian Medical Journal for December 12, 1885, states that he had similarly used carbolized kangaroo tendon for several years.

[4] Dr. E. L. Keyes recommends [illegible] a curved cutting needle for this

which is then loosened from the grasp, and the needle is then carried back through the same punctures, and more slowly and carefully in front of the veins between them and the skin. If a second ligature is deemed advisable, the first is not tied until the second one is passed. The tying is generally finished with the patient lying down, as then the most pain is felt. After the ends of the ligatures have been cut short, a little pull on the skin of the scrotum will cause the knot on one side and the loop of catgut on the other side to sink out of sight, when the needle-punctures are to be dusted with powdered iodoform and a light antiseptic dressing applied. On the third to sixth day the patient can be allowed to go moderately about with the scrotum in a suspensory bag.

Excision of the veins was promulgated by Patruban in 1870,[1] and revived in 1880 by Nebler, as an excellent method in the treatment of varicocele, and five cases were presented by the latter in illustration of his views. He has been followed by Nicaise [2] who advises, as does Nebler, to carefully separate the artery from the veins, a procedure which not only is not at all easy, but is unnecessary, since the artery accompanying the vas deferens communicates with the spermatic at the entrance into the testicle, though Zesas[3] has shown that this inosculation does not exist in dogs, in whom, therefore, ligature of the spermatic veins with the included artery would cause gangrene of the testicle. Richolot[4] also speaks well of excision, and Reginald Harrison[5] varies the operation a little by tying the larger veins separately through an incision and lightly cauterizing the smaller ones by a Paquelin cautery.

Excision is easiest performed by an incision, under cocaine, one or two inches long on the posterior or lateral surface of the scrotum. When the mass of veins is exposed a double ligature of sublimated or junipered catgut is placed around them, about an inch apart, and the included portion cut away with the scissors. A small drain is inserted and the wound is then closed with catgut sutures and a sublimated gauze or peat dressing applied. If a rubber tube is used for a drain (and this I prefer in all cases) it should be removed on the third to fifth day, and the wound will be found tightly healed at the end of a week. Provided the case has been treated by a surgeon experienced in antiseptic measures, the treatment by excision is both safe and expeditious, and is worthy of adoption, particularly in those cases where the size of the varicocele would demand two or three subcutaneous ligatures or where the more radical operation of scrotal amputation has been declined by the patient. This latter operation, *the removal of the scrotum sufficiently to act as a natural suspensory bandage*, was much in use at the New York Hospital during my pupilage there in 1856 to 1860, and for several years prior and subsequent to that time many cases of cures, and almost as many cases of failures, from its use came, either then or afterward, under my observation. The reason for its desuetude was not difficult to arrive at. Like an elastic suspensory the scrotal tissues gradually yielded to the weight of the enlarged veins which were yet distended, and which varied greatly in their blood contents on any exertion. In other words the principal cause of the symptoms was not removed. This operation was brought again into repute in 1871 by the excellent treatise of Dr. M. H. Henry, of this city, who contrived a serviceable clamp to facilitate its execution. The advent of antiseptic surgery also tended to further the advance of this operation, and meeting with cases in which either failure had occurred from the other methods referred to, and in which the large varicocele was associated with marked elongation of the scrotum, I resumed its use under the stimulus of Dr. Henry's cases. I soon found renewed cause for dissatisfaction, and in 1882 an addition was made to this truncation of the scrotum. This was as follows:

After including the portion of the skin of the scrotum between the jaws of Henry's or Andrews' [1] clamp, which is placed antero-posteriorly along the raphé, to the extreme back limit of the scrotum, and removing the same by a few cuts with a strong scissors, the instrument is removed and all the numerous bleeding points tied with fine catgut. Both testicles are now seen enclosed in their tunica vaginalis, hanging down through the wound, and the dilated tortuous veins are clearly brought into view. Instead of closing the wound, after washing it with the sublimate solution of 1 to 2,000 or 1 to 5,000, I determined, and so did then and since, to tie these veins while thus exposed in one or two selected places, by passing a catgut ligature around them, which is a matter of very easy accomplishment.

I soon found an extra reason to be pleased with this method. In not a small number of varicoceles there is associated with them the formation of little spermatic cysts about the head of the epididymis, which are often the seat of considerable pain. These when encountered in an amputation of the scrotum, can not only be very easily recognized but treated. They are simply to be split open and their interior swabbed out with pure carbolic acid, applied on a cotton probe or match. The temptation is great to tie all the sets of varicosed veins, and there are generally two, and sometimes three packets of such to be seen. The larger one or ones contain the spermatic artery. I have attempted but once to isolate this, so as to tie only the veins, and found it then impracticable, and the testimony of others is in the same direction. This care is unnecessary, as has been already stated, but it would be dangerous to ligate the artery of the vas deferens. This is to be found in the smaller detached batch of veins that inclines toward the base of the testicle. These are therefore not to be tied; at least, in the only case in which I know of risk occurring to the testicle the ligatures were so placed, I understand, as to choke off all the veins.

If care is taken to arrest all oozing of blood, the wound may be closed with interrupted or continued catgut sutures (the former are preferred) without using a drainage-tube, and a dressing of peat-bags or sublimated gauze, over the surface of which iodoform is dusted, can be applied, and firmly secured in place, over layers of absorbent cotton, by a tight double figure-of-eight bandage. By doing in this manner primary union is obtained in from five to eight days. If the bleeding is not entirely checked, a drainage-tube should be used and removed on or before the fifth day. It is needless to say, that in all the surgical interferences with the scrotal veins, from simple ligation to amputation of the scrotum, strict attention to antiseptic rules should be maintained.

Should, in either of the cutting operations, failure of union occur, the granulating patch is quite painless and does not prevent the patient going about with a large cotton-lined suspensory bandage.

I have now repeated this operation for large or otherwise intractable varicocele in nine cases, and with a most satisfactory result, and without any complication in the treatment save such as came in a few instances from the premature giving way of several turns of a continued suture, and it is for this reason that the interrupted suture is now advised. Dr. Abbe, one of the surgeons at St. Luke's Hospital, has also had six cases in which this treatment has been applied, with an excellent result, and in two of these the operation was painlessly done by him under the subcutaneous injection of cocaine.

Whether the procedure has exactly been used by other surgeons is not known, but it is extremely probable that it has, for the end to be attained has existed in the mind of the distinguished Guyon,[2] for instance, who, in 1884,

[1] Wien Med Presse, 1870. [2] Rev. de Chirurgie, 1881, p. 784.
[3] Wien. Med. Wochenschr., 1874, No. 14.
[4] Gaz. des Hôpitaux, 1881, No. 142. [5] Lancet, Mar. 12, 1881.

[1] A somewhat simpler instrument than Henry's. New York Journal of Medicine, November, 1871.
[2] Annales des Maladies des Organes Genito-urinaires, 1884, p. 209.

reported several cases where he successfully amputated the scrotum for varicocele by a transverse cut and tied the veins in the wound, and Henry Lee,[1] of London, advocated, in 1885, the radical cure of varicocele by scrotal amputation and subsequent temporary ligation of the veins until they have been divided and their ends lightly seared with a black cautery iron, on the ground that in the severer cases of this disease other operations are but temporary in their benefit.

Since my experience does not proceed beyond the operations recorded in the foregoing remarks, I beg forthwith to sum up in these concluding words: 1. That for small varicoceles, there is nothing better than the single (or double) subcutaneous catgut ligature. 2. That for medium-sized varicoceles or for cases declining a more heroic operation, excision in careful hands is to be advised. 3. That for large varicoceles, for relapsed cases, and for those not very large, but with a much elongated scrotum, ablation of the scrotum with ligation of the veins is preferable.

57 West Thirty-third Street.

A CONTRIBUTION TO THE NATURAL HISTORY OF PULMONARY CONSUMPTION.

Embracing the Causation and Symptomatic Events. Based on an Analysis of Fifty-nine Cases of the Disease.

By JAMES KING CROOK, M.D.,

Assistant to Dr. Arthur Nicholls in Mount Sinai Hospital Dispensary, Fellow of the New York Academy of Medicine, and Physician to the Out-Door Department of the Presbyterian Hospital.

Continued from last page.

Infection and contagion.—It does not come within the scope of this paper to discuss this important and somewhat perplexing subject at length. A brief retrospect of some of the cardinal points in its literature may, however, not be out of place.

The doctrine of the infectious or contagious nature of pulmonary consumption has always had an extensive following in the South of Europe. Galen was a believer in this doctrine, and Morgagni firmly advocated it. It received but little attention, however, from the great body of the medical profession until M. Villemin succeeded in 1865 in inoculating rabbits with the virus of tuberculosis.[2] Research in this line of study at once received a great impetus, which has continued to the present day without abatement.[3] Villemin's experiments have been repeated and confirmed with more or less exactness by various investigators (Clark, Fox, Sanderson, Tappeiner, Schottelius, Gerlach, Cohnheim, and others). Some of these observers, however, found that the employment of other substances, such as cinnabar, cork, cheese, pulverized brain-tissue, the sputa of simple bronchitis, etc., led to apparently the same result as the introduction of the true tuberculous virus. The more recent elaborate experimental investigations of Hyppolite Martin prove that tubercular material alone is capable of reproducing true tubercular lesions, and that the so-called tubercular reproductions of other foreign substances are not genuine, but "pseudo-tubercular" lesions.[4]

In the light of these prognostic events, the announcement by Robert Koch[5] of his discovery of the *bacillus tuberculosis* was not altogether unlooked for. This chain of experimental research points very strongly to the presence of a specific and contagious virus in the lesions of tuberculosis, of which the micro-organism of Koch seems to be the essence. So far as I know only two instances of direct inoculation from man to man are on record. Though standing alone they are yet of great importance. Following is a brief sketch of these cases. 1. Three Greek physicians of Syra inoculated a patient with perfectly healthy lungs, who was in a moribund condition from gangrene of the left lower extremity, with the sputum of a phthisical patient. Signs of induration appeared at the right pulmonary apex at the end of three weeks, and in thirty-eight days the patient died of the gangrene. At the necropsy seventeen small tubercles were found at the right apex, varying in size from a mustard-seed to a lentil. Two granulations were also found at the left apex, and two on the convex surface of the liver.[1] 2. A cook, a sound, healthy woman, in the family of Professor H——, in removing a cup containing sputa from the bedside of the professor (who was suffering with consumption, and died soon after), cut her hand on the vessel, a spicula of glass puncturing one of her fingers. The injured member refused to heal, and the cubital and axillary glands became swollen and indurated. The finger was disarticulated, and the enlarged glands also removed. Specimens, both of the finger and the extirpated glands, were prepared, and a microscopical examination demonstrated the presence of tubercular bacilli in abundance.[2]

The foregoing data constitute our chief reasons for regarding pulmonary consumption as an infectious or contagious disease. Some of the facts are very suggestive, but much remains to be explained. Isolated cases are reported from time to time, which seem to have their origin in contagion. It has not been shown, however, why years of exposure to, and attendance on, phthisical cases, examples of which we see daily in hospital nurses and attendants, fail to develop the disease. The great mass of clinical experience is at variance with the doctrine of contagion or infection. An analysis of the cases in the table which form the basis of this paper fails to offer it much support. All of the patients were interrogated as to opportunities for contracting the disease through contact with, or living with, other consumptive patients. It was ascertained that 12 of the patients were at the time, or had recently been, living with or nursing a consumptive relative. In 3 instances the patients stated that they slept in the same bed, and in 5 others in the same room. It will be seen by consulting the table, however, that the person lived with was in almost every case a near blood-relative; hence, it is problematical whether family predisposition, or a common mode of life, were not equally as, or more, instrumental in determining the development of the disease than the medium of personal contact. Some of the patients informed me that they had never, to their knowledge, seen a person who was suffering with consumption.

After a careful review of this much-vexed question, it strikes me that the present state of professional opinion may be formulated as follows: First, the results of *experimental pathology* are strongly in favor of the proposition (*a*) that tubercle is an infectious malady originating in a specific virus and propagated by the conveyance of that virus from body to body, and originating in no other way; and (*b*) that the activity of this virus is embodied in a micro-organism peculiar to tubercle and denominated by Koch the *Bacillus tuberculosis*.[3] Second, *clinical experience* fails to sustain this view. It shows that while consumption may possibly be communicated from person to person by long and constant contact, especially in cases in which the *receptivity* already exists,

[1] Lancet, April 12, 1884, p. [illegible].

[2] Gazette Méd. de Paris, 1865, p. [illegible]; Études de la Tuberculose, 1868.

[3] For a drawing attention to some of the more important contributions to the subject, see Andrew Clark, Medical Papers and Reporter, 1880; Ingleby Anderson, Pearl Essays of the Medical Officer of the Privy Council, London, 1884; Wilson Fox, On the Artificial Production of Tubercle in the Lower Animals, 4to London, 1868: Cohnheim, Consumption as a Contagious Disease, London, Bullinger, Archiv f. Experimental Pathologie, Bd. I., 1873, 1874, also Medical Revue de Med., April, 1881, also, Archiv. de Physiol.; Tappeiner, Virchow's Archiv, 1881, 1882; Koch, Berl. klin. Wochen., No. 15, 1882; Arloing, Med. Journ., 1882, i. 895; Magnin and Sternberg, Bacteria, New York, 1884; Review by L. M., Am. Journ. Med. Sci., 1882, lxxxiii.; Welsh, Journ. Am. Med. Assn., April 18, 1885.

[4] Dr. Sternberg has recently shown, in a series of laborious and painstaking experiments, that the introduction of inorganic material, such as glass, cinnabar, marine blue, etc., will not produce the lesions of tuberculosis (Am. Journ. Med. Sci., January, 1885).

[5] Berl. klin. Woch., No. 15, 1882.

[1] Nouveau Dictionnaire de Medicine (article Phthisis).

[2] Hospitals-Tidende, Copenhagen, December 17, 1884.

[3] An admirable exposition of the [illegible] may be found in Friedlander's Manual of Microscopical Technology, translated by Dr. Stephen Yates Howell, New York, 1886.

the vast majority of cases originate from causes entirely independent of this influence, so far as can be traced.

Pregnancy, childbirth, miscarriage, etc.—Of the 19 female cases analyzed, 16 were married, 12 had been pregnant, and 5 of the 12 had had one or more miscarriages. Two of the patients had a vague idea that childbirth or nursing had something to do with bringing on their disease, but the connection seemed very remote and this is not given a place among the causes assigned by patients in the table. One patient, however, dated her disease very clearly from a miscarriage which she had had a few months previously. It was attended by great loss of blood and several weeks' confinement. She developed a cough during her illness which was soon followed by hæmoptysis, night-sweats, and emaciation. On her visit to the clinic she was well advanced in consumption, having catarrh at the left apex and extensive consolidation in the upper part of the right lung. There was no hereditary influence in this case, and the connection between the miscarriage and the lung trouble seemed very direct. In none of the other cases, however, did it seem reasonable to attach any etiological significance to the fact that the patient had borne children or had miscarriages. Altogether these cases do not offer much support to the view that pregnancy or childbirth bear an important causal relation to phthisis. It has been clearly established that consumption is more common among males (at least in the class among whom these observations were made) than among females. The inference does not seem illogical that if those influences to which males are not subject were largely operative, such would not be the case. Besides, it must be remembered that a large proportion of women marry and bear children, so that phthisis must necessarily choose a considerable number of its victims from this class. In this connection an interesting point of investigation relates to the relative frequency of consumption in the two sexes during the fifth decennial period of life, as during this decade the vast majority of women attain the menopause, or "critical period." An analysis of the 917 cases shows that 96 out of 548 males, or a little more than seventeen per cent. were between forty and fifty years of age, and that 57 out of 369 females, or only a little more than fifteen per cent., were of the same age. It may be stated that several of the females attributed more or less influence to "change of life" in bringing on their lung disease. It is well known, however, that any illness, of whatever nature, which may occur about this period, is apt to be referred by the patient to the same cause. No other reason than that the age for change of life had come was assigned for their suppositions in these cases, and it seemed to me that the occurrence of phthisis was coincidental and not referable to the menopause. A study of the foregoing facts, then, would oppose the view that the functions peculiar to the female sex, or the cessation of those functions, are largely instrumental in the production of consumption.

Alcoholics.—Fifty-five of the cases in the table were interrogated as to their habits with regard to the use of alcoholic stimulants. The following results were obtained: 9 patients admitted that they were habitual hard drinkers; 26 were addicted to the use of alcoholic stimulants in moderate quantities, and 4 drank occasionally; in all, then, 39 patients out of 55 who were questioned were more or less habituated to the use of alcoholic beverages. These facts would seem to contravene a very popular idea that such indulgence acts somewhat in the nature of a prophylactic against consumption. However beneficial their judicious use may be in the treatment, it can not be said that the ordinary habit of alcoholic indulgence offers much in the way of prevention of the disease.

Syphilis.—The subject of the relationship between syphilis and pulmonary disease is one which has attracted considerable attention in this city during the past few months, and about which no little difference of opinion still exists. Hence, in investigating the influence of syphilis in these cases every precaution was taken to avoid error and to secure truthful histories, in order, if possible, to obtain an insight into the real condition of affairs. The impossibility of ascertaining the influence of heredity with respect to syphilis under the circumstances attending these investigations is evident. The following account, therefore, and the conclusions deduced therefrom, relate only to acquired syphilis. In 5 of the 59 cases, for sufficient reasons, no questions were asked on this subject. In the remaining 54 cases the results of a close and careful examination were as follows: 40 of the patients stated positively and unequivocally, that they had never at any period of their lives had a sore or ulcer of any nature whatever upon their genital organs. They also gave negative replies when questioned with reference to the common well-known symptoms of secondary syphilis. None of these patients had, so far as I could ascertain, any symptom or sign of syphilis at the time of examination. Four of the patients gave histories which made the existence of syphilis at some past time probable, or at least suspicious. Subjoined is a synopsis of these cases:

Case. 1.—A widow, aged forty-five, whose husband had died many years previously. She admitted that she had been exposed to venereal contact since that time and was under the impression that she had had syphilis ten years previously to the time she came under observation. She remembered no symptoms, however, except a skin disease, and is classed in the table as "suspicious." She had lost her mother and a son with consumption, and attributed her lung disease to exposure to cold and wet. She had slight periosteal tenderness and a cicatrix on the left side of her neck, whence an enlarged suppurating gland had been removed.

Case 2.—A widow, aged forty-two, a professional equestrienne, who had led a fast life. She stated that her husband had syphilis before he died and that about twenty years ago (prior to examination) she had had a suppurating ulcer on the left labium majus. The sore soon healed and was not followed by any secondary symptoms that she remembered. She had lost a sister with consumption. The patient thought her lung trouble was due to "change of life," although she had not been entirely well since an attack of pleuro-pneumonia, which she had in April, 1884.

Case 3.—An old man, aged sixty-five, who had travelled over the world considerably and thought that he had had all the venereal diseases "known to science." I could get no history pointing to syphilis, however, except of "swelling in the groins," and he too is classed as "suspicious." He thought that his lung trouble was the result of a general breaking up of his system due to old age.

Case 4.—A woman, aged thirty-seven, who thought she had contracted a blood-disease from her husband, who the doctors said had syphilis several years ago. She had a rash on her skin which lasted a month or two, and some soreness of the throat, but no local sore. She attributed her pulmonary disease to mental anxiety, caused by domestic troubles. She had well marked hydrothorax in addition to her phthisical trouble.

Basing the diagnosis of syphilis on the presence of a local sore followed by secondary symptoms, we find that ten out of fifty-four cases (about eighteen per cent.) gave tolerably clear histories. Reference to the table will show the leading points in connection with these cases, so that it will be unnecessary to repeat them here. It should be mentioned, however, that in two cases of long-standing phthisis the patients informed me that they had well-marked symptoms of lung disease before contracting syphilis. In three others, also, the local sore described was not of the indurated, non-suppurating variety, commonly known as the initial lesion of syphilis. The manifestations of tertiary syphilis were also very

meagre in most of these cases. Only four had alopecia, less than half a dozen made complaint of osteocopic pains, and in only five of the entire fifty-nine was there any lesion of the skin whatever at the time of examination (one of these cases was afterward diagnosed as psoriasis by a competent dermatologist).

Tenderness and œdema over the sternum and tibial crests has been urged by Professor William H. Porter[1] as a pathognomonic sign of advanced pulmonary syphilis. As described by Dr. Porter "pressure over these regions produces a very peculiar pain which is quite intense and accompanied by a recoil not easily forgotten when once recognized. Patients often try to avoid giving evidence of this, but as surely fail as though trying to resist the muscular reaction of the electric current." Being aware of Dr. Porter's views on this subject early in the summer (before the publication of his paper), I determined to give it a careful investigation in every case of phthisis which should come under my observation during the session. Fifty-seven of the cases in the table were examined with reference to this sign. The result was as follows: In five cases, more or less evidence of pain could be elicited by making firm pressure both up and down the sternum and the crests of the tibiæ. In no case, however, was the pain unendurable, or even extremely severe. In the remaining fifty-two cases all endeavors to bring out this sign were futile. Every precaution was observed, the patients often being taken off their guard, but nothing further than the necessary discomfort produced, which bore no semblance to pain, was complained of.[2] Some significance, however, may lie in the fact that three of the five cases in which periosteal tenderness was present had syphilitic histories, and a fourth gave a history suspicious of syphilis. In looking for a possible connection between the syphilitic symptoms and the development of consumption meagre results were also obtained. We find that two of the patients with histories of syphilis had had pneumonia; three had had pleurisy; the father of one had died with consumption, and two were living with consumptive brothers. Altogether, then, eight of the ten gave efficient causes for phthisis without taking the syphilitic histories into consideration. Again, in looking over the events of the histories of the syphilitic cases as shown in the table, it is difficult to see wherein they differ from those in the cases without syphilitic histories. We find the familiar cough, hæmoptysis, night-sweats, emaciation, dyspnœa, elevation of temperature, etc., in about the same proportions in both classes of cases. A careful study of the foregoing facts warrants us in assuming from a *clinical* point of view, first, that syphilis is not a cogent factor in the production of pulmonary phthisis; second, that the fact that a patient has had syphilis modifies to a very slight, if to any extent, the ordinary course of a phthisical attack.

Rheumatism.—Articular rheumatism has been mentioned from time to time as having a causative relation to phthisis. On examining the 59 tabulated cases we find that 6, or a trifle more than ten per cent., gave rheumatic histories; 13 others stated that they had had rheumatism, but on careful questioning it was found that their trouble had been muscular rheumatism (lumbago, pleurodynia, scapulodynia, etc.), or dorso-intercostal neuralgia. Their influence in the causation of phthisis may probably be regarded as *nil*. The remaining cases had had neither muscular nor articular rheumatism. Following is a brief sketch of the cases with rheumatic histories:

Case 1.—Male, aged forty-seven. Had several attacks of articular rheumatism which he thought undermined his health. He did not date his pulmonary symptoms from an attack, however, as he had been up and about for six or eight months when he commenced to cough.

Case 2.—Male, aged twenty-eight. Had an attack of rheumatism eight or nine years ago, about a year and a half before the commencement of pulmonary symptoms. His joints remained stiff and sore for a long time.

Case 3.—Male, aged thirty-seven. Had rheumatism ten years ago, with complete recovery. Symptoms of consumption came on three or four months ago. He had subacute pleurisy, complicating his phthisis.

Case 4.—Female, aged forty-three. Had several attacks of rheumatism in her joints, and felt touches of it to date of examination. This patient had lost a sister with consumption, and had had several miscarriages. She attributed her disease (consumption) to exposure.

Case 5.—Male, aged twenty-seven. Had rheumatism fourteen years ago, and entirely recovered. Phthisis commenced in December, 1884 (about eight months before examination). Father died of consumption.

Case 6.—Male, aged thirty. Had rheumatism nine years ago, with perfect recovery. This patient dated his consumption from an attack of pleurisy which he had in 1884.

The histories of these cases do not show an intimate relationship between articular rheumatism and consumption, and offer no support to the view that the former is an active cause of the latter. It is not unreasonable to suppose, however, that severe or repeated attacks of rheumatism may so debilitate the system as to render it less capable of withstanding the exciting causes of consumption.

Pneumonia and pleurisy.—Of the 59 tabulated cases, 10 stated that they had had pneumonia, 9 had had pleurisy, and 4 had had both diseases[1]—in all 23 cases, or almost thirty-nine per cent. of the whole number. Seven of the patients dated their present illness directly from a pneumonic attack, having never recovered from its effects, 2 from an attack of pneumonia and pleurisy combined, and 1 from a pleuritic attack, making in all 10 cases, or seventeen per cent. in which the connection between the antecedent pulmonary disease and the symptoms of consumption were clear and unmistakable. In most of the remaining cases the patients attached great importance to the previous lung trouble, stating that they had never been as strong as before, that they considered the lung on the affected side weak, etc. A physical examination almost invariably showed that the phthisical process was situated on this side or on both sides. We find that 6 of these patients gave a family history of consumption, which leaves 17 cases, or 28.8 per cent. of the whole number, in which antecedent pulmonary disease seemed to be the most efficient factor in the development of the phthisical attack. These cases would indicate that pneumonia and pleurisy possess a very strong etiological relation to consumption.[2]

Other antecedent diseases.—In order to learn the influence of other affections in the development of consumption, each patient was interrogated as to what diseases, if any (besides those already considered), he had suffered from during the three years immediately preceding the appearance of the phthisical symptoms. The subjoined result was obtained, for which, of course, due allowances must be made for forgetfulness, etc.: Malarial fever, 3; tape-worm, 3; dyspepsia, 2; gonorrhœa, 2; and 1 each of the following—enteric fever, hæmorrhoids, colliquative diarrhœa, chagres fever, prolapsus uteri, "uterine disorder," habitual constipation, severe bronchitis, diphtheria, hæmatemesis, heart dis-

[1] New York Medical Journal, August 1, 1885. In this paper Dr. Porter states that fifty per cent. of all cases of pulmonary disease treated at his clinics could be traced to a syphilitic origin.

[2] In upward of 1,000 cases of various diseases of all kinds which I have seen at the clinics of Professor Burt since October, 1883, I recall less than a dozen who complained of unusual pain while undergoing the ordinary manipulations of a physical examination. Since reading the paper of Dr. E. Darwin Hudson, Jr. (Medical Record, 1885, xxvii., 505, 510), I have seen several cases in which the muscular tumor or "cutaneous intumescence" described by him could be produced by light, immediate percussion-blows over the costal cartilages in thin subjects.

[1] These diagnoses, I was informed by the patients, were made at the time by the attending physicians.

[2] Professor Ruehle is of the opinion that pleurisy acts chiefly as an exciting cause in cases in which a diathesis already exists (Ziemssen's Cyclopædia, vol. v., p. 501).

ease, abdominal neuralgia, nasal catarrh, emphysema, and hydrothorax. Some of these affections continued up to the time the patients came under observation, and will be further considered under the head of Complications. As will be seen, many of them are of minor importance, and none occurred with sufficient frequency—with the possible exception of malarial fever—to give them any special causative significance. Two of the patients stated that the knowledge of having a tape-worm gave them constant anxiety, and this no doubt exerted a deleterious influence over the pulmonary trouble. We may say, then, that this point of enquiry produced, on the whole, rather negative results.

Climate; where living when symptoms appeared, etc.—The object of this point of enquiry was to ascertain as far as possible the effect of the climate of New York on the production and course of consumption. The number of cases observed was too small and the visits of the patients too irregular to lead to decided results. As might be expected, most of the patients developed their disease in New York, their place of residence. Following is a list of the places or countries where the symptoms of phthisis first made their appearance: New York City and vicinity, fifty-two, and Germany, Malta, Pennsylvania, Nebraska, Chicago, and Philadelphia each one. Both the patients from the West—one from Nebraska, the other from Chicago—considered themselves very much worse since their arrival in New York. The Chicago patient informed me that his symptoms had almost disappeared and he supposed he was getting well while in the West, but since his residence in New York (only a few weeks) he was much worse than ever. His disease was rapidly progressive during the time he was under observation. These limited observations only corroborate a fact which is already well-known, viz., that the climate of the seaboard in this latitude is highly favorable to the development and rapid progress of phthisis pulmonalis.[1]

Influence of season.—All the patients were interrogated on this subject in order to learn at what period of the year phthisis is most likely to be developed. In 16 cases the patients were unable to state this point. The remaining 43 cases began as follows: In January, 6; February, 3; March, 5; April, 3; May, 1; spring (month unknown), 7; June, 4; July, 4; August, 3; September, 1; October, 1; December, 5. Thus we find that in the three winter months (December, January, and February) the symptoms came on in 14 cases, in the spring in 16 cases, in the summer in 11 cases, and in the fall in 2 cases. This gives a slight percentage in favor of spring, which is closely followed, however, by winter. The fall months show a strikingly small proportion, November not being represented at all.

At the Bellevue Dispensary cases of consumption are considerably more frequent in the winter and spring than in the summer season. This may be partially accounted for by the fact that some of the patients under treatment secure employment in the country, or, at any rate, leave the city at the advent of hot weather. Nevertheless, it cannot be doubted that some of the prolific causes of phthisis, viz., pneumonia and pleurisy, are far more frequent in winter and spring than in the summer.

Floor of house occupied.—It did not occur to me to enquire into this subject until late in the summer, consequently I obtained statistics of only twenty cases. The question, On what floor of the house were you living at the time your symptoms first came on? was asked in each case. The result was as follows: 10 occupied the first floor, 5 the second, 1 the third, 2 the fourth, and 2 the "top" floor. (Almost without exception the patients lived in tenement houses.) Thus we see that one-half of the patients interrogated lived on the lower floor, and a fourth on the floor next above. The number analyzed, to be sure, was not large, and a more extensive enquiry might lead to different results; but so far as they go these cases show that persons living on the lower floors of New York tenement houses are much more liable to consumption than those on the upper floors. This is not surprising to those who are acquainted with the construction and surroundings of these places of abode; the upper floors as a rule have better facilities both for light and ventilation than the lower.

Causes assigned by patient.—In order to complete the enquiry into the causation, each patient was asked to give his own opinion as to the most probable cause of his lung trouble, or to what facts or events he attributed it. Eighteen of the patients were unable to assign a cause; forty-one, however, had opinions on the subject, and not a few very positive convictions.

The results of this enquiry were as follows: Inherited, or because it was in the family, 4; heredity and exposure, 1; result of pneumonia, 6; result of pleurisy, 1; of pleurisy and syphilis, 1; of pleurisy and subsequent exposure, 1; result simply of exposure, 7; hard work, 3; occupation, 3; "change of life," 3; bad cold, 2; close confinement, 2; bad air, 2; "hard luck," 1; domestic troubles, 1; old age, 1; contracted while nursing consumptive aunt, 1, and ill-treatment, miscarriage, and hard work, 1.

Some of these causes are perhaps a little far-fetched, but it cannot be doubted that in most cases the patients were very near the truth.

Facts Pertaining to Symptomatology.—In inquiring into this subject, we will first consider the symptom or event which initiated the disease. In 15 of the cases the first symptom noted by the patient was a dry cough: Commenced with cough (character not stated), 15; with hæmoptysis, 8; cough and hæmoptysis together, 2; pneumonia, 6; pleurisy and pneumonia (pleuro-pneumonia?), 2; pleurisy, 1; pain in side, 2; pain about heart (mitral regurgitation), 1; "bad cold," 1; attack of bronchitis, 2; intermittent fever, 1; vertigo and sick stomach, 1; and suppressed menstruation, 1. One patient did not remember how his trouble began. Pneumonia and pleurisy have already been discussed; the other principal symptoms will be considered under their individual heads.

Cough and expectoration.—As would naturally be expected we find cough to be the most constant and one of the most prominent symptoms. This event initiated the disease, or, at least, was the first symptom observed by the patient in 30, or more than half the cases, without considering those beginning with pneumonia or pleurisy. Fifteen of these stated that the cough was dry and hacking in the beginning, while in 15 others the character of the initiatory cough was not noted. Two of the patients informed me that they had been treated a long time for bronchitis before they commenced to have night-sweats, hæmoptysis, and other common symptoms of consumption. In all the other cases, however, the patients considered the cough a part of the disease, *ab initio*.[1] In only one case of the 59 was this symptom absent. This patient, a female aged thirty-four, persistently maintained that she had no cough at the time these observations were made, nor had she ever had any, although her history extended over a period of several years. Yet we find that she had great emaciation, pallor, dyspnœa, disordered digestion, aversion to fats, night-sweats, and scanty menstruation. On physical examination, bronchial breathing and dulness showed extensive consolidation in the upper part of the right lung. The patient informed me that she raised more or less yellowish or sanguineous expectoration at times, but that no efforts at coughing were required. Accepting the statement of the patient as true, this condition would seem to admit

[1] For valuable remarks on this subject see Curnow, J. Kay, M.D., etc., in Gaillard's Medical Journal, November, 1881, and January, 1882. According to Blodgett's Climatology the percentage of deaths from phthisis in New York [illegible] (reports) that the percentage of deaths from this disease in the United States diminishes progressively from North to South. For example, in Maine it is 258; New York, [illegible] Mississippi, [illegible] whole United States it is 142 per 1,000.

[1] It is probable that many of the cases, especially those resulting from exposure, "bad cold," etc., began as simple bronchitis.

of no explanation, save under the hypothesis that there was complete loss of sensibility of the laryngeal mucous membrane.[1] With reference to *expectoration* we find that it was variable in 9 cases, profuse or abundant in 28, and variously denominated as scanty, bloody, or frothy in 18. One patient stated that he had never had any expectoration, and in 3 no inquiry was made in regard to it. The nature of the expectorated matters was observed, so far as possible, while the patients were in the clinic-rooms. In general, it was found that the expectoration was more abundant in advanced cases, and in cases that were progressive, though not a few exceptions to this rule, were noted.

Dyspnœa.—This symptom was present with greater or less severity in 50 cases; 8 of the patients stated that they had never experienced any shortness of breath, and in one case no inquiry was made. In several cases the dyspnœa seemed to be more the result of general weakness than of destruction of the respiratory surface. Generally speaking, however, it seemed to bear a tolerably constant relation to the progressiveness of the disease, and to the extent of lung-tissue involved.

Hæmoptysis.—In the table we find that this symptom existed in 43 cases, was absent in 14, and was not noted in 2. In 31 additional cases in which enquiries were made it was present in 22 and absent in 9 cases. This makes a total of 65 cases in which hemorrhage from the lungs was present out of 88 which were noted. Three of the cases in the table came under observation during the summer suffering from this symptom alone, having no physical signs whatever at first. They developed consumption while under observation, as shown by the gradual appearance of other symptoms and by repeated physical examinations of the lungs. We find on examining the table that in 8 cases hæmoptysis was the initiatory symptom, and in two others either the first or second. Whether or not the occurrence of bronchial hemorrhage acts as an exciting cause of phthisis is by no means a settled question;[2] it is very generally recognized as an extremely significant prodromic event. My observations lead me to believe that, occurring at any time, it should not be lightly regarded. Aside from the local irritating effects of the effused blood, and from the loss to the general system, it excites apprehensions in the mind of the patient from which it is difficult to reassure him, and undoubtedly in this way exerts a very unfavorable influence on the progress of the disease.

Pallor.—Of the 59 cases analyzed, 50 exhibited more or less pallor of the surface. This symptom was generally found to follow a course *pari passu* with the emaciation. A few exceptions were noted in which great pallor was present with very slight loss of flesh, and *vice versâ*. In 2 cases, which are marked "fibrous phthisis" in the table, the superficies presented a florid aspect, and in several other cases the face was not notably pale. *Brilliancy of the eyes* was observed in the majority of recent cases in patients under the age of thirty, though facts with reference to its frequency are not embraced in the records. This symptom was usually concomitant with high temperature. In spite of the few exceptions noted, pallor of the surface may be classed as one of the most constant signs of consumption, and probably no case runs its course without it sooner or later.

Emaciation.—This symptom was noted in all the tabulated, and in 33 additional cases, making a total of 92. It was present to a greater or less extent in 88. In 4 cases the patients stated that they had not lost in weight since the beginning of the phthisical symptoms. Variation in the weight was noticed to be one of the most reliable indices to the progress of the disease. When the patient was not losing flesh the other symptoms were apt to be in abeyance, but when the reverse was the case the phthisical processes were found to be steadily extending.

Pain.—Twenty-six cases stated that they had experienced no pain whatever since the beginning of their lung trouble. Thirty-three had pains of various kinds in the region of the chest. In most of these the pain referred to was found to be wandering, fugitive, muscular, or præcordial, being largely due to intercostal neuralgia or pleurodynia, and occasionally to violent coughing. It was not uncommon to find the pain on the opposite side or in a situation remote from the seat of the disease. In only six or seven cases could it be traced to the diseased lung, and even then it bore no relation to the severity or progressiveness of the disease. From these data, then, it would appear that pain is not a prominent event in the history of consumption, and that it is of little importance in making a diagnosis, either of the existence or of the location of a phthisical process.

Sternal and tibial dulness and tenderness.—This subject has been considered under the head of Syphilis.

Night-sweats.—This symptom was present in 49 and absent in 10 of the tabulated cases; in 27 previous cases it was present in 24 and absent in 3 cases. Most of the cases in which it was absent were in an advanced stage. Several of these informed me that they had had night-sweats several months, or a "long time," ago, but others insisted that they had never had them.

Erasmus Wilson was, no doubt, correct, when he affirmed that the skin acted as an "everted lung" in eliminating carbonic acid, and thereby ventilating the blood, for we cannot question its use as an emunctory in health; but the theory that the night-sweats of phthisis constitute a conservative process on the part of nature in aiding a crippled lung, and that they are thereby beneficial to the patient and deserving of encouragement, meets with no support from the cases which I have seen. The patients invariably informed me that, aside from the discomfort produced, they felt weaker, less cheerful, and worse in all respects after a severe night-sweat.

The few exceptions noted do not invalidate the general rule that night-sweats constitute one of the most constant, as well as debilitating and distressing, symptoms of phthisis.

Appetite, digestion, etc.—Twenty-two of the 59 patients had good or fair appetites. In 36 the appetite was indifferent, poor, or altogether absent. One patient spoke of having "peculiar cravings" since the beginning of her disease. She constantly longed for such articles as pickles, sauces, etc., which she had never relished while in health. Twenty-four of the patients stated that they considered their *digestion* good or fair; 34 made complaints of certain errors of digestion, 14 of this number were costive and 4 had diarrhœa almost constantly; five of the number had frequent spells of vomiting, and 11 complained of pains after eating, and eructations, nausea, and occasional constipation, or diarrhœa. One case was not interrogated on this point.

In regard to *fatty articles of food*, 18 patients stated that they had always had a distaste for them. The appetites of 18 others had changed in this respect since the beginning of their disease (about thirty-two per cent. of those observed). They formerly relished such articles, but could not now eat them without nausea or vomiting. Twenty of the patients relished fats, or could eat them without disagreeable effects. Three cases were not noted. *The tongue* was considerably or heavily coated in 41 cases, slightly coated in 8, clear in 6, and not observed in 4 cases. Coating of the tongue would appear, then, to be a very constant condition in consumption. It was observed in a number of cases, who stated that the appetite was good, the bowels regular, and who seemed to have no trouble with digestion. It was certainly far more frequently observed in the cases of con-

[1] In the Medical Times and Gazette of April 1, 1882, two cases of [illegible] reported in which expectoration was absent throughout the course of the disease, and the cough was so slight and infrequent as to pass almost unnoticed. The downward course was rapid, death occurring in each case in [illegible] month, and the other symptoms and physical signs were not different from those of ordinary phthisis.

[2] Drs. Reginald Thompson and William Ewart are of the opinion that a large proportion of well-defined encapsulated cavities take their origin in hemorrhagic deposits (Ewart-Gulstonian Lectures for 1882, Brit. Med. Journal, 1882, i., 333 *et seq.*).

sumption than in cases of asthma, bronchitis, emphysema, and other pulmonary troubles which came under my observation.

Bulbous fingers and incurvated nails.—Fifty-eight of the tabulated cases were examined for these conditions. It was deemed that 25 (slightly more than forty-three per cent.) of this number had one or both.[1] In only two or three instances, however, were they so well marked as to have attracted the notice of the patients, most of them asseverating that no changes had taken place in the shapes of their fingers or nails since the beginning of their illness, and that these appearances were due to rough usage of their hands by hard work, etc. This was doubtless true to some extent, for the same appearances were observed in patients who had no trouble with their heart or lungs. It will be seen, too, that a number of the cases in which these conditions are noted as existing that the patients were in the early stages of the disease; on the contrary, some of the far-advanced cases showed no signs of them. On the whole, then, these data would indicate that clubbing of the fingers and incurvation of the nails are signs of only occasional value in the diagnosis of phthisis, and that their existence should be given very little weight when occurring among the laboring classes.

Œdema of the feet and ankles.—Dropsy of the lower extremities was entirely absent in 41 cases out of 57 who were examined. It existed in 16 cases, but was very slight in most of them. In only 3 was it well marked; one of these was complicated by mitral regurgitation, and hydro-thorax and hydro-peritoneum. A majority of the patients were examined at an hour when œdema of the lower extremities should manifest itself if the conditions were present for its existence, viz., from 1:30 to 2:30 P.M., after they had presumably been on their feet a number of hours. As far as they go, the foregoing numerical facts would indicate that dropsy of the feet and ankles is not a sign of much importance in "walking cases" of consumption.

Mental condition.—Twenty of the 59 cases were cheerful and hopeful, 2 felt indifferent, 31 were depressed or low-spirited, and 6 said that their state of mind with regard to their disease varied—sometimes they felt hopeful, even buoyant, at others very low-spirited. In none of the cases did the state of mind seem to bear much reference either to the stage of the disease or to the progress it was making. Some of the patients, even in the earliest stages, and in cases in which the disease was making very little if any progress, were in a state of great despondency—a marked contrast to the cheerful, buoyant frame of mind in which I found some of the most advanced cases. The mental condition seemed to bear a much more constant relation to the intellectual constitution of the patient than to his physical state.

Menstruation.—Of the 19 female patients in the table 10 stated that menstruation had ceased altogether since the appearance of the symptoms of consumption; in one of these, indeed, arrest of the menstrual flow was the first intimation the patient had of her approaching illness. In all the others it came on early, becoming scanty and irregular, and soon ceasing altogether. Menstruation is noted as being scanty, irregular, or diminished in 3 others. Five of the patients were past the menopause, while one claimed to be nursing a child to which she had given birth a few months previously. These results corroborate those of previous observers, viz., that arrest or irregularity of the menstrual function is an early and constant symptom in women afflicted with phthisis.

Laryngitis and pharyngitis.—Fifty-eight cases were noted with reference to throat symptoms; 20 of this number complained of "sore throat." It was not practicable to make an extended examination of the throat under the circumstances, but by means of a tongue-depressor I was enabled to recognize more or less redness and tumefaction of the pharyngeal mucous membrane in 10 cases. It was judged by the huskiness and hoarseness of the voice and by the statements of the patients (some of whom were under treatment for their throats) that 4 of this number and 7 others were suffering with laryngitis. It did not seem to be severe in more than 5 cases, but in most of them the patients informed me that they had been unable to obtain much relief; 2 of the laryngeal cases, whom I had seen off and on for more than a year, retained the same husky, stridulous voice throughout this time. One case had well-marked tonsillitis and 2 complained of their throats in whom nothing of a definite nature could be made out. Some of the patients thought their throat trouble was due to violent attacks of coughing. Thirty-eight cases made no complaints of their throats when questioned and consequently were not examined. From these data it would appear that affections of the throat are quite frequent attendants of phthisis, but that the majority of them are not distressing nor of great importance.

Pulse, respiration and temperature.—The pulse was noted in 58 cases; the highest rate was 160 beats per minute; lowest, 68; average of all the cases, 110.77. The pulse-rate was observed to fall from 4 or 5 to 15 or 20 beats to the minute after the first excitement of the examination was over; hence, it was in all cases among the last points of which a record was made. The respirations were observed in 56 cases; the result was: highest rate per minute, 40; lowest, 17; average, 27.46. The temperature was taken in 48 cases; the highest noted was 103° F.; lowest, 96°; average of all the cases, 99.17°. This represents the sublingual temperature. The observations were made in most of these cases between 1:30 and 2:30 P.M. It should be stated that the pulse, respiration, and temperature recorded in the table were in each case the result of the first observation made on the patients. It was of course impossible to observe the diurnal variations in dispensary patients. As far as could be judged under the circumstances the temperature was a trustworthy guide to the progress of the disease; a high temperature meant usually rapid extension of the phthisical process. The pulse, respiration, and temperature did not always observe a *pari passu* rate. The pulse was usually most frequent in the early stages, the respirations in the later stages of the disease. Some of the advanced cases had very rapid breathing while the temperature was normal or even subnormal.

Complications.—Of the 59 tabulated cases, 32 were, so far as could be determined, free from complications. In some of the other cases the conditions indicated as complications might perhaps be better classified as symptoms. The cases with other diseases, or with symptoms severe enough to constitute complications, were as follows: Tertiary syphilis, 3; severe indigestion, 2; tapeworm, 2; and one each of the following, lumbago, exhausting diarrhœa, hemorrhoids, necrosis of the sixth (left) rib, extreme muscular debility, tonsillitis, nasal catarrh, laryngitis, hydrothorax and ascites, prolapsus uteri, "uterine disorder," constant facial neuralgia and toothache, abdominal neuralgia, chagres fever, intermittent fever (?)[1], mitral regurgitation with subacute pleurisy and extensive pulmonary emphysema. It will be seen that many of these troubles were trifling and unimportant; but we are struck with several points of interest. For example, the infrequency of cardiac disease as a complication. Each one of the 59 cases was carefully examined with reference to this point; in only one was an organic trouble found. Among several hundred cases of phthisis which I have seen at the physical diagnosis clinics of the Post-Graduate School, less than a dozen were complicated by valvular lesions of the heart. This would imply rather an antagonism than a causative relation between

[1] Pollock states that they occurred in twenty-six per cent. of cases analyzed by him (Flint's Practice of Medicine, Phila., 1881).

[1] The supposed periodical paroxysms of tertian intermittent fever in this case were afterward learned to be simply exacerbations of the fever attending the pulmonary trouble.

phthisis and organic diseases of the heart. Again, we are impressed with the infrequency of nasal catarrh in the list, only one patient having it at the time or mentioning it as an antecedent affection. This is greatly at variance with a widespread idea among the laity (and indeed among some professional men) that nasal catarrh is a frequent forerunner of consumption, and an important prodromic event. These complications were of course only such as could be elicited, or were manifest at dispensary clinics.

Lung Involved.—On physical examination the left lung was found to be involved in 22 cases, the right lung in 19 cases, and evidences of the disease were found in both lungs in 18 cases. It is highly probable that a necroscopic examination would have shown both lungs to be involved to some extent in a far greater number of cases, the fact being evident that slight phthisical or tubercular changes are often beyond the ken of a physical examination. When the disease extends over a long period it no doubt exemplifies quite fully the law of symmetry or parallelism. In the great majority of the cases in the early stages the disease was found to be limited to the apex. When no evidences of disease were found in this situation it was usually found that phthisis did not exist in the lungs. The disease seemed to observe a fairly uniform course, as will be seen by comparing the column containing "condition of lungs" with that containing "time of commencement." As a rule, in cases dating back for a few weeks or several months, evidences of catarrh were found at one or both apices. In cases with histories from six months to a year or two in duration, consolidation was usually present with more or less catarrh, while in cases extending back for several years, consolidation and cavities were the rule. There were several notable exceptions to this rule, however. Two of them will be cited.

Case 1.—Young man aged twenty-four, compositor by occupation. His disease commenced in April, 1885 (two months before examination), with a dry cough. Hæmoptysis, night-sweats, and great dyspnœa came on rapidly. When seen he was found to have a temperature of 103°, and extensive consolidation with unmistakable evidences of excavation were found in the left lung.[1]

Case 2.—Male, carpenter, aged twenty-eight. No heredity. Had articular rheumatism eight or nine years ago; commenced to cough seven years ago. Had more or less dyspnœa, and occasional hæmoptysis; expectoration was variable, night-sweats frequent; digestion was fair, although the appetite was generally poor. Patient was found to be low-spirited at the time of examination, and evidences of pharyngitis were discovered; he also had lumbago. The temperature was 102½°. On a careful physical examination no further evidences of phthisis than circumscribed catarrh of the left apex could be found. This was evidently a case of occasional irruptions with long remissions; he was probably suffering from a fresh outbreak at the time these observations were made. Several other patients who claimed to have been sick only a few weeks presented unmistakable evidences of phthisis.

It has not been my hope in the foregoing contribution to offer much that is new on the much-studied but never-hackneyed subject of pulmonary consumption. Some of the results arrived at are at variance with those of others, while many of them are simply in corroboration of past researches. In apology I would state, in the language of Professor Flint,[2] that "my object has been to study by means of numerical analyses my cases without reference to similar researches by others; and if the results of my analytical investigation are in conformity with those which have been already obtained this is certainly no disparagement of their correctness, nor does it impair their value as a contribution to our knowledge."

[1] This was a hereditary case. [2] Op. cit.

In conclusion I would offer my acknowledgments to Prof. Stephen Smith Burt, M.D., whose valuable clinical lectures have suggested many of the points in the foregoing investigation, and in whose departments at the Post-Graduate School and at the Out-door Department of Bellevue Hospital the cases were observed.

VOLVULUS OF THE SIGMOID FLEXURE RELIEVED BY OPERATION—DEATH FROM PNEUMONIA SIX DAYS LATER

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H. T——, male, aged forty-five years, had been for thirteen years an inmate of the Randall's Island Pavilion for the insane. He was demented and unable to give any account of his own condition.

On June 30, 1885, he was observed to moan incessantly, to walk bent forward as if suffering from pain in the abdomen, and to go frequently to the water-closet.

On July 1st, being removed to the hospital, the abdomen was found to be slightly distended and quite tense. He made frequent attempts to have a passage from the bowels, but nothing came away. Abdomen somewhat tender.

On the third day of his illness abdominal distention was greater. Tenderness persisted. Bowels had not moved. Appetite failed.

On the fourth and fifth days of his illness, first castor-oil alone and afterward with croton-oil were given without effect. An injection brought away a small lump of hard fæces. Some hiccough occurred, but no vomiting.

July 7th, the eighth day of his illness, I saw him for the first time. The abdomen was greatly distended, very tense, and universally tympanitic on percussion. As the patient was said to be a stick eater, impaction of fæces was regarded as probable, and an injection was given with a stomach-tube and hydraulic pressure was attempted, at first in vain, owing apparently to the great distention of the abdomen. A moderately coarse aspirator needle was then introduced into the right lumbar region, that region being chosen because, owing to the tenesmus, the obstruction was supposed to be in the large intestine near the rectum, and the cæcum consequently was regarded as the most eligible portion of the gut to tap. A large amount of gas escaped. The rectal tube was re-introduced and pushed forward as the gut became distended with fluid. In all, twenty inches of tube and about a quart and a half of water were introduced. The abdomen was as tense as before. No fluid escaped on withdrawing the tube.

During the next two days other attempts were made to administer forced injections, but without result. A review of the case now led me to make a diagnosis of volvulus of the sigmoid flexure, based on the following grounds: The long duration (nine days) and absolute character of the obstruction, the absence of acute symptoms, such as vomiting and manifestation of great pain, and the large distention of the abdomen, pointed to obstruction of the large intestine. The large amount of gas drawn off from a single puncture pointed to the tapping of a distended colon rather than to a knuckle of small intestine. The tenesnus, the very great distention of the abdomen, and the absolute binding up of the bowels were regarded as pointing to volvulus of the sigmoid flexure, that particular portion of the gut being decided on because it is most frequently affected. Lastly, the retention of a large enema after passage of twenty inches of tube seemed best accounted for by supposing that the tube had passed an obstruction, which had recurred with its withdrawal. The large amount retained and the great tension of the abdomen rendered the classifying of this retention with that phenomenon, as ordinarily seen in the

[1] Read before the New York Pathological Society, January 21, 1886.

normal gut, hardly allowable. This last factor, together with the subacute course of the case, seemed to point to a not very tight twisting of the bowel.

The patient's pulse was rapid. He had no fever. His general condition was unfavorable. July 8th, ninth day of illness, being on duty at the time as visiting surgeon, as well as physician, I determined, in spite of unpromising conditions, to operate. The abdomen was shaved and washed with hot water and soap, followed by hot (1 to 200) carbolic water. The hands of the operator were carefully washed in the same solution before and at intervals during the operation. Clean towels wrung out of the same fluid were kept around the abdominal incision.[1] The patient being etherized, an incision four inches long was made in the median line just below the umbilicus. Under the peritoneum, before its incision, were observed bubbles of gas, which explained a crepitation which had been felt over the prominent portion of the abdomen since the puncture of the gut, two days before. On cutting through the peritoneum a small amount of slightly turbid, odorless fluid escaped. A congested, largely distended gut presented at the bottom of the wound. An aspirator needle was introduced obliquely into the presenting gut to reduce tension sufficiently to admit of safe exploration, and much gas was drawn off. On passing the hand into the abdomen the sigmoid flexure was found to have made a half twist on its axis, the lower and right portion of the loop having been carried forward and to the left, and the left and upper portion, which presented in the wound, backward and to the right. The distended flexure extended about two inches above the umbilicus, and one and a half inch to the right of the median line. Reduction was easily effected by drawing the lower limb forward and to the right with the left half hand and tucking the upper limb backward and to the left with the fingers of the other hand. It was now possible to follow the large intestine from the contracted rectum to the equally contracted descending colon, and to satisfy one's self that the obstruction was overcome. On the apex of the sigmoid flexure was observed an irregular, red, rough surface about two inches by four inches, found subsequently to be the muscular coat of the gut laid bare by rupture of the peritoneum.

The cæcum being greatly distended, the aspirator needle was thrust into it and much gas was withdrawn. On drawing out the needle a flow of gas continued. It was thought best not to attempt to suture the opening in the greatly distended gut, but to trust to the closing of the opening when the bowel emptied itself in the natural way. The peritoneum and external parts were closed separately with carbolized silk sutures. A copious flow of fluid fæces took place from the anus before the abdominal cavity was closed. The wound was dusted with iodoform, the sutures reinforced by rubber plaster, and a large pad of carbolized gauze and absorbent cotton was firmly bandaged over all. During the operation the pulse rose from 120 to 140. Temperature before operation, in rectum, 100°.

For three days the patient did fairly well. He had several loose passages a day. The abdomen became sunken. Two quarts of peptonized milk in twenty-four hours, whiskey, and morphia were given. On the fourth day the temperature went up and the patient began to lose strength. No abdominal symptoms manifested themselves, except that the abdomen again became distended in the epigastric region for two or three days before death. The wound looked healthy, no symptoms pointing to lung trouble were observed. It was not thought prudent to attempt physical examination of the posterior part of the chest. Death occurred from gradual exhaustion, six days after the operation, and fifteen after the first symptoms of obstruction were observed.

Autopsy, fourteen hours after death (unessential parts omitted).—The peritoneum was firmly closed at the site of the abdominal incision. The cutaneous incision was closed only for its lower inch, the rest of the wound gaping when the sutures were cut. There was no sign of inflammation, except a few drops of pus in the track of one of the cutaneous sutures.

The posterior half of the upper and middle lobes, and the posterior two-thirds of the lower lobe of the right lung were in a state of gray hepatization in spots apparently undergoing purulent softening. At the apex of the left lung was a cavity, the size of a pigeon's egg, filled partly with cretaceous, partly with thick, curdy matter. A few old cretaceous nodules were scattered through other parts of the lung. The posterior two-thirds of the lung was in a condition of red hepatization, with here and there lobules which were yellow and apparently approaching a cheesy condition. The portions of lung not hepatized were very œdematous.

One kidney presented a soft, white neoplasm, the size of a small marble, in the cortex, shown by the microscope to be an alveolar carcinoma. Kidneys otherwise normal.

Stomach.—Mucosa slightly thickened and injected.

Intestines.—The sigmoid flexure, cæcum, and transverse colon were much distended, the latter being about four inches in diameter. A very small amount of transparent fibrin, appearing like post-mortem coagulation of ascitic fluid, was seen here and there on the intestines. The intestines looked at points somewhat injected and dark from commencing putrefactive changes, but no peritonitis was present. Over the most prominent part of the sigmoid flexure was an irregular tear in the peritoneum, four by two inches. Similar, but smaller, tears existed over the cæcum and transverse colon. The points at which the cæcum had been punctured were represented by round, pigmented spots, perfectly closed.

Small intestine moderately distended. The mucosa of the small intestine was irregularly and slightly injected, and in its lower part thickened. The mucosa of the largely distended cæcum and transverse colon was intensely injected, and appeared to be slightly ulcerated on its surface. The splenic flexure and descending colon, which were contracted, showed an irregular strip of deep and old ulceration, extending longitudinally, above one inch in width, and containing long strips of mucosa, with long and narrow ulcerations on either side. About four inches above the commencement of the sigmoid flexure, the gut was still narrower, and an irregular band of red, slightly elevated tissue presented, extending for about four inches, diminishing and disappearing rather gradually at either end.[1] The mucosa of the sigmoid flexure was thick, œdematous, and injected. Its veins were distended, and tortuous.

The meso-colon of the sigmoid flexure was somewhat thickened, but presented no other abnormality.

Retro-peritoneal glands not enlarged.

In my remarks upon this case, I follow in the main the able monograph of Frederick Treves on intestinal obstruction. According to this authority, volvulus of the sigmoid flexure about its mesenteric axis constitutes about two-thirds of all cases of volvulus. The anatomical condition necessary for its production is said to be a long loop, with narrowing of the meso-colon at its parietal attachment. This arrangement of the parts he states may be congenital, but, as volvulus of the sigmoid flexure is "extremely rare in the young," such a circumstance must be uncommon. Peritoneal adhesions, cicatricial contractions, and above all, the dragging down of the meso-colon by flatus and fecal accumulations in the sigmoid flexure, are the common predisposing causes. The mechanism in my case does not apparently fall exactly under this heading, because there was no appreciable deformity of the meso-colon. I believe that the following is the explanation in this particular case. The descending colon was very much contracted down to its junction

[1] The instruments were kept in 1 to 2000 carbolic solution. Two silk ligatures used were soaked in the same.

[1] Microscopic examination showed that this thickening was entirely inflammatory.

with the sigmoid flexure, the transition at that point from a rigid to a very distensible portion of gut being marked. It is conceivable that at the time of the occurrence of the volvulus the sigmoid flexure was distended by flatus, twisted upon itself during its vermicular contraction, and that the lower limb of the flexure became caught and retained between the shoulder formed by the abrupt transition from the stenosed to the dilated gut immediately below and the anterior abdominal wall. I have illustrated my idea on the little cadaver here presented. The ulceration and inflammatory changes in the bowel were probably due to the constipation common in the insane, the irritant effect of the bowel contents being increased by the foreign bodies which he was alleged to swallow.

On analyzing the symptoms presented during life, the combination of tenesmus, absolute constipation, and rapid distention of the abdomen were highly suggestive of the condition found. Marked tenesmus points almost invariably to a lesion of the large intestine, though Treves records two cases of volvulus of the lower part of the ileum accompanied by severe tenesmus. It occurs, also, to some extent in intussusception of the small intestine. It was a marked feature in fifteen per cent. of cases of volvulus of the colon, and in fifty-five per cent. of cases of acute and subacute intussusception, the latter usually involving the colon. In these latter cases absolute constipation is "extremely rare" (Treves). Moreover, distention of the abdomen is rare in these cases, also. Whether or not existing tenesmus depends upon stricture or other lesion of the large intestine in a case of intestinal obstruction can best be determined by the previous history, a source of information which my patient's mental condition rendered unavailable. In many cases of volvulus early development of peritonitis, commencing in the twisted meso-colon, causes a local tenderness which is of importance in diagnosis. In my case the patient's mental state rendered it impossible to form any accurate idea of his subjective symptoms. As there was no peritonitis, there probably was no local tenderness. The absence of vomiting and of the other symptoms of great acuteness of attack, such as marked shock and suppression of urine, pointed in a general way to obstruction of the large intestine. Treves has pointed out, however, that these symptoms depend rather "upon the nature of the occlusion than upon its situation." It is the very lesion which I am now discussing which "may present symptoms as violent and as rapidly developed as any met with in acute strangulation of the small intestine."

The fact that a very large amount of gas was drawn off from a single puncture at the site of the ascending colon seemed to prove that the distended colon had been punctured and not a knuckle of small intestine. This is a diagnostic point accidentally hit upon, to which I have seen no reference, and which seems to be of value. Whether or not tapping of the gut is justifiable, except as a step preliminary to operation, may be an open question. The general reduction of abdominal tension by aspiration or puncture has been recognized as of value in facilitating diagnosis. A striking exception to the rule in my case was the passage of the tube past the obstruction, twenty inches into the sigmoid flexure, and the retention of a quart and a half of water. As a rule, this is not possible, and enemata only as large as can be accommodated by the rectum can be injected. The deep introduction and injection were possible only after reduction of the tension of the abdomen by the drawing off of gas. The passage of a tube past an obstruction and the retention of a large enema is a source of fallacy to which attention has been called. It has been noted, for instance, in intestinal stricture, in which a mass of hardened fæces acts the part of a ball-valve, preventing the passing downward of fluid. This occurrence in my case I interpreted as indicative of a comparatively slight twist in the gut, and my conclusion proved to be correct.

The use of the long tube as a means of diagnosing the site of an obstruction is one which is recognized as being attended by sources of error. In my case it was, on the occasion above cited, actually pushed through one place of obstruction. In others, it doubles back upon itself. It is claimed by some observers that it is possible to reach even as far as the transverse colon or beyond with a tube introduced into the rectum. Treves states that he has "good reasons for doubting if these rectal sounds ever go beyond the sigmoid flexure."

I desire in this connection to call attention to the fact that a sound, in going round the curves of a normal sigmoid flexure, is of necessity guided by the inner concave surface of the gut, rendered resistant by distention, and must be equal in length to the gut traversed. The normally developed large intestine, from the anus to the splenic flexure, may be roughly stated as being from one-half to two-thirds the length of the individual. To reach the splenic flexure in an adult, therefore, would require a tube at least two and a half feet, and oftener three feet or more in length. In experimenting on the bodies of infants, on one occasion I succeeded in passing a catheter into the transverse colon after the abdomen was opened. How often, if at all, this can be done in the living, unopened subject, I cannot say. It, at least, can be positively affirmed that the passage of a sound in a straight, or approximately straight, direction in a person with a normally developed sigmoid flexure, from the anus to the umbilical region, or even as high as the diaphragm, proves nothing except that the sigmoid flexure is very distensible and movable, or that the operator has perforated the gut, a thing which is not very difficult to do, at least in a dead baby. With regard to the treatment, the administration of cathartics in the early stage of the case, when the patient was supposed to be suffering from ordinary constipation, was of course wrong. After the true nature of the case was suspected they were of course discontinued. The error of the House Physician was excusable, owing to the frequency of obstinate constipation in the insane, their insensitiveness to grave affections, and, in demented cases, their inability to describe their ailments.

The result of the intestinal puncture, in admitting gas to the peritoneal cavity, was an illustration of the danger of this procedure, though it did not have any obviously bad effect on the patient's condition. This may have been due to the fact that the gas was not absorbed. At least quite a number of bubbles were still present under the peritoneum at the operation, two days after the puncture. The great tension of the abdomen probably accounts for this non-absorption, the relief caused by the withdrawal of gas being quickly offset by the injection of water. This episode suggests the possibility that the distention of the intestines in peritonitis may be conservative, by preventing or diminishing absorption of septic matter. In some cases of volvulus of the sigmoid flexure, however, the distention has been so great that death resulted apparently from pressure upon the thoracic viscus.

Laparotomy for volvulus has proved very unsatisfactory. The cases are usually very acute. The enormously distended coil of gut is difficult to handle. Even when reduction is effected the predisposing cause remains and recurrence is probable. In my case the coil of gut was comparatively small. Reduction, or even safe exploration of the abdomen, would have been impossible without preliminary aspiration of the intestine. It is to be remarked that the introduction of an aspirator needle obliquely through a chosen portion of exposed gut is materially safer than the haphazard thrusting of a needle through the walls of an unopened abdomen.

To prevent recurrence it has been proposed by Treves to fix the apex of the coil in the abdominal wound and make an artifical anus.[1]

In my own case it seems reasonable to suppose that an earlier operation would have resulted differently.

[1] Medical Record, vol. xxvi., p. 171.

Careful regulation of the bowels would perhaps have been more successful in preventing recurrence than in the more common cases of narrow pedicle, long loop, and more extensive twisting of the intestine.

Clinical Department.

AN INSTANCE OF REMARKABLE FECUNDITY.

Dr. Joseph N. Steedy, of Cambridge City, Ind., reports the following rare case: On May 3, 1884, he delivered Mrs. S——, aged sixteen, of a healthy female child, weighing nine pounds. On February 2, 1886, he delivered the same woman, then eighteen years of age, of three female children. All were born alive and weighed, respectively, four and three-fourths, four and one-fourth, and five and a half pounds. The first presented by the vertex, the second by the face, and the third by the foot; each in a separate sac. There was one large placenta, the three cords being attached to the margin at about equal distance from each other. There was about thirty minutes' interval between each birth. These children were born under the most unfavorable circumstances, and with a temperature outdoors of from 10° to 18° below zero. They were all alive at the time of Dr. Steedy's report, and seemed as strong and vigorous as children of their weight usually are when born singly.

ANTIPYRETIC TREATMENT.

Dr. M. A. Veeder, of Lyons, N. Y., sends us the following: The use of certain drugs for the purpose of reducing the temperature is very liable to become a mere matter of routine. The ease and certainty with which fever is detected by means of the clinical thermometer leads to the habitual use of this instrument, with the effect of concentrating the attention upon changes of temperature to the neglect of other symptoms. The obvious consequence of this tendency is an undue reliance upon fever mixtures of one sort or another. In regions where this therapeutic fashion holds full sway but few patients escape being dosed with quinine, aconite, the salicylates, antipyrin, or some other wonderful antiphlogistic. Unquestionably such drugs have their proper uses, but they should not, therefore, be employed haphazard in every case of elevation of temperature. In fact, their routine use does harm by preventing the adoption of measures having real efficiency. In typhoid fever, for instance, it should not be forgotten that healing the ulcerated bowel moderates the fever most effectually. It has been the fortune of the writer to see an extremely severe case of typhoid recover without the use of any of the ordinary antipyretics, the high temperature as well as the other symptoms yielding under treatment directed almost entirely to remedying the condition of the bowel. Thorough digestion of the nourishment given, and the use of turpentine, bismuth, and opium, in accordance with their well-known effects, were the means employed. The principle involved in this method of treatment is to attend first to the primary lesions of the disease rather than to its symptoms. Fever will cease if the disorder upon which it depends has been remedied. Thus fever dependent upon indigestion can be relieved, not by aconite or quinine, but by clearing out the bowels. A stimulating expectorant like carbonate of ammonia, liquefying and removing foul accumulations, will often have a more decided effect upon the temperature than any of the regular antipyretics. In case of sore throat with bad breath, chlorine water, attacking the disorder in its very seat, may relieve all the symptoms, feverishness included. Certain malarial fevers may have their power broken by methods that do not involve the swallowing of any drugs whatever; only clean out the filthy cellar or the nasty drain, or trap the sewer on the premises, and fever takes its departure like a whipped cur. Improper splints or bandages may cause feverishness after surgical operations. In such cases, instead of dosing with quinine, smooth out the wrinkles and put the wounded part in as comfortable a condition as possible, and the patient becomes as serene as a morning in May. Puerperal fever not unfrequently disappears, as if by magic, when the uterus has simply been freed from malodorous materials, and thoroughly disinfected. In dealing with wounds and sores generally, absolute cleanliness is the best antipyretic. In fact, the whole subject of antiseptic treatment, which looms up so largely in these days, may properly be regarded as but a phase of the subject of antipyretic treatment. As a result of modern researches into the nature of disease-germs and wound-infection it is evident that physicians are fast becoming better able to deal with the causes as well as the symptoms of disease. It is safe to say that the time is approaching when Medicus will no longer thrust a fever thermometer beneath his hapless patient's tongue, and then with an air of vast scientific superiority prescribe a fever mixture hap-hazard.

DISLOCATIONS OF THE SHOULDER-JOINT.

Dr. Thomas H. Manley, of this city, writes that his experience during the past year with luxations of the shoulder has led him to regard the accident as a much more serious one than is generally supposed. It is impossible to tell from inspection, immediately after dislocation has occurred, how easy or how difficult its reduction will be; and after repeated attempts at reposition have been made without success, another effort, perhaps by another surgeon, may be followed by the desired result. He says that of 10 cases seen by him in the past year, 8 were subglenoid, and were easily reduced, while 2, which were subcoracoid, were absolutely irreducible. In the successful cases ether was used only once, its administration being required on account of the severe pain. In one of the irreducible cases, occurring in an epileptic, the effect of ether was to cause a tetanic rigidity of the muscles, which, at times, became so general and so marked as to interfere with respiration. The writer believes that ether is seldom required, despite the generally accepted opinion to the contrary. Its principal value is to relieve pain, but it is questionable whether the relaxed state of the muscles which it induces is of any real value to the surgeon in the majority of cases. Dr. Manley sums up with the following conclusions: 1. The surgeon should not attempt the reduction of a dislocated shoulder without the aid of an experienced assistant. 2. Without great caution in manipulation and care not to use violence, he may very seriously injure the joint by lacerating the tissues, or fracturing the bone. 3. With the best directed efforts some dislocations of the shoulder cannot be reduced.

A FAILURE WITH COCAINE.

Dr. Charles B. Kelsey, of this city, writes: The successes of cocaine are so many, and the failures so few, that each of the latter is of interest. My own was in a strong, healthy man, aged thirty-one, suffering from an ulcer within the rectum. Desiring to dilate the sphincter, and make an application to the diseased spot, I injected forty minims of a four per cent. solution, ten minims each in four different spots around the anus. There being no appreciable effect after fifteen minutes, I again injected fifteen minims of the same solution at two other points—fifty-five minims in all. Ten minutes after the second injections I dilated the sphincter, and although I cannot be sure that the cocaine did not lessen the pain, the effect was not at all such as I desired. The constitutional effects, however, were well marked. One week later I repeated the same operation on the same patient, beginning with thirty minims of a four per

cent. solution, and following it in ten minutes with fifteen minims more. The injections were made at four points in the circumference, the needle being entered just within the anus. The sensibility was tested every two minutes after the first injection; the pain of the punctures for the second injections was fully as great as for the first, and after twenty five minutes I operated without the least appreciable benefit from the cocaine. The article was good, as is proved by my having used it two days before with perfect success; and the failure was not due to the method of application, because I have applied it in the same way to many other cases of rectal operations with perfectly satisfactory results.

Progress of Medical Science.

Blindness Due to Simple Anæmia.—An interesting example of the possibility of simple anæmia producing complete blindness has lately been seen by Professors Litten and Hirschberg in Berlin. The patient was a girl, aged fifteen, who for some short time previously had noticed that her sight was becoming dim, and who for the last two days had been quite blind. She was well formed and stout, but pale and badly nourished; the menses were regular and abundant. She complained of spasmodic pains in the stomach, and this probably was the cause of the malnutrition. The internal organs were healthy; the heart-sounds clear; there was a loud hum in the jugular veins; pupils equal, dilated, and insensitive; sensorium normal; amaurosis complete; papillæ swollen; optic nerves slightly reddened and dull, the edges much swollen; veins distended and contorted; urine normal; blood thin and bright, presenting the well-known characters of anæmic blood—mycrocytes, club-, pear-, and pessary-shaped blood-corpuscles; white corpuscles slightly increased. Anæmia was evidently the real cause of the amaurosis. The girl was put to bed and well fed, and syrup of iodide of iron prescribed. The stomach trouble and appetite soon improved, and in a month's time the condition of the blood and the ophthalmoscopic appearances had become normal. It is worthy of remark here that the appearances were not such as are found in pernicious anæmia—complete pallor of the papillæ, bright redness of the veins, and streaks of blood. The prognosis therefore was good, and was fully justified by the result.—*The Lancet.*

False Tabes.—Under the name of "tabes dorsalis illusoria," Dr. Kovalevski reports a case of hysteria in which the symptoms were very similar to those of locomotor ataxia. The patient was a man, thirty-seven years of age, of previous good health, who had experienced considerable mental anxiety. He had pain in the back, lancinating pains in the limbs, an uncertain walk, especially with closed eyes and in the dark, weakness and heavy feeling in the legs, a feeling of constriction around the body, tightness of the chest, vertigo, constipation, and retention of urine. The patient was sleepless and exhibited suicidal tendencies. Objective examination revealed nothing abnormal. A course of treatment by excessive physical exercise, general faradization, good nourishment, and douching brought about a complete cure in twenty-three days.—*Centralblatt für klinische Medicin*, January 2, 1886.

Pseudarthrosis.—M. Berger presented to the Surgical Society of Paris a specimen of pseudarthrosis of the leg taken from the body of a man fifty-seven years old. The condition had existed exactly fifty years, and the abnormal articulation was remarkable for its perfection. The upper fragments of the tibia and fibula were cup-shaped and received the ends of the lower fragments. There were no cartilages, but the extremities of the bones were eburnated, and were surrounded by exostoses similar to those seen in arthritis deformans. A capsule formed of thickened periosteum covered the ends of the broken fragments, and held them together. The tendons ran across this false joint in true synovial sheaths. There was no apparent atrophy of the neighboring muscles, but the foot on this side was only three-fourths of the size of the other, the bones of the leg were shortened, the patella was small, the corresponding half of the pelvis was less developed, and there was a lateral spinal curvature, the body being inclined to the affected side. M. Trélat, in commenting on the case, was inclined to the opinion that the pseudarthrosis and atrophy were the result of a nervous lesion, as, for example, atrophic infantile paralysis; for there was considerable bony atrophy, and the fracture had taken place at an early age, when pseudarthrosis very rarely occurs.—*La France Médicale*, January 16, 1886.

The Abdominal Bandage after Labor.—Professor Czerny writes in the *Centralblatt für Chirurgie*, of January 16, 1886, that he has been struck with the fine figures of English ladies, even after they had gone through numerous pregnancies. He attributes this preservation of form to the habit of English accoucheurs of applying an abdominal bandage immediately upon the completion of labor, and urges the adoption of the practice by German physicians and midwives. It is interesting to learn that this idea has reached Heidelberg, and there is reason to hope that the Teutonic matron of the next century will be happy in the possession of a smooth and finely rounded abdomen.

Pessaries.—Dr. Leopold Meyer writes upon this subject in the *Hospitals-Tidende*, and recommends a pessary formed of copper wire covered with a soft rubber tube. The rubber is to be painted over with iodoform-collodion (1 to 15) and may then be retained for three or four months in the vagina without acquiring any odor.

Late Hereditary Syphilis.—Under this name are included the manifestations of the so-called tertiary period of syphilis which make their appearance at a considerable period after birth, usually about puberty, without any prior symptoms of the disease. Zeissl has collected the records of over a hundred such cases and adds a number seen by himself. The disease affects chiefly the osseous tissues, more especially the bones of the nose, and also the nervous structures and the organs of special sense. The author asserts that Hutchinson's triad (deformity of the permanent incisor teeth, parenchymatous keratitis, and diseases of the auditory apparatus) points only to a probability of the existence of hereditary syphilis; these symptoms may be present without syphilis, and may be absent when the disease is actually present.—*Centralblatt für klinische Medicin*, January 16, 1886.

Turpentine in the Treatment of Fistulæ.—Dr. S. Cecchini has employed injections of oil of turpentine in the treatment of fistulæ and indolent sinuses, and reports in detail a number of successful cases. The turpentine acts both as a stimulant to the granulations and as an antiseptic. In seven cases of anal fistulæ he obtained a perfect cure in five. The injections were made by means of blunt pointed cannulæ, and were repeated at intervals of three or more days. The pain caused was only moderate, but when necessary, the turpentine was diluted with almond or olive oil. In four cases of caries of the temporal bone in children a complete cure was obtained in from two to three months. The fistulæ were washed out with a solution of boracic acid before each injection. A like favorable result was obtained in eight cases of dental fistulæ complicated with more or less extensive caries of the alveolar process and jaw. One case of fistula of Steno's duct was cured by eight injections in thirty days. In a number of other cases of indolent fistulæ not due to caries, a favorable result was obtained in from ten days to a month. Finally, two dissection-wounds which the author had acquired were healed by turpentine in four and nine days respectively. —*Centralblatt für Chirurgie*, January 2, 1886.

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THE LATE DR. AUSTIN FLINT.

DR. AUSTIN FLINT had long been rightfully regarded as the best representative of the best type of American physician. In personal character, in scientific attainments, in practical experience, and in the art of dealing successfully with his patients and his fellow-men he leaves behind no equal. Dr. Flint had a presence which inspired confidence, and a genial manner which won friendship and kindly feelings from every one with whom he came in contact. Beneath his geniality, however, was an indomitable will and strength of purpose which he could exhibit when occasion called. He had that fortunate combination of elements in his character which enabled him to achieve the completest success attainable to medical men without awakening envy or creating enemies. Few men have been so justly eminent and yet so widely beloved and admired.

Dr. Flint contributed largely both to medical literature and medical science. His works and writings were an immense help to American medicine. No other single American author has done so much to give our profession a standing before the world. At various times Professor of the Practice of Medicine in six different medical colleges, his experience and studies were naturally kept broad, while at the same time his knowledge was made exact. This was shown in his systematic writings, which always showed painstaking research, a judicial mind, and were free from any taint of personal bias or useless speculation. We doubt if Dr. Flint ever had a genuine "hobby;" if so he kept it from his writings.

Dr. Flint's contributions to clinical medicine were numerous, and many of them were positive advances in medicine. Perhaps his name will be longest associated with the study of physical diagnosis. Among the earliest to teach the utility of this art, he added greatly to our knowledge of it, particularly as regards the nature of the sounds in pulmonary phthisis and in heart disease.

The honors which Dr. Flint received, especially during the last years of his life, were all that medicine can bestow upon its most favored followers. Though an old man, age had not in the least dimmed his faculties or abated his activity, and his death seemed as premature as it was unwelcome and sad. American physicians can never cease to honor his memory, and we trust will never fail to emulate his virtues. If our art is not the greatest, it can at least be proud that it produces such men as the late Austin Flint.

THE RHYTHM OF FEVER.

A CORRESPONDENT sends us an interesting and very clearly presented *résumé* of the arguments in favor of the nervous origin of fever. He correctly states that the view that fever is proximately a neurosis is now established on almost impregnable ground. The opinions of Liebermeister, and the experiments of Wood, to which we may add those of Eulenberg and Landois, of Sachs, Hitzig, and Bechteren, are referred to and quoted.

But beyond this our correspondent offers a suggestion of his own. He says: "The phenomena of fever are better explained upon the supposition of the disturbance of a heat-centre by applying one of the corollaries of the persistence of force, as given in the principles of evolution, viz., that of the rhythm of motion. Mr. Spencer has shown us that, as a deduction from the persistence of force, there must follow the fact that all matter is in a state of vibration which is rhythmic in character. Periodicity, rise and fall, maxima and minima, this is the law of all matter whether molecular or ponderable. Applying, then, the rhythm of matter to the hypothesis of a thermal centre, we see that the daily oscillations of that centre, the rhythm, rise and fall, may correspond to the diurnal rise and fall of temperature which we know takes place in the body in health. Suppose this centre to be disturbed by shock of certain kinds, then the molecules in their vibrations will take a wider range of divergence, and vibrating across the median line of normal temperature will, as they swing to one extreme, unduly stimulate the inhibitory power of its conducting nerves, and depress the heat-production and heat-dissipation to so low an ebb that a degree of cold, perhaps a chill, results. Then as the oscillation carries it across the median line of normal temperature to the limit of its opposite range the undue stimulation will be succeeded by its opposite of partial paralysis of its inhibitory power, with the resultant of over-production of heat. Again, as the extreme of paralysis is reached and the oscillation tends to resume its equilibrium, at that point as it is reached the heat-production and heat-dissipation again balance each other, and the normal temperature is the result. This moving equilibrium, as Spencer denominates it, may be maintained here, or the shock may have been sufficient to cause successive vibration across the median line of normal temperature with their resulting effects of chill, fever, and period of intermission, or in other words, all of the phenomena of intermittent fever, the rhythmic rise and fall of which would correspond closely with the rhythmic vibrations of the nerve-centre, which are a necessity as a corollary of the persistence of force. Or suppose the primary shock to have been sufficient to displace the oscillations entirely to one side of the median line of normal temperature. In jelly-like masses of matter, we may see such vibration entirely to one side of the perpendicular line of gravity.

"In such a case there would ensue a continuous paralysis of the inhibitory forces, resulting in a steady overproduction of heat, but varying daily as the oscillations occurring in their range outside o the median line approach first to the normal and then swerving outward to the range of greatest limit. Thus may the daily rhythm go on for weeks, in conjunction with its outer rhythmic expression, in enteric fever, until its tendency to seek its normal

equilibrium being greater than the primary shock the oscillations finally touch the normal point and rest there, or perhaps swing outward again for a few times, as we sometimes see in the closing days of a fever, to ultimately resume their wonted position of a moving equilibrium across the line of normal temperature.

"These may seem but idle speculations, but with the exception of the assumption that the rhythm of fever corresponds with the rhythm of the molecular mass in the heat-centre there is nothing speculative about it.

"It would account also for the self-limiting character of fever, since the tendency of all bodies in motion is to rest; the original shock to the heat-centre having spent itself the tendency of that centre would be to a state of rest and thus to a limitation of the fever. Whether the original shock to the nervous centre be due, as Liebermeister surmises, to the 'reflex irritation of cold,' or whether it is due to the material impact of a germ is a matter of no moment as regards the rhythm of fever."

We shall dismiss our correspondent's suggestive communication with the single comment that he appears to forget that in a chill both the temperature of the body and the heat production are increased, though heat excretion is temporarily lessened.

RELATIONS OF STATE AND LOCAL HEALTH AUTHORITIES.

In proportion as the population of a country grows more dense the struggle for health becomes more difficult, while at the same time it is the more necessary to the individual, since existence is harder and sickness takes away the ability to earn. The establishment of certain laws and regulations designed to improve the sanitary conditions of localities thus becomes imperative. That the laws at present in force are not perfect few will be disposed to deny, but they must answer until new regulations, better adapted to the purpose, can be formulated and put into execution.

Dr. Maurice Perkins, of Schenectady, sends us an interesting article, embodying some suggestions on this point, which we reproduce in brief. He does not favor the idea of referring matters of this sort to commissions, but thinks they should be subjects of political interest, to be discussed freely by all voters. It would be possible, he says, for some State officer, as the State Engineer, to have a health department under his control, and for its success and usefulness the people could hold him responsible at the polls. "But it is to the local health officer," Dr. Perkins writes, "that we should look for the best results, and everythin snould be done to magnify his importance, and care should be taken that he is fitted for his work. I would have him appointed directly by the official head of the city or town, and selected from a list of candidates who have passed a proper examination. I would have the state officer a court of appeal to settle differences between health and other local authorities as to powers, etc., and would have him in constant communication with local officers, demanding from them news of epidemics and such matters, and transmitting the reports to all others, that they may be informed as to possible danger. He should offer prizes for the best yearly reports from health officers, and should encourage the publication of original papers on hygienic subjects." The writer thinks that the State should not interfere in the matter of sewerage or the water-supply of towns, but should leave such matters to the consideration of the voters in the locality interested, and he also disapproves of the sending of experts, either medical or sanitary, from one place to another, believing that, were local authorities relied upon to a greater extent, they would soon manifest their competency for the work imposed upon them. In short, Dr. Perkins believes thoroughly in home rule, as far as sanitary matters are concerned, and he would restrict the power of the State as far as possible consistent with order and the public safety.

A FOOLISH SOCIETY.

The St. Louis Medical Society has passed a resolution positively prohibiting the publication of its transactions, or any part or synopsis thereof, in any medical journal, and directing that "no member of or visitor to the Society shall transcribe its proceedings, or any part thereof, for publication, nor publish an epitomization or synopsis of the same."

The object of this act was to prevent the publication of partial and mutilated reports.

The Society is evidently neither wise nor experienced. In time it will learn that seventy-five per cent. of society discussion is rubbish, and that medical journals cannot publish them in full and live. No society can long force upon the public, by "Transactions" or "organs," material not worth publishing.

A NEW FORM OF LUNG DISEASE.

In 1877, Bollinger showed that the disease of cattle ordinarily known as "swell-head" or jaw-sarcoma was due to a fungus, and he called the disease actinomycosis. To Ponfick belongs the credit of having first detected this disease in man.

Since attention was called to it a number of other cases have been reported. Dr. P. B. Conti recently published the history of a case of actinomycosis occurring primarily in the human lungs. He has also collected sixteen other cases, and from a study of them has been able to give a tolerably good picture of primary broncho-pulmonary actinomycosis, or, as it may be called, actinomycotic phthisis. Although nearly all the cases so far observed have been found in Germany, it is not at all improbable that the affection occurs in this country, since the researches of Dr. W. T. Belfield have shown the prevalence of the actinomyces in American cattle. It is all the more important that physicians should have their attention drawn to it, since the disease closely resembles in its general course acute phthisis, while at the same time presenting some very pathognomonic signs to those who are on the lookout for them.

The disease begins insidiously, the actinomyces reaching the deeper bronchi by inspiration and lodging there. A local irritation is caused, and the patient has the signs of a bronchitis. This is very soon followed by a circumscribed broncho-pneumonia. The sputa, if examined in this stage, would reveal the real trouble, but it could be detected in no other way. The disease extending, causes peri-bronchitis and interstitial pneumonia, and then the pleura becomes involved. There is

sometimes a circumscribed adhesive pleuritis, at other times a sero-fibrinous exudation or a purulent pleurisy. Some cases apparently begin in the pleura, but it is probable that even here there was originally a pulmonary invasion which speedily extended to the pleura. In the last stage of the disease the thoracic wall itself is invaded, a peri-pleuritis taking place. Indolent, œdematous tumors appear, which are often the first thing that calls attention to the true nature of the trouble. These tumors finally suppurate and may open and discharge externally.

The disease runs a course lasting about ten months and is, we believe, always fatal. Wasting is very slow. The course is generally apyretic, and the chest finally becomes distorted. Only a microscopic examination of the sputa can positively differentiate the disease from cancer.

It is to be hoped that American physicians living in the West, where the opportunities for observing this disease occur, will report any cases that come under their observation. While pulmonary actinomycosis can probably not be cured, it can at least be prevented.

The complications which may arise are those of metastasis, the actinomyces getting into the blood-vessels and giving rise to embolisms. The general symptoms are much like those of a catarrhal phthisis, or perhaps still more like those of pulmonary cancer. In the later stages the disease seems to resemble septicæmia.

Characteristic features of it are scanty sputa, disagreeable in odor, having a currant-jelly like appearance, containing no blood, but showing under the microscope the characteristic appearance of the actinomyces.

HOSPITAL MANAGERS AND MEDICAL BOARDS.

In the relations between the governing boards of hospitals and the medical staff there often arise serious difficulties, ending but too uniformly in the humiliation of the latter. With hardly an exception it is the medical men who are defeated and made to suffer when any contest arises. The managers control the revenues, the doctors contribute their services, and are often made to feel that they are in fact only a higher grade of employee.

Occasionally, however, the physicians make a good fight, and even a successful one, against the unjust usurpation of their privileges by the governing boards. Such a case has occurred in Halifax, N. S., and the particulars of it are instructive. The Medical Staff of the Provincial and City Hospital had for seven years been in the habit of appointing the House Surgeon after a careful competitive examination, awarding the appointment to the candidate who took the highest mark. Last spring the usual examination was held, and the appointment of Dr. Goodwin was recommended to the Board of Commissioners. These latter gentlemen, instead of confirming him, appointed a Dr. Hawkins, who had stood much lower in his examination record, and who was not, therefore, recommended by the Board. The Medical Board protested and asked for explanations, but being treated rather curtly, after negotiating for six days, they all resigned. In this act they had the uniform support of the profession of the city at first. Sad to relate, however, later in the day some men finally consented to take the vacant places.

The old Medical Board has, however, wisely continued its struggle, and is, we are informed, securing the support of the profession throughout the province. A petition has been drawn up, addressed to the provincial Government, asking that the matter be investigated, and that the authority of the Medical Board be given a definite legal status. This petition is being extensively signed by the physicians of Nova Scotia, and we trust that they will unite in supporting the Board in its struggle. While the question at stake is not a great one, it involves a principle, and if the physicians succeed in establishing their rightful demands, it will be a helpful precedent in future controversies.

THE "DRY TREATMENT" FOR UTERINE DISORDERS.

In a paper read before the St. Louis Obstetrical and Gynecological Society, Dr. George J. Engelmann brings forward what he terms a new departure in uterine therapeutics. Preliminary to a description of his own methods, Dr. Engelmann gives an interesting sketch, showing the national peculiarities of gynecologists, so far as topical therapeutics is concerned. "In Germany," he says, for instance, "at one time the washing of cervix and vagina with strong solutions was an almost universal practice; in many clinics it was customary, whether other treatment was applied or not, to wash cervix and vagina with strong solutions of sulphate of copper, or carbolic acid, through the Ferguson speculum. In France—I am only speaking of methods which are not used here—they use the cautery, and medicated supports to the uterus; the thermo-cautery also is a specialty in French gynecology; a common usage is to apply a remedy in a small semicircular bag made of muslin or mosquito-bar, which at the same time serves as a support for the uterus. This country is peculiar in its use of nitrate of silver and iodine, though in England it is used in a similar way, but by no means as freely and as commonly as here."

Dr. Engelmann's new departure consists essentially in the use of medicated absorbent cottons, with or without the addition of a powder-blower, or gelatin pencils. The medicated tampons have the advantage, we are told, of giving support to the uterus, of acting continuously and evenly, and of being cleanly. The tampons may also be made of jute, and perhaps the best combination is a medicated jute tampon covered with a layer of the softer cotton. The powders used are those of alum, bismuth, tannin, salicylic acid, iodoform, and zinc. Next after these in value are the gelatin or iodoform pencils. The cotton or jute used is medicated with iron, boracic acid, alum, tannin, iodine and other substances.

By the use of the powders or pencils and tampons, in endocervicitis, erosions, and other chronic uterine troubles the profuse discharge is often checked very promptly, and a healing process set in action. Dr. Engelmann does not recommend the glycerine tampons which are considerably used in this city. His "new treatment," though a good one, is not, we venture to say, very new, something very much like it, *i.e.*, the use of powder and cotton tampons, was, we believe, at one time quite the routine practice in Vienna. In this city also cotton tampons medicated with alum and other powders have been used for six or more years.

THE PROPHYLAXIS OF GONORRHŒA.

PREVENTIVE medicine is certainly attaining a catholicity of scope and an unexpected multiplicity of ramifications which ought to gratify its supporters. Dr. Haussmann, of Berlin, applying the same mental machinery of analogous reasoning used by Bishop Butler of immortal memory, inferred that because nitrate of silver prevented gonorrhœal ophthalmia in infants born of women suffering from gonorrhœa, it would also prevent gonorrhœa in persons no longer infants who exposed their sexual organs to infectious influence. By what means he persuaded anyone to an experiment we do not know, but European physicians have a strong influence over their patients, and at any rate, he found that an injection of a two per cent. solution of nitrate of silver into the urethra, at most a quarter of an hour after cohabitation with an infected woman, proved a very effectual means of preventing infection.

Dr. Haussmann speaks only of the male, thus giving a mild suggestion of the Teutonic idea, that woman is a useful breeding and housekeeping animal—but not much more.

A French sanitarian in the gonorrhœal field, however, comes in opportunely, and in response to his natural gallant instincts suggests a remedy for the woman as well as the man. He advises that prostitutes should have on hand a supply of a solution of bichloride of mercury, 1 to 500, this to be used by themselves and their male visitors! Such applications of science are repulsive and degrading, yet we can hardly say that they are wrong. Sexual crime will not be lessened because it involves the danger of disease, but because it causes moral and social injury.

This prying of preventive medicine into brothels imparts to it something of nastiness, but it may be useful for all that.

News of the Week.

THE PHOTOGRAPHS OF CIGARETTE MAKERS.—We have been informed that the photographs to which reference was made in our last issue do not represent, as we supposed, the operatives in the cigarette factories of Richmond, but merely models who pose for various industries. The pictures which are considered objectionable have been withdrawn from circulation by the manufacturers.

HONORS TO M. PASTEUR.—King Humbert, of Italy, has decorated M. Pasteur. The Academie de Médecine has voted the sum of $2,000 for the projected Pasteur Institute.

LEGAL EXPENSES OF THE NEW YORK COUNTY MEDICAL SOCIETY.—Considerable grumbling is heard over the legal expenses of the County Medical Society. Out of an income of about $4,500, nearly three-fourths went last year into the pockets of the lawyers, the total sum paid them being $3,067.40. A natural inquiry arises as to whether there is any return, aside from the fines paid by quacks, for this extraordinary expenditure. If the sum of $3,000 were annually applied to encouraging scientific work or creating a building fund there would be very little complaint, but the doctor is apparently compelled to pay twice for the enforcement of the laws.

A NEW FIELD OF JOURNALISTIC ENTERPRISE is being opened by the local newspapers. It consists in furnishing as news long notices of the lives and successes of certain doctors. An illustration of this is seen in a newspaper published at Westport, Conn., in which a fulsome description of the attainments and skill of a local physician is given. A curious feature in these quack advertisements is that the quack is always anxious to let people know that he has at one time been associated with and taught by eminent and reputable physicians.

COMMENCEMENT OF THE BELLEVUE HOSPITAL MEDICAL COLLEGE.—The twenty-fifth annual commencement of the Bellevue Hospital Medical College took place on March 15th at the Carnegie Laboratory. The address to the graduating class was delivered by Dr. Isaac E. Taylor, the President of the College. Professor Dalton delivered an address in which he eulogized the late Dr. Austin Flint. Diplomas were presented to 139 graduates. The successful candidates for appointment in the Bellevue Hospital were: Hezekiah S. Houghton, Thomas McCann, Witter K. Tingley, and William H. Nammack.

THE GERMAN GYNECOLOGICAL SOCIETY holds its first annual meeting in Munich June 17th to 19th of the present year.

TRICHINOSIS IN BERLIN.—Dr. Grawitz, Virchow's second assistant, who gives the course in pathological histology for Virchow, says that about one-third of the cases diagnosed in life as muscular rheumatism are shown, by post-mortem examination, to be trichinosis.—Cor. *Medical Press of Western New York.*

A NEW EMMENAGOGUE.—This is "erotic excitement," and is certaialy in its ordinary form as venerable as the vertebrates. But a correspondent of the *Medical Press of Western New York*, Dr. T. D. Strong, suggests producing it in a scientific and perhaps subconscious way by applying sinapisms to the breasts.

PRAIRIE ITCH is the expressive title of a disease which seems to be prevalent in Texas, Kansas, and other Southwestern States. It is probably due to a parasite, but the editor of the *Kansas City Medical Index* confesses to ignorance of the pathology, while he prints a recipe for its cure, viz., the external use of a solution of sulphuret of potassium, gr. xx. to ℥ j. of water.

A PURE PEPTONE, prepared from milk, has been manufactured by Herr Weyl, of Berlin. It is a colorless powder, soluble in water, and of a not unpleasant taste. Senator speaks highly of it in phthisis and convalescence from typhoid fever.

MEDICAL EDUCATION IN CALIFORNIA.—*The Pacific Medical and Surgical Journal* takes some exception to our criticisms upon the state of medicine and medical education in California. The University Medical College and Cooper Medical College require, we are told, a "scholastic examination" before the Dean prior to matriculation, and three regular courses of lectures. We are very glad to learn that the preliminary examinations have been established, and to testify in general to the excellence of the two schools in question. According to the announcements of 1883, no such examination was required, unless evidence of a fair English education be considered a "scholastic examination."

Restricting the Practice of Vivisection in Austria.—Baron Conrad, the Austrian Minister of Public Instruction, has sent to the medical faculties a circular concerning vivisection. Henceforth it will only be permitted in very exceptional cases, when it is thoroughly necessary, and for important researches. Vivisection can be practised in Government medical institutions only, and then by the professor or *agrégés*. The animals must be previously rendered insensible.

Diphtheria in New Orleans has been on the increase in the past few years. In 1885 there were 166 cases reported, with 151 deaths! This shows not necessarily a high mortality rate, but a great neglect in diagnosticating and reporting the cases.

Surgeon William A. Corwin, United States Navy, died on board the steamer Adams, at Panama, on the 10th inst.

Medical Advertising in California.—Much discussion has recently taken place in the San Francisco County Medical Society, says *The Pacific Med. and Surg. Jour.*, relative to the extent of advertising that is permissible to medical men. The conduct of a member had been called in question because he placed a card in the programme of a variety theatre, calling attention to his attainments and his preference for certain diseases. This was naturally objectionable to the members of the society, but when the case came up for discussion the business cards of many practitioners were produced, including those of specialists, such as oculists and aurists, to prove that advertising is to a certain extent permissible to medical men, and therefore the question became one of degree.

Getting a Little Mixed.—Dr. Carl L. Jensen has discovered a way of manufacturing a certain form of pepsin, and has got a patent on it. The *Medical and Surgical Reporter* defends the right of a doctor to take out a patent. The Code says that it is derogatory to professional character for a physician to hold a patent for any surgical instrument or medicine. Our ochre-bound contemporary defends the Code and defends the doctor with his patent.

Embalming the Dead.—A bill has been introduced into the Rhode Island Legislature providing that no undertaker or other person shall apply to the body of any deceased person, or still-born child, any embalming or otherwise preserving or disinfecting preparation whatever, without having first obtained the consent of the friends of the deceased, and the written permission of the officer having custody of the returns of death in the town or city where the death occurred. The object of the bill is to prevent the hiding of criminal or suspicious appearances of bodies. It is supported by the health officers, but opposed by undertakers.

A New Form of Blackmail.—Two prominent physicians of Chicago have recently had civil suits brought against them for alleged damages in sums of $5,000 and $6,500, the real animus being, so far as known, the fact that the doctors had sued for the collection of their bills. Inasmuch as it only costs six dollars to commence such a suit against a physician, with no further liability to the plaintiff—whatever may be the result—this appears to be a cheap sort of revenge.

The Funeral Services of the Late Dr. Austin Flint were held at Christ Church, on March 16th. The church was crowded with the friends, colleagues, and pupils of the deceased physician. Hardly a prominent medical man in the city was absent, and the gathering was a remarkable and spontaneous tribute to the memory of the departed. The services were brief and simple.

The Cartwright Lectures.—Dr. William Osler began the delivery of the Cartwright lectures at the Young Men's Christian Association Hall this week. He has chosen for his subject certain questions in the Physiology and Pathology of the Blood.

Obituary.

AUSTIN FLINT, M.D., LL.D.,

NEW YORK.

Dr. Austin Flint died on March 13th, at his residence in this city, of cerebral apoplexy. He had been feeling in his usual good health, and on the day before had attended to his usual professional duties. On midnight of March 12th he uttered a cry and fell on his bed unconscious. He remained in an unconscious state for the next fourteen hours, when death took place. Drs. E. G. Janeway, Isaac E. Taylor, and William T. Lusk were called in consultation, and every effort was made to restore consciousness and avert the fatal issue.

Dr. Flint was born in Petersham, Mass., in the year 1812. He came of a race of English and American physicians. His great-grandfather, grandfather, and father, were medical men, and all obtained more than average eminence. Dr. Flint was educated at Amherst, and afterward graduated in medicine at Harvard in the year 1833, at the age of twenty-one. The first three years of his professional life were passed at Northampton and Boston. In 1836 he went to Buffalo, where he remained until 1844, his prominence at that time securing him a call to the chair of Institutes and Practice of Medicine at the Rush Medical College, Chicago. After a year of that life he returned to Buffalo, where he established the Buffalo *Medical Journal* in 1846, which he conducted for ten years. Meanwhile he was increasing his usefulness in various directions. He was one of the three founders, in 1847, of the Buffalo Medical College, at which, until 1852, he occupied the chair of the Principles and Practice of Medicine. Then he went to the Louisville University, holding the same chair in that institution, where he remained until 1856, when he went back to Buffalo as Professor of Pathology and Clinical Medicine. While still holding a residence at Buffalo he passed the winters of 1858, 1859, and 1860 at New Orleans, where he was Professor of Clinical Medicine in the medical school, and was also visiting physician to the Charity Hospital. He changed his home toward the close of this engagement to this city, where he has since remained. In 1861 he became one of the physicians to Bellevue Hospital and was appointed to two Professorships—the Principles and Practice of Medicine and Clinical Medicine at Bellevue, and Pathology and Practical Medicine at the Long Island College Hospital. He remained always with the Bellevue Faculty, but his duties forced him to sever his connection with the Brooklyn college in 1868. In 1872 he was elected President of the New York Academy of Medicine, from which Society he lately resigned.

He continued his connection with the New York County Medical Society, although he was active in the County Association. In 1876 he was a delegate to the International Medical Congress at Philadelphia, where he delivered an address on "Medicine." He attended the Congress at London in 1881, and at Copenhagen in 1884, and had been chosen President of the next Con-

gress, to be held at Washington in 1887. During the winter he was accorded the honor, never before received by an American physician, of an invitation to address the British Medical Association on "Medicine" at its coming meeting. The invitation had been accepted, and he intended to go to Europe in July for this purpose. In 1884 he was President of the American Medical Association. Dr. Flint was a member of a very large number of learned societies in this country and Europe.

As an author Dr. Flint did much for the profession. His "Treatise Upon the Principles and Practice of Medicine," published in 1866, has run through seven editions. Dr. Flint was engaged during the past winter in revision work for another edition. The sales of this book have been phenomenally large, reaching nearly 40,000 copies. A work on "Clinical Study on Heart Sounds in Health and Disease," which he wrote in 1852, received the first prizes of the American Medical Association in 1852 and 1859. His work on "Phthisis," and his "Manual of Percussion, etc.," have long been standard works.

Dr. Flint's real success as a practitioner, and his conspicuous prominence as a teacher and writer, began when he came to this city in 1861. He added lustre to the profession of this city, which in turn was always keenly awake to his merits.

Dr. Flint had never shown any signs of physical decline, or of the approach of senility. His voice was fresh, his step active, and his mental faculties as acute as ever. He had kept up his work of teaching, writing, and practising. It is said that he dreaded a lingering illness; a wish that he might be taken suddenly when his time came was often expressed by him.

At a meeting of the Faculty of the Bellevue Hospital Medical College, held March 15, 1886, on motion it was

Resolved, That this Faculty keenly sympathizes with the wife, son, and family of our lamented confrère, Professor Austin Flint, in their irreparable loss of a tenderly devoted husband, father, and counsellor;

Yet, that in their griet they will find consolation in that they can ever cherish the memory of his spotless life, his greatness, and his goodness;

That the son, grandson, and great-grandson of eminent physicians and surgeons, entrusted by nature with medical skill and sagacity, so nobly fulfilled his mission;

That his powers of thought and action were preserved in their fulness of vigor to the close of his intellectual and benevolent career;

That his prayer was granted in being spared from lingering illness;

That, as he had mitigated the sufferings of others, he himself was saved from suffering;

That after a day and evening of arduous medical duties, he retired to his painless couch of death;

"God's finger touched him, and he slept."

Resolved, That this Faculty has been deprived, in this dispensation of Providence, of one of the most illustrious founders of this College, whose professors felt honored by having their names enrolled with his; one through whose instrumentality other medical colleges have been established in our country; one whose pupils fill chairs in our Faculty, while others hold distinguished positions in similar institutions of medical instruction; one whose self-sacrificing and gratuitous services have been cheerfully rendered to the sufferers in Bellevue Hospital, and other hospitals in our city and country, for the last half century.

Resolved, That our city and the world have lost in his death one whose noble presence and tender sympathies in the sick-room cheered the heart and secured the confidence of the afflicted; whose remarkable record is justly the pride of any profession in any land; whose gifts and labors were recognized at home and abroad; who was honored with positions of distinction in America and Europe rarely won; from whose eloquent lips thousands of students in many colleges have been taught the science of medicine, and by whose graphic pen tens of thousands have gained medical knowledge; and whose numerous and valued works, translated into many tongues, will continue as fountains of instruction to future generations.

Resolved, That while our heads bow in grief at his sudden death, our hearts rise in gratitude to God for his prolonged life of widely extended usefulness.

Resolved, That a copy of these resolutions be engrossed and transmitted to his family, and that they be given for publication to medical and secular journals of this city.

ISAAC E. TAYLOR, M.D.,
President.

JOSEPH D. BRYANT, M.D.,
Secretary pro tem.

SAMUEL OAKLEY VANDER POEL, M.D.,

DR. SAMUEL O. VANDER POEL died in Washington, on March 12th, while on the way South for his health. His death was a surprise to the community, as he had not been thought to have any malady likely to have a fatal issue.

Dr. Vander Poel came of a family long distinguished in the affairs of this State. His father, also a physician, carried on an extensive practice at Kinderhook, Columbia County, N. Y. That was the doctor's birthplace on February 22, 1824. Equipped with an academic education in that town, the young man took a course at the University of the City of New York, of which Theodore Frelinghuysen was then Chancellor. Then he returned home, and for a while studied medicine with his father. This prepared him for entrance to Jefferson Medical College, in Philadelphia, from which he was graduated in 1845. The ensuing two years he passed with his father. His ambition looked beyond a lifetime in the quiet of Kinderhook, however, and in 1847 he went to Paris. French feeling was then revolutionary, and as the scenes of turbulence were not suitable for quiet study, he went for a time to Southern France and Italy, going back to Paris when quiet was restored in the summer of 1848. In 1850 he came home and settled in Albany, where he married.

Dr. Vander Poel had acquired a large practice when, in 1857, Governor King appointed him on his staff as Surgeon-General. In 1860 he became President of the Albany County Medical Society. The duties of Surgeon-General had been barely more than nominal during Governor King's administration, but in 1861, when Governor Morgan selected him for that place on his staff, the requirements and responsibility of the position were great. Without experience in organization, Dr. Vander Poel was called upon to create and manage a bureau of medical supply for all the troops sent out by the State. He had to keep about seven hundred positions filled with competent officers, and to deal with the most exacting class of men. The novelty of army and hospital service wore off while Dr. Vander Poel's position was yet new, and its difficulties were complicated by wholesale resignations. During one week he had to make five hundred appointments to fill vacancies by resignation. He filled the difficult position so acceptably as to win the thanks of the Governor and the Legislature, and when the work was over there was not a trace of bitterness in any quarter as a result of anything he had done. After the war he resumed private practice, which grew during the next few years until it became beyond question the largest in Albany. In 1867 he was chosen to the chair of General Pathology and Clinical Medicine at the Albany Medical College, and at about the same time he became one of

the Board of Managers of the State Lunatic Asylum, at Utica. He was elected President of the State Medical Society in 1870. While still devoted chiefly to his private practice, Governor Hoffman appointed him in 1872 Health Officer of this port. Quarantine matters were then in a deplorable state, and Dr. Vander Poel's powers of organization were again called into play. By introducing system into the management of the office and relaxing oppressive enactments, while still watchful for all needed sanitary regulations, the Quarantine was sustained for the first time in its history by commerce during his administration. He continued as Health Officer until 1880, and left the office with the regrets of the merchants and others who had been brought into official or personal relations with him. During his term he filled, in 1876, the chair of the Theory and Practice of Medicine in the Albany Medical College. After his term as Health Officer he returned to Albany for a year, but in 1881 he came here to live, and has since practised here. In 1883 he was elected to a Professorship of Public Hygiene in the medical department of the University of New York, from which institution he received the degree of LL.D. in 1884. He was also a member of the International Medical Congress, at Copenhagen, Denmark, in 1880–84.

Reviews and Notices.

Text-book of Ophthalmoscopy. By Edward G. Loring. Part I.: The Normal Eye, Determination of Refraction, Diseases of the Media, Physiological Optics, and Theory of the Ophthalmoscope. New York: D. Appleton & Co. 1886.

Of all the many persons attracted during the present generation to the special treatment of the eye no one is, perhaps, more competent to write a text-book of the ophthalmoscope than the author of the work before us. He has entered upon the task with the inspiration of the enthusiast, without which scientific work can at best be but mediocre, and the reader feels sure that nothing of importance has been omitted, and that the subject has been treated with the clearness its importance demands. In the introductory chapter we find the scope of the book thus announced: "In the whole history of medicine there is no more beautiful episode than the invention of the ophthalmoscope, and physiology has few greater triumphs. With it, it is like walking into nature's laboratory and 'seeing the infinite in action,' since by its means we are enabled to look upon the only nerve in the whole body which can ever lie open to our inspection under physiological conditions, and to follow in a transparent membrane an isolated circulation from its entrance into the eye through the arteries to its exit in the veins. We are further enabled to watch and study daily, or even hourly, morbid processes in each and every phase, from simple hyperæmia to absolute stasis, and from passive œdema to the most violent inflammation; while oftentimes through its agency, also, we get the first intimation of disease in remote and seemingly unconnected organs, so as to read as if in a book 'the written troubles of the brain,' the heart, the spleen, the kidneys, and the spine."

If we may not attach the importance to the revelations thus claimed for the ophthalmoscope, we can certainly attest to the frequency with which it has been found to confirm the diagnosis after other phenomena than optical have become pathognomonic.

The instrument itself is described in the appendix, and it is well known that Dr. Loring is the inventor of one of the very best combinations in use. The theory of the ophthalmoscope, and directions for its use, together with a brief and simple explanation of the elements of optics, is also to be found in the appendix.

Twenty pages are devoted to the anatomy of the fundus of the normal eye; sixty-two pages to its appearances under the ophthalmoscope and its anomalies; forty pages to the determination of the optical condition of the eye—refraction, astigmatism, etc. Forty-eight pages are given to the examination of the media of the eye—the aqueous humor, the iris, the lens and its opacities, vitreous humor, fundus, and to entozoa. The appendix consists of sixty-four pages.

An exhaustive review of a work of this kind would be beyond the scope of a weekly journal; indeed, it is so concisely written that no mere abstract would do the author justice. When it is stated that its literary excellence is in the author's best style, the method of investigation painstaking and exact, but little remains to be said in its praise.

The work is enlivened by good pictures; there are four excellent chromo-lithographic plates, and one hundred and thirty-one engravings and diagrams, all of which are well adapted to illustrate the text, many of them being original.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M.D. Sixth edition, pp. 870. Philadelphia: Lea Brothers & Co. 1886.

Dr. Smith's wide and varied experience has made him an authority in children's diseases. His process of observation, coupled with a practicality which prevents him from becoming too much entangled in theory, has enabled him to write a book which practitioners have properly held for a long time in high estimation. Five years have elapsed since he put forth the fifth edition of the work now before us. A half a decade in these days of persistent research and investigation gives an author no easy task in the pruning, amending, and enlarging of his work. Some important maladies have been entirely rewritten, such as cerebro-spinal fever, scarlet fever, pseudo-membranous croup, and infantile diarrhœa. The treatment of many of the diseases has been revised.

Tablets of Anatomy. By Thomas Cooke, F.R.C.S. Eng., B.A., B.Sc., M.D. Paris; Senior Assistant Surgeon to the Westminster Hospital, and Lecturer at the School of Anatomy, Physiology and Surgery. Fourth Edition. London: Longmans, Green & Co. 1885.

In these "Tablets" a student will find great assistance in helping him to recall the anatomical relations of the various parts preparatory to examination, and the practitioner also whose memory is somewhat treacherous will be enabled to refresh it in a moment by glancing at the tables spread out clearly and distinctly before him.

How We Treat Wounds To-day. A Treatise on the Subject of Antiseptic Surgery which can be Understood by Beginners. By Robert T. Morris, M.D., late House Surgeon to Bellevue Hospital, New York, etc. Pp. 161. New York and London: G. P. Putnam's Sons.

The title of this little book indicates precisely its scope and intent. The author has done his task well. In language terse and in aphorisms pungent Dr. Morris defends antiseptic surgery, and offers directions for its application in every-day practice which are evidently the outcome of actual observation. Although the language is somewhat enthusiastic, the picture is not overdrawn, and the results of Lister's great innovation are carefully considered.

Its clear instructions for the preparation of the dressings (giving even the cost and place for purchasing) will enable the general practitioner who is removed from the great cities to provide for emergencies, and the author's incisive method of impressing the principles and practice of "genuine antisepsis" will render the intelligent physician so watchful and exact in its execution that very soon "he will find himself proud of his results." The antiseptic treatment of all wounds is minutely detailed under their respective titles—open, lacerated, etc. Hence the practitioner need only refer to the proper chapter to find himself complete master of the situation.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, Monday, February 8, 1886.

STEPHEN SMITH, M.D., CHAIRMAN.

DR. R. F. WEIR read a paper (see p. 321) on

THE TREATMENT OF VARICOCELE.

DR. ROBERT ABBE agreed with Dr. Weir's conclusions almost entirely, and he would, therefore, confine his remarks to the incidents connected with the operation. A radical cure was not always accomplished by simple ligation of the veins subcutaneously with catgut. It was in most cases accomplished where the varicocele was not a large one. But, as Dr. Weir had shown, there were several veins, and while the ligature shut off the main one, it sometimes occurred that the others became dilated, and thus there was a recurrence of the varicocele. He had seen this in two or three cases. Regarding the safety of the operation by subcutaneous ligature, he thought that was a very important matter. Although he knew of no recorded death, the operation in a considerable number of cases was certainly attended with unpleasant complications. We would like to be able to assure the patients that they could go out to their work within eight or ten days, but in the majority of cases they could not. Often two or three weeks, and even four or six weeks, elapsed before they could be discharged cured. Sinuses occurred at the seat of the ligature which sometimes required weeks to heal by granulation. There was also a complication which Dr. Weir did not speak of, and which Dr. Abbe had observed in a considerable proportion of cases, namely, an induration of the epididymis and testicle; a sort of subacute epididymitis and orchitis. This might occur, however, after other methods of operating. But it followed simple ligation, and also more complicated operations. He presumed it was due to tardy return of blood which was transmitted to the organ through the artery of the cord after the spermatic artery had been occluded by the ligature. The induration might take place during the first three or four days, or it might not come on for a week or ten days.

Dr. Abbe gave the results of operations for varicocele in St. Luke's Hospital during the past ten years. There were thirty-six cases in all. The method at first used was Wood's, described in the paper of the evening. Sixteen cases were treated by this method, of which four, not resulting in complete cure, were operated upon within a month by amputation of the scrotum. The antiseptic catgut ligature was employed subcutaneously in six cases, of which three were followed by ablation. The antiseptic silk ligature passed at two places was employed in one case. There was amputation of the scrotum alone in six cases, and amputation with ligation of veins in seven cases. The testicle and vas deferens were inflamed in four cases after Wood's method. In the case in which the silk ligature was employed there was epididymitis. Of the six cases treated by catgut ligature one had epididymitis. After amputation and the use of catgut there was epididymitis in all of the seven cases. There were abscesses in a number of cases in both the simple Wood's method and the open operation.

It seemed to Dr. Abbe we should be specially careful in the open operation in handling the parts. And we should not amputate too much of the scrotum; not as much as if we were going to rely upon amputation alone for a cure; for, by crowding the testicle up into an unnatural position, perhaps twisting the vessels, we shut off the vein and artery of the testicle for a time at least, and caused danger.

He recalled two recent cases in which the epididymis and testicle, becoming indurated, gave him some anxiety for a time, for he feared gangrene of the testicle or sloughing. They both came out nicely, however, although for more than four weeks the organ lay embedded in a solid inflammatory mass. In one similar case a slough took place, which, as near as he could ascertain, occurred in a portion of veins lying between two ligatures. That, however, was a sequel to a secondary hemorrhage taking place within twenty-four hours after amputation of the scrotum, although he thought he had left the wound perfectly free from danger of hemorrhage. He opened the wound, evacuated a quantity of clot, ligated the small bleeding vessel, and the case did well except for the slough mentioned.

DR. M. H. HENRY had been interested in the paper read by Dr. Weir, in which he gave an account in a very terse and elegant manner of the procedures that had been adopted for the cure or relief of varicocele. He supposed it would be just as well to begin with the relation of his personal experience, which commenced about 1856, consisting at first in observing what others did. About 1860 Dr. Henry performed Ricord's operation, but without very good results. He was always struck with the uncertainty of a cure when ligatures were employed. There was no doubt then, and there is no doubt to-day, in his own mind, that the ligation of the veins was dangerous, not only to life, but it was liable to be followed by atrophy of the testicle, and of being unattended by any beneficial result. Now, one of the greatest inconveniences from which patients suffering from varicocele complained was that the length of the scrotum interfered with the crossing of the legs and with assuming other positions. Ablation of the scrotum would do away with this. Any of the other operations described by Dr. Weir, subcutaneous ligature, ligature and ablation of veins, and ligature with ablation of the scrotum, were regarded by Dr. Henry as dangerous. Complete ablation without ligature would cure the varicocele, and if performed after the manner which he had adopted and described, it was the best and safest operation. Dr. Henry claimed nothing new with regard to the method excepting that he had made it safe. He described different clamps which had been employed for taking up the redundant tissue during the operation, and then showed the superiority of his own. He excised all redundant tissue, putting the testicle in the same position which it occupied when exposed to cold, and inasmuch as the scrotal tissue had been so greatly stretched, he did not think there would be danger of elongation from further resiliency. Cases which he had operated upon many years ago showed a complete cure. In 1880 he read a paper before the Academy, giving the results of his treatment, and the method had been employed more or less by different operators. Dr. Henry had noticed that most cases of varicocele occurred in persons of delicate health. He had never seen a case of severe varicocele without a redundancy of scrotal tissue which required to be removed, and if we followed this procedure we would not be troubled with abscess, following the use of the ligature, and other unpleasant symptoms which attended other methods described. In three of his cases the varicocele had been accompanied by hydrocele. One of these cases he saw twelve years afterward, and there had not been any return of the hydrocele.

The clamp employed by Dr. Henry was easily adjusted, never slipped, and formed, as it were, an artificial raphe corresponding to the normal raphe in the scrotum.

DR. CHARLES MCBURNEY had treated a good many cases of varicocele in both hospital and private practice, and his treatment had consisted of three different methods. The first was adopted a good many years ago, before he had become thoroughly acquainted with antiseptic surgery, being the use of Wood's clamp described by the author of the paper. The results were satisfactory; indeed, he must say very much so, except that the instrument itself was uncomfortable. There was some

suppuration in the track of the wire. The second method consisted in a combination of Wood's clamp with amputation of the scrotum, and was employed where there was a redundancy of scrotal tissue. The third method was the use of the subcutaneously applied catgut ligature. This he had used in a good many cases since 1880, and with the greatest satisfaction. It was very easily applied, it caused no distress in recovering from the anæsthetic. He had employed it without an anæsthetic and without causing discomfort. He had never seen suppuration follow its use, and the results in general had also been positively satisfactory as regards cure. He had never resorted to excision of the veins, and at present he did not look forward to excision of the veins in varicocele as an excellent measure. If all we desire to accomplish was simple occlusion of the veins, he thought the skilful application of the ligature would be sufficient, and the subcutaneous catgut ligature would answer this purpose admirably. That one could fail to apply the ligature in a manner to include all of the veins, was undoubtedly true. But he would, he thought, always make use of this method in preference to the open one, as he could hardly see how the latter offered a greater probability of occluding the veins.

As to ablation of the scrotum, he thought all surgeons would agree that where there was a redundancy of the scrotum it was desirable to effect suspension, and the most satisfactory way was, of course, to shorten the scrotum itself. But he could not agree with Dr. Henry's conclusions with regard to the effect of amputating the scrotum. Dr. McBurney had seen varicocele in cases in which there was no elongation of the scrotum, and probably had never been. It would have been difficult to say whether one testicle was lower than the other. He had seen one case—and it carried with him a good deal of weight—in which the varicocele returned after perfect suspension by ablation of the redundant scrotum. To be sure that was only one case, but that case was sufficient to satisfy him that amputation of the scrotum alone was not always a cure for varicocele. Where the scrotum was elongated and the testicle was unsupported, Dr. McBurney thought amputation was better than artificial support, and the instrument invented by Dr. Henry for amputation was better than any other which had been recommended.

Dr. George A. Peters had employed the best method in use at different periods during his surgical career. At one time he used Wood's clamp, and his experience with it had been very satisfactory. Occasionally he had suppuration, but he learned to have less and less the oftener he did the operation. The great trouble seemed to be to know just when to remove the wires. At first they were left too long, and afterward he sometimes removed them too soon, but in general the results had been quite satisfactory. Subcutaneous application of the catgut ligature, however seemed to have given even better results than Wood's clamp. Dr. Peters had amputated the scrotum a number of times, but he had not done both operations on the same patient. He thought, however, he would associate ablation and ligation hereafter. He should say that it seemed to him ablation did not offer as good a chance for a cure as ligation. But where there was redundant scrotum, requiring the use of a suspensory bandage, he would amputate.

Dr. A. M. Phelps, of Chateaugay, N. Y., by invitation, said he had been much interested in the discussion of the question of the treatment of varicocele. He had had some experience with the different methods described, and, as had been said by others, he had had some good results and some bad. He was rather in favor of removing as much of the scrotum as possible, and at the same time ligating the veins. He had had only one case in which there was bad suppuration, and there it was probably because due regard was not paid to antisepsis.

The Chairman thought from his own experience that the truth probably lay somewhere between the extreme opinions which had been expressed. There was no question at all, he thought, but what varicocele might exist without an elongated scrotum. He had seen that in several instances. In such cases, of course, amputation would not be the remedy. Ligature with catgut had given the best results, and it could be used without danger, excepting, perhaps, that of induration of the testicle alluded to by Dr. Abbe. Immediate bad effects he thought had been avoided almost entirely. But when there was elongation of the scrotum he thought there was no question at all but what amputation was best, and Dr. Henry's instrument was much the best he had ever used. He took the ground, in practice, of resorting to whatever method seemed best suited to the case. It seemed to him there was a class of cases in which both amputation and ligation were required.

Dr. Weir said, with regard to subcutaneous ligature of the veins, we should not go too close to the testicle. The open wound had the merit of quickness, and in hospital practice, where due care could be given to the case, treating it antiseptically, it had advantages, but for general practice he would not advocate it. He fell back on simple ligation for small varicocele, and in other cases amputation with a certain amount of ligation. We were liable to make the error of using too many ligatures. As to amputation of the elongated scrotum alone, it was not so reliable. Absolute cure of the varicose condition by ablation was extremely rare.

Dr. Stephen Smith was elected Chairman, and Dr. A. B. Judson, Secretary, for the ensuing year.

The Section then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 27, 1886.

John A. Wyeth, M.D., President, in the Chair.

The special subject for the evening was

INTESTINAL VOLVULUS,

and the discussion was opened by Dr. R. Van Santvoord with a paper (see p. 329).

ELONGATED AND DISPLACED SIGMOID FLEXURE.

Dr. L. Emmett Holt presented a specimen with the following history: It was taken from the body of a child aged thirteen months, who had died of pyelo-nephritis. The only symptom during life which seemed to bear any relation to the displacement was a persistent tympanitis, which had existed for months, and was much of the time excessive.

On the autopsy the sigmoid flexure occupied the umbilical region and was much distended with gas, so that it resembled the stomach. The descending colon was normal in size and position, but at the crest of the ilium the intestine was slightly twisted upon itself and passed in front of the small intestine to the right of the median line, and descended into the pelvis near the *right* sacro-iliac junction. The sigmoid flexure measured ten inches in length, being longer than the descending colon. Its mesentery was much elongated, but its walls, except a degree of attenuation from the distention, showed nothing pathological.

The case was an illustration of a condition not very unfrequently seen, and undoubtedly having an influence in the production of volvulus, though that condition could hardly be said to be present, as neither vomiting, constipation, nor any other signs of intestinal obstruction had existed.

The President said that one of the chief points of interest in this class of cases was with reference to surgical interference in intestinal obstruction from any cause. He believed that the rule should be, not to wait even twenty-four hours when there were well-marked symptoms

of obstruction. It would be wiser to explore at once—which, under ordinary circumstances, was not a dangerous procedure—and then a positive diagnosis could be made, and in most cases the obstruction removed. If the exploratory incision is made within twenty-four hours, it is not dangerous, and all obscure points which cannot be made out by any other method can be solved.

With regard to puncturing the intestine, either after it had been exposed or through the abdominal walls, Dr. Wyeth had punctured hernial sacs in two cases. The punctures were made simply for the relief of pain, due to distention, in hopeless cases, and in each instance he had an opportunity to examine the intestine at autopsy, and found that the holes had remained open so that the contents could still escape through them, although it was several days after the punctures were made before death took place.

Dr. Van Santvoord said that the probable reason why the punctures did not remain open in his case was because the cæcum was immensely distended, and with the collapse of the gut there was a corresponding diminution of the size of the openings. The use of a small needle in a hernial mass was somewhat different than its use in a largely distended intestine through a distended abdomen. It is a fact well established that these punctures have been followed by extravasation of fæces and peritonitis, and their use through the unopened abdomen is discouraged by Mr. Tait.

Dr. Wesley M. Carpenter referred to an act which was played in the same amphitheatre in which the Society was then holding its meeting. The late Dr. Willard Parker was lecturing on strangulated hernia, and mentioned the embarrassment which sometimes attended the escape of several coils of intestine from the abdominal cavity. This condition of things was illustrated by a striking picture.

With regard to the treatment which the protruding intestinal coils, under such circumstances, should receive, he spoke of the temptation which might arise to puncture them, but emphatically warned the students against yielding to the temptation, because of the great liability to the escape of intestinal contents and the development of peritonitis.

After Dr. Parker had passed this point and got well toward the close of his lecture, the late Dr. Alexander H. Stevens entered the amphitheatre, and before the hour expired, Dr. Parker invited him to make some remarks to the class. This venerable surgeon said that he did not know that he had much to add to what he had heard on the important subject of the lecture, but his attention had been attracted to the very embarrassing condition of things illustrated by Professor Parker's diagram on the wall, and he would like to say that the very best plan of treatment of the distended gut, under such circumstances, was to make numerous punctures with a fine cambric needle and allow the gas to escape, when the intestine could be easily returned to the abdominal cavity and no harm would follow the operation.

Whereupon Dr. Parker smiled, the students smiled, the bell rang, and the class was dismissed.

Here were given, by two of the great surgeons of this country, opinions which were directly opposed to each other, and many a confiding medical student saw for the first time an illustration of the adage, "Great men will differ."

From the number of cases in which puncture of the intestines, either after they had been exposed or through the abdominal walls, has been done without consequent harm, one might be led to resort to it without hesitation; but there is a sufficient number of cases on record in which these punctures have been followed by evil results to warn us against their indiscriminate use.

Dr. J. Lewis Smith asked the President if he would resort to an early operation in ordinary intussusception occurring in an infant. He had succeeded in reducing intussusception with injections of water as late as the third day. He had no doubt, however, that many lives might have been saved by operation, but thought that, perhaps, an exception with reference to intussusception might be made, as to resorting to operative interference as early as indicated by Dr. Wyeth.

The President asked Dr. Smith what proportion of cases of intussusception had recovered where no operative interference had been made.

Dr. Smith said that up to the last four or five years the proportion of deaths had been very large. But he thought that he could now detect the condition early, and therefore be able to commence treatment within the first day.

The President said that the hopelessness of these cases after a few days called for reduction of the intussusception within twenty-four hours.

Dr. Smith said that unfortunately, in most cases in infants, purgatives had been given before the physician was called, and their action being pernicious, the obstruction was already so great and the invaginated mass so large, that it was difficult to reduce it. But with early diagnosis and the avoidance of purgatives, and treatment by injections of water, with kneading the belly, he thought that success might be obtained in perhaps one-half of the cases.

Dr. Van Santvoord said that Lichtenstein, if he recollected correctly, placed the mortality in intussusception at seventy per cent.

The President thought that large injections of water and distention of the intestine with gas, were equally as dangerous as the exploratory operation, and certainly not as positive with reference to diagnosis and result. He had come to this conclusion from the study of hernia cases. He did not believe that a patient with strangulated hernia would ever die, if operated upon within from *six* to twelve hours after the strangulation occurred, or at least the rate of mortality would be reduced to almost zero. He believed that it was from waiting that the disaster came in these classes of cases.

Dr. Smith had seen several cases in which he had been sorry that laparotomy had not been performed; one in particular, the specimen from which he had presented to the Society.

The President said that he operated four weeks ago on a patient with symptoms of intestinal obstruction, at the junction of the sigmoid flexure and the rectum. Not knowing what the exact condition of affairs was, he anæsthetized the patient, and performed linear rectotomy, passed his coned fingers up to the point of obstruction, pushed it up an inch or so, and, strange to say, relief of the obstruction at once followed. Although it was not then made out, he had regarded the case as one of prolapse of the sigmoid flexure into the rectum.

Dr. Holt had recently seen the report of two or three cases in which injections of water, two to three days after the obstruction occurred, resulted in perforation—showing that the method is not without danger, if the symptoms are acute and the obstruction tight.

Dr. Smith had not seen an ill result from the use of water, but had seen one case of rupture produced by inflation.

Dr. Boldt raised the question as to the use of opium in cases of severe pain and doubtful diagnosis; and referred to a case in which, after the administration of a hypodermic injection of morphine the pain was relieved and the vomiting ceased. The case was one of umbilical hernia, and the question was, would it have been preferable to have operated at once?

The President said that he should, in such cases, give morphine to relieve the pain, and then operate.

Dr. Van Santvoord thought it wise to keep in mind the fact that not unfrequently, according to the urgent symptoms present, it would seem that some kind of obstruction existed, but the patients were relieved entirely by injections of morphine. Within the last two years he had seen five such cases, in which he felt almost certain that some form of obstruction was present, and yet all

the symptons passed off under the influence of opium. It had been a growing impression with him that the cases of possible intussusception, or twisting of the gut, which subsided spontaneously, or with a single injection of morphine, were rather common. Moreover, it should be borne in mind that those who wrote on this subject were chiefly surgeons who saw severe cases, and therefore had a rather exceptional experience; of course, they are guided in what they say by what they see.

The President said that the symptoms mentioned in the cases referred to by Dr. Van Santvoord did not mean obstruction which would lead to exploration of the abdominal cavity. He thought there was no stronger argument in favor of surgical interference than the quotation made by Dr. Van Santvoord, that seventy per cent. of the cases of intussusception terminated fatally.

Dr. Van Santvoord said that the cases referred to in the quotation came from the records, while the slight cases did not get recorded at all.

The Society then went into executive session.

Stated Meeting, February 10, 1886.

John A. Wyeth, M.D., President, in the Chair.

Dr. L. Waldstein, Chairman of the Committee on Microscopy, reported that the specimen presented by Dr. C. H. Knight at the last stated meeting was

A SIMPLE FIBROMA

of the vocal cord, which did not implicate the mucous membrane proper.

Dr. T. Mitchell Prudden presented a specimen, with microscopic sections, of

CHRONIC LOCALIZED ENDOCARDITIS AND INTERSTITIAL MYOCARDITIS FROM INFLAMMATION AND PARTIAL OCCLUSION OF CORONARY ARTERY.

He was indebted for the epitomized clinical history to Dr. A. B. Pope, Resident Physician to Bellevue Hospital. Male, fifty-two years of age, United States sailor, single; mother died of phthisis; family history otherwise good; never had rheumatism; well-marked alcoholic history; seven years ago had sore and suppurating bubo, but no secondaries. Patient says that in wet weather he has slight cough; has had night-sweats and one hemorrhage from lungs. For some time he has had ringing in the ears and spots before the eyes. Six days before admission he vomited several times and began to have diarrhœa. He was admitted on January 6, 1886, cyanotic and suffering from severe dyspnœa. Heart-beats were regular but frequent (124), very feeble, no murmur. No tenderness or pain in chest. Examination of lungs showed good resonance, with some scattered crepitant and sub-crepitant râles, with few mucous râles. There was no œdema of feet or legs. The urine examination showed only water, no albumen. On January 9th he had less dyspnœa, but was "out of his head." The next day his craziness disappeared and his dyspnœa returned, but was somewhat relieved by opium. He continued to have attacks of very severe dyspnœa, with some symptoms of pulmonary œdema, and so died on January 18th, twelve days after admission, and eighteen days after the commencement of his attack. The temperature had ranged from 99° to 102°.

Autopsy.—Brain not examined.

Heart, right auricle and ventricle filled with a voluminous, loose red clot, pulmonary and tricuspid valves normal. Aortic and mitral valves show scattered patches of fatty degeneration, as does also the aorta. The left ventricle shows a patch of much-thickened endocardium, about five millimetres by seven millimetres, occupying the apex of the heart, and extending anteriorly and over the lower portion of the septum. The endocardium in some parts of this region is five millimetres in thickness. A dense, whitish blood-clot is entangled among the papillary muscles, and firmly adherent to the heart-wall at the point of lesion. The wall of the heart itself over the area corresponding to the endocardial lesion shows a replacement of its inner half by new, dense connective tissue.

The heart-muscle in this region is found by microscopical examination to present a moderate degree of fatty degeneration.

The coronary artery leading to the affected region shows, about two centimetres below its origin, a sudden constriction from the formation of a dense mass of new tissue in its walls. Below this, for about one centimetre, the artery is very narrow, the seat of obliterating endarteritis and atheroma, and is nearly occluded by a thin parietal thrombus.

Beyond this point the artery widens out, and with the exception of a few patches of fatty degeneration in its wall, appears normal.

The coronary artery leading to the right ventricle shows a small patch of atheroma near its origin.

Right pleural cavity contains about five hundred cubic centimetres of clear, yellow serum, with a few flocculi of fibrin. The pulmonary pleura over the upper lobe is covered with a thin pellicle of fresh fibrin. The upper lobe presents the appearances, both gross and microscopical, of lobar pneumonia in a condition of advanced resolution. The left lung presents general old pleuritic adhesions, and partial pneumonic consolidation in the lower lobe, similar to that on the right side.

Spleen shows moderate degree of chronic interstitial inflammation; kidneys are small with free capsule, slightly nodular surface, thin and irregularly marked cortex. Liver is normal.

He presented the case because the specimen showed in the most striking and evident manner the exact character of this always interesting and important heart lesion, and furthermore, because it afforded an excellent example of a class of cases in which persons go on enjoying tolerably good health, with very extensive lesions of an important organ, but succumb to the original disease when an intercurrent disorder disturbs the equilibrium under which the life functions were being fairly well maintained.

Dr. Wesley M. Carpenter asked if microscopical examination was made of the arterioles of the kidneys.

Dr. Prudden replied in the negative, and that the diagnosis of renal disease was based on the gross appearances.

Dr. Carpenter said he asked the question because, somewhat recently, there had been considerable discussion concerning the relation existing between fibroid degeneration of the arterial system and Bright's disease of the kidneys. He had examined the blood-vessels of kidneys removed from the bodies of persons who had given the ordinary history of chronic Bright's disease in a large number of cases, and in a goodly proportion of them had found no particular change in the arteries. These examinations were fairly reliable, although made in the ordinary line of pathological work and laboratory instruction. In other cases, however, in which persons had died with the usual symptoms of chronic Bright's disease, and in which the kidneys had furnished the lesions of chronic diffuse nephritis, the arteries exhibited very marked changes, not only in the external coat, but also in the intima. There were, therefore, according to his observations at least, exceptions to what perhaps, from what had been written, might be inferred to be the rule—namely, that fibroid degeneration of the blood-vessels was necessarily a part of the morbid anatomy of chronic diffuse nephritis.

Dr. Prudden could concur in Dr. Carpenter's remarks, but in this particular case the lesion in the coronary arteries seemed to be local; there was no general atheroma.

Dr. Carpenter said that was the reason why he asked concerning the blood-vessels of the kidneys. The case

seemed to be an illustration of the fact that such fibroid degeneration of the arteries might be local. The special point to be made was that fibroid degeneration of the blood-vessels or arterio-capillary fibrosis, was not necessarily a part of the morbid anatomy of chronic Bright's disease.

Dr. Louis Waldstein had found fibroid changes affecting the arteries in kidneys the seat of chronic Bright's disease, but he was not prepared to say that it was present in all cases. Its existence depended very much upon another factor, and that was the senile changes present in the body under examination.

It appeared to him that the examinations made by Gull and Sutton, and to which doubtless Dr. Carpenter referred, were mostly in elderly people, and that the changes described when the kidney trouble was found were senile in character. Fibroid change in the arteries might exist in various organs, without any change at all which could be properly regarded as belonging to Bright's disease. On the other hand, he had seen cases, as remarked by Dr. Carpenter, in which Bright's disease existed with fibroid changes affecting the blood-vessels, and especially those of other organs of the body than the kidneys.

With reference to Dr. Prudden's specimen, he had had occasion to examine the coronary arteries with fibroid change in two cases very thoroughly, and singularly enough, he did not find the changes which Dr. Prudden had described. Instead of proliferation of the connective tissue he found emboli and degenerative changes in the myocardium. In both cases there was the clinical history of repeated attacks of angina pectoris.

The President said the same point was brought out in the Society about two years ago, in connection with a specimen in which the condition referred to by Dr. Waldstein was found, but the symptoms were about the same as those given in Dr. Prudden's case.

Dr. Prudden believed it to be essential to separate sharply the cases of partial and complete occlusion of the coronary artery.

In one class of cases there is a sudden and complete obstruction of the coronary artery, followed by fatty degeneration of the myocardium that may lead to rupture, although rupture does not always occur. In another class of cases a thrombus occludes the artery, and from this small emboli become detached and find their way to other parts.

Furthermore, there is a class of cases in which there is only partial occlusion of the artery from thrombus, but there is subsequent connective-tissue proliferation.

In the specimen referred to by the President, it seemed to him that the heart-muscle had undergone degeneration, and afterward fibroid change took place; whereas in the specimen just presented there was a well-defined area which had probably not gone through the degenerative stage, but in which new connective tissue had formed from the beginning.

Dr. L. Emmett Holt presented specimens from a case of

ACUTE NEPHRITIS IN AN INFANT.

Dr. Waldstein asked Dr. Holt how he collected the urine from small children.

Dr. Holt said the best method he had employed was to place a clean sponge over the genitals and fasten the diaper over that.

Dr. Waldstein said he asked because he regarded it as very important to examine, as often as possible, the urine of children who give symptoms which cannot be grouped readily. About one year ago he was called suddenly, in the night, to see a child that was taken sick two days before, and when he arrived at the house, within a very short time from the call, the child was dead. The symptoms had not led the attending physician to suppose that the child was so ill. The post-mortem examination revealed morbid changes in the kidneys only, which were very much enlarged, and showed both interstitial and parenchymatous nephritis.

Dr. Waldstein had since read a paper by some German writer, who recommends the use of a catheter for collecting the urine in small children.

Dr. Carpenter said that wrapping the genitals and covering the abdomen suddenly with flannel wrung from hot water, had been suggested as an efficacious method of making children empty the bladder.

Dr. Boldt said he had adopted this method, and had found it successful in a large proportion of cases.

Dr. Holt said it was resorted to in his case several times and with good effect. He also regarded it as important to recognize a class of cases in which there is no retention, but a temporary suspension of the action of the kidneys, and this state of affairs might continue for twelve or twenty-four hours without apparent cause. One point of interest in his case was the fact that a child could have so extensive kidney disease and yet all the ordinary objective symptoms be absent.

Dr. J. E. Newcomb asked Dr. Holt if he had noticed any tendency to collapse in the use of antipyrin.

Dr. Holt said that he had used it in fifty cases in children, and had not seen the slightest tendency to collapse. In one case the drug was administered in a dose of ten grains without unfavorable symptoms.

Dr. Newcomb said that he knew of one case in which two grains, given to a child aged six months, produced an alarming collapse, from which, however, the child recovered.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

[Regular Special Correspondence.]

MR. SUTTON'S LECTURES ON EVOLUTION IN PATHOLOGY — THE ORIGIN OF TUMORS — THE ADMISSION OF WOMEN TO THE MEDICAL PROFESSION — THE LATE MR. WORDSWORTH.

LONDON, February 25, 1886.

In my last letter I gave a brief *précis* of Mr. J. Bland Sutton's views on Inflammation, as expounded by him in his second "Erasmus Wilson Lecture" at the College of Surgeons. The subjects discussed by Mr. Sutton are so important that, at the risk of wearying your readers, I venture to devote some further space to give a short account of his third and concluding lecture. In this the etiology of tumors, or, as the lecturer preferred to call them, neoplasms, was treated of. Inflammation and tumors, although they may not, as some students think, form the whole, or even the greater part, of pathology, even from a surgical standpoint, are yet, at any rate, two subjects eminently interesting to every practitioner. I would not have it understood that Mr. Sutton's first lecture was one whit less interesting or important, but it dealt with matters less interesting to the clinician, so I have not given any report of it.

Mr. Sutton gave the following definition of a neoplasm: "A new growth characterized by histological diversity from the matrix in which it grows; it is distinguished from inflammatory new formations by the variety of its forms, its mode of origin, and the frequent inherent tendency it has to increase." He ranged neoplasms in three groups: 1, Mesoblastic, including the connective-tissue growths; 2, epiblastic and hypoblastic, comprising adenomata, carcinomata, and papillomata; 3, teratomata, or neoplasms containing tissues derived from the three embryonic layers. The histological details would determine the varieties.

Mr. Sutton went on to say that Cohnheim's hypothesis, which ascribed the origin of neoplasms to persistent rudiments, had the most to recommend it if the term "tumor" were used in its most restricted sense. This hypothesis

he proceeded to expound, and showed the immense number of facts which can be brought forward to support it. He was careful to explain that he used the term "germinal rudiment" in a more extended sense than that in which Cohnheim employed it. We had evidence, he said, that such germinal rudiments did exist, and that such germs might become tumors. No one disputed the origin of true cysts from functionless ducts and tubules, and why should the origin of solid neoplasms from rudiments be doubted, especially if such untransformed tracts of tissue could be demonstrated unequivocally to be heteroplastic in their nature? It was, of course, easier to demonstrate the origin of cysts from pre-existing germs than it was ever likely to be in the case of neoplasms, but still we could show that in the region where particular tumors were more prone to occur there was embryological testimony to explain why they occurred there. An epithelioma on the lip was what we expected, but a similar growth starting in the midst of a block of cartilage was incomprehensible. A piece of cartilage in the midst of the shaft of a femur of a boy five years of age was cartilage in the wrong place. Such islands were, nevertheless, to be met with by those who cared to expend time and labor in searching for them; and, as pointed out by Virchow, might in later life become the starting-point of enchondromata. The lecturer referred to the development of enchondromata (and also osteomata—the latter being simply higher developments of enchondromata) from those regions of the skull in which, even in the oldest, traces of the cartilaginous matrix remain. Such regions were the region immediately posterior to the external auditory meatus, the neighborhood of the nasal fossæ, the septum nasi, and the vertebræ, and these were favorite situations for enchondromata and osteomata. Moles and nævi might be regarded as tumor-germs. There were many instances of a small nævus, untreated in early life, forming later on an angioma of some size, and becoming a source of danger. All germs or rudiments did not become tumors. Three courses were open to them. They might (1) undergo transformation into normal tissue; (2) remain quiescent; (3) be stimulated into abnormal activity by irritation. If we admitted the origin of enchondromata, osteomata, and angiomata from rudiments, need we doubt the origin of other varieties of mesoblastic tumors from similar sources? There was this important fact—they were always confined to regions of the body where the elements of which they were composed were to be unequivocally demonstrated.

Referring to sarcomata, Mr. Sutton said he had no doubt that many cases of round-celled sarcomata were not genuine neoplasms, but the result of the irritation of micro-organisms. He alluded to a paper by Mr. Pearce Gould showing the apparent traumatic origin of many sarcomata, and mentioned several observations tending to the same conclusion which he had himself made on animals. Careful examination, he said, of many of these cases supported the notion that after the injury the inflammatory tissue, or tissue of repair, exceeded normal limits, developed erratically, and played the part of a tumor-germ.

The second group of neoplasms contained, in addition to mesoblastic tissue, epithelial elements derived from either the epiblast or the hypoblast, and in their structure more or less resembled glands. If the resemblance was close, the neoplasm was termed an adenoma, and the cells clothed the alveoli in a regular manner; but if the cells were merely tumbled in confusion into the alveoli, it was called a carcinoma. The distinction between hyperplasia of a gland and a glandular neoplasm was simple—the latter was impotent to produce the secretion normal to the gland. Carcinomata resembled secreting glands in their relation to blood-vessels, and in their mode of development. The abnormal epithelial growths in carcinomata mimicked the mode of development of glands by a down-growth of epithelium from the hypoblast or epiblast. There was no valid reason why the abnormal down-growths of epithelium occurring in the neighborhood of any glands, and forming carcinomata, should not be considered tumor-germs in the same sense as the little masses of cartilage lodged in the interior of a long bone. If we were asked why cancer should be more frequent in the old or debilitated than in the young or vigorous, the answer was that young trees brought forth the best fruit because in them vigorous growth was at an acme; when this faded, then that which was inferior was produced. So with glands. Irritation in the young produced papillomata; in the old, cancer.

After considering teratomata, and diverging from his subject proper to give a few words about congenital cervical cysts, Mr. Sutton concluded by saying that any one ambitious of becoming a scientific pathologist must first be a sound human anatomist, acquire a tolerable knowledge of comparative anatomy, and then keep well abreast of the teachings of embryology. These qualifications are so admirably combined in Mr. Sutton himself that he might have been accused of self-praise, were it not for his modesty. Given these qualifications, and the pathologist, he said, would then, in spite of himself, become a firm believer in the fundamental principles of the grand doctrine of "evolution."

No more striking proof of the mutability of human opinion could well be adduced (from a medical point of view) than the change of front made by many leaders in the profession in regard to the question of the admission of women to practice. At first vigorously opposed, then treated with contempt, their claims now meet with marked approval in many quarters. A great step was gained when the University of London threw open its doors to women, and a still greater gain was the extension of the privilege to its medical degrees. Sir William Gull presided last week at a meeting, held in the rooms of the Medical Society of London, convened to found a scholarship as a memorial to the late Miss Helen Prideaux, a distinguished medical graduate of the University. Miss Prideaux, after obtaining the M.B. degree with high honors, died from diphtheria contracted in hospital practice, on the eve of presenting herself for the M.D. examination, in December last. Sir William Gull confessed that he had opposed the admission of women to medical studies, but was now in favor of it. Such an opinion, though shared by many, is, however, by no means universal among medical men. One distinguished graduate in medicine, of the University—a well-known physician attached to one of the largest and oldest of the metropolitan hospitals—has ceased to use the title of M.D. since women have been allowed to enter the University, and even omits it from the Medical Directory. About ten years ago, when the question was being discussed, an eminent London physician, who had graduated at the University with distinction many years before, announced publicly that were the portals of the University opened to women, he, for his part, would seek a degree elsewhere. The promise, however, remains as yet unfulfilled.

Among recent deaths is one of a surgeon of some note—Mr. J. C. Wordsworth. Mr. Wordsworth was formerly Assistant Surgeon to the London Hospital, and Demonstrator of Anatomy in the Medical College. When the Crimean War broke out he went out to the seat of war as a surgeon. He did not go for a mere surgical picnic, as has been done several times of late years by hospital surgeons when any little war breaks out, but resigned his appointment and remained at the Crimea until the end of the campaign. He was appointed a surgeon on the army medical staff, and had charge for a time of the British Hospital at Smyrna. On his return to London he devoted himself to ophthalmic surgery, in which he attained no inconsiderable practice and repute. Mr. Wordsworth was quiet, unassuming, and genial, and much liked by his immediate associates. I believe he was no relation to the poet Wordsworth.

OUR PARIS LETTER.

(From our Special Correspondent.)

DEATH OF DRS. MACCARTHY AND WILLIAM E. JOHNSTON.

PARIS, February [illegible], 1886.

IN the space of four days the English and American colonies of Paris have each lost one of their oldest and most eminent physicians by the death of Dr. MacCarthy and that of Dr. William E. Johnston. Dr. MacCarthy died on Wednesday the 10th inst., in the seventieth year of his age. He was a native of Ireland, but came over to Paris, at an early age, with his father, who became professor of English to Louis Philippe's family. Dr. MacCarthy prosecuted his medical studies in Paris, and took his degreee in 1844. He acquired a very good practice, not only among the English residents in Paris, but also among the Americans and French, by whom his loss will be very much felt.

By the death of Dr. Johnston, the well-known American physician, the American colony in Paris has sustained a great loss. He had been more or less an invalid for some time, and the particular cause of his sufferings was somewhat obscure until about three years ago gastric symptoms manifested themselves, which seemed to remove all doubt as to the nature of his malady, though to the last he himself would not concur with the diagnosis pronounced by other physicians. Dr. Johnston was a "Southerner," and it was after the "struggle" that he came over to Europe as a newspaper correspondent, in which capacity he distinguished himself as a very clever writer and an able critic.

In 1866 he received permission to practise medicine in Paris, where he resided till the day of his death, and acquired great popularity and fame, not only as a medical practitioner, but also as a wise counsellor, and he was always consulted by the representatives of the American Government in this country upon all matters coming within the scope of his profession. He rendered valuable services to the sick and wounded during the siege of Paris and during the Commune, for which he was created Chevalier of the Legion of Honor, and later on was raised to the rank of Officer. He was also Officer of the Order of the Crown of Prussia. His funeral took place yesterday at the American Church in the Rue de Berri, the service being performed by Dr. Hough. The American Legation was officially represented. After the funeral ceremony was concluded the body was removed to the new American church, where it was laid in a vaulted chamber to await removal to the United States. The lamented physician was about sixty years of age, and he leaves a widow and an only son.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 7, to March 13, 1886.

ROBERTSON, R. L., First Lieutenant and Assistant Surgeon (Fort Ringold, Tex.). Granted leave of absence for one month. S. O. 29, Department of Texas, March 5, 1886.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending March 13, 1886.

WOODS, GEORGE W., Surgeon. Ordered to Navy Yard, Mare Island, to relieve Surgeon W. K. Scofield, April 1, 1886.

SCOFIELD, W. K., Surgeon. Detached from Navy Yard, Mare Island, and wait orders.

THE HARVEST OF DOCTORS.—The statistician will soon be busy counting the number of graduates from the various medical colleges, and the old story of an overcrowded profession will be repeated.

New Instruments.

A NEW RECTAL SYRINGE.

By W. F. MORRISON, M.D.,

IT often happens that an irritable rectum or a sensitive sphincter ani prevents the administration of a rectal enema, and compels us to prescribe medicines which we

would like to avoid. To obviate this embarrassment, an instrument has been devised, and used with great satisfaction, which relieves this valuable method of treatment of many of its objectionable features.

This instrument consists of a long rubber tube with a bulb in the centre, like the ordinary household syringe, and is operated in the same way. On the receiving end is a leaden sinker, which by its weight holds the tube in its place in the basin. A fine strainer prevents foreign bodies entering the tube. The sinker and strainer may be readily detached, leaving the end like that of the ordinary syringe.

A nickel-plated tube through which the fluid passes is attached to the other end of the tube, and is so curved and finished that it forms a convenient handle.

A quarter of an inch from the tip a soft-rubber cushion is placed, which prevents the instrument from entering the rectum. This serves also to prevent the injecting fluid from escaping or flowing out at the side. It is seen that the tip does not pass through the sphincter ani, and in this respect the syringe differs from any other in use. It has been found that when the bulb is pressed the fluid is projected forward, and enters the rectum through the sphincter ani without any constrictive action of that muscle, and no peculiar feeling of resistance or pain is noticed.

This instrument is peculiarly valuable where the parts are sensitive, or where there are piles, fissures, or other diseased conditions. As a family syringe it is superior to the one now in use, which is inserted two inches into the rectum.

It is often impossible to administer an enema to a child on account of the local irritation caused by the introduction of the syringe. But with this device an enema of tepid water may be readily administered without exciting any unpleasant sensations.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 13, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small pox.	Yellow Fever.
Cases.								
March 13, 1886	1	1	42	5	7	[illegible]	3	0
Deaths.								
March 13, 1886		3	6	4	1	33	2	0

New York Post-Graduate Medical School and Hospital.—The annual dinner of this institution was held at Delmonico's, Thursday evening, March 11, 1886. The President, Dr. D. B. St. John Roosa, in opening the after-dinner speaking of the evening, referred to the fact that its foundation, in 1882, marked a new era in medical progress in New York. This Faculty were the successors of the Post-Graduate Faculty of the University. In order to carry out the plan of post-graduate instruction in a proper way, seven gentlemen composing that Faculty resigned and founded this institution, devoted solely to the requirements of practitioners in medicine. Three of these seven were in the present Faculty; one had died. The Faculty of the Post-Graduate Medical School and Hospital, being the pioneers in this branch of medical teaching, had found and surmounted the many difficulties in the way of such an institution, and had so impressed the principles of this branch of teaching upon one, at least, of the gentlemen composing the Undergraduate Faculty of the institution with which they had formerly been connected, that he allowed his name to appear as one of the directors of another school, with similar objects in view, which was founded shortly after the appearance of the announcement of the establishment of the school now celebrating the fourth, and by far the most successful, year of its existence. Over five hundred gentlemen, engaged in the active practice of their profession in all parts of this country, the West Indies, Australia, England, and Turkey, had availed themselves of the opportunities offered for post-graduate study, and the Faculty, in carrying out their original plan, had found it necessary to found a hospital in connection with the school. He congratulated the Faculty on the present prosperous condition of the institution, and commented upon the fact that it had more than seventy gentlemen composing the teaching and clinical staff. Besides some sixty members of the Faculty, several visitors were present, among whom may be mentioned Mr. Whitelaw Reid, Mr. C. C. Beaman, Mr. C. H. Kellogg, Dr. J. K. Smith, U.S.A., Dr. Abram Jacobi, President New York Academy of Medicine, Dr. Daniel Lewis, President County Medical Society, Dr. F. P. Foster, and the Rev. Dr. McArthur, all of whom took occasion to congratulate the college upon its success in ingrafting such an advance in the study of the science of medicine upon the incomplete courses pursued in the general undergraduate schools. Professor F. R. Sturgis then presented a few facts in regard to the Hospital Department, showing its growth from simply a private hospital to one where all manner of disease may be treated, and the poor receive proper special medical advice. He also referred to the foundation of the *Babies' Ward*, due to the persistent efforts of one of the instructors in diseases of children, Dr. S. J. McNutt, and of the present necessity of larger and more commodious quarters. He also referred to the possibilities that might be accomplished in these departments were the school properly endowed. Professors A. H. Smith, C. L. Dana, A. J. C. Skene, Wm. A. Hammond, and others also spoke. One hundred and fifty practitioners have already attended the sessions of the school since May, 1885, and new matriculates appear each week.

Frequency of the Use of the Forceps and the Results.—Formerly, the forceps was hardly ever resorted to until the parturient woman, worn out by the protracted sufferings she had endured, was almost moribund, and when, too, the child was probably dead, in consequence of the long-continued pressure to which it had been subjected. Thus twenty-six years ago, Dr. J. Hall Davis, in his work "On Difficult Parturition," informs us that he only found it necessary to use the forceps on seven occasions in 7,371 deliveries, or once in every 1,053 labors. In the statistical reports of the successive Masters of the Dublin Lying-in Hospital we find the most conclusive evidence of the advantage which has followed the judicious use of the forceps in later years in that institution. During the Mastership of Dr. Joseph Clarke, from 1787 to 1794, there were 10,387 deliveries in the hospital, and the forceps was only applied in fourteen of these, with six deaths. But the more easily used perforator and crotchet were resorted to in forty-nine cases, with fifteen deaths; and in his private practice, extending over forty years, Dr. Clarke only once attempted to use the forceps. In Dr. Labatt's Mastership, from 1815 to 1822, during which time 21,867 births took place in the hospital, the forceps does not appear to have been used in any instance. From 1826 to 1833, Dr. Collins used the forceps in 24 cases out of a total of 16,654, but employed the perforator in no less than 118 cases, with 24 deaths. From 1842 to 1845, Dr. Charles Johnson used the forceps in 18, the vectis in 16, and the perforator in 54 cases, in 6,702 deliveries. From 1847 to 1854, in Dr. Shekleton's Mastership, there were 13,748 deliveries in the Rotunda, and the forceps was now used in no less than 220 of these, and the perforator in 54. Dr. McClintock, who ruled the hospital from 1854 to 1861, brought the forceps into still more frequent requisition, and in his last three years of office employed it or the vectis in 76 cases, or once in every 60, in 3,700 deliveries, while the number of craniotomy cases was reduced to 5. The succeeding Master, Dr. Denham, was a still more constant advocate for the timely use of the forceps. To Dr. Johnston, the next Master, belongs the credit, however, of having brought the forceps into more frequent use than had ever previously been the case. Thus, from November, 1868, to November, 1874, in 7,027 deliveries the forceps was used in no less than 639 cases, or about once in every 11 cases, with only 39 deaths, while the proportion of craniotomy or cephalotripsy cases was reduced to 29. The foregoing statistics, as I have already said, unquestionably demonstrate that, as the forceps is used more frequently the mortality in the cases in which it is employed diminishes; and, secondly, also shows the happy effect of the free use of the forceps in lessening the proportion of craniotomy cases.—*Dr. T. M. Madden.*

Alfred Charles Post, M.D., LL.D.—Resolutions commemorative of his life and services, adopted by the New York Pathological Society, March 10, 1886:

Whereas, In the fulness of years, at the ripe age of eighty-one, our friend and long-time colleague has been taken from us in accordance with the faithful saying: "The days of our age are three score and ten; and though some men be so strong that they come to four score years, yet is then their strength but labor and sorrow: soon after it passeth away and they are gone."

Whereas, He was more than usually gifted, industrious, accurate, conscientious, pure, temperate, religious, skilled, learned in all medical, surgical, scientific, and classical lore, and gave this Society more than thirty years of his best labor. Be it

Resolved, That we will cherish his memory individually, and by preserving on our minutes and in our published transactions a truthful record of his useful and blameless life, to the end that other generations shall know him somewhat as we did.

Resolved, That while we sorrow and sympathize with his family and lineage in their great loss, we congratulate them that one so good and eminent was born among them, and was so long spared to them in health, prosperity, and honor.

Resolved, That, while we sorrow for ourselves, we rejoice that we had his wholesome example before us for such long series of years, and that part of his good repute will forever remain with us.

> "Nothing more for tears; nothing to wail
> Or beat the breast; no weakness, no contempt,
> No dispraise or blame. Nothing but was good and fair,
> And what may quiet us in a life and death so noble."

He has but gone to the beginning of peace.

Signed, John C. Peters, M.D.,
Wesley M. Carpenter, M.D.,
Royal W. Amidon, M.D

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Original Articles.

FAITH-CURES.

By JAMES HENDRIE LLOYD, A.M., M.D.,

INSTRUCTOR IN [illegible] IN THE [illegible] OF PENNSYLVANIA, PHILADELPHIA, PA.

To offer up sacrifices to the gods is human—at least the history of the human race would indicate this fact. The motive, no doubt, is usually some pressing self-interest; the circumstances have been, too often, the perversity and ignorance of self-esteem. The stern soul of Achilles, in its brutal and conceited grief, must immolate twelve captives on the pyre of Patroclus—to do what? The primitive man, we are told, never laughs; life is a burden to him, "roots are scarce," and he is in daily conflict with his great enemy—nature; but he, too, has already taken up this habit of offering sacrifice. Disease is a demon to be exorcised; death is a hideous penalty to be averted; incantations are better than drugs. In the evolution of religious sentiment these things have doubtless changed; the law of the survival of the fittest has inevitably crowded out these crude and cruel systems. Whereas there were formerly idols, there are now ideals. The material sacrifices of other days are in a measure replaced by a self-consecration; the gifts of wine and bullocks are discarded for a state of mental erythism—a so-called spiritual effect.

It must be apparent to a careful inquirer, however, that there are what the biologists call *reversions* in these modern forms of religious thought, which reversions proclaim infallibly their kinship to the older types. When Pieta proclaims that she has been cured of her neurasthenic spine by faith, *i.e.*, by a sort of ideal abandonment of self, with prayer and unreasoning confidence, to the divinity, she does not differ essentially, in her non-appreciation of the physical laws of disease, from the Egyptians who sacrificed in the temples of Canopus. The fundamental fact, in each instance, is that the devotee believes that the universal laws of nature are suspended for his or her special benefit by supernatural power. The zeal of some of these modern disciples is not unlike that of Elijah and the followers of Ahab, when they contended together to exhibit the power of prayer; and the presumption of the unfortunate priests of Baal appears greater, only because of its more tragic climax, than that of the faith-curer, who said that he furnished his house by prayer, even to the melodeon! We do not seem far removed from the classics when we read the story of the death of Dom Pedro's mother. The Empress, it seems, was devoted to a miraculous image of the Virgin, which performed cures; but the image was at last offended by being carried to the Empress when she was too ill to be carried to it, and not only allowed the imperial lady to die, but even killed off the Archbishop with cholera morbus.

A continued interest in this subject of faith-healing is perhaps excusable for several reasons. The mystery of the cases, and the astonishing results claimed, challenge the attention, and not unfrequently puzzle the understanding. They are generally so related also as to throw discredit and opprobrium upon the physicians who have happened to be in attendance upon the case. Then, again, they may lead to some astounding development in archæology, finance, or even in the dark sciences—as in the case at South Orange, N. J., where a woman, who had been a cripple for many years, was cured by faith; whereupon her husband immediately started a fund for $20,000 to enable him to recover a certain stone in the Sphynx, which is an infallible cure-all. Another reason is stated by the *Philadelphia Press*, which says that faith-cures are a good thing because, like the whipping-post in Delaware, they are cheap. But a more valid reason for interest in these cases, and the one which is the cause of this paper, is to endeavor to extricate a few of the exact facts from their perilous admixture with mysticism and fiction.

Some time in the early part of last year, the Society for Psychical Research, in Philadelphia, appointed a committee to investigate faith-cures. The writer was chairman of this committee, and in consequence has devoted more or less time to the subject. The object was intended to be entirely *psychical*, and not at all *polemic*. It was not proposed to enter into the general subject of answer to prayer, but simply to investigate these individual cases of alleged faith-cure. It was the personal belief of the writer that such investigations would lead to some interesting facts in psychology and, perhaps, psychiatry. Esquirol has said, "Generally, mental alienation is terminated by sensible crises," and it seemed a good thing to determine how far some of our remarkable cases were only these "sensible crises" occurring in a neurotic constitution. It was, of course, desirable to avoid the error of going over old ground entirely; it was well to be mindful of the hackneyed facts of the stock text-books and of the elaborated work of Tuke.[1] With the aforesaid object in view, the investigation was pushed with some vigor, and while it did not disclose the wealth of facts in matters psychical which had been hoped, it did bring to light a variety of interesting and even remarkable truths. A verbal report to the Society closed the committee's labors, and the chairman has felt free to record some of his observations.

First. The method pursued and difficulties met with Two series of questions were proposed, as follows:

A. (To Faith-curer): I. What diseases have you cured, especially *fevers?* (Typhoid, small-pox, scarlatina, measles, and graver forms of malaria?) *Nervous diseases?* (Paralysis, what form? Apoplexy, chorea, epilepsy?) *Tumors* (cancer and ovarian?) *Wounds* and *fractures?*

II. *Method?* (By faith alone, or were surgical or therapeutic means used in any cases?)

III. Patients' names and addresses, which would not be printed if so requested.

B. (To Patient): I. *History of case?* Cause, course, symptoms, duration, and treatment, with results? Condition just preceding cure? (Had patient been improving, growing worse, or stationary?)

II. *The cure?* Circumstances which induced application? Condition of mind at first—belief or doubt? Length of time to effect cure?

III. *Recent history.* Thoroughness of cure? Interval since cure? Relapses—how many? Is improvement more marked than that obtained by medical treatment?

The above questions were used for those who lived at a distance. In all cases where practicable a personal examination was requested; if such examination were not practicable the aid of the family doctor was solicited. It soon became apparent, in the search for cases, that the city of Philadelphia had not enjoyed the therapeutic benefits of faith in that superabundance which one might

[1] Influence of the Mind upon the Body, by H. Hack Tuke.

have supposed, and which seems to have been the fortune of more distant localities. What there is in the latitude and longitude of the Quaker City that predisposes its constitution to resist this mild remedy must be left for sanitarians to determine. It is certain, however, that, although the search was industrious, and even announced in the public press, and application made to the most distinguished practitioners of the cure (as shall be seen), there were only negative results obtained, which are nevertheless of value.

It did not seem difficult to obtain the addresses of cases in Boston, New York, and the West, but most of the letters written to them remain unanswered to this day, while some of the answers which were received await our more detailed criticism. Captain R. Kelso Carter, quite a distinguished supporter of the doctrine, and who has been announced himself as cured of "fatal heart disease," very kindly wrote a letter containing the following extracts: "Doubtless some healed ones would innocently submit to a medical examination. I would not, believing it to be dishonoring to my great Physician. I give my testimony—and I say Jesus cured me. I do not propose to submit to tests, to endorse God's notes of promise by the signature of men." The reports written by the patients themselves proved to be always so inexact and loose-jointed, that it was quite impossible often to make out the semblance of a diagnosis. Their likeness, indeed, to the cases advertised by the patent medicine men was very striking. They often, too, had a little of the tone of a modern clergyman's endorsement of soap.[1]

Dr. Charles Cullis, of Boston, is no doubt one of the most prominent practitioners of this newest school. The writer addressed a letter to him and received a very brief and unsympathetic reply, in which he said that he had cured all the diseases mentioned "except perhaps *small-pox*," which had never been presented to him. The letter contained the following curious passage: "In regard to wounds and fractures, I should employ a surgical aid and trust the Lord to perform the healing." This seems to be a specimen of tergiversation; and moreover, it will presently appear that herein Dr. Cullis is not up to the traditions of his profession. Shortly after this letter an article in the *Century Magazine*[2] contained a very able criticism from the genuine orthodox standpoint, and taxed Dr. Cullis and his friends with lack of candor for not publishing lists, as our hospitals do, of the "dead" and "uncured" as well as "cured." Another letter was then addressed to Dr. Cullis soliciting such a list, but the letter has never been answered. If the doctor desires at some future day to make up such a list, he is at liberty to draw examples from this paper.

In October last a Convention of Faith-curites was held in Philadelphia. A letter was addressed to this body, which included many illustrious delegates, inviting their co-operation in this good work for humanity and the cause of truth. Cases were especially requested for examination. As no notice was taken of the letter a delegate was asked subsequently for the reason. He replied that the convention had tabled the letter because it did not consider such investigation to be part of its business. Rev. A. B. Simpson writes: "I should as soon expose the sanctity of my home life to the public eye, as the sacred work of God in human bodies . . . to scientific criticism;" but he appears to forget that the "sanctity of his home" is a purely personal matter to himself, whereas the healing of human bodies is of very near interest to every individual who has one; and that the subject is open to scientific criticism, and will stand or fall by it *alone*. Rev. John E. Cookman, who is an enthusiast, writes, "I do not say it in any captious or hypercritical way, but as an honest and fair criticism, . . . that a society for psychical research might have been formed in Jerusalem, Judea, Samaria, or Galilee, in the days of our Divine Lord, to investigate the cases of healing wrought by Him, with as much pertinency as your present society." The various possible applications of this remarkable paragraph must be made by each reader for himself. Mr. Cookman was himself healed by faith of "nervous prostration;" and, with great latitudinarianism, in spite of the above paragraph, sent several addresses of patients.

Second. The results. It was not possible to give some cases thorough examination because of the delicacy of the subject. This was true of obstetrical cases, in some of which there have probably been remarkable and speedy "cures;" in fact someone has spoken of the whole subject as the "*miraculum naturæ*." One physician reported a case, which happened at a distance, of a woman who shut herself in her room when her pains came upon her, and relied entirely upon divine care in her delivery, but who unfortunately took to flooding and would have lost her life, had not a physician been called to her side. There may be other cases. But it is not remarkable that some of these ladies succeed in their rash enterprise, when we consider what a large percentage of women are delivered successfully every year, with no one but ignorant midwives in attendance.

The following case came directly under the writer's notice. An infant, aged a few months, had a very bad congenital vascular nævus of the upper lip, which was very disfiguring and caused the family much concern. Dr. Cullis came this way, and held meetings in a church edifice which was converted into a free dispensary for the treatment of all manners of disease by faith. Prayers were solicited for this child, and offered for it, but as every medical man would expect, the nævus got no better, but only worse. This was in every sense a crucial test. The failure could not have been due to a "lack of faith" (which is the favorite argument), because, as the infant was too young to bear this reproach, the faith of the friends would suffice, and even if that were lacking there was the vicarious faith of Dr. Cullis. The writer had the opportunity afterward of seeing Professor Agnew excise this growth and effect a *scientific* cure.

The following case is brought forward as a specimen of the rambling pathology, which renders a scientific diagnosis very hazardous. M. E. D—— has published her own case in a tract, and has further described it in a letter which was revised by her physician, who is a female doctor. She "inherited a weak back from her mother, who had spinal disease." She fell down-stairs, which added to her inheritance. Then she had "malarial fever;" then came "seven attacks of diphtheria," which went "down the passages and into the stomach," and caused a diphtheritic ulceration of the stomach "which continued for four years." Twice in that time there were abscesses (location not stated) "which discharged a pint from the diphtheria." "Also I had paralysis." Then came a hyperæsthetic spine, and prospects of being "strapped to the bed," because "her limb was in continual motion." Then she had trance-like spells, with closed eyes, but perfect consciousness. Then the account becomes grewsome in the extreme. "I well remember the first attack of the kind. My doctor was away, and my father was away from home also; my mother was alone; for hours she waited, hesitating whether to send for the undertaker or to await the return of my father. I heard all that was said, and was in an agony of fear lest I should be put into an ice-casket alive. At last my mother discovered a slight motion of the eyes, and she continued working with me until I could speak." Then came lateral curvature of the spine; then the opium-habit; then contracture of leg-muscles; then anæsthesia of the skin; then the sum total of the pathology is given as "congestion of the spinal cord at the seat of the lumbar plexus." One is reminded of the poor ghost in Dante:[3]

> Thus one perhaps
> Hath been by force of palsy clean transposed,
> But I never saw it not believe it so

[1] See advertisement by Rev. H. W. Brockett.

[2] Faith-cure, by A. J. Gordon, December, 1885.

A detailed criticism of such a case is, of course, not possible, but medical men will see at a glance that *Hysteria* is written in big letters all over it. Another, and parallel, case is that of Miss Carrie Judd, of Buffalo, as published by herself. It is probable that no layman, or woman, has ever written a more exact account of chronic hysterical invalidism, than has Miss Judd in her description of her own case.[1] She is to be complimented on the easy professional swing of her pen—up to that place where she said that her disease "had grown into blood consumption," which term savors too much of the patent-medicine puff. The patient was paralyzed, bed-ridden, hypersensitive and tyrannical to the last degree—as shown by the "silent house," as she calls her home, from which it was scarcely possible to bury her grandmother, because the patient was "so low." It is quite unnecessary to go into the details of her case; medical literature abounds in such, and in their not unfrequently sudden cure. The writer calls to mind at this moment cases in the writings of Laycock, Skey, Mitchell, and Emmet, which are more striking than that of Miss Judd.

It has always been the reproach of the faith-curers that their successes are with the mere *functional* disorders, and that they have never produced an effect upon serious *organic* affections. But they have recently had several champions come to the front with quite a formidable array of cases of cancers, fractures, and other severe ills. For instance, the Rev. R. L. Stanton has written a pamphlet of almost one hundred pages[2]—a very trenchant work and well calculated to win a certain class of converts and propagate error; in which he parades the most startling cures of tumors, cancers, and broken bones. But if all of his cases are not more authentic than the one quoted below, let us hope that his book will be expurgated before it reaches another edition. The case referred to is that of a little son of Dr. Reed, a physician of Philadelphia, who fell and broke both the bones of his forearm. The account says that the patient insisted the following morning upon having the dressings removed, because Jesus had made it well; that the child was so confident and persistent that on the third day the surgeon, who was the boy's uncle, did remove the splints and exclaimed, "It is well, absolutely well;" and "hastened to the door for air to keep from fainting." This case has been so widely circulated, and in such good faith, that it was very desirable to know more about it. It so happens that the patient is now grown to manhood, and is himself a graduate in medicine from the University of Pennsylvania. A letter was addressed to him and the following very interesting and amusing reply was received:

"DEAR SIR: The case you cite, when robbed of all its sensational surroundings, is as follows:

"The child was a spoiled youngster who would have his own way, and when he had a "*green stick*" fracture of the forearm, after having had it bandaged for several days, concluded he would much prefer going *without* a splint. . . .

"To please the spoiled child the splint was removed and the arm carefully adjusted in a sling. As a matter of course, the bone soon united, as is customary in children, and being only partially broken, of course all the sooner. This is the miracle!

"Some nurse, or crank, or religious enthusiast, ignorant of matters physiological and histological, evidently started the story, and unfortunately my name—for I am the party—is being circulated in circles of faith-curites and is given the sort of notoriety I do not crave.

"I have been pestered with letters on the subject from ministers and members of the fraternity who seek to rob us of our patients, but have consigned all such letters to my waste-basket. . . . I take pleasure in giving you these few notes, trusting they will satisfy your mind in regard to this example of faith-cure.

"Very respectfully yours,

"CARL H. REED."

The Rev. Mr. Stanton ought to make a dog-ear on this leaf for future reference, because this letter of Dr. Reed's spoils the most interesting story of supernatural healing of a fracture that has appeared since the day when Diomedes threw a great stone at Æneas and caused a compound fracture of the femur, which is supposed to have been cured by Venus, the divine mother of the injured hero. This case is reported by Homer, and has probably not been investigated.

During the past autumn the writer's attention was several times called to a home for sick and injured in Philadelphia, where the treatment, support, and everything was by faith. It was kept by a medical graduate of Harvard, who is an ex-member of Congress, and was announced to contain a room in which were piled up the crutches and other surgical gear which patients had cast off after their miraculous deliverance from disease. The impression conveyed by reports was that troops of patients were daily cured, and that old cast-off canes were as plentiful as at the once notorious shrine of Knock. The writer visited this house, and was received graciously on two occasions; he was shown all over the establishment, and noted that no patients were there at that time. Inquiry was made for the room of discarded crutches, whereupon the proprietor smiled, as though he saw the joke, and said that that story had been somewhat exaggerated—in fact, he had but *one pair* of crutches, and that pair was from a patient who probably had never needed them! He then went on to describe the case. The patient was a woman, who had been diagnosed at a homœopathic hospital to have lateral curvature of the spine, but for his part he was not certain about it, because he doubted the homœopathic ability to make a correct diagnosis. When asked if he had not made his own diagnosis, he said he had not time to do that in his peculiar work, that he could not trouble himself about diagnoses, but still he thought he detected the curvature under the patient's dress; and as he prayed he felt it suddenly straighten. When asked if the patient was entirely cured he said, "No, she still has the curvature!" The address of this patient was withheld.

A lady in New England took great pains to report a case, and did it so well, that an important deduction can be drawn from it. It was a case of hip-joint disease, or bone disease, with large discharging sinuses, in which rubber drainage-tubes had been kept, as is customary, for a long period. The patient, a child with firm faith, attended a "novena" (a sort of nine days' devotion), at a Roman Catholic church, and at the same time threw aside tubes and treatment. In about *two months* the sores had healed, but the leg remained stiff. The obvious criticism of this case is the fact that a miracle would not have taken two months, and that the cure was not much to boast of as divine, if the leg remained stiff. The physician to the case is reported as attributing the cure, very wisely, to a fortuitous removal of the tubes at just the right time.

Miss Louisa M. Alcott writes of the *mind-cure* (which is a kindred branch with faith-cure), that although it failed in her case, she is convinced there is a "great truth" in it, but she does not say what the great truth is. As for her, "homœopathy has worked more miracles than the mind-cure." This will probably confirm some of us in the suspicion that homœopathy is another branch of psycho-therapeutics.

The conclusion of the whole matter brings us to one more point. The mystical language used by these people is often responsible for many of their errors. This language can often be neither parsed nor translated. Said one good woman to the writer, "You cannot understand these things because they are spiritual, and you do not

[1] How I Entered Into Rest. By Carrie F. Judd.
[2] Healing through Faith, etc.

believe;" as though the alleged healing of the cancer in the Rev. Mahan's wife was not materialistic enough to be looked after. A clergyman wrote that he hoped the "ethical nature of disease" (whatever that is) would be explored. Some few of the advanced guard have forged ahead to the only one logical conclusion, and, with Stockmayer, proclaim that with one great combined, cumulative exercise of faith by the Christian Church death will be eventually abolished from the world.

Far be it from the writer to ignore the just claims of religious emotion upon the mind of man; but it is sometimes comfort to reflect, with Epicurus of old, that those are not undevout who deny the gods of the many, but those who attribute to the gods the opinions of the many

ABORTIVE TREATMENT OF GONORRHŒA.

By S. O. VANDER POEL, Jr., M.D.

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For about three years almost daily systematic observations as to the local effect of various drugs upon the urethral discharge in gonorrhœa have been made at the Dispensary of Roosevelt Hospital under the supervision of Dr. William S. Halsted.

Starting with the premise that gonorrhœa proper is due to a specific germ, Neisser's gonococcus[1]—and there can at present be no reasonable doubt as to its existence or specific character, since Neisser's claims have been confirmed by so many careful observers (Aufrecht,[2] Leistikow,[3] Krause,[4] Wolff,[5] Eschbaum,[6] Bokai,[7] Bockhart,[8] and Podres[9])—and recognizing that in order to cure the discharge its cause must be eliminated, it was sought to find a substance which would destroy the micrococcus and at the same time not injure the urethral mucous membrane. It is my purpose to present a method, believed to be abortive, first considering the various steps that led to it, and from which it was evolved. In all the cases that form the basis of these experiments the microscope was used in the examination of the discharge, both for purpose of diagnosis and to note the effect, if any, the measure used had in destroying the micrococcus. All previous claims to abortive treatment in which this precaution was not taken can scarcely be accepted as well-authenticated facts when we consider the danger of confounding cases of specific urethritis, due to the presence of a germ, with the non-specific variety occasioned by exposure to leucorrhœal discharge, to the secretion from an endocervicitis, to menstrual fluid, acrid vaginal discharges, traumatic influences, etc., in none of which is the gonococcus found.

Hot-water irrigation, strongly advocated by Vajda (Schmidt's *Jahrbücher*, 1880, p. 166), was among the first substances used. It acts as a sedative to the inflamed mucous membrane, and is consequently grateful and soothing to the patient; its effect on the gonococci is to apparently diminish them in number, provided the irrigation is performed sufficiently frequent to keep the urethra free from discharge, its action being simply mechanical, that is to say, that as fast as the germs are formed in the mucous membrane and find their way into the urethra they are washed out by the irrigation, but as the hot water produces in the mucous membrane a soil in which they propagate rapidly, and exerts no action in destroying them, they are found as numerous as before just so soon as the irrigation is discontinued. In order to test its efficacy in cleansing the urethra I have had a patient irrigate at a single sitting with eight quarts of hot water. Microscopic examination of the urine first passed after the irrigation disclosed pus-cells in large quantities, demonstrating that it is practically impossible by means of bland fluids to free the canal.

A somewhat extensive use of the short catheter as a means of introducing fluids into the urethra in gonorrhœa, first suggested by I. P. Prince (*Medical Times and Gazette*, October, 1875), has led us to abandon it, in consequence of the pain occasioned upon introduction. The testimony of patients upon whom both the catheter and the blunt nozzle have been used is unquestionably in favor of the latter.

A saturated solution of boric acid in cold water is perhaps one of the most soothing applications that can be employed in urethritis, far exceeding hot water in allaying the irritation and burning. But the same objections are applicable to it as to hot water, namely, that its destructive action on the gonococcus is almost nil, as after its continued use for weeks, they are still to be found in the discharge. It would seem that the ordinary complications of gonorrhœa, cystitis and epididymitis, are more likely to occur during the use of non- or feebly-antiseptic substances, such as hot water or boric acid; the micrococci being carried into the bladder, there to kindle inflammation, or being absorbed by the lymphatics which accompany the vas deferens travel through them to reach the epididymis.

It was believed that if iodoform could be brought into intimate contact with the inflamed mucous membrane, in consequence of its anæsthetic properties and its controlling influence in governing the migration of leucocytes, it would prove serviceable. Watson Cheyne, in the *British Medical Journal* for July, 1880, claimed for it a specific abortive action when introduced in the form of soluble bougies with eucalyptus oil, but he has since retracted his assertion. Two years since it was used by Dr. Halsted in the form of an ointment made up with cold cream in the proportion of 1 to 6, or 1 to 8, and injected through a blunt glass nozzle from compressible metallic tubes similar to those in which artists' pigments are sold. By this means half an ounce of the ointment could be introduced without pain or discomfort, which was the principal objection to the soluble bougies of Watson Cheyne. It was found most serviceable in quieting frequent micturition, and would also allay the annoying itching or tickling, so frequently experienced in the latter stages of gonorrhœa. But in my hands it did not materially diminish the amount of discharge, or shorten the duration of the disease. Among the other drugs that were successively used in a series of cases, and in most instances with indifferent success, may be mentioned acetate and sulphate of zinc, sulphate of lead, carbolic acid, salicylic acid, peroxide of hydrogen,[1] tannic acid, nitrate of silver, and bichloride of mercury.

The latter, when used as it was at first, in the strength of 1 to 8,000 or 1 to 10,000, a single injection with the ordinary urethral syringe being given daily, was found to excite so much inflammatory reaction that it was necessary to supplement it with irrigations of boric acid. Even with this precaution it was impossible to continue it more than two or three days, for if persevered with it occasioned painful and frequent micturition with bloody discharge, and in one instance temporary retention. Notwithstanding these disagreeable features, under its use the discharge rapidly diminished, the gonococcus could no longer be found, but would reappear after the lapse of some days. A substitution of a milder solution, 1 to 20,000, when introduced in the same manner, was likewise too irritating to be continued long enough to kill all the germs. Podres has had a similar experience with the bichloride when used in this strength, 1 to 20,000, but in

[1] Centralblatt f. d. Med. Wissen., 1882, No. 51.

[illegible] Wochenschr., Nr. 13, 1883.

[7] Bokai: Vierteljahresschr. f. Derm. u. Syph., 1881, Heft 1.

[illegible] Vierteljahresschr. f. Derm. u. Syph., 1885, Heft 3 und 4.

a few instances—where the urethra was unusually tolerant and he could repeat the injection every two hours during the day—claimed to have aborted the disease in five days. His present method is to begin with 1 to 20,000 and continue just so long as the urethra will tolerate it, using for the remainder of the course the ordinary astringent solutions. With this plan the average time taken to effect a cure is three weeks.

As a result of the experiments thus far it was manifest that the bichloride, in spite of the irritation caused, seemed best to control the disease, and the necessity of employing an agent that would kill bacteria was evident. The investigations of Koch upon the culture and pathogenesis of gonococci, from which most of the antiseptic forms of treatment are deduced, would show that while the bichloride of mercury is by far the most active agent in destroying the germ in artificial cultures, it was necessary to use it in comparatively strong solutions (1 to 20,000), too strong in fact to be continuously borne by the urethra.

The experiment of Bockhart indicates that artificial cultures of gonococci grown upon blood-serum are more virulent than those which ordinarily develop in mucous membranes. He inoculated the urethra of a paralytic dement with an artificial culture of gonococci four removed, and established a gonorrhœa of such severity that the subject died in ten days. The mucous membrane and lymph-channels of the entire genito-urinary tract were infiltrated with the micro-organisms, while a metastatic abscess of the kidney, and a necrotic spot in the bladder were filled with the germs. It is probable, then, that the sterilized blood-serum upon which the germs were cultivated formed a better propagating soil, giving them greater life, power, and resistance to germicides than is furnished by the urethra. The fact that gonococci propagate in the mucous membrane, from which they gradually find their way into the urethra, and are not to any extent developed in the canal itself, explains why they are not all destroyed by the stronger solutions. Those that the bichloride comes in contact with in the urethra are killed, but as it is impossible, in consequence of its irritating properties, to continue it more than a few days, the ones that are forming beneath the epithelial layer of the mucous membrane are not reached, and as they migrate into the urethra, re-establish the discharge. For experience shows when using these stronger solutions the gonococci disappear, and the amount of discharge materially diminishes just so long as they can be continued, only, however, to reappear when we are obliged to discontinue them.

These considerations suggested the idea of irrigating the urethra with large quantities—two to three quarts—at each sitting of a weak solution of bichloride of mercury (1 to 40,000) and repeating the procedure three or four times a day. The modus operandi is simple, and when once explained and demonstrated to a patient can be effectively carried out by him at home. These irrigations are best accomplished by hydrostatic pressure, the most convenient form being the ordinary fountain syringe, with a blunt glass nozzle of sufficient size to occlude the meatus. By suspending the syringe at a proper height a force is produced which will comfortably distend the urethra, avoiding a pressure which would carry the injected material into the bladder, although experience shows that its presence there is productive of no harm, since the germs are previously destroyed by the antiseptic. About four feet above the pelvis of a patient as he sits upon the edge of a chair has been found most serviceable. The stream is then permitted to flow continuously, the nozzle being held in the meatus, so that the fluid may permeate the entire length of the canal, and at the same time allow of its escape by the side of the nozzle. The sensations of the patient are the best guide for determining the depth to which the fluid permeates. When it reaches the neighborhood of the prostate, it produces a sensation similar to that experienced in urinating. With a little experience they readily acquire the technique necessary to carry the fluid well back in the canal, and at the same time permit of its regurgitation through the meatus by the side of the nozzle. Great differences will be found in urethræ as to their susceptibility to the bichloride solutions, as frequently cases are seen which cannot continuously use irrigations as weak as 1 to 40,000, and again there are those who can bear it as strong as 1 to 20,000 without inducing an irritation sufficient to cause its discontinuance. It would seem, then, a safe rule to begin with 1 to 40,000, and if it is well borne, producing but little irritation with a slight burning after irrigation, and no frequency in micturition, it may be continued, but if these symptoms are intensified, and should be accompanied by a blood-tinged discharge, it is best either to discontinue it for a day or two, or substitute a weaker solution, 1 to 60,000.

This treatment has now been employed in eight cases, by four different observers, who have, without exception, succeeded in aborting the disease in from eight to fourteen days. The diagnosis was verified by microscopic examination, gonococci being found in each instance. Subsequently the discharge was examined daily, with the result of showing the disappearance of gonococci on the third to sixth day, the discharge itself daily diminishing, to cease entirely on from the fifth to tenth day. After the microscope has shown the germs to be no longer present in the discharge, it is still necessary—in order to reach those germs which are in the lymph-spaces of the mucous membrane, to continue the irrigations for three days, when, if the discharge has not stopped, it is advisable to use some mild astringent with the ordinary urethral syringe. A solution of nitrate of silver, gr. ¼ to ʒ j., will be found most serviceable in checking this discharge, which is caused by the irritating action of the bichloride.

The entire freedom of the patients thus far treated from the ordinary annoyances, burning and scalding, with frequent micturition, is worthy of note. In fact, so slight discomfort did they experience, that there was little to remind them of their trouble, save the necessity of frequent irrigation. Although the number of cases in which this plan has been followed is small, the fact that four different observers have succeeded in aborting the disease in all the cases in which it was tried, and have not been able to do so by any other method, would tend to give it additional weight.

The complications—epididymitis, cystitis, and rheumatism—that not infrequently arise during the course of a blennorrhœa, are usually the most distressing part of the ailment, prolonging its duration and intensifying the suffering. Epididymitis, perhaps the most frequent, can often be anticipated by recognising the premonitory pain and soreness complained of along the course of the vas deferens. If the painful area be thoroughly but lightly touched with the thermo-cautery the pain will cease, and perhaps the progress of the inflammation along the course of the lymphatics will be arrested. When the epididymis is involved, applications of the cautery will cause the pain immediately to subside. It is necessary, however, that the point should not be heated beyond a dull red, and that the testicle be quickly and lightly touched, producing a general blush over the surface, such as is seen after the application of a sinapism. In several instances where this has apparently failed to give relief a very small hydrocele was found, and when this was emptied with a hypodermic syringe, the pain would disappear. After the use of the cautery a thick poultice of iodoform ointment, 1 to 6, will materially shorten the course of the inflammation.

Rheumatism occurs too frequently during the course of gonorrhœa to be considered a mere coincidence, even if we did not have the incontrovertible fact of the presence of gonococci in the fluids of the inflamed joints. Generally these rheumatic complications are among the most obstinate we have to deal with during the course of a

blennorrhœa, it frequently taking months to effect a cure. The bichloride would likewise here seem to play an effective *rôle*. If, for example, it be the knee or other large joint that is involved, and the capsule is distended from intra-articular accumulations, it should be aspirated with antiseptic precautions, and a solution of 1 to 20,000 bichloride of mercury thrown into the joint-cavity. This was recently done in a case at Bellevue Hospital, where a man had been confined to bed for some days with gonorrhœal effusion in the knee-joint, over which morphine had but little effect in controlling the pain. He was immediately relieved by the operation and the following day was up and about the ward. When the inflammation is diffused in the fibrous tissues surrounding a joint, as frequently occurs about the wrist or ankle, a hypodermic injection of 1 to 10,000 down to the bone will yield at times most satisfactory results, a preliminary injection of cocaine being given. A girl of five years of age was brought to the dispensary with an inflamed shoulder-joint. It being an invariable rule to examine the urethræ of cases with acute articular trouble, gonorrhœa was found, the diagnosis being verified by the microscope. In this case deep injections, down to the bone, of bichloride were made rapidly, relieving the symptoms, for which she had been unsuccessfully treated outside by the ordinary anti-rheumatics. For cystitis the ordinary irrigations with mild antiseptics have proved most serviceable, boric acid being preferred. Since we began to use bichloride, even when experimenting with the strong solutions 1 to 8,000 or 1 to 10,000, none of these complications have been met with.

Cases of so-called gleet, for which the passage of a sound is recommended, are frequently seen to grow worse after an instrument has been introduced, while in others decided benefit follows its use. The explanation of this apparent contradiction would seem to rest in the fact that in the first instance gonococci are present in the secretion, and as the sound passes it spreads the infectious material along the canal, developing new foci of disease, and if by chance the tip of the sound carry any of the discharge into the bladder a cystitis may be established.[1] When benefit is derived from the sound the discharge is usually prostatic, contains no gonococci, and is attended by a swollen and slightly tender prostate. It can, therefore, we think, safely be asserted that the passage of a sound does no good, and frequently is productive of much harm, just so long as the micro-organisms are demonstrable in the discharge.

In cases of gleet the character of the discharge and the presence or absence of gonococci will frequently give valuable hints in treatment. If the discharge assumes a fibro-plastic character, adheres tenaciously to the urethral wall, forms a coating on the mucous membrane, and contains gonococci, it will resist most obstinately the ordinary astringent injections, although the amount of discharge that escapes through the meatus is small. If such a variety be first thoroughly irrigated with some warm solution (preferably boric acid), in order to dissolve off the tenacious secretion, it can be readily cured by bichloride irrigations.

Then again, other cases of long-standing discharge will present themselves, who tell you that they see but little discharge during the day, but sometimes after urination and in the morning a drop or two of thick pus will present itself at the meatus. Endoscopic examination will often show the fossa navicularis or some of the sinuses in its neighborhood to be the seat of trouble. If this be found it is advisable to manipulate the urethra externally at this point, when generally a drop of thick pus can be made to exude, which leaves a surface upon which the bichloride can be effectively used. A combination of both these varieties of gleet may exist in the same case, when it is necessary to recognize the seat of the trouble and character of the discharge before a cure can be effected.

DIPHTHERIA AND ITS TREATMENT.

By SAMUEL W. SMITH, M.D.,

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Mortality reports establish the fact that diphtheria ranks among the most fatal diseases known to medical science, as is shown by the following statistics kindly furnished me by Dr. John T. Nagle, Deputy Register of Records in the Health Department of New York City:

Year.	Cases reported.	Deaths.	Per cent.
1880	3,307	1,390	42.032
1881	5,272	2,249	42.659
1882	3,507	1,525	43.484
1883	2,906	1,009	34.377
1884	2,201	1,090	49.477

An average of 42.405 per cent.

From January 1, 1885, to September 1, 1885, the statistics given me by months are as follows:

January reported 221 cases, with 101 deaths, or 45.701 per cent.; February reported 259 cases, 110 deaths, or 42.471 per cent.; March reported 229 cases, 118 deaths, or 51.528 per cent.; April reported 236 cases, 103 deaths, or 43.644 per cent.; May reported 287 cases, 116 deaths, or 40 per cent.; June reported 253 cases, 111 deaths, or 43.873 per cent.; July reported 202 cases, 98 deaths, or 48.514 per cent.; August reported 133 cases, 71 deaths, or 53.383 per cent.; September reported 149 cases, 83 deaths, or 55.711 per cent., or an average of 47.209 per cent.

Hence this disease becomes a theme of corresponding interest to every conscientious practitioner of medicine, and when one hears a physician say (as was said to the writer not long since in consultation) that he had treated scores of cases of diphtheria every year, amounting to several hundred, without a single fatal result, one is warranted in doubting the reliability of the man and justified in regarding his "facts as fictions."

Divers theories respecting the character and treatment of diphtheria are held by equally respectable authorities, which I shall not attempt to discuss in this paper, but state such facts as appeared in the study of the following thirty cases, treated by me, as well and concisely as I can.

I came to have an extended experience in dealing with this disease, and devoted especial study to it, some four years since, in company with Dr. C. E. Billington, whose most excellent paper, read before the Academy of Medicine a short time previous, upon "Diphtheria and its Treatment," I had perused with much interest. I determined at the first opportunity to test its efficacy. Dr. Billington had several cases of diphtheria which we jointly treated, and in which we religiously followed the plan of treatment previously set forth in his paper. The result was flattering, there being two deaths in ten cases treated by us, and both had become laryngeal at the time of our first visit.

This plan of treatment, which I have adopted since it became known to me in every case I have been called upon to treat, and which I gladly make so prominent in this paper, consists in the most thorough medication of the parts affected with a solution composed of one teaspoonful of common salt to a pint of lukewarm water, to be forced with a common ear-syringe into the nostrils and throat of the patient every two hours. I added to this salt-water solution one to two drachms soda biborate, a solution to be used with a hand atomizer every half hour, composed of aqua calcis, oz. iv.; acid. carbol., gtt. x.; and the employment internally of tr. ferri chloridi with glycerine, alternated every half hour with potass. chloras.

I consider the soda biborate one of the best and least irritating of antiseptic solutions, especially to the nasal mucous membrane. The sodium chloride certainly promotes osmotic action; and when the diphtheritic membrane is not sufficiently loosened to be washed away by

the stream of antiseptic solution from the syringe, this action facilitates the contact of the solution with the decomposing putrescent material underlying the diphtheritic deposit.

The iron, I believe, acts as nearly as a specific in this disease as it does in all forms of erysipelas, and in small doses, frequently repeated, is of great value for its local effect, and the glycerine seems to have a sustaining power of great value.

The large doses of tr. ferri chloridi recommended by some to children from three to five years of age—half a drachm to a drachm every hour or two—I think injudicious, unwise, and unscientific, and for this reason, if given in excess of amount entering into the circulation it must necessarily act as a local irritant to the digestive tract. It is a recognized fact that one of the great dangers to the life of the diphtheritic patient, whether the local affection be primarily or secondary to the disease, is the septic poisoning by the absorption of the decomposing putrescent material as the result of the local necrotic process. My observation in the treatment of the disease has proved to my mind, beyond a doubt, that this local septic poisoning is the only danger to the life of the patient, except in those cases where the disease becomes laryngeal, or extends to the trachea and bronchi. Hence, I would say to those who would call upon the skin, kidneys, and intestines with their shot-gun style of administering drugs for the purpose of eliminating the poison of diphtheria, that to my mind it would be as reasonable to suppose that the septic poisoning from a decomposing retained placenta could as easily be eliminated by the use of drugs in the stomach, or a dirty-faced boy made clean by a dose of castor-oil.

FORMULÆ.

I.—℞. Sodium chlorid..... ℥ j.
Sodæ biborat..... ʒ j.–ʒ ij.
Aquæ fervens..... Oj.

M. et Sig.—Use with a syringe into the nose and throat every two hours, lukewarm.

II.—℞. Acid. carbol..... gtt. x.
Aquæ calcis..... ℥ iv.

M. et Sig.—Use with a hand atomizer in the nose and throat every half hour.

III.—℞. Tr. ferri chloridi..... ʒ j.
Glycerine..... ʒ j.
Aquæ..... ʒ jss.

M. et Sig.—Dose: a teaspoonful every hour.

IV.—℞. Potass. chlorat..... ʒ ss.–ʒ ij.
Glycerine..... ʒ ss.
Aquæ calcis..... ʒ ijss.

M. et Sig.—Dose: a teaspoonful every hour, alternated with No. III.

When an unirritating astringent is deemed advisable, I add to No. I. formula tr. kino, ʒ ss.–ʒ j.

Since treating the following cases, I have used with the atomizer, instead of No. II. formula, the following formula, and am well pleased with it:

℞. Listerine..... ʒ vj.
Glycerine..... ʒ iij.
Aquæ rosæ.....q. s. ft. ℥ iv.

M. et Sig.—Use ¼ with the hand atomizer instead of No. II.

I adopted this plan of treatment in the very spirit and letter of the law; for, as Dr. Billington has so forcibly made known in his discussion on the treatment of diphtheria, it is in the little details in the care of the diphtheritic patient that success is obtained, and the neglect of these has caused many to abandon this plan for more heroic measures, or to content themselves with a constitutional remedy alone, and thus have they swelled the death-rate. Some, again, have carried out this plan of treatment in every particular, and seen, as I have seen, the disease leap from the tonsil to the pharynx, mount the pillars of the fauces, rage over the whole surface of the palate, rush into the posterior nares and Eustachian tubes to the middle ear, and, like a lurid demon, curl down into the larynx, as if mocking human opposition.

The nostrils are plugged up with diphtheritic exudation; this is washed away, and epistaxis follows. This is controlled. The disease goes down the trachea into the bronchi; rapidly, but secretly, the patient's system is being overwhelmed by the absorption of diphtheritic poison, unknown to the physician, threatening paralysis or cardiac thrombosis.

The little patient gets up from its cot, walks across the floor, and is seated in a chair to have its nose and throat washed out. You turn away for a moment to fill your syringe, then seat yourself before the child. A sad surprise seizes you—the little head drops on the shoulder, the face becomes purple, the eyes glassy. You lay the child quickly and gently on its cot, and hastily take out your hypodermic syringe—too late, the little sufferer is dead.

Another and another, and yet another case with like result, and the treatment is abandoned. But this is not, to my mind, a conclusive test either for or against any plan of treatment, because each case may have been of the most malignant type, or of that type necessarily fatal under any plan of treatment.

Again, you may have cases of the more simple type where any plan of treatment, or no treatment at all, would have been followed by recovery. I consider it necessary, therefore, to have at least twenty or more cases to treat, and the given plan to be strictly followed in each case, to fairly decide as to the efficacy of any plan of treatment.

Without entering upon a discussion of the etiology or pathology of the disease, I will here observe that I had been taught, and fully believed, that diphtheria was primarily a constitutional disease, having a local expression in the throat and glands of the neck. My own experience, however, in the treatment of cases in common with Dr. Billington, and subsequently in the treatment of many other cases while Visiting Physician to Demilt Dispensary, has had the effect of entirely changing my old theories. I became convinced that diphtheria was a local disease with a constitutional expression, and all subsequent observations have confirmed and strengthened this conviction.

During the spring and summer of 1881 and 1885, while I was Visiting Physician for the south district of Demilt Dispensary, I was called to see the following thirty cases of diphtheria, each one of which was seen by Dr. Billington and others, experienced in the treatment of diphtheria, who confirmed my diagnosis.

I will here beg your indulgence for a few minutes while I read in detail the history of three or four cases, which I personally attended, and which I believe justify my change of views on this subject:

Case 4.—I was called to see S. C——, aged four, June 12, 1881. Three or four weeks previous I had treated patient for scarlet fever. The condition of this patient was very bad. When first seen the diphtheritic exudation covered both tonsils, palate, pharynx, and extended into the nostrils. Temperature, 103½, axillary; respiration, 30; pulse, 140; fetid breath. Vomiting any liquid or food taken into the stomach. Albumen in the urine. Treatment as given above, with a diet of milk and lime-water to be given immediately after syringing out the nose and throat.

June 13th, P.M.—Patient did not vomit after the first thorough syringing of the nose and throat, and had swallowed nearly a quart of milk during the twenty-four hours. Temperature, 101; respiration, 22; pulse, 120. From this on the patient did well.

June 18th.—Examination of patient showed no diphtheritic exudation either in the throat or nostrils; but the urine was scanty and dark-colored, containing a large quantity of albumen.

Cases 5 and 6.—Brother and sister of Case 4, aged eight years, and eighteen months respectively; took the disease June 15th. Both cases were of the tonsillar and naso-pharyngeal type. The disease in both commenced

Thirty Cases of Diphtheria.

No. of case	Name.	Age.	Date of attack.	Date when first seen	Character of the disease.	Treatment	Duration of disease.	Result and remarks.
1	Kate T——.	5 years.	1881. May 2.	1881. May 3.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	6 days.	Passed out of my hands at my second visit, and died on the sixth day of the disease.
2	Mary D——.	8 years.	May 21.	May 22.	Tonsillar and pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	11 days.	Recovered.
3	Joseph K——.	8 years.	June 1.	June 1.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	8 days.	Recovered.
4	Samuel C——.	4 years.	June 10.	June 12.	Tonsillar, naso-pharyngeal, and laryngo-tracheal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	9 days.	Patient died on the ninth day from œdema of the lungs.
5	James C——.	1¼ years.	June 15.	June 15.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
6	Kate C——.	8 years.	June 15.	June 15.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	8 days.	Recovered.
7	James McM——.	6 years.	June 13.	June 15.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	6 days.	Recovered.
8	Bernard K——.	4 years.	June 17.	June 18.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	4 days.	Died suddenly on the fourth day of the disease.
9	James S——.	5 years.	June 25.	June 26.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
10	Rose R——.	4 years.	June 28.	June 29.	Tonsillar and pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	8 days.	Recovered.
11	Maggie O'B——.	13 years.	June 28.	June 30.	Tonsillar and pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	8 days.	Recovered.
12	Frances McG——.	5 years.	July 7.	July 10.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	14 days.	Recovered.
13	Anna B——.	3 years.	July 14.	July 16.	Labial, naso-pharyngeal, and laryngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
14	Mary T——.	2 years.	July 23.	July 25.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	13 days.	Recovered.
15	Edward C——.	5 years.	July 26.	July 26.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	11 days.	Recovered.
16	Michael D——.	6 years.	July 28.	July 29.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
17	Maggie S——.	2 years.	August 6.	August 8.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	12 days.	Recovered.
18	Daniel S——.	5 years.	August 9.	August 9.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
19	Ellen S——.	7 years.	September 22.	September 23.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	8 days.	Recovered.
20	Anna H——.	4 years.	September 22.	September 23.	Labial, tongue, naso-pharyngeal, and laryngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	11 days.	Recovered.
21	Marian B——.	10 months.	October 3.	October 4.	Naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	7 days.	Recovered.
22	Bridget F——.	5 years.	October 4.	October 5.	Tonsillar and pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	6 days.	Recovered.
23	John McA——.	3 years.	November 2.	November 3.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	7 days.	Recovered.
24	John S——.	3 years.	November 5.	November 7.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	7 days.	Recovered.
25	Peter M——.	7 years.	November 15.	November 18.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
26	Charles A——.	5 years.	December 9.	December 11.	Naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	7 days.	Recovered.
27	Michael D——.	4 years.	December 12.	December 14.	Naso-pharyngeal and laryngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
28	Ernest H——.	6 years.	December [illegible].	December [illegible].	Laryngo-tracheal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	10 days.	Recovered.
29	Francis H——.	3 years.	June 12.	June 13.	Laryngeal, tracheal, and [illegible].	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	5 days.	Died.
30	Samuel H——.	5 months.	June 15.	June 16.	Tonsillar and naso-pharyngeal.	Salt water and borax, with syringe-atomizer; iron and potass. chlorate, as per formula given above.	7 days.	Died.

June 19th.—Patient was allowed to leave his bed and go out into the yard.

June 21st.—I was called in the night to see the little patient, and found him in the last agonies of death with œdema of the lungs.

on the tonsils, spread to the palate and pharynx, and into the nostrils. The same treatment was carried out as in Case 4. In neither case did the temperature rise above 101½° F. Both made a good recovery, one in eight and the other in ten days.

Case 8.—B. K——, aged three. Was called to see this case on the second day after the attack. Disease tonsillar and naso-pharyngeal. Breath, fetid; temperature, 103°; respiration, 30; pulse, 140. This little patient was very intractable, so that I was never able to satisfactorily syringe out his nose and throat. He fought me to the last, and died suddenly on the fourth day of my attendance on him.

Case 12.—Was called July 9th to see F. McG——, aged nine. Patient first seen by me on the third day following the attack. Examination showed that the disease had spread from the tonsils to the palate, pharynx, and into the Eustachian tubes as well as the nostrils. Complete nasal stenosis. Palate and uvula very much swollen. Breathing rapid, stertorous, and breath extremely offensive. Temperature, 104°. Patient complained of severe pain in both ears. This patient was very refractory. It required the united efforts of my assistant, nurse, and the father of the patient to hold him in a chair while I syringed out his throat and nostrils. The relief to the patient was so great that two hours afterward the nurse had no trouble in using the syringe and atomizer alone.

July 11th.—Patient much improved. Temperature, 100°; respiration, 22; pulse, 98. Exudative material almost entirely cleared from the throat. Palate ulcerated through on both sides of the uvula, so that I was able to pass my lead-pencil through the holes. Both drum-heads ulcerated, and ears discharging freely.

July 12th.—After syringing out the nostrils quite a severe epistaxis followed the operation, but was soon controlled by the use of ice. From this on the patient did well, and convalescence was fully established on the fourteenth day of the disease.

Case 13.—Was called to see A. B——, aged two and one-half, July 16th. Examination of the throat and nostrils showed no signs of diphtheria, but on examining the inside of the lips I found several spots of diphtheritic exudation. The disease spread to the tongue, tonsils, pharynx, nostrils, and larynx. The same treatment as in the other cases, with recovery on the tenth day of the disease.

Case 21.—Was called to see M. B——, aged ten months, October 4th. Patient unable to breathe through the nostrils. Nursed with difficulty and had frequent attacks of vomiting. Examination of the throat showed no signs of diphtheria. Temperature, 103½°; respiration, 38; pulsation, 140. Examination of the lungs gave negative results. I suspected nasal diphtheria and prescribed the usual treatment. In syringing out the nostrils the solution would pass into the throat.

October 5th.—Patient in much the same condition. Examination of the throat showed a few patches of diphtheritic membrane upon the pharynx, none to be seen on either tonsil. While syringing out the nostrils, suddenly one nostril became completely blocked up and a small portion of the diphtheritic membrane protruded from this nostril, which required considerable force with a pair of forceps to extract it. When spread out on a cloth this piece of membrane measured one inch in diameter and was about one-fourth of an inch in thickness and gave a perfect cast of the posterior nares and soft palate.

October 6th.—Patient much improved; nursing without difficulty; no vomiting; breathing about normal, and temperature 99½° F. From this time on patient did well, and convalescence was fully established on the seventh day of the disease.

In referring to Cases 28, 29, and 30, I wish to bring out a point in tracheotomy for membranous croup, so called, but which my experience has taught me to call diphtheritic laryngo-trachitis. In the above cases, the occurring as they did within two weeks of each other, and in the same family, leaves no doubt on my mind as to the nature of the disease.

In Case 28, on the second day of the disease, when the breathing became very labored, pulse rapid, temperature 103°, and the features showing a want of proper aëration of the blood, I suggested tracheotomy to the parents. They would not permit the operation. The same treatment as in the preceding cases was followed. To my surprise the patient made a good recovery in ten days, except a slight hoarseness, which lasted for two or three weeks.

Case 29 was attacked, three or four days following Case 28, with precisely the same symptoms, and died on the fourth day of the disease without tracheotomy. The treatment was the same as in the former case. Hence, had I done tracheotomy in Case 28, and he had lived, as he did without it, and then have omitted to do the operation in Case 29, I would doubtless have been wedded to the operation, which I am not.

One week following the death of Case 29, Case 30 was attacked with the disease. Its first appearance was seen on the tonsils; it rapidly spread to the palate, pharynx, and nostrils, made its appearance on the genitals, and the little patient succumbed on the seventh day of the disease.

I think there can be no doubt as to the nature of the disease in these three cases; yet Cases 28 and 29 were such as are regarded by dualists as typical of true croup rather than diphtheria.

It is proper that I should say that Dr. Billington claims nothing specific or new in the remedies, nor does my own experience lead me to believe that there is a specific for the cure of diphtheria known to the profession. However, Dr. Billington, believing the disease to result fatally if allowed to develop into blood-poisoning, and that this condition is superinduced by the absorption of decomposed gangrenous sloughs, adopted the plan of washing away the gangrenous discharge, cleansing the parts antiseptically, thoroughly, and often. The efficacy of this treatment as a preventive of blood-poisoning is most conclusively attested by the hundreds of cases it has saved, and these, too, under the most unfavorable conditions, surrounded by filth and foul air in the wretched houses of the poor of New York. In the treatment of a small number of cases there can be no just estimate formed of the value of any method of treatment. It not infrequently occurs that the first few cases coming under our observation are of a desperate character, or it may be that we are not called in until the disease has reached a stage when the system is almost overwhelmed with blood-poisoning. In these cases and at such times any plan of treatment may fail, and then we are too apt to abandon the course pursued as unavailing, or no better, at least, than other plans which have been advanced and resulted in failure. We may then solace ourselves with a few severe reflections on the fact that the highest authorities have always pronounced diphtheria a most fatal disease; that the County and State Medical Societies have reiterated this verdict, and that statistics have fixed its death-rate at no less than fifty per cent.

Confronted by this alarming rate of fatality, I determined at the outset of my contact with diphtheria to scrupulously avoid vacillating or experimenting with different forms of treating the disease, but firmly adhered to the one form in which I had fullest confidence. I considered that the results from at least twenty or thirty cases treated were necessary before an intelligent judgment could be reached—before the plan adopted should be pronounced a failure. Therefore, when I assumed the duties of Visiting Physician of the south district of Demilt Dispensary, I decided to observe the very spirit and letter of Dr. Billington's plan of treatment. This means something more than an occasional spray of carbolic acid and lime-water, with a semi-occasional injection into the nostrils and throat of a spoonful of the salt-water solution. It means more than this, if it means anything. It means that the parts affected must be thoroughly cleansed with the syringe, using in some cases a pint of the salt-water solution for each sitting, and at in-

tervals not exceeding two hours, and using the atomizer every half hour. Herein lies the success of this plan of treatment, as without a judicious thoroughness in applying the syringe the throat becomes filled with the gangrenous discharge, and the nasal passage completely blockaded; so that respiration is carried on through the mouth. In this suffering condition I have frequently found the patient on my first visit; a condition pre-eminently favorable for absorbing the poisonous discharge. Then allow no time to be lost in preventing or stopping such absorption, or the gravest consequences will ensue. I use a common hard-rubber ear syringe, with the tip of the nozzle cut off for cleansing the throat and nostrils.

With the inexperienced a mistaken diagnosis is frequently made in dealing with diseases of this class. A simple catarrhal pharyngitis is sometimes termed diphtheria, and again, follicular tonsillitis is mistaken for the same disease. When the muco-purulent discharge is thrown out from the follicles, besmearing the tonsils, and even the pillars of the fauces, drying and gluing itself to the parts, it presents to the eye of the casual observer the appearance of a marked case of diphtheria, as it resembles the plastic effusion thrown out by the diphtheritic process, or in the case of follicular tonsillitis, where the inflammatory process within the follicles has been so destructive that we find two or more follicles coalesced and surrounded by the débris of the broken-down walls, the appearance is again much like that of the destructive process of diphtheria; but by judicious syringing of the tonsil you will be able to wash away the exudative material and broken-down tissue and bring into view each inflamed follicle; and this, as in all other inflammatory products of the throat, not diphtheritic, we are able to remove by the aid of the syringe. However, I think in two of my cases the disease started first as a follicular tonsillitis, and afterward, being in a locality where diphtheria existed, they became cases of diphtheria.

Before closing, permit me to state that in not a single case did I deem it necessary, neither did I give one drop of alcoholic or other so-called stimulants, nor one grain of quinine or other so-called antipyretics. In each and every case I adhered to a strictly milk diet until convalescence was well established.

CLAVICLE SPLINT.

By A. P. MITTEN, M.D.,

COLUMBUS, IND.

Dr. Smith's apparatus for fracture of the clavicle, as shown in The Medical Record for December 19, 1885, will evidently accomplish but *two* of the three essential requirements in that fracture. It will elevate the shoulder and carry it outward, but will *not* carry it backward; the latter direction being most essential in a vast majority of the cases. As must inevitably be the case where the arm is used as a lever and the chest as a fulcrum, the position is irksome and uncomfortable; unbearable, in fact, in some cases. The fact that from the time of Hippocrates to the present time eminent surgeons have advised placeing the patient in bed, with little or no dressing, is but a confession of inability to apply satisfactory apparatus to this injury.

The accompanying cuts will show the apparatus I have used with entire satisfaction. I will briefly describe it, and mention what I claim as points of superiority, and let its application, by those who may consider it worthy a trial, be the test of its merits.

1, in Fig. 1, a board half an inch thick, eight to ten inches wide, heavily padded on one side, and eighteen inches long. 2, six inches wide, from sixteen to eighteen (or according to size of patient) inches long, half an inch thick, this securely fastened to upright splint, as shown; a notch in the upper and lower side near the ends; two belts made of wide surcingle material tacked upon the upright, as shown in Fig. 1, and buckled in front, as shown in Fig. 2; two pieces of unbleached muslin about four inches wide and one yard long, folded and sewed, and stuffed with bran for a distance of about six inches at the middle; these passed over each shoulder, 3, 3, in Fig. 2, and securely tied over the end of the cross splint. The shoulders are now carried upward, outward, and

Fig. 1.

backward. The clothing can be put on and the arm supported in a sling, and, if need be, secured to the side. The roll over the shoulder should be flattened from before backward, and to prevent slipping in either direction, inward or outward, the under surface should have stitched to it a piece of rubber adhesive plaster about two inches wide and six inches long, the adhesive surface of course being directed to the shoulder. If the action of the sterno-cleido-mastoid muscle should elevate the inner extremity of the bone, a compress can be applied

Fig. 2.

by means of a strap of adhesive plaster. 1. It does away with the axillary pad. 2. It fixes the scapula and the entire shoulder-joint. 3. It avoids fixing the elbow-joint in a constrained and painful position. 4. The patient can put on and remove his clothing without disturbing the dressing. 5. The patient can attend to his ordinary daily

wants, as slight movements of the arm and hand can be made without injury, as such motions stop at the head of the humerus. In conclusion, the injury being a simple one and unattended by danger, and so considered by the laity, it becomes all the more necessary to make the apparatus used in its treatment as simple and as comfortable as is consistent with the accomplishment of its purpose.

Clinical Department.

CONVULSIONS IN AN INFANT CURED BY MORPHINE.

Dr. H. Plummer, of Harrodsburg, Ky., reports the case of an infant, twenty-two months old, who was seized, after a short period of malaise, with convulsions. She was seen after the second convulsion, and did not then appear to be very ill, but was fretful; the temperature was 102°, and there was some little cough, but there were no signs of pneumonic trouble. Bromide of potassium in five-grain doses was given every hour, but the convulsions increased in severity and frequency. The bowels had been moved by calomel and castor-oil. In the afternoon of the second day the child was in the following condition: The tongue was protruded between the teeth, swollen, and constantly in motion; the forearms were flexed and rigid, the thumbs being firmly drawn into the palms, and the lower extremities were likewise rigid; the child was now unable to swallow, and the pupils were widely dilated. The convulsive attacks recurred at such short intervals that they seemed to be continuous. Other remedies having proved ineffectual, Dr. Plummer determined to employ morphine, and accordingly gave one-sixth grain hypodermically. In a few minutes the little patient fell into a sleep, in which she remained, awaking only to drink, for twenty hours, the pupils became of nearly the normal size, and the muscular system became relaxed. From this time she continued to improve, although she seemed nervous and fretful for a time, and the convulsions did not return.

CLINICAL FEATURES OF TWO CASES OF PSEUDO-HYPERTROPHIC SPINAL PARALYSIS.

Dr. C. Eugene Riggs, of St. Paul, Minn., reports two cases of this affection, having an interesting family history. The patients were brothers. The first boy, aged six, had a peculiar waddling gait when walking, and marked lordosis of the spine, with consequent protrusion of the abdomen. Upon falling to the floor he was unable to raise himself to the erect posture, and attempts to do so caused pain in the back. He could not talk plainly, and the tongue remained more or less protruded from the mouth. The patient complained of pain through the eyes and temporal region at times, and also of some pain in the calves of the legs. The circulation seemed sluggish in this portion of the body, and the skin presented a mottled appearance, and remained white for some time after pressure had been made. The hypertrophy of the muscles was much more marked upon the left than the right side, the only exception to this being in the legs, which measured the same, although nine months ago the left was half an inch smaller than the right. The calf was the only portion of the right limb hypertrophied. Upon the left side the muscles on the posterior portion of the thigh and the glutei muscles were hypertrophied. The muscles of the back, especially those on the left side, were undergoing apparent hypertrophy, as were also the left deltoid and the tissues of the cheek on the same side. The left forearm measured half an inch more than the right.

The following measurements show the degree of hypertrophy in the second case, a boy, aged four: Upon the right side the arm, forearm, thigh, and calf measured, respectively, 3½, 5½, 11, and 6 inches in circumference, while upon the left side the figures were 6, 6, 11½, and 6.

In this case the hypertrophy was on the anterior portion of thigh. Patient was able to walk, but with the characteristic gait. After falling, he was able to resume the erect posture by raising himself first upon his feet and hands, and then, approximating the two extremities, climbing up his legs by his hands. During this effort he complained of some pain in the back. The mother of these children states that neither of them walked until he was two years of age, and never crept, but only "hitched along from one object to another."

The following interesting family history was given by the grandmother of the patients, an intelligent old lady, eighty-two years of age, seemingly herself suffering from a partial paralysis of the flexor muscles of the thigh. Her grandmother was the mother of ten children, nine daughters and one son. None of this family manifested any symptoms of this disease, as far as known, though the son entered the army at the age of twenty and all trace of him was lost. Several of the daughters reached adult age, married, and bore children. The males were all victims of this disease. Mrs. S—— (the lady giving the history), of the next generation, had ten sisters and one brother; the latter began to show symptoms of the disease at the age of ten years, and died in his twentieth year. As the disease progressed, his thighs became flexed upon the abdomen, and the legs upon the thighs. For a week prior to death there was no fecal evacuation, but a continual hemorrhage from the bowels. Two hours before death the patient suffered extreme pain throughout the body; this continued about an hour, and during the last hour there was no pain. The intellectual faculties were retained to the last. Mrs. S—— is the mother of eleven children, four daughters and seven sons. Two of the former died young, a third was the mother of one child, a son, who died of this disease. The mother died of cancer. The other daughter was the mother of the subjects of this report. Five of Mrs. S——'s sons died of the disease. One of them, who lived a comparatively longer time than the others, had the thighs firmly flexed upon the abdomen, and the legs upon the thighs, and the spine was curved to such an extent that the back of the head was within eight inches of the buttocks. The other two sons, now between thirty and forty years of age, are free from the disease. This history covers a period of more than one hundred years, and shows the heredity of the disease and its tendency to follow the males from one generation to another. In the two cases reported there was a condition and a symptom which Dr. Riggs has not seen mentioned in works upon this disease, namely, the hemi-hypertrophy of the left side, and the pain in the back. The former was well marked in both cases, as shown by the measurements, and the latter was one of the pronounced symptoms complained of by the patients.

ACCIDENT TO A PREGNANT WOMAN, RESULTING IN FRACTURE OF THE SKULL OF THE FŒTUS—RECOVERY OF THE MOTHER.

The following case is reported by Dr. George Lunney, of Malden, Mass.: A lady, aged twenty-three, who was within about ten days of the completion of gestation, while opening a door slipped and struck the edge of the door with great violence against her side in the right lumbar region. She was seized with a feeling of faintness and nausea, which continued for some hours, and then recurred at intervals for three days. Prior to the fall the child had given frequent evidence of life, but since that time it had been motionless, and the abdomen, which had hitherto been "warm," now felt, as the patient expressed it, "cold and unnatural." Examination showed a long, narrow line of contusion, extending from the lower part of the right lumbar region to the upper part of the umbilical region. Eight days after the accident labor be-

gan. After the spontaneous rupture of the membranes an examination was made, and revealed the presentation at the os of an angular, irregular mass, which a little later was recognized as a comminuted, disarticulated skull within an unbroken scalp. Labor progressed very slowly, and, as it was impossible to apply the forceps to the presenting part, a dose of ergot and whiskey was given, and delivery accomplished by pulling on the scalp with the hand, the vagina being at the same time protected from injury by the sharp angles of bone.

On examination of child a complete fracture of the left half of the frontal bone was found, extending from the supra-orbital foramen in front, passing backward and slightly inward—nearly equidistant from frontal suture and temporal ridge—to the coronal suture.

The left parietal bone was also broken, the fracture extending from a little to the left of the anterior-superior angle in front, passing backward over the parietal prominence and terminating a little to the left of the posterior-superior angle. Many of the other bones of the cranium were fractured or disarticulated. The woman made an excellent recovery without a single untoward symptom.

GUNSHOT WOUND OF THE HEART.

Dr. S. V. Hoopman, of Baltimore, writes: "On Christmas afternoon a man was shot in the chest. The ball was a No. 38. Death occurred nineteen and three-quarter hours after the shooting; the post-mortem fifteen hours after death. The bullet entered the chest to the left of the sternum, perforating the fifth rib. It then passed through the pericardium, left ventricle, and lower lobe of the left lung, it then passed out of the chest, fracturing the eleventh rib, and was found in the muscles of the back. *One* ounce of blood was found in the pericardium, and *fourteen* ounces in the *left pleura*."

Progress of Medical Science.

The Trigeminal Cough.—This peculiar term, introduced by Schadewald, signifies the cough which in perfectly normal conditions of the larynx and lungs persists with the greatest constancy day and night, being caused by the slightest temperature changes and in presence of penetrating odors. Sneezing and snuffling are the constant attendants of this trigeminal cough, which can even be artificially produced by gently tickling the nares. The patient will at once be forced to cough violently, and will recognize the cough as identical to the one which usually torments him. The frequently occurring cases of persistent coughing, without any traceable implication of larynx and lungs, which can be readily provoked by touching the termination of the trigeminus, are all to be regarded as pertaining to the trigeminal cough. The paroxysm of the trigeminal cough has a striking resemblance to the purely nervous asthmatic attack, beginning and ending with a paroxysmal cough. Still, in the asthmatic paroxysm we find a different acme as to duration and mode of respiration. Wille regards the purely nervous asthma as a simple reflex neurosis of the trigeminus in its nasal branches, and, according to his observations, we find the nervous asthma always accompanied by a trigeminal cough. Hence many cases of asthma can be, and have been, cured by cauterization of the nasal mucous membrane. The trigeminal cough can be divided into a nasal, a pharyngeal, and an auricular one. The cough which sets in if the external auditory meatus is being cleansed or irritated, is by no means a vagus cough, as has been assumed before; for the anterior portion of the meatus is not supplied by the vagus, but by the auriculo-temporal branch of the infra-maxillaris, hence by a subdivision of the trigeminus. This cough, therefore, is to be regarded as a typical trigeminal cough. The nasal form of trigeminal cough, however, is that most frequently met with. In all cases in which we find an obstinate cough, and yet are unable to discover any organic alterations, a trigeminal neurosis should be thought of. In the trigeminal cough, as in the asthmatic paroxysm, the neurotic affection is the principal fact, and not, as some authors have asserted, some possibly visible anatomical alterations of the mucous membrane, such as tumefaction of polypi, etc. Not only the direct cauterization of the nares, but even the simple sounding, executed sufficiently roughly to provoke epistaxis, suffices to produce an improvement of the neurosis. The therapeutic success of iodide of potassium in nervous asthma, which is actually but an intense nasal trigeminal neurosis, is to be explained by the hypersecretion of the part excited by the drug, which assists in the elimination of foreign irritations and bodies from the affected tissues. As the best mode of treatment of trigeminal neuroses the galvanization of the nasal nerves with a weak induction current has been warmly recommended. In lighter cases a resolving treatment, with the nasal steam-douche and the internal administration of iodide of potassium, will be sufficient. The sneezing and snuffling produced by this drug is the very thing desired. Wille formulates his general conclusions on this subject as follows: 1. The trigeminal cough is by far the most frequent type of all existing coughs. 2. It is a nasal reflex neurosis, and may be regarded as the pathological inversion of the sneezing act. 3. This neurosis may exist with or without anatomical alterations of the nasal cavities without being dependent upon them. 4. The highest expression of this neurosis is the nervous asthma. 5. This reflex can be provoked by all branches of the spheno-palatine ganglion, and by the ethmoidal nerve. 6. Every local treatment in the domain of the trigeminus, which alters its reflex functions, may lead to an improvement or even a cure of the affection.—*The Therapeutic Gazette.*

Hysteria in Children.—The following are the conclusions of Dr. Peugniez, in a recent thesis on this subject (*Archives Générales de Médecine*, February, 1886): 1. Hysteria is not rare in children. 2. Heredity is the principal predisposing cause of the affection. 3. Disturbance of the moral faculties is one of the first symptoms observed. 4. The general symptoms are nearly the same in children as in adults, whatever be the sex. 5. The results of treatment are usually more satisfactory in the child than in the adult. 6. The earlier the diagnosis is made and treatment instituted, the less grave is the prognosis. 7. Isolation is the most effective method of treatment of infantile hysteria. 8. The disease is sometimes epidemic in character.

The Treatment of Congenital Syphilis by the Older and Newer Methods.—Professor Monti, of Vienna, has published an elaborate paper on this subject. The following abstract (*London Medical Record*, January 15, 1886) embodies the chief points made by the author. Of treatment by inunction, the oldest is that in which blue ointment is employed. It is still largely used, but the objection to it is that it oxidizes too readily in this form, and is then apt to produce eczema. Oleate of mercury is extensively used instead of the blue ointment, and mercurial plasters have been substituted by some, while Charcot recommends mercurial soap. All those compounds are, however, more or less unsuited to the tender skin of infants, the least objectionable being the oleate of mercury. Dr. Monti has, however, had no personal experience of the soap. Moreover, inunction involves considerable risk of the system rapidly absorbing an excessive quantity of the drug, and in the case of very young infants this leads to acute anæmia. He has also come to the conclusion that the sudden death, which is not an uncommon incident in hereditary syphilis, occurs with far greater frequency where this has been treated by inunction. For these reasons he has for some years ceased to use it in the case

of children under one year. The next treatment under review is that by calomel. This also has a tendency to produce anæmia, and should, therefore, be given as a powder in combination with lactate of iron. This should be discontinued when the first symptoms have disappeared, and saccharated iodide of iron substituted until the spleen is no longer felt or the skin has resumed its normal color; but should the disease reappear in the skin, mucous membrane, or bones, calomel must again be resorted to. In some rare cases, such as those where there is great irritability of the intestinal tract, a subcutaneous injection of a freshly prepared mixture of calomel suspended in mucilage may be administered. The treatment by corrosive sublimate gives very satisfactory results, provided it be not too long continued, in which case symptoms of gastric irritation will supervene. This drug is also administered in the form of a bath, which should contain about seven grains; but in the writer's experience their effect upon the disease is very slow, and should, therefore, be accompanied by calomel internally, and in that way they appear to hasten the cure. The best mode of giving corrosive sublimate is by subcutaneous injection. The solution should consist of perchloride of mercury, gr. jss.; chlorate of soda, gr. vj.; and water, 150 grains, and of this one-half to one syringeful should be used every day, or every other day, until the symptoms disappear, to be renewed upon their return. The punctures are best made upon the abdomen or chest, and must not be too close together. The injection is in general well borne, and according to Dr. Monti's experience never produces mercurialism and causes very little loss of flesh. It cannot be denied, however, that infants do not bear these injections so well as adults; even with the greatest care it is not uncommon to find induration of the cellular tissue and abscesses at the seats of puncture. It is also not suitable for out-patients, because the mothers decline to bring the children after the first few times. Notwithstanding that the symptoms subside more rapidly under this treatment than under any other, the author has of late confined its use to cases that would not bear mercury internally. Albuminate of mercury, as recommended by Bamberger, is preferable for hypodermic use to corrosive sublimate, provided the solution be clear, but it is excessively unstable, and, if used in a cloudy state, produces irritation and abscesses. Much the same objection applies to mercury-peptone, though it is rather more stable. Formamide of mercury (Liebreich) is unsuited to children. Protiodide of mercury produces excellent results, especially when combined in a powder with lactate of iron, and perhaps no other remedy acts so promptly upon syphilitic affections of the bones. Unfortunately it produces diarrhœa and colic, and the addition of Dover's powder to the above compound soon ceases to have any effect. Consequently Dr. Monti only gives it in cases where bone-affections exist from the beginning. Black oxide of mercury, as recommended by Henoch, was found to produce vomiting, and was therefore soon given up. The author has had only a limited experience of hydrargyrum tannicum oxydulatum (Ludwig), but is favorably impressed by it, more especially because it does not appear to affect the digestive organs. It is now a recognized fact that hereditary syphilis can be cured by preparations of iodine as well as, though more slowly than, by mercury. The author is very favorably impressed with the saccharated iodide of iron. He says that it is well borne by children of any age, improves their nutrition, and never produces iodism; but it is much slower in its action than mercury, and is therefore best suited for very chronic cases. It should be given as a powder, for if the syrup be used it is apt to produce diarrhœa. Three grains may be divided into ten powders, and a new-born child may have two or three daily, dissolved in milk.

Broncho-pneumonia in Cholera.—M. Dubreuilh writes ("Thèse de Paris," 1885), that broncho-pneumonia of insidious and rapidly progressive course not infrequently occurs during the period of reaction of cholera. It may be latent and only discoverable through a small number of symptoms, and even then only on the eve or the day itself of death. The most frequently observed symptoms are an acceleration of respiration and pulse, rusty sputa, pain in the side, and especially the physical signs, subcrepitant râles, rarely a blowing sound, and dulness on percussion. Notwithstanding the rapid evolution of the disease, the lesions are very extensive. Broncho-pneumonia may be the actual cause of death, or it may be only an accessory in leading to a fatal issue. Recovery may take place, and when it does occur, the return to health is usually very rapid.—*Archives Générales de Médecine*, February, 1886.

A Successful Ovariotomy in the Seventh Month of Pregnancy.—Dr. N. N. Suslin reports the following case in the *Journal of the Kazan Medical Society* (Russian), December 31, 1885. A peasant woman, nineteen years of age, one year married, entered the clinic of Professor Levshin on account of an abdominal swelling which she had noticed for the past three years. She commenced to menstruate when sixteen years old, and had always been regular up to seven months before admission. At that time the abdominal enlargement began to increase very rapidly, and was now so excessive that when lying on her back the patient was unable to breathe, and she had for two months been forced to sleep reclining in a chair. The abdomen at the level of the umbilicus measured fifty-four and one-half inches in circumference. Two tumors could be felt, separated by a distinct depression. The mammary glands were enlarged, the nipples pigmented, and on pressure milk could be expressed. There were also other signs establishing beyond doubt the existence of pregnancy complicating an ovarian cyst. On the day after admission ovariotomy was performed, an incision being made in the linea alba, extending for a distance of eight inches between the umbilicus and pubis. The anterior surface of the tumor was found adherent to the parietal layer of the peritoneum, but the adhesions were not very firm and could easily be ruptured by the hand. The cyst, which was attached by a short pedicle to the right side, was drawn out and evacuated. The uterus lay posteriorly and on the left side, and was as large as it would normally be at full term. The pedicle was ligated and left within the peritoneal cavity, and the wound was dressed with iodoform. The dressing was removed on the tenth day, and the wound was found to have healed by first intention. The patient made a good recovery, and her pregnancy went on without disturbance to full term, when she gave birth to a healthy child. Nine days later she was discharged cured.

Primary Endocarditis in Soldiers.—All authorities agree that primary endocarditis is a very rare affection. The disease not unfrequently develops after pneumonia or pleurisy, in severe fevers, and in acute articular rheumatism, but it is very seldom seen to arise independently of these conditions from external causes. M. Fournier states, however, in an article in the *Gazette des Hôpitaux* of January 30, 1886, that he has observed it several times in soldiers, and believes that it is not seldom caused by chilling of the body during a halt after a long march or fatiguing evolutions. He relates a typical case taken from those which have come under his observation, and arrives at the following conclusions as a result of his studies in this direction: 1. Primary endocarditis, a very rare disease in the ordinary conditions of life, is much less infrequent in soldiers. 2. It is commonly developed in them through the influence of cold or fatigue. 3. Energetic treatment should be instituted at once, in order to prevent the deposit of fibrine upon the valves, which may lead in time to serious heart trouble. 4. The best mode of treatment consists in the application of wet cups over the region of the heart, followed by a blister. This treatment is usually followed by rapid amelioration.

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THE INDICATIONS FOR EXCISION IN HIP DISEASE.

THE question as to how frequently the operation for excision of the hip should be performed when the joint is diseased is still an unsettled one. The application of antiseptic surgery, which has reduced the mortality from the operation itself, has in particular rendered a fresh study of the matter advisable. In the *Annals of Surgery* for January, 1886, Dr. Leroy M. Yale has reviewed the subject in a thorough manner, and has collected statistics which enable one to reach certain tolerably positive conclusions.

There has been no little difference of opinion among surgeons as to whether any operative interference is advisable, unless the patient has necrosed bone or is plainly suffering from extensive and severe disease of the femur or os innominatum. The tendency perhaps has been to operate quite often in suppurative coxitis.

The ground taken by those advocating excision is that it promotes early healing of the disease, lessens mortality, and gives a better limb functionally.

The general mortality from hip disease, judged by the reports of the New York Orthopædic Hospital and of the Hospital for Ruptured and Crippled, is not high—ranging from five to twelve per cent. of the cases.

The mortality from suppurative coxitis when no operation is done varies extremely, as shown by the following table: Hueter, 50 per cent.; Cazin (80 cases), 12½ per cent.; Taylor (private practice, 24 cases), 8⅓ per cent.; Ollier, the greater part recover; "London Clinical Society Report" (587 cases), 33½ per cent.; Caumont (19 cases), 63.1 per cent.

As the question of excision only arises after suppuration takes place, the statistics showing the mortality when this is done are very significant. They are as follows: Leisrink, 57.9 to 63.6 per cent.; Sayre (72 cases), 34.7 per cent.; Culbertson (418 cases), 41.62 per cent. (6.93 from operation itself); Cowell (65 cases), 10.77 per cent.; "London Clinical Society Report" (587 cases), 37.7 per cent.; Holmes (215 cases), 18.6 per cent.; Caumont (42 cases), 61.9 per cent. (11.9 from operation); Bryant (30 cases), 18 per cent.; Volkmann (48 cases), 8⅓ to 25 per cent. (antisepsis); Korff (33 cases), 48.8 per cent. (30 per cent. under antisepsis); Grosch (166 cases), 33.7 per cent. (antisepsis); Alexander, 30.55 per cent. (antisepsis).

From these figures it seems that there is not much difference, as regards mortality, whether excision is performed or not, and that the introduction of antiseptics has reduced the mortality six or seven per cent.

The tables given do not indicate the proportion of cases that are not benefited by the operation—that "relapse," or are unhealed. This is placed by Dr. Yale at about twenty per cent. Assuming, therefore, that about one-third die and one-fifth relapse, it follows that the successes in excision amount to only about fifty-three per cent. This is about the same as the percentage of cures given by Cazin in eighty cases treated expectantly, the cases being followed up for five years.

No very brilliant results, so far as cure is concerned, therefore, can be attributed to excision. As to the claim for better functional result, this has not at least a very strong basis. We are inclined to believe, from the evidence so far accumulated, that patients treated expectantly, as a rule, get a better limb. At the same time the operation of excision occasionally gives most brilliant results.

The conclusion reached by Dr. Yale is that excision is only indicated as a life-saving operation, in order to remove the dangers consequent upon long-continued suppuration.

APHRODISIAC ADVERTISEMENTS AT THE THEATRES.

THE medical press is almost alone in its fight against quackery, because, for one thing, quacks pay the daily press some seventy-five cents a line to convince them that our strictures and opposition spring merely from a spirit of selfishness and a trades unionism.

Sometimes, however, advertising quacks combine with their effrontery such manifest immorality that we can fairly venture to call the attention of the secular press and of the officers of the law to it.

A correspondent has sent us some specimen advertisements from the programme of a musical burlesque which is running under a certain kind of sensational management in this city and whose popularity is based mainly upon the almost complete denudation of the female characters.

The advertisement is for the "Turkish Aphrodasiac Golden Pills," or "The Secret of the Harem," the advertiser, as will be seen, in his search for positive cures having neglected the minor details of spelling.

Our correspondent writes: "The place where the remedy is advertised betokens very good judgment on the part of the owners of 'The Secret of the Harem,' as one might well imagine that, after a wine dinner, an evening spent in the study of infra-umbilical female morphology at this theatre might act as a powerful synergist to the phosphorus and cantharides in the "Aphrodasiac Golden Pills."

The worst part of this disgrace, our correspondent adds, "appears on the first page of the same programme, where ladies are requested to send their name and address to the same disreputable firm in Buffalo, when 'they will receive by return mail valuable information.' What this 'valuble information is it does not say, but probably it contains hints as to helping the 'Golden Pills' 'permit' the 'old men' to 'procreate.' It is unnecessaryto comment on the influence of such obscene stuff on the good or bad of both sexes.

A GREAT PATHOLOGICAL EXHIBITION.

At a recent meeting of the London Pathological Society, fifty cerebral tumors were exhibited by members.

The size, location, and morbid condition of the tumors was almost as varied as the number presented.

There certainly is a wide appreciation of the fact, that the study of the morbid anatomy of the brain will give us a key to many of the physiological processes of that organ. Unfortunately, the tumors in most cases spread themselves to such an extent, involving so much of the brain-substance, that it is difficult to disentangle the symptoms belonging to the various areas involved.

The *British Medical Journal* thus summarizes the one generalization which, it says, can be drawn from the London Exhibit: "A tumor may occur in any region of the brain, that the region within which symptoms permitting localization occur is very limited, and that, therefore, surgery can do nothing for a large proportion of the patients who suffer from such tumors."

Such a method of investigating morbid anatomy, whether of the brain or any other organ, is a very practical one. It arouses interest, brings the minds of a learned body like a pathological society to bear upon one subject, which insures a preparation and ability to discuss questions which one would naturally hesitate to do offhand.

POSTURE IN THE REDUCTION OF HERNIA.

It needs no argument to prove that prevention is better than cure, or that it is better to reduce a hernia before strangulation has occurred than to operate after this condition has become established. Much has been written about the best methods of taxis; but the advice is almost always given to push up the prolapsed gut, and the utility of traction in effecting reduction is seldom considered. Most writers, it is true, recommend that the effort be made to relax the abdominal walls by means of an anæsthetic, and many advise that the patient be inverted if taxis in the dorsal position have failed in its object. But posture, if it be mentioned at all, is usually referred to only incidentally and as a last resort after the attempts to push back the intestine have proved fruitless, and the prime necessity of reducing intra-abdominal pressure seems in a measure to have been overlooked.

In an article in the *Centralblatt fur Chirurgie* of February 6, 1886, Dr. Karl Nikolaus notes this omission, and calls attention to a method which he claims to be at once rational and effective. Every-day experience demonstrates how unsatisfactory in many cases is taxis, as commonly employed, and that it should so often be ineffective is shown by a simple experiment. A portion of intestine about three feet in length is passed through a piece of rubber tubing two inches long. If now one end of the gut be filled with water it will be found impossible to force the fluid by means of pressure through the constriction formed by the rubber tube, but let suction be made on the empty extremity and the water will readily pass. And again, a knuckle of empty intestine can with great difficulty be pushed through a rubber tube, although it can be drawn through the same tube with ease. In like manner a prolapsed knuckle of intestine may resist every effort made to push it back through the constricting ring, but reposition will take place spontaneously when a traction force is substituted for pressure.

The necessary traction force is to be obtained by reducing intra-abdominal pressure. But this is not effected by simple relaxation of the abdominal walls, for the abdominal parietes may be made very lax by placing the patient on his back with the thighs flexed and the thorax elevated, but in this position the capacity of the abdomen may be so much diminished as even to increase the pressure. The position which the author recommends is that known as the knee-shoulder position, the patient resting upon his knees and upon the shoulder on the sound side. Or, if this is for any reason impracticable, the Sims position may be assumed, the patient lying upon the side opposite to the hernia and with his pelvis raised. The intra-abdominal pressure may be still further reduced by previously evacuating the bladder and rectum. While the patient is in this position a considerable suction force is exerted to empty the incarcerated gut of its contents, and then the intestine will often be drawn back into the abdominal cavity by a continuation of the same force combined with that of gravity.

Dr. Nikolaus has succeeded by this means alone in effecting reduction in a considerable number of cases of hernia after taxis had been tried in vain. The method would seem to deserve a more prominent place in the therapeutics of hernia than it has hitherto occupied, and it might, at least, be tried first, before resorting to prolonged taxis, which is, even in experienced hands, by no means always a perfectly safe and harmless procedure.

THE QUESTION OF LATIN.

It is not in this country alone that the opponents of a so-called classical education are active, but they are making themselves heard also in older lands and among people whom we are accustomed to regard as less practical and more wedded to tradition than ourselves. A work entitled "The Question of Latin," has recently been published by M. Raoul Franz, in which he asserts that the time spent in the study of this language is, for the great majority of educated men—physicians as well as others—simply time thrown away. It would be much better, he thinks, were students to employ the hours now devoted to Latin, in the acquisition of more practical knowledge. The arguments which the author brings forward in support of his position are familiar to all those who have given the subject any study; but though not new they are presented in such an attractive way as possibly to force conviction upon many whose opinions are as yet unformed.

It can hardly be questioned that, as Latin and Greek are now taught in school and college, they might with advantage be dropped from the curriculum. But the remedy is not to abolish the study, but to reform the system. There is no necessity of devoting six or eight years to the study of a language, even a dead language, in order to acquire a good working knowledge of it, when by the use of the modern methods a better result can be obtained by one, or at most two, years' application. While fully recognizing the advantage to a physician of a knowledge of French and German, we do not believe that the study of those tongues can be made to take the place of a groundwork in Latin. Education is a training,

and one who has had the mental discipline furnished by a proper study of Latin will find that he has acquired a facility for mastering modern tongues which another will not possess. And furthermore, he will have become possessed of habits of observation and reasoning which will be of incalculable advantage to him in the practice of medicine as well as in other pursuits.

LITERARY EVOLUTION.

We greatly err in supposing that evolution obtains merely in the animal and vegetable kingdoms. Biology, or the science of life, in the individual merges into Sociology, or the science of life among an aggregation of social units, that is, society—and the same laws that govern two kindred sciences just as truly control the development of the mental organism. From the old tribal chief, with his exhortations, we have gradually come, through manuscripts, to the age of printing. Newspapers and books have followed in due order, and if we watch the present spirit of activity in the literary world, we see that there has been a still further unfolding, particularly in our own profession. Less books, perhaps, are written by our best men, that is, books covering a wide range of topics. More is done in the line of monographs or in the presentation of papers before society gatherings.

After all, is not this but another manifestation of that tendency to specialism so prevalent among medical men? It seems to us so to be. Moreover, it happily is free from many of those features which in the specialization of medical practice have given rise to so much acrimony. Many and sometimes bitter have been the wordy wars between the general and the special practitioner of medicine. We took occasion to remark some months ago that the latter would appear just in proportion to the demand for them. They are a product of the call of the times for division of labor, and the number of true specialists will be regulated, as are all inorganic commodities, by the law of supply and demand.

We see, then, that the best thoughts of the profession are more likely to be promulgated in the form of papers than ever before. This has both encouraging and discouraging features. There is encouragement in the fact that many who would shrink from the task of writing a set treatise, will, from their garnered wisdom, enlighten us on topics concerning which they are particularly well qualified to judge. There is discouragement in the fact that the preparation of a paper seems such a slight task, comparatively, that we may be flooded with a series of contributions, shallow, indecisive, and not contributing anything to our positive knowledge.

No paper, then, should be a mere repetition of what has preceded it! If it contain the results of original investigation on any topic, it is worthy of being read. Its value varies with the experience of its writer, the carefulness of his experiments, and the logic of his deductions. It is worthy also of presentation if it contains observations on any new topic or new phase of an old topic. From all these communications the future treatises on medicine will derive useful information. We cannot, as a rule, rightly record the history of our own times. We are too much a part and parcel of it to have the unbiassed judgment of the historian. The present prolific literature on our Civil War is showing us the falsity of many of the conclusions of a score of years ago. The present discussion on many of the problems of pathology, while unsettling to our own opinions, is yet the prerequisite for the solidification of truth. Right here is the province of the carefully written paper: it feeds the discussion with facts. Our system of therapeutics, around which all other branches of medicine centre, must be constructed by the inductive method. We must reason from a part to the whole. From authentic facts we must infer the general law which governs them.

THE HAIR-ROOTS AS INDICATORS OF BODILY OR MENTAL DISEASE.

Some time ago considerable notoriety was given to a claim that changes in bodily health could be detected by an examination of the white blood-cells, or, again, by a study of the hæmatoblasts and the mode of blood-coagulation. Something much more unique and apparently fantastic has been announced by Dr. J. Pohl-Pincus, of Berlin. This investigator, in a brochure entitled "Polarized Light as a Means of Recognizing Irritable Conditions of the Nerves of the Scalp," claims that by an examination of the hair-roots by polarized light peculiar changes may be observed whenever the patient suffers from physical irritation or mental excitement.

Dr. Pohl-Pincus rushes forward with no hasty conclusions, but says that his investigations have now been going on for twenty-five years, and that his later observations continue to confirm those made earlier.

If, in healthy conditions of the body and mind, the hairs that fall out daily are examined microscopically by polarized light, the enlarged bulbous end of the root will show a white contour and a yellowish, or brownish-red, centre (Form A).

In all irritable conditions of moderate grade, all painful conditions of any organ, also in emotional disturbances of moderate grade without any apparent bodily disease, the bulbous end of the hair-root increases in length and breadth (in proportion to the intensity of the irritation), the central part appears under polarized light of a violet, blue, or bluish-green color, separated from the white contour by bands of yellow and red (Form B).

In higher grades of bodily disease or mental disturbance the bulb becomes still larger, and the bluish centre changes to green, yellow, or orange (Form C).

A few hairs of the B and C type are found in normal conditions, especially in those more advanced in life.

A professor of jurisprudence, aged forty-six, suffered from overwork and great mental anxiety. Fifty-seven fallen hairs showed: of Form A, 11; Form B, 24; Form C, 23. Two years later, when in good health and free from worry, 34 fallen hairs were classed as follows: Form A, 18; Form B, 16; Form C, 0.

A young man, aged nineteen, while studying for examination, had in 38 hairs: Form A, 16; Form B, 19; Form C, 3. Three weeks later, while at examinations: Form A, 7; Form B, 12; Form C, 17.

Thirty-one cases, showing the effects of painful disease, but more especially of depressing emotions upon the appearance of the hair-roots, are reported.

Dr. Pincus concludes that bodily disease or mental excitement causes circulatory disturbances, and in consequence a change in the normal nutrition and pigmentation of the hair. This is only in accordance with previous observation, and it appears that the merit of Dr. Pincus' discovery, if such it is, lies in his obtaining a means by which very slight and temporary changes in tissue-growth can be detected and approximately measured.

MEDICAL ADVERTISEMENTS IN NEWSPAPERS AGAIN.

Instances of medical advertising have of late been so numerous and flagrant, and the practice is so liable seriously to hurt the profession in every way, that we have not hesitated to criticise the perpetrators sharply. In this we are doing only what the sentiment of the profession as well as its material interests and dignity demand.

To those bold enough to say that there is nothing immoral in public advertising, we answer at once that they are mistaken, because whatever tends to injure our fellows is wrong; and if, of two equally good physicians, one advertises and the other does not, the latter's reputation and practice may be seriously thrown into the shade. If we as a profession should ever be driven to the position that all must advertise, then medicine loses its dignity as a calling, and has an expensive and often dishonest encumbrance added to it.

We can hardly make this plea for preserving the traditional methods of our calling without an apology for so doing. Having made it, however, we would add that, perhaps in one case out of ten of the newspaper advertisements, the doctor is not at fault. One such case apparently occurred at Auburn, N. Y., recently. We criticised severely the announcement in flaming sentences of a surgical operation done by a physician of that city. We learn from authentic sources that the doctor in question had nothing to do with the publication of the article, but that it was communicated to a reporter by the patient himself, without the knowledge of the surgeon. It is needless to say that we are extremely glad to learn and to announce that these are the real facts in the case.

THE CARTWRIGHT LECTURES ON THE BLOOD-PLAQUE.

Dr. Osler's opening lecture upon "The Blood-Plaque" was an interesting one, and gave promise that the present Cartwright series will furnish some solid contribution to medical science. The lecture was devoted entirely to a description of the "third blood-corpuscle." This we are told is identical with the elementary corpuscle of Zimmermann, the hæmatoblasts of Hayem, and the blood-plate of Bizzozero. The so-called "invisible corpuscle" of Norris is a different thing, according to Dr. Osler, although Norris claimed that the corpuscle described by him was the same as that of Bizzozero. The blood-plaque is also identical, presumably, with the *grains sarcodiques* of Vulpian, and the globulins of Donné. Very full accounts of these bodies have been given by Bizzozero and Hayem, and this is not the first time that Dr. Osler himself has contributed to our knowledge of them.

Dr. Osler describes the blood-plaque as a colorless, protoplasmic disk, constant in the blood of mammals, measuring from 1.5 to 3.5 micro-millimetres. The number varies at different periods of life and in disease. In a healthy adult there are between 200,000 and 300,000 per cubic millimetre of blood. In the same amount of blood there are about 10,000 white and 5,000,000 red blood-cells, so that the ratios would be about 500 red cells to 25 blood-plaques and 1 white cell.

Dr. Osler gave an account of the normal and pathological variations in these corpuscles. They are more numerous in the young, and are increased in number in cachectic conditions, as was first noted by Riess; also in the convalescent stage of fevers, but not in the active stage, as Vulpian states. In certain cases of profound anæmia the blood-plaques are very scanty, while in the so-called blood diseases they vary much in number.

The modes of studying this plaque are numerous. Dr. Osler, in 1874, showed that they could be readily seen in the blood-vessels of a young rat by snipping out a piece of the subcutaneous tissue and examining it in a saline solution. It was, we believe, Bizzozero who showed that they could be seen in the circulating blood of the guinea-pig by stretching the mesentery over a ring of cork. They can be well seen also, according to Osler, by allowing the blood to flow directly into a one per cent. solution of osmic acid, or into Pacini's fluid.

The blood-plaques are smooth, homogeneous bits of protoplasm, with no nucleus. They are in the form of a flat circular disk. Seen edgewise they look like rods. There is no certain evidence that they are biconcave. When withdrawn in the blood they very rapidly disintegrate and agglutinate, forming the "granule masses" described by Schultze. They do not undergo amœboid movements.

They have been believed to be very important factors in the process of coagulation. The blood-plaque is constant in the blood of mammals, varying, however, in size. In birds there is a corpuscle which appears to be analogous with the plaque, but it is, according to Dr. Osler, nucleated.

The description of "the third blood-corpuscle," of which we have thus given a brief outline, is not a new one, but the lecturer has made valuable additions to our knowledge of it, and given a better standing to a morphological element heretofore regarded by physiologists with the suspicion always accorded to scientific strangers.

Cholera in Japan.—The epidemic which prevailed in Japan during 1885 was recognized as cholera at Nagasaka, August 23d. The disease next made its appearance in Kumamoto. In Hiogo one case occurred on board an American man-of-war recently from Nagasaka. During September and October, cholera prevailed in many places. Reports of cases and deaths have, however, not yet been received. Forty-five counties, embracing an area of 5,600 square miles, are reported as having been infected. Cholera last prevailed in Japan in 1882.—*Bulletin of Nat. Board of Health*.

Death at an Advanced Age.—According to the Russian journal *Kaspii*, a woman recently died in the Province of Baku aged one hundred and thirty. Careful statisticians have claimed that there is no authentic instance of anyone living beyond the age of one hundred and ten.

News of the Week.

THE WILL OF DR. FLINT.—By the provisions of his will, Dr. Flint gives his medical library to the New York Academy of Medicine, with the exception of such works as the family may wish to retain.

BLOOMINGDALE ASYLUM.—It is proposed to tax the Bloomingdale Asylum, and to open streets through its property. The managers naturally object to this and claim that the money saved by the freedom from taxation goes to lessen the cost of treatment, and is really applied in charity. It appears that the only point on which the managers case is weak is this: that they have no right to ask the citizens of New York City to be taxed for the support of an institution whose charities, such as they are, are not limited to the residents of New York City.

THE CONGRESS: FIGHTING OR COMPROMISING.—Everyone is liable to error, although if there are ever exceptions it is the editorial staff of a medical journal. With this proviso we must repeat our statement that the affairs of the next International Congress are not in a promising condition. There is apathy and discord at home, a state of doubtfulness and expectancy, to put it mildly, abroad. It is utterly useless to deny this, and it appears to us most unwise for certain of our esteemed contemporaries to close their eyes and blindly shout that all is well. All is not well, and no amount of strident vocalization can make it so. The death of Dr. Flint and the illness of Dr. Davis are additional blows to those who appear to wish to rule the Congress on an association basis, or ruin it. We urge attempts at peace and compromise at the St. Louis meeting. There must be some compromises or the Congress will have to meet while antagonizing a considerable and influential part of the medical profession in this country.

THE FAILURE OF MEDICAL LEGISLATION IN MARYLAND.—The *Maryland Medical Journal* states that the bill to regulate the practice of medicine in Maryland, now before the Legislature, was drawn up and at first approved by the Medical and Chirurgical Faculty of the State. The bill was modelled on that of Illinois, and provided for an examining board of five regular physicians and two homœopaths. On subsequent maturer consideration, the Faculty decided to withdraw its approbation from the bill. The *Maryland Medical Journal* says that no law can be had without some concession to homœopathy.

PROFESSOR BILLROTH has gone to Egypt on account of his health.

ANOTHER DEATH AMONG PASTEUR'S PATIENTS.—Nineteen Russian mujiks, who had all been bitten by mad wolves, arrived in Paris on March 15th, and were at once placed under M. Pasteur's care. Inoculations were at once begun and were made twice daily. On March 22d, *i.e.*, on the seventh day, one of the patients was attacked with hydrophobia and died in great agony. The symptoms of the attack came on on the fifth day, after the mujik had been inoculated over half a dozen times, from an infected cord only about seven days old. The other patients are reported as doing well.

NEW YORK HOSPITAL.—Mr. Joseph Pulitzer has given his first year's salary as Congressman, $5,000, to the New York Hospital, to found a free bed for the benefit of newspaper men.

A NEW CURE FOR CONSUMPTION.—Dr. Caius, some four hundred years ago, when an old man, tried to regain his youth by suckling the breast of a woman. He died of stone—not of old age, at least. A more successful application of this remedy is reported to us by a correspondent, who says that "a party who had every indication of the last stages of consumption has regained former health, and attributes it to obtaining his nourishment from sucking a healthy nursing woman."

CHOLERA IN EUROPE.—Our reports cover the three weeks, December 23d to January 15th, at which date cholera was still prevalent in the Department of Finisterre, France. December 23d to 30th, there were 73 cases and 14 deaths; December 31st to January 7th, 74 cases and 7 deaths, and from January 8th to 15th, 55 cases and 11 deaths.—*Bulletin Nat. Board of Health.*

CHOLERA IN AUSTRALIA.—Four deaths from cholera occurred at Sydney in December, 1885.

A DENTAL SCHOOL IN VIENNA.—The Professorial Senate in Vienna have under discussion the question of establishing a dental school in connection with the medical faculty.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF NASHVILLE graduated a class of ninety-six at its commencement on February 25th.

DR. HARVEY D. BURLINGHAM, of Plainfield, N. J., died at his residence there on March 17th, aged fifty-four. He graduated in 1857 from the College of Physicians and Surgeons, in New York, and served in the United States Navy as a surgeon during the late war. He became a resident of Plainfield in 1872.

DR. J. S. KNIGHT, Surgeon United States Navy, died suddenly of heart disease, at Hyannis, Mass., on Sunday last. Dr. Knight was born in Delaware, entered the service in 1861 as assistant surgeon, and was commissioned as surgeon in 1866.

DR. JOHN K. KANE, one of the leading practitioners of Delaware, died recently at Summit, N. J. Dr. Kane was born in Philadelphia, December 18, 1833. He studied medicine at Jefferson Medical College, Philadelphia, and at one of the medical schools in Paris, and settled in Wilmington for the practice of his profession. His brothers were General Thomas L. Kane, who went into the late war as colonel of the celebrated Bucktail Regiment of Pennsylvania, and Elisha Kent Kane, the Arctic explorer. Dr. John K. Kane accompanied the expedition which went to the northern seas in 1856 for the relief of his brother, and was one of the surgeons.

CARING FOR NEW JERSEY'S INSANE.—The commissioners of the Morris Plains Asylum presented to the legislative committee yesterday plans for a sewerage system for the institution. The contemplated expense is $30,000, and the Legislature is to be asked to make an appropriation of that sum. Dr. E. E. Smith, the medical director of the institution, has tendered his resignation, to take effect on June 1st.

Poisonous Wall-papers.—A bill has been submitted to the Massachusetts Legislature prohibiting the manufacture and sale of wall-papers containing more than one-fourth of a grain of arsenic to the square yard, and permitting the sale of such papers containing not more than one-fourth grain to the square yard. Dr. Edward S. Wood claims that arsenic is sometimes put into paste to prevent its souring. It seems that a law permitting the use of arsenic to the extent of one-half grain to the square yard, as required by English law, would answer the case. In Germany, Sweden, and Bavaria the law forbids the sale of arsenical wall-papers.

A Proposition to Establish a Post-graduate School in London is being agitated.

A Pasteur Institute.—A commission appointed by the Academy of Sciences has decided upon the establishment of a *locale* in Paris for the treatment of persons bitten by mad dogs. It is to be called "Institut Pasteur," and is to be supported by public subscription. As it is intended to be international, subscriptions are solicited from all parts of the world. A cable despatch announces that already about $10,000 has been raised.

The Efficacy of Vaccination.—The New York State Board of Health announces that it was successful in preventing the introduction of small-pox from Montreal last fall, and that its work signally demonstrated the utility of vaccination and the activity of the New York City Board of Health virus.

Dr. Bochefontaine, chief of the Laboratory of the Faculty of Medicine of Paris, died recently. He was an active opponent of the microbic theories of Pasteur and Koch, and swallowed a dose of cholera bacilli during the epidemic last year in order to prove their innocuousness.

Dr. Chr. Bohr succeeds the late Professor Panum as Professor of Physiology at Copenhagen.

Not Favoring Pasteur.—The Vienna city government has refused to accept the proposal of Princess Metternich to send medical men to Paris to learn Pasteur's method of preventing hydrophobia

Hopeine is a substance which is claimed to be the alkaloid of hops. Whether there is such a thing is yet a question. It is stated that several samples of English hopeine examined were found to be really only impure morphine. On the other hand, the *Pharmaceutical Journal*, of London, claims that the alkaloid has been obtained, and is now being tested.

Against Cremation.—Dr. Frank H. Hamilton's paper, entitled "Cremation not Required as a Sanitary Measure," has deservedly received wide notice. It should put a quietus on a great deal of foolish talk about the dangers of inhumation.

A State Hospital for Virginia.—A Richmond paper says: "The medical fraternity are moving in the matter of securing from the Legislature an appropriation of $12,000 a year, for the maintenance of a State hospital to be located in Richmond. Without going into the full details of the scheme, as set forth in a bill now before us, we would say that the main object is to furnish "treatment for indigent persons from the State of Virginia who are suffering from curable but non-contagious diseases and injuries."

Small-Pox in Italy continues to increase. During December there were 2,679 cases, distributed in 153 localities.

A College of Pharmacy is to be established at Buffalo, in connection with the medical department of the University. Professor R. A. Witthaus has been elected President of the faculty.

Tying the Lingual Artery with the Eyes Closed.—Billroth has recently done several operations for cancer of the tongue. A correspondent of the *Iowa State Medical Reporter* says: "The operation, by tying the lingual artery, was nearly bloodless. In order to show the students how easy it was to tie the lingual artery, he found and ligated the same in one case, after making the first incision, without using his eyes."

The Cook County Insane Asylum.—Investigation has shown that the management of this institution, since its foundation, thirty years ago, has been unspeakably bad. It has been a part of the political machine, and care of the "boys" has been considered first, the care of the insane last. It is recommended that the institution as such be abolished, and the insane inmates be placed under the care of the State. Nothing in the history of local government in this country shows more clearly the pernicious results of the political machine system applied to medical charities.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 22, 1886.

Daniel Lewis, M.D., President, in the Chair.

Dr. L. D. Bulkley read a paper on

THE RELATIONS BETWEEN DISEASE OF THE SKIN AND DISORDERS OF OTHER ORGANS.

The skin may become idiopathically affected the same as any other organ, but local pathology has been carried so far by some as almost to ignore the existence of any relationship between diseases of the skin and the conditions of other organs.

The author of the paper read a letter received from a patient who gave an exceedingly intelligent account of her symptoms, associated with acne, rosacea, eczema, and bromidrosis; these were referable to the digestive organs, such as constipation or diarrhœa, more or less nausea, restlessness, etc., retarded menstruation, occasional attacks of severe pain in the head. Such a diversity of symptoms would almost instinctively lead one to treat the patient by other than local measures.

The subject proper of the paper was studied under the following heads: The relation which exists between diseases of the skin and (1) the digestive organs; (2) nervous disorders; (3) circulatory disorders; (4) sexual disorders; (5) general conditions, as anæmia and debility; (6) special conditions, as malaria, gout, and rheumatism.

The general conclusion of the paper was that diseases of the skin may sometimes bear important relations to other organs, and he will act most wisely in endeavoring to remedy the former who considers the whole of the individual presenting the same, and he will succeed

best who most fully recognizes and appreciates the relations which the skin and the other organs sustain to each other.

Dr. C. Heitzman had scarcely anything to criticise in Dr. Bulkley's paper, although educated in the Vienna school, which teaches that many of the skin diseases are purely local, yet a great many of them do depend upon internal diseases. Dr. Heitzman agreed with Dr. Bulkley that the parasitic skin diseases, such as tinea tonsurans, etc., are local, although some dermatologists regard them as constitutional. Urticaria, also, may depend upon disturbances of digestion, may occur independently of such disorders, and may be caused by uterine troubles. That skin diseases frequently depend upon disorders of the nervous system was very obvious.

Dr. George T. Jackson referred to the doctrines of the French and German schools, and said he believed that the middle course was the best to pursue, namely—that skin diseases may be either local or constitutional.

Dr. J. Leonard Corning spoke of the relation between skin lesions and nervous affections, and thought that we should know more of this relation as pathology advanced.

Dr. C. W. Allen believed that in very many cases the skin must present a suitable soil for the parasite to develop before the person would have such affections as favus, etc. The cause of local lesions was sometimes very near at hand, as in the case of a cutaneous lesion affecting the upper lip and alæ of the nose, caused by peculiar nasal cartarrh, etc. Diabetes also was a frequent cause of skin lesions, notably pruritus.

Dr. Hadden had seen numerous cases of disorders of the skin dependent upon diabetes, most frequently in the aged. He regarded many skin diseases as having a close relation to constitutional conditions, and addressed his treatment at first to the correction of these errors.

Dr. Bulkley in closing the discussion said that he did not wish to be understood as saying that urticaria always depended upon digestive disorders, for it also depends upon nervous disorders very frequently, etc. He believed that favus, or ring-worm, did not develop in healthy individuals, and that to treat such parasitic affections most successfully internal medication was required, such as tonics, alteratives, alkalies, etc.

Dr. Stephen Smith then read a paper on

THE EFFECTS OF HIGH TEMPERATURE ON THE PUBLIC HEALTH OF THE CITY, AND THE MEASURES FOR THEIR PREVENTION,

in which he pointed out the effect on the rate of mortality produced by the high temperature of the summer months, especially July, August, and September; also the conditions which favored an increase in mortality under the influence of high temperature, as age, rest, and activity, the introduction into the blood of decomposing animal matter, etc. The special causes of high temperature in the city of New York were Southern exposure, absence of vegetation, aggregation of stone, brick, and mortar, and crowded population. The measures for the prevention of the deleterious effects of high temperature were: moderation of the temperature of the atmosphere by means of shade-trees, and flushing the streets with water, and the daily regulating and equalizing of bodily temperature by artificial means, such as public baths.

Dr. Smith also read a bill entitled: "An Act to Secure the Increase and Protection of Shade-trees in the Streets, Avenues, Public Squares and Spaces in the City of New York," which had been prepared with the view to Legislative enactment, for the purpose of providing the city with shade-trees, and asked that it be referred to the Committee on Hygiene with the approval of the Society.

Dr. Bulkley moved to amend by including additional water-supply for flushing the streets, and it was so ordered.

Remarks were made by Drs. Peters, Carpenter, Hadden, and others, and the subject was referred to the Committee on Hygiene, with power to act for the Society, with reference to the indorsement of the proposed measure.

The President made the following

ANNOUNCEMENT OF THE DEATH OF THREE MEMBERS.

"It is my sad duty to announce the death of three members of this Society since the meeting four weeks ago. Such a record of mortality in our ranks is remarkable in several respects, for which reason I hope you will indulge my brief reference to it.

"Never, so far as can be learned, has so large a number been transferred from our midst in so brief a period. Four weeks ago to-night, they were all in the midst of their active professional labors. To-night every earthly thought, ambition, motive, and plan of those three lives is ended forever. Such a sudden stroke is an unusual reminder of the uncertainties surrounding all that relates to human life. It is also worthy of remark that all three were prominently identified with the medical history of the present day.

"Dr. Gaspar Griswold, who died after four days' illness, had not reached thirty years of age, and yet was well and favorably known as a teacher and medical writer. His future bid fair to be one of uncommon usefulness and brilliancy.

"Dr. Austin Flint was recognized in both hemispheres as one of the best of medical instructors. Flint's 'Practice of Medicine' is the best book ever written on that subject for medical students. His name and his fame will ever remain one of the brightest pages of American medical history. None who knew him personally can forget his characteristic geniality of manner and absolute purity of life, which made him a medical gentleman in the best sense of the term. No one can be found to fill his place.

"Dr. S. Oakley VanderPoel, my immediate predecessor in the chair, can receive no encomium from us which will more than equal the distinguished position he attained as an earnest, independent, conscientious man, whose wonderful energy and ability as an executive placed him in the front rank of the profession. It was fortunate for a young physician to know Dr. VanderPoel, for he had the power of impressing upon his associates, to an unusual degree, his own sterling qualities. The County Society has lost an ex-president whose name was one of its ornaments, and whose wise counsels it is hoped may not soon be forgotten.

"Dr. Agnew has kindly consented to present a memoir of his life at a future meeting; Dr. Carpenter will be memorialist for Dr. Flint, and a like announcement for Dr. Griswold will be made at the next meeting of the Society."

The Society then adjourned.

A Substitute for Cantharides.—A Spanish beetle, *Œnas afer*, has been found by Dr. Armengue, of Barcelona, to possess a vesicating principle which can be extracted and made use of like cantharides, over which it is stated to have the advantages of greater cheapness, absence of irritating effects on the kidneys and reproductive organs, and last, but not least, of entire painlessness.

Anæsthesia by Ether Vapor.—Dr. A. F. Muller (*Medical News*) reports excellent results for securing a steady flow of ether vapor to the patient. He has an apparatus consisting of two halves of a rubber foot-ball, sewed together at the edges, and connected by a tube with a bottle containing ether, which is plunged in a vessel of hot water. As ether boils at 98°, the vapor passes steadily and rapidly, and is inhaled by the patient, whose face is covered by the inhaler, protected by a clean towel. There is no nausea, no struggling, no stage of excitement. The quantity of ether varies from an ounce and a half to three ounces.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 18, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE Corresponding Secretary reported the death of Samuel Oakley VanderPoel, M.D., LL.D., Honorary and Resident Fellow; of Austin Flint, M.D., LL.D., ex-President, and, in the absence of the Statistical Secretary, of Gaspar Griswold, M.D., M.R.C.S.

The President appointed Stephen Smith, M.D., memorialist for Alfred C. Post, M.D., LL.D., and said that he should claim for himself the honor of memorialist for their distinguished ex-President, Austin Flint. Memorialists for Dr. VanderPoel and Dr. Griswold will be appointed at the next meeting of the Academy.

THE SIGNIFICANCE OF SMALL QUANTITIES OF SUGAR IN THE URINE.

The discussion on this subject was under the auspices of the Section in Theory and Practice of Medicine, Alfred L. Loomis, M.D., LL.D., Chairman, and was opened by Dr. THOMAS A. MCBRIDE, who said that he first had his attention especially directed to the significance of small quantities of sugar in the urine by Seegen, of Vienna, and that, by the adoption of therapeutic measures intended to correct this abnormal condition, he could assure this class of patients that they would be benefited, at least, and almost always be cured.

A large number of affections exhibit sugar in the urine some time during their course, and, of disturbances referable to the nervous system, cerebral hemorrhage, fracture of the skull, concussion of the brain, and certain psychoses; and in the latter particularly, the sugar is believed to exercise an important influence in the production of the symptoms of which the patient complains. Sugar may be present in the urine in certain cases of lithæmia. Dr. McBride had found sugar in the urine of persons suffering from insomnia, restlessness, and general nervousness, neurasthenia, parasthesia, general and symmetrical or asymmetrical, in hemiparæsthesia, and also in certain pareses. In two cases it was evidently the cause of temporary hemiplegia. In all these cases the ordinary tests for sugar in the urine were employed, and in many of them with negative results; but by Seegen's method the presence of sugar was demonstrated distinctly.

The method consists in filtering the urine through *blood* (not animal) charcoal (most reliable imported by Fraser & Co.), then washing the filter with distilled water, afterward testing the second, third, and fourth *washings* with Fehling's solution. From $\frac{1}{10}$ to $\frac{1}{2}$ per cent. of sugar may not be detected by the ordinary use of the Fehling test.

His treatment had consisted in regulating the diet, and the internal use of arsenic, more particularly Clemens' solution, the arsenite of bromine.

Just at present he was at a loss to say what is, and what is, not diabetes.

DR. KINNICUTT said that several years ago Lauder Brunton called attention to the fact that, occasionally, on the addition of sulphate of copper and caustic potash, or of Pavy's solution, to diabetic urine, a precipitation of the oxide of copper did not occur. He believed that it was due to the presence of some other substance in the urine, which kept the reduced oxide of copper in solution. He found that, by largely diluting such urines and so lessening the solvent power of this substance, whatever it might be, the precipitation of the oxide took place. He also had noticed that this peculiarity in reaction most commonly was present in urines which give a purple coloration on the addition of nitric acid. Kühne long ago called attention to the fact that in normal urine, to which was added as much as one-half to one per cent. of sugar, a reduction of cuprous oxide failed to occur. Normal urine, therefore, probably contains the substance or substances which prevent the precipitation of the oxide of copper.

These facts would suggest the usefulness of the method described by Dr. McBride.

DR. R. C. M. PAGE said that glycosuria could be conveniently divided into three classes of cases: 1, that occurring after the ingestion of an excess of sugar; 2, that in which sugar is present in large quantity, but not continuous; and 3, that in which sugar is present in small or variable quantity, but persistent.

According to Niemeyer, diabetes occurs most frequently in men, and between the ages of thirty and forty years; but his experience had been that it occurs most frequently in women, and after the middle period of life; and that such cases are usually mild and intermittent. So far as treatment was concerned, he had no faith in the efficacy of drugs. Beyond affording rest, he did not regard opium as beneficial.

DR. GEORGE P. FOWLER gave an outline of the experiments and observations which led him to the conclusion that sugar, in slight trace or marked quantity, will come into the urine after being taken into an empty stomach. When, therefore, a patient comes to him with sugar in the urine, low specific gravity, and the symptoms not very severe, he immediately sets himself to work to ascertain whether or not sugar, saccharine fruit, etc., has not been partaken of freely, and whether or not there is anything wrong in the process through which sugar passes to become properly digested.

DR. W. H. DRAPER had ceased to attach very much importance to the occasional presence of very small quantities of sugar in the urine, for the reason so well stated by Dr. Fowler. He had found it very often in connection with the condition known as lithæmia; that is to say, with a variety of dyspepsia in which there is evidence in the urine of suboxidation. He had been accustomed to regard sugar in the urine, as he did an excess of urates, as an indication of defective conversion of the food elements. He had also found that the treatment which caused the disappearance of the urates also caused the disappearance of the sugar. He believed that there was a great deal of truth in Dr. McBride's statement, that he was unable to say exactly where diabetes begins. Dr. Draper thought that, frequently, the mild form of diabetes was nothing more than a form of indigestion; the grave form, the true diabetes mellitus, being that in which sugar is formed from azotized food.

DR. MCBRIDE said he had found sugar, as he supposed, in the urine of lithæmics, but when the fermentation test and the polariscope were used he had ascertained that sugar was not present.

Sugar, when present *persistently* in small quantities in the urine, seemed to indicate excess of sugar in the blood. It had been claimed by Seegen that when more than one-tenth per cent. was in the blood, it could be found in the urine, and that in this quantity it acts as an irritant to the nervous centres and produces certain nervous phenomena. Furthermore, it had occurred to Dr. McBride that the sugar might not be of the variety almost always appreciated by the ordinary tests when the urine is diluted, but perhaps is of the variety found in the muscles.

DR. DRAPER said he was well aware that uric acid occasionally gave a reduction of the oxide of copper in the use of Fehling's solution, but he had frequently verified the presence of sugar in such cases as he had described. As to the nervous symptoms due to the persistent presence of sugar in the urine, he thought it impossible to distinguish these from the symptoms which occur in cases of lithæmia in which sugar is not found in the urine.

Dr. Draper believed that gout and diabetes were closely allied, and that both were frequently found under the same conditions in which lithæmia occurred.

DR. MCBRIDE agreed with Dr. Draper, except that he thought that sugar could produce certain nervous symptoms, the same as uric acid does, and other poisons circulating in the system.

Dr. Devlin had recently seen the statement that the inhalation of nitrous oxide gas was likely to be followed by sugar in the urine, and asked if the Fellows had any experience to relate on this point.

Dr. Hudson had observed sugar in the urine after the inhalation of chloroform, but he thought that it was not of special significance.

The President said that sugar was present in the urine of a great many persons at different times without meaning much; that is, small quantities recognized by Fehling's test. Such patients may be in tolerably fair health for ten, fifteen, or twenty years or more. As a rule, such persons are under thirty years of age; rarely from forty to sixty. Not all of these are mild cases; a large number of them live for a long time; some get well. The diabetic symptoms are likely to be intermittent. Some of these patients are gouty. Under treatment, dietetic and medicinal, they get well temporarily. When such persons, however, get sick with any acute disease, especially pulmonary, they are in very great danger. Thus small quantities of sugar in the urine may mean much, or they may mean but little.

THE TREATMENT OF DIABETES.

The discussion on this part of the subject was opened by Dr. F. A. Burrall, who spoke of treatment under three heads: the dietetic, the hygienic, and the medicinal. According to Donkin, clinical experience favors the use of pure milk as the main article of diet. Glycerine is of doubtful propriety. Individual peculiarities must be considered. No exclusive plan can be given.

Dr. C. M. Cauldwell spoke of the use of jambol, which he had administered with benefit in three or four cases, and to these he could add two cases under the care of Drs. Keyes and Alexander, one of which was benefited and the other not. Probably the success in these six cases was due in a large measure to dietetic and hygienic treatment.

Dr. W. H. Draper continued the discussion and said that, excluding the dietetic treatment of diabetes, it may be truly stated that our treatment of the disease is as purely empirical as our knowledge of its pathology is speculative. This must needs be so, for until we know the determining cause of the malassimilation, which is the essential feature of the disease, we cannot expect to have any rational basis for its treatment. It is a curious fact in the history of the medicinal treatment of diabetes that we have little experience of the value of any drug independently of concurrent dietetic management. I think I may truly say that we have no testimony that drugs alone, without the more or less exclusion of starchy and saccharine foods, can check the malassimilation of glycerine in the diabetic.

While I believe that certain drugs are of service in controlling glycosuria, my experience leads me more and more toward the conviction that dietetic and hygienic means are, after all, the essential factors in the successful management of this disease.

In estimating the value of any medicinal treatment we are apt to be led astray, not only by the fact that careful exclusion of the carbohydrates is generally insisted upon, but also by the fact that many cases, perhaps the larger proportion, are cases of what has been called the benign form of the disease—cases in which the disease seems to consist simply of a loss of power to convert the food-sugars, the sugars and starches. Such cases are apt to occur in persons past middle life, with a history of acquired or hereditary gout, with a tendency to obesity, and stout persons and heavy feeders upon sweets and farinaceous stuffs. These are the cases which are often intermittent, which get well, or almost well, and remain so upon an appropriate diet and good hygienic conditions. But the grave cases, those in which glycogen is formed from the nitrogenous foods, and in which the exclusion of the carbohydrates serves only to diminish the degree of the glycosuria—cases generally occurring in persons who have received some serious nervous shock, or in whom there are evidences of tissue-degeneration—these are the cases on which to test the efficacy of drugs, and they are the cases which thus far, unhappily, are not cured, though they are often ameliorated, by the use of medicines.

The drugs upon which I am accustomed to rely in the treatment of diabetes are opium—generally in the form of codeia—the sulphide of calcium, and the alkaline carbonates. It cannot be said that the rationale of the action of any of these drugs is understood. It seems probable that opium acts through the vaso-motor nerves; but how, whether it stimulates metabolism, or in some mysterious way regulates it, it is vain to ask. It certainly is a great boon to the diabetic, and in connection with a more or less modified diet, it may cure, and it is pretty certain to control his disease. The treatment by sulphide of calcium was introduced by Dr. Husted, formerly of this city, now of Tarrytown. He was led to use it on himself by its being vaunted as a remedy for furuncles—a complication of diabetes from which he was at the time suffering. To his surprise and satisfaction he found that it not only cured his boils, but caused the sugar to disappear from his urine. Dr. Husted remains well, and is able to live in the country upon a simple, mixed diet without glycosuria. I have had considerable experience with the sulphide of calcium. I give it in $\frac{1}{4}$ and $\frac{1}{3}$ grain doses, before meals, three or four times in the twenty-four hours, and in cases of the milder forms of the disease, and especially in those having a gouty history, with good result. I have never used it without some modification of the diet, but I believe that it enables the patient to enjoy more freedom in diet than he could without it.

The alkaline carbonates have been in my hands most useful remedies. It was stated by Miahle that they were a specific for diabetes, and it is doubtless to these substances that the springs which are renowned in the treatment of this disease owe their reputation.

The theory of Miahle, that they promote oxidation, is one that is based upon the chemical theory that diabetes is a disease of suboxidation. The frequent association of diabetes with gout in different members of the same family, and frequently in the same individual, and the value of alkalies in the treatment of both these disorders, are certainly striking facts, and they seem to lend some plausibility to the hypothesis that the defective metabolism in diabetes and gout is really due to a defective oxidation, and that perhaps the nearest approach to a rational treatment of both these diseases is an effort, through hygienic and medicinal means, to stimulate oxidation.

Dr. Dadirrian spoke of the treatment of diabetes practised in Constantinople. The dietetic management consisted chiefly in the use of fermented cow's milk, also used by the Germans, the French, and the English, differing from ordinary milk only in the fact that it does not contain sugar. It is called matzoon, and he had prepared it and used it, not only there but here, with good success as an article of diet.

Dr. Dawbarn spoke concerning Merck's preparation, as being the only reliable one of sulphide of calcium.

Dr. R. F. Weir spoke of the occurrence of gangrene in cases of diabetes, and referred to one case in which some of the peripheral portions of one upper extremity were involved, and in which he amputated and the patient recovered. In a second case, occurring in the lower extremity, the patient died. In a third case, the patient recovered from an attack of pneumonia, and twelve days afterward gangrene developed in one of the lower extremities and the question of amputation through the thigh arose. He found nine cases reported of amputation of the thigh for gangrene below the knee occurring in the course of diabetes, and in only one did recovery take place; in five, death occurred from shock, and in three from coma.

From this account of the success of amputation, he

deemed it best not to perform the operation, and the result showed the wisdom of the decision, because the gangrene spread, a line of demarcation did not form, and the patient died. He asked for the experience of the Fellows on this point.

Dr. Baruch spoke of the benefit of muscular exercise and massage in the treatment of diabetes.

Dr. Draper thought it very dangerous to make those suffering from the severe form of diabetes take very much exercise, especially when the nervous symptoms are prominent. In ordinary cases, exercise in the open air within the limits of fatigue is important and necessary, but fatigue in the severe form is very dangerous.

Dr. Baruch admitted the danger of over-exercise; but at the same time, with the patients' disposition to take as little exercise as possible, exercise is beneficial; but it must be regulated by the judgment of the physician.

Dr. Kinnicutt said that he was wholly in accord with Dr. Draper in regard to the danger to diabetics of overfatigue. Pavy had noticed that diabetic coma not unfrequently was developed in patients shortly after their arrival in London from long railway journeys.

Dr. Kinnicutt had seen during the past two years three cases of diabetic coma in children develop shortly after admission to hospital. He had believed at the time that the fatigue and excitement incident to admission had acted as an exciting cause in its production.

SECTION IN PRACTICE OF MEDICINE.

Stated Meeting, March 10, 1886.

Alfred L. Loomis, M.D., LL.D., Chairman.

Dr. A. Jacobi read a paper, including practical remarks.

ON THE USE OF DIGITALIS,

based on the experience of a third of a century. The general nature of digitalis and the effects produced by it were well known to all, and needed no special mention. The cardiac symptoms requiring the use of digitalis were irregular and frequent pulse, passive congestion of the pulmonary circulation with secondary bronchial catarrh, small arterial wave, cyanotic surface, coolness of the skin, sensation of chilliness, loss of nutrition, cutaneous œdema, and diminished micturition.

The effect produced by the drug in such cases was first described by Withering, one hundred and thirty years ago, who regarded digitalis as a sedative. To Traube is due the credit of proving that digitalis is a stimulant to the heart and blood-vessels.

Digitalis, with or without iron and nux vomica, acts admirably in cases of fatty heart.

In acute and chronic pulmonary consumption it is a valuable adjuvant to such remedies as arsenic, iron, etc. Repeating what Withering had said more than a century and a quarter ago, he knew of nothing which regulated so well the pulmonary circulation in phthisis as digitalis, which manifested itself by increased regularity of the pulse, etc., and digestive disturbances were not a contra-indication, since they so frequently depended upon venous stasis. In general the dyspepsia of pulmonary affections indicates the use of digitalis.

Anæmia, from almost any cause, is benefited by the use of this drug.

It is not a diuretic in healthy persons; on the contrary, it diminishes the elimination through the kidneys of both water and solid material, and when in such conditions as that of general cachexia it acts as a diuretic, it does so only by increasing arterial pressure.

From experiments on either man or the lower animals no definite conclusions have been reached concerning the exact dose required to produce the best effects.

According to his experience, the following are effective and safe: digitaline, from one-tenth to one-eighth of a grain daily, administered in three doses; extract, from one and a half to two grains, in three or two doses, may be taken, day after day, for one or more weeks. He valued the last preparation very highly, because it can be given in pill form and is easy of combination with other drugs. Digitaline is often inert. Of the leaves, from four to seven grains may be given daily with safety for as many successive days and weeks. The fluid extract had not with him proved so satisfactory as other preparations, and in urgent cases he had resolved not to rely upon it any more than upon digitaline.

Dr. Jacobi then related briefly several cases in which he had prescribed digitalis with advantage. An atheromatous heart and arteries do not bear much digitalis; the muscle is destroyed to a greater or less extent, and therefore cannot be lashed into healthy action; neither in cases of myocarditis does it do well. He had used it with benefit in Graves' disease, combined with other drugs.

Dr. W. H. Thomson was pleased with the paper, because its author had presented the action of digitalis from a clinical rather than from the supposed action derived from physiological experiments. From the literature of the subject he was in a condition of great uncertainty whether digitalis can be prescribed according to physiological data any better than dyspepsia can be treated by physiological rules. The final analysis of digitaline, which has been regarded as the quintessence of digitalis, determines that it contains *five* distinct principles, and opposed in action.

Brunton would by this fact explain the great uncertainty of the preparations of digitalis. For example, in the infusion a good deal of the antagonizing principle is present, and therefore it does not increase the power of the heart's action so much as it produces diuresis; while in the preparations in which alcohol is used as the menstruum those principles which increase the power of the heart's action are present in largest quantity. Furthermore, when we turn to the heart's action, the complexity of the problem is not diminished, for some say that it exerts an inhibitory influence on the vagus, while others claim that it affects the spinal cord, through it the splanchnic, and dilates the arteries of the abdominal viscera, and thus lowers the pressure all over the body; yet others say that it dilates the arterioles, and, lastly, and perhaps as true as any, that its principal action is upon the cardiac muscle itself, without any action upon the nerves at all.

From the physiological point of view, Dr. Thomson was unable to agree with Dr. Jacobi as to the uniformity of the action of digitalis as a cardiac tonic, meaning thereby increase of power of the normal rhythmical cardiac contraction. He had not found it beneficial in the treatment of fatty degeneration of the heart from any cause. No one doubted its efficacy in cases of mitral regurgitation with dilatation. But digitalis is capable of doing harm in many diseases, because it unquestionably increases arterial tension. In Bright's disease with cerebral symptoms he, therefore, would not use it.

In other states it is exceedingly dangerous, as in acute diseases in which, with cardiac fatty degeneration, there is arterial tension, as in certain conditions with diphtheria, etc.

The remedy is undoubtedly beneficial in cases of dyspepsia with abdominal distension, of epistaxis, anæmia, etc., as reported by Dr. Jacobi; and if any comment was to be offered, it would be as to how much was due to the digitalis and how much to the drugs with which it was combined.

Dr. F. A. Castle related two cases which confirmed what Dr. Jacobi had said with reference to the beneficial action of digitalis in cases of fatty heart, and he had also rarely failed to benefit anæmic patients by its administration.

With regard to the activity of the drug, some of the older experiments were made with the leaves, and in many

of them the *digitoxin* practically took no part, because it is insoluble in water. When, therefore, the infusion of digitalis made from the leaves is prescribed, the influence of digitoxin in increasing the power of the heart is not obtained. But if the fluid extract, which is an alcoholic preparation, is used in making the infusion, as many druggists have the habit of doing, digitoxin is administered, and an effect produced different from that obtained by using an infusion of the leaves.

Moreover, the active principles of the leaves are considerably volatile, and he had therefore been accustomed to use the tincture made from the fresh plant.

With reference to the extract spoken of by Dr. Jacobi, it had been ascertained by Dr. Squibb that in preparing it a certain amount of the active principle of the drug is rendered insoluble by the process of desiccation.

Dr. Jacobi said that he intended to speak from the practical point of view. It is agreed that digitalis produces arterial tension, and it is this that is at the bottom of all nutritive changes. Thus it is that the heart itself participates in the improved circulation and general nutrition. The reason why he used digitalis in combination with other drugs was because it was impossible to procure normal circulation without addressing the other organs of the body at the same time. For example, it was essential to keep the bowels regular and the abdominal viscera free from pressure. Thus very frequently, when giving extract of digitalis, he gave it in combination with a purgative; and as much of the circulation in the body depended upon the action of the voluntary muscles, he added nux vomica, which improved the condition of these muscles, and so on.

The topic for general discussion was

THE DIETETIC TREATMENT OF CHRONIC BRIGHT'S DISEASE.

Dr. W. H. Katzenbach opened the discussion by saying that the indications were to maintain and improve nutrition and prevent uræmia, which manifested itself, not only in disturbances of the nervous system, but in flatulence, nausea, vomiting, and frequently diarrhœa. In the selection of articles of diet, therefore, those should be chosen which are easily digested and readily assimilated

He restricted his remarks to the use of milk, which should be taken in quantities varying from three to five pints in twenty-four hours, in equal parts, at intervals of from two to four hours.

The tendency to constipation can be overcome by either, during the first few days, diluting the milk with water, Apollinaris water, or sometimes by the addition of salt, or by peptonizing the milk, or by the use of a seidlitz powder alternating mornings, or some vegetable laxative, after which, as a rule, the bowels will take care of themselves. Illustrative cases were reported.

Dr. Beverley Robinson continued the discussion, and spoke first with reference to the lack of definite directions, in text-books, on the subject under discussion. He thought it exceedingly desirable that more exact data should be obtained, based upon chemical analyses and clinical observations conducted with special reference to quantity of albumin and urea.

He had but little doubt that milk is the best single article of diet, but there were limitations to its use, as, for example, there are some persons who cannot take it, do what you will in way of preparation.

Again, even though albumin and injurious excreta are increased, it is not absolute evidence that harm is being done to the patient, because it is so essential to improve the general nutrition. It seems to be proven, moreover, that the addition of meat to the diet-list does not invariably increase the quantity of albumin excreted by the kidneys.

At St. Luke's Hospital some observations had been made in the direction indicated, and the results had been collected by Dr. E. B. Dench, House Physician. The following is a summary:

"During the last two years 70 cases of chronic Bright's disease have been treated—uncomplicated, 26; complicated, 44.

In the great majority of the cases the diet was milk and farinaceous food. In several cases the addition of farinaceous or nitrogenous food caused a diminution of the urinary secretion for twenty-four hours. In some cases such an addition increased the quantity of albumin in the urine. In one case the quantity of urine was increased by the addition of farinaceous food. The duration of treatment, dietary and medicinal, was from one to three months.

To test roughly the effect of different kinds of dietary treatment on the amount of albumin excreted, Dr. Dench made experiments in three cases. The estimation of the albumin were volumetric; the Doremus test for urea was used.

In Case 1 the milk-diet diminished the amount of albumin, and the addition of farinaceous and light diet (small quantity of meat) caused an increase in the amount of albumin.

In Case 2 there seemed to be no relation between the diet and the quantity of albumin in the urine.

In Case 3 albumin was increased after the addition of meat to the diet, except in one instance, the observations being made for several days.

Dr. Gouverneur M. Smith continued the discussion, and made special reference to a paper which he read before the Academy, April 1, 1869, "On the Etiology of Bright's Disease, with Remarks on the Prophylaxis." The paper was based upon an analysis of 308 cases gathered from the records of the New York Hospital. It seemed to him that many of the points which he then brought before the Academy are as correct as when they were read, and especially with reference to the subject under discussion, for they were based upon well-established physiological facts.

Of the 308 cases, 135 terminated fatally within the hospital, 117 patients were discharged relieved, 14 by request, and in 2 cases the patients became insane. Clinically, the different processes grouped under the term chronic Bright's disease are identical in that the usefulness of glandular structure is impaired, and that the normal functions of the kidneys are to a greater or less extent diminished.

The relations between food and the renal secretion are such that albumin in the urine can be reduced in quantity by cutting off nitrogenized principles and placing the patient on the use of rice or arrow-root, etc. This fact Dr. Smith had observed clinically. It is well known that the water and uric acid can be materially reduced by a proper adjustment of food. Years ago Lehmann proved that urea can be diminished to the minimum by an amylaceous, saccharine, or oleaginous diet. Dalton, Flint, Hammond, and Draper appear to agree that urea is traceable to a disassimilation of the azotized principles of the tissues, and also to a transmutation in the blood of the surplus nitrogenized principles which have been taken as food. The indication, therefore, is, when a patient is menaced with or suffering from uræmia, to cut off essentially nitrogenous food, and to prescribe aliment mainly composed of ternary proximate principles. The necessities of nutrition must always be kept in mind, but with superfluous or inappropriate diet the kidneys cannot receive that rest so evidently required. As diverse causes are operative in the production of chronic renal disease, a specific line of dietetic treatment cannot be laid down as exactly suited to every case, but the quaternary and ternary principles of food can often be handled so skilfully as to checkmate morbid processes.

Dr. Smith said he would venture to repeat what in substance he said in 1869—namely, that in Bright's disease, if the patient is threatened with uræmia, it is a favorable symptom if his urine is heavily loaded with albumin, as thereby a principle is rejected which if retained would directly or indirectly augment the toxæmia.

Such drain of albumin from the blood is, of course, ordinarily pernicious, and the statement just made refers to albuminuria as it occurs under the uræmic conditions alluded to; in some instances it may be beneficial, in others the reverse.

The Section then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 24, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. G. C. FREEBORN presented, in behalf of a candidate, a specimen of *mitral stenosis and insufficiency*.

DR. JAMES E. NEWCOME presented a specimen which illustrated

CARCINOMA OF THE LIVER—OCCLUSION OF THE BILE-DUCT—ULCERATION OF THE GALL-BLADDER—BILIARY CALCULI.

The patient, a German, aged fifty-eight, bartender, came under observation December 26, 1885. He was in a state of great mental stupor, and no satisfactory history could be obtained. He had been complaining for four weeks; denied specific disease, but admitted great excess in alcohol.

On admission there was marked anasarca of subcutaneous tissue of legs, arms, and abdomen; abdomen excessively distended with fluid. No pleuritic effusion was made out. The liver was enlarged, reaching from just below the nipple to a point two inches below the right free border of the ribs. Heart normal. Urine, 1.020, amber colored, acid, no albumen or casts.

December 28th.—Paracentesis abdominis; 200 ounces fluid withdrawn, sp. gr. 1.010, eighty per cent. albumen, cloudy, light yellow, neutral, no sugar, peptones.

The patient was put upon diuretics, but the fluid rapidly reaccumulated, and he became very weak. The fluid oozed away from the puncture-wound, and this was allowed to continue under antiseptic pads. Five days after the evacuations became involuntary, the temperature ranged from 99° to 100.5° F., and on the eighth day the patient died.

Autopsy.—Heart: Some pericardial adhesion over upper surface; slight thickening of mitral valve with a few granulations of small, pin-head size. Lungs: Congestion and œdema of both lower lobes; three or four ounces of bloody fluid in pleural cavities. Kidneys: Some swelling of epithelium; otherwise normal. Spleen: Weighed five drachms; mottled capsule, interstitial and perisplenitis. Stomach: Mucous membrane atrophied and mottled; chronic gastritis. Liver: Gall-ducts occluded; numerous large whitish and reddish hard nodules throughout liver, some projecting from its anterior surface, cystic duct at upper end stopped by a gall-stone the size of a hazel-nut. The wall of the gall-bladder is one-fourth of an inch thick; its upper two-thirds shows roughening ulceration on the inner surface. Three hundred and ninety gall-stones (mostly small), facetted, found in the mucus and pus in the gall-bladder, which was not distended.

This case is of some interest as presenting two lesions, viz., carcinoma and gall-stones, either of which may stand in a causative relation to the other. Any cause obstructing the biliary flow through the liver will naturally cause thickening of the secretion, and we know that inspissated bile is the nucleus of many biliary calculi, hence carcinoma might lead to their formation.

On the other hand, where we have calculi in the gall-bladder we may have an inflammatory action set up, whereby we have exudation and thickening of the peritoneum covering the bladder, which is bound down by strong adhesions. The neighboring liver-tissue may become sclerosed and such inflammatory exudations may become the seat of malignant growths. Hence the presence of gall-stones may cause carcinoma.

In these latter cases we generally have a history of antecedent severe attacks of hepatic colic. In this particular case, the absence of any definite history renders this point purely a speculative one.

DR. WESLEY M. CARPENTER remarked that the specimen presented by Dr. Newcomb was especially interesting as one of primary carcinoma of the liver, which is very rare.

DR. J. C. PETERS said that the combination of gall-stones and carcinoma of the liver was on record in the Society's proceedings, and also a few cases of primary cancer of the liver, although almost all such specimens were secondary. One noteworthy case was that of cancer of the head of the pancreas with cancer of the liver and with gall-stones, which could be felt in the gall-bladder, almost counted, on account of the extreme emaciation of the patient. The head of the pancreas had pressed upon the duodenum, and had almost completely occluded the pyloric opening of the stomach, which became so distended that, at times, there was fluctuation in it almost like that obtained in ascites.

THE PRESIDENT recalled one case of primary cancer of the liver, and it was regarded as a rather anomalous specimen. In that case, also, the patient was tapped and the leakage plan carried out by making openings in the skin along the line of the *linea alba*, but without antiseptic dressings, as it was several years ago.

DR. NEWCOME said that the antiseptic dressing in his case consisted simply in the use of a towel wet with an ordinary antiseptic solution, and the oozing stopped within a very few hours.

DR. JOHN C. PETERS then read a

MEMORIAL SKETCH OF ALFRED C. POST, M.D., LL.D.

(see p. 274), to be accompanied by resolutions prepared by the committee appointed, consisting of Drs. J. C. Peters, R. W. Amidon, and Wesley M. Carpenter, and to become part of the published proceedings.

DR. FRANK FERGUSON presented two sets of specimens as follows:

CARCINOMA OF THE RECTUM AND LIVER.

These were removed from the body of a man fifty-four years of age, a widower, and a native of the United States. He was admitted into the service of Dr. G. L. Peabody, in New York Hospital, on December 1, 1885. His father died of cancer of the rectum. In March previous to his admission he complained of "internal piles," which frequently bled. He had considerable pain in the lower part of the large bowel and in the lower part of his spine. During this time he suffered from diarrhœa and had no formed movements. He had swelling in each groin, swollen and painful left testicle since March, 1885. His appetite all this time has been poor, and he has been frequently nauseated. He gives a well-marked alcoholic history, but has had no hard drinks for two months prior to his admission.

On admission he was poorly nourished and senile. His pulse was 88; respiration, 24, and temperature, 99°. Urine was of light yellow color, alkaline in reaction, 1.010 specific gravity, contained no albumen, no sugar, and, microscopically, was negative. During the first three weeks in December he suffered considerably from diarrhœa, having some days as many as ten movements. He had moderate distention of his abdomen, and vomited occasionally.

The last week in December his vomiting became more frequent, some days vomiting three to four times. On December 28th he was etherized, and a rectal examination revealed a mass apparently as large as a hen's egg in the anterior wall of the rectum, a little to the right of the median line. Just below this mass was felt a smaller one, as large as an acorn. Both these tumors were very firm in consistency.

The first week in January his symptoms continued, his pain being less severe.

On January 9th in some way he was told, and believed, he had a carcinoma, and he became very despondent.

During the latter part of January and first of February he was troubled with vomiting occasionally, his pain was kept under control by opiates, his abdominal distention was increasing, and he was gradually failing.

The tympanites rapidly increased after the first week in February; he was troubled with vomiting as often as four times daily some days. Pain and vomiting continued, his tympanites was very marked, and he required large quantities of morphine, frequently repeated, to keep him quiet. He gradually grew worse and on February 15, 1886, he died.

CARCINOMA OF THE STOMACH, LIVER, AND PERITONEUM.

The specimens were taken from the body of a woman thirty-five years of age, a native of Germany, and married. She was admitted into the service of Doctor G. L. Peabody, in the New York Hospital, on February 20, 1886. She gave no family history bearing on her case. She had had two children. She considered herself well until five weeks previous to her admission, which was one week after the birth of her last child. At that time her appetite became poor, she had pain in her stomach, which was relieved by the administration of opium only. Since the development of these symptoms she occasionally vomited. It was not until February 10th that she felt obliged to keep her bed. At this date she had chilly feelings, followed by fever and sweating. During this time her abdomen rapidly increased in size, she suffered from dyspnœa, and had a diarrhœa, having from two to seven movements a day. These movements were preceded by pain, from which she was free after the act of defecation. All her symptoms gradually became graver until the date of her admission, when she was troubled greatly with dyspnœa. Her appetite was very poor, she was very weak and could not sleep.

On admission her temperature was 96.2° F.; pulse, 102, and respiration 30 per minute. She was fairly nourished, anæmic, and there was slight œdema of the lower extremities. The hepatic area extended from the fifth rib above to the umbilicus. Over this area below the free costal edge on the right and in the epigastric region the surface of the liver was rough and the examination caused great pain. In the left mammary line, just below the free border of the ribs, there was an area the size of the palm of the hand in which by auscultation friction fremitus, synchronous with respiration, was obtained. The superficial glands were not enlarged. The veins over the abdomen were prominent and tortuous. There was a slight general anasarca. The abdomen was distended, tense, and fluctuating. She was cachectic and her expression was anxious.

During her short residence in the hospital she suffered considerable pain and dyspnœa. Her heart rapidly failed and she died on the 21st inst. at 6.30 A.M.

DR. CARPENTER asked Dr. Ferguson why the case was not one of primary carcinoma of the omentum.

DR. FERGUSON replied that in such a case, where the carcinoma invaded the mucous membrane, he regarded that as the primary lesion. Besides, there was evidently a continuity of the growth, which involved the mucous membrane of the pyloric extremity of the stomach, through to, and involving, the peritoneal coat, forming ing a nodular mass upon the outside, and thence extend to the neighboring organs. Furthermore, he had seen only one case of primary carcinoma of the liver, and had never seen one of primary carcinoma of the omentum, which, although it had occurred, was exceedingly rare. Wilkes and Moxon had recorded only four cases of primary carcinoma of the liver.

DR. AMIDON asked Dr. Ferguson if his rule would apply to sarcomatous growths in the abdomen.

DR. FERGUSON said that it would not; and that sarcomatous growths could begin in connective tissue anywhere.

DR. CARPENTER reported the result of a private autopsy made several years ago, in which cancer of the omentum was found, and the cancerous mass, weighing probably two pounds, had pressed against the under surface of the left lobe of the liver, where there was also superficial cancerous infiltration. It was regarded as a case of primary carcinoma of the omentum, and the lesion of the liver was believed to be secondary because the organ had been invaded only in the region where it came in contact with the cancerous mass. Undoubtedly the cancer of the stomach was the primary lesion in Dr. Ferguson's case, and he asked the question simply to further develop the pathological relations existing in the specimens.

The Society then went into executive session.

Correspondence.

VAGINAL INJECTION—AN EASY METHOD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Every gynecologist must agree with your observation, in a recent issue of THE MEDICAL RECORD, on "The Question of Vaginal Injections," that women will not faithfully carry out any treatment which involves much trouble or discomfort, either in preparation or in application. To obviate these, and secure at once the comfort and convenience of the bidet, and the advantages of the supine posture, I have been accustomed to have a broad barrel-stave, with its ends sawn off, laid across a foot-bath (or water-bucket, or other receptacle for the waste fluid) as a seat for the patient. This may be cushioned by two folded towels, so as to leave the concave centre of the stave free to conduct the fluid into the foot-bath. By placing this—raised on a box if necessary—at the end of a couch or beside the bed, the patient can lie back, while the feet rest on the floor, and the clothing, which hangs outside the seat, is wholly undisturbed.

To save fatigue some form of irrigating apparatus is indispensable; and, of all those I know, the "Reymond Siphon Syringe" is the best. Indeed, for simplicity and convenience it leaves nothing to ask, enabling the patient to take, absolutely without effort, an injection as copious or long-continued as may be desired. It consists of a rubber tube some eight feet long, which, near its upper end, is passed through two holes made in a common spring-clothes-pin that clasps the edge of the pail or other container of the injection-liquid. This end is weighted, as usual, to hold it at the bottom of the pail. The lower end terminates in a hard-rubber nozzle, a foot or so above which is placed the clamp to close the tube, and just above this a valveless bulb. The container being secured at the proper height, and the patient in position, a single squeeze of the bulb forces the air up through the liquid, which at once fills its place. Then, on opening the clamp, the flow starts and continues until the supply is exhausted.

JOHN WINSLOW, M.D.

ITHACA, N. Y., March 16, 1886.

PRACTICES OF THE COLORED TRICK DOCTOR IN SOUTH CAROLINA—AIKEN, S. C., AS A HEALTHFUL RESORT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: An old negro man having general paralysis was under the care of Dr. Croft, but the wife of the patient having learned of the wonderful powers of a colored doctor then in the neighborhood sought his advice. He offered to "raise the old man up" for so much in hand and so much when he was "raised." After establishing himself at the family fireside and studying the case, he decided the patient was "tricked," and suffering from the presence of snails and worms within his body. After prayers he produced a cow's horn, with the tip sawn off,

and after lancing the man's arm placed the large end of the horn over the part lanced, and desired the wife to suck on the end of the horn and thus draw out the aforesaid creatures; the same procedure was done on the man's back. On removal of the horn it was found partly filled with worms, leeches, and a frog. A wonderful influence was effected upon all members of the family except the old man, who was not "raised up." The doctor remained at the family fireside for two or three weeks, they all being under his spell. As success had not followed they desired to get rid of him, but he would not depart, claiming the man had been "tricked" again, and that before he tried again he must marry the daughter; and if this was not accomplished at a certain time, the old man would die, and a spell fall on them—they would have fits, and on recovering would run and drown themselves.

The family became demoralized, but finally sought the doctor formerly in charge. The wife came into his office very much bewildered, saying she was under a "spell," and sought advice; she was in a state of abject fear, and trembled as she talked, as the time to marry her daughter to the "trick doctor" was at hand. After trying to quiet her fears the doctor asked if the man had a license to practise medicine; she thought he must have. After much persuasion she was induced to make a complaint to the magistrate, but doubted his power.

The "trick doctor" unwittingly wandered into town and was arrested. All through the trial he kept his eyes on the woman, and on retiring, after his conviction as a vagrant, said his spell would still work. His surgical instruments, cow's horn, and the result of the cupping in bottles, some morphia, and a license to preach are in possession of Dr. Croft. It is a good thing for the naturally superstitious colored race that the medical registration act is in force to prevent them being so actively treated as heretofore by the itinerant colored "trick doctor."

A few words about Aiken, S. C., as a healthful resort during the inclement season at the North. The presence here from year to year of those whose means enable them to seek any clime for pleasure and comfort, irrespective of bodily ills, speaks well for it. Officers of our navy, who have floated on every sea and touched all ports, winter here when able to do so.

Here and there you see cases that might better stay at home. Come early and stay late is the advice of those benefited.

Till the benefit of climate, under proper medical advice, has been superseded by a specific against the bacillus tuberculosis, it is best to take advantage of it early and continuously. Very respectfully, W. S. L.

Aiken, S. C., February, 1886.

The Fattening Effect of Chewing Gum.—A Southern paper *Macon* (Ga.) *Messenger* says: "Twenty years ago the rule was that Southern women were thin and delicate; it is not the rule now. Southern women are not physically equalled in all North America. Any physician who is as well informed as he ought to be will tell you that this is true This change is due to the habit of chewing gum. You may smile, you may even laugh, if you please, but I am telling you a plain fact. As to Southern men, they are as thin and gaunt as they ever were, and so they will remain until they cease to chew tobacco and begin to chew gum."

Meningitis following Enucleation of the Eyeball.—At a recent meeting of the London Ophthalmological Society, a paper was read by Mr. Nettleship, Ophthalmic Surgeon to St. Thomas' Hospital, in which the details were given of a case in which meningitis occurred after excision of the eyeball. The case was fatal. Only twenty-nine cases have previously been recorded, and of these twenty-five have proved fatal, making, with Mr. Nettleship's, a total fatality of twenty-six out of thirty cases.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 20, 1886:

Week Ending	Typhus Fever	Typhoid Fever	Scarlet Fever	Cerebro-spinal Meningitis	Measles	Diphtheria	Varioloid	Yellow Fever
Cases.								
March 20, 1886	1	15	51	0	13	57	0	0
Deaths.								
March 20, 1886	0	1	1	0	1	27	0	0

A Man of Many Talents.—One of the most versatile of medical men of the present day is Sir Henry Thompson. He attained eminence many years ago in his own profession, specially distinguishing himself in the field of urethral surgery. He is also well known as an artist, having frequently been an exhibitor at the Royal Academy. He is not unknown as a writer and speaker, having on several occasions championed the cause of temperance reform. He is now busy with a new novel, and bids fair to attain equal renown in the field of romance.

Insomnia in the Aged and its Treatment.—In opening a discussion on this subject, Dr. C. L. Dana said that he had found the information contained in the text-books upon insomnia in the aged was very slight in amount. Insomnia was not frequent in the aged, but when it was present it was sometimes very intractable. Pathologists thought it was due to anæmia and malnutrition. The thickened arterial walls and the high arterial tension from the contracted kidneys, and similar states, which were found in the aged, would indicate that the blood-supply to the brain was deficient. The insomnia produced by anæmia was characterized by drowsiness during the daytime, the patient falling into little naps, while at night he was unable to obtain any rest. This was true of the young as well as the old. If in any case we found no actual disease, it was customary to try iron and rich diet. In the speaker's experience, however, iron did not relieve the anæmia of the aged so as to produce sleep. Alcohol with the food was another remedy, and many recommended hot gruel or hot milk with alcohol before going to bed. While alcohol would relieve some cases, there were others in which the insomnia was increased. The bromides and chloral, even when given in enormous doses, often failed to give relief. Opium was another remedy. Dr. H. C. Wood had recommended that we make our aged people opium-eaters and alcohol-drinkers. The speaker had not found that opium always agreed with the aged, and in his experience, where opium had produced sleep, it was sometimes followed by such physical and mental depression as precluded its further use. Good results had been obtained with a combination of cannabis indica and codeia; from five to six minims of the fluid extract of cannabis indica with one-sixth to one-eighth of a grain of codeia might be used. Fraser's "Trituration Tablets" were a convenient vehicle for their administration. One-fourth of a grain of the extract of cannabis indica taken alone was sometimes effective. As a rule, however, the combination with codeia was preferable. Hyoscyamine was sometimes useful, but in nervous, flighty persons it would sometimes produce an actual delirium. Under ordinary circumstances the dose should not be increased above one-fortieth of a grain to obtain the desired effect. The effect of these remedies, he thought, had been increased by the addition of from two to three drops of

tincture of aconite two or three times a day to relieve the tension of the blood-vessels. Tincture of valerian and compound spirits of lavender sometimes acted like a charm in relieving insomnia. Large doses (℈j.) of lupulin were also often effective. To recapitulate, then: In the treatment of insomnia in the aged he had been disappointed in bromide and chloral, and considered the results of opium sometimes disastrous. He recommended, therefore, good food, warm drinks at night, and small doses of codeia with canabis indica. Valerian and lavender, hyoscyamine, and lupulin sometimes were also useful drugs.—*Bulletin of Clinical Society, N. Y. P. G. M. S.*

Iodide of Sodium and Calomel in Conjunctivitis.—For inflammation of the conjunctiva, A. Bellyarminov, writing in the Russian *Ophthalmic Review*, advises the employment of iodide of sodium in large doses internally, and local treatment at the same time by blowing calomel into the conjunctival sac. This produces, after the second application, a swelling of the eyelids and of the conjunctivæ. Sometimes, also, streaks of yellowish scales may be seen on the conjunctivæ, but they fall off in three days, and by that time all the inflammation is found to have disappeared.

Yerba Santa as a Vehicle for Quinine.—Mr. J. D. Aug. Hartz, of College Point, L. I., writes: "A vehicle for the successful masking of the bitterness of sulphate of quinia has long been a desideratum to practitioners. This want has been partially met by various secret elixirs, fluid extracts, etc., which more or less accomplish their purpose, but which are mainly designed to enrich the compounders. Yerba santa, glycyrrhiza, and coffee have in turn been employed, the former with the best results. A Western firm discloses this ingredient in the name of a preparation offered for disguising quinine; other firms hide this drug under fictitious names. With a view of producing a compound which by its non-secrecy may obtain the approval of physicians who desire to prescribe intelligently, and in order to avoid the vexation to pharmaceutists by being compelled to keep on their shelves a number of preparations all designed for the same purpose, I have, after repeated experiments, compounded a mixture for which, for the sake of uniformity in designation, the name of 'Syrupus Corrigens' is proposed. One fluidrachm will so obliterate the taste of two grains of quinine that only a slight bitterness is perceptible some time after the medicine has been taken. The ingredients in a fluidounce are. Aqueous fluid extract yerba santa, f℥j.; syrup, f℥ vij.; oil of orange, ♏ jss.; chloroform, ♏ ¾."

Permanent Drainage in Ascites.—Dr. Marcell Hartwig, of Buffalo, proposes to secure permanent drainage of ascitic fluid into the subcutaneous tissues of the abdomen by means of a bent tube of gold, silver, hard rubber, or bone. The tube is to be inserted with one extremity opening into the peritoneal cavity and the other buried in the subcutaneous tissues, and left in position as long as may be necessary. Dr. Hartwig says that experience with wire sutures shows that the drain would probably remain patulous, without causing irritation, for a considerable time, perhaps years; and when ulceration did occur, it would be a simple matter to remove the tube.

The Treatment of Infantile Paralysis.—In a lecture recently delivered by Dr. William Murrell, a plan of treatment has been formulated which, it is to be hoped, may prove as successful in other hands as it appears to have been in his own. The treatment consists essentially in the administration of aconite during the acute stage while fever is present, followed, after a lapse of three or four days, by physostigma, combined still later with suitable doses of phosphorus. So much for the medicinal part; but, simultaneously with the latter portion of the treatment, recourse must be had to massage, not the massage ordinarily in use, which frequently proves inefficacious, but a massage conducted on the scientific plan laid down by Metzger, of Amsterdam, and Von Mosengeil, of Bonn. This process is divided into four forms, or gradations, first, *effleurage* (surface rubbing); secondly, friction, a more vigorous application of the preceding; then the *pêtrissage* (kneading); and, finally, *tapotement*, which is a form of percussion. When the cases are taken in hand early, a marked improvement is promptly perceived, the temperature of the affected limb approaches the normal, and the nutrition of the tissues acquires a fresh stimulus.

The Hygiene of Pregnancy.—Let the patient eat but little in the latter months, though she may eat a little frequently during the day. A large meal causes much inconvenience, due to the already enlarged abdomen. A bandage properly applied around the abdomen is useful and comfortable. She should sleep eight hours; and take an occasional bath in tepid water. If leucorrhœa be present, let her use an injection of salt water, and bathe the external genitalia with tepid water. For the breasts, use oily matters, and no alcohol. In the morning the nipples may be painted with equal parts of tincture of arnica and water, but in the evening should be covered with cocoa-butter. High-heeled shoes should be dispensed with during pregnancy.—Professor Parvin in *Coll. and Clin. Record.*

Hydrobromate of Hyoscine.—Dr. P. M. Wise, of Willard Asylum for the Insane, Willard, Seneca Lake, N. Y., writes: "The recent use of hydrobromate of hyoscine as a hypnotic, in substitution for the coarser alkaloid hyoscyamine, has led to such different experiences, as recorded in several articles in recent medical literature,[1] as to lead one to suppose the drug used by the several writers was not of a uniform nature. Hyoscine obtained for use at the Willard Asylum, where its action has been carefully observed for a number of months, was obtained through Merck's authorized agents in New York, and was delivered in original packages. To be assured that there was no 'reasonable ground for doubt that the substance employed emanated from Merck's laboratory,' it was obtained from several different importing agents in packages of various sizes, with the original seals unbroken. This is the purported source of the preparation used by the above-mentioned writers. The preparation of the aqueous solution was made with great care, and to eliminate any element of doubt with regard to deterioration of the solution, it was kept only in ground-glass stoppered bottles. The conclusions reached by the medical staff of the asylum, in respect to its value as a hypnotic, are nearly identical with those of Drs. Peterson and Langdon, of the Hudson River State Hospital (Medical Record, September 19, 1885)—that it disposes to sleep indirectly after several hours, when given in sufficient doses to produce its marked physiological effect, such as muscular relaxation, and, occasionally, stupor; but that it cannot be regarded as a hypnotic in its proper sense. Its use in active mania and melancholia was not attended with desirable results. In cases of insomnia it failed in doses short of producing its disagreeable effects—midriasis and dryness of the throat and mouth. In our experience it does not possess the value of hyoscyamine in any of the uses to which it is ordinarily applied. It has been used in doses varying from $\frac{1}{200}$ to $\frac{1}{150}$ of a grain. I may state, incidentally, that I have used it in the case of my own child, nine years of age, suffering from whooping-cough, in doses increased from $\frac{1}{300}$ to $\frac{1}{100}$ of a grain, with the effect of producing dilatation of the pupil and dryness of the throat, but without appreciable relief from the paroxysms or insomnia."

[1] American Journal of Insanity, October, 1885; New York Medical Record, September 19, 1885; Philadelphia Medical News, December 12, 1885.

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Original Lectures.

ON CERTAIN PROBLEMS IN THE PHYSIOLOGY OF THE BLOOD-CORPUSCLES.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE ASSOCIATION OF THE ALUMNI OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, MARCH 23, 1886.

BY WILLIAM OSLER, M.D.,

PROFESSOR OF [illegible]

LECTURE I.

THE BLOOD-PLAQUE.

INTRODUCTION.—Around the blood-corpuscles still centre some of the most interesting questions in physiology and pathology, and though amid microbes and cultures we may have forgotten them for the moment, they are nevertheless still calling for solution, and perplexing this quite as much as any one of the six or seven generations which have passed away since Loeuwenhoek first detected the red corpuscles in the human blood.

The origin and life history of the corpuscles of the blood have been, and still are, among the *great secrets* of physiology. Strange, indeed, is it to think of the thousands of able observers who have gazed long and ardently, with rude and with perfect instruments, vainly endeavoring to solve the riddle constantly propounded by these common objects of study. In no department of physiology has so much labor been spent with so little apparent result. While in other lines we have penetrated to the centre of certain biological mysteries, the progress here seems painfully slow, and the discovery by Wharton Jones, in 1843, of the amœboid power of the colorless corpuscles, the rediscovery by Cohnheim of their migratory power, and the discovery of the blood-forming function of the marrow, may be said to be the most important additions to our knowledge in this generation.

The activity of research during the past decade has had, however, a perceptible influence, and there are signs of breaking in the heavy clouds which overhang the origin of the corpuscles, and the darkness is certainly less dense than it was.

A peculiarity of these perennial problems is that certain phases for the time engage the attention of observers, and the laboratory activity the world over seems centred upon them, with the result, in a few years, of an enormous increase in the literature; and after the question has been thoroughly fought out and quiet is resumed, we are thankful if only an outpost has been gained in the struggle, and we are a step nearer to the citadel of truth.

As regards the blood-corpuscles, the work of the past few years has been largely in two directions—toward the determination of the existence or non-existence of a third corpuscle in the blood, and in the study of the histological processes attending degeneration and regeneration of the corpuscles in disease; and upon these subjects I shall hope to engage your attention during this course.

I propose, therefore, in the first lecture to consider the much debated third corpuscle, or hæmatoblast of Hayem, which, so far as I know, has not yet received systematic consideration before any American or English audience. In the second I shall discuss certain histological problems connected with the degeneration and regeneration in the blood-corpuscles; and in the third I shall present a statement of recent views on the relation of the corpuscles to coagulation.

THE THIRD CORPUSCLE, OR BLOOD-PLAQUE.—*Definition.*—A colorless protoplasmic disk, constant in mammalian blood, measuringfrom 1.5 to 3.5 micromillimetres. The number per cubic millimetre in the blood of a healthy adult is about two hundred and fifty thousand, but their number varies greatly at different periods of life, and with varying conditions of health and disease. The ratio to the red is about one to eighteen or twenty. They are delicate elements, and, like the red corpuscles, tend on the withdrawal of the blood to adhere to one another, when they form the irregular granular clumps which have long been known as Schultze's granule-masses.

Name.—It will be necessary, at the outset, to refer to the names which observers have given to this corpuscle. Unfortunately they are rather numerous, and no one of them entirely satisfactory. Donne,[1] whose description is the earliest, called them *globulins*. Zimmerman[2] spoke of them as *elementary corpuscles*. Later, the collected groups were referred to as "*granular débris*," or Schultze's[3] *granule-masses*. Among the more recent observers, Hayem[4] gave the name of *hæmatoblast*, and Bizzozero[5] that of *blutplattchen—blood-plate*. Various writers refer to this element as the *third corpuscle*, while in the research of Kemp,[6] just issued from the Biological Laboratory of Johns Hopkins University, the term *plaque* is used, and has received the sanction of Professor Martin. To the terms *third corpuscle* and *hæmatoblast* there is the serious objection that these names have been applied to other bodies which have nothing to do with the elements in question. The former, to the so-called invisible corpuscle[7] of Norris,[8] and the latter to the nucleated red corpuscle of the bone-marrow. The name hæmatoblast, moreover, carries with it certain theoretical conceptions regarding the functions of these bodies which may or may not be true. I am inclined to favor the name which Bizzozero has adopted, partly because we are indebted to the distinguished Turin professor for a series of able researches which have awakened the liveliest interest in these corpuscles, and partly because usage of late has confirmed the name. Blood-plate, the English equivalent of the word *blutplattchen*, is by no means euphonious, while the French *plaque*, adopted by Kemp, is perhaps more convenient, and might be employed in the future by American and English writers.[9]

Methods of Study.—Let us first consider the plaques in blood examined in the usual manner, without the addition of any reagent; and let us suppose the blood to be taken from a case of consumption or cancer, or from

[1] Donne: [illegible]

[2] Zimmerman: [illegible]

[3] Schultze: Archiv f. mikr. Anatomie, Bd. i.

[4] Hayem: [illegible]

[5] Bizzozero: Virchow's Archiv, Bd. xc.

[6] Kemp: Studies from the [illegible]

[7] Shortly after the publication of Bizzozero's paper, Norris claimed that the corpuscles described as [illegible] "fugitive group," but a study of the beautiful photographs in his book will, I think, convince anyone with a practical knowledge of the blood-plates of Bizzozero that they are separate elements. The granules which he figures (Fig. 45) as resulting from the breaking up of the younger or fugitive corpuscles are in reality the disintegrated blood-plates. Moreover, the corpuscles which he figures are uniformly larger than the blood plates.

[8] Norris: Physiology and Pathology of the Blood, 1882.

[9] I did think of suggesting the word *disklet* as very suitable for these *little disks*, but I had not the courage to add another to the already long list; moreover, as my own name has been used in connection with these bodies, I felt absolved from further sponsorial duties on their behalf.

a new-born animal, as in these states these corpuscles are abundant. We then find, in addition to the red and colorless corpuscles, many grayish-white granular masses of various sizes and shapes. Examined at once, and if too much pressure is not exercised by the top-cover, the edges of these masses are clearly defined, and they form compact aggregations. With a power of five hundred diameters the composite structure is well seen, and the granular character is plainly discernible to be due to the

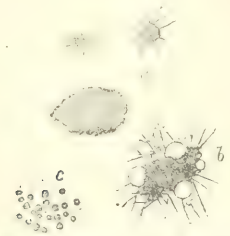

Fig. 1.—*a*, Aggregations of plaques in human blood, forming the so-called granulations of Max Schultze; *b*, disintegration of the plaques, and fibrin filaments and mucin-like spheres adhering to the mass; *c*, isolated plaques.

agglutination of numerous small bodies of uniform size. At the edges, isolated or partially free corpuscles can usually be noticed. The fibrin filaments, as coagulation proceeds, seem to radiate from the masses as centres. This remarkable conglutination of the plaques, and a tendency to undergo rapid change, have retarded greatly the recognition of the corpuscles as veritable elements of the blood. Observers have, as a rule, seen in them nothing more than a granular débris of no special significance. Nor is this to be wondered at, as they so quickly undergo changes that the clusters, in the course of a short time, really present the appearance of disintegrating protoplasm (Fig. 1, *b*). The size and shape of the groups are most variable; the more abundant, as a rule, the plaques, the larger and more numerous the aggregations; the smaller ones, composed of two or three plaques, may not equal in size a red corpuscle, while the larger ones may be ten or fifteen times the size. A tendency to adhere to foreign particles is very noticeable, and they will collect in numbers upon a fine thread of cotton or linen. In the normal blood of the adult the plaques are not very numerous, and so do not form very large collections. In some individuals, however, in health the groups are always of considerable size.

There are conditions of the blood in which, from some cause, the attraction of the plaques to each other appears diminished, and instead of forming large masses they adhere to the slide either isolated or in scattered groups of from two to ten in number (Fig. 1, *c*). Possibly this may be an accident of preparation, but I am inclined to think it not, from the fact that I have noted it in cases of malignant fever, small-pox, scarlet fever—the very states in which the normal process of nummulation of the red corpuscles may be so altered that the cells aggregate into compact clumps. In fact, the red corpuscle and the plaque in normal blood have each their peculiar mode of aggregation, the red in series and the plaque in masses. I have never seen any appearance which would suggest that the plaques have the slightest tendency to adhere by their flat surface, and to form rouleaux, as the red. It will be found too, I think, that just as there are, apart from modes of preparation, peculiarities which interfere with the normal nummulation of the red, so there are conditions in which the plaques present variations in their usual method of aggregation.

It was a consideration of the relative size of the masses, and the impossibility of their passing through the capillaries, which led me in 1873, in University College Laboratory, London, to the discovery of their corpuscular nature; and it was found that while in the blood of the young rat, when withdrawn, the masses were numerous and large, in the blood-vessels the collections, as such, never occurred, but innumerable small corpuscles, similar in character to those seen at times so plainly at the edge of the masses.

To study the plaques properly, the blood must be allowed to pass directly into a solution which, while preventing conglutination, does not materially alter their form or characters. Or they may be, perhaps, more satisfactorily observed while still within the blood-vessels.

Various solutions have been employed by different observers. Zimmerman, whose study of these corpuscles was really very complete, allowed the blood to flow directly into a solution of a neutral salt which prevented coagulation, and then in the supernatant fluid he found small colorless cells in extraordinary numbers. I have repeatedly confirmed this observation in the case of horses' blood, when demonstrating the common experiment of preventing clotting by letting the blood flow into sodium sulphate. The plaques abound in the clear serum, and if the solution is not too concentrated they are very little altered. In using the hæmacytometer (Gowers), the sulphate of soda with which the blood is mixed acts in the same way, although in the counter it is more common to find the plaques aggregated than isolated, but the individual plaques are unusually distinct. More suitable solutions for histological purposes are osmic acid one per cent., the fluids of Pacini, modified by Hayem, and of Bizzozero. Pacini's solution, as used by Hayem, consists of sodium chloride 1 part, sodium sulphate 5 parts, corrosive sublimate 0.5 part, in 200 of distilled water. Bizzozero employs the ordinary salt solution, ¾ per cent., to which methyl-violet has been added. Afanassiew recommends strongly the use of salt solution to which 0.5 per cent. of dried pepsin has been added, and 1 to 1,000 of methyl-violet, and a small amount of sublimate or carbolic acid to prevent decomposition. I find that the Pacini fluid and osmic acid answer every purpose, and in them the plaques undergo very little change.

The examination is made in the following way: Upon the thoroughly cleansed finger-pad a single drop of the solution is placed, and with a sharp needle, or pricker, the skin is pierced through the drop, so that the blood passes at once into the fluid, which is then received upon a slide and covered. The withdrawal of the corpuscles into the solution prevents the plaques from aggregating, and they remain as isolated and distinct elements. The amount of blood allowed to flow into the drop must not be large, and should be quickly mixed. In many respects the most suitable medium is osmic acid, one-half to one per cent., which has the advantage that by its use permanent preparations can be obtained. The various cells are at once fixed, and the plaques are, by this method, very well preserved. Good preparations may also be obtained by spreading rapidly a thin film of blood on a top-cover, and then placing it at once in the osmic acid. Still another method is to dry the blood in the thinnest possible layer, and then fix with osmic acid or stain with methyl-violet, and mount in balsam. Kemp recommends placing the blood-drop on a top-cover, rapidly moving it about, and then washing off the superfluous blood with salt solution. The plaques adhere to the cover, while the red cells are swept away. The cover is then quickly put in osmic acid.

For the study of the plaques in the circulating blood, the mesentery or omentum plate must be employed, and similar measures adopted to those used in the study of the circulation of the blood in mammals. The half-grown rabbit, white rat, or guinea-pig will be found best adapted for this purpose. The chief difficulties arise from the amount of fat which, in some instances, obscures the vessels, and the rapidity of the current may render it hard to see the plaques. But when, as in the omentum, a small transparent vessel is found, in which the current is slow, then with the red and colorless corpuscles the smaller plaques are also seen (Fig. 2). In

Bizzozero's paper, and in the recent communication of Eberth, full directions are given for the study of the plaques in the circulating blood. They are modifications of the original Sanderson-Stricker method (*vide* Sanderson's "Handbook"), which answers every purpose in the case of the guinea-pig, the omentum of which is a peculiarly suitable object. In the rapidly flowing current no plaques

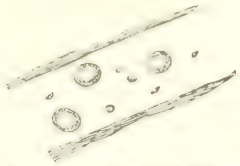

FIG. 2.—Plaques in [illegible] 1882.

are distinguishable, but when the stream is slow they can be seen here and there in the still layer with the white corpuscles, while if the current becomes very feeble, they tend to collect at the periphery with the leucocytes. In a small venule, where the stream is slow, and only a few corpuscles passing, the best opportunity is afforded of seeing the plaques. They may be well studied within the vessels in the recently killed animal, or in man, in portions of tumors, etc., recently removed. The subcutaneous tissues of the new-born rat afford perhaps the very best situation in which to study the plaques while within the vessels. The rat is killed with a snip of the scissors through the spine, and then portions of the mucoid con-

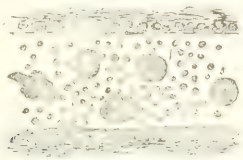

FIG. 3.—Plaques in [illegible] 1882.

nective tissue are spread thin upon the slip, either with or without saline solution. In the thin transparent vessels, the plaques are very distinct, and they remain unchanged for hours. Perhaps there is no better mode of studying these forms, as the thin walls offer no impediment to the view, and the plaques are in their natural medium. In the subcutaneous tissue of man I have had several opportunities of examining the plaques in this way, and Fig. 3 represents them in a vessel of the tissue of the scrotum an hour after its removal. In the smaller vessels of the pia mater they may also be seen.

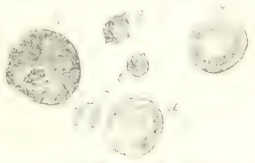

FIG. 4.—Isolated Plaques in [illegible] if nucleated.

General characters and structure.—The plaques are minute elements circulating in the plasma with the other corpuscles, and possessing such specific and distinct characters that they must be reckoned among the normal histological constituents of the blood.

The plaque is colorless, with a uniform grayish-white appearance, homogeneous or very finely granular, and presents no differentiation in the delicate protoplasm of which it is composed. So far as my observation goes, it is always colorless.

The *size* is variable. In man they may be said to measure from 1.5 to 3.5 of a micromillimetre, or from about one-sixth to one-half the size of a red blood-corpuscle. The majority of them are from 1.5 to 2.5 μ. Occasionally a plaque may be seen measuring as much as five micromillimetres, but this is exceptional. When they are abundant, remarkable gradations in size may be measured between the smallest and largest forms. They have not the constancy in size of the red corpuscle. I think in man, when very abundant, the average size is slightly less than when they are not so numerous. They are stated to bear in size some relation to the size of the red corpuscle of the animal, but we need a more elaborate series of measurements to determine this. In the white rat they are slightly smaller than in man.

The shape of the normal plaque, as seen in the vessels, is a circular disk with smooth, well-defined margin. When slightly tilted it has naturally an ovoid appearance, and when seen in profile is as a narrow, straight rod or staff. Whether they are flat disks, or biconcave, as like red corpuscles, is really not easy to determine. I should say that the majority do not show a bilateral depression, but forms are sometimes seen which resemble in outline very closely a miniature biconcave disk. Alterations in form quickly occur when the blood is withdrawn; but the natural shape, as seen in the vessel, and also, as a rule, in Pacini's fluid, or osmic acid, is as here stated.

The plaque consists of a homogeneous, smooth, structureless protoplasm of a light gray color. In the unaltered condition no nucleus can be seen, but in the fluids used to conserve them the appearance is in the form of a collection of distinct granules, which may look like a nucleus. This will sometimes, in dried preparations, stain a deeper color in the hæmatoxylon than the remainder of the plaque, and it is regarded by Hayem as a nucleus.

Changes in the plaques.—Outside the vessels the plaques are characterized by two peculiarities which have been a serious hindrance to their recognition as special elements of the blood, viz., the rapidity with which the protoplasm alters and the tendency to adhere to one another and to any substance with which they may come in contact. Within the vessels, however, they do not seem to be more prone to rapid decay than the red or white corpuscles, and in the young rat, kept at ordinary temperature, I have seen them in the vessels quite distinct and clear twenty-four hours after death. So also I have found them unaltered in the vessels of the pia mater in man, some hours after death; and, as I shall have occasion to show in the third lecture, they may in masses remain apparently unchanged for some time.

The substance composing the plaque appears homogeneous when first seen, but soon a change occurs, and

FIG. [illegible] protoplasm into a darker and clearer portion: *b*, alterations in form of plaques examined in blood-serum and watched for three hours.

the plaque presents a darker, more highly refractile portion, and a clearer substance. Usually this darker portion is peripheral, but it may be central, and then is not unlike nucleus. It is as if a material had separated from the stroma or basis of the plaque, just as the hæmoglobin of the red corpuscle may do under the influence of reagents. The plaques undergo the most curious changes in shape, to the study of which I devoted much time in 1873.' Within the vessels they are circular, but when at rest they not infrequently become ovoid or prolonged, or slightly angular. These angula-

processes may increase greatly in length, and give a stellate appearance to the plaque. The changes in form are very fully described and figured in my original paper. These alterations are probably induced by changes in the external conditions, and are not amœboid or vital in character. The addition of serum to the blood-drop, and the examination in a warm stage, afford the best means of studying the variations in form. Even within the vessels they may show these changes, and in the course of a few hours alter in a remarkable manner, so as to be scarcely recognizable.

A very common change is the separation from the plaque of a mucin-like (?) material in the form of a pale sphere, which may remain attached to the cell or separate from it. When aggregated in masses, as in a slide of fresh blood, this process can be readily seen at the margin, and the field in the vicinity may be covered with these pale globular bodies. They result, doubtless, from the separation of a material from the substance of the plaque, and are identical with the spheres so often seen attached to spermatozoa in urine.

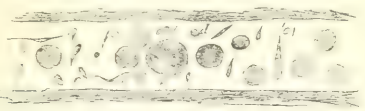

FIG. 6.—Alterations in the Plaque while within the Blood-vessels, sketched after three hours on the warm stage. April 6, 1885.

In marked contrast to the stability of the plaques within the vessels is their rapid disintegration when withdrawn. At a low temperature this does not occur so quickly, and of this Hayem took advantage in his researches; but at the ordinary temperature, and in the examination of the blood without any reagent, the plaques unite with each other and undergo rapid change—a viscous metamorphosis, as Eberth [1] terms it. As I shall have occasion to point out, this is associated with the separation of fibrin which seems to arise first about the groups of plaques, as Ranvier [2] noted in 1873, and he spoke of these little granulations—*grains sarcodique* of Vulpian—as centres of coagulation.

Action of reagents.—This has already been referred to in the consideration of the best modes of examining and preserving the plaques. Water reacts upon them as upon the colorless elements, causing a swelling of the protoplasm and a rapid production of the pale spheres already described. Dilute acid and saline solutions act in the same way. In three-fourths per cent. salt solution, or in the sodium sulphate solution for blood-counting, they retain their outlines and do not so rapidly coalesce and disintegrate. Dilute potash solution causes speedy dissolution.

The aniline dyes stain the plaques as other protoplasmic bodies, and Bizzozero's fluid has the advantage of tinting them and making them more distinct. In preparations by Ehrlich's method, the tint of the central portion of the plaques may be deeper than the periphery. Carmine appears to have no effect. For permanent preparations the dry method is the best, and they may be stained with hæmatoxylon, fuchsin, Bismarck-brown, or methyl-violet. The blood in osmic acid may be kept for some days if the cover-glass is carefully surrounded with paraffine. A solution of corrosive sublimate 1 to 1,000 is also suitable for their preservation.

The precise chemical composition of the plaques has not been determined, but from the similarity in most points of their reaction and behavior with dyes to the nuclei of cells we may suppose their composition to be of a similar nature.

The number.—The numeration of the plaques presents serious difficulties, on account of their extraordinary adhesiveness, and the numbers now given may be subject to revision when better methods are devised. In my own case the numbers range from 250,000 to 300,000 in the cubic millimetre; figures which correspond to those of Hayem. Full-blooded, plethoric individuals have rarely more than 250,000 per cubic millimetre. The variations in the same individual may be considerable during the day, and they seem increased after a full meal. Age has an important influence; in the infant and young child the number may be double that of the adult. In the new-born of all the mammals I have examined they are specially abundant. As age advances they seem again more numerous, particularly if the individual is weak and debilitated.

Until more extensive and more reliable counts are announced, we may say that the plaques in health number between 200,000 and 300,000, the ratio to the red being about 1 to 18 or 20, and to the white corpuscles 35 or 40 to 1. The numeration of the plaques is a much more tedious matter, and requires far more patience than counting the red and white corpuscles. Rapidity is essential to success. I find the *compte-globule* of Malassez rather more adapted than the Gowers apparatus, as the mixture can be more thoroughly and quickly made. The blood is got from a deep puncture and aspirated into the tube of the Potain mixer to the line, and then the Pacini's fluid or osmic acid is immediately drawn in. Frequently it will be found that, with the greatest care, the plaques have run together and the process must be repeated. It is essential, too, in the first aspiration of the blood, to reach the line at once; if the blood-column goes beyond, it must be discarded and a fresh attempt made, as the time lost in accurately adjusting the column would be sufficient to allow the plaques to coalesce.

The plaques in disease.—In health the plaques are relatively scanty, and they aggregate into such small, scattered groups that they do not necessarily excite the attention of the student, but every constant observer of the blood in states of disease must have marvelled again and again at the extraordinary number and size of the granule-masses met with in certain cases. Led away by their constancy and peculiar characters, writers have regarded them as specific and distinctive elements in some affections (leukæmia, phthisis). From the able and comprehensive paper of Riess to the more recent one of Afanassiew,[1] there have been very many observations on the frequency and significance of these bodies in disease, but we still lack careful and painstaking enumerations in the various acute and chronic diseases. A rough estimate of their increase or diminution may be made by anyone well accustomed to their observation, but for scientific accuracy the hæmocytometer must be used, and means must be devised to overcome the present serious source of error.

My own observations have been very numerous, and I have for years been in the habit of noting the paucity or abundance of these elements. In the absence, however, of systematic and reliable counts, the notes are not worth much. The general results I may state as follows:

1. The plaques are increased in all chronic wasting maladies—cachexiæ—with or without fever.

This is very evident by examining in rotation the various patients in a hospital ward. The debilitated individuals, the subjects of phthisis, cancer, or other chronic wasting diseases, present a marked increase. In phthisis the number per cubic millimetre may reach five hundred thousand or more, and the ratio of the plaques to the red may rise as high as 1 to 5.

2. In acute sthenic fevers the plaques are not increased in the early stages, but as the disease advances, and the patient becomes weaker and more debilitated, the increase is usually marked. This is well seen in typhoid fever, in which the number of plaques during the first week may not rise above normal, while in the third and fourth week there is usually a notable increase.

[1] Eberth und Schimmelbusch: Virchow's Archiv, [illegible], Heft [illegible], 1881.
[2] Ranvier: Gaz. Méd. de Paris, 1873.

[1] Afanassiew: Deutsches Archiv f. klin. Medicin, Bd. [illegible].

3. In the so-called blood diseases the number of the plaques is variable. Many observers have remarked the great numbers in certain cases of leukæmia, but in others the increase is not apparent. So, also, in lymphatic anæmia. In some cases of Hodgkin's disease I have seen the plaques in extraordinary numbers. In profound anæmia the plaques may be very scanty. I have long noted, in cases of pernicious anæmia, that the clusters of plaques may be almost absent, or much more scanty than in health.

Distribution of the plaques in animals.—So far as our present knowledge goes, the plaques are constant constituents of the blood in mammals, and, with the exception of slight variations in size, the general features are the same in the various orders. My observations on this point have not been extensive, but I can speak of their presence in the blood of the dog, cat, mouse, guinea-pig, rabbit, sheep, ox, horse, pig.

They also occur in the ovipara, and here they are nucleated. Kemp states that in the blood of oviparous animals there is a nucleated corpuscle which is physiologically analogous with the plaque in the blood of mammals, and which behaves like it when the blood is drawn.

Origin.—Various explanations have been given to account for the origin of the plaques, and Kemp enumerates no less than seven different views. Perhaps the most prevalent idea, particularly among clinical physicians, is that they result from the disintegration and degeneration of the blood-corpuscles, especially the leucocytes. This is really not unnatural, for the irregular clumps of plaques in blood examined in the ordinary way look very like—and, indeed, are—protoplasmic débris, but we know of no such process of rapid disintegration in the colorless corpuscles, which are remarkably stable elements, and even in their death and decomposition never, so far as I can make out, produce structures similar to the groups of plaques. The fact that the formation of the *granular débris*, as the groups of plaques are called, can be prevented by drawing the blood directly into a drop of osmic acid (or Pacini's fluid), in which the elements are fixed instantly, should be sufficient to convince the most sceptical; but if it does not, the study of the plaques in the new-born rat will satisfy, I think, the most obdurate. The abundance and large size of the groups of plaques in a blood-drop examined in the ordinary way, the ready demonstration of the individual elements in the blood-vessels of the subcutaneous tissue, and the identity of these with the corpuscles at the edges of the groups, and with those in the osmic acid drop, render the conclusion irresistible that we are dealing with something quite independent of the colorless corpuscle.

I am unaware of a single observation corroborative of the view that the plaques result in any way from the degeneration of the red corpuscles. We need not consider the views that the plaques represent fibrin particles, or are depositions of globulin.

A majority of observers regard the plaques as independent elements in the blood, others agree with Hayem that they are young red corpuscles—hæmatoblasts—and a further discussion of this point will be best considered in the next lecture, when I speak of the regeneration of the corpuscles.

Historical.—I do not propose to enter exhaustively into the literature of the blood-plaque. This has already been done very fully by several German observers, and quite recently by Kemp, whose paper on the "Studies from the Biological Laboratory of Johns Hopkins University" will be accessible to all American and English students. In my original paper I have also given pretty fully the older references. We may conveniently divide the work which has been done in this department into three periods. The first embraces the time prior to the publication of Hayem's researches in 1877. The masses had been observed frequently, and the corpuscles had been studied, notably by Donné, Zimmerman, and Max Schultze. In 1874 I demonstrated the corpuscular nature of the granule-masses, and showed that the bodies of which they were composed "were present as separate elements in the vessels, and showed no tendency to adhere together." In 1873 Ranvier[2] called attention to their possible association with fibrin formation. Riess and others had called attention to their increase in disease. The second period dates from the publication by Hayem, in 1877–78, of his researches, and to him really belongs the credit of establishing the histological position of these corpuscles as constant blood-elements. It is curious that his careful observations met with very slight recognition among physiologists. The interest in the question had, indeed, almost died out when, in 1882, Bizzozero, of Turin, published an exhaustive article in Virchow's *Archiv* upon the *Blutplattchen*, and their relation to fibrin formation. From this we date the third period, during which there have been already published eighteen or twenty essays, chiefly in Germany, and the most intense interest seems to have been aroused on the subject. The weight of histological evidence is strongly in favor of the views which I have here laid before you, but there still remains the greatest diversity of opinion as to the function of these bodies in blood development, and of their relation to the formation of fibrin, and upon these questions I shall have more to say in the second and third lectures.

Original Articles.

THE BENEFIT TO BE DERIVED FROM SYSTEMATIC WASHING OUT OF THE STOMACH, IN CASES OF GASTRIC DILATATION DUE TO HYPERTROPHIC OR CICATRICIAL STENOSIS OF THE PYLORUS.[1]

By FRANCIS KINNICUTT, M.D.,

Although Canstatt first recommended the frequent withdrawal of the accumulated fluid in the stomach by means of the stomach-pump, in cases in which the patient had lost the power of vomiting, its systematic use in cases of marked gastrectasia was first instituted by Kussmaul, in 1879. The results obtained by him were so favorable that this method of treatment at once obtained recognition, and of late years the washing out of the stomach by means of the stomach-pump or by the siphon process, has been successfully employed in the treatment not only of gastrectasia, but also of gastric affections of various kinds.

During the past year, three cases of extreme dilatation of the stomach from pyloric obstruction, have been treated in my wards at St. Luke's Hospital. The histories of Cases I. and II. illustrate the benefit which may be derived from systematic lavage of the stomach by means of the siphon process.

Case I.—M. P——, female, aged thirty-nine. Admitted to hospital February 4, 1885.

A sister died of cancer of the breast; family history otherwise good. During a period of ten years, until the patient reached her thirtieth year, she suffered from frequent attacks (every few weeks) of violent epigastric pain, usually after meals, followed by vomiting of the contents of the stomach. The pain was only relieved by hypodermatic injections of morphine. There was never any blood in the vomited matter. During the past several years, she has been quite free from these attacks and, until a year ago, apparently enjoyed fair health. Her weight at this date was two hundred pounds. At about this time, she began to have frequent attacks of vomiting. At times, the vomiting occurred within a few minutes after the ingestion of a meal; again, an attack

[1] [illegible]
[2] [illegible]

would occur only once in two or three days, when as much as "several pints" of partially digested food was vomited. At first, there was an absence of other symptoms; gradually, however, more or less constant nausea and intense burning pain in the epigastrium supervened. The patient rapidly emaciated, losing one hundred pounds in weight within the year, lost strength, and was finally confined to her bed. There was obstinate constipation. On admission to hospital, the patient was extremely weak, anæmic, and emaciated. There was anorexia, a thickly-coated tongue, and constipation. There was also constant nausea, foul-smelling eructations, an intense burning sensation and pain in the epigastrium. The temperature was normal; the urine was free from albumen and sugar.

Physical examination revealed a marked depression just below the ensiform cartilage and beyond, marked distention of the abdomen, with distinctly-outlined borders; the lower border reached a point three inches below the umbilicus in the median line, and extended thence obliquely to the extreme limit of the left iliac region.

There was marked tympanitic resonance over nearly the whole area of the distention, and succussion on palpation. Distinct undulatory movements, passing from left to right, were visible. There was slight enlargement of the inguinal glands. Examination of the heart, lungs, liver, and spleen gave negative results.

Two days after admission, no vomiting having occurred in the interval, the patient vomited two quarts of semi-fluid matter, containing fragments of meat eaten *previous* to admission.

After complete evacuation of the contents of the stomach by vomiting and by means of the stomach-tube, a small tumor, the size of an almond, could be felt distinctly, one inch to the right of the median line and two and one-fourth inches above the umbilicus. It was of firm consistence, was easily movable within narrow limits, and readily slipped from under the finger. It was found that the stomach easily retained ninety-two ounces of fluid, introduced by means of the œsophageal tube.

A mechanical dilatation of the stomach, from pyloric obstruction of a doubtful nature, evidently existed. A systematic daily washing out of the stomach by the siphon[1], and careful feeding, were at once instituted.

The method adopted was to wash out the stomach thoroughly with a weak solution of boracic acid, early each day, before food was taken. A pint of peptonized milk was then given by the tube or mouth. A similar quantity of milk was given at varying intervals during the day, and at first lavage again was regularly employed in the afternoon. The rule was adopted, also, to evacuate the contents of the stomach by means of the tube, *whenever* marked epigastric distress followed a "feeding." The relief of the burning sensation and epigastric pain, and of the vomiting, was rapid and marked. Broths and beef-solutions were gradually added to the diet. Aside, however, from the alleviation of the above symptoms, little progress was made during the succeeding five weeks. The digestive power of the stomach evidently was seriously impaired. The daily lavage showed the presence of foul-smelling, undigested matter in the fluids withdrawn from the stomach. At the end of two months distinct improvement in this respect was observed, and the patient began to increase in weight. On February 4th, her weight was 99 pounds; on April 7th, 102 pounds; April 21st, 103 pounds. On April 24th, there was a *spontaneous* evacuation of the bowels, the first for a year. From this date, natural movements, without the use of cathartics or enemata, occurred with more or less regularity. On May 5th, the weight was 108½ pounds; May 12th, 110 pounds; May 19th, 112 pounds. On May 20th a small amount of meat was added to the diet, but given only after thorough lavage. It apparently was easily digested, and from this date it was allowed daily. On May 26th the patient's weight was 120 pounds; June 9th, 124½ pounds; June 16th, 127 pounds. On May 27th a small amount of uncooked rice was given to the patient, and three days afterward a portion of it, at least, was withdrawn from the stomach by means of the siphon. On several occasions during June, lavage was discontinued temporarily, by my directions. Epigastric distress and vomiting at once recurred, and the patient earnestly begged that the daily washing out of the stomach might be renewed. During the period of the employment of lavage, the reaction of the urine passed at successive periods, during the twenty-four hours, was tested,[1] and found to be constantly alkaline. The patient, while under observation, suffered from time to time from tetanic spasms of the calves of the legs.

Kussmaul explains both the muscular spasms and the epileptiform convulsions which not infrequently occur in cases of dilatation of the stomach on the ground that there is a deficient absorption of fluids by the stomach in this condition, through which an abnormal dryness of the muscular and nervous tissues is induced (Ziemssen's "Cyclopæd. of Med.," *loc. cit.*). Bouchard refers the symptom to an auto-infection by toxic products of fermentative and putrefactive changes in the stomach (article on "Dilatation of the Stomach," by W. H. Welch; Pepper's "System of Medicine," vol. ii., p. 596).

The marked improvement in the patient's condition during the above period of four months, and the absence of appreciable growth of the pyloric tumor, pointed to the non-malignant character of the obstruction. The patient was unable to use the stomach-tube herself, yet without its daily use a considerable prolongation of life seemed impossible. She was most anxious that operative interference, which afforded a possibility of permanent relief, should be attempted. The case seemed a suitable one for Loreta's operation of digital dilatation of the pylorus, and after a consultation of the physicians and surgeons of the hospital, it was determined upon. The result has been reported elsewhere by my colleague, Dr. McBurney.[2] The pyloric obstruction and tumor were found to be due to a purely hypertrophic process, affecting the submucous and muscular tissues of the pylorus.

Case II.—S. J——, female, aged fifty-nine, admitted to hospital April 9, 1885. The patient had previously been an inmate of the hospital for a brief period, in the winter of 1883. She at that time gave the following history: From fourteen to nineteen years of age, she suffered from occasional attacks of hæmatemesis. At the age of nineteen, after severe exertion, she vomited a large amount of blood. Again, twenty years ago, she vomited almost daily, for a year, black grumous material, in varying quantities. In the early part of 1881, she had a severe hæmatemesis. She was admitted to hospital in December, 1883, much emaciated, complaining of severe epigastric pain, and vomiting after food. The stomach was found to be greatly dilated, and there were the physical signs of slight changes at the apex of the right lung.

She was discharged after a short stay in the hospital. She has continued to vomit since this date, at least once daily, and has lived almost wholly upon a milk and fish diet. Last July, she had an hæmoptysis, and during the past winter her cough has been troublesome. She has suffered from almost constant epigastric pain, at times so severe as to require hypodermatic injections of morphine. Her bowels have been obstinately constipated for more than a year, never being moved without the use of cathartics. For the past six weeks she has been con-

[1] The tubes used [illegible] were [illegible] mann, of New York. The French tube and funnel are made in one piece. Both tubes are of soft, flexible red rubber. An irrigator was attached to one end of the tube for greater convenience in use, and a Y-shaped glass tube was connected by one arm with the tube running to the irrigator, and by the other with a discharging tube.

[1] An alkaline reaction of the urine during the treatment of gastric ectasia by lavage has been noted by many observers. It has been suggested by Quincke that this mode of treatment diminishes the absorption of the gastric acids, and thus withdraws an important factor in the acidification of the urine (Ziemssen's Cyclopæd. of Medicine, vol. vii., p. 318).

[2] New York Medical Journal, January 16, 1886.

fined to her bed. On admission, the patient was greatly emaciated, weak, and anæmic. The tongue was thickly coated; there was anorexia, great thirst, and constipation. She complained of constant distress and pain in the epigastrium, and of foul-smelling eructations. The urine was scanty; alkaline in reaction; it contained neither albumen nor sugar.

Physical examination revealed a localized distention of the abdomen, occupying the umbilical, hypogastric, and left lumbar regions. The lower border of the prominence reached a point two inches below a line drawn through the anterior superior spinous processes of the ilia. There was a resonant percussion note over the greater portion of the above area and succussion on palpation. On complete evacuation of the contents of the stomach by means of the siphon, a tumor of about the size of an almond could be distinctly felt in the epigastrium, two and one-fourth inches above the umbilicus in the median line. It was immovable and of firm consistence. There was sensitiveness over its site, on firm pressure. It was found that the stomach could easily receive and retain one hundred and fifteen ounces of fluid. Consolidation, with areas of softening, was found at the apex of the right lung. Examination of the remaining organs was negative. There was no enlargement of the superficial glands. The patient's weight was eighty-seven pounds. The dilatation of the stomach was evidently due to pyloric obstruction, and a cicatricial or hypertrophic stenosis was believed to exist. An exactly similar method of treatment to that pursued in the previous case (daily lavage and careful feeding) was instituted. On April 14th there was no vomiting, and for the first time for many months morphine was not required. The fluids withdrawn from the stomach continued to be extremely offensive for the first month after daily lavage was adopted; the eructations, the epigastric distress and pain, and the vomiting, however, were greatly relieved. The vomiting only very occasionally recurred. From May 8th, there were daily spontaneous movements of the bowels. On May 16th, a little toast was allowed for lunch. On May 19th the patient's weight was 88½ pounds; on the 20th, meat, after lavage, was ordered. It was found that it could be taken without distress. May 26th, the weight was 90 pounds; June 2d, 91 pounds; June 9th, 93 pounds; June 23d, 99 pounds. A gain of 12 pounds, in the presence of a progressing tubercular affection of the lungs, had been obtained in a period of a little less than three months. The necessity and efficacy of the method of treatment had been demonstrated; life could be prolonged, however, only by its continuous employment, and this was found to be impossible outside of the hospital. The patient earnestly begged that a surgical operation should be attempted, and after consultation with the surgeons of the hospital, Loreta's operation was determined upon. Dr. McBurney also has reported the subsequent history of this case.[1] The cause of the pyloric stenosis is one of great interest, as demonstrating a condition which must be of very unusual occurrence. The nature of the pyloric tumor is also of interest. The following report is taken from Dr. McBurney's notes of the case:

"On opening the stomach, an old and apparently healed ulcer was felt and seen, directly opposite the incision. . . This ulcer was about an inch in diameter, and its largely-thickened edge formed the tumor which had been felt before the operation. . . The base of this ulcer was firmly adherent to the pancreas behind, and the contraction of cicatrization had given the stomach an hour-glass form. . . Even then it was difficult to find the pyloric orifice. . . After a search of some minutes, I found it at the upper border of the ulcer, close to the latter, but not involved in it, and directed upward. . . The posterior edge of the pylorus had been so firmly drawn by the cicatrization of the ulcer that, although it was easy, by lifting the anterior edge, to pass the finger through it, yet when the anterior edge was not so lifted, the orifice was completely closed."

Several practical points are suggested by a study of the histories of these cases. They are, (1) that systematic daily lavage of the stomach is often capable, not only of relieving distressing symptoms, but also of, partially at least, restoring the digestive power when seriously impaired, in cases of gastric dilatation due to hypertrophic or cicatricial stenosis of the pylorus; (2) that improvement in the latter respect is frequently attainable only after weeks of persistent treatment;[1] (3) that considerable prolongation of life with the existence of a pyloric stenosis of the degree described above is improbable, in the absence, either of the continued employment of this mode of treatment, or of surgical interference.

Case III. was that of a woman, aged twenty-eight, who died in hospital previous to the admission of those whose histories have been related. Her statements in regard to her health, previous to a few months before admission, were contradictory and unsatisfactory. On admission, January, 1885, she stated that her present symptoms first appeared three months ago. At about this date, she began to be troubled with epigastric distress, occasional vomiting, and abdominal distention. For the past month, she has vomited daily. Frequently, food taken on one day has been distinguishable in the vomited matter of the next. She was greatly emaciated, weak, and distinctly cachectic. The tongue was thickly coated, there was intense thirst, anorexia and obstinate constipation. She suffered greatly from eructations, epigastric distress and pain. The temperature was normal; the urine, acid in reaction, sp. gr. 1.024; it contained neither albumen nor sugar. On examination, the outlines of the stomach were distinctly visible through the abdominal walls. The lower border reached a point considerably below the umbilicus, in the median line. There was marked succussion on palpation, and the peristaltic movements of the stomach, passing from left to right, were plainly discernible. A tumor, the size of an English walnut, was detected one inch above the umbilicus, in the median line. It was of firm consistence, and was easily movable within narrow limits.

Examination of the heart, liver, and spleen, gave negative results. There was no enlargement of the superficial glands.

The presence of a marked cachexia, the comparatively recent date of the occurrence of abdominal symptoms, the existence of a presumably pyloric tumor, warranted, it seemed to me, the diagnosis of malignant disease. Palliative treatment only, with the irregular employment of lavage, was therefore prescribed. The emaciation and weakness rapidly increased; the patient continued to suffer from epigastric distress and pain, and vomiting, and finally died, without the occurrence of other than the above symptoms, seven weeks after admission.

Examination after death showed that, with the exception of small areas of catarrhal pneumonia in the lower lobe of the right lung, and slight changes in the connective tissue of the liver, the morbid changes were confined to the stomach. The stomach was enormously dilated. The pylorus was greatly thickened, and its orifice barely admitted the tip of the little finger.

A large cicatrix, two inches in diameter and of regular outline, was found in the immediate vicinity of the pylorus.

The pyloric tumor was found, on microscopical examination, to consist of an increase in the normal elements of the muscular and submucous coats of the pylorus.

The results of the autopsy illustrate the difficulty of positively differentiating dilatation of the stomach, due to hypertrophic or cicatricial pyloric stenosis, from that resulting from malignant disease of the pylorus.

[1] New York Medical Journal, January 16, 1886.

[1] As the stomach [illegible] allowed to stand separated into the layers which have been considered to be indicative [illegible] of the digestive function.

The obstruction evidently had existed for a long period, sufficiently long to seriously impair the digestive functions of the stomach. A cachexia was produced, which in no respect was distinguishable from that accompanying malignant disease. I am inclined to believe that if the true nature of the affection had been recognized and *systematic* lavage of the stomach employed, as in the previous cases, a very considerable prolongation of life might have been attained. The case suggested to me a different method of treatment, in the presence of similar symptoms.

Cases I. and II. are examples of a pathological process, which I believe is of more common occurrence than is generally recognized.

In Case I. the most careful examination of the stomach failed to reveal the presence either of an ulcer or a cicatrix, and it properly may be considered, therefore, as one of purely hypertrophic pyloric stenosis.

In Case III. the cicatrization of an old ulcer may be regarded as a factor in the pathogenesis of the hypertrophy of the tissues of the pylorus.

Hypertrophic stenosis of the pylorus has been described by various observers, particularly by Lebert [1] and Habershon.[2] The latter considers it to be due to a fibroid degeneration of the "pyloric valve," affecting its mucous and submucous coats, usually the latter, associated with a compensatory hypertrophy of the muscular coat of the pylorus.

In conclusion, I would add a word in regard to the means which I have found most efficient in determining the size of the stomach in cases of suspected dilatation. Frerichs' method of determining its contours by artificial distention, through the generation within the stomach of carbonic acid gas (introducing bicarbonate of sodium twenty to thirty grains, and tartaric acid fifteen to twenty grains, in solution), has often failed in my hands. Auscultatory percussion of the stomach, artificially distended by the above means, has given somewhat more satisfactory results.

Leube's method of sounding, which consists in introducing a tube into the stomach, and attempting to feel it with, or catch it between, the fingers through the abdominal walls after insertion, also has proved unsatisfactory. A tube sufficiently soft to be unattended with possible risk in the necessary manipulation, permits of a coiling upon itself, which militates against a correct estimation of the degree of dilatation.

Penzoldt's modification of Piorry's method, I have found both safe and comparatively accurate in application.

It consists in withdrawing the fluids from the stomach by means of the stomach-tube, thus causing dulness to disappear; and in then making the latter reappear by injecting more fluid. "By noting the lower limit of dulness thus produced, the position of the lower border of the stomach may be determined."

I desire to express my indebtedness to the gentlemen of the medical house-staff of the hospital, Drs. Sherman, Tieman, and Densch, for their assistance in carrying out the method of treatment described.

THE CURE OF TUBERCULOSIS.—A subscription for the purpose of encouraging researches in the therapeutics of tuberculosis has been opened by the *Gazette Hebdomadaire de Médecine et de Chirurgie*, of Paris. The idea of a subscription for this purpose was suggested by M. Verneuil, and in a few days the sum of over four thousand francs was raised.

VENICE TURPENTINE IN CHRONIC POSTERIOR GONORRHŒA is highly recommended by the editor of *The American Practitioner and News*. It should be given in large doses.

[1] [illegible]
[2] [illegible] Page 1.

AN ANALYSIS OF SEVENTY-SEVEN CASES OF TRACHEOTOMY.

BY ROBERT W. LOVETT, M.D.,

ASSISTANT SURGEON TO THE NEW YORK ORTHOPÆDIC HOSPITAL.

IN the year 1885 tracheotomy was done seventy-seven times for pseudo-membranous laryngitis, at the Boston City Hospital. Of these cases 20 recovered and 57 died; 25 died with septic symptoms, and 26 with symptoms of extension of membrane to the trachea and bronchi, 4 died of heart failure during or after operation, and 1 each of pneumonia and peritonitis. This classification of the causes of death is of course purely arbitrary; when a child died with symptoms of strangulation the case was set down as dying of extension. When septic symptoms and stupidity were predominant and the breathing was not labored the death was classed as septicæmia. The two divisions often overlapped markedly. Of the four cases of heart-failure, one, not anæsthetized, died before the trachea was opened, one was practically dead before operation, and the other two, both feeble children, died, one during and the other just after a simple and not markedly bloody operation. No one of these four children was anæsthetized. They were all between two and three years old.

The cases put down as septic died very much more quickly after operation than did the extension cases. The twenty-five septic cases lived, on the average, forty-eight hours while the twenty-six extension cases averaged eighty-one hours after operation.

The ages of the children ran from nine months to two years, but the bulk of the cases lay between two and seven years. The youngest recoveries were two children fifteen months old, who both nursed throughout their illness. The recoveries and deaths were quite equally distributed among the children of all ages.

A very bad class of cases comes to the hospital; the majority are sent in only as a last resort; some are brought in *in extremis*, and one or two died before tracheotomy could be done. When the parents desired it, and as a means of euthanasia, the operation was done even in the most hopeless cases. Twelve or more of them were of that very offensive sort that is accompanied by gray or greenish membrane in the throat and an intolerable odor, with, of course, much sepsis. With one exception these all died. The majority of the children were brought during the first or second day of their dyspnœa. In forty-four cases the operation was performed on the first day of the croup, and in sixteen on the second. In no case was the operation done later than the third day. The average time of operation was the same in the cases that died and the cases that recovered—thirty-two hours after the beginning of the croup. Croup supervened on the diphtheria from the second to the tenth day of the disease, averaging the sixth. In the cases that recovered the operation was performed on the sixth day of the disease, on the average; in both extension and septicæmia cases the average day of operation was between the fourth and fifth. That is to say, in favorable cases the croup did not come on so rapidly as in the cases that died. In the treatment no delicate distinction between croup and diphtheria was attempted; they were all classed and treated as diphtheria, and most of them presented unmistakable signs of it. In forty-eight of them diphtheritic membrane was seen in the pharynx by some of the hospital staff. In sixteen no examination was noted; in many of them none was made on account of the haste or the child's bad condition. In thirteen the child's throat was examined and no membrane was seen. Nevertheless several of these children showed marked signs of diphtheria; one gave post-mortem evidence of it in the form of a septicæmia, two had every sign of it except pharyngeal membrane, another had been exposed to it in the family, etc. Setting aside four of these thirteen who certainly had diphtheria, we have nine cases

where the diagnosis of diphtheria could not be made. Four of these nine cases recovered.

The operation done was ordinarily the high one, and anæsthesia was not used in more than one-half of the cases. Ordinarily, without it there was but little suffering, as the child was stupefied by the lack of oxygen. Sometimes the operation seemed painful throughout, and sometimes only the first cuts caused suffering. Ether invariably produced spasm and more labored breathing; chloroform was readily taken, and excited no spasm. After the use of either anæsthetic, and especially ether, there was apt to be a marked collapse after the operation. No child died in this condition, but only because they were carefully watched and strongly stimulated.

As to tracheotomy as a means of euthanasia, where septicæmia prevailed the death was easy enough and a state of stupidity preceded the end by many hours, but in every one of the twenty-six extension cases the death was preceded by gradually increasing dyspnœa, which became, in many cases, frightful to witness. The suffocation which comes before tracheotomy, seems to be of a rapid sort, which soon stupefies the child by its intensity, and makes the end a comparatively painless one; but the dyspnœa which comes after tracheotomy, as an accompaniment of the extension of membrane, is so gradual an affair that it reaches a much more acute stage before it stupefies the child. Unless septicæmic, the child is keenly alive to its suffering; cyanosis and retraction of the soft parts of the chest come on, the discharge from the tube is suppressed, and the breathing whistling. Restlessness and much suffering are only too apparent. The condition of affairs grows worse until the child dies in a paroxysm of dyspnœa, or, after hours of acute suffering, becomes comatose. Tracheotomy is not a means of euthanasia in cases that die by extension of membrane.

Albumen was present in the urine of nearly all the bad cases that were examined. The investigation of this point was very unsatisfactory, as it was very difficult to collect the urine of such small and such sick children. The urine was examined in 35 cases; 28 of these had from one-fourth to one-half per cent. of albumen. When it could be watched, it appeared toward the close of the first week of the disease, increased for a week or ten days, and in the course of a fortnight more it disappeared. It seemed to have no particular significance, and was equally distributed among all three classes of cases, except that it was constantly present in large amounts in bad septic cases.

More or less enlargement of the superficial cervical glands was noted in all but five cases; this varied from a few lumps to a neck as large around as the head. These large necks accompanied only very septic cases, and usually foul ones. A progressive enlargement of the neck was one of the worst possible prognostic signs, and, with the exception of one case, there was no recovery where the neck reached any considerable size. This one case was as septic and foul and hopeless as any in the series, and the swelling of the neck was simply enormous; but from the fifth day improvement was steady.

Nasal discharge was very common and without any especial significance. It is noted as having been present in fifty-five cases, and was equally distributed among all classes; nose-bleeding was present in six fatal cases. The character of the discharge from the tube was a most interesting indication of a case's progress. At first it was always bloody, and ordinarily loose. In twenty-four hours, the blood would disappear and the discharge would be whitish or yellowish, and thick or loose, but so long as it was free and not sticky it was favorable. The discharge was apt to become bloody at any time in any case, and it seemed to have no significance. Blood appeared as late as the fifth day in favorable cases, and in any case was apt to disappear and return again, and sometimes be present for one or two days at a time. But marked diminution in the amount of the discharge was a most ominous sign. The discharge then became sticky or gummy, and in many cases complete suppression of the discharge followed, preceding death. In only four cases that recovered, all bad ones, did the discharge at any time become gummy, and then only for a short time. In the other favorable cases, the discharge was free throughout.

In fatal cases a gummy discharge was generally present as a precursor of death; it appeared ordinarily within twenty-four to forty-eight hours of the end, sometimes coming temporarily a day or so earlier. This suppression of the discharge accompanied both septicæmia and extension cases, but in the latter dried pellets of mucus were apt to be present in the trachea, and to cause much choking and sometimes death. The condition of the trachea was seen, post-mortem, in two cases of this sort, and both showed fibrinous bronchitis and laryngitis, and fibrino-purulent bronchitis of the smaller tubes, with a mild degree of septicæmia, shown by cloudy swelling of the other organs. In a word, the drying of the discharge is one of the worst prognostic signs. The temperature, probably, possessed no more than its ordinary prognostic value in acute septic diseases. It went up to 107° in 3 fatal cases, and in 34 cases where it reached 104° there were only 2 recoveries. No child recovered where the temperature reached 105°. A sudden rise of temperature after operation meant nothing, and was noted in several favorable and several fatal cases. A sudden rise, however, on the third, fourth, or fifth day was a very serious matter, and, with one exception (when it rose 4° on the third day), it meant death. A later sharp rise was noted in four favorable cases in the second week, but it proved only temporary.

There was in no case what appeared to be distinctly diphtheria of the wound, though there were plenty of ugly-looking eroded holes left after the removal of the tube, and three or four cases of cellulitis or erysipelas of the neck. They had no significance. The treatment proved a very interesting part of the cases. A certain part of it was routine, while a certain part was adapted to each case. Every child was taken from the operating-table to a room where the steam-pipes had been tapped, and a cloud of steam was played directly onto the child. Special nurses were detailed to watch the cases night and day, whose duty it was to keep the tube clear by feathers and to remove and clean the inner tube every few hours.

The diet of the cases was milk *ad libitum* and some stimulant, ordinarily brandy; either one or the other of these was given every hour, and in some cases the children were encouraged to take broth and eggnog. The steam was continued until the wound was nearly closed, and the tube was removed on the fifth, sixth, or seventh day, without any preliminary testing. Only two cases had to wear a tube over seven days, and both of these had to wear it for months. Brandy was given in two-hourly doses, and from one to four ounces a day was readily taken. The number of cases is, of course, too small to furnish any very valuable statistics as to the relative value of different treatments, but it is not without significance that in cases treated with corrosive sublimate or calomel the percentage of recoveries was thirty-five, while only twelve per cent. recovered with non-mercurial treatment. The dose of corrosive sublimate was one-sixtieth of a grain every two hours, or every hour in an older child; salivation often followed its use on the second or third day, but was never troublesome after the mercury was stopped. Calomel was more apt to cause diarrhœa, and was given in quarter-grain doses every two or three hours. When diarrhœa or salivation began the mercurial was at once stopped.

The children took on the average from twenty to forty ounces of milk a day; thirty was a fair amount and below twenty was very small. Without regard to age, the children who took the large amounts of milk were the ones who got well. All the recoveries but three were in children who took between thirty or forty ounces of milk daily. In children who took over thirty ounces, the percentage of recoveries was fifty, while in those who took

twenty-five ounces or less, the percentage was only ten. Speaking roughly, the fact that a child was taking its nourishment well was encouraging.

In general, any prognosis, unless the case is a perfectly hopeless one, before the second or third day is largely guess-work. At that time of extremely unfavorable import are progressive glandular enlargement, gummy, or suppressed discharge, and the fact that the child takes less than twenty-five ounces of milk daily. The most encouragement that we can have is an absence of these ominous symptoms, along with a fair general condition of the child.

THE PALLIATIVE OR MECHANICAL TREATMENT OF HERNIA, WITH ILLUSTRATIVE CASES.[1]

With a Brief Report on Repeated Injections of Oak-Bark Without Confinement to Bed.

By W. B. DE GARMO, M.D.,

Instructor in the Treatment of Hernia at the New York Polyclinic.

Through all ages we find voluminous writings on the radical cure of hernia. Every age has had its vaunted cure; still, it remains a fact which we must all recognize, that of all adults suffering from hernia, very few ever obtain a complete and permanent cure. In view of this fact, is it not time that we study those means which shall give the greatest relief to the greatest numbers? that we should strive to secure the afflicted against the dangers which may arise from their hernias, and obtain the greatest amount of improvement possible, rather than endanger their lives in a vain attempt to produce a radical cure?

That very great good shall come from the study of the subject in this light, my past experience proves to me beyond the slightest doubt.

The adjustment of a splint to an insignificant fracture receives the surgeon's most careful personal attention, but in a case of hernia the entire responsibility is transferred by that same surgeon to a mechanic wholly ignorant of the first principles which should govern its proper treatment.

If we attempt to inform ourselves upon this subject by its literature, we will find that there has been the same neglect in the past as now exists. It is almost barren of practical instructions as to how the palliative treatment of hernia should be conducted. If we turn to those books in which we would naturally expect to find something as a guide, we are only told to "put on a good-fitting truss." Just what a good-fitting truss is, we are not informed, and as to the management of the case after such a truss has been applied, it never receives the least consideration.

Necessity, therefore, must be my excuse if in opening this discussion I draw almost wholly upon my own personal experience. The palliative treatment of hernia does not consist of mere truss-fitting; the selection and adaptation of an appliance is only preliminary to the proper treatment of the case. The common habit of prescribing a truss and discharging the patient, cannot be too strongly condemned.

The condition of *every person* suffering from hernia can be improved, but that improvement cannot be accomplished without intelligent care and attention. The patient, after having been supplied with a suitable appliance, must be instructed respecting its correct use, and, as his case improves, the instrument must be altered to meet these changed requirements.

Before speaking of the selection of appliances for special cases, it might be well to say a few words regarding trusses in general; and as there are at the present time fully forty varieties manufactured, these remarks must be generalized.

I am led, from experience, to condemn all trusses without springs, consisting of elastic or inelastic webbing about the body, held in place by perineal bands. Occasionally, for night use, they serve a good purpose, but for day wear I consider them a "delusion and a snare." If the body was perfectly round, they might act well; but being oval, with the most depressed portion in the inguinal region, it is self-evident that the greatest amount of pressure will be exerted where not needed—that is, on each hip. They are a delusion, because they keep the hernia out of sight for a time, but as they leave the upper part of the inguinal canal unprotected, it is quite liable to increase in size until it becomes uncontrollable. The perineal band is constantly drawing the pad down against, or over, the pubic bone.

I object also to all trusses with springs which are applied from the same side upon which the hernia exists. This includes all trusses commonly known as French or German; it includes a large portion of all that are sold throughout the country; it includes what our instrument-makers here call their *best* truss. Best merely because their great-grandfathers made them after the same pattern.

They would have been consigned to oblivion long ago, had the mechanical treatment of hernia been in the hands of professional men. So far as I have ever seen, they cannot be applied so that they will not act as a compress over the pubic bone. I am equally opposed to any truss that has an arm descending from the spring, upon which the pad is carried. A pad so placed cannot be retained high up over the internal ring, and I am positive that to secure the best possible results from mechanical means, that the closing of the upper portion of the canal is an absolute necessity.

As a covering for truss springs and for pads, I have found nothing equal, for cleanliness and durability, to hard rubber. I cannot imagine a better substance, and I know of nothing that is so well borne by the skin.

Before saying anything regarding the truss that I should select for a given case, I desire to speak briefly of the method of fitting which I have followed for the past four or five years; and for so doing, perhaps, a word of apology is needed, as that method has already been published. As its importance may have been overlooked by many at the time, and as I believe it to be the very key which places truss-fitting within the reach of every practitioner, I may be pardoned for again mentioning it.

Any physician who undertakes to treat his cases of hernia will soon discover that, by the ordinary method, it is a very difficult task to shape a steel spring so that it shall be accurately adapted to all irregularities of the form. This fact has prevented many physicians from making more than one or two attempts at truss-fitting.

The method referred to consists in securing a diagram of the outlines of the pelvis. This is traced upon paper, and the spring to be worn is shaped to correspond exactly with this line.

The diagram is secured by means of a lead tape which is moulded to the form in the following manner: One end is placed over the region of the internal ring (for example, we will say of the right side), from this point it crosses the front of the abdomen, around the left hip, to the centre of the back or beyond.

Having moulded this carefully to the form, it is slipped from the body and placed upon a sheet of paper of suitable size.

A pencil tracing of the inner surface of this is made, and the shape of the opposite side taken in the same manner—which, when added to the first, will give the outlines of the pelvis in a fairly accurate manner, as shown in the diagram exhibited.

Any spring that it is desirable to use, can be bent to conform to this line, making, of course, due allowance for pressure. If the spring is covered with leather or celluloid, it may be bent without any preparation. If covered with hard rubber, it must be thoroughly warmed by passing through the flame of a spirit-lamp or gas-jet, before such bending is done.

[1] Read before the Surgical Section of the New York Academy of Medicine, March 8, 1886.

In oblique inguinal hernia of small size I usually select a light spring, which shall cross the front of the abdomen, and around the hip opposite the hernia. I prefer a small convex pad, which shall press just below the internal ring; the object being to close the canal at its origin. It is a very common mistake, even for physicians, to place a truss directly over the external ring. Truss-sellers and instrument-makers always place it there, because there is where they see the swelling, and that is as far as their information extends.

A truss which has been constantly growing in favor with me is a modification of the Hood truss, which supports both sides, even though only one hernia exist. I have had these constructed in several different ways, as you will see on those patients whom I shall show you to-night.

The difference in construction relates more to the strength than to any change in principle. Where the additional expense to the patient is not an important consideration, I think it is always best to use a truss which shall protect both sides. It is quite certain that strong pressure upon one side tends to crowd the abdominal contents toward the other, which produces an unnatural strain upon that inguinal region.

I sometimes use the English pattern cross-body spring, with ball-and-socket pad, which I like very well. I prefer it, however, with a stationary pad, having found that, as a rule, so-called self-adjusting pads shift out of position easier than those that are fastened to the spring. The after-management of an ordinary case of inguinal hernia is, after having it under perfect control for two or three months, to reduce the pressure gradually as the case improves, getting the truss off entirely, if a complete recovery has taken place.

As a class, large scrotal hernias that are reducible are very badly treated. The so-called scrotal trusses of the instrument-makers are a striking illustration of the ignorance displayed in the treatment of these cases.

That they require a very strong truss is frequently true; but that they require a large pad because the hernia is large, is an absurdity.

I commonly select a truss known in the trade as the radical-cure truss, the peculiarity of which consists in the construction of the pad, which has a small, prominent, and hard centre, surrounded by a ring of softer material. This I use until the case is under control, and then exchange for either the Hood or some lighter pattern.

Owing to the shortening of the canal in these old and neglected cases, it is necessary at first that the pad should be placed immediately above the pubic bone, but after the hernia has been retained for a few months, the canal will resume its normal length to such an extent that the centre of pad-pressure may be raised an inch or more. One case briefly stated will suffice to illustrate this class:

A man, sixty-two years of age, was sent to me by the late Dr. Post, with a note saying that he considered the case beyond relief by mechanical means, but to do whatever I could for him, and, if unsuccessful, return him for an operation.

The protrusion was twenty-five inches in circumference, and hung down from the body ten inches. It was on the left side, and had existed for about eight years, without having received any attention. The man was almost wholly disabled for ordinary duties and compelled to abandon his work.

After some difficulty the mass was almost wholly reduced, but the most powerful spring would not retain it for a moment when on his feet, nor for any length of time when in the recumbent position. The man was put to bed for a week or ten days, and the hernia finally brought under control.

The patient is now here for examination. The truss at present worn is of the Hood pattern, which I have recently applied, as I found that he was developing another hernia on the opposite side.

The hernia slips down at times, even now; but there is very great improvement over his previous condition, and he has been enabled to return to his work.

There is one point in connection with this case which I wish to call attention to. When the case came under my care there was a portion of omentum which was not reducible. It was firmly adherent. This has to a great extent disappeared; but I think that those who examine the case will have no trouble in finding the small remaining portion. I call attention to this fact to show that omentum remaining in the scrotum will gradually disappear under pressure of a truss over its neck.

Large hernias should be supported at night as well as by day, but not by the same truss. I sometimes use the elastic truss for this purpose, but more frequently a cushioned, light spring truss. I also present for your examination a gentleman (sent to me by Dr. Bradshaw) who was disqualified for business pursuits by two extreme scrotal hernias. He had tried many things and been the victim of the rupture quacks. In his case the Hood truss had proven very successful. In ordinary examinations it is the custom of many surgeons to pronounce irreducible any hernia that cannot be returned to the abdominal cavity after the use of taxis for ten or fifteen minutes, and the patient is informed that in an operation lies his only hope of relief.

That relief can be afforded these cases, in many instances, without an operation, I have proven to my own satisfaction a number of times, by converting them into reducible hernias, which were controllable by means of a truss. I will cite one case for illustration, and the man is here for examination:

Dr. M. H. Williams sent to me, at the New York Polyclinic, a man about forty years of age, with a very large scrotal hernia, which had existed four years. A truss had never been worn, and not until recently had his hernia given him any trouble.

Of late, symptoms of strangulation had frequently occurred. The bowel contained in the protruding mass was easily reduced, but the greater bulk of the tumor, omentum, appeared firmly adherent, and resisted persistent efforts at reduction.

A truss was adjusted which made strong pressure over the neck of the tumor, and a systematic course of manipulation, which I always adopt in similar cases, was begun. The patient was instructed in making taxis, and was asked to resort to it every night and morning for from fifteen to twenty minutes, while in the recumbent position.

At the end of two weeks the tumor had softened considerably, and before the expiration of one month the patient came to me with his hernia completely reduced. He had worn a truss during the entire time. The case is here for examination. Also another similar one, which is undergoing the same treatment, wherein the hernia has not as yet been reduced, but improvement is already noticeable.

In this manner I have succeeded in reducing four hernias, and by continued pressure of a truss pad over the neck of the tumor I have seen the gradual improvement of several others.

Hernia complicated by a retained or undeveloped testicle is of far more frequent occurrence than generally supposed.

During the past two years I have met with not less than ten such cases, and their frequent mismanagement leads me to speak of them here.

In infancy the delayed descent of the testicle is not uncommonly mistaken for hernia.

Within the past two weeks an infant of six months was brought to my clinic with a truss over a testicle which had just escaped at the external ring. The tumor had been noticed, and the family physician had pronounced it hernia, and sent it to a well-known instrument-maker. The truss being worn was strong enough to retain a large hernia.

Had the use of this truss been continued the testicle would have been kept within the canal, and when the child began to walk a hernia would have developed.

A practising physician of this city came to me, eighteen months since, with left inguinal hernia and a partially developed testicle which could be carried into the canal, where it had been kept for years by the truss worn.

By means of a light truss with a small pad placed just below the internal ring the hernia was perfectly retained, and the testicle was allowed to come outside of the external ring.

I was called to Brooklyn to see a young man, aged twenty-two, supposed to be suffering from strangulated hernia, but found instead an inflamed testicle in the inguinal canal. He had been sent by his physician to a truss-maker, who had produced the orchitis by rude manipulation. No hernia existed, but both testicles were retained in the inguinal canals.

A light pressure over the internal ring will, in such a case, encourage the descent of the testicle and prevent any protrusion through the dilated canal.

A young man now present was sent to me by Dr. W. E. Forest on the 16th of last month, who presented the following condition :

A large scrotal hernia, the contents of which was principally bowel, but containing also from a half to one ounce of fluid.

The fluid as well as the bowel could be returned to the abdomen, leaving just below the external ring a small undeveloped testicle. The history of the case, as furnished me by Dr. Forest, is peculiar. The patient having been subject to attacks of colic, the doctor examined him for hernia. None existed, nor was the testicle outside of the external ring at that time.

Some months later he presented himself with the hernia as already described. The case presents the characteristics of congenital hernia.

The young man is now under treatment by the injection method.

In closing this somewhat disconnected paper, I desire to bring before you a method for which I expect, at a later date, to claim an important place in the list of means at our command for the palliative treatment of hernia.

I expect to make even broader claims for it, as my experience confirms me in the belief that in this method, combined with the skilful mechanical treatment of hernia, we have the means which will afford the greatest relief, and produce the largest number of cures attainable.

I refer to the injection of the extract of white-oak bark into the inguinal canal, in quantities of from five to ten minims, repeated at intervals of about two weeks, and this without confinement to bed, or detention from ordinary business.

The fluid used is after the well-known Heaton formula, and the injection is made into the canal outside the hernial sac.

The patient is first supplied with an accurately fitted truss, which shall retain the hernia as perfectly as possible ; after this has been worn for about one week the first injection is made, and is made in the following manner : With the patient in the recumbent posture, the end of the forefinger of the right hand is passed into the external ring by invaginating the scrotal tissues, the cord and sac being held to the outside of the finger. The forefinger of the left hand is now pressed firmly over the end of the finger that is in the ring, and as the latter is withdrawn, the former is pressed directly into the ring. The needle is passed at the end of the left forefinger directly into the canal, and the fluid gradually deposited. Where the subcutaneous tissues are thin, an ordinary strong hypodermic needle is used, but in cases with a thick deposit of adipose tissue covering the external ring, the hernial syringe described by me in THE MEDICAL RECORD of February 7, 1880, is employed.

Slight discomfort follows the injection, which usually continues for two or three days, and the parts are sensitive for a week afterward. The truss is worn constantly, even at night, if too much discomfort is not produced. As the injections are repeated the truss-pressure is reduced.

I make this preliminary report on this method merely to place it before the profession, that others who so desire may also use it. My first case was treated by this method two years since, and resulted in a complete cure after five injections. I have used it for the past year at the Polyclinic, and with results which warrant my bringing it before you.

I have now in course of preparation a paper on the "Treatment of Hernia by Injection," which will include full particulars respecting this method.

A CASE OF FATAL PURPURA HEMORRHAGICA.

By A. BRAYTON BALL, M.D.,

NEW YORK.

FOR the notes of the following case of fatal purpura hemorrhagica, I am indebted to Dr. S. W. Lambert, Senior Assistant Physician to the First Medical Division of Bellevue Hospital :

J. M——, aged thirty, United States, married, cook, was admitted to my service at Bellevue Hospital, February 6, 1886. Habits very intemperate, but says he has not been on a spree for six months. Within the past few years has had two attacks of acute inflammatory rheumatism. On January 19th he was attacked with pain and swelling in both ankles, but was not confined to bed. These symptoms improved after a few days, but he did not entirely recover the use of the joints. On February 2d his right arm became swollen from the elbow to the shoulder, and soon afterward the left arm was similarly affected, though to a less degree. He lost appetite and felt weak. Twenty-four hours before admission he was seized with a severe cough, with bloody expectoration, which still continues. He had a "chancre" several times, but no specific history can be obtained.

On admission, temperature, 102°; pulse, 124, full, regular. No cardiac murmur or other evidences of heart disease. Lungs normal, with the exception of a few bronchial râles. Liver dulness diminished in extent. Spleen normal in size. External lymphatic glands not enlarged. Urine contains ten per cent. of albumin, granular casts, and blood-cells. On the left side of the neck is a hard, brawny, tender, non-fluctuating swelling, two by four inches in size, which he states made its appearance five weeks ago, and has given him but little annoyance until within the last twenty-four hours, during which time it has nearly doubled in size ; the overlying skin is somewhat reddened, but not ecchymotic ; on exploratory puncture a little blood, but no pus, is obtained. Both upper arms are considerably swollen, and present reddish-yellow ecchymoses of the skin, with tenderness, especially in the region of the elbow-joints. The right hand is also swollen, and the wrist is tender, the skin in the neighborhood presenting some reddish-yellow discoloration. Petechial spots on skin of right eyelid. On the back, loins, and thighs are numerous raised ecchymotic patches, varying in size from that of a pea to that of a bean, together with a few vibices. The tip of the tongue presents an irregularly shaped subepithelial ecchymosis. No hemorragic inflammation or sponginess of the gums. No jaundice.

February 8th.—Hæmoptysis still continues, but is not excessive in amount. Tongue swollen, and of a dark-blue color. Over the hemorrhagic area the epithelium is removed, leaving a superficial ulcer. Subcutaneous hemorrhages on the calves and near the knees, with reddish-yellow discoloration of the skin in these places. Numerous fresh petechial spots are seen on the loins, thighs, and arms. These spots began as raised patches of the

size above mentioned, remaining white for from twelve to twenty-four hours, and then gradually becoming petechial. The temperature has ranged between 102° and 104° F. The albuminuria (ten per cent.) and slight hæmaturia are still present.

February 10th.—The hæmoptysis has ceased. Patient is more comfortable, with the exception of some pain in shoulders and left hand, which is swollen. A few fresh hemorrhagic spots have appeared, especially on left leg. Temperature slightly lower.

February 12th.—Most of the first crop of petechiæ have disappeared, leaving only a slight yellow stain. Fresh eruptions have occurred on loins and thighs. The scrotum is much swollen and of a dark-blue color. Complains slightly of pain in shoulders and elbows. Swelling in neck is somewhat smaller and less tender; no pus obtained on exploratory puncture. Tongue brown, but moist. Temperature, 104° at 1 P.M.; respiration, 48. Examination of heart negative; examination of lungs unsatisfactory. No abnormal physical signs except feeble respiratory sounds and some general impairment of resonance.

February 14th.—Pulse, 150; respiration, 50; temperature, 104°. Dulness and bronchial breathing over right upper lobe, most distinct in right axillary line. Expectoration mucous, not pneumonic. Tumor in neck is diminishing in size. Bullæ have formed on scrotum, which have ruptured and discharged a bloody fluid.

February 17th.—No fresh hemorrhages have been observed. Only a few petechial patches now remain on the skin, and these are of a lemon-yellow color. Appearance of scrotum unchanged. Expectoration profuse and lemon-colored. Pulse, 160, and weak; temperature, 103°. Patient rapidly sank and died at 1.45 P.M. No autopsy was allowed.

The absence of an autopsy in this case makes it difficult to say whether we had to deal with an uncomplicated case of purpura hemorrhagica or whether the hemorrhagic manifestations were due to some underlying condition other than changes in the walls of the blood-vessels. The marked prominence of the joint-symptoms, especially during the last two weeks of the illness, naturally suggests the inquiry whether the case was not, after all, one of acute articular rheumatism complicated with purpura hemorrhagica.

The occurrence of two previous attacks of acute rheumatism is certainly significant in this connection. The joint-symptoms in the present illness, although less intense than is usual in acute rheumatism, were certainly more marked than, and ran a different course from, the joint-symptoms noticed in so-called purpura rheumatica or peliosis rheumatica. In the latter affection the joint-affection precedes the hemorrhages by only a few days, is usually confined to the lower limbs, and subsides when the eruption makes its appearance. In this case the ankles were affected two weeks before any hemorrhagic manifestations.

On February 2d acute articular symptoms developed in both upper extremities, with considerable fever, and continued with but little change until death. Moreover, peliosis rheumatica, as differentiated by Schönlein and others from purpura hemorrhagica, is characterized by the presence of superficial, and the absence of internal, hemorrhages. Still, cases have been observed occasionally which began as a mild peliosis rheumatica preceded by joint-symptoms, and afterward developed into marked or even fatal purpura hemorrhagica with internal hemorrhages, and this fact has led many writers to adopt the view that there is no essential pathological distinction between the two affections. Whether in such cases the arthritic symptoms have ever assumed the prominence noticed in the present instance, I have been unable to ascertain.

Notwithstanding the previous rheumatic history of the patient, and the resemblance of the joint-symptoms in the present attack to those of acute articular rheumatism, there are good reasons, it seems to me, for believing that the arthritic affection was not wholly, if at all, of a rheumatic nature, but was connected with the general hemorrhagic process.

It is to be noted that the joint-lesions were confined to the upper extremities, at least during the last two weeks of the illness, and were situated in the immediate vicinity of extensive superficial and deep hemorrhages. This connection is probably more than a mere coincidence, and points to an explanation of the joint-symptoms similar to that accepted for the joint-symptoms of peliosis rheumatica, viz.: that the arthritic tenderness and swelling were due to hyperæmia and serous transudation or even hemorrhages into the cavities of the joints, these lesions being produced by the same structural changes in the walls of the vessels of the joints as those which underlie the hemorrhagic extravasations in other situations. Again, the development of acute articular symptoms coincided in point of time with the occurrence of extensive hemorrhages into the connective tissue of the adjacent parts.

On the supposition that the joint-symptoms were truly rheumatic, the question naturally arose whether the hemorrhages could be due to a malignant endocarditis which failed to reveal itself by physical signs on the part of the heart. Petechial eruptions have been observed in some cases of this affection, but I have been unable to find any mention of such wide-spread hemorrhages in this connection as were observed in this case; for instance, petechiæ on the left eyelid, hemorrhages into the tongue, scrotum, lungs, kidneys, and probably other internal organs, deep extravasations into the subcutaneous connective tissue of both arms, and numerous petechiæ and vibices on the back, abdomen, loins, and legs. The very multiplicity and severity of these lesions make it highly probable that they were not produced by hemorrhagic infarctions by emboli carried from the heart, but were occasioned by wide-spread tissue-changes in the walls of the blood-vessels.

A word in regard to the high temperature which was noticed in the case. Purpura hemorrhagica is usually an afebrile disease. In the febrile cases, in which the purpuric symptoms are not due to an underlying febrile process, the elevated temperature may be explained partly by absorption from the hemorrhagic foci, and partly by inflammatory irritation excited by these foci. That the febrile disturbance was somewhat more marked than usual in the present case is what might be expected from the great number and extent of the sources of infection and inflammatory irritation.

It may be added that the patient's occupation and habits were such as to predispose him to degeneration of his blood-vessels. The occupation of cook is unfavorable to a proper nutrition of the body. Cooks usually take but little exercise and have poor appetites. The patient's habits were, moreover, very intemperate, and had, most probably, already produced cirrhosis of his liver and kidneys.

The Berlin Treatment of Throat-Disorders.—In the topical treatment of both acute and chronic catarrhal laryngitis and pharyngitis the remedy which the Berlin physicians place before all others, nay, use almost to the exclusion of all others, is nitrate of silver in solutions varying from two to fifty per cent. Moreover, they use the spray almost not at all—instead, make applications with a brush or small sponge. Their theory is that their application is more exact, and touches nothing but the particular portion intended to be touched; but as a matter of fact, except in cases where some growth was to be removed or an application made to an ulcer, the forcible manner in which the brush is moved about in the larynx is almost as injurious as the original trouble. Moreover, their results in catarrhal affections are not as good as ours.—Correspondent of *The Medical Press of Western New York*.

Clinical Department.

HABITUAL ABORTION IN CONNECTION WITH DISEASE OF THE HEART AND KIDNEYS.

Dr. Frank H. Murdock, of Bradford, Pa., writes: On February 9, 1886, Mrs. K——, aged forty-one, came into my office complaining of great weakness, and shortness of breath on making any exertion. She menstruated at fifteen, and has always been regular. She married at twenty, and had six living children at term, all healthy. Then followed four premature births, the fœtus dying about the seventh month of pregnancy, and being expelled four weeks later. Next in order came a healthy living child at term, which was succeeded by five premature births of dead children at the eighth month of pregnancy, the last miscarriage occurring three months ago. Examination of the patient revealed a slight laceration of the cervix, a well-marked aortic systolic murmur, and the urine contained albumen, a quarter, and an abundance of granular and epithelial casts. There is no history of syphilis, and there is now no tenderness over the sternum or tibiæ, and no changes in the retinæ can be detected.

INVERSION OF THE UTERUS.

Dr. George E. Brickett, of Augusta, Me., reports a case of a woman who, on the third day after labor, had severe expulsive pains, and passed a quantity of blood-clots. From that time she continued to suffer from loss of more or less blood every day, was confined to her bed, became extremely emaciated and anæmic, and could not move without shortness of breath, faintness, and vomiting. When Dr. Brickett was called to see the patient, two years later, he found what on first sight seemed to be a polypus, but which a more careful examination showed was the inverted uterus. After a short course of tonic and stimulating treatment repeated attempts were made to reinvert the organ, but these failing, a spring ligature was placed around the base of the tumor, and the uterus dropped off on the tenth day. There was no hemorrhage after the application of the ligature, no severe pain, and no constitutional disturbance. The patient made an excellent recovery, and has enjoyed good health during the seven years that have elapsed since the operation.

A CASE OF IMPERFORATE HYMEN.

Dr. J. G. Knox, of Toomsuba, Miss., writes that he was called to see a young woman, twenty-two years of age, who was supposed to be suffering from gravel, having had difficulty in passing water, and, at the time of coming under observation, was suffering from retention of urine. She was stout, of good color, and seemingly in robust health, but had never menstruated. The abdomen was very large, but no signs of pregnancy were discoverable. A wedge-shaped tumor was found extending obliquely upward and backward from the posterior commissure of the labia to the roof of the vagina. The patient stated that this tumor had made its appearance suddenly while she was lifting a heavy tub of water. The os uteri could not be found after most careful search. A diagnosis of imperforate hymen, with retention of menstrual blood, was made, and the membrane was punctured with a trocar, which gave exit to nearly sixteen pints of a dark, thick, grumous fluid, which, however, had no disagreeable odor. The cavity was then washed out carefully with carbolized water, and the orifice in the hymen was enlarged. The membrane was one-eighth of an inch thick and very tough. The uterus was filled with menstrual blood, and was as large as it would normally be at term.

RUPTURE OF THE LIGAMENTUM PATELLÆ.

Dr. Samuel Thompson, of Toledo, Ia., reports the case of a man, twenty-six years of age, who fell from a wagon, tearing the ligamentum patellæ from its attachment to the tubercle of the tibia. He was supposed at the time to be suffering from a sprain, and was treated by weight extension and liniments. When first seen by Dr. Thompson, three weeks later, he was emaciated, nervous, and suffering great pain in the knee. The joint was flexed to an angle of 45°, the patella was dislocated upward for about an inch and a quarter, and there was a distinct depression just above the tubercle of the tibia. There was very little swelling about the joint, but tenderness and pain on the slightest motion, either active or passive. The patient was discouraged, and was losing flesh rapidly. Dr. Thompson encased the leg in a plaster-of-Paris bandage, pushing down the patella as far as possible and making firm pressure over the knee. The immediate result was an increase of pain, but this subsided in a few minutes, and there was thereafter no pain and great relief from the muscular spasm.

The patient soon commenced to improve in general health, and was out of bed in a week from the time of applying the plaster dressing. The dressing was left on four weeks, and was then removed; passive motion being ordered, to be kept up indefinitely. Dr. Thompson concludes: "Some of the mosaic doctors in this region think, or affect to believe, that the use of the plaster dressing in the case was not the proper treatment. I think it was, for it accomplished what I started out with, viz., to relieve the pain and get the patient out of bed."

A CONGENITAL DEFORMITY.

Dr. H. Hudon, of Fraserville, Canada, writes: On June 10th last I delivered Mrs. M——, at full term, of a male child. The peculiar moaning of the new-born attracted my attention. Upon examination I noticed that the eyes were very small and red. Both ears were entirely absent, their places being supplied by two small cartilaginous lumps. The arms were unusually long, and had no elbow articulations—only one long humerus. The thumbs were absent, and the remaining four fingers were very short. The legs were of the usual length, but were also deprived of the knee articulations. The whole surface of the body was covered with hair, especially on the forehead and face.

Rather Cheeky than Otherwise.—The palm for brazen assurance must certainly be awarded to a new firm of patent-medicine vendors who have taken to sending their circulars and sample bottles of their physic to physicians throughout the country. One of the pamphlets contains a somewhat startling picture of a gravestone. It is not, as might at first sight be supposed, a premium to be given to the consumers of the medicine; but is merely a design of a monument to be erected as a tribute of love and gratitude to the inventor of the sure cure by his patrons, and possibly also as a thank-offering from those who have tasted of the draught and still live. One of the many reasons given why the remedy should be always kept on hand is that it is economical, saving in most cases the expenses of a physician. This is an advantage, as it enables the mourners to pay the undertaker promptly.

A Sceptic.—A gentleman who evidently underrates the value of all previous anatomical study writes to *The St. Louis Medical and Surgical Journal* an account of a wonderful case of intestinal obstruction which he finally cured by passing a piece of rubber-tubing up into the rectum just as long as he could shove it in. He says he "passed nearly two yards of tubing into the resepticle," and excitedly exclaims, "What I want to know *is* there such a thing as the illiasecle valve?"

Progress of Medical Science.

TREATMENT OF CHOLERA BY ABDOMINAL COMPRESSION.—Dr. C. Bruckner writes in *Memorabilien*, xxxi., No. 8, to direct attention anew to a therapeutical measure employed by him successfully in the cholera epidemic of 1872. The excessive loss of fluids from the intestines and stomach causes an inspissation of the blood, in consequence of which the circulation is markedly impeded. The nutrition of the tissues, and especially of the intestinal nerves, already partially paralyzed by the contagium, is thus so seriously interfered with as to constitute in itself a special menace to life. The author was thus led to discontinue all medication, the blood stasis rendering absorption in most cases impossible, and sought to compress the abdomen by means of a cold sand-bag, weighing from nine to fifteen pounds, such as is sometimes used in uterine hemorrhage after parturition or abortion. By means of this combination of pressure and cold (ice was also given internally), he states that not only were the intestinal discharges controlled, but the circulation was improved. When the pulse showed that circulation was again active, the remedies deemed appropriate could be administered with every hope that they would act promptly. Dr. Brückner employed this method in twenty-five cases of cholera at different stages, and lost but three patients. His papers were published in the *Deutsche Klinik* for 1873 and 1874. He advises, as a more effective mode of producing compression, the application of an elastic band around the body; between this band and the abdomen are placed two metal plates which can be separated by means of a screw. In this way any desired amount of compression can be obtained, and at the same time the application of cold is facilitated by placing the ice-bag between the two plates. Professor Kashimura, of Japan (*Wiener Medizinische Presse*, No. 42, 1885), employs a somewhat similar principle, placing large ice-bags on the abdomen. But the degree of compression obtained is much less by this method than by that just detailed.

OTALGIA.—This is the title of a recent memoir by Dr. V. Grazzi. The author treats only of those forms of earache which are nervous in their origin, and not due to any inflammatory conditions. Nervous otalgia, he states, is due to an alteration in the sensory nerves distributed to the external, middle, or internal ear. Neuralgia of the pavilion is rare, and usually circumscribed; if the pain is seated in the anterior aspect the auriculo-temporal branch of the fifth nerve is affected; if on the posterior surface the superior cervical. Earache is often reflex in its origin, depending upon dental caries, ulcerations of the epiglottis, lesions of the larynx or pharynx, cancer of the upper portion of the œsophagus, etc. Malarial poisoning is also an occasional cause of otalgia. The author has several times seen it arise with the paroxysms of fever, and subside as these passed away. Rheumatism, hysteria, and sudden atmospheric changes may also occasion pain in the ear. The chief symptom is pain coming on suddenly, usually in the night, then subsiding and returning periodically. In neuralgia of the pavilion a light touch often aggravates the pain, while temporary relief is sometimes obtained by strong compression. The pain of otalgia is increased by passing from a warm to a cold atmosphere, and loud noises or words spoken close to the ear may induce a fresh attack. The auditory sense is sometimes blunted. The affection may last several days or weeks, and may become chronic, especially if the causal conditions remain unchanged. The best remedy, Dr. Grazzi states, at the beginning of an acute attack, is valerianate of quinine, with which may be combined iodide of potassium, as recommended by Politzer. In the chronic form, the best results have been obtained from the continued current; the positive pole is to be placed in the ear and the negative pole applied to the nucha. The induced current is contra-indicated. Pain caused by lesions of the middle ear may often be relieved by the insufflation through the Eustachian tube of the vapor of chloroform or turpentine.—*Revue Médicale*, February 6, 1886.

THE TREATMENT OF ACUTE PROSTATITIS BY HOT WATER INJECTIONS.—M. Paul Reclus speaks very highly of the value of hot rectal injections for the relief of the pain and turgescence of the prostate in acute inflammation of this gland. He uses water at a temperature of 130° F., and instructs the patient to retain the injection as long as possible. At the same time he applies wet compresses of the same temperature to the perineum. By this means he states the pain is almost immediately relieved, vesical tenesmus and dysuria disappear, the swelling diminishes, and a complete cure is obtained within a few days. He relates two cases, one the result of gonorrhœa, in a man thirty-one years of age, and the other in a man of fifty-five years, in whom an acute prostatitis supervened upon a chronic enlargement of the gland. In both cases the relief obtained by the use of hot injections and perineal compresses was almost instantaneous.—*Journal de Médecine*, January 15, 1886.

A WAY OF LIMITING THE MISCHIEF OF POLITZER'S METHOD TO A SINGLE EAR.—In unilateral aural affections the employment of Politzer's and other similar methods often causes injury to the healthy ear, the drum membrane of which, stretched violently outward, carries with it the chain of ossicles. And sometimes, when there is obstruction in one Eustachian tube, the full force of the inflation is expended upon the ear which requires no treatment. The practice of stopping the healthy ear with the finger is an ineffectual means of averting this inconvenience. At the third International Congress of Otology, Dr. Loewenberg exhibited an apparatus designed to correct this fault. The tube attached to the air-bag is divided into two, the end of one being placed in the nostril in the ordinary way, that of the other in the meatus of the sound ear. When the bag is compressed, the air-pressure tending to force outward the membrane of the tympanum is met by an opposing column of air from without, of equal force, so that between the two currents the equilibrium of the membrane is maintained.—*Lo Sperimentale*, January, 1886.

THE TREATMENT OF FEVER BY ELECTRICITY.—Professor E. De Renzi, having by chance observed a case of quartan fever cured by the application of electricity, instituted a series of experiments in this direction, and has formulated as a result of these observations the following conclusions: 1. Fevers of malarial origin resist the action of the electrical current much more than do those symptomatic of bronchitis, pulmonary phthisis, etc. 2. During the application of electricity the temperature remains elevated, or even rises a fraction of a degree; but soon after, at the most within an hour or two, a fall of several degrees occurs. 3. The best effect is obtained by holding a moist electrode in the hand while a metallic brush attached to the other pole is swept over the surface of the body. 4. Arterial pressure is increased during the application, the skin becomes reddened and often moistened with perspiration, and the pulse is increased in force. It is probable, therefore, that the antipyretic effect of electricity is due to the increased activity of the cutaneous capillary circulation, whereby caloric is more rapidly lost. —*Gazzetta Medica Italiana*, January 23, 1886.

SPASTIC SPINAL PARALYSIS.—Dr. Gaetano Zavena relates the case of two individuals of the same family—father and son—who were attacked nearly simultaneously with a peculiar paresis of the lower extremities, the symptoms being those of spastic spinal paralysis. No cause could be found for the trouble except that both men had been living for two years on an almost exclusive diet of French or kidney-beans. The author was led to suppose the existence of a nervous alteration due to the bean diet, similar in its nature to lathyrism.—*Raccoglitore Medico*, February 10, 1886.

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LIFE AS A PUTREFACTION.

THE conviction has been growing that the evil effects produced in the animal system by the action of micro-organisms result from certain chemical poisons developed during bacterial growth. It is very well known that there are always produced in the putrefaction of tissues certain toxic substances which are known as ptomaines. Some peculiar ptomaines, resulting from the activity of special bacteria, may, it is thought, give rise to a special disease. The symptoms of cholera, for example, are supposed by some to be due to those alkaloidal products of the growth of the cholera bacillus. It has long been suspected that certain putrefactive products were the cause of certain morbid symptoms, such, for example, as those of dyspepsia in disease of the stomach or of fever in gastro-intestinal catarrh.

The view, however, that in the natural and normal course of tissue activity there are any poisonous alkaloids developed must be considered somewhat novel. A French contemporary, which apparently has access to the sibyllic books, tells us that the principal medical event of this year is certainly the communication which M. A. Gauthier has made to the *Académie de Medecine* upon ptomaines and leucomaines, in which he announces the discovery that in normal vital action there is a continual manufacturing of poisons, which, if not eliminated, cause disease. The comment of Professor Peters is quoted: "Can the medical mind hesitate a moment between the parasitic doctrines, full of shadowy hypotheses, and this new doctrine, as luminous as it is precise, which explains the phenomena of normal and abnormal life by life itself in action?"

Has some one then opened the door to a New Pathology?

M. Gauthier tells us that he has found in the excretions of living animals, healthy as well as diseased, bodies of the nature of ptomaines. The alkaloids of the urine described by Liebreich and Pouchet belong to this class. Recently he has also discovered in the muscular juice five new alkaloids, "perfectly defined and crystallizable;" these latter have a more or less powerful action upon the nervous system, producing somnolence, fatigue, and even vomiting and purgation, having, in fact, an action similar to but milder than that of the cadaveric alkaloids. This group of substances is called leucomaines, from λεύκωμα, white of egg, and they are defined as alkaline bases appearing during life in the tissues and derived from the albuminous matter of the tissues.

To establish the fact that life is in part a kind of putrefactive process, Gauthier makes some calculations showing that part of the vital processes is "anaërobic," *i.e.*, takes place without the aid of oxygen. According to certain experiments of Pettenkofer and Voit, a dog weighing 33 kilos absorbs daily 477 grammes of oxygen in the form of air, and excretes 587 grammes, or an excess of oxygen averaging 110 grammes. This excess represents a breaking up of tissue and yielding up of its oxygen; it is not a combustion, like the larger part of vital processes, but a putrefaction, such as the micro-organisms produce, It is, therefore, assumed that one-fifth of tissue metabolism is "anaërobic," or putrefactive, and leucomaines are the result. We already know, says Gauthier, that our bodies are constantly developing and discharging such putrefactive products as ammonia, carbonic acid gas, sulphuretted and phosphuretted gases, indol, scalol, phenol, fatty acids, etc. We may be perfectly prepared to expect, therefore, that there should be putrefactive alkaloids, smaller in amount, more powerful and insidious in action, in the secretions, blood, muscles, and other tissues.

Many diseases may result from imperfect excretion of these leucomaines. Indeed, there would be a continual auto-infection from them if the skin, kidneys, bowels, and lungs did not act freely, and the oxygen of the blood, which is their great enemy, were not continually supplied to the tissues. Whether any specific diseases may result from the accumulation of certain leucomaines in the system remains to be determined. MM. Gauthier and Peters believe that here is a fruitful field for further research. They may be right, but we may remind our readers of the researches of Guareschi and Mosso, who showed what serious sources of error there are in experiments to determine the presence of ptomaines and leucomaines. They found residue having alkaloidal reactions in alcohol, ether, and chloroform, while in ninety-six pounds of human brains they found only a minute quantity of toxic alkaloid. Leucomaines, if they exist, therefore, are apparently only in extremely minute amount.

THE GERM OF TYPHOID FEVER.

MICRO-ORGANISMS were found in the blood of typhoid-fever patients more than twenty years ago, and experiments to determine their significance have been going on ever since. The results, until lately, have not been very fruitful. Previous to the careful studies of Gaffky very little real advance was made owing to the imperfection in technique. Gaffky made a series of pure cultures of the bacillus of typhoid, after the method of Koch. He found the bacilli in twenty-six out of twenty-eight. They were observed in the mesenteric glands, spleen, liver, kidneys, and swollen follicles. Pure cultures made upon potato and gelatine were inoculated into lower animals with negative results. Hence, although the typhoid bacilli were found only in that disease, Gaffky obtained no positive evidence of their pathogenetic function.

Subsequent experimenters have been more fortunate. In a recent monograph by E. Fraenkel and M. Simmond, some successful inoculation experiments are reported. Still later, Professor A. Fraenkel, in the *Centralblatt für*

klinische Medicin, March 6, 1886, contributes the results of his experience. He made pure cultures of the typhoid bacteria obtained from the spleens of four different cases. These cultures he injected into mice, rabbits, guinea-pigs, and doves, using from three to five minims of the gelatine culture-fluid. Of the sixteen mice, all died, and were found to have enlarged spleen and swollen Peyer's patches, while the characteristic bacilli were found in the blood. The inoculated doves were refractory, while of three rabbits only one died. The autopsy upon it was practically negative.

The guinea-pigs, however, which did so much for the scientific habilitation of the cholera bacillus were equally useful in the present issue. The virus was injected directly into the duodenum, as in the case of the cholera bacillus. The animals died in from five to seven days. On post-mortem examination, no peritonitis existed, but the spleen was found enlarged, Peyer's patches throughout the intestine were swollen, and one of them actually ulcerated. The mesenteric glands were also swollen. The characteristic bacilli were found in the intestinal wall and the spleen. Sometimes slight capillary hemorrhages in the bowel were noticed. Fourteen animals were experimented upon, of which seven gave positive results. Of these seven, five received the virus directly into the duodenum, while in two it was injected subcutaneously.

Fraenkel tried some experiments with mitigated virus, *i.e.*, virus enfeebled by growth at a high temperature. In six injection experiments in which the fluid was deposited in the duodenum the results were negative, showing that the bacilli can by culture be deprived of their potency.

The experiments of Fraenkel and those of E. Fraenkel and Simmonds furnish decided progress in the work of showing that the typhoid bacillus is the specific germ of typhoid fever.

THE CAUSE AND PROGNOSIS OF CEREBRAL APOPLEXY.

The unfortunate illness which has attacked Secretary Manning calls attention to some of the facts which the modern pathologist has developed, or is still studying, with regard to the subject of cerebral hemorrhage. One fact which the pathologist has not perhaps felt called on to investigate is the apparent increase, relatively and absolutely, of this trouble. In England and Wales, during the years 1850–54, the average annual death-rate from apoplexy per million inhabitants was 454.2, while in 1870–74 it was 523.8. During the same periods the ratio of deaths from brain diseases increased from 192.4 to 248.6.

In New York City the total deaths from apoplexy and hemiplegia in 1874–75 amounted to 1.35 per cent. of the total death-rate; in 1884 the percentage was 1.8. Even bearing in mind the fact that more persons reach the apoplectic age now than did thirty years ago, it still remains probable that apoplexies are on the increase.

Modern pathology has shown that the primary cause of cerebral hemorrhages is, in the great majority of cases, the bursting of miliary aneurisms which have developed on the cerebral vessels as the result of a local periarteritis. The most important supplemental cause to this is an increased arterial tension due to heart disease, plethora with corpulence, and disease of the kidneys with the arterial sclerosis often accompanying it. Charcot found hypertrophied heart in forty per cent. of cases of cerebral hemorrhage, and renal disease in 32½ per cent.

The cause of the miliary aneurisms is naturally the point that should most interest the physician, but here little progress has been made. We know in general that they develop almost solely in persons passed forty, while from fifty to seventy is the apoplectic age. As in five-sixths of the cases atheroma of the arteries is present, we may attribute the aneurisms to much the same cause as the atheroma, viz., degenerative changes natural to old age, chronic alcoholism, specific disease, and continual excesses and exposure of almost all kinds. They develop more often in men, and heredity, as shown by Hughlings-Jackson and Dieulafoy, undoubtedly plays its part.

It is still a matter of some doubt whether such a thing as the "apoplectic habit" exists. Most systematic writers of late years deny it, but it is very evident that many of these authorities either "speak by the book" or argue from a hospital experience among the poor, who do not suffer from corpulence. We are ourselves much inclined to side with Immermann, who places apoplexy among the prominent "complications and sequelæ" of corpulence, especially if with it there is plethora. A corpulent man who has passed the age of fifty is more likely, other things being equal, to have degenerated arteries and higher arterial tension than a spare man. He is in more danger of an intracranial hemorrhage.

Brain-workers are not by virtue of their work made liable to apoplexy. This is a disease of nutrition and of the blood-vessels; its causes are senility, exposure, and intemperate living in the broadest sense. Whatever puts off old age delays degenerative changes and lessens also the tendency to apoplexy.

The prognosis after an attack occurs relates to life and to health in the future, should life be preserved.

Quick onsets, quickly recovered from, are more favorable than those coming on slowly. When the attack comes on without loss of consciousness, as was the case, we are told, with Secretary Manning, the prognosis *quoad vitam* is very good. If loss of consciousness is profound, and lasts twenty-four or forty-eight hours, the outlook is most ominous. But one of the worst prognosticators of the future is the clinical thermometer. A progressive rise or a steady fall of temperature means death, while an absence of rise or fall of temperature is a most favorable sign. The extent of the paralysis, and aphasia, if that exists, gives a fair indication of the extent of the lesion, and this, in connection with a history of its progress during the first fortnight after the attack, will tell how much of mental or physical restoration can take place.

THE NEW HAVEN WATER-SUPPLY.

We have received from Professor Herbert E. Smith and Mr. William E. Lockwood, of the Medical School of Yale, some criticisms regarding the reports upon the water-supply of New Haven. These criticisms relate especially to the analyses of this supply made by Dr. Arthur J. Wolff, of Hartford, and published officially in the Report of the Connecticut State Board of Health.

Dr. Wolff's figures make the water of New Haven worse than it really is, according to Professor Smith and others. There is also a peculiar uniformity in the figures.

From three of the four sources of the water-supply Dr. Wolff's analyses give as follows: Total solids, 17.6 to 19.1 grains per million; chlorine, 7 grains per million; ammonia, free, .011 to .05 parts per million; ammonia, albuminoid, 0.100 to 0.341 parts per million.

In contradiction to these figures are those of Professor Smith and his assistant. These authorities make the total solids from 2.5 to 4.6 grains per gallon, while the chlorine does not reach above 4.79 parts per million, instead of 100 to 105.7, as given in the State Health Board's Report. Very similar results were obtained by Professor R. H. Chittenden, whose figures are quoted by Professor Smith, and who finds only one-sixth as much "total solids" as did Dr. Wolff. Samples of the same supply, as our correspondents believe, were examined at the same time by Dr. Wolff and Professor Smith with the following very different results:

	Total Solids.	Chlorine.	Ammonia. Free.	Albuminoid.
Dr. Wolff	305.	105.7	0.0173	0.276
Authors	59.9	4.8	0.034	0.108

THE SUCCESSFUL RESECTION OF FIVE FEET OF INTESTINE.

It is, we believe, only about four years since the gangrenous gut in strangulated hernia has been successfully resected by a primary enterorrhaphy. In 1884, Baum, of Danzig removed 137 ctm. by a primary operation, but the patient died. Koberle has successfully removed two metres of the intestine by a secondary operation.

Recently Professor Th. Kocher, of Bern (*Correspondenz Blatt*, March 1, 1886), reports a case in which he successfully resected 1 metre 60 ctm. of gangrenous intestine. As this, according to his statement, is the first time in which so large a portion of the intestine has been successfully removed in strangulated hernia with gangrene, the case deserves some notice.

The patient was a laborer, fifty-seven years of age, and for years had had a right-sided inguinal hernia of about the size of an egg. He was brought into the hospital while suffering from a strangulation of the gut that had lasted about twenty-four hours. An operation was deemed necessary, and upon cutting down into the sac the intestine was found plainly very œdematous and gangrenous. On account of the extensive gangrene it was decided to resect the intestine rather than leave it. This was accordingly done, under careful antiseptic precautions; thirty vessels in the mesentery had to be ligatured. The wound was closed and a drainage-tube inserted; the patient was fed mainly by the rectum for three days. The wound healed without any reaction or complication, and the patient was discharged, perfectly well, in eighteen days. He was seen again in the fall, and reported that he had never been better in his life.

Kocher makes a number of interesting comments upon this case. He explains the mechanism of the sudden strangulation by the extremely high pressure in the sac. This reached 67 ctm. of water, while the pressure in the mesenteric veins is only about 40 ctm. of water, hence stasis of the blood, œdema, and gangrene.

The question in this case arose as to whether there should be a resection, or whether the parts should be left to form an artificial anus. In Kocher's opinion the conditions forbade the latter plan. The statistics of Heimann (83 cases), gave for the operation for artificial anus a mortality of only five per cent., while the statistics of Guillard (44 cases), and Madelung (88 cases), make the mortality for intestinal resection about fifty per cent. Kocher, however, takes a much more gloomy view of the future of patients who are left with an artificial anus, and thinks that a great part of them die of malnutrition or some intercurrent disease of the bowel. Kocher, therefore, on these grounds, and on the ground of the greater safety of enterectomy under careful antisepsis, makes a plea for the more frequent application of this operation in cases of strangulated hernia with gangrene.

AN HONOR TO DR. SAYRE.

It has often been cited as an argument against the dignity of the Republic, that although we call ourselves Americans, we are in truth but a mongrel race, tracing our progenitors to the back stairs of every European nation. During the early stages of our development, and even at the present day, there is something of truth in the accusation; and yet there are many and mighty indications of occult sub-currents in our unique society tending ever to a higher and more homogeneous civilization. Naturally, in the process of welding men to the heart of the Republic, forces have been liberated which, up to a comparatively recent period, found expression in material creations of the most gigantic and unheard-of dimensions. Pending these struggles science and letters were necessarily neglected. But there has come a change upon us. To-day we have undoubtedly a literature which reflects to a certain extent the genius of the American mind; and in science we have opened pathways leading to ends so practical as to cover a positive industrial revolution. It is but natural that this reflection of our environment, this "spirit of the times," this Americanism should have found expression in medicine. We are not surprised, therefore, to find that there has grown up on this side of the Atlantic a medical literature, the most striking characteristic of which is its practicality. This characteristic of American medical writers seems now to be universally recognized in Europe. A notable instance of this is seen in a recent German translation of Dr. Lewis A. Sayre's "Lectures on Orthopædic Surgery." The translator, Dr. F. Dumont, of Berlin, draws, in the preface to his translation, especial attention to the practical attributes of the American mind. He instances this quality as the reason why they have succeeded so well in the domain of orthopædic surgery. As Dr. Dumont truly observes, the name of Sayre is too well known in Europe to require an excuse for the present translation. We heartily congratulate Dr. Sayre upon the well-deserved honor, which is alike a credit to himself and his countrymen.

A New Surgical Specialty.—*The Weekly Medical Review* announces that it will have a special department on Railway Surgery. We are told that the number of cases treated in the hospitals of the Missouri Pacific system alone, during one year, was over one hundred thousand, and that that system employs one hundred and forty-nine surgeons.

News of the Week.

Miami Medical College graduated a class of forty at its Commencement on March 11th.

The Medical College of Ohio held its sixty-sixth Annual Commencement on March 10th, and graduated a class of seventy-eight.

American Climatological Association.—The third annual meeting of this association will be held in Philadelphia, on Monday afternoon and on Tuesday morning and afternoon, May 10 and 11, 1886. Contributions have already been promised by Drs. Loomis, of New York; Garland and Bowditch, of Boston; Baker, of Lansing, Mich.; Pepper and Osler, of Philadelphia, and others.

The French Surgical Congress will hold its second meeting at Paris from October 18th, to October 21st. The subjects contained in the programme are: Nature, Pathogenesis, and Treatment of Tetanus; Nephrotomy and Nephrectomy; Orthopædic Resections; Surgical Operations in Irreducible Dislocations. Papers on other subjects cannot be read at the Congress unless the conclusions of the authors are forwarded to the secretary, Dr. S. Pozzi, 10 Place Vendôme, Paris, between July 1, and July 13, 1886. Papers that are not read will not be printed in the Transactions.

The Medical Society of the State of Tennessee holds its next annual meeting at Memphis, beginning April 6th.

The Kentucky State Medical Society holds its thirty-first annual session at Winchester, June 23, 24, and 25, 1886.

Such is Fame.—A Western medical journal with one stroke of the pen emasculates and crushes an esteemed townsman. It says that the new National Association of Physicians and Pathologists is to meet under the presidency "of one *Frances* Delafield."

The National Board of Health.—Efforts are now being made in Washington to restore to the National Board of Health those powers of which it has been stripped, and which when it had them made it a very efficient body. We all know that to accomplish much good from a sanitary point of view we must have concerted action; we must have organization, harmoniously working, all the way from the national down to the county or township or village Board of Health. Duties that properly belong to the National Board of Health have been, for some occult reason, relegated to another department of the Government, and it is the effort to restore this power to its proper place to which we refer. For this praiseworthy effort we bespeak the influence of our readers, and ask them to urge upon their Congressmen the importance and justice of the measure.

The Amount of Solids which should be present in milk in order to have it approach a normal standard is shown by the results derived from an examination into the milk product of Massachusetts, completed by the department of health of the State Board of Health, Lunacy, and Charity. The milk examined was selected from herds, individual cows, and from cows owned by public and private institutions, all the samples being of known purity, as the inspectors were compelled to witness the milking of the samples gathered. The average solids of all samples of milk obtained from private farms, from herds, and single cows, 426 in all, was 13.36. This amount may be compared with the average amount of solids from samples obtained from all sources, 601 animals, which was 13.26. These two statements represent the average quality of the milk produced by the 150,000 cows of Massachusetts.

What Chicago is Doing for the Profession.—Homœopathy seems to be thriving at the stronghold of the Old Code. In the last six weeks two regular colleges have graduated 243 students, while two homœopathic medical colleges graduated 167. There is another regular college to be heard from which generally graduates about forty, and an eclectic college which graduates about fifty. The total annual output of regulars, therefore, is about 285, and of irregulars about 215. Of the 641 eclectic and homœopathic graduates in 1884, over two-thirds (476) were graduated from Western and Southern colleges.

Delegates to the American Medical Association.—The rates given to the delegates to the American Medical Association, meeting May 4th, in St. Louis, have been fixed by the different railroad committees of the country at one and one-third fares for the round trip. Delegates must pay full fare coming, and will receive, on application, from the agent at the starting-point, a certificate which, when signed by the Chairman of the Local Committee of Arrangements, will entitle them to the reduced return rate.

Acute Coryza is a Neurosis, according to Dr. Lees, of London, and is best treated or cut short by the following method: From forty to sixty grains of bromide of potassium were given at once, the dose being repeated in six hours, and again, if necessary, six hours later; and twenty drops, equal to fifteen minims, of tincture of belladonna were also given every hour or every two hours, until the throat felt a little dry. Painting the nasal mucous membrane with a four per cent. cocaine solution gave great relief, and might even by itself suffice to arrest a cold.

The Importation of Rags.—The Local Government Board in London and the Board of Supervision of Scotland have extended the prohibition of the importation of rags from Spain until May 1st.

Fees for Medical Expert Testimony.—Dr. F. G. Groner, of Big Rapids, Mich., writes to the *Medical Age* that in the case of the People *vs.* Vanimmens a physician was called to testify on behalf of the defendant, and when asked for a professional opinion refused to answer until a fee for expert testimony was secured. The judge said he had no authority to secure the fee; the bill must go before the Board of Supervisors. Witness said he had had enough experience with that body to trust them no further. The judge said this question has never been decided in this State. "I can insist," he said, "on the witness answering, and if he then refuse I can fine him for contempt of court, and then let him fight it out with the Supreme Court. But after many years' study and

observation, I decide that a physician's knowledge is his stock in trade, his capital, and we have no more right to take it without extra compensation than we have to take provisions from a grocery without pay to feed the jury. The Court rules that the witness is not *compelled* to testify." The doctor at once stepped off the stand. The defence took exception to the ruling of the Court. Should a new trial be granted, this will be one of the points to be decided by the Supreme Court.

The Southern Medical College held its Annual Commencement at Atlanta on February 25th and graduated a class of thirty-four.

The Medical College of Indiana graduated a class of twenty-nine at its recent Annual Commencement.

The Central College of Physicians of Indianapolis graduated a class of twelve at its last Commencement.

Injuriousness of Natural Gas as a Fuel.—It is thought by some physicians in Pennsylvania, says *The Sanitary News*, that the use of natural gas as fuel is responsible for many cases of diseases of the respiratory organs. The manner in which it is burned in grates necessitates almost entire closing of these important means of ventilation, and the burning gas also vitiates the air of the room with products of combustion.

The Question of the Disinfecton of Rags has come up at Boston, owing to the protestation of the importers against the restrictions of the Health Board. The views of several experts to whom the matter was referred were expressed as follows: First, that the treatment of rags from non-infected ports is not necessary. Second, that from endemically infected ports rags (1) be disinfected to the satisfaction of the Board of Health before embarkation; or (2) disinfected externally in bulk at the port of entry, and also at the mills after breaking bales; or (3) disinfected after imbaling at the port of entry at the discretion of the Board of Health. Third, that from epidemically infected ports the importation of rags be prohibited. Some evidence was given to show that the superheated steam process did not in practice always raise the temperature to a point sufficient to kill the germs.

Creation of a Fund for the Encouragement of the Experimental Cure of Phthisis.—Professor Verneuil, of Paris, has started a fund for the purpose of enabling experimental studies in the treatment of tuberculosis to be carried on. M. Verneuil seems to think that it may be possible to prevent the development of phthisis after contamination by some inoculation method similar to that employed by Pasteur against rabies. The project of securing a fund is enthusiastically supported by the *Gazette Hebdomadaire* and by Dr. Landouzy in the *Revue de Medecine*. Phthisis alone killed sixty-five thousand five hundred and sixty-three persons in Paris during five years.

The Weekly Medical Review wisely discourages the somewhat factious spirit displayed in some quarters as regards the next meeting of the American Medical Association. It says: "The object of the Association is to advance medical science and formulate professional opinion in the United States. Its present most important duty is to provide for the coming of the Medical Congress. Is this object to be attained and this duty discharged by fomenting sectional strife?"

Another Death from Chloroform.—The intelligence reaches us that another death has occurred from chloroform at the outset of preparing an adult patient for a surgical operation. It is the old, old story, which has been repeated so often that it ceases to make any impression upon the stolid adorers of sulf-sufficiency. This time the "accident" occurred in the private hospital of a competent surgeon, in this city, who evidently has failed to see the handwriting upon the wall, so plain that it has been read by all except the indifferent and the stoical.

New York City Lunatic Asylum.—Dr. T. M. Franklin, Medical Superintendent of the New York City Lunatic Asylum, Blackwell's Island, has tendered his resignation, which has been accepted, to take effect on May 1st next.

Dr. James R. Leaming.—We learn that Dr. Leaming has resigned his Professorship of Medicine at the New York Polyclinic.

Obituary.

SAMUEL WARD FRANCIS, M.D.,

NEWPORT, R. I.

The death of Dr. Samuel W. Francis, of Newport, R. I., on March 24th, will cause the keenest sorrow and regret among his wide circle of friends. Dr. Francis had done much literary and scientific work during the twenty-five years of his professional life, but of late had confined his activity mainly to the sanitary and medical interests of Newport.

Dr. Francis was born in this city in 1835. His father, Dr. John W. Francis, was for years one of the prominent figures, socially and professionally, in the history of the metropolis. Having received a degree from Columbia College in 1857, Dr. Francis entered the University of New York, from which he was graduated as a physician in 1860. He distinguished himself while a student by taking the Mott prize medal for the best record of clinics at the University. The first two years of his professional life were passed here as physician in cases of diseases of the head and abdomen at the New York Dispensary in 1860 and 1861, and physician at the same place of diseases of the skin for the following year. While so engaged he wrote a medical essay on "Water," which commanded attention. He went to Newport in 1863. For twenty years or more he was identified with the various interests of that city. He was among the early advocates of sanitary reform, and materially aided in organizing the Sanitary Protection Association, which was the first step which led to the forming of a Board of Health. He was the originator of Newport's Natural History Society, and was interested in the medical society and in various charitable and benevolent organizations. He wrote several books, among them "Inside Out," "Biographical Sketches of Distinguished Living New York Surgeons," "Biographical Sketches of Distinguished Living New York Physicians," "Life and Death," "Curious Facts Concerning Man and Nature," and "Invention of Transparent Treatment." He was ingenious and devised many improvements in methods of treatment, patenting twelve inventions. The New York Academy of Medicine, the New York Historical Society, of which he was a life-member, and the Rhode Island Medical Association were among the organizations with which he was connected.

Reports of Societies.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, March 5, 1886.

BEVERLEY ROBINSON, M.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT presented an improved form of *galvano-cautery*, with different forms of points.

THE PRESIDENT also presented a patient who illustrated

REFLEX OCULAR SYMPTOMS IN NASAL DISEASE.

The young woman had been treated for an affection of the eyelids by Dr. Loring, who had also prescribed spectacles for her. At the same time she complained of more or less disturbance in the nasal passages, and on examination Dr. Robinson found a number of exceedingly sensitive areas, especially in the left nasal fossa, which corresponded to the eye most affected while she was under Dr. Loring's care. These areas he had touched twice with the galvano-cautery, employing the apparatus exhibited to the Society. The first application was made three weeks ago, the second about ten days ago, and the patient stated that she was almost completely relieved from both nasal and ocular symptoms.

AURAL HALLUCINATIONS.

DR. SAMUEL SEXTON brought before the Society a case of aural hallucinations which he believed would be of interest, since the relations of *tinnitus aurium* to mental disease was liable to be overlooked, and it was probable that in some cases, where the cause of these fancied phenomena could be explained, it would allay nervous excitement. The patient is an Irishman forty years of age, who states that he has long been of intemperate habits. He has been subject to "dry throat" in the morning, to frequent headaches, and is nervous and "shaky." He stated, when he came to the New York Eye and Ear Infirmary in December, 1885, that seven months previously, after a severe "spree," he had delirium tremens, and on recovery experienced annoying sounds in the left ear; persons either seemed to be "talking to him constantly" or there were sounds of voices in this ear. At first he thought the voices heard were those of persons following him about "for the sake of a joke," but of late he believes they may be due to some disease of the ear. As regards the tinnitus, he describes a "beating" sound in the ear synchronous with the cardiac pulsation, and a "buzzing." Sometimes there is low whistling. There has been no annoying disturbance in the left ear. The utterances heard are always profane or otherwise bad, and on "giving himself up" to the delusion he believes himself to be the subject of abusive language. When he himself is not directly the subject of invectives, he is still cognizant of a colloquy between two individuals on some other topic. He cannot escape from these unbidden defamers at will, but sometimes the noises in his head are less pronounced, and then the hallucinations are also less marked. At such times he is less worried, and feels as though he "could control himself" and throw the delusions off. There are times, however, when the voices do not din so unceasingly in the ear, but then he finds himself annoyed by knocks upon his door and steps in the hall; these sometimes arouse him up out of a semi-unconscious state with a shock. He often fancies "a party in the house is playing a game on him" with an electric battery; he can hear it "click," and "it nearly shakes him out of bed, and plays on his head like a hose." Then he is annoyed by speaking and whistling through a gas-pipe or tube coming up through the floor. Sometimes he "feels a kind of dizziness through the head." He has been to a police station about this trouble. He says the "voices" always remain outside the door. One of the "voices" is a heavy "bass" voice, the other is "high and squeaky," and may be a woman's or a boy's; they are comparatively as a "tin whistle to a cornet."

The patient's attention having dwelt on this matter, the phenomena have greatly increased in importance; he now hears the bass voice in left ear, the tenor in the right one, whereas at first every sound seemed to enter the left ear.

As regards the aural condition of this patient, I may say that there is no history of any previous disease of the organ. Syphilis is denied. He has chronic catarrhal inflammation of the upper air-tract (hypertrophic). The drumheads are lustreless and somewhat atrophied, the anterior segment of both is dry and wrinkled. The left membrana flaccida is hyperæmic, and has a fleshy appearance. There are other evidences of loss of tension in the transmitting mechanism—thus there is general relaxation of the exterior parts of the ear, the skin in front of the tragus on both sides is notably relaxed, as is shown by several wrinkles. Inflation of the drum with the air-bag has caused the tinnitus to cease for ten or fifteen minutes; closure of the meatus seems to muffle the sounds heard. His own voice never sounds autophonously. Hearing is defective, ordinary voice only being heard distinctly at a distance of ten feet.

I advised the patient to find occupation, and suggested that when not at work he might find relief by keeping in the noise on the streets, etc., as much as possible. He found, however, that the noise of trucks, horse-cars, and other heavy vehicles made him worse, since the loudness of the voices heard was also increased. He found that he was much better after remaining a few days in the country.

Dr. Allan McLane Hamilton, who saw the patient, considers that he has both insane delusions and hallucinations, due to some form of chronic cerebral disease arising from alcoholism, and that he is liable to become a dangerous lunatic. He found the tongue to point slightly to one side, and the pupils to be unequal. It was thought that the ophthalmoscope might throw more light on the case than could be gained from rational symptoms, and Dr. Loring kindly made an examination. Although nothing decisive was found in the fundus, yet he thought the vessels of the left eye had a suspicious look, the veins being very large in some places and considerably tortuous; these conditions might suggest commencing trouble from tumor of the brain or gummata.

Interest attaches to this case, not from disturbance of audition from central causation, but on account of the effect of the *tinnitus aurium* upon a mind already predisposed to insane hallucinations. At first the hallucinations were notably unilateral, seemingly for the reason of greater defectiveness in the left ear. Subsequently, however, his attention was frequently directed to the probable bilateral source of the voices, and then it was that he began to fancy the sounds entered both ears.

I think there can scarcely be a doubt, if I may judge from a very considerable experience among these cases, that sounds in the head of roaring, beating or pulsating, buzzing, whistling, and the like, which are so often propagated from defective ears in subjects of both chronic catarrh and acute aural disease, may give rise to veritable insane delusions in neuropathic subjects. The changes in the transmitting mechanism of the middle ear in these subjects usually give rise to autophonia, and when these phenomena of audition occur in alcoholic or senile persons, the necessary factor in finally producing serious mental trouble may be found.

In this patient the ear disease is well marked; and it would seem that since the drumhead may present recognizable changes in many instances, perhaps in a very considerable number of mentally insane persons, a knowledge of the condition of these parts might be available in forming a diagnosis of the case as well as aiding in the treatment.

SARCOMA OF BRAIN.

DR. KINNICUTT exhibited a sarcoma of the brain, occurring in a boy twelve years of age, with the following history: Four other children of the same parents died

of "water on the brain." Until three weeks before admission to the hospital, February 22, 1886, the patient was reported to have been in excellent health. At this time he began to complain of pains in the calves of his legs. There were no other symptoms until February 17th, when patient complained of not seeing well. For two days before admission there had been occasional vomiting. The patient was able to walk a very considerable distance to hospital. On admission, there was bilateral ptosis; the pupils were widely dilated, and wholly irresponsive to bright light. Complete amblyopia existed. There was no more than a slight uncertainty in the patient's gait. The respirations were regular in rhythm and normal in frequency. The pulse was 78 and regular. Ophthalmoscopic examination showed well-marked atrophy of the optic nerve of the right eye, and slight tortuosity of the vessels. There was commencing swelling of the left optic nerve. There were absolutely no other symptoms than those described above, until twenty-four hours before death, when the respirations suddenly became very rapid and irregular, the pulse very frequent (160); œdema of the lungs supervened, and death ensued. On examination after death a tumor (sarcoma) was found, completely filling the fourth ventricle, encroaching (infiltrating) upon the substance of the cerebellum, and firmly adherent to the pons and medulla. Two small growths of a similar nature were found immediately posterior and adherent to the optic commissure, and also adherent to the optic tract upon either side. The tumor filling the ventricle had not been dissected from its attachments, in order that it might be shown *in situ*.

The case was of interest, as presenting few symptoms until immediately before death, in the presence of a lesion occupying the site indicated above.

Dr. Kinnicutt also read a paper (see page 381) on

THE USE OF THE ŒSOPHAGEAL TUBE IN DILATATION OF THE STOMACH FROM OBSTRUCTION OF THE PYLORUS.

Dr. W. H. Draper asked Dr. Kinnicutt if he had had any experience in the use of the hydrochloric-acid test in the determination of the presence of cancer of the stomach.

Dr. Kinnicutt said that the absence of hydrochloric acid in the gastric juices was exceedingly difficult to determine, and he had been informed that it was a delicate and a misleading process.

The President referred to cases of dilatation of the stomach without obstruction at the pylorus, mentioning especially the fact that, on the second day in one case, while passing the tube, quite a little hemorrhage followed, which probably came from the stomach. This circumstance made him doubt whether the patient was not suffering from ulcer of the stomach; but no recurrence of the hemorrhage took place, and the patient was almost entirely relieved of his indigestion.

Dr. Kinnicutt thought it not very unfrequent to have a slight amount of hemorrhage follow the first and second introduction of the tube, and he had regarded it as coming from the œsophagus rather than from the stomach. It had become his practice to use lavage in all cases of cancer of the stomach, nor did he regard ulcer of the stomach a contra-indication to the use of the tube. Certainly benefit could be gotten from its use, at least as regards temporary relief from distressing symptoms.

Of course, only the soft, flexible rubber tube and the siphon process should be used in these cases, and the tube should never be introduced except by the physician; recent hemorrhages would contra-indicate its use.

The President said that he would be loth to use the tube in a case of ulcer of the stomach.

Dr. Kinnicutt said that no case of perforation of an ulcer by the stomach-tube had been reported. The tube, when introduced, naturally seeks the most dependent portion of the stomach, and this was not the usual site of gastric ulcer. In his experience, retching and vomiting most often occurred with the passage of the tube into the œsophagus; by thoroughly spraying the pharynx with a solution of cocaine, he had found that in many cases this symptom might be avoided.

The President had noticed, however, that the passage of the tube frequently produced a great deal of retching, which he thought not unlikely to bring the ulcer in contact with its extremity.

Dr. A. B. Ball then read a paper (see p. 388) in which he reported a case of

PURPURA HEMORRHAGICA.

Dr. C. L. Dana said the patient whose case Dr. Ball had reported, entered Bellevue Hospital, and was in his wards for two days. During that time he made the diagnosis of purpura rheumatica. On the third day the house physician thought the patient was getting up erysipelas, and he was accordingly sent to the pavilion and put under Dr. Ball's care. Dr. Dana still thought the case was an atypical one of purpura hemorrhagica, and believed that there was certainly some other element in it.

Dr. Ball admitted that the case was not perfectly clear; certainly it presented unusual symptoms, and therefore it was unusually interesting; but he was unable to see what possible connection rheumatism could have with such hemorrhages except through the medium of ulcerative endocarditis, and he had been unable to find any reference at all to such a condition of things occurring in ulcerative endocarditis.

Dr. Dana said that when the patient entered the hospital there was considerable elevation of temperature, which could not be attributed to purpura hemorrhagica.

Dr. Ball thought Dr. Dana was mistaken in saying that purpura hemorrhagica is not a febrile disease; perhaps it is not in most cases, but there are many cases in which it is distinctly febrile.

Dr. Dana said that it might be febrile in the latter part of its course, but not in the earlier manifestations of the disease.

Dr. Draper thought that purpura hemorrhagica should be regarded as dependent on a variety of causes. Hemorrhagic purpura might occur in cases of cirrhotic and fatty liver; it occurs in certain essential fevers; it is not uncommon in cerebro-spinal meningitis; it is seen in a certain number of cases of malignant scarlet fever. The history which Dr. Ball had read seemed to him to be fairly that of a case of so-called rheumatic purpura. He had seen a number of these cases within the past winter. He saw one young lady who gave the history of rheumatism, became very anæmic, and afterward had hemorrhages from the kidneys, and then from the mucous membranes, without very marked but very distinct joint symptoms, who finally died from uncontrollable epistaxis. He had another case, that of a gentleman who for many years had attacks of gout, several of them accompanied by cutaneous hemorrhages, purpuric in character. This patient had cirrhotic and fatty liver, and he ultimately died with extensive purpura hemorrhagica, with connective tissue changes similar to those described by Dr. Ball.

He believed that various diseases brought about the condition of the blood-vessels which gave rise to these symptoms. Dr. Ball's case clearly began as one of rheumatic fever, and terminated, he thought, as one of rheumatic purpura.

Dr. Ball asked what connection there was between the rheumatic fever and the hemorrhages.

Dr. Draper said he did not know. We know that there is no other disease which so rapidly produces extreme anæmia as rheumatic fever, and this anæmia may be so extreme as to bring about such results as exist in the final stages of pernicious anæmia.

Dr. Ball said that Dr. Draper certainly used the term purpura rheumatica in a different sense from that in which it is ordinarily used by writers; for, purpura rheumatica is not a rheumatic affection at all. The joint affection is supposed to have an entirely different explanation.

Dr. Draper said he was aware that different explanations had been given, but he thought that he had seen the disease occur under circumstances when it was impossible to regard the joint lesions other than gouty or rheumatic, because they occurred in gouty and rheumatic persons, and with all the characteristic features.

Dr. E. Darwin Hudson, Jr., remarked as to the question whether rheumatism was a definite disease due to an acid condition, or whether it was a condition of malnutrition of the blood, that it was not easy to see how some cases would develop rheumatism, and others the more advanced changes leading to purpura. He then referred to a case which corresponded to the descriptions given of *peliosis rheumatica;* at the same time it was undoubtedly a well-defined case of subacute rheumatism. It occurred with recurrences at an interval of one year, and also in each instance it was preceded by a well-defined attack of tonsillitis. The patient was an American lady twenty-three years of age, who had an attack of acute tonsillitis about one year ago, for which she was treated by Drs. Gage and Harrison. One tonsil suppurated, and following that she developed the usual symptoms of rheumatic arthritis, with a temperature of 102° to 103° F., for several days, and then there developed the characteristic patches, which at first were red and afterward of a more livid hue, and finally, the cuticle over them became slightly raised, and the whole patch had a leathery, resisting feel. She was treated with acetate of potash and tonics, and recovered, and was entirely well for about one year. In last November she had twenty-four patches of this kind affecting the lower extremities, after having been taken with a chill, general soreness and inflamed fauces, and subsequently developed well-defined symptoms of subacute rheumatism, affecting the wrist, the elbows, knees, and ankles. During the course of this sickness the characteristic spots appeared, varying up to the size of the thumb-nail, perceptibly elevated and resisting. She was treated with salicylic acid and bicarbonate of potassium, and was well in about two weeks. The question arose whether these attacks were septic in each instance, or whether they were rheumatic.

The Society then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 10, 1886.

T. Mitchell Prudden, M.D., Vice-President, in the Chair.

Dr. Prudden presented, in behalf of a candidate, a series of microscopic sections of the spinal cord from locomotor ataxia, which illustrated

WEIGERT'S STAINING FOR THE NERVOUS SYSTEM.

Dr. W. M. Carpenter presented, for Dr. Heineman, in behalf of a candidate, a specimen of

CEREBRAL TUMOR.

It was referred to the Committee on Microscopy. [Subsequent examination showed that it was a small round-celled sarcoma.]

Dr. Eugene Hodenpyl presented specimens, with microscopic sections, with the following history:

FAULTY DEVELOPMENT OF THE PENIS AND TESTICLES.

The patient from whom these specimens were removed was a man twenty-eight years of age. He was of about the usual height and size, and had had phthisis for several years. He died after being in the hospital a few weeks. At the autopsy both lungs presented the lesions of chronic phthisis. There was a large cavity in the apex of the left lung, and several smaller ones scattered about. The other organs were normal. The penis was unusually small, and there was marked phimosis. The right testicle was lobulated, and about the size of a small almond. The epididymis was present, though very small. There was no trace of the left testicle, although a careful search was made for it, both in the scrotum and abdomen. The tunica vaginalis was present on both sides; also the spermatic cords, which were considerably atrophied. The cord on the right side terminated in the rudimentary testicle; the left one, after leaving the internal abdominal ring, gradually grew smaller, and finally became lost. The microscopic sections of both cords showed all the elements of a normal cord. The normal layers in the wall of the vas deferens could be made out in both sections. There was also a section of the testicle which contained a small amount of glandular tissue, composed of tubules lined by cuboidal epithelia, but the greater part of the mass was composed of fibrous tissue.

Dr. Prudden remarked that the specimens were interesting because the atrophied testicle was very apt to remain within the abdominal cavity.

Dr. H. J. Boldt presented

AN OVARIAN CYST,

removed by operation from J. N——, married, forty-one years of age, the mother of two children, the youngest born five years ago. Her menstruation began at the age of sixteen. While single, and until the birth of the first child (eighteen years ago), she suffered from dysmenorrhœa. Had always menstruated regularly, the flow lasting five to six days, except when pregnant or nursing. She had enjoyed good health up to about six months ago, when she noticed a heavy sensation in the pelvis, and some lumbar pains, which gradually increased in severity. When she presented herself to Dr. Boldt, February 3, 1886, she had, in addition to the above, pain in the right inguinal region, radiating down the same thigh; frequent micturition, being compelled to urinate every fifteen to twenty minutes; cardialgia; darting pain in the præcordial region; occasionally nausea; menorrhagia, the flow now lasting ten to fourteen days, and dysmenorrhœa; constipation, and when the bowels did move, it caused much pain and tenesmus. Bimanual examination showed the uterus to be remarkably anteflexed and somewhat to the left of the median line. The cul-de-sac of Douglas was filled with a tense mass, fluctuating slightly, and apparently more on the right side. In size the mass seemed to be about as large as a large orange. The diagnosis rested between a hydrosalpinx and an ovarian cyst, which was low down and not yet large enough to rise out of the pelvis.

Operation was advised, and performed on the following Sunday at her home.

On opening the abdomen the tumor, which proved to be a simple ovarian cyst, was found to occupy a position to the right and behind the uterus. No adhesions had yet formed; consequently its removal was quite easy. The other ovary seeming healthy, was left *in situ*. Recovery was rapid, the patient being out of bed on the ninth day and sitting in an easy-chair, which was more remarkable as the surroundings were anything but good. The temperature kept normal throughout. It is now a little over one month since the operation, and the patient has made a complete recovery, all her distressing symptoms having entirely disappeared.

Dr. Boldt said that the specimen was interesting, especially with reference to the age of the patient, the disturbances of menstruation, particularly the dysmenorrhœa, and as an illustration of the severity of the symptoms which may be produced by so small a growth.

It was one of six successful ovariotomies out of eight cases in patients operated upon in tenement-houses. The case also illustrated the advantage of operating early, before the formation of adhesions.

Dr. Robert Newman presented a portion of the genito-urinary apparatus which illustrated

CYSTITIS WITH HYPERTROPHY OF THE PROSTATE—PYELONEPHRITIS—[illegible]

The patient came under observation in November, 1885. M. T. P——, sixty-seven years of age, com-

plained of pain in the bladder and difficulty of micturition. The urine was cloudy, ropy, and had a fetid odor. He had been ailing for two years in this manner, without asking medical advice. The patient has never been sick, was accustomed to all kinds of hardship, and by predilection slept upon the floor, scarcely being in bed during the last twelve years, although he had about fifty beds in his house. He was obliged to seek medical advice on account of the pain in his bladder and almost impossibility of voiding his urine, and Dr. De La Vergne, of Brooklyn, used the catheter several times; but as it was almost impossible to introduce any instrument, he returned the patient to Dr. Newman for treatment.

December 1st.—Examination: Prostate is much enlarged, encroaching both on bladder and rectum, and so sensitive that digital examination cannot be endured. The pressure makes the prostatic urethral canal tortuous in its course, displacing the urethra. The enlarged prostate fills up the neck of the bladder, being an obstacle to the introduction of a catheter, as well as the flow of urine, thereby causing retention. The bladder is full of finger-thick, ropy masses of phosphates, pus, mucus, blood, and fibrin. Spasm of the bladder caused pain and completed the obstruction. Ordered rectal suppositories of extract of belladonna.

December 3d.—With great difficulty a guide was introduced, over which a tunnelled catheter, No. 9, French scale, passed into the bladder. The instrument was obstructed by pus, blood, and mucus; but by suction and washing out bladder with warm water considerable urine was withdrawn, so that he could void urine again in a small stream, or by dribbling away.

December 8th.—Catheter No. 18 passed with difficulty.

December 12th.—Catheter No. 23 passed easier. Bladder was washed out without causing any hemorrhage.

December 19th.—Catheter No. 23 passed very easily. There is marked improvement. Extract of colocynth is added to the suppositories to relieve constipation, and belladonna given in the medicine to allay pain.

December 23d.—The colocynth added to the suppositories acted well by keeping the bowels normal. Catheter No. 23, French, passed into the bladder easier than ever. Bladder was washed out with a solution of sulphocarbolate of zinc. There is marked improvement, and the patient passed water voluntarily.

January 6, 1886.—The treatment has been interrupted by the sickness and death of patient's wife; thereby patient's condition had become worse. Nevertheless, catheter could be introduced and bladder washed out.

January 8th, 12th, 15th.—On each occasion bladder was washed out by a double canula catheter, No. 23, which passed into the bladder easily, while Mercer's invaginated catheter failed. Patient feels better; voids urine voluntarily, and is improved in every way.

January 16th.—Patient is worse, having neglected himself. During the cold spell he remained in a cold room without a fire, sitting up without being in a bed. He is very feeble, the prostate so congested that no catheter could be introduced.

January 17th.—Dr. Newman visited him in Brooklyn. Patient was weak. After some efforts patient was relieved; took milk-punch, and was left in good spirits at 5 o'clock P.M. At 10 o'clock a sudden collapse took place. Dr. De la Vergne was called, and found patient becoming comatose, evidently suffering from the effects of uræmia. He was sinking fast, and died comatose at 2 o'clock in the morning, January 18th. Autopsy was held on January 19th, thirty hours after death.

The kidneys were found entirely disorganized, of an amyloid appearance; the pelvis was dilated and enlarged to about three times the normal size, and filled with pus. It is evident that the kidneys could not perform their functions, and that uræmia was the cause of death. The ureters were also very much dilated and filled with pus. The bladder was enlarged and thickened, but not to such a degree that the cystitis could have been a cause of death. On the contrary, the mucous lining shows that treatment has improved the condition of the bladder, so that the mucous membrane looks now nearly healthy. The prostate gland is much enlarged, and one part of the third lobe can be seen to obstruct the passage of the urine at the neck of the bladder by tilting over just into the opening of the urethra into the bladder. This state shows plainly why retention occurs, and when these parts are irritable and congested it makes catheterism almost impossible. All the other organs were normal.

Dr. H. Marion Sims presented a small

FIBROID OF THE OVARY

removed from a patient, thirty-four years of age, who had suffered for a number of years with profuse menorrhagia, menstruation occurring regularly and lasting nearly three weeks. It was evident that she had a fibroid of the uterus, and to arrest its growth Dr. Sims determined to remove the ovaries. On opening the abdomen he found a fibroid tumor, about four times the size of the normal uterus, attached to one side of that organ, and, with the ovary on the right side, he removed the small fibroid presented, which was interesting on account of its rarity of situation.

Dr. Sims also presented several specimens of what, for lack of more positive knowledge, he called

ABDOMINAL NEUROMATA,

removed by operation from just beneath the skin of the abdomen of a woman who had always been healthy, was married at the age of seventeen, immediately began to suffer from extreme vaginismus, which was relieved completely by removal of the hymen. Her nervous symptoms disappeared and she remained well for three or four months, when she became pregnant, and in the second month began to complain of severe pain in the region of the left ovary, which increased in severity as pregnancy advanced, and in the sixth month she began to have the most violent hystero-epileptic convulsions, occurring from once or twice a day to one every four or five days. The only relief afforded was from the inhalation of nitrite of amyl. Finally the child was born in July last, but instead of relief coming, the pain increased in severity, and then Dr. Sims found that the left ovary was considerably enlarged and cystic, as was also the right ovary somewhat. With Dr. C. C. Lee in consultation, it was determined to remove the left ovary, which was done, Dr. Lee assisting, and it was found to be about three times the normal size and filled with cysts; the right ovary, being diseased, was also removed. The patient recovered from the operation, the convulsions and pain in the head ceased, and it was thought that all her trouble had been overcome. But about two weeks afterward she began to complain of violent pains in places over the abdomen, about the size of a silver ten-cent piece; getting better in one place and appearing at another; and, finally, there were so many of them that Dr. Sims injected cocaine, and made an incision into the worst one of these painful spots, and removed four little knot-like bodies, about the size of bird-shot and small peas. The patient recovered from this operation, and had no more pain whatever up to about six weeks ago, when she was suddenly attacked with abdominal pain which presented the features of peritonitis, and she was treated for peritonitis. The pain gradually diminished in severity, became more localized, and finally centred in one spot on the right side of the abdomen, where Dr. Sims found another of these little button-like masses, which he incised, and removed a nest of these peculiar shot-like bodies. The pain ceased at once, and the patient recovered from the operation promptly.

The specimens were referred to the Committee on Microscopy.

Dr. Putnam-Jacobi presented specimens which illustrated

PULMONARY CONSOLIDATION — ENLARGED BRONCHIAL GLANDS—PRESSURE UPON ONE OF THE RECURRENT LARYNGEAL NERVES—HEART-CLOT.

They were removed from the body of a German child, three and a half years of age, whom she saw two days before its death, when she learned that it had suffered three months from pertussis, and that during the last six weeks the health of the child had manifestly declined. Three weeks before death, when the child was brought to the dispensary, where Dr. Daniel saw it, the parents said that it could not walk ; but on examination it was evident that the inability to walk was due to general weakness rather than to any definite cause. Two days before death there were extensive bronchial râles, with evidence of pulmonary consolidation. There was present, however, almost complete aphonia. There was an area of distinct dulness on percussion over the upper lobe of the left lung, with absence of vesicular murmur, and with remote bronchial breathing. So far as could be ascertained there had been no fever. On account of the absence of fever she interpreted the physical signs as meaning atelectasis rather than pneumonia. There was no evidence, on percussion, of enlargement of the glands at the root of the lung, although there was a certain amount of lividity about the face that would lead one to suspect pressure upon the right jugular vein. The apparent condition of the lung did not explain the aphonia. No evidence could be obtained to warrant the conclusion that the child had at any time had diphtheria. The child died suddenly.

Autopsy revealed in the upper lobe of the left lung an abscess in the midst of caseous pneumonia, with other patches of ordinary broncho-pneumonia, and in the lower lobe atelectasis. There was nothing of special interest in the right lung. All the glands at the root of the lung were enormously enlarged and cheesy. Where the inferior left recurrent nerve curves around and crosses the aorta, an enlarged gland has pressed upon it, and thus the aphonia was explained. In this respect, therefore, the case was analogous to Parrot's, in which the diagnosis of aneurism at this point was made from the presence of aphonia and unilateral paralysis of the vocal cord.

The probable order of events in the case was engorgement of the glands at the root of the lung, subsequent cheesy degeneration, making the point of departure for the cheesy pneumonia which was present, and which had apparently developed within six weeks. The immediate cause of death was minute coagula, which intertwined about the cardiac valves, particularly marked around the tricuspid. Nothing was found in the larynx.

Dr. Prudden remarked that it was not the rule for caseous material to break down as described.

Dr. R. O. Mason asked if the minute coagula really had anything to do with the death of the patient.

Dr. Putnam-Jacobi thought that the tendency of opinion among pathologists was toward the older view that such clots might be the immediate cause of death.

Dr. John J. Reid presented a specimen of

PERFORATION OF THE CÆCUM FROM PERITYPHLITIC ABSCESS,

with the following history :

A married Bohemian woman, twenty-three years of age, was admitted to the Charity Hospital suffering from pain and swelling in the right gluteal region. She said that four months previously she was delivered of a child, and one week subsequently complained of severe pain in the region of the womb and pelvis, which extended over the sacro-iliac synchondrosis. At this time her legs and ankles swelled, and assumed a glistening, white appearance. This swelling disappeared; but with this disappearance there was an increase of pain in the right iliac region. On admission to hospital, January 6, 1886, there was severe pain in the right iliac fossa, extending outward toward the sacrum. Her left leg was swollen, glistening, white, and solid to the touch. The right side over the gluteal region was swollen, and strongly suggested the presence of pus. None could be obtained, however, by an exploring needle. Poultices were applied, and five days afterward pointing was detected to the right of the promontory of the sacrum. From the opening made at this point a large amount of pus escaped, carrying with it some grape-pits. This settled the question of diagnosis. A drainage tube was inserted, and antiseptic injections used. It was deemed expedient to make an exploratory incision, but the patient persistently declined permission, and there was nothing left but to carry on the ordinary washing-out treatment of the sinuses. Death occurred from exhaustion a month after admission. Autopsy twelve hours after death. Nothing worthy of special note was found, except in the abdominal cavity.

On exposing these organs the viscera were in normal position and of normal appearance, omentum fairly loaded with fat, more than the general bodily appearance would indicate. On searching for the cæcum, etc., the usual peritoneal adhesions were greatly exaggerated, the lower end of ileum, cæcum, and ascending colon firmly bound to posterior wall of abdomen ; the appendix vermiformis short, club-shaped, three-quarter inches in diameter. On removing the intestines and separating the adhesions above described, two perforations of the cæcum, about two inches apart and one-eighth inch in diameter, were found, which openings communicated by sinuses with a large cavity beneath the skin above mentioned, extending from the upper opening, a little to the right of the second lumbar vertebra, upward one inch toward the median line, and from thence downward to the iliac crest, embracing an area shaped like a half-circle, containing a small amount of yellowish fœtid pus. The appendix vermiformis presented no communication with the cæcum, and contained a canteloup or cucumber seed considerably eroded. The cæcum was very much thickened, the mucous membrane containing points of superficial ulceration. The ileo-cæcal opening was reduced by this thickening to half its diameter. The other portions of intestine were normal ; kidneys slightly enlarged, cortices thickened, capsules non-adherent.

One point of special interest was the fact that if an opening had been made at the crest of the ilium near the synchondrosis, the finger could have been carried down to the cæcum, and would have reached the perforation.

Dr. Van Santvoord presented specimens with the following history :

URETHRAL STRICTURE — SYPHILIS — PYELO-NEPHRITIS — SEPTIC ENDOCARDITIS.

M. M——, seventy-three years of age, was admitted to Randall's Island Hospital, December 2, 1885. He was suffering from a deep urethral stricture, through which only a filiform bougie could be introduced. His urine contained one-eighth albumen ; condition otherwise fair. On January 6th, several days after passing a bougie, he had chill, fever, and headache, with pain in the left side of the loins. The next day he had no fever, headache was less, and he felt well. On the third day he had fever, headache, vomiting, tongue dry in centre, urine diminished in quantity, containing one-fifteenth albumen, no casts, and considerable pus. On the fifth day stiffness of the neck, pain in attempting to bend it forward, and a pressure over the nucha, and pain in joints of the left arm, were superadded. A soft systolic murmur was heard over the apex, not transmitted. Subcrepitant râles over both lower lobes, patient somewhat delirious. On the sixth day, pain on moving head or limbs was more marked ; no swelling or redness of joints visible ; direct pressure was noted on the seventh day as causing pain in the left wrist and ankle-joints. On this day twitching

in almost all the muscles of the body, with some rigidity, were noted. A few bluish spots (ecchymoses) observed on chest and abdomen. Fæces and urine were passed involuntarily. The patient passed into coma, and died on the morning of the eighth day after his first chill, which was the sixth of his continuous febrile temperature.

Autopsy.—Several small hemorrhage spots, the size of a pea, in skin. The brain showed four hemorrhages about the size of a ten-cent piece in the pia of the cerebral convexities. On the convexity of the right lobe of the cerebellum was a clot three-fourths of an inch long by one-eighth wide, dipping down one-half inch into one of the sulci. Vessels at base slightly atheromatous. Spinal cord was normal. The lungs were œdematous and congested. The heart was normal in size. The right cavities were normal. The aortic valve showed slight chronic thickening. About one-third of the ventricular surface of the posterior leaflet was coated with an irregular fibrinous mass. The same process involved a small part of the adjacent end of the right leaflet, and ran down on the endocardium for about one-third inch. The endocardium at the edge of the process was infiltrated with blood. The mitral valves showed a patch of grayish recent fibrin, about the size of a small pea, on the auricular surface of each leaflet, affected portions of the leaflets coming in contact when the valve was closed. There was general old thickening of the valve. The aorta showed slight atheroma; size normal. Spleen: Slightly enlarged and soft, capsule extensively thickened, and substance contained two dark infarcts with an area of softening. Kidneys: The left kidney was about one-half larger than normal. Its fat capsule was indurated. The capsule proper stripped easily, showing the body of the organ dotted over with small yellow spots with congested areolæ. The cut surface showed many yellow streaks and dots in the pyramids, and also in the cortex. The same appearance was shown by the right kidney, but not so extensively; it was not so large as its fellow, and contained a cyst the size of a cherry-pit. There was no apparent lesion of the ureters and pelvis. The bladder was contracted; its walls were two-thirds of an inch thick; its mucosa was thrown into ridges, was thickened, and showed great injection and small hemorrhages. At the bulbo-membranous junction of the urethra was a marked narrowing of the canal, which readily admitted an ordinary groove director passed from the bladder. A pocket, one-eighth of an inch in diameter existed in the floor of the urethra, immediately in front of it. The stomach was somewhat dilated. Its mucosa showed a number of small, black, superficial hemorrhages. Several hemorrhages, the largest the size of a twenty-five cent piece, were seen in the mucosa of the colon. The left wrist, shoulder, and ankle-joints were opened, but showed no obvious lesion.

In this case the initial chill occurred several days after the introduction of a filiform bougie into the bladder by a careful house-physician, who takes good care of his instruments. It seems questionable whether this had anything to do with the setting in of the process. The question is raised, if the bougie was the bearer of septic poison, as to how long a time may elapse between septic inoculation by catheterism and the development of symptoms.

A second point of interest was the fact that, although the cystitis and the widely diffused lesions in the kidneys seemed to point to the urinary organs as the point of entrance of the poison, yet the ureters and pelves of the kidneys were apparently normal. This he had seen once before in a somewhat similar case. The third point of interest was the marked resemblance of the case, during the last two or three days of life, to one of cerebro-spinal meningitis, the stiff neck, opisthotonus, pain on moving neck and limbs, and delirium being very deceptive. As the cord and the joints showed no lesion, the pain, etc., seemed to be only the arthralgias due to septic poisoning. The heart lesion could not be connected with the systolic apex murmur heard during life.

Dr. Prudden said that if the specimen had been in alcohol the question of presence of endocarditis could be settled by examining the exudate for bacilli. He had seen six or seven cases where general infection occurred, and the ureters and kidneys were skipped entirely. It was sometimes difficult in these cases to discover the source of infection because of the great extent of surface affected.

Dr. Prudden then presented a specimen of

CARCINOMA OF THE CERVIX UTERI INVADING THE BLADDER, OCCLUDING THE OPENINGS OF BOTH URETERS, AND CAUSING HYDRONEPHROSIS AND PYONEPHROSIS.

He was indebted for the specimen and clinical history to Dr. E. R. Lyon, resident physician to Charity Hospital. The patient was a German female, seventy years of age. On admission she complained only of a little cough, and was very feeble; she was stupid, and at times mildly delirious. She was not much emaciated, but had a sallow, cachectic appearance; no fetid discharge was noticed from the vagina. She gave the physical signs of bronchitis. There was considerable œdema of lower extremities. The pale alkaline urine had a specific gravity of 1.010, and contained two and one-half per cent. of albumen. It contained pus in considerable quantity. She remained in the same stupid condition, and died suddenly four days after admission. Autopsy: Heart, normal; lungs, bronchitic. The pelvis and ureter of the left kidney were filled with pus. The kidney substance was somewhat encroached upon by the accumulation of pus in the pelvis.

The right kidney was converted into a thin-walled sac, 12 ctm. long, 9 ctm. wide, and 5.5 ctm. thick, with internal partitions representing the original calyxes. There was a thin layer of kidney substance lining the sac. The right ureter was completely occluded as it entered the bladder, and was dilated to a diameter varying from seven millimetres to two centimetres. The pelvis and ureters together contained 300 c.c. clear amber urine, sp. gr. 1.010, containing no albumen, but considerable numbers of hyaline casts, fatty epithelial cells, and ordinary urinary and cholesterin crystals.

The cervix uteri was completely ulcerated away. The body of the uterus was small, and infiltrated with white, soft, irregular masses of new tissue. The left ovary was small, and not involved in the new growth. The right ovary was concealed in a nodular mass of hard new tissue, which attached the uterus to the bladder.

At the base of the bladder, over the seat of the new growth, was an ulcer 2 ctm. long by 1½ ctm. wide, with slightly raised edges and a grayish smooth surface.

It was the new tissue at the base of the ulcer which had caused the complete occlusion of the right ureter and the partial occlusion of the left.

Microscopical examination of the new growth showed it to be *carcinoma*.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, March 8, 1886.

STEPHEN SMITH, M.D., CHAIRMAN.

Dr. W. B. De Garmo read a paper (see p. 386) entitled

THE PALLIATIVE OR MECHANICAL TREATMENT OF HERNIA, WITH ILLUSTRATIVE CASES.

Dr. V. P. Gibney said he had been a trifle disappointed that the author of the paper had not gone into the subject of the radical cure of hernia by mechanical appliances, because he had been looking for radical cures by means of the truss, and yet, in common with the bulk of the profession, he had doubted the existence of very many radical cures by any kind of truss. It was well known that certain truss-makers in this city advocated the radical cure, and it was also believed by medical gentlemen that

such cases did occur, and, as evidence on this point, he could cite one case he saw in 1884, with a distinct inguinal hernia, and to which he adjusted a truss that held it for a while and then failed to accomplish its purpose. He then took the patient to a truss-maker, who made an instrument and applied it, and the patient wore it for two or three months, when it also failed to afford relief. The patient then disappeared from his observation, and he saw nothing more of him from 1884 until a few days ago, when he met him and was told that he went to a down-town man two or three times a week, for three months, in the summer of 1885, had a truss adjusted that cured his hernia so that he had not been obliged to wear a truss in three or four months. Dr. Gibney said that the patient was a very active man, and that he also regarded him as truthful in his statements, although he had not had opportunity to examine the case personally.

The cure by injections was on the same principle that the Germans had employed other substances, such as alcohol once or twice a week for several weeks, and had reported good results.

With regard to reducible herniæ, he had seen a large number of cases in which taxis was not dangerous, and he believed that intelligent taxis could be employed with safety and good results. He did not, therefore, advocate as early operation as some of his surgical friends.

His firm belief was that fully ninety per cent. of the cases of hernia occurring in infants could be cured within twelve months by wearing any truss with a pad which fits sufficiently well to retain the hernia. His inflexible rule was to reduce the hernia, adjust a truss which could not be taken off by the parents, and aim to so retain the hernia that it should never be seen after its first reduction. During the first month he saw his patient once in two or three days; after that at much longer intervals.

Dr. F. D. Weisse said that hernia, both from an anatomical and a surgical standpoint, had been with him a favorite subject of study. It was certainly the opprobrium of surgery that so many cases of hernia went unrelieved, and had been turned over to the treatment offered by those who had no special knowledge of the condition of the parts involved.

His own view was that not sufficient consideration had been given to the causes of hernia, and that the area of support should extend over the entire hypogastric and opposite inguinal regions. Dr. Weisse then spoke of the anatomy of the inferior third of the abdominal parietes, and he thought that anatomical considerations would support the deduction that this whole area contributed to the cause, increase, and perpetuation of hernia.

The tip of the index-finger, when adjusted against the protruding contents, was sufficient to give perfect support, and this was the principle involved in the various forms of pads. But in addition to this, he believed that the lower part of the abdominal parietes should be thoroughly supported. To secure this he referred to the application of a plaster-of-Paris cast to the lower third of the abdomen while the patient was in the recumbent posture, being careful at the same time to know the exact point at which the pad of the truss should be applied.

He also thought that too little was taught with reference to taxis, and too much said against it. Unfortunately, in very many instances it was improperly applied, but when intelligently employed he thought it was a very great adjunct in the management of herniæ.

With regard to hernia with undescended testicle, he had seen several cases in which a useless testicle was the result of the application and the wearing of a truss.

It was a new point to him that a truss could be worn without danger when the hernial tumor was composed of omentum, and he regarded it as a point well worthy of special study. Dr. Weisse then referred to the value of percussion in determining the character of the contents of the hernial tumor. He would also ask Dr. De Garmo if there was a definite time at which he regarded it safe to leave off the truss.

Dr. John C. Peters said that, up to the present discussion, he had been of the opinion that the entire subject of hernia had retrograded since forty or fifty years ago, at which time Amos G. Hull, Sr., was the man in this city who paid most attention to this subject. He was the first to use the long arm of a spring in front from the side opposite to the hernia; who used a broad sacral pad, and was especially careful to mould his springs to the shape of the body; who insisted that the truss should never be removed until the patient was lying down, and that the patient should never get up until after the truss had been adjusted; who used a convex pad surrounded by a ring; who employed an abdominal support; who applied a truss for a descended omentum; and who used a truss with success in the treatment of varicocele. The exact form and mode of adjusting the truss in these cases he had been unable to ascertain.

Dr. F. A. Burrall said that he had been led by his experience in the direction of the remarks made by Dr. Weisse, that there had been a lack of adaptation in the use of mechanical appliances. He believed that the abdominal bandage should be applied more often than it had been, for it divided the support and it was a very great addition to the comfort of the patient. He regarded prophylaxis as an important factor, especially in the way of timely support of the abdominal parietes after exhausting illness.

Dr. A. Jacobi had always been under the impression that no bandage or truss would ever cure hernia in the adult. On the other hand, he fully agreed with what Dr. Gibney had said concerning hernia in children. When an infant wears a truss for one or two years in succession, and protrusion of the intestine does not take place during that time, he regarded it as a certainty that the hernia had been cured. To accomplish this a truss is required which retains the hernia and exercises gentle pressure on the soft parts. It had not been his practice to keep the truss on during the night, except when the child had a cough.

Dr. Stephen Smith stated that it had not been his fortune to see many cases of cure of the herniæ of adults, either by means of the truss or operative procedures. He used the term cure in the sense that the profession generally understand it, viz., such a cure that the patient can with impunity dispense with the truss altogether. The reason for this failure seemed to him to be due to the fact that a hernia in an adult indicates a loss of integrity in the lower abdominal walls, which cannot be compensated by any changes which a truss or an operation can secure. All he ever contemplated accomplishing with a truss in an adult was the easy, but constant, retention of the bowel within the abdominal cavity. This is a great gain to the patient, for, as the enlargement of a hernia depends upon a gradual lengthening of the mesentery, the natural support of the bowels, the more effectually the bowels are retained within the abdomen, the less is the disposition of those organs to descend, owing to the tension of the mesentery. As to the various operations for the radical cure of hernia, he had performed many of them, and had yet to see any such results as would warrant the removal of the truss at a given date with the certainty that the hernia would not return. He had seen them well after six months, but the larger number returned within a twelvemonth after the patient dispensed with the truss. In practice, he had come to believe that when a hernia appears in an adult, a properly adjusted truss was to be worn the rest of the patient's life, whether an operation was performed or not. There is no doubt that the operations are useful, but in his own practice, whatever operation was performed, he insisted upon the patient's wearing a light-fitting truss continuously after the cure was apparently completed. He recalled a conversation with Dr. James R. Wood, who frequently operated, in which Dr. Wood stated that he regarded the continuous use of the truss as an essential part of the after-treatment in all operations. He also

recalled a statement of Mr. Banks, of Liverpool, who has had a large experience in operations upon herniæ, to the effect that the term "radical cure" is misleading. The popular belief, in the opinion of this surgeon, that a patient upon whom a radical cure has been performed need never again wear a truss, nor ever again be in danger of his hernia coming down, was, in his experience, far from being true, and the instances where a light truss can be dispensed with are in the minority. He says very pertinently that to determine results we should see the patient one year after he left oft his truss, and learn what he has been doing meantime. Dr. Smith regarded the truss as the great palliative measure on which reliance must be placed after a hernia once appears in an adult, and hence the necessity of the greatest care in the selection of these instruments. One kind of truss cannot be adapted to all cases, and great skill and experience are necessary in the selection for each individual patient.

Dr. De Garmo said he had not spoken of the radical cure of hernia because it was his purpose to consider that in another paper, and he had restricted himself, therefore, to the palliative cure of hernia. As this point had been brought up, however, he would say that he thought skilled mechanical appliances would cure as large a percentage of herniæ as any operation performed in these days. It was this fact which enabled quacks to obtain their certificates.

With regard to hernia in infants, he regarded cure as certain when proper treatment was instituted, by means of mechanical appliances, any time prior to ten years of age, and he did not regard the recumbent posture as essential to effecting this cure. Doubtless it aided, but it was not necessary. He thought it just as well to delay the treatment of hernia in children by mechanical appliances until the child was three, four, or five years old.

With regard to supporting the lower part of the abdominal parietes, it seemed to be well in theory, but he had not found it so valuable in practice, for there were cases in which such support seemed to press the contents of the abdomen downward and interfere with retaining the hernia by means of a truss.

With regard to the use of a plaster-of-Paris cast, he noticed this method when it was first published, but he was unable to see how it could be made available in the treatment of hernia.

With regard to the removal of the truss, he judged entirely by the condition of the parts; there could be no prescribed limit of time with reference to its removal. He thought that Dr. Peters was in error in ascribing the cross-body spring to Hull, because Sir Astley Cooper had mentioned this spring as the invention of Solomon Ody, in 1803.

With reference to the treatment of varicocele, Curling had recommended a truss for the radical cure of varicocele arranged so as to make direct pressure over the external abdominal ring. He continued the use of the truss during the night in the treatment of hernia in children, because they were so liable to have the hernia protrude as the result of crying or change of position, etc.

Dr. Jacobi referred to the use of pads filled with air, as he had recently seen one which seemed to work very well, and he would ask Dr. De Garmo if he had had any experience in the use of this form of pad.

Dr. De Garmo said that the air-pad was not being used very much now, but the water-pad was used somewhat. Both, however, had been almost entirely discarded.

Dr. W. M. Carpenter said that, from the remarks made by the author of the paper, and also by Dr. Weisse, it might be inferred that direct inguinal hernia did not exist. If correct in this inference, he would like to place upon record a case which came under his observation several years ago. A man about sixty years of age had had a knuckle, perhaps the size of a walnut, in the right groin for several years, but it gave him no inconvenience up to the time when he lifted a large basket of potatoes into his wagon. He then felt that he had strained himself in this region, and immediately began to suffer from pain referable to this small knuckle, which he at once discovered was slightly increased in size. His family physician saw him a few hours afterward, and reached the conclusion that the swelling was a hernia which had become strangulated. He endeavored to reduce it by taxis, but failed. He then called consultation, and taxis was again resorted to, but failed. Every effort at taxis increased rather than diminished the size of the tumor; the taxis was made as for indirect inguinal hernia. At the end of three days it was decided that relief could not be afforded the patient, except by surgical interference, and Dr. Carpenter was asked to perform the operation He found a small sausage-shaped tumor in the right inguinal region, and, after the usual incisions had been made, he discovered that the opening through which the mass of omentum (omentocele) protruded was the external abdominal ring. The constriction was readily relieved, and the contents of the hernia, in a viable condition, were returned to the abdominal cavity.

The patient recovered from the influence of the ether, conversed intelligently, but, as a precautionary measure against the occurrence of an inflammatory process, a dose of opium, equivalent to twenty drops of laudanum, was administered. About six hours afterward the patient began to manifest some symptoms of stupidity, afterward became unconscious, and died comatose at the end of about twenty-four hours.

Post-mortem examination did not reveal any apparent cause of death. All the organs were apparently healthy. The hernia had been completely reduced, it could be distinctly seen that it had protruded from the external ring, and there was no evidence whatever of inflammation. The wound had united almost entirely.

Dr. Weisse said he did not wish to be understood as saying that direct inguinal hernia did not occur; but he thought it exceedingly rare, and he had never seen a case.

Dr. De Garmo thought it possible that a good many cases of so-called direct inguinal hernia were ventral in character.

Dr. John C. Peters offered resolutions with reference to the death of Alfred C. Post, M.D., LL.D., which were seconded by the Chairman, and unanimously adopted.

The Section then adjourned.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 14, to March 27, 1886.

Cochran, John J., Assistant Surgeon. Ordered for duty as post surgeon, Fort Mason, Cal. S. O. 18, Department of California, March 15, 1886.

Polhemus, A. S., Assistant Surgeon. Ordered for duty at Presidio of San Francisco, Cal. S. O. 18, Department of California, March 15, 1886.

Hoff, John Van R., Captain and Assistant Surgeon. Ordered from Department of California to Department of Missouri. S. O. 60, A. G. O., March 13, 1886.

Official List of Changes in the Medical Corps of the U. S. Navy during the week ending March 27, 1886.

Martin, H. M., Surgeon. Detached from Independence and ordered to the St. Louis.

Guiteras, D. M., Passed Assistant Surgeon. Detached from Navy Yard, Pensacola, and wait orders.

Ross, J. W., Surgeon. Detached from special duty, New York, and ordered to Pensacola.

Eckstein, H. C., Surgeon. Detached from the St. Louis and placed on sick leave.

Means, V. C. B., Assistant Surgeon. Detached from the Vermont and ordered to the Shenandoah.

Beaumont, N. H., Surgeon. Detached from the Enterprise, and wait orders.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Lectures.

ON CERTAIN PROBLEMS IN THE PHYSIOLOGY OF THE BLOOD-CORPUSCLES.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE ASSOCIATION OF THE ALUMNI OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, MARCH 23, 1886.

BY WILLIAM OSLER, M.D.,

PROFESSOR OF [illegible] IN THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

LECTURE II.

DEGENERATION AND REGENERATION OF THE CORPUSCLES.

THE conception of the blood as a fluid tissue, the corpuscles representing the cells and the plasma the matrix, is not a very happy one, as both cell elements and matrix present peculiarities unknown in any other tissue. Rather is it to be regarded as an internal medium, to use Bernard's phrase, bearing the same relation to the constituent tissues as the external medium does to the individual.

In spite of local variations, the composition and characters of the blood present a remarkable uniformity, the result of the combined action of the receptive, excretory, and formative tissues, which are concerned in the digestion and absorption of food, in the discharge of waste, and in the renewal of worn-out elements.

The maintenance of the histological uniformity of the blood is absolutely dependent upon the integrity of these processes. In health the waste and repair of the corpuscles are not accompanied by any striking or obvious phenomena. The corpuscles present a remarkable sameness, and we cannot pick out with readiness the old elements ready to die, or the new ones which have just made their appearance. This it is which makes the blood such a puzzle, for the corpuscles, so far as observation goes, neither die nor are born in the circulating fluid, but appear to enter it as perfect elements, and are removed from it before they are so changed as to be no longer recognizable.

That the red corpuscles in health are constantly degenerating and as constantly being reproduced, is universally acknowledged, though the facts upon which this belief is based are not very numerous. There is evidence that the coloring matters of the bile and of urine are derived from the hæmoglobin, and to supply their daily amount many corpuscles must be destroyed, and to replace which new ones must be formed. The variations in number at different times and under different conditions indicate that waste and repair are ceaseless processes. Moreover, there is the direct evidence in the presence of degenerating red corpuscles in certain organs, spleen and bone marrow. Our very imperfect knowledge of the details of degeneration and regeneration of the corpuscles in health has been supplemented to some extent by experiment and by the study of the blood in disease, and I propose in this lecture to touch upon the salient features of these processes so far as we at present understand them. As it is difficult to separate the two conditions, which in many instances coexist, I shall first take up the consideration of the state of the corpuscles in anæmia, as induced either by increased destruction or loss of the corpuscles, or as it results from scanty production. The loss may be sudden, as from hemorrhage or acute poisons, or be a slow, gradual process, as in fever and chronic poisoning. Anæmia from imperfect production of cells may result from primary changes in the cytogenic tissues, or be a secondary effect of imperfect nutrition; but in either case the reduction in the number of the red corpuscles is by far the most important change, and upon this the symptoms mainly depend.

In health the red corpuscles present a remarkable uniformity in size, or perhaps it is more correct to say that the variations which occur are within very narrow limits. The large proportion of the corpuscles have a diameter of 7.5 μ, but there are a few to be found which measure a micromillimetre less or more, 6.5 or 8.5 μ. These slightly smaller and slightly larger forms are not numerous in normal blood, not so numerous, I think, as Hayem's[1] researches would indicate, for he places the medium-sized at seventy-five per cent., the smaller forms at twelve per cent., and the larger at twelve per cent. Gram,[2] who has made a number of careful observations on this point, finds the average diameter to be a little more than 7.5 μ (7.8 μ), but the percentage of corpuscles of less or greater diameter varies greatly in different individuals. In the new-born, and for some time after birth, the maximum and minimum diameter of the red corpuscle presents a much wider range, the variations being from 10.3 μ to 3.3 μ. One of the most striking alterations of the red corpuscles in certain diseased states is a reversion to this embryonic or infantile condition, with a variation in the size of individual corpuscles to a degree which is truly remarkable. Instead of an extreme variation of 2 μ as in health, the range between the smallest and largest forms may be from 8 μ to 10 μ, or even more. Thus, minute corpuscles may be measured from 2.5 μ to 3.5 μ, while contiguous cells may be as much as 10, 12, or even 14 μ. To these abnormal forms the terms microcytes and megalocytes have been appropriately given.

Mycrocytes occur normally in the blood of the embryo (Fig. 10, *b*) and new-born, but are rarely to be seen in a healthy adult. In disease they are most abundant in

FIG. 1.—Outlines of Red Corpuscles in [illegible] Normal corpuscles. [illegible] forms—poikilocytes, [illegible]

anæmia, whether from hemorrhage or as a result of changes in the cytogenic organs, or secondary to disease of important viscera. When the attention of observers was first directed to these bodies it was thought that they might be of diagnostic import in certain forms of anæmia, but we know now that they occur—in variable numbers, it is true—in all forms, in chlorosis, splenic anæmia, pernicious anæmia, leucæmia, Hodgkin's disease, and in the anæmia of

[1] Leçons sur les M[illegible]

[2] Deutsch. Archiv f. M[illegible]

cancer, phthisis, and other chronic affections. I must say, however, that so far as my personal experience goes I have not met with them so uniformly or so abundantly in any condition as in those cases which we designate by Biermer's name of progressive pernicious anæmia. In what may be called the primary anæmias they are almost invariably to be found, while in the secondary form they are variable and may be absent. There is unfortunately a difference of opinion as to the nature and origin of the microcytes, some regarding them as disintegrated remnants of corpuscles, others as young forms in process of development. Possibly both views may be correct. The small, spherical bodies of a deep red color, 1.5 to 2.5 μ in diameter, should, perhaps, be distinguished from the forms slightly larger, more distinctly discoid, and less deeply tinted. That they may result from changes in the ordinary red corpuscles is, I think, certain. I have frequently noticed that they appeared to increase in a slide kept for observation. They resemble, too, particularly the small, deep-red ones, the fragments into which the red cells disintegrate under the influence of the induction stream and of various solutions. In a freshly prepared slide of anæmic blood, firm pressure on the top cover will sometimes be sufficient to produce a large number of microcytes which result from the destruction of the red corpuscles by pressure. They may, indeed, be observed in process of formation as shown at Figs. 2 and 3. Normal blood in Pacini's fluid does not often show

Fig. 2.—Extreme Poikilocytosis in Blood from Anæmic Patient, examined in Pacini's Fluid. It illustrates also a possible mode of origin of the microcytes.

special changes in the form of the corpuscles, but the corpuscles, in cases of profound anæmia, may become in it very irregular in outline and deeply fissured, as sketched at Fig. 2, and portions may separate and appear in the field as microcytes. In the bone-marrow, too, I have often noted a somewhat similar process (Fig. 3),

Fig. 3.—Origin of Microcytes from Normal Corpuscles by Process of Budding and Fission. Specimen from red marrow.

and by a sort of budding and fission many small forms may arise. These microcytes are not always to be regarded as a result of post-mortem change—they may be seen in blood examined with the greatest possible rapidity after removal. Whether the slightly larger form of microcytes, from 2.5 to 5 μ, and which are often less deeply tinted, arise in the same way, is still an unsettled question. They occur with the others, but are regarded, as I shall point out later, by many good observers as developing forms.

The *megalocytes* have attracted less attention than the smaller forms, but are equally curious. The term may be applied to forms above 8.5 μ or 9 μ in diameter. They may reach an extraordinary size, 12, 14, and even 15 μ. They are very constant elements in cases of pernicious anæmia, and also occur in chlorosis and leukæmia. Gram[1] has made the interesting observation, which I have been able to confirm, that these forms occur in numbers of cases of icterus. He also states that ordinary red corpuscles placed in icteric serum (of ascites in cirrhosis) seem to increase somewhat in size. We may call to mind in this connection the peculiar lemon or subicteroid tint of the skin in many cases of pernicious anæmia, and possibly there may exist in the blood-serum some element—the product of destruction in the hæmoglobin—which may act upon the red cells and cause them to assume a more flattened form. These megalocytes often show the most eccentric changes in outline, to which I shall shortly refer. When I speak of the development of the corpuscles, I shall return again to these forms.

In the normal red corpuscles regularity in outline is not less constant than uniformity in size, but in the blood of the various anæmias we now recognize the loss of this character as a very distinctive feature. Here, also, many of us erred in supposing this condition to be peculiar to pernicious anæmia, the disease in which these irregular forms were first accurately described. Quincke called them *poikilocytes*, a term which has been very generally adopted. At Figs. 1 and 2 this condition is represented. The corpuscles may present the most remarkable shapes, ovoid, elongated, pyramidal, balloon-shaped, with indented edges, or rods straight or bent at right angles. Many of these bizarre forms are scarcely recognizable at first as red corpuscles. I still hold that we meet with these forms in a more extreme degree in cases of a pernicious anæmia than in any other disease, but they occur also in the anæmia of phthisis, cancer, and inanition. This is a physical change depending probably upon alterations in the blood-serum. It is not induced in the healthy corpuscles by dilution of the serum or slight grades of concentration, or by any of the reagents which tend to produce crenation. In Pacini's fluid the corpuscles of anæmic blood may sometimes be observed to become much more irregular in form (Fig. 2).

Percentage of hæmoglobin.—We know as yet little or nothing of the processes associated with the production of the coloring matter of the corpuscles. In a state of health the percentage of hæmoglobin in each cell is tolerably definite, varying within very slight limits. In diseased conditions we have learned to recognize two remarkable changes in the relation of the coloring matter of the corpuscles. One is the observation made some years ago by Duncan (1867) that the hæmoglobin in chlorosis was reduced out of proportion to the reduction of the corpuscles, so that the individual worth of each red corpuscle in coloring matter might be very greatly lowered. The true anæmia might be much greater than the number of red corpuscles per cubic millimetre might indicate. Subsequent researches have fully borne out this fact, for which, however, we have as yet no suitable explanation. The pallor of the corpusles may even be recognized with the microscope. In ordinary anæmia from hemorrhage or organic disease, the average worth in hæmoglobin of each corpuscle usually remains unaltered, and the percentage of coloring matter corresponds closely with the percentage of the corpuscles; but in certain cases of pernicious anæmia the interesting fact has been ascertained that the percentage of hæmoglobin in each corpuscle is increased, and the anæmia in reality may not be so great as the reduction in the number of red corpuscles would appear to indicate. The individual worth of each corpuscle in hæmoglobin may be actually doubled, and the heightened color be evident on microscopic examination. These two facts, intensely interesting and suggestive, may be said to comprise our knowledge of the changes in hæmoglobin percentage in the corpuscles in disease, and they serve as a background against which to display our ignorance of this most essential feature in hæmatogenesis.

Nucleated red corpuscles.—In anæmic states there may be present in blood nucleated red corpuscles such as normally occur in the blood of the embryo, and such as are present in the red marrow of the bones. I have not met with these elements so frequently as the statements of certain observers (Ehrlich) would lead us to suppose. Certainly they do not occur in all cases of

[1] Archiv für Heilkunde, 1885.

profound anæmia. I have met with them in leucæmia in larger numbers than in any other state (Fig. 4). They present characters identical with the nucleated red cells, which I shall speak of shortly in connection with the regeneration of the corpuscles. They are usually a little larger than the ordinary red corpuscles, and the tint may be slightly paler. The nucleus may be seen in process of division, and I have seen corpuscles

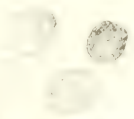


Fig. 4.—Nucleated Red Blood-corpuscles from Blood in case of Leucæmia.

in process of fission identical in appearance with those long ago described and figured by Kölliker as occurring in the blood of the embryo. They may not infrequently be found in groups of three or four, close together, or even in contact, as if the group had resulted from the division of a single corpuscle. I was particularly struck with this feature in one case of leucæmia in which they were very abundant, and I regard the explanation just given as a very likely one in the light of the recent observations of Bizzozero upon the rapidity of the process of division in these red forms. That they originate in the bone-marrow there can be no doubt, and in my experience it is just in those conditions in which this tissue is hyperplastic that they occur in the blood.

A rare and odd element in the blood is the *corpuscle containing red blood-corpuscles*. Several observers have noticed the presence of red cells inside colorless corpuscles in the circulating blood. It is very uncommon, and the sketches at Fig. 5 represent the only examples which I have met with. Considering the abundance of these cells in the marrow, spleen, and lymph-glands in certain states, it is surprising that we do not find them more often in the blood. It is quite possible, however, that the colorless corpuscle circulating in the blood may itself take up a red cell into its interior, just as it may an oil-drop or a particle of pigment. I have a sketch of a colorless corpuscle of the

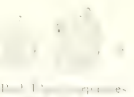


Fig. 5.—Corpuscles containing Red Blood-corpuscles from blood of child with leuæmia. 2. Connective-tissue corpuscle containing pigment.

blood of the frog, with three or four human red corpuscles in its interior which it had *eaten*. I have sought in vain, in chronic malaria, for evidence that the leucocytes in the blood take the corpuscles entire into their interior in the formation of the black pigment. They would appear to take in the disintegrated particles, possibly in the spleen and liver, but not the entire cells.

It is interesting to compare the sketch I have thus given of the state of the corpuscles in anæmia with the condition of the blood in the acute anæmia following a profuse hemorrhage, either accidental or experimentally induced. With our present knowledge, there is a really serious difficulty in deciding just what features of the blood indicate degeneration and what a process of regeneration. Thus, the microcytes, as I have stated, are regarded by some as evidence of a retrograde process, by others as indicating repair of the waste. In an animal deprived of one-third of the amount of blood, or in an individual after a severe prostrating hemorrhage, the changes noted are almost identical with those already described. 1st. The red corpuscles display irregularly in size and shape. The microcytes are numerous and resemble in all respects those of chronic anæmia. The larger forms of red corpuscles are not so constant. Poikilocytes also occur. As the percentage of red cells approaches the normal, these irregularities diminish in a marked manner. 2d. The colorless corpuscles are relatively, and may be even absolutely, increased in number. This doubtless is the result, in part, of a relatively smaller loss in white corpuscles in consequence of their adhesive, wall-loving property, and in part to the flooding of the blood-current with leucocytes poured in with the copious flow of lymph which takes place to make up the volume of blood. 3d. The nucleated red corpuscles may appear. In the experimentally induced anæmia in animals (dogs) they are more abundant than after profuse hemorrhage in man (cirrhosis, hæmoptysis). 4th. There is a marked increase in the number of the blood-plaques.

Regeneration of the corpuscles.—There is probably no subject in physiology upon which opinions differ more widely than in the mode of formation of the corpuscles—particularly the red—after birth. The possibility of a solution of the question seems to have been offered in the discovery of the blood-forming function of the red marrow by Neumann and Bizzozero, and the positive assertions of Hayem regarding the blood-plaque

Fig. 6.—[illegible] corpuscle. *c*. Connective-tissue corpuscle from subcutaneous tissue. [illegible] intracellular development of red blood-corpuscles.

and its connection with regeneration have served to arouse again the interest in this important question.

I propose to lay before you briefly a statement of the current views, as interpreted in the light of more recent investigations, and I shall first direct your attention to the study of the formation of red corpuscles in the *bone-marrow*.

I begin with this, as I here feel more at home, having for some years been an observer of this tissue in various states, and having arrived at certain conclusions which

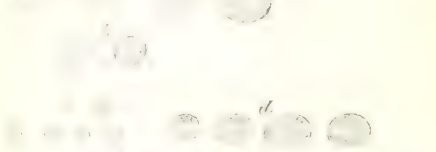


Fig. 7.—Cells from the Marrow of [illegible]. *a*. Smaller, more [illegible] cells. *c*. Free nuclei, or small lymphoid cells, some of which may [illegible] provided with a delicate rim of protoplasm. *d*. Corpuscle with clear, translucent protoplasm.

appear to me justifiable. The red marrow, which in the new-born and young child occupies the bone-cavities of the entire body, is confined in the adult to the cancellæ of the short and flat bones, but even with this limitation the entire bulk is very great, and if massed as one organ would exceed considerably the volume of the spleen. Without entering into preliminary histological details on the structure of the marrow, which are now incorporated in the text-books, I shall proceed at once to the consideration of the cell-elements of this tissue. With a fine capillary pipette, a small quantity of the soft red marrow is placed upon a slide without

any reagent and a thin cover applied with gentle pressure so as to procure a layer of uniform thinness. The plasma of the marrow is usually quite sufficient, and there is serious objection to the addition of any reagent, as the delicate-colored stroma of many of the cells may be at once altered. I feel sure that neglect of this precaution, so strongly emphasized by Neumann, has time and again prevented observers from seeing the very objects they were in search of, and they have ended with a denial of their existence (Rutherford, "Histology"). Examined in this manner we can usually see the following elements: 1. Ordinary marrow-cells (*a*), with coarsely granular protoplasm (Fig. 7, *a*), coarser-looking than that of a colorless blood-corpuscle. The nuclei may not be apparent at first, but they gradually become distinct, two or three in number, oval, round, or reniform in shape and vesicular in character. On the warm stage these elements display feeble amœboid movements.

b. Smaller cells about the size of colorless corpuscles, with more solid nuclei and less granular body protoplasm; they are not so numerous as the larger cells and some of them may be colorless blood-corpuscles.

2. Marrow-cells (9 to 12 μ in diameter) with smooth homogeneous protoplasms (Fig. 7, *d*) and finely granular nuclei, indistinct on first examination, but becoming more apparent in a few minutes. The protoplasm surrounding the nucleus is translucent, homogeneous, colorless, and variable in amount. There may be a single large nucleus surrounded by a narrow rim, or there may be a dumbbell-shaped nucleus, or it may be divided into two or even three. The process of indirect division of the nucleus can be well traced in these forms. Certain of the cells may present the faintest possible tint of color, and as they are carried about among the other corpuscles they show a peculiar flexibility.

3. Small lymphoid elements, resembling free nuclei; solid-looking, homogeneous, 2.5 to 5 μ in diameter (Fig. 7, *c*). They resemble the smallest lymph-corpuscles, but about many of them no distinct rim of protoplasm can be seen. In others there is a faint border of protoplasm. These bodies are variable in number, but they may be regarded as constant elements of the red marrow. Identical structures may be found in the spleen (Fig. 11, 4). They are well described by Norris as the "primary lymph-cell."

4. Nucleated red corpuscles, which we may regard as the special element of the red marrow, and which are present at all periods of life, Fig. 8, *a*. They range in size

FIG. 8.—Nucleated Red Cells of Marrow. Illustrating mode of development into the ordinary non-nucleated red corpuscle. *a*, Common forms of the colored nucleated cells of red marrow. *b*, 1, 2, 3, gradual disappearance of the nucleus. *c*, large non-nucleated red corpuscle resembling 2 and 3 of *b* in all respects save in the absence of any trace of nucleus.

from 6 μ to 12 μ, and are circular or slightly ovoid in shape. When freshly examined the protoplasm is homogeneous, clear, and the nucleus indistinct. The color

FIG. 9.—Nucleated Red Corpuscles. Illustrating the migration of the nucleus from the cell, a process not infrequently seen in the red marrow.

is of all grades up to the intensity of an ordinary red corpuscle. As they float about in the current they show the flexibility and elasticity of the ordinary colored forms. The nucleus may be simple and large, and is frequently seen in all stages of division. It is not colored. In certain cells there are appearances which indicate that the nucleus undergoes changes prior to disappearing, becoming granular and indistinct. In some specimens the nucleus can be seen adherent to the edge of the cell, as if in process of migration from it (Fig. 9), and bodies of a similar appearance may be seen in the immediate vicinity of the red cells.

5. Red corpuscles of ordinary form and appearance. Upon their abundance or paucity depends the color of the marrow. In addition to the usual biconcave disks there are commonly megalocytes, especially if the marrow is hyperplastic, and a variable number of microcytes. The larger corpuscles are, I think, more frequent than the smaller ones.

6. Myeloplaques or giant-cells, the description of which need not detain us, and

7. Corpuscles containing red blood-cells (Fig. 6, *b*, 1). Some of these are evidently collections of red corpuscles undergoing disintegration to form the cells containing granular pigment (Fig. 6, *b*, 2), while others, resembling rather the giant-cells (Fig. 6, *b*, 3) may possibly bear a different interpretation.

The chief interest centres in the nucleated red corpuscle of the marrow and of the spleen. From what does it originate? What is the process of its conversion into the ordinary red disk? All are agreed as to its importance in blood-making. It is the earliest red corpuscle in the embryo; it is constant in the cytogenetic tissues of all animals, and it would be unreasonable in the highest degree to suppose that in the red marrow of the adult it was present for any other purpose. Moreover, in states of anæmia and after bleeding, the nucleated red corpuscles increase in the bone marrow, and even appear (overflow) in the blood; and lastly, Bizzozero has watched the process of division, which may occur with remarkable rapidity, within fifteen minutes. My observations lead me to regard the nucleated red corpuscle as the product of transformation of the clear-bordered homogeneous marrow cell, as all grades of tint can be seen, between cells with scarcely a trace and strongly colored forms. There is no essential difference apparent in the body protoplasm; in both it is smooth, flexible, and translucent. It is not difficult to outline corpuscles in series from those without a trace of color to forms well and clearly tinted. The colorless marrow cells with clear-bordered protoplasm appear to be the descendants of the solid lymphoid cells—the primary lymph-corpuscles, the protoleucocyte — which gradually becomes surrounded by a zone of homogeneous protoplasm. Certainly intermediate gradations can be seen between the forms figured at Fig. 7, *c*, and the smaller corpuscles at Fig. 7, *d*. The process of transformation of the nucleated red into the ordinary forms occurs, I believe, by the gradual disappearance of the nucleus, as shown at Fig. 8, *b*, 1, 2, and 3. It seems impossible to draw any other conclusion from a study of such cells, and the small granular remnants which they contain may be the sole means of distinguishing them from ordinary red corpuscles. Very many observers have recorded the fact of the migration of the nucleus from the cell, and it may be seen in all stages

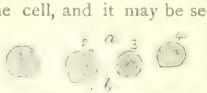


FIG. 10.—Blood of Embryo, Four Months. *a*, 1, 2, 3, 4. Nucleated red corpuscles; in 4 the same granular, disintegrated appearance of the nucleus as in marrow-cells. *b*, 1, myelocyte. 2, 3, 4, megalocyte. 5, granular red corpuscle.

of the process, as represented at Fig. 9, but I have not been able to convince myself that this is anything but a post-mortem change. Certainly in the fresh marrow there are not nearly so many corpuscles with nuclei partially extruded as in a specimen kept for twenty-four hours. Rindfleisch regards this as the normal mode of transformation, and we need additional careful observation on the point. In favor of the view that the nucleus undergoes disintegration is the fact that a similar process

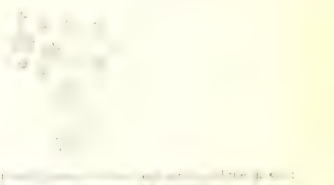
may be traced in the nucleated red blood-cells of the embryo, as shown at Fig. 10 *a*; and as the cells are identical in appearance, and probably in origin, this may be regarded as strong confirmative evidence. Bizzozero, whose careful study of this question entitles his opinion to the greatest consideration, regards the nucleated red corpuscle as a fixed and constant element derived, by fission, from pre-existing forms of the same kind, and not by any process of development from colorless cells of the marrow.

The nucleated red corpuscles are slightly larger than ordinary blood-corpuscles, and in size resemble the megalocytes which are usually abundant in the bone-marrow. Such a cell as is represented at Fig. 8 *b*, 4, differs in appearance from those at *b*, 1, 2, 3, solely in the absence of nuclear remnants. In the further process of development into the ordinary red corpuscle we must suppose condensation of the stroma and a change from a flattened cell to a biconcave disk. In anæmia the megalocytes which may be so abundant in the blood are to be regarded as imperfectly-formed corpuscles, which, from causes as yet unknown to us, have not attained their proper form.

Possibly in other ways the spleen and marrow elements may participate in the blood-formation. I have already referred to the process of budding which may be seen in certain of the red cells of the marrow (Fig. 3) and also of the spleen, and Malassez looks upon these gemmæ as capable of development into ordinary red forms.[1] The difficulty is one of interpretation; the process can be readily followed, but, as I mentioned, it is probably a physical change.

Within the large myeloplaques, and also in the elongated cells of the stroma of the marrow, there can be seen, occasionally, red corpuscles, which suggest *development*, not *disintegration*, inasmuch as the corpuscles are in smaller number and show no traces of degeneration. They are figured at 6 *a*, 1, 2, 3, from the spleen, and at 6 *b*, 3, from the marrow. I have been struck with the close resemblance of such cells to those in the subcutaneous tissue of the young rat, in which the process of intracellular development of red corpuscles can be readily traced, as shown by Mr. Schäfer. Fig. 6 *c* represents one of these connective-tissue corpuscles with four developing red cells in its protoplasm. It is quite possible that in the reversion to the embryonic or fœtal state of the bone-marrow these cells may resume their hæmatogenous function, which seems to be a widely-distributed property in the protoplasm of mesoblastic (parablastic?) elements.

The relation of the plaque to blood-formation is still undetermined, and the most diverse views prevail among those who have studied the question. Hayem argues that they are the true *hæmatoblasts*, and the red corpuscles arise directly from them, basing his opinion upon the following grounds: 1, The shape of the plaque is discoid, resembling a miniature blood-cell; 2, the faint tint of color which he says may be observed in them; 3, the remarkable gradations in size which they present, so that a complete series of forms may be traced from the smallest plaque to a common blood-disk; 4, their paucity in the healthy adult, their abundance in the young, and in all conditions in which blood-formation is rapidly going on; 5, their occurrence in the cells of the blastoderm. These views of Hayem have met with active opposition from a large majority of the observers who have studied the blood-plaque. I have never been able to detect coloration in the plaque, but, in the larger forms, the pale gray-white aspect of the protoplasm seems most distinct. I cannot see any connection between the blood-plaque and the ordinary microcyte, which is of a deep red tint, even when as small as the smaller plaques. The larger microcytes, 4–5 μ, which are usually paler in tint, have a homogeneous and distinctly colored stroma, precisely similar to the red corpuscle, and unlike plaques of the same size. Fig. 11 gives a representation of a



translucent, lymphoid cell or free nucleus.

group of elements from the spleen with the blood-plaques, five or six in number: 1, are of various sizes, and presented a pale, faintly granular protoplasm; at 2 were seen two microcytes, resembling more closely miniature blood-disks than the form represented at Fig. 1 and 4, but though resembling in size the larger plaques, the appearance is totally different, and forms intermediate between them are not seen. A strong point in Hayem's theory is the abundance of the plaques under the very conditions in which the corpuscular production goes on rapidly: (1) in the embryo and new-born, (2) after hemorrhages, (3) in the stage of convalescence from acute diseases. So, also, in chronic wasting diseases, and in certain forms of anæmia, their prevalence may be reasonably explained by failure to develop into more mature forms. We enter here the region of hypothesis, and it must remain for future observers to determine the precise position of the plaque in the development of the corpuscles. There is remarkable unanimity of opinion among those who have lately worked at the subject, to the effect that the evidence is at present altogether insufficient. Afanassiew is an exception, but he holds that the plaque develops into the nucleated red blood-corpuscle, the nucleus of which is in turn extruded and becomes a plaque.

The observations of the past ten or twelve years have led us away from the old view that the red cells are derived from the colorless corpuscles. Except in the mode I have indicated in the marrow, there is no evidence in favor of the conversion of the colorless blood-corpuscles into colored forms, and the opinion is gaining ground daily that they constitute separate elements with important functions quite apart from regeneration of the red cells. They constitute so many masses of primitive or basis protoplasm which may be called upon in the repair and reproduction of tissues and in the healing of wounds. They act as scavengers—*phagocytes*—in the removal of dead parts, or enclose injurious particles in their interior, and so render them inert. The leucocytes of the body have been compared to a standing army ready to resist invasion, and inflammation, in which they play such an important part, is but a battle by which they protect the organism against injurious agents, such as micro-organisms. The researches of Metschnikoff, Tavelowsky, and others, have so materially widened our conception of the functions of the colorless corpuscles, that we can regard with equanimity their displacement from the duty so long attributed to them of acting as progenitors of the red corpuscles.

After all, the most solid acquisition to our knowledge of the process of regeneration of the corpuscles, is the participation in the adult of the bone-marrow, and the development of the red corpuscles from its nucleated colorless cells. Here we seem to tread on a firm pavement of carefully observed and well-worked-out facts. There are minor details yet in dispute, which the next few years will see settled. Doubt and uncertainty still exist as to how far in the adult the spleen shares in the

[1] Creighton has observed the formation of colored corpuscles in the spleen by budding from nucleated cells; their walls, and in a few cases the nucleus, remained. Stone maintained (Seguin's Archives, vol. vi.) that the red cells developed by budding from the granular protoplasm of the adenoid reticulum of the spleen and lymph-glands.

process, and some good observers (Neumann) would deny altogether the post-natal formation of red corpuscles in it, but I think the evidence is sufficient to show that it shares this important function with the marrow.

We shall find, as our information on the subject deepens, that the regeneration of the corpuscles follows the laws governing the regeneration of tissues in general. In the adult body there are permanent and transitory tissue-elements, and to the latter the blood-corpuscles undoubtedly belong. The nutrition of the former is entirely interstitial, and does not involve any change in the element, when once fully developed. Of transitory elements the epidermic tissues are the best examples. The epithelium is in constant process of regeneration, and the shedding of the superficial cells is analogous to the destruction of the older red corpuscles. The new growth takes place by the constant fission and multiplication of the cells of the deeper part of the *rete mucosum*, and if the entire thickness of a portion of the epidermis is removed by accident, the remnant of the cells adherent to the corium repair the loss. Just so in the life-history of the blood-corpuscles, which are fleeting structures, like the epithelial cells, the hæmatogenous tissues—spleen, bone-marrow, lymph-glands—contain as permanent elements cells which, by fission, multiply and pass into the blood-current, more or less modified, as the red and white corpuscles.

The recent increase in our knowledge of the changes in the corpuscles in disease, and of the processes of reproduction, is an earnest of fuller information in the near future. A key to the solution of many problems in pathology will, I doubt not, here be found, but in seeking it let us not forget that the corpuscles float in the blood-plasma, the pathological relations of which await investigation, and offer a field for research which should be equally fruitful in advancing our knowledge of the ultimate processes of nutrition, and of those deviations from it which lie at the very root of so many chronic diseases.

Original Articles.

INTUBATION OF THE LARYNX IN FIFTEEN CASES OF DIPHTHERITIC CROUP, IN THE SERVICE OF JOS. O'DWYER, M.D.

REPORTED BY DILLON BROWN, M.D.,

RESIDENT PHYSICIAN, NEW YORK FOUNDLING ASYLUM.

By intubation of the larynx we mean the insertion through the mouth into the larynx of a tube devised and perfected by Dr. Jos. O'Dwyer, of New York. The whole tube is completely contained within the larynx and trachea. The upper end rests upon the ventricular bands, and does not interfere with the functions of the epiglottis. The lower end is about half an inch from the bifurcation of the trachea.[1]

In all our cases we have uniformly inserted the tube to relieve suffering, without regard to the hopeless condition of the patient. No child has been allowed to die of layrngeal obstruction, although the tube was never inserted until the dyspnœa was most urgent.

CASE I.—Albert L——, aged three years and two months; diphtheria of larynx, pharynx, and posterior nares; albuminuria; recovery. (See report of case by Dr. O'Dwyer, *New York Medical Journal*, November 28, 1885.)

CASE II.—John E——, aged sixteen months; diphtheria of larynx and pharynx. Autopsy showed that pseudo-membrane extended from pharynx to the most minute bronchi. (See report of this case in *New York Medical Journal*, November 28, 1885.)

CASE III.—Herbert W——, aged one year and eleven months; diphtheria of larynx and posterior nares; severe rickets; double broncho-pneumonia; albuminaria; convulsions. This patient has rickets, and has never been able to walk or even stand alone. The post-nasal diphtheria began October 28th, and several days after this he had German measles, which lasted two days. He began to cough croupy November 4th, and signs of laryngeal obstruction soon showed themselves.

November 5th.—The dyspnœa grew progressively more severe, and at 5.15 P.M. it was excessive—extreme restlessness, deep sinking in of the lower end of the sternum, and cyanosis. Dr. O'Dwyer inserted one of his tubes, and the child, after coughing twenty minutes, fell into a quiet sleep. Temp., 102°; pulse, 138; resp., 24.

November 6th.—Slept quietly all night. He takes semi-solid food well, but has some difficulty in swallowing liquids. Temp., 103°; pulse, 192; resp., 36. P.M.: Temp., 103.2°; resp., 42. At 9.30 P.M. (twenty-eight hours after its insertion) the tube was coughed out and followed by a large amount of ropy, stringy mucus. It is rare for the tubes now in use to be coughed out, and in this case it was probably due to the thick, tenacious character of the mucus.

November 7th.—At 2 A.M. the characteristic croupy symptoms returned. 9 A.M.: Temp., 103°; pulse, 196; resp., 28. 7 P.M.: Temp., 103°; pulse, 180; resp., 48. The laryngeal obstruction gradually increased. At 7:30 P.M. the dyspnœa was extreme, and Dr. O'Dwyer was compelled to reinsert the tube (twenty-two hours after its removal).

November 8th.—Temp., 104°; pulse, 180; resp., 64. He is restless, and there are deep recessions above the clavicles and in the epigastrium. At noon the tube was removed, and a longer one inserted. The tube was coated with a tenacious ointment of nitrate of silver, ʒ j. to the ℥ j., in order to excite more vigorous coughing, which it did, and gave relief. P.M.: Temp., 102.1°; pulse, 150; resp., 36.

November 9th.—A.M.: Temp., 104.5°; pulse, 185; resp., 60. Slept well last night. Takes a fair amount of food. At 3 P.M. the tube was removed, four days after its first insertion. Physical examination shows an extensive double broncho-pneumonia. Much prostration. P.M.: Temp., 103.2°; pulse, 168; resp., 50.

November 10th.—A.M.: Temp., 103.3°; pulse, 168; resp., 54. The nasal discharge has stopped, and there has been no return of the croupy symptoms. P.M.: Temp., 103°; pulse, 168; resp., 60.

November 11th.—A.M.: Temp., 103.5°; pulse, 168; resp., 59. P.M.: Temp., 103.2°; pulse, 180; resp., 58. No signs of laryngeal obstruction.

November 12th.—Urine contains a large amount of albumin. No casts found. During the night he had a convulsion, and this morning another one, in which he died at 9.15 A.M., nearly three days after the removal of the tube, and the disappearance of all croupy signs.

Autopsy.—Extensive double broncho-pneumonia. Pleura hemorrhagic, and shows in places coating of fibrine. Interstitial emphysema of inner portion of left upper lobe. Bronchial glands enlarged. Trachea and larynx congested; trachea shows pseudo-membrane down to second division of bronchi. Kidneys not enlarged, markings fairly distinct. Liver congested. Other organs normal.

CASE IV.—Bessie L. H——, aged three years and two days; *diphtheria of larynx; albuminuria; double pneumonia.*

November 6th.—The first croupy signs appeared this morning, when she had a severe spasmodic attack of dyspnœa. After this had subsided there remained marked laryngeal obstruction, which grew worse very rapidly, and at 10.45 A.M. it was excessive. Dr. O'Dwyer inserted one of his tubes, which was expelled in fifteen minutes; but its use was followed by marked relief. Temp., 102°; pulse, 150; resp., 36. The char-

[1] For a description of the instrument and the case, see New York Medical Journal, August 1, 1885; and November 28, 1885; the Medical Record, February 21, 1885; Chicago Medical Journal and Ex., June and November, 1885; Archives of Ped., November, 1885; and Journal American Medical Association, February 6, 1886.

acteristic croupy symptoms returned immediately, and at 8 P.M. the child was suffering severely for air. Dr. O'Dwyer reinserted the tube, coated with a tenacious ointment of nitrate of silver, 3 j. to ℥ j., and left the string attached, by which it was removed in twenty minutes. It was applied in order to find out whether its astringent effect would enable the patient to dispense with the tube for several hours. But the obstruction returned rapidly, and the tube was reinserted at 10 P.M. The relief was immediate and the child fell asleep. Temp., 102°.

November 7th.—A.M.: Temp., 103°; pulse, 180; resp., 54. Sleeps quietly and takes a large amount of food. Physical examination shows abundant bronchial râles on both sides of the chest. Urine contains twenty per cent. albumin by bulk. P.M.: Temp., 105°; pulse, 160; resp., 54.

November 8th.—A.M.: Temp., 105°; pulse, 180; resp., 54. Urine contains 33⅓ per cent. of albumin by bulk. At 4.15 P.M. the tube was removed, but it was necessary to reinsert it at 5 P.M. She gradually failed, and at 10.30 P.M. died quietly—two and one-half days after first insertion of the tube.

Autopsy.—Larynx: Pale; some œdema of the folds; no pseudo-membrane. The lower half of the trachea contained a moderate amount of pseudo-membrane, extending into the second division of the bronchi. Trachea and bronchi intensely congested. Lungs: Œdema; extensive bronchitis; pneumonia of both lungs posteriorly. Kidneys: Congested, firm; markings distinct. Brain not examined. Other organs apparently normal.

Case V.—Sammy W——, aged three years and four months; tuberculosis; diphtheria of larynx, pharynx, and posterior nares; albuminuria; pneumonia.

November 21st.—Patient had a post-nasal and pharyngeal diphtheria, from which he was convalescent November 26th. But his temperature remained high and irregular, varying between 104.2° and 98° Fahr. Copious perspiration and frequently delirium. Pulmonary tuberculosis suspected.

December 13th.—Temp., 99°; pulse, 144; resp., 42. A croupy cough this morning. Pseudo-membrane has reappeared in the pharynx.

December 14th.—A.M.: Temp., 99.8°; pulse, 114; resp., 26. A fetid, bloody nasal discharge. P.M.: Temp., 102°; pulse, 168; resp., 24. Severe catarrhal conjunctivitis.

December 15th.—Otorrhœa. Pulse, 150; resp., 22.

December 22d.—All pseudo-membrane gone from pharynx.

December 28th.—A.M.: Temp., 103.5°; pulse, 180; resp., 36. P.M.: Temp., 101°; pulse, 180; resp., 23. Since last entry the temperature has varied between 105° and 101° Fahr. The cough has been more or less croupy. To-day the respiration became obstructed, and at 11.45 P.M. there was extreme dyspnœa. Dr. O'Dwyer inserted a tube, with complete relief. The boy coughed about fifteen minutes and fell into a quiet sleep.

December 29th.—A.M.: Temp., 102°; pulse, 144; resp., 30. P.M.: Temp., 103.1°; pulse, 180; resp., 28. No signs of laryngeal obstruction. At 11 P.M. (nearly twenty-four hours after its insertion) the tube was removed, and its calibre found free.

December 30th.—A.M.: Temp., 103.5°; pulse, 180; resp., 36. Slept fairly well last night. The dyspnœa slowly returned, and at 11 A.M. it was severe. The tube was reinserted (twelve hours after its removal), and gave immediate relief. P.M.: Temp., 104.5°; pulse, 168; resp., 34. At times marked delirium. Copious sweating of head and body. At 10.30 P.M. the tube was removed.

December 31st.—A.M.: Temp., 102.5°; pulse, 156; resp., 36. P.M.: Temp., 103.4°; pulse, 162; resp., 34. Moderate laryngeal obstruction.

January 1st.—A.M.: Temp., 103.5°; pulse, 156; resp., 29. The obstruction progressively increased, so that at noon it was excessive. At 12.10 (one and one-half day after its removal) the tube was reinserted, and the patient fell asleep in the nurse's arms. During the afternoon marked dyspnœa appeared. A larger and longer tube was inserted, and this gave relief. P.M.: Temp., 103.5°; pulse, 156; resp., 38. No dyspnœa.

January 2d.—A.M.: Temp., 104.8°; pulse, 156; resp., 60. At times delirious. Physical examination shows a broncho-pneumonia of left lower lobe; much prostration. Urine contains albumin, fifty per cent. by bulk, and hyaline and fine granular casts.

January 3d.—A.M.: Temp., 105.2°; pulse, 162; resp., 56, and irregular. At 10 A.M. the tube was removed (five and one-half days after its first insertion). P.M.: Temp.. 104.8°; pulse, 158; resp., 54. No dyspnœa.

January 4th.—A.M.: Temp., 105°; pulse. 156; resp., 66. About 3 P.M. the pulse was imperceptible, and the condition of the boy was that of extreme collapse. He rallied somewhat, and at 7 P.M. temp. was 104°; pulse, 156; resp., 76. No pseudo-membrane visible; no croupy symptoms.

January 5th.—Delirious all night. A.M.: Temp., 106.2°; pulse, 163; resp., 84. P.M.: Temp., 105°; pulse, 180; resp., 79. He slowly grew weaker and died quietly at 11 P.M.—two days and a half after the removal of the tube.

Autopsy.—Larynx, trachea, and bronchi, to about third division, contain a thin layer of pseudo-membrane. Superficial ulceration of mucous membrane of trachea, where lower end of tube came. Lungs: Lower two-thirds of left lung very firm, and marked infiltration of the small bronchi; recent diffuse pneumonia; less consolidation of the right lung, but in addition there are several tubercular cavities size of a bean; tubercular peri-bronchitis. Bronchial glands small, but contain tubercles. Kidneys: Moderate swelling of the epithelium of the convoluted tubules; size about normal. Heart, liver, and spleen normal. Stomach, intestines, and brain, not examined.

Case VI.—Katie H——, aged three years and four months; diphtheria of larynx and pharynx; pneumonia.

December 11th.—Yesterday her voice was hoarse. During the night she became croupy, and to-day the cough and inspiration present the characteristic croupy signs. Temp., 98°; pulse, 144; resp., 30. Tonsils and fauces are red and swollen, but no pseudo-membrane can be seen. Cervical glands enlarged. No nasal discharge. The dyspnœa grew progressively more severe, so that at 3.35 P.M. Dr. O'Dwyer inserted the tube, which gave immediate relief. P.M.: Temp., 102.2°; pulse, 138; resp., 34.

December 12th.—A.M.: Temp., 103.8°; pulse, 150; resp., 48. Both tonsils covered with pseudo-membrane.

December 13th.—A.M.: Temp., 102°; pulse, 150; resp., 38. P.M.: Temp., 103.2°; pulse, 174; resp., 60. Physical examination shows bronchial respiration on both sides of chest. A few subcrepitant râles on right side after coughing. Nostrils dilate on inspiration.

December 14th.—About 2.30 A.M. she became restless and had some dyspnœa; but she soon grew quiet, and died at 4 A.M.—two days and a half after insertion of the tube.

Autopsy.—Pharynx, larynx, trachea, and bronchi, to fifth division, contain pseudo-membrane. In the lungs the membrane can be traced to the fifth division in some bronchi, and only to the second in others. Glands along trachea, above bifurcation, enlarged, and several of them cheesy. Lungs: Much œdema and congestion. Small masses of pneumonia. Pleural exudate of delicate adhesions, more marked over the seat of the pneumonia. Spleen, liver, and kidneys normal. Mesenteric glands enlarged. Moderate catarrh of the intestines.

Case VII.—Vincentine W——, aged three years and six months; diphtheria of larynx and posterior nares; pertussis; pneumonia; albuminuria. Two weeks ago she had a broncho-pneumonia, from which she is now convalescent. She has whooping-cough.

December 21st.—The characteristic croupy symptoms were well marked at noon. The pharynx is swollen and red, but no membrane can be seen. P.M.: Temp., 102°; pulse, 156; resp., 21.

December 22d.—P.M.: Temp., 102°.

December 23d.—A.M.: Temp., 99.8°; pulse, 75; resp., 25. P.M.: Temp., 101°; pulse, 168; resp., 30. A bloody, fetid nasal discharge. No pseudo-membrane is visible. Vomits frequently, but takes a good amount of food. At noon she coughed up a large piece of pseudo-membrane.

December 24th.—A.M.: Temp., 100.2°; pulse, 168; resp., 36. The dyspnœa grew progressively worse, so that at 2 P.M. it was excessive; extreme restlessness, cyanosis, and deep falling in of the lower end of the sternum. The tube was inserted and gave immediate relief. There was coughed up through the tube a large cylinder of pseudo-membrane, with three branches. P.M.: Temp., 104.2°; pulse, 180; resp., 48.

December 25th.—A.M.: Temp., 102°; pulse, 156; resp., 42. P.M.: Temp., 103.6°; pulse, 192; resp., 48. Slept quietly last night. Pseudo-membrane in the pharynx. Much prostration. Urine contains albumen, fifty per cent. by bulk, and a few granular casts.

December 26th.—At 1.30 A.M. the tube was removed and found free from obstruction. The dyspnœa returned so rapidly that the tube was immediately reinserted, but without relief. It was removed and a cast of the trachea expelled, but the dyspnœa was not relieved until the tube was put back. She died quietly at 4 A.M., thirty-eight hours after its first insertion.

Autopsy.—Larynx, pharynx, and trachea, to finest bronchi, contain pseudo-membrane. Lungs: Bronchial glands large and cheesy; tubercular peri-bronchitis and some diffuse tubercular tissue of right lung; also some recent pneumonia of both lungs; interstitial emphysema of left anterior superior lobe. Kidneys large and boggy; cortex thick, and striations indistinct. Other organs appeared normal.

Case VIII.—Adelaide I——, aged three years and seven months; diphtheria of larynx, pharynx, and posterior nares; albuminuria; recovery.

December 28th.—Post-nasal and pharyngeal diphtheria began December 25th. Last night the characteristic croupy cough and respiration began. A.M.: Temp., 100.6°; pulse, 150; resp., 30. The dyspnœa grew progressively more severe, and at 6.40 P.M. it was excessive. I inserted the tube and it gave immediate relief. P.M.: Temp., 100.5°; pulse, 150; resp., 28.

December 29th.—A.M.: Temp., 103.8°; pulse, 174; resp., 60. Slept quietly all night. Takes a fair amount of food. P.M.: Temp., 102.3°; pulse, 162; resp., 42.

December 30th.—A.M.: Temp., 101°; pulse, 162; resp., 36. No membrane is visible in the pharynx. At 6.30 P.M. a piece of pseudo-membrane was expelled through the tube. P.M.: Temp., 102.5°; pulse, 150; resp., 36.

December 31st.—A.M.: Temp., 104.5°; pulse, 180; resp., 42. At 7.30 A.M. the tube was expelled, and its calibre found free of obstruction. The dyspnœa returned quickly and soon became excessive—extreme restlessness, cyanosis, and deep sinking in of the lower end of the sternum. At 1 P.M. she was comatose. I quickly inserted the tube, which gave immediate relief to the dyspnœa, but caused no coughing. She remained unconscious until 4 P.M., when she began to rally. In all our cases we have uniformly waited until the dyspnœa was excessive before inserting the tube. The operation is done so quickly, requiring only a few seconds, that we have been able to defer the operation longer than we would have dared to do if we intended to resort to tracheotomy. Thus we have had four recoveries from diphtheritic croup without resorting to any interference; and in all of these cases the dyspnœa was well pronounced, and would have urgently called for tracheotomy. P.M.: Temp., 104.6°; pulse, 164; resp., 56. No dyspnœa, and the patient is bright and comfortable. Urine contains twenty per cent. albumen by bulk, and hyaline and fine granular casts.

January 1st, 1886.—Slept quietly last night. The tube was removed at 9.25 A.M.—three days and fifteen hours after its first insertion. A.M.: Temp., 102.6°; pulse, 138; resp., 32. P.M.: Temp., 99.8°; pulse, 132; resp., 34.

January 2d.—A.M.: Temp., 100°; pulse, 144; resp., 30. P.M.: Temp., 101.2°; pulse, 144; resp., 27. A croupy cough, but no dyspnœa.

January 3d.—A.M.: Temp., 101°; pulse, 126; resp., 32. P.M.: Temp., 101°; pulse, 135; resp., 46. No dyspnœa. Voice hoarse and inspiration noisy.

January 4th.—A.M.: Temp., 99.8°; pulse, 132; resp., 36. P.M.: Temp., 99.6°; pulse, 132; resp., 30.

January 5th.—A.M.: Temp., 99.6°; pulse, 144; resp., 36. P.M.: Temp., 100°; pulse, 126; resp., 24.

January 6th.—A.M.: Temp., 98.9°; pulse, 138; resp., 28. P.M.: Temp., 99.8.° No croupy symptoms. Respiration noisy when asleep.

January 7th.—Temp., 99.5°; pulse, 132; resp., 30. Convalescent.

January 11th.—Slight paralysis of the muscles of both legs.

January 14th.—She was out of bed and dressed.

January 18th.—She regained her voice—seventeen days after the removal of the tube.

Case IX.—Eliza W——, aged eleven months; diphtheria of larynx and pharynx; albuminuria.

December 22d.—A.M.: Temp., 102.8°; pulse, 168; resp., 60. The pillars of the fauces, the uvula, tonsils, and posterior wall of the pharynx covered with pseudo-membrane. The characteristic croupy symptoms are well marked. Miserable condition. The dyspnœa grew severe, and although it was a hopeless case from the beginning, the tube was inserted to relieve the suffering. At 11.30 A.M. I inserted the tube. The child immediately fell into a quiet sleep, and the respiration dropped from 60 to 48 per minute. P.M.: Temp., 104.8°; resp., 96. At 9 P.M. (nine and one-half hours after its insertion) the tube was removed and its calibre was free. The dyspnœa returned so rapidly that the same tube was put back at 9.30 P.M. Temp., 105.6°; resp., 66. Urine contains albumen fifty per cent. by bulk.

The dyspnœa returned in a few hours, and at 2 A.M., December 23d, she died with severe dyspnœa (fourteen and one-half hours after the insertion of the tube).

Autopsy.—A thin layer of pseudo-membrane in the trachea, ending at the bifurcation. Lungs: Intense bronchitis and œdema; no consolidation. Marked œdema of the anterior mediastinum. Kidneys: Markings slightly indistinct. Larynx: Swelling of the epiglottis, and ary-epiglottic folds overlapping the aperture of the tube. This condition never having occurred before, it was not suspected. The introduction of a larger-headed tube would have removed the difficulty. The secondary dyspnœa in this case was believed to be due to the extension of the membrane into the bronchial tubes. This dyspnœa always occurs when the bronchi are plugged by pseudo-membrane to any extent.

Case X.—Julia Mc——, aged three years and three months; diphtheria of larynx and pharynx; albuminuria; double pneumonia.

December 24th.—Last night about 8.30 P.M. the characteristic croupy symptoms appeared. A.M.: Temp., 100.6°; pulse, 150; resp., 20. P.M.: Temp., 101.8°; pulse, 150; resp., 24. No pseudo-membrane visible in the pharynx. The laryngeal obstruction grew progressively worse. At 10.30 P.M. a piece of pseudo-membrane was coughed out, but it gave no relief. At 10.40 P.M. the dyspnœa was extreme, and the tube was inserted. The child fell into a quiet sleep and rested well all night.

December 25th.—A.M.: Temp., 103°; pulse, 168; resp., 28. P.M.: Temp., 103.8°; pulse, 180; resp., 36. No dyspnœa. Coughed a small piece of membrane from the trachea through the tube.

December 26th.—At 1.30 A.M. the tube was removed, and its calibre found free. Temp., 104.6°; pulse, 178; resp., 42. The obstruction returned rapidly, and at 6.35 P.M. (seventeen hours after removal of the tube) it was so severe that the tube was reinserted. Immediate relief to the dyspnœa. P.M.: Temp., 103.2; pulse, 168; resp., 44.

December 27th.—A.M.: Temp., 104.5°; pulse, 168; resp., 48. P.M.: Temp., 104.5°; pulse, 168; resp., 46. Cheeks flushed and nostrils dilate. Pseudo-membrane visible in the pharynx for the first time. Urine: Sp. gr., 1.028; acid; no casts; albumen, thirty-three and one-third per cent. by bulk. At 9.45 the tube was removed, but the dyspnœa returned so rapidly that it was reinserted in half an hour. She gradually failed, and at 10.30 P.M. she died comatose—three days after the first insertion of the tube.

Autopsy.—Pseudo-membrane in the pharynx and larynx. There is a thick, tenacious cast of pseudo-membrane from the tip of the epiglottis to the most minute bronchi. Lungs: Pneumonia of posterior portion of both lungs. Pleura shows points of hemorrhage. Glands moderately enlarged and dusky. Kidneys show some cloudy swelling. Heart, liver, spleen, stomach, and intestines normal.

Case XI.—Rose M. T——, aged four years and eight months; diphtheria of larynx and pharynx; albuminuria; recovery. Just recovering from whooping-cough. December 28th she had a pharyngeal diphtheria, from which she was convalescent January 3d.

January 5th.—Last night she was hoarse, and this morning the characteristic croupy symptoms appeared. The pharynx is swollen and red, and on the left tonsil there has reappeared a patch of pseudo-membrane. A.M.: Temp., 100.5°; pulse, 158; resp., 30. P.M.: Temp., 99.5°; pulse, 132; resp., 30. Urine contains albumen, fifty per cent. by bulk.

January 6th.—A.M.: Temp., 99 5°; pulse, 120; resp., 28. P.M.: Temp., 100.6°; pulse, 156; resp., 26. Pharynx covered by dark gray, sloughy pseudo-membrane. A small piece of membrane expelled while coughing. Well-marked laryngeal obstruction, which has increased slowly and progressively. At 11.20 P.M. it was severe and the tube was inserted. She coughed about half an hour and then fell asleep. After the insertion of the tube the patient usually coughs about fifteen minutes and then falls into a quiet sleep—the dyspnœa is completely relieved. The coughing is of much benefit by aiding the expulsion of mucus, and the tube is often coated with an ointment of nitrate of silver for that purpose.

January 7th.—P.M.: Temp., 101°; pulse, 138; resp., 38. Slept quietly all night; no dyspnœa. She does not take food as well as usual. When the tube is in the larynx the patients usually take semi-solid food, as soft-boiled eggs, mush, ice-cream, etc., from the beginning; but it is twenty-four hours, as a rule, before they learn to take liquid food easily.

January 8th.—A.M.: Temp., 100.6°; pulse, 108; resp., 36. P.M.: Temp., 101.5°; pulse, 138; resp., 34.

January 9th.—A.M.: Temp., 101.2°; pulse, 144; resp., 32. Tube removed at noon, two and a half days after its insertion. P.M.: Temp., 101.4°; pulse, 150; resp., 36; slight croupy cough; no dyspnœa.

January 10th.—A.M.: Temp., 101°; pulse, 162; poor condition; no dyspnœa; urine contains fifty per cent. albumen by bulk; feet, hands, and face are much swollen. On great effort, she can phonate (one day after the removal of the tube).

January 11th.—A.M.: Temp., 99.8°. P.M.: Temp., 99.2°.

January 12th.—A.M.: Temp., 100°; pulse, 126; resp., 30. P.M.: Temp., 99.8°; urine contains no albumen; œdema of hands and feet gone; good, clear voice. Well.

Case XII.—Eva O——, aged one year and two days; diphtheria of larynx, varicella; miserable condition.

January 15th.—The baby is in miserable condition. It was born prematurely and has never thrived. There has been a well-marked croupy cough and respiration since yesterday afternoon. The dyspnœa gradually increased until noon, when it was excessive; rapid respirations, restless, dark color of skin, and deep falling in of the lower end of the sternum. The tube was inserted and relieved the dyspnœa immediately; but the child was so exhausted that the presence of the tube caused only a few feeble coughs; fetid otorrhœa. The case was hopeless from the beginning, and the tube was inserted only to relieve the suffering. No pseudo-membrane visible in the pharynx; physical examination shows a double pneumonia. P.M.: Temp., 104.5°; resp., 64. The baby gradually failed, and at 6 A.M., January 16th, quietly died, eighteen hours after the insertion of the tube.

Autopsy.—Epiglottis normal. No pseudo-membrane in the larynx, except over the ventricles. Trachea lined by a thin layer of pseudo-membrane; membrane extends to the third division of the bronchi. Lungs: Bronchopneumonia of lower portion of both lungs, more marked on left side. The lower end of the tube came within half an inch of the bifurcation of the trachea.

Case XIII.—Minnie V——, aged three years and nine months; diphtheria of larynx and pharynx; pertussis; recovery. Patient is in poor condition and has pertussis. January 3d, she had diphtheria of pharynx, from which she was apparently well January 13th.

January 14th.—P.M.: Temp., 100°; urine normal; well-marked croupy symptoms appeared last night. The dyspnœa grew progressively worse, so that at 9 P.M. the tube was inserted. At 9.40 P.M. she was asleep and all the dyspnœa gone. Pulse, 134; resp., 26. Good respiratory murmur over both lungs.

January 15th.—A.M.: Temp., 100.5°; pulse, 126; resp., 31. P.M.: Temp., 101.8°; pulse, 120; resp., 48. There was a small patch of pseudo-membrane in the pharynx yesterday, but it has disappeared to-day; no dyspnœa.

January 16th.—A.M.: Temp., 99°; pulse, 156; resp., 42; sleeps well, takes food well and is comfortable. At noon the tube was removed—thirty-nine hours after its insertion. P.M.: Temp., 101.2°; pulse, 132; resp., 22. The croupy signs have returned, but there is no dyspnœa.

January 17th.—A.M.: Temp., 99.5°. P.M.: Temp., 99.8°; pulse, 120; resp., 20.

January 24th.—Since last entry she has improved rapidly. No return of the dyspnœa, and the temperature has not been above 101° Fahr.; good voice. Well.

Case XIV.—Emily E——, aged three years and five months; diphtheria of larynx and pharynx.

January 16th.—This morning the characteristic croupy symptoms appeared. There is a large patch of pseudo-membrane in the pharynx. A.M.: Temp., 102.2°; pulse, 138; resp., 40. P.M.: Temp., 102.5°: pulse, 156; resp., 28. The laryngeal obstruction is well marked. Severe epistaxis.

January 17th.—The dyspnœa grew progressively worse, and at 5 A.M. it was excessive. I inserted a tube and it gave immediate relief. She vomited freely and expelled a piece of pseudo-membrane while coughing. Pulse, 180; resp., 36. At 9 A.M.: Temp., 104.5°; pulse, 180; resp., 73. Although the respiration is rapid there is no dyspnœa. Physical examination of the chest is negative. P.M.: Temp., 105°; pulse, 192; resp., 72. At 7.30 P.M. the tube was removed to see if its calibre was free. The tube was clear, and at 7.45 P.M. it was reinserted, coated with an ointment of nitrate of silver to excite coughing. Pulse over 200. She gradually failed and died quietly at 2.30 A.M., January 18th—twenty-one and a half hours after the insertion of the tube.

Autopsy.—Pharynx, larynx, trachea, and bronchi to nearly the base of the lung, contain macerated pseudo-membrane. Tonsils excavated. Lungs: Beginning pneumonia in both; marked œdema; pus easily ex-

pressed from bronchi; bronchial glands enlarged and dusky. Liver and kidneys congested. Heart normal. Intestines: Peyer's patches moderately congested and swollen; solitary follicles pigmented. Urine drawn post-mortem contains no casts.

Case XV.—Liza W——, aged five months and twelve days; diphtheria of larynx and posterior nares; diarrhœa. She had varicella January 14th.

January 20th.—About 8 P.M. yesterday the first signs of croup appeared, since which time the dyspnœa has gradually increased. Severe diarrhœa. P.M.: Temp., 101.4°; resp., 50. Fetid, bloody nasal discharge.

January 21st.—At 3.30 A.M. the dyspnœa was so severe that a tube was inserted. It gave immediate relief to the dyspnœa, but the baby was so exhausted that the presence of the tube caused no coughing. The child fell asleep and all dyspnœa disappeared. A.M.: Temp., 104.4°; resp., 84. Cheyne-Stokes respiration.

January 22d.—She gradually failed, and died quietly from exhaustion at 1 A.M.—twenty-one and a half hours after the insertion of the tube. After death the tube was removed and found clear.

Autopsy.—Larynx, trachea, and bronchi (left) contain pseudo-membrane, going from root to base of lung. Less pseudo-membrane in the bronchi of the right lung. Lungs: Well-marked double broncho-pneumonia. Kidneys, heart, liver, and spleen seem normal. Intestines: Peyer's patches swollen; mesenteric glands enlarged.

The autopsies were made by Dr. W. P. Northup, pathologist to the asylum.

To recapitulate:

1. All the cases were among the class of children called foundlings.

2. The tube was inserted in *every* case of severe laryngeal obstruction that occurred in the asylum without regard to its hopeless character.

3. One-third of the cases were babies aged sixteen, twenty-three, eleven, twelve, and five months respectively, an age at which recovery after tracheotomy is extremely rare.

4. Two (Cases V. and VII.) had tuberculosis, a disease which is in itself absolutely fatal.

5. One (Case III.), a rickety child, died of uræmic convulsions three days after the disappearance of all laryngeal obstruction.

6. The tube requires no attention, after its insertion, to keep it clean, and if a piece of pseudo-membrane should close it (which is not likely to happen), the tube is held in place so loosely that it would be immediately expelled.

7. The inspired air is warm and moist. This prevents drying of the secretion in the tube.

8. The head or shoulder of the tube does not rest upon the vocal cords, but just above them on the ventricular bands. There is never any ulceration of the cords, but slight ulcerations may be produced by the head and the lower end of the tube, when retained for a long time. This can do no harm.

9. There is not the slightest danger of the tube slipping through into the trachea.

10. In most cases semi-solid food is taken well from the beginning; but it usually takes twenty-four hours for the child to learn to swallow liquids. Occasionally, in very young children, it is necessary to feed them through a tube.

11. The mouth-gag is intended only for children who have back teeth. In babies there is no difficulty in keeping the mouth open with the finger.

A Gift from Medical Students.—The students of medicine and pharmacy of Marseilles have presented to the hospital administrators the sum of nearly twenty thousand francs, to be applied to the erection of isolating wards for the reception of children suffering from contagious diseases. The money was the net proceeds of a series of balls given by the students in recent years.

REMARKS UPON SOME OF THE PHYSICAL SIGNS OBSERVED IN EXAMINATION OF THE CHEST.[1]

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The history of Inspection and Palpation as methods of procedure in the physical examination of the chest appears to be unknown. The same may be said of Mensuration, although some of the instruments used for that purpose, such as the stethometer, cyrtometer, and the like, are comparatively recent inventions.

Thoracic percussion, however, was discovered by Auenbrugger in 1753, while engaged in the study of empyema and the indications for thoracentesis in that disease. He was born in Gratz, Styria, in 1722, and practised in Vienna, where he died in 1809. He performed only immediate percussion, and published his views on that subject in 1761. Piorry, of Paris, invented the pleximeter in 1828, and was the first to practise mediate percussion. He was the first also to draw attention to the increased sense of resistance which accompanies the dull percussion sound. To Walshe, of London, more recently, is due the honor of having been the first to call attention to the all importance of pitch in the clinical examination of the heart and lungs. Skoda was the first to describe tympanicity as a quality of percussion resonance. That occurred in 1839, and in 1841 Wintrich invented the percussion hammer. Since that time, Guttmann, of Berlin, Gerhard, Geigel, and others have called attention to variations in the pitch of tympanitic resonance. Flint, of New York, first applied the term vesiculo-tympanitic (called bandbox by Biermer) to the exaggerated percussion resonance of emphysema, and broncho-vesicular, instead of rude or harsh, to the respiratory murmur obtained over incomplete consolidation of lung-tissue, as observed in incipient phthisis.

Hippocrates (460–375 B.C.) was the inventor of succussion, by which means the splashing sound characteristic of pneumo-hydrothorax is detected. He may, therefore, be said to have been the first to make use of auscultation, but to a very limited extent. But Laennec, of Paris, invented the stethoscope in 1816, and was the first to give to auscultation the value which it now possesses. Honoré, a contemporary with Laennec, first observed the pleuritic friction sound as a physical sign, but its true pathological significance was afterward fully pointed out by Raynaud.

Trousseau, of Paris, first brought before the profession in a practical manner the operation of paracentesis thoracis (thoracentesis) in cases of extensive pleuritic effusions, whether of serum or pus. After his death it fell into disuse, but was revived in 1852 by Dr. Bowditch, of Boston, Mass., who clearly pointed out the indications for the operation. More recently, by means of the hypodermic syringe, the existence and character of pleuritic effusions can be established with certainty. In 1840 Drs. Cammann and Alonzo Clark, of New York City, invented auscultatory percussion. It is especially useful in the diagnosis of thoracic aneurism, but may also be used for accurately determining the boundaries of the heart, liver, and other organs of the body.

Other less important procedures in physical diagnosis are autophonia, the method by musical vibrations, and phonometry. Autophonia was first brought into notice by the late M. Hourmann, who "connected peculiarities in the resonance of the observer's own voice (as he speaks with the ear applied to the chest directly, or with the intervention of the stethoscope) with certain definite conditions of density of the parts beneath." The method by musical vibrations originated with Drs. Stone and Grabham (London *Lancet*, vol. i., 1867, p. 114), and consists in "communicating a musical impulse to the air in the

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bronchial passages by forcibly inspiring through a tube or pitch-pipe containing a free reed. The note emitted is directly conveyed to the parts under observation." Phonometry is a new method described by Baas. It "consists in placing a vibrating tuning-fork on the surface of the chest or abdomen, and determining, by the intensity or feebleness of the tone it gives, the condition of the subjacent organs." The best instrument for this purpose is Blake's tuning-fork, with a small spring hammer attached.

Although physical diagnosis approaches nearer, perhaps, to an exact science than any other branch of the practice of medicine, yet, even in this, eminent authors sometimes make such conflicting statements about the same thing that one is left in doubt as to the real condition. In emphysema, for instance, the apex beat of the heart is displaced, according to some authors, downward and inward. According to Niemeyer and others, it is carried downward and outward. Niemeyer (seventh Germ. ed., American trans., vol. i., p. 126) says that "as a natural consequence of depression of the diaphragm in emphysema, the oblique position of the heart becomes more horizontal, and its apex lies farther out." According to my own experience that is the rule, the displacement downward and inward, being the exception. The epigastric pulsation is due to the right ventricle, which has been lowered and hypertrophied—the latter condition having been brought about by obstruction to the circulation of the blood in the lungs. Sometimes the apex-beat in this disease is so obscured by lung-tissue spread over it that it is difficult, and even impossible, to find it.

The sound produced by percussing the healthy chest is variously termed, by different authors, normal vesicular resonance, normal pulmonary resonance, and normal percussion resonance. I prefer the latter expression, it being in more marked contradistinction to that of normal *vocal* resonance.

The note of any percussion resonance consists of four properties or elements: 1, Duration (length); 2, intensity (amount); 3, pitch; 4, quality (timbre). Pitch marks the different degrees of elevation of sounds elicited by percussing different substances. Liquids emit, under percussion, a higher-pitched sound than solids, and solids than gases (Walshe: "Diseases of the Lungs," fourth edition, p. 48). Quality marks the different kinds of sounds that are characteristic of different substances. Thus flatness is characteristic of the presence of fluid, dulness of solidification, and tympanicity of a cavity with tense walls and containing air. Walshe and some others are right, I think, in regarding pitch as the most important property of a percussion note, the duration and intensity being secondary to and varying with it. The lower the pitch the longer will be the duration, and the greater the intensity (amount, volume). On the other hand, the higher the pitch the shorter will be the duration of the note and the less the intensity. Skoda, however, pronounces pitch to be an attribute of chest-sounds of no value, and Guttmann ("Handbook of Physical Diagnosis," p. 60, William Wood & Co., New York, 1880) regards intensity as the most important.

To distinguish differences in pitch, especially when slight, is not within the reach of every one. It is simply a natural gift, and belongs to those who are born with what is called an ear for music. Even then it requires cultivation and practice.

Authors differ as to whether the pitch of percussion resonance at the end of a full inspiration is higher or lower than it is at the end of a full expiration. According to Walshe (*op. cit.*, p. 62) it is higher at the end of a forced expiration. Guttmann, Da Costa, and Flint state that it is higher at the end of a forced inspiration, owing to increased tension of the chest-walls and lung-tissue. A chest with little expansive power may be made very tense on forced inspiration without increasing the volume of air in proportion. Here the pitch of the percussion note would be higher at the end of a full inspiration. If volume exceeded tension we would get a lower note. Flint ("Manual," pp. 58, 59, Lea Brothers & Co., fourth edition, 1885) says that "the instances of disease, however, are exceedingly rare in which such nicety of discrimination is important."

In the same way we find different statements about the pitch of the percussion resonance in emphysema. Walshe (*op. cit.*, p. 328) says it is lowered, while Flint (*op. cit.*, p. 165) says it is more or less raised. The truth is, the pitch in emphysema is sometimes lowered and sometimes raised, but the quality remains the same. Especially do we find it raised in cases of long standing and complicated with old bronchitis and peribronchial thickening, together with marked rigidity of the chest-walls.

If Walshe's statement (*op. cit.*, p. 48) be correct, and I believe it is, that, other things equal, the greater the quantity of air in the part struck, the lower the pitch, we have one important fact toward explaining variations in the pitch of tympanitic resonance. The bass-drum emits tympanitic resonance on percussion, and so does the snare-drum. But the pitch of the former is lower than that of the latter. The pitch also varies with the amount of tension. It may be higher or lower, therefore, than the pitch of normal percussion (pulmonary, vesicular) resonance. According to Guttmann (*op. cit.*, p. 72) the pitch of tympanitic resonance obtained by percussing pulmonary cavities is higher when the mouth is open, lower when it is shut, and lower still when the nostrils are closed—provided the cavity communicates freely with a large-sized bronchial tube.

In percussion resonance, as already said, the lower the pitch the greater, as a rule, will be the intensity of the note and the longer its duration. How is it in the case of vocal resonance? The same law applies to *normal* vocal resonance, but in *bronchial* vocal resonance (bronchophony), as obtained in case of solidified lung-tissue, the pitch is raised, the duration is shortened, but the intensity, as a rule, is markedly increased. The change in pitch is due to the change the voice makes from one medium to another—from normal tissue to solidification—in its transmission to the chest-walls (Walshe, *op. cit.*, p. 147). But it is raised all the same, and with that the intensity is increased instead of being diminished, or just the reverse of what occurs in percussion resonance. The fact appears to be that in percussion resonance, or normal vocal resonance, when the pitch is low, the intensity is greater in the sense of *volume;* whereas in bronchophony, although the pitch of the voice-sound has been raised *in transitu*, the intensity has been increased in *concentrated amount*, due to increased conduction, by reason of consolidated lung-tissue.

The fact that in bronchophony the intensity of the vocal resonance is increased though the pitch be raised, should not lead to the error of supposing that a high-pitched or loud, shrill voice is most favorable for the production of any kind of vocal resonance. On the contrary, a loud, harsh, low-pitched voice will, other things equal, give not only better normal vocal resonance, but also more intense bronchophony than will a loud, shrill (high-pitched) voice.

What is true of bronchophony is also true of bronchial breathing. Here also the pitch is higher and the duration shorter, but the intensity (concentrated amount) is increased.

The pitch of normal percussion resonance is higher, as a rule, in the right subclavicular (infraclavicular, supramammary) region than the left. Walshe ("Diseases of the Lungs," p. 64, fourth edition) attributes this to the greater development of muscle on the right side, as is generally the case. When the normal pitch is higher on the right side, in the absence of such preponderance of muscular tissue on that side, as in the case of a left-handed person, he offers no explanation.

According to Flint ("Manual," p. 51, fourth edition,

1885) the raise in the pitch of percussion resonance in the subclavicular region is due to the combination of the vesicular with a tympanitic quality toward the sternum, the latter being derived from the primary and secondary bronchi. Whether it be this or the presence of bronchial tubes occupying space that would otherwise be taken up by vesicular tissue, the fact that the right primary bronchus is larger and higher up than the left, would cause the pitch to be slightly higher in the right than the left subclavicular region.

Besides this, the right lobe of the liver as a solid base for the right lung, may possibly have some influence toward raising the pitch of the right subclavicular (infraclavicular, supramammary) region, as opposed to the large end of the stomach in relation to the left lung. Da Costa and Loomis simply mention the fact, while Guttmann ("Handbook of Physical Diagnosis," p. 68, William Wood & Co., New York, 1880) states that "on the right the pitch is usually deeper (lower) than on the left, though occasionally the reverse condition is met with." Such variations, according to the same author, possess no diagnostic value, as they depend only on the physiological differences in the tension of the chest-wall. According to my own observations the pitch of the normal percussion resonance is slightly higher in the right than in the left subclavicular region, as a rule. When the reverse occurs it is the exception.

All the authors quoted thus far, except Guttmann, state that the normal respiratory murmur in the right subclavicular region is more bronchial in character than on the left side. In the former, according to Loomis ("Physical Diagnosis," p. 35, William Wood, New York, 1883), the pitch of both inspiration and expiration is higher, less vesicular, and the expiration more pronounced and prolonged than in the latter. Guttmann states, erroneously I think, that it is simply more intense sometimes on one side, sometimes on the other. Flint (*op. cit.*, p. 87) calls this breathing in the right subclavicular region "the normal broncho-vesicular respiration," and says that "these several modifications of the respiratory murmur in the infraclavicular region are marked in proportion as the sounds are studied near the sternum, that is, over the site of the primary bronchi." In other words, the right primary bronchus, being larger than the left and higher up, gives the broncho-vesicular character to the normal respiratory murmur in the right subclavicular region which is not to be found in the left.

The reason why normal vocal fremitus is felt with greater intensity on the right side than on the left is, I believe, correctly given by Guttmann (*op. cit.*, p. 49) and others, and that is because the right bronchus is larger than the left. Moreover, according to Gray ("Anatomy," p. 850, Henry C. Lea's Son & Co., Philadelphia, 1883), the septum between the two primitive bronchi is situated to the left of the median line, so that foreign bodies entering the trachea naturally drop into the right bronchus. It is reasonable, therefore, to suppose that a greater amount of voice-sound would be conducted to the right than to the left side of the chest. Moreover, the left bronchus passes under the arch of the aorta, which may tend to interrupt the vibrations in that tube. The same reasons may be given why the normal vocal resonance is more marked on the right side than the left, as was first noticed by Stokes, of Edinburgh, Scotland.

In reviewing the points of disparity between the physical signs, as obtained in the right and left subclavicular regions of the healthy chest, we note the following: 1. Inspection is chiefly negative. 2. Palpation gives more fremitus on the right side. 3. The pitch of the percussion note is, as a rule, slightly higher on the right side. 4. Upon auscultation we find normal broncho-vesicular respiratory murmur and more intense vocal resonance on the right side. In other words, we have in the right subclavicular region of a healthy chest some physical signs which resemble very closely those of incomplete consolidation of lung-tissue, as seen in incipient phthisis. All that is wanting to make out this latter disease are localized subcrepitant râles or the mucous click. "Without a practical knowledge of these points of disparity," says Flint (*op. cit.*, p. 88), "error in diagnosis can hardly be avoided."

Walshe (*op. cit.*, p. 26) states that "as a general rule sounds of high pitch give *relatively* most vocal resonance, sounds of low pitch most fremitus." In other words, a high-pitched voice may give a fair amount of vocal resonance without any fremitus. This does not mean that a high-pitched or loud, shrill voice gives better vocal resonance than a loud, low-pitched voice, for farther on he says (*op. cit.*, p. 126) that, "*cæteris paribus*, the natural (vocal) resonance is marked in proportion to the graveness of the voice." Flint (*op. cit.*, p. 91) states that the "intensity (of normal vocal resonance) depends greatly on the loudness and lowness in pitch of the voice of the person examined. The resonance is notably weaker in women than in men." This view accords with those of Da Costa, Loomis, Guttmann, and others, so that it may be accepted as a fact that, other things being equal, a loud, low-pitched, harsh voice gives more intense vocal resonance, as a rule, than a high-pitched, or loud, shrill voice.

According to Walshe (*op. cit.*, p. 26) "vocal fremitus and audible vocal resonance bear no uniform relationship to each other, either in health or disease." And yet the conditions enumerated by him as most favorable for the production of both are about the same. They are: 1. A loud, harsh, low-pitched voice. 2. They are both more marked, therefore, in adults than in children, and in males than in females. 3. Both are more marked in the long-bodied and large-chested than in short-chested persons. 4. Chest-walls unencumbered with superfluous fat or extra development of muscle. 5. Both are more intense on the right side than the left.

It is true that vocal resonance may be well marked in a spot where vocal fremitus is feeble or wholly deficient, but it is the exception and not the rule. Indeed, Guttmann (*op. cit.*, p. 128) says that "the intensity of this sound (vocal resonance), at any part, corresponds exactly to that of the vocal thrill (fremitus); the conditions, therefore, on which depend the greater or less audibleness of the voice at any point of the surface of the thorax are precisely those formerly enumerated (*op. cit.*, p. 49) as similarly affecting the intensity of the pectoral (vocal) fremitus."

Both normal vocal fremitus and resonance are most marked in the subclavicular, infrascapular, and interscapular regions of the right side. Over the liver and heart, of course, the normal vocal resonance and fremitus are diminished or even absent, but, according to Walshe, the kidneys, unless enlarged, affect neither.

A curious fact about normal vocal fremitus is that its intensity is slightly increased by the recumbent posture, regardless of the substance reclined on. The voice-sound appears simply to be conducted to the chest-walls with slightly more force in the horizontal position, but the fremitus may be more marked when the person examined reclines on a spring couch, for instance, than a non-vibrating substance.

Of course the vocal resonance and fremitus may be increased or diminished both in health and disease. The conditions most favorable for their production in health have already been given, and the opposite of these will cause the vocal resonance to be more or less diminished, and the fremitus may be entirely absent, as in the case of a woman with a short, fat chest and a high-pitched, soft voice.

In disease, thickened pleura, and also emphysema, will, as a rule, diminish both vocal reasonance and fremitus. The former muffles them according to the degree of thickening, and in the latter case the lungs do not conduct the voice-sounds as well as in health. Stoppage of the bronchial tubes with mucus or the like will also cause them both to be diminished over the part to which

the tubes are distributed. Air or fluid in the pleural sac may cause both to be diminished or absent on the affected side. Occasionally a small spot is found over an extensive serous effusion where fremitus, bronchophony, and bronchial breathing may be obtained. This is probably due to a string of pleuritic adhesion attaching the compressed lung to the chest-wall. The voice and breath-sounds are then telephoned, as Dr. Leaming aptly terms it, along the string of adhesion to the chest-wall. While strings or small spots of pleuritic adhesions may not noticeably affect vocal resonance or fremitus, or may even serve to conduct the voice and breath-sounds with increased force, extensive plastic adhesions and thickened pleura, as a rule, diminish vocal resonance and fremitus according to the degree of thickening. There are, of course, many other causes affecting the vocal resonance and fremitus which space does not allow.

The differentiation of adventitious sounds is usually not difficult, except occasionally, as, for instance, in the case of fine, moist, bronchial and intrapleural râles. According to Flint (*op. cit.*, p. 136) the diagnosis is not difficult; but according to Da Costa ("Medical Diagnosis," p. 247, fifth edit., 1881), "where the secretions are viscid it would require a sense of hearing more delicate than belongs to the majority of mankind to judge, by the application of this test, whether the sound we perceive is formed in the lung or on its covering." Both are heard, usually, more plainly on inspiration than expiration. If they change with coughing, are not uniform, are attended with more or less expectoration and occasional sibilant râles, are bilateral and diffused, or else limited to one apex, they are probably bronchial. If, on the other hand, the râles are unaffected by coughing and are uniform; if the cough be reflex and there is little or no expectoration; if the râles are superficial, dry, and explosive, like the crackling of parchment under the ear, and are found only on one side, circumscribed, and situated about the periphery of the lung, they are probably intrapleural. Owing frequently to peribronchial thickening and commencing induration of lung-tissue, the pitch of the percussion note over both of these râles may be raised in pitch. When it is not, however, it is a point in favor of their being bronchial.

31 West Thirty-third Street, February 17, 1886.

Liberal Studies and the Social Position of the Doctor.—The physician sustains a twofold loss by reason of lack of liberal study. First, a loss in social position. Not the individual, but the average doctor, is here referred to. The social position of the average doctor is not equal to that of the average minister or lawyer, and the reason is largely due to deficiency in education. The remedy for this is in the hands of the medical student. The second loss is in professional practice. This is a consideration of weight to those who are indifferent to the matter of social position. How does liberal study help the physician in his practice? The medical profession has a natural and necessary alliance with all studies of nature and man. This is the reason why the *armamentarium* of the doctor should be liberally furnished. The speaker mentioned a list of some of the studies, not strictly professional, with which a medical student ought to acquaint himself. 1. The languages, especially English and Latin. 2. Natural history, especially botany and zoölogy; also geology and mineralogy. 3. Mathematics. 4. Philosophy. 5. General literature. 6. Rhetoric and Logic.—*Address of Dr. Willard.*

M. Reclus showed, at a recent meeting of the Paris Surgical Society, a female patient who presented a curious lesion. One of her legs was constricted by a congenital fibrous band. Last year M. Reclus removed two-thirds of the band, and subsequently the remaining third. The success resulting has been perfect. [This case evidently belongs to the same class as those in which amputation is produced *in utero* by constricting bands.]—*London Med. Record.*

Progress of Medical Science.

Ptomaines and Leucomaines.—At a meeting of the Paris Academy of Medicine, held on January 12th (*Archives Générales de Médecine*, No. 2, 1886), M. Armand Gautier presented a very important communication upon the alkaloids derived from the bacterial or physiological destruction of the animal tissues. The putrefactive alkaloids, or ptomaines, were discovered by Selmi and the writer, acting independently of each other, in 1870. M. Gautier had remarked that the albuminoid substances became, during the process of putrefaction, more strongly alkaline than was to be accounted for solely by the production of ammonia, and he was thus led to prosecute the researches which led to the discovery of the ptomaines. Selmi had discovered these alkaloids while analyzing the intestinal contents of a man supposed to have died from poisoning. The author reviewed the processes of extraction of these alkaloids and their physiological action, and stated that the marked differences which existed between ptomaines and the poisonous vegetable alkaloids, in their properties and chemical composition, were sufficient to prevent any confusion of the two on analysis. He then discussed the leucomaines, or the physiological alkaloids formed in the tissues during life. The animal organism resists this constant auto-infection by means of two distinct processes: elimination of the poison, and its destruction by oxygen. Most of these alkaloids are very oxidizable, and are rapidly burned up. But when anything occurs to prevent the free access of air to the blood, or to diminish the quantity of hæmoglobin, as in chlorosis, or when hæmatosis is interfered with, the leucomaines accumulate within the organism, and symptoms of poisoning appear.

A Peculiar Deformity of the Foot.—At a recent meeting of the Society of Physicians of Vienna, Herr Billroth presented a patient upon whom an operation for caries of the fifth metatarsal bone had been performed. The diseased portion of the bone was removed by the sharp spoon, and the wound healed kindly, leaving no deformity of the foot. Not long after this the patient, in alighting from a wagon, sprained his ankle, and was in consequence confined to the bed for three weeks. There was, however, no fracture of the bones. But soon the foot was seen to become misshapen, and when presented to the Society the appearance of the limb was like that resulting from a badly set fracture of the tibia. The external malleolus and lower end of the tibia were greatly thickened, and on the dorsum of the foot was an abnormal osseous growth coming down obliquely from the extremity of the tibia. The process was that of arthritis deformans as it is more frequently seen after fractures and dislocations. The case is worthy of note because of its spontaneous origin, and from the fact that the arthritis deformans in this instance, contrary to the generally observed rule, occurred in a tuberculous individual.—*Deutsche Medicinal-Zeitung*, February 4, 1886.

The Treatment of Chorea.—Dr. Joffroy recommends the systematic administration of chloral in combination with the use of the wet pack. To children over ten years of age he gives one drachm of chloral per diem, divided into three doses, after meals; 15 grains are given after breakfast, 15 after dinner, and 30 after supper. In children aged six or seven years, from 30 to 40 grains a day are usually sufficient, but each dose must be large enough to produce sleep in about fifteen minutes after its administration. He has never seen any unpleasant effects caused by the drug other than a roseolous eruption. In very severe cases the writer has the children wrapped in wet cloths at a temperature of 50° to 53° F., for two or three minutes, morning and evening. They are rubbed while in the pack, and are then covered up warmly and kept lying down for half an hour.—*Deutsche Medicinal-Zeitung*, January 21, 1886.

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THE NATIONAL BOARD OF HEALTH.

THE National Board of Health is largely the creation of the medical profession of the United States, acting through the American Public Health Association. Everything relating to this Board—its work, its difficulties, its progress, and prospects—must be of special interest to medical men. Its membership is largely medical, and among its officers and members we recognize physicians of the highest standing in their sections of the country. Dr. James D. Cabell, the eminent professor of surgery in the University of Virginia, is its President; Dr. Stephen Smith, of New York, long connected with our own board of health, is Vice-President. Other members are: Dr. Robert W. Mitchell, of Memphis, Tenn., who organized and directed all of the work of that city during the great yellow fever epidemics; Dr. Stanford E. Chaillé, of New Orleans, long distinguished as a teacher of hygiene in the University of Louisiana; Dr. Charles Smart, U.S.A., eminent as a chemist and scientist; Dr. James M. Browne, U.S.N., the director of the bureau of hygiene of the Navy. These names give character and reputation to any organization to which they belong, and afford to the profession the highest possible guarantee that the duties of the Board were performed efficiently and honestly. And we may add that, if a Board so constituted does not command the confidence of the profession, the country, and Congress, we despair of ever seeing a central health authority established permanently at the capital. But the Board stands to-day the legally constituted health department of the general Government, fully organized and ready for active service, and yet it is idle at a season when its activity in the field of prevention should be greatest, and for reasons fully set forth in a recent statement by the President of the Board, Professor Cabell. We desire to call the attention of the profession to the facts so clearly and fully set forth in this communication. The appeal is made to every medical man to take such action as will, in his opinion, most certainly rightly influence his representation in Congress. Professor Cabell says the special cause which led to the establishment of the Board "was the great yellow fever epidemic of 1878. A great variety of measures were brought before Congress, designed to organize a health department at the capital, and, after the largest discussion and the most mature deliberation, the law creating the present Board was passed with great unanimity. The law was approved March 3, 1879. It provided for eleven members, seven of whom were appointed by the President and the Senate from different sections of the country, and four were detailed, one each from the Army, Navy, the Marine Hospital Service, and the Department of Justice. This law imposed upon the Board the duty of obtaining information upon all matters affecting the public health, and of advising the several departments of the Government, the executives of the several States, and the Commissioners of the District of Columbia on all questions submitted by them, or whenever in the opinion of the Board such advice may tend to the preservation and improvement of the public health. It also empowered the Board to make, or cause to be made, such special examinations and investigations, at any place or places within the United States, or at foreign ports, as it may deem best, to aid in the execution of the act and promotion of its objects. Immediately on its organization the Board proceeded to institute a series of investigations into matters relating to the public health, and continued them while appropriations were made by Congress for their prosecution. The subjects chosen were those having a national interest, and which could not be thoroughly investigated except by the aid of the Government. During the period that appropriations were made upward of thirty subjects were reported upon, more or less completely. The nature of these investigations will appear from the following among many subjects chosen: 1. A well-selected and fully equipped commission to study yellow fever in Cuba, and the methods of preventing its importation into the United States. 2. An investigation into the prevalence of adulteration of food and drugs. 3. An inquiry into the diseases of food-producing animals in their relation to man. 4. An investigation in regard to the influence of various soils upon sanitation. 5. An investigation upon the flow of sewers in relation to their sizes and gradient. 6. An investigation on the best methods of determining the quantity of organic matter in potable water, and the specific effects of variously contaminated waters upon persons who have used them. We need only say, in regard to these and other works carried forward by the Board, that the results attained are conceded by all to be of great and permanent value to the nation.

The danger of the reappearance of the yellow fever epidemic of 1878 led Congress to enlarge the duties of the Board, and on June 2, 1879, an act was approved which empowered the Board to co-operate with State and local boards in the prevention of the introduction of contagious and infectious diseases into the United States, and their spread from one State into another. By this most important act the combined powers of the municipal, State, and National Governments were for the first time united in one harmonious effort to prevent the introduction of pestilences into this country, and their spread if they secured a foothold. Under this act the National Board added to the efforts of State and local boards all the powers and resources of the general Government toward the suppression of the great epidemic of yellow fever of 1879, and with a degree of success which received universal commendation. It inaugurated and carried on a system of steamboat and railroad sanitary inspections; it made, and as far as it had power enforced, rules securing the best sanitary condition of ships entering the ports of the United States; it established a

series of island refuge stations for infected ships to be cleansed on the South Atlantic and Gulf coasts; it organized and aided in carrying out a system of inspection and vaccination of unprotected immigrants, which prevented an epidemic of small-pox. It also issued a weekly bulletin to health boards and sanitary officers of this country. Unfortunately for the country the law of June 2, 1879, was limited to four years, and expired in 1883. Congress did not re-enact the law, and thus the powers of the Board lapsed in so far as they related to co operation with State and local boards in their efforts to prevent the introduction and spread of epidemic diseases. Nor have appropriations since been made by which the Board could continue the investigations referred to in the act by which it was established. As a consequence, though the Board has been maintained in all its integrity and efficiency, it has been compelled to remain comparatively idle in the presence of epidemics national in their prevalence and disastrous in their effects. It has been our constant and earnest endeavor to establish, on a firm and enduring basis, a branch of the public service devoted to the investigation and elucidation of the great problems relating to the promotion of the health of the people, and to the organization and enforcement of methods of co-operation of the municipal, State, and national authorities in the prevention of the introduction and spread of contagious or infectious diseases. We believe that the question of the need of a public health service in this country is no longer debatable, and that the Board as now provided for by law is the most efficient and acceptable form of organization for the discharge of these important duties. But while we have sought by every proper means and influence to sustain the Board, and thus faithfully discharge the trust committed to our care, we feel that it is for the citizens at large to determine whether, by suitable legislation and adequate appropriations, the National Board of Health shall be invested with such powers as will enable it to discharge properly the duties belonging to such a branch of the public service.

Deeply sensible of the responsibility resting upon us, and impressed with the absolute need of the service contemplated in the law establishing the Board and in the subsequent legislation enlarging its duties, we feel it our duty to lay these facts before them, and to bespeak their earnest co-operation in our effort to preserve and improve the public health. To accomplish this purpose it is absolutely necessary that the matter should be *at once* brought to the attention of the Senators from each State and the Representative in Congress from each district, in order that they may be informed as to the public sentiment in regard to these matters. Without such expression of opinion, legislation at this session of Congress is impossible.

THE USEFULNESS OF SPAYING.

The attempt of the New York Academy of Medicine to check the practice of spaying is evidently an ill-considered one, and is entirely antagonistic to the progressive instincts of the day. The history of the world shows that the practice in question has always been one of the crowning ornaments of the best types of civilization, from the Chaldean to the Roman age. Now that, after many centuries of gloom, it is again brought into beneficent existence, its critics should beware of thoughtless and shallow opposition. The trouble probably lies in the fact that there still lingers an impression among crudely educated minds that the ovaries are organs of social necessity and economic importance. This, however, is a serious mistake. These organs are, it is true, useful for a short period in the existence of a portion of womankind for the perfunctory propagation of the race. Aside from this, however, they are not only of no service, but are a source of racial, domestic, and individual distresses of the greatest magnitude. Philosophers of the present day have ascertained several facts which place this view upon a solid and impregnable basis. No woman wants more than two children, many only one, and a large per cent., including all the unmarried, not any at all. But in fact the population is increasing at a seriously rapid rate, and the modern economist has had to revive and re-adopt the views of Malthus. In this exigency, when society's needs are antagonized by infant multiplicity, the laparotomist steps in, as a kind of modern saviour from the threatened polypædic catastrophe. The woman has her child, the ovary swells, the learned touch of the gynecologist detects a pyosalpinx, and in a twinkling out comes all the source of woman's labors and man's unsought paternities. The laparotomist is plainly society's best friend. Like all benefactors of the race, he must endure opposition and calumny for a time; but his noble work of radically removing the sources of over-population will go on, and we calculate that, at the present rate of increase, in fifty years some thirty-five per cent. of women will be permanently relieved of all the worry of maternal anticipation.

THE WORK OF THE NEW YORK MEDICAL MISSIONARY SOCIETY.

We have received a courteous letter from Dr. George D. Dowkontt, of this city, Medical Superintendent of the New York Medical Missionary "Home and Institute," regarding the subject of "specially trained medical missionaries," to which we referred in our issue of March 6th. Dr. Dowkontt pleads the cause of the specially educated medical missionary. The great need of medical and surgical aid in heathen lands, and the great missionary value of such aid, are referred to, while the scarcity of men both willing and fitted to go is insisted upon. It was for these reasons that the Edinburgh Medical Missionary Society was founded in 1841, and the New York Medical Missionary Society in 1881. The peculiar need for the existence of the latter society, we are told, lies in the fact that medical missionaries must be particularly well educated medically, and American medical colleges are not good enough, and do not furnish sufficient training. Our correspondent adds:

"Allow me to say, in conclusion, that there is great force in the suggestion you made, that we could well spare two thousand out of the four thousand physicians annually graduated in America; and this is forcibly shown in the fact that while in 1880 there was one doctor to 585 people in the United States, there was only one *medical missionary* to nearly ten *millions* of the *heathen*.

"You observe that these could well be spared to go

forth and *disseminate the gospel.* Would to God they were *able* and *willing* so to do, then we need not exist; but they must first possess this gospel in their own hearts and lives to be able to disseminate it, and they must further be actuated by the spirit of self-denial which characterized the Great Physician for body and soul, the Lord Jesus Christ, before they will be *willing* to do so.

"Thank God for the noble men of our profession who have gone forth to heathen lands, as Scudder to India, Parker to China, Livingstone to Africa, and Post to Syria, but oh! for more such men who are willing rather to live to *give*, than to get.

"At the same time, I would not overlook the good work done by Christian physicians at home, work seldom recognized at its full worth, such as our late President, Dr. Alfred C. Post, and others."

THE HEALTHIEST CITIES IN THE WORLD.

JUDGED by their death-rate (in February), the healthiest cities in the word are St. Paul and Minneapolis (*Northwestern Lancet*). The death-rate per 1,000 on the basis of the February rate is 9.60 and 9.88, respectively. We dislike to dethrone the twin metropolis of the great Northwest from its hygienic supremacy, but it does seem very probable that the figures which the *Lancet* bases its statements upon are not strictly accurate. According to them, there were 97 deaths and 220 births in February, a ratio of deaths to births which is beyond all precedent. This ratio in Brooklyn, for example, is as 137 to 125, and in New York as 340 to 289.

The average birth-rate is about 38 per 1,000, while in St. Paul it is only 21.9 per 1,000, and at Minneapolis it is only 15.5 per 1,000. Procreative vigor in Minneapolis, therefore, by the same figures, reaches its lowest ebb. If the statistics are right, then the great salubrity is at the cost of alarming sexual decay.

LOCAL ANÆSTHESIA.

SINCE the discovery of the remarkable effects of cocaine the progress in the study of local anæsthesia has been as wonderful as it has been gratifying. Ophthalmology, to which its employment was at first restricted, soon proved itself too narrow a field, and the journals soon teemed with reports of its use on almost every portion of the body. Nor were the trials confined to the smaller operations. Resections, ligatures of arteries, and amputations followed in the train, with results now so well known. Cocaine, of course, has its limit of adaptability. Although it can never absolutely take the place of ether, its ultimate possibilities are not yet demonstrated. No one has studied the latter with better results than has our esteemed townsman, Dr. J. L. Corning, and we are pleased to notice that his methods of procedure are being indorsed by surgeons all over the country. The trouble with cocaine, when injected, has been the evanescent character of its effect, a matter of serious import in prolonged and severely painful operations. Corning has seemingly compassed these difficulties by confining the circulation of the part by ligature. In his recent work on this subject * are detailed many interesting suggestions bearing on the general question of local anæsthesia, not the least of which is that referring to the employment of his method in sciatica and other neuralgias. There is no doubt that cocaine deserves to be studied from these practical standpoints, and we shall await the results with interest. Dr. Corning is evidently on the right track, and it must be a source of gratification to him to know that the results of his patient labors are being recognized.

* Corning on Local Anæsthesia. New York: D. Appleton & Co.

ARSENIC IN WALL-PAPER.

THE annual excitement in the city of Boston relating to the presence of arsenic in wall-paper has on this occasion, resulted in thorough investigation by a committee of the Massachusetts Legislature, so that the medical profession and the public at large have at length the plain facts before them.

One of the questions investigated was the manner in which the poison was communicated, supposing arsenic to be present in the wall-paper in any quantity. Of course, there are two ways in which this could happen: first by *attrition* or friction, where the color containing the arsenic is rubbed off. This would most probably occur in a bedroom where the bed was placed next to a wall, as the movement of the bedclothes against the wall would produce such an effect. It is obvious, however, that only a very small percentage of the arsenic on the walls could be removed within a certain amount of time, and unless the walls were literally covered with arsenic it would be difficult for a person during the night to collect sufficient of the poison to produce toxic symptoms.

The case, however, assumes very different proportions if the arsenic present could be shown to be decomposed and mixed with the air of the room in the form of a gas. A very small proportion of arsenic breathed as arsenurated hydrogen would cause immediate sickness. It is therefore clear that this form of arsenical poisoning is to be most dreaded.

The Legislative committee tried to clear up this point, whether arsenic could, or could not, be converted into arsenurated hydrogen gas in a room by damp or any other cause.

The evidence of Professor C. F. Chandler, of New York, before the committee, was very convincing as showing that this danger did not exist. It appears that some time ago, as a mere scientific experiment at Columbia College, he tested this matter in the most severe manner. He prepared a large box to represent a room, and hung the interior with a wall-paper full of Paris green. The paper was hung in deep folds dropping from top to bottom of the box, new paste was added to represent the actual conditions and afford the necessary dampness to produce the gas. Air was forced through the box for some time and collected, and afterward analyzed. On all occasions not a trace of arsenurated hydrogen could be found. On the strength of these and other tests, Professor Chandler gave his opinion, that under no conditions could arsenical poisoning occur through breathing arsenurated hydrogen from wall-paper, leaving the only risk that could happen to be from friction alone.

As to the question of arsenic in wall-paper, it was admitted that there was a time when it was used without

limit as a coloring material, but three years ago it was practically abandoned; since this time arsenic has undoubtedly been present in small quantities, even when the color has been sold and guaranteed to be non-arsenical. This may have arisen from the presence of arsenic in the zinc, or other ingredients, of the color, as a simple impurity. But for all practical purposes it may be stated that the use of arsenical colors has been abandoned by reputable manufacturers.

The bill before the Massachusetts Legislature proposes to place a limit to the presence of arsenic in wall-paper at one-fourteenth of a grain to the square yard, which is about half a grain to the piece of eight yards. Since the opening of the investigation it has been found that arsenic is present in large quantities in the paper of fancy boxes, paper for wrapping candy, gentlemen's underwear, carpets, ladies' dresses, and a variety of other articles of general commerce. It is now proposed very justly to make this anti-arsenic bill apply to manufacturers generally.

As to the question of legislating on this subject, Professor Chandler said that one grain to the square yard would be a safe limit, but he was opposed to any restrictive measure, because he thought the danger had passed and did not at the present time exist. Such a bill would cause unnecessary alarm in the public mind, and create a prejudice; it would also cause trouble to the manufacturers, leading to endless litigation and disputes. If, however, any restrictive bill of this kind is passed by the Massachusetts Legislature, it should certainly apply to all kinds of manufactures, particularly to clothing, and articles coming in contact with food-products.

THE DUALITY OF THE TEMPERATURE SENSE.

As cold is but a negative expression, denoting the abstraction of caloric, the idea of distinct sets of nerves, and of separate centres for the perception of heat, and of the absence of heat, is somewhat perplexing. Yet we know that the sensation of pain, which seems to be but an exaggeration of that of touch, may be abolished while the latter is preserved, and conversely, a part may be acutely sensitive to painful impressions, although tactile sensibility has been abolished. And it is now believed that these sensations of touch and of pain are carried by separate nervous tracts to different points of the central system. We know that heat and cold, subjectively considered, are only relative terms, and that an object of a given temperature which feels cold or warm to one person may even convey the opposite impression to another, or to the same person at another time. In myelitis it sometimes happens that the application of ice causes a burning sensation, just as in certain hyperæsthetic conditions the slightest touch causes unbearable pain. These facts and others exemplifying the difference between physical and physiological heat and cold can be explained more easily by the assumption of a dual sense than by any hypothesis which has been hitherto suggested.

In the *Centralblatt für Nervenheilkunde*, No. 20, 1885, Dr. A. Herzen argues with some force upon the existence of separate perceptive centres for heat and cold. His conclusions, formed as a result of experimental and pathological observations, are that there are distinct peripheral organs for the perception of heat and of cold, and that, consequently, the centripetal nervous filaments are also separate; there are, therefore, specific nerves for these two sensations, which, though they have a common course and a common termination, are by no means identical. The sense of cold, he believes, is in some way connected with that of touch, while the impressionability to heat and pain are similarly allied. These sensations are not one and the same, however, and we cannot argue from a loss of the sensation of cold that tactile sensibility is also destroyed, nor conversely.

In the *Memorabilien*, vol. xxx., No. 8, Dr. Friedreich Betz reports a case which adds considerable weight to Herzen's theory. The patient, a man seventy-five years of age, was suddenly seized with a paresis of the left arm. The case seemed at first to present nothing of special interest, until the patient received a severe burn on the hand without feeling any pain therefrom. This led to further examination, when it was found that the sense of heat-perception was entirely lost. As light pricking sensation and an involuntary reflex movement of the arm were the only signs by which he was able to tell that any substance was hot. But the sense of cold-perception was even exaggerated, so much so that rain-drops falling on the hand caused a feeling of almost unbearable cold. In the course of time a slight improvement took place in both muscular power and in the ability to feel the heat of objects, but a perfect recovery was never obtained.

In studying this subject, it is interesting to recall the experiment of Horvath, who found that the application to the skin of alcohol at a temperature of −5° F. abolished the sense of pain-perception, while tactile sensibility was seemingly unimpaired. Were the sense of touch and of cold-perception so slowly allied, one would suppose that the exhaustion of the latter by overstimulation would depress the tactile sense rather than abolish that of pain.

THE MOVEMENT CURE IN CHINA.

It has been generally supposed that the system of kinesitherapeutics, known as the Swedish movement cure, or Lingism, was an invention of Mr. Ling, of the Royal Academy of Sweden, but this is a manifest error. We never had anything against Mr. Ling, but, on the contrary, have always revered his memory, and have gazed upon the machines used to impress motion upon the various parts of the human frame with a feeling akin to awe, such as must have filled the breast of the untutored savage of the plains when first he beheld a locomotive. But candor compels us to proclaim to the world that the Swede was preceded by a Chinaman who invented a similar therapeutic system some four thousand years ago. We have been forced to admit the prior claims of the Chinese to the invention of gunpowder and the art of printing, and now we must yield them the palm also in this other discovery so useful to man and to the cause of civilization.

Dr. D. J. Macgowan has recently published a little brochure, entitled "The Movement Cure in China," in which he gives a brief history of the system, and describes the methods in use at the present day. That the method is one of undeniable efficacy, is proven by the fact that Ch'ee Sung Asz, one of its earliest professors,

had, according to reliable Chinese authorities, already attained the somewhat venerable age of twelve centuries, when he was consulted by the Yellow Emperor concerning the art of prolonging life. Hoang-ti does not, however, seem to have profited by his instructions as much as he might, for he reigned only a hundred years, and then died like the patient of any ordinary physician. One of the greatest authorities in kinesipathy was Ta-mo, or Thomas, a Buddhist patriarch, who came from India in the fifth century of the Christian era. His disciples became celebrated for their athletic and militant proclivities, though the master himself, like some members of his profession in modern times, did not practise what he preached, for he passed the last nine years of his existence in the not very active occupation of gazing at a blank wall, and neglected entirely his life-prolonging exercises.

The latest addition to the literature of the Chinese movement cure is a work by P'an Wei, the Governor of Hupeh, entitled "Important Life-maintaining Methods," published in 1858. In this treatise most minute directions are given for the proper performance of the exercises, and the text is supplemented by numerous graphic and highly artistic illustrations. We can mention only a few of the exercises here, and those who desire to perfect themselves in the art are respectfully referred to Governor P'an's original work in Chinese. While going through the motions the patient is to think about nothing, but should have the mind in a state of absolute quiescence. The neck is to be held with the hands, and the head must then be turned thirty-six times; then press the temples with the index finger twenty-seven times, shut the teeth firmly thirty-six times, swing the arm in its socket twenty-four times, and get on all-fours thirteen times, raising and depressing the back. The patient must then walk one hundred steps, rubbing the abdomen with both hands, concentrating the mind on the "little stomach" in the pubic region, and finally hold the scrotum with one hand, and the belly with the other, changing hands eighty-one times. This very brief abstract will suffice to demonstrate the excellence of the method, and prove beyond question its superiority to the modern system of Ling. If our remarks shall have the effect of leading others to introduce the new-old cure of the Chinese into modern therapeutics, we shall feel that we have had our reward.

MEDICAL WONDERS OF THE WEST.

A RECENT number of a Western contemporary which has fallen into our hands convinces us that in the field of therapeutics the world follows the theory of the Rev. Jasper, and "do move." In fact, as we look over the pages of this periodical we feel that our Eastern therapeutics are sadly behind the times. A few illustrations of Western progress may be in order.

To cure tape-worm, the sovereign remedy is a full tablespoonful of gunpowder, followed in ten hours by a dose of castor-oil. The mode of action is not given. The powder may go off and the parasite be shattered—blasted out, as it were—or it may be simply stunned by the concussion and swept out by the relentless oleum ric. before it has recovered from the shock. The writer of the article further tells us that he or she (for the name suggests one of the fair sex) has "added shekels to my (his or her) bank account, and a little 'good report' to the professional side of the scale as a successful practitioner, and especially for good luck in the treatment of Bright's disease." Main reliance is placed upon an infusion of orange seeds, alternated with oil of turpentine. The former is believed to have a specific action over the vaso-motor centres and to equalize the "venal" circulation. As an "adjunctive" the tincture of lycop. vir., hydrarg. ar., and liatris spic., are given, with the directions that a teaspoonful be taken every six hours until cured. In accordance with our present ideas as to the prognosis in Bright's, it must be necessary to place a bottle of the liatris spic. in the coffin of the patient, so that the dosage can go on according to the above directions.

For scabies the following ointment is recommended: "Acid nit. (stronger) 2 ounces; mercury, 1 ounce; adeps, ½ pound." The writer frankly admits that he has known "one or two persons to be paralyzed by using too copiously." This affliction of the patient, instead of the parasite, is truly a disagreeable circumstance.

The localization of the centres for conscious activity is evidently still *sub judice*. An account is given of a man who was "felling a tree, and it lodged; when attempting to dislodge the tree it fell and struck him about the pubis, knocking him senseless." There is in this sad recital a suggestive hint for our neurologists.

A very interesting discussion ensues as to whether negroes are ever killed by lightning. It seems that out there lightning, as a therapeutic agent, has a sort of selective affinity, somewhat analagous to the effects of belladonna on the eye and aloes on the large intestine. A sort of collective investigation seems to have been undertaken on this topic. One gentleman reports a case in which the subtle fluid attacked first a tree and next a house—joyfully pranced down on one of the rafters, and ended up by performing the happy despatch of an unoffending colored woman, of three. Another observer has records of an occurrence where "a single stroke of lightning sent the souls of two old darkies from 'Dixie's' cotton fields to the land beyond." This writer adds the comment that "a negro's cuticle is pretty hard to penetrate, but when Jupiter Tonans sends his thunderbolt against it a surrender generally takes place." We presume that a temporary armistice is concluded between the combatants.

We might quote further, but we desist. In view of the foregoing facts we almost feel that our own discussion of medical topics is provincial. Still, we shall not prescribe gunpowder or believe in the immunity of our colored brethren from lightning without further evidence.

PROPITIATING THE GODDESS OF CHOLERA.—During the late Dusserah festival at Bombay, it has been discovered that three buffaloes were sacrificed in a most brutal manner with the view of propitiating the Goddess of Cholera. The buffaloes, after being decked with garlands and led around the bazaar, were literally hacked to pieces, while the police and civil authorities remained in convenient ignorance of what was being done.

A NEW MEDICAL SOCIETY FOR ST. LOUIS is announced to be in process of organization.

News of the Week.

A Good Bill.—The Record has on several occasions drawn attention to the bill "For the Better Preservation of the Health of Children in Institutions," introduced in the Assembly by Judge Batcheller, of Saratoga. This bill was prepared by the committee appointed by the New York Academy of Medicine in June last, and if its passage in the Legislature is secured will do much toward lessening the scourge of ophthalmia, which exists so extensively in the orphan asylums of this city and State. Fortunately for the friends of the bill, Judge Batcheller, from a long residence in Egypt, knows much of the ravages the disease has there caused. The Assembly Committee of Public Health, under the efficient chairmanship of Dr. Herman Craft, has favorably and unanimously reported the bill, and it has been passed by the Senate.

Dr. John S. Billings, of Washington, has been chosen to deliver the address in medicine before the next meeting of the British Medical Association, in place of Dr. Austin Flint, deceased. No better man could have been selected to represent American medicine on such an occasion. It is an honor well deserved, and we congratulate Dr. Billings accordingly.

Mr. Lawson Tait on Methods of Diagnosing.—Mr. Lawson Tait, of Birmingham, England, sends the following note: "It has been pointed out to me by more than one correspondent that the expression I used in referring to the method of examining a patient lying on her back has given offence to some of my professional brethren on your side of the Atlantic who habitually employ it. I desire to say that I deeply regret this, and that I desire to express my regret for having used a word certainly much stronger than I need have used when I said that the method was a brutal one. I should be glad if you would permit me formally to withdraw that word, and to say that it was used without sufficient thought to convey the full sense of its offensiveness to me. What I did mean was that I feel it is by no means as delicate a method of examination as that which I habitually employ myself, and more than this I ought not to have said. I certainly am perfectly satisfied, despite what my friend Dr. Mundé said, that our English method is sufficient for nearly every purpose, and that being simpler and more delicate in its application is that which ought to be usually employed."

Dr. James J. Delany died of pleuro-pneumonia, April 2, 1886. He was a native of Waterbury, Ct. He graduated from the College of Physicians and Surgeons, New York, in 1874, and entered the service of Charity Hospital, from which he was called in 1875 to take charge of the small-pox and fever hospitals under the care of the Health Department. While there he carried on a most thorough series of investigations on the use of the cold-pack in fevers, but unfortunately the book containing the records was lost. After five years' service he went to Buenos Ayres, but was dissatisfied with the appearance of the country and returned to this city. He was visiting physician to the Hospital for Nervous Diseases on Blackwell's Island. Dr. Delany was much loved by his professional friends, and the esteem in which he was held by the community was manifested by a large congregation at the funeral services. He was unmarried.

St. Louis Medical Society.—At their last meeting the St. Louis Medical Society adopted the following resolution: *Resolved*, That all reputable medical journals be invited to make such report of the proceedings of this society as they may desire.

Dr. Henry B. Millard, of this city, has been chosen by the president of the International Congress of Hydrology and Climatology to be the American delegate to said Congress. The latter meets at Bayreuth, Bavaria, in October next.

The Mississippi State Medical Association will convene at Jackson, April 21st.

The State Medical Society of Michigan.—The eleventh annual session will be held in Helena, on Wednesday and Thursday, April 28th and 29th, commencing on Wednesday at 10 A.M.

The Death of Dr. Thomas Spencer Cobbold, the distinguished helminthologist, is announced.

The Medical Society of North Carolina meets at Newbern on May 19th.

We fear that our usually-alert contemporary, *The Medical and Surgical Reporter*, does not read his exchanges. It says: "The Association has, we maintain, the right to do just exactly that which it chooses; and when it has announced its decision, it then becomes the plain duty of all right-meaning medical men to uncomplainingly abide by this decision. The claim that the Association has not the right of arbitration has been, we say, clearly abandoned by those who at first made this claim, as is evidenced by their determination to refer the matter in dispute to the Association for arbitration." Turning now to *The American Practitioner and News*, one of the journals which first made this claim, we read: "The new committee pledged the Association to accept the work of the Committee on Organization. It gave the latter full power to create or destroy, to do or undo, according to what it believed would inure most to the interests of the Congress. It promised that its acts should neither be altered, nor revised, nor interfered with, in any manner whatever. It is true that such a pledge was an unusual one to give, and such a promise an unusual one to make, but both were incorporated in the bond executed by the legal representatives and accredited agents of the Association, and nothing remains for that body, when it meets in St. Louis, but to ratify the contract. This it is in honor clearly bound to do. It has absolutely no choice in the matter."

The Decrease of General Paralysis and Increase of Climacteric Insanity in Edinburgh.—Dr. Clouston finds from a study of admissions into the Edinburgh Asylum during the past twelve years that there has been a decrease in the percentage of general paralytics from 7.3 in 1873–77 to 4.5 in 1881–85. He thinks that this indicates a decrease in preventable insanity. He finds an increase of cases of what he terms mental break-down in persons of about the age of sixty who have worked hard. It is, he thinks, a kind of climacteric insanity in the male.

Only a Cold.—The *Lancet* minimizes the illness of the Princess, declaring she is only under the influence of "a common cold." "Only a cold," was the reply of a patient to a query from Abernethy. "Only a cold!" repeated the great medico; "what the devil would you have, the plague?"

Prescribing Fornication.—An eminent Cincinnati evangelist recently said: "The doctors of this country have said to many a young man, 'You can't be virtuous and be healthy.' Is there a doctor here that ever said that to a young man? If there is I want to look him in the face and tell him, 'You are a liar of the deepest dye.' My daughter, your daughter, has the same constitution as your boy, and I dare you by all the power in the Bible to walk up to my daughter and tell her she cannot be virtuous and be healthy! What does the doctor say to you old married men? Does he tell you that you can't be virtuous and be healthy?" To this the *Lancet and Clinic* indignantly replies that "the doctors of this country do not give any such advice as the evangelist asserts." We trust and believe that the great majority do not, but we fear that a small minority do; and we venture to say that the importation of European morals, along with European science and pseudo-science, has had something to do with it. In a blind scientific study of the "case," the doctor may forget sometimes that he owes a duty to society as well as to his patient.

The Lady Doctors.—The Scottish Colleges of Physicians and Surgeons (of Edinburgh and Glasgow) have just decided to throw open to women their conjoint examinations and "triple qualification" in medicine, surgery, and midwifery. Nine of the nineteen licensing bodies in Great Britain are now open to female medical students.

The Memphis Hospital Medical College graduated a class of thirty-seven at its annual commencement, February 26th.

The Omaha Medical College celebrated its fifth annual commencement on March 25th, and graduated a class of five.

The Sunny Side.—Dr. R. C. Moore, of Omaha, Neb., in an address before the graduating class of the local medical college, said: "After an experience of over two-score years, I can tell you honestly and candidly that there is but little truth in all of these doleful prognostications of these dyspeptic doctors. The skilled and conscientious physician is the happiest, most self-satisfied, and best-fed man in the community. If he attends to his business, if he be honest in his dealings with his fellowmen, if he be endowed by nature with common sense, and has acquired by study the fundamental principles of his profession, he cannot only enjoy the social pleasures of cultivated society, but he can accumulate a sufficiency of this world's goods to render his declining years free from pecuniary embarrassment, without arduous labor at the time of life when the desires of man are for freedom from business perplexities and physical fatigue."

American Surgical Association.—The annual meeting of the American Surgical Association will be held in Washington, April 28th, 29th, 30th, and May 1st.

Mutual Protection against Blackmail.—We learn from Dr. E. J. Doering that a physicians' protective association is to be organized in Chicago. It is stated incidentally that during the month of March four suits for alleged malpractice have been brought in Cook County against well-known physicians.

The Cost of Sickness in the hospitals of France in 1880 was $10,779,235.

Gonorrhœa in the Family.—M. P. Aubert contributes some facts to the *Lyon Médical* which show that gonorrhœa introduced into a family by the erring husband may affect not only the wife, but children. Mme. X—— sent to him her little daughter, aged four, suffering from "whites," and Dr. Aubert found that she had gonorrhœa, with numerous gonococci in the secretions. The mother had herself suffered from excessive leucorrhœal discharge for several days, and she stated that her husband had had a discharge for some weeks. The family attributed it all, says Dr. Aubert, to some bad wine which had been used. In a second instance, father, mother, and little girl all had the gonorrhœa. Here it was established that the mother, while suffering from the discharge, twice took her daughter into the bath with her. It was thought that the contagion came in this way.

New York Neurological Society.—At the annual meeting of this society, April 6th, Dr. C. L. Dana was elected president, Dr. George W. Jacoby secretary.

Misfortune to the Graduates of the Jefferson Medical College.—After the college commencement, which was held on April 2d, the Faculty gave a banquet to the newly-made doctors at Natatorium Hall. A temporary floor had been placed over the basin fixed for swimming in the west end of the room. On the temporary floor stood a piano, around which a number of the doctors were standing. Suddenly the floor gave way, and about twenty-five of the party fell with the piano and the débris to the bottom of the basin, a distance of twenty feet. Three persons were seriously hurt, but there was no fatal injury.

The Contagious Diseases Acts of Great Britain, by which prostitution was regulated in garrison towns, have been repealed by a vote of 245 to 131. English medical opinion, as a rule, supported the acts, and *The Lancet* announces gloomily that henceforth "disease and immorality in their most revolting forms are to riot in the midst of our garrison towns." The sentiment of the English public, however, was against the acts.

The Philadelphia Polyclinic and College for Graduates in Medicine has established a hospital for operative and other cases at the college building, Broad and Lombard Streets, Philadelphia. A number of ward patients have already been treated in the new hospital.

A National Sanitary Convention is announced to be held in Philadelphia, under the auspices of the Pennsylvania State Board of Health, on May 12, 13, and 14, 1886.

An Independent Health Board for Massachusetts.—The bill separating the Massachusetts State Board of Health from that of lunacy and charity has become a law.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 1, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT announced as memorialist for S. Oakley Vander Poel, M.D., LL.D., Albert Vander Veer, M.D., of Albany.

Reports from Sections were made, containing brief abstracts of their proceedings.

DR. HENRY C. COE then read a paper entitled:

IS DISEASE OF THE UTERINE APPENDAGES AS FREQUENT AS IT HAS BEEN REPRESENTED?

in which the author said that this title did not imply skepticism so much as it did a mildly negative answer to the question. Not only was our knowledge of the normal ovary in an unsettled condition, but especially crude was, as far as text-books were concerned, our knowledge of the pathological conditions supposed to be included in such terms as ovaritis, periovaritis, etc. But interest in ovarian disease would not die out in this country, at least, if the work of the surgeon with its rapid growth was able to keep it alive. The aid of the microscope was only rarely invoked by gynecologists, and not infrequently ovaries were removed and passed into the hands of the pathologist with the request that the diagnosis be sustained, when the subsequent examination made it extremely difficult to justify the wisdom of the operation.

The question, then, naturally arose, What is a normal ovary? So much had been said about the common occurrences of chronic ovaritis, cystic degeneration, etc., that, if true, the existence of a normal ovary, except in animals, might well be doubted. Besides, the minute structure of the ovary was not constant, histologically. Under these circumstances it could be readily seen how difficult it was to determine where the physiological condition ended and the pathological began.

Ovaries had been removed because they were regarded as cystic, and yet it had not been decided what was meant by a cyst; that is, when the ovisac ceased to be a vesicle and became a cyst.

The ovary ordinarily encountered was not the typical one illustrated in the text-books on histology, to be sure, but it was not to be regarded, on that account, as an organ suitable to be plucked out.

Then the question arose, To what extent may an ovary deviate from the so-called typical without being diseased? In general, the conditions which had been said to justify the operation for the removal of ovaries were included under variations in size and shape, the presence of cysts, more or less numerous, upon their exterior, changes affecting the thickness of the cortex and the stroma, adhesions, etc. Dr. Coe then examined the several points, and said that the variations in size and shape might be such as to make them spherical, oblong, or discoid, instead of almond-shaped, and still they might be perfectly normal. Under the influence of simple congestion the organ might be temporarily enlarged. The moderate enlargement due to congestion had been noticed at the operating-table, but it did not necessarily imply disease. Considerable increase, a decided diminution in size, did not positively indicate an abnormality. The ovary was not a stationary organ; it varied in this respect according to age, and also never returned to its natural size after labor. It might be seamed and scarred and changed in color as age increased. Thickening of the cortex might be perfectly natural in an ovary, and frequently existed in an ovary which was in full functional activity. So long as the Graafian vesicles could get to the surface there was not much thickening, and localized cirrhosis in the depths of the stroma were not uncommon. Cystic degeneration was most frequently given as a condition that justified extirpation, and he had rarely heard the diagnosis of cystic degeneration called in question when three or four vesicles, not larger than small peas, had been found upon the exterior of the organ. If all the so-called cystic ovaries were to be regarded with suspicion, there were but few women who were positively out of danger. Ordinary cases of hydrops ovarii seldom acquired any importance clinically.

On the other hand, as had been demonstrated by Olshausen, there was a true cystic degeneration, but it is not common. From all that was known, pathologically, concerning cystic degeneration, it could be said truthfully that, given an ovary slightly above the usual size, with a half-dozen transparent vesicles, as large as peas, upon its surface, and functionally active, we were not justified in inferring that such an ovary was in extensive cystic degeneration, and that, consequently, it should be removed without regard to other and more positive indications. Nor was cirrhosis to be inferred because of the presence of a few spots of fibroid degeneration. If a number of sections showed perfect ovisacs, or Graafian follicles, the deduction could not be made safely that this was evidence of a diseased organ which should be removed. Neither did partial disease imply total loss of function. Schroeder had even gone so far as to remove only the diseased portion of ovaries, and with the expectation that what remained would perform the function of the organ. Although there was room for doubt with regard to the success of this method, it was evidence of the conservative tendency of its author, adn furnished food for thought. With reference to *tubal pathology*, there was no discrepancy of opinion as to removal of tubes distended with pus being justifiable and necessary. But Dr. Coe was not prepared to accept the statement of Mr. Tait that it was illogical to attempt to make a differential diagnosis between certain conditions, and, on the contrary, believed that it was illogical not to attempt to separate the different classes of cases. Against the sweeping statement made by Mr. Tait, that in chronic ovarian disease the tubes were invariably involved, Dr. Coe protested. He then asked what constitutes disease of the tubes? Nothing was plainer than a plain case of pyo-salpinx; but the multiplication of terms which had been seen, and which was increasing, had not been fortunate enough to secure the support of pathological observation. A healthy Fallopian tube was capable of increase in size. He had sought for evidence of catarrh of the tubal mucous membrane, but had not been successful, and the conditions which he had found in the so-called cases of catarrhal salpingitis, were such as he had been unable to distinguish from the normal; that is, moderate hyperæmia of the mucous membrane, which was covered with a thin layer of mucus. Cilia in active motion was proof against the presence of inflammation. Nor had he found that hypertrophy of the muscular coat of the tube, and changes affecting the lumen, except pyo- and hydro-salpinx, were common. The number of cases of pyo-salpinx reported by Dr. Wylie, was a larger proportion than usual, and the same was true of the cases reported by Imlach of Liverpool. During two years Dr. Coe had examined microscopically every specimen which came within his reach, and these included a large proportion of the cases in which the operation had been performed in the city, and he had found that in not more than one-fifth was pyo-salpinx or hydro-salpinx present; that hypertrophy of the muscular coat existed in a less number, and that hæmato-salpinx had been extremely rare. He had come to be skeptical concerning the diagnosis of pyo-salpinx where there was no pus in the tube; no pus, no pyo-salpinx.

With reference to symptoms, they were not due to the condition of the ovaries and tubes so much as to localized peritonitis and to neuralgia, pure and simple; and that these symptoms were removed by extirpation of the uterine appendages he did not believe. It would not be proven that a cure had been effected, until it could be

shown that the patient was well at the end of six years after the operation. The special point upon which he wished to insist was that the presence of insignificant changes in these organs was insufficient to subject a woman to the risks of abdominal section.

Dr. W. T. Lusk said that he was not, by any means, an enemy of the operation commonly known as Tait's, but he had seen it performed when ovaries had been removed which were said to be examples of cystic degeneration, but which in all respects were similar to those he was in the habit of exhibiting as specimens of normal ovaries, when he taught physiology. It seemed to him that since it had been learned that ovaries could be removed with but little risk to the life of the woman, surgeons were under strong temptation to perform the operation much too frequently. He had the suspicion that even Mr. Tait had sometimes removed ovaries and tubes which might have been properly included among the normal. The theory that the abdominal cavity should be opened in doubtful cases was at the bottom of the mischief which the paper of the evening was intended to combat.

Dr. Lusk had some doubt as to whether, in cases of pyo-salpinx, surgeons would long feel obliged to open the abdominal cavity and remove the tubes, in order to effect a cure; and he thought they would learn that it was possible to reach these tubes through the vagina, possibly by means of some such an instrument as that devised by Dr. Mundé, and thus be able to treat these cases successfully in that way.

Dr. W. Gill Wylie did not wish to defend any one for removing normal ovaries and tubes. He might have taken some out in his lifetime, and Dr. Coe ought to know, as he had had opportunity to examine nearly all the specimens he had obtained by operation. He was unable, however, to see how the matter was to be settled if an absolute distinction was to be made between the surgeon and the pathologist.

His own guide, with reference to removing the ovaries and tubes, had been the symptom, aided, of course, by what knowledge he could obtain by physical examination, and in only a very few instances had he been in doubt as to the condition of things that would be found on opening the abdomen.

Now he rarely performs the operation, except for pyo-salpinx, and not then unless the symptoms plainly indicate the operation and the woman wishes to have it performed. He thought that it was not very difficult to diagnosticate pyo-salpinx, but believed that the skill in diagnosis would consist in recognizing cases of pyo-salpinx in which rupture into the peritoneal cavity was liable to occur, and so produce general peritonitis.

When the patient was unable to perform her work, suffered from pain in the side almost constantly, or was bed-ridden, and there was pyo-salpinx, he believed that laparotomy for removal of the uterine appendages was justifiable, and was the proper operation to be performed. He regarded aspiration in such cases as only temporizing.

He believed that localized peritonitis was associated with the disease of the ovaries and the tubes in a very large proportion of cases, and regarded the history of repeated attacks of pelvic peritonitis as the best evidence of disease of the ovaries and tubes.

He especially avoids operating in the hysterical or hystero-epileptic cases, notwithstanding the tubes and ovaries were involved in almost all these cases, whether diseased or not he was not prepared to say.

Dr. W. M. Polk said that the answer to the entire question was that salpingitis was not a new disease; that it had been recognized for years; and that it had been cured over and over again without cutting the bellies of the women open and removing their uterine appendages, and they had afterward had babies. The name under which it had been described in the text-books was cellulitis; that is, there is a mass in the region of the broad ligament, sometimes continuous with the uterus, sometimes not, the uterus is fixed to a greater or less extent, with considerable fever in some cases, or slight in others, etc. On opening the abdomen in *fifteen* cases giving these symptoms he had removed a mass from the posterior surface of the broad ligament, but there was no induration whatever between the layers of this ligament. He wished to emphasize the point that when the masses thus removed were cut open, pus would be found in the tubes. He could not, therefore, help reaching the conclusion that they were talking about a condition which surgeons had recognized for years and had treated successfully, curing the patients.

Again, he had reached the conclusion that the indurations found were the result of extension of inflammation from the interior of the uterus; that if the cases were called peritonitis with salpingitis, a position would be taken that could be maintained; and that in the majority of cases of what are called cellulitis, there has been an ordinary endometritis which has extended to the tubes and to the peritoneal cavity; it may also extend along the line of the blood-vessels or the lymphatics.

He was also prepared to reach the conclusion that at first pelvic abscess was in nearly all cases nothing more than an accumulation of pus in the tube, which went on and involved the pelvic tissues; in a minority of cases the inflammatory process may originate between the layers of the broad ligament.

With all this he believed that there was a minimum number of cases, and these were cases of pyo-salpinx pure and simple, in which laparotomy for removal of the ovaries and the tubes might be performed with propriety, and was a justifiable procedure.

Dr. Paul F. Mundé said that, in 3,000 cases of disease of the female sexual organs he had treated, 117 were recorded as ovaritis and salpingitis, combined with peritonitis, which would sustain what had been said by Dr. Wylie and Dr. Polk. Besides, he had recorded 212 cases of uncomplicated ovaritis. He would therefore say that, according to his experience diseases of the uterine appendages were quite as frequent as generally supposed, although he did not, by any means, mean that cases requiring removal of the ovaries and tubes were so frequent as they might be considered to be by the followers of Mr. Tait. To say that there was something in the pelvis that was not normal, was not difficult; but that was not a diagnosis. With regard to operative interference, the symptoms must be the guide, and if they were such as would not yield to other measures, and the woman wished to have it performed, he regarded laparotomy for removal of the uterine appendages as a justifiable operation. Removal of normal ovaries, he did not approve of. Laparotomy, however, in these cases should not be resorted to rashly. He did not regard pelvic abscess as a pyo-salpinx which had worked its way out, but believed that it began in the cellular tissue.

Dr. E. Noeggerath still adhered to the views which he expressed eleven years ago, that the large majority of peri-uterine affections are of peritonitic origin; but that cases of cellulitis and perimetritis also occurred from other causes there was no doubt, although only under one circumstance, that is, whenever there has been a lesion of the mucous membrane of the uterus, and the lymph-sac of the lining membrane has been opened.

If, however, the inflammation of the lining membrane of the uterus was carried into the peritoneal cavity, and there was no lesion of the mucous membrane of the uterus, it was always by way of the tubes.

With regard to frequency, endometritis, with or without peritonitis and salpingitis, was the most common affection which we had to treat. He had become convinced that it was possible to relieve, by careful and rational treatment, a great many who were operated upon for removal of the uterine appendages. However, in the cases in which Dr. Wylie had operated, the specimen showed that the operation was justifiable in any case.

Dr. Coe said, in closing the discussion, that of course a certain amount of doubt must always attend clinical examinations that did not belong to the diagnosis of the pathologist who had the specimens before him.

The Academy then adjourned.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, March 2, 1886.

Alexander S. Hunter, M.D., Chairman.

Dr. A. H. Goelet read a paper entitled

RAPID DILATATION OF THE CERVIX UTERI FOR DYSMENORRHŒA AND STERILITY,

in which he set forth his views concerning the indications for the operation and the method of performing it. The indications were: First, dysmenorrhœa, constant and severe, where stenosis with obstruction is present; this includes flexion with obstruction. In these cases the pain is relieved by the flow; it sometimes becomes more pronounced after marriage. Second, it is indicated in cases of acute flexion, where the probe can be easily passed after the proper direction of the canal has been ascertained; there is no actual obstruction—the dilatation is done to overcome the flexion. Third, it is indicated where little or no flexion exists, and there is only slight obstruction, the passage of the sound through the internal os is attended by pain, and there is no other cause of the dysmenorrhœa and sterility. Fourth, it is indicated in a class of cases which give a history of no inconvenience, but sterility exists and dysmenorrhœa, at first only slight, gradually increasing in severity; the sound passes without pain until the fundus is reached, and an albuminous fluid exudes from the os. In these cases endometritis did not exist previous to marriage, but the congestion consequent upon that state has lessened the calibre of the uterine canal and increased the secretion from the uterine cavity. Complete dilatation, if maintained, will alone cure some of these cases.

The proper time for performing this operation is a week or ten days after the cessation of the menstrual flow, and much can be done by preparatory treatment to favor a good result.

The mode of performing it consists in anæsthetizing the patient, exposing the cervix through a speculum, introducing a sound, first to ascertain the direction of the canal, fix the cervix, drawing it down slightly, introducing the dilating instrument, which usually goes through the internal os with a *jump*, making it evident that it has entered the uterine cavity, and then applying gentle pressure to the handles of the instrument until they are brought together and the required amount of dilatation has been effected, usually the full extent of the instrument.

If the dilator does not pass the internal os with a moderate amount of pressure, introduce the applicator *repeatedly*, armed with cotton, which will increase the size of the opening so that the instrument can be introduced *without* force. When the handles have been brought together they should be held for a few moments, then removed, and a Hank's dilator introduced, to be followed by the applicator. This done a tampon of boro-glyceride is applied and the patient put to bed. On the following day introduce a stem made of hard rubber, slightly curved, tunnelled, and perforated in the centre, and for a week this is to be removed daily, cleansed, and replaced, when it can be removed permanently, and the patient allowed to get up. Dr. Goelet regards the operation as perfectly safe and effectual, if done properly, and in eighty cases it has not failed in a single instance to cure dysmenorrhœa.

The following conclusions were reached: 1. Rapid dilatation is a perfectly safe and justifiable procedure. 2. If a stem be used in the after-treatment recontraction does not occur. 3. The operation is demanded by the following conditions: First, marked stenosis with or without flexion; second, acute flexion without actual stenosis or obstruction; third, slight stenosis shown by passage of the sound, and dysmenorrhœa and sterility existing without other cause; fourth, moderate endometritis, acquired, with narrowing of the canal and lack of free drainage for the discharge.

Dr. Paul F. Mundé said that he had been particularly interested in the study of rapid dilatation during the last twelve or thirteen years, and he had found that the operation was very satisfactory so far as dysmenorrhœa, depending upon a constricted uterine canal, was concerned. He thought that the cases of dysmenorrhœa in which he had failed to afford relief did not reach ten per cent. The dilatation had been practised either at the dispensary or in his office, and he was not aware that any bad results had followed the operation. He used at first Ellinger's dilator, being the first to bring the instrument to this country, and subsequently substituted Palmer's dilator. He had not been so successful in the use of other forms of dilatation. The relief in a proportion of his cases had been only temporary, and the operation was repeated. In all the cases referred to the dilatation had been performed without the administration of an anæsthetic.

In twenty-nine cases of *sterility* he dilated thoroughly and effectually under the influence of an anæsthetic, using the Palmer dilator in all except five (in these dilatation was accomplished by means of tents), and by repeated dilatation at his office for several months kept the canal open. In all these cases a stem was used, either hard rubber or glass, and the patients were kept in bed for a week or ten days. During the first week the stem was kept in place by means of a tampon, and afterward by the cup-shaped pessary devised by Thomas. On an average, the patients wore the stem for three months.

In only two cases did pregnancy follow, so far as he knew. In one of the cases the dilatation was done with laminaria tents, and in the other with a dilating instrument. Three out of the twenty-nine cases had pelvic cellulitis, due to the operation. He was inclined to believe that more than two got pregnant, but at the same time he believed that impregnation after dilatation was rather exceptional—especially if the woman has been married and sterile for five years—probably not more than twenty-five per cent.

Dr. W. Gill Wylie advocated the use of the dilator for the cure of dysmenorrhœa and sterility, and he also almost always uses it when he wishes to make a uterine application. He thought that sufficient credit, in general, had not been given to Dr. Ball, of Brooklyn, for bringing forward this method of treatment for these two conditions. After Dr. Ball read his paper Dr. Sims always used the dilator after using the knife, and the method had a very great influence on Dr. Sims' results. Dr. Wylie could cite four cases of sterility, in three of which pregnancy took place within one year after the operation was performed. In quite a number of cases Dr. Wylie believed it to be physically impossible to pass these dilators through the internal os at the first sitting. He never attempts the operation as long as the uterus is fixed. Dr. Wylie makes a distinction between dilatation and divulsion. Dilatation will cure four out of five cases of dysmenorrhœa, and the patients can be treated in the office.

In *sterility*, *divulsion* is more commonly practised. Certainly he had obtained much better results, both in dysmenorrhœa and in sterility than Dr. Mundé had reported, yet not all cases had been cured. He also regarded it as important, as did Dr. Sims, not to draw the cervix down with the tenaculum.

Dr. A. M. Jacobus had dilated, according to Wylie's method, in a good many cases, and, so far as dysmenorrhœa was concerned, with very good success. In some cases he knew that pregnancy had followed the opera-

tion, which he had in most cases performed without an anæsthetic. Dr. Jacobus also spoke of the necessity of treating the mucous membrane of the uterus, after dilatation had been accomplished, and believed that by so doing the results would be improved.

Dr. H. Griswold said that he had not been very fortunate in practising extreme dilatation, but had been more successful with repeated moderate dilatations.

Dr. Boldt regarded chronic endometritis as an indication for dilatation, and thought it should be performed in these cases as thoroughly as in flexion or stenosis of the canal. So far as sterility was concerned, his experience was about midway between that related by Dr. Mundé and Dr. Wylie. He had had a few cases in which cellulitis followed the operation. Dilatation should never be performed when there is cellulitis or old pelvic peritonitis.

Dr. J. H. Fruitnight had performed dilatation with almost uniform success; eighty per cent. of the cases having become pregnant. *Divulsion* should be done under an anæsthetic.

Dr. Mundé could not agree with Dr. Wylie that the cervix should not be drawn down with the tenaculum.

The Chairman had found that it was desirable, in the cases best adapted to this method of treatment, to have an instrument which is sharply curved at one-eighth or one-fourth of an inch from its distal extremity, and with such an instrument he had been able to pass the sharpest flexion readily.

Dr. Goelet said that, after all, sterility was a secondary consideration, the pain of dysmenorrhœa being the symptoms from which the patients wished to be relieved. Dr. Goodell had reported nineteen per cent. of cures in sterility. Statistics concerning sterility, however, were necessarily unreliable. He regarded it as somewhat dangerous to divulse to the extent of rupturing the circular fibres of the cervix, and also believed that dilatation could not be performed thoroughly without an anæsthetic. With regard to recontraction, he found that it occurred before he used the stem. He does not expect now that the os will remain as large at the end of a year as it was at the time the patient passed from under treatment, but if the sound passes freely it may be regarded that the patient is cured permanently if the dysmenorrhœa has been relieved. He had always found that in severe chronic endometritis the uterine canal was sufficiently open to admit of treatment without dilatation, and therefore to allow free discharge.

The Section then adjourned.

Epilepsy Caused by the Sight of a Cadaver.—M. Legrande du Saulle reports the following eight cases in which the first attack of epilepsy in children occurred immediately after they had seen a dead body. 1. A child, ten years old, daughter of an hysterical mother, saw her mother's corpse, and was seized with epilepsy, the attacks recurring every day. 2. A girl, six years old, the child of a drunkard, saw her father's body, was greatly terrified, and became epileptic. 3. A child, twelve years old, whose father was a drunkard, the mother hysterical, and whose brother died in convulsions, became epileptic immediately after looking on a cadaver. 4. The fifteen-year-old daughter of an intemperate father, whose uncle was of unsound mind, saw her father's dead body and was seized with epilepsy, and manifested homicidal tendencies. 5. A girl, seven years old, saw her father's corpse and became epileptic, the atttacks recurring at intervals of a week. 6. A young girl, fourteen years old, saw her father die suddenly, was seized with convulsions, and became epileptic. 7. A child, ten years old, began to suffer from nocturnal epilepsy after she had seen the dead body of her grandfather. 8. A young woman, twenty-five years of age, saw and embraced her father's corpse and immediately had an attack of epilepsy, the convulsions recurring about once a month.—*Lo Sperimentale*, December, 1885.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CONJOINT SCHEME AND THE EXAMINATION UNDER IT—WORKS ON NERVOUS DISEASES—CARDIOGRAPHY AND ITS USES—NOTES FROM THE SOCIETIES—QUININE DEPOSITED IN THE EYES—SYMPATHETIC OPHTHALMIA—DOUBLE OPTIC NEURITIS IN CEREBRAL HEMORRHAGE—A NOVEL TREATMENT FOR HERNIA CEREBRI—NERVOUS SEQUELÆ TO VARIOLA—NECROSIS OF LOWER JAW FROM MEDICINAL USE OF PHOSPHORUS—FURNEAUX JORDAN'S AMPUTATION—UNUSUAL PRESSURE-SYMPTOMS FROM A MEDIASTINAL TUMOR—DIFFUSED SYMMETRICAL PULMONARY CIRRHOSIS—ANTE-MORTEM DIGESTION OF STOMACH—THE PURIFICATION OF THE THAMES—THE LUNACY BILL—MR. STANSFELD'S MOTION FOR THE REPEAL OF THE CONTAGIOUS DISEASES ACTS.

London, March 16, 1886.

I have on several occasions referred to the new "Conjoint Examinations," and the ill-repute for fairness they have acquired—the first examination more especially—with both teachers and students. Changes in the first examination have been considered advisable, and the following alterations have been approved by the two colleges, and will no doubt come into force at once: 1. Medical botany to be omitted. 2. The option to be allowed of taking materia medica with either the first or second examination. 3. The area of examination to be more limited both in chemistry and materia medica. The chemical part of the latter is to be transferred to the examination in chemistry. More stress is to be laid on the physiological action of drugs. One alteration which is much needed, but to which the committee do not allude, is a more orderly mode of conducting the examination, so as to prevent such confusion as, I am told, reigned at the October examination. It is also a strange state of things that two great colleges cannot arrange to have the practical examination in chemistry conducted at one centre, instead of sending the candidates in batches here and there all over London. I was informed by a candidate who was examined in practical chemistry at the College of Physicians, that the laboratory improvised there was a veritable cellar, with "a dim religious light," and imperfect standing-room for the numerous candidates. The collection of reagents was in a lot of odd bottles irregularly labelled—some with the formulæ and some with the chemical names—suggesting the idea that, instead of ordering a proper series of reagent bottles from a wholesale chemist, the College had utilized for the purpose the sweepings of a dozen surgeries, possibly presented to it by as many general practitioners on relinquishing general practice to become physicians. Platinum was not to be had for the asking, so the flame-test could not be applied. Such was the account I received from an eye-witness, and, even if it be taken with a grain of salt, it reveals a by no means creditable condition of affairs. Let us hope for better things on the completion of the new Examination Hall, the foundation-stone of which is to be laid by the Queen to-morrow week.

It is often said that this is an age of nervous diseases. It certainly is one in which great attention is paid to them. I lately chronicled the formation of the Neurological Society. A very full "Handbook of Diseases of the Nervous System" has just been published by Dr. James Ross. It follows closely the lines of his enormous monograph on the same subject, and may, in fact, be regarded as the same book "boiled down." As is usual in modern medical monographs, it includes a very elaborate *résumé* of the anatomy, physiology, and general pathology of the subject. The book is being also issued in America; but, instead of being reprinted there from advance proofs, the whole issue has been printed in Philadelphia, and the copies for British use sent over here.

We are also promised a work on the same subject by Dr. Gowers. Dr. Gowers has already written several works on nervous diseases, including two very popular and successful ones on "The Diagnosis of Diseases of the Spinal Cord" and "The Diagnosis of Diseases of the Brain," respectively, the last-named being issued only last summer. The latest announcement is of a treatise entitled "Paralyses: Cerebral, Bulbar, and Spinal," by Dr. Bastian, one of Dr. Gowers' colleagues at University College Hospital. Dr. Bastian is evidently determined not to be behind. His forthcoming treatise will probably be found to be an expansion—brought up to date—of his former excellent little book "On Paralysis from Brain Disease," which appeared in 1875. The student of neurology has also two other recent books to choose from for his reading, viz., Dr. Wilks' Lectures on "Diseases of the Nervous System," and Professor Grainger Stewart's "Introduction to Diseases of the Nervous System."

Cardiography was discussed at some length at Tuesday's meeting of the Medical and Chirurgical Society. Dr. P. M. Chapman read a paper on the subject, in which he endeavored to show (from numerous observations by himself and others) that in the human subject the duration of the systole diminishes by a constant quantity as the pulse frequency increases. This constant diminution he made out to be .0085 seconds for every increase in frequency of five beats in the minute between the rates of forty-five and one hundred and fifty per minute. He pointed out the importance of this rapid diminution in duration of systole as providing the heart with more rest, and remarked that a high pulse frequency was not necessarily attended with rapid cardiac failure.

Dr. Broadbent believed the relative duration of systole and diastole could be gauged by the stethoscope. He considered blood-pressure had a great deal to do with the diminution of the duration of systole. In fevers this diminution was due to diminished resistance in the peripheral circulation, though in some, *e.g.*, scarlatina, the arteries were not relaxed, and no diminution occurred. The normal rhythm might be lost and auscultation reveal the complete "tic-tac." The diastole might be actually shorter than the systole. Similar phenomena were met with in acute renal disease, in which a slight elevation of temperature was accompanied by considerable increase in the peripheral resistance. In some cases of acute albuminuria the heart rhythm varied almost from day to day; here cardiac exhaustion played a part. He had also observed the lengthening of systole gradually diminish as the heart gained power. He believed that, controlled by careful stethoscopic examination, cardiographic tracings were of considerable value.

Dr. Sansom also spoke in favor of the cardiograph, and maintained that it could distinguish for us between mitral stenosis and aortic regurgitation accompanied by a thrill.

Dr. Angel Money rather threw cold water on the previous speakers by remarking that he had taken five hundred cardiograms, and had found them of little value.

LONDON, March 15, 1886.

No one can complain of there having been any lack of subjects for discussion at the society meetings within the last week or so. Such a variety of topics have been discussed and so many cases of interest brought forward that I can only give a few brief jottings about some of the most important items in the proceedings.

At the last meeting of the Ophthalmological Society, Mr. Lang showed a patient in whom a deposit of quinine (which had been given medicinally) had occurred in both eyes, without impairment of vision.

Mr. Nettleship read the report of the Committee on Sympathetic Ophthalmia. The report was based upon an analysis of two hundred cases. The conclusions at which the committee arrived were as follows: Removal of the exciting eye, whilst it had not been proved to have any marked effect on the progress of the sympathetic disease, certainly did not increase the severity of it. Comparing equal numbers of cases in which (soon after sympathetic inflammation) the exciting eye was, and was not, removed, the sympathetic inflammation was more fatal to sight when the exciting eye had *not* been removed. This argument for early excision, however, was somewhat weakened by the fact that the excess of recoveries after early excision was partly due to the natural mildness of the disease in those cases, and the excess of losses in the other cases to their greater natural severity. The committee considered that mercury had little or no effect. They thought early iridectomy (on the sympathizing eye) was less unfavorable than usually supposed. In a few cases it had been performed on the exciting eye, and in nearly all with benefit to both eyes. They considered sympathetic ophthalmia to be extremely rare without perforation of the exciting eye having occurred. With reference to the interval between the lesion of one eye and the sympathetic inflammation in the other, only a dozen cases were found in which it was more than a year, and only eighteen in which it was a month or less. When the disease occurred late there seemed a greater probability of blindness ensuing.

Dr. Bristowe read the notes of a case of cerebral hemorrhage in which double optic neuritis occurred. The case was diagnosed during life as one of cerebral tumor. There was conjugate deviation of the head and eyes which persisted for five or six weeks. There was paralysis on the right side of the body. At the autopsy a large cavity was found in the left optic thalamus containing partly decolorized clot. The posterior limb of the internal capsule was ruptured, and both the lenticular nucleus and the white matter of the temporo-sphenoidal lobe damaged. Dr. Hughlings Jackson concurred with Dr. Bristowe as to the extreme rarity of the association of optic neuritis with simple cerebral hemorrhage. Hemorrhage from a tumor might lead to error. A large clot, on the other hand, might be regarded as a foreign body.

At last week's meeting of the Clinical Society, Dr. Maclaren recounted a case of hernia cerebri which he had successfully treated by pressure applied within the skull. The case was originally one of compound fracture and hernia cerebri supervened. The protrusion was shaved off, and then a silver plate placed on the mass within the skull so as to block the opening, the plate being a little larger than the aperture. This had no ill effects, though the plate slipped once, reproducing the hernia cerebri. The protruding mass was again excised and the plate readjusted, this time the edges of the scalp being brought into apposition and sutured over the plate. The latter was left in place for two months when it was removed and, the protrusion of brain-substance not recurring, the wound soon healed. The patient made a good recovery, though some paralysis remained from the effects of the original injury.

Drs. Whipham and Myers read notes of two cases in which peculiar nervous symptoms, especially affecting the speech, occurred after variola. They had been unable to find any account of similar cases among English writers though they had found some references to the subject among continental ones. In both cases paralytic and ataxic symptoms occurred on recovery from the fever, but the most marked feature in each case was a peculiar affection of the speech. The syllables were "scanned." The onset was not sudden. There was no nystagmus and there were no tremors. The cases were therefore not examples of disseminated sclerosis. In one case complete, in the other incomplete, recovery from the paralytic and ataxic symptoms ensued. In both, however, the speech remained permanently impaired though some improvement occurred in one of the cases. The author suggested that minute scattered hemorrhages, chiefly cerebral, had occurred, and that such lesions might be more common in small-pox than in other fevers. Out of eight closely analogous cases tabulated by the authors this "scanned speech" had been a sequel in six cases in which the patients had had small-

pox. A lengthy discussion took place on this paper, in which Dr. Hughlings Jackson, Dr. Stephen Mackenzie, Dr. Barlow and Dr. Seymour Taylor, took part. Dr. Hughlings Jackson believed similar symptoms occurred without febrile disease and suggested thrombosis in a minute vessel of the medulla oblongata as a possible cause. Dr. Stephen Mackenzie said severe malaria could give rise to the same phenomenon but there was then generally tremor also.

Mr. Hutchinson described a case of necrosis of the lower jaw which he believed to have been produced by the use of phosphorus internally. The patient had taken $\frac{1}{33}$ grain of phosphorus (in pill) three times a day for two years. She had carious teeth, and inflammation had begun in connection with one of them, and probably about six or nine months after the phosphorus had been commenced.

On Monday evening, at the Medical Society of London, Mr. Edmund Owen read notes of a case in which he had performed amputation at the hip-joint by Furneaux Jordan's method. There had been abscesses in the hip- and knee-joints. Pyæmic abscesses formed in other parts, the liver was much enlarged, and the urine contained one-fourth albumin. The case did well, and when the boy (six years of age) returned from the seaside, there was a thick core of bone in the stump, and both the hepatic enlargement and albuminuria had diminished. There was a brief but lively discussion on Mr. Owen's case, and in replying he said he considered that albuminuria from scrofulous disease and crepitations at the apex of a lung were indications for operation. What would the surgeons of thirty years ago have thought of this? And yet some practitioners talk about the good old times!

Dr. Theodore Williams read notes of a case of mediastinal tumor in which unusual compression of neighboring organs was caused. There was severe dyspnœa and extreme difficulty in swallowing. The left vocal cord was fixed.

On Tuesday evening, at the Pathological Society, Dr. Percy Kidd described a case of lung disease in which (post mortem) diffused symmetrical cirrhosis of both lungs was found. There were many hemorrhages. Dr. Hanford exhibited a specimen which he regarded as one of ante-mortem digestion of the stomach.

Old Father Thames is at last to be relieved of a portion, at least, of the vast bulk of sewage hitherto poured into his channel. Within the last few years this has been tempered by admixture with a (relatively) small amount of disinfectants at the outfalls. The Metropolitan Board of Works have now prepared a scheme for dealing with the whole of the London sewage. It comprises three processes: 1, precipitation of solids by addition of lime and ferrous sulphate, $3\frac{3}{4}$ grains of the former and one grain of the latter being added to each grain of sewage and one or two hours allowed for the solids to precipitate; 2, compressing of the resulting semi-solid mass by filter presses to the smallest possible bulk, the final product (sewage-cake) being taken out to sea in large steamers if it cannot otherwise be disposed of; 3, purification of the effluent by admixture with sodium manganate and sulphuric acid. The Metropolitan Board of Works have not hitherto shown themselves particularly alive in sanitary matters, but they seem in earnest now. Their plan is being well received, and, if satisfactorily carried out, it is not too much to say that it will constitute one of the greatest sanitary reforms this generation has witnessed.

The coming extinction of private asylums, under the new Lunacy Bill, brought forward in the House of Lords, is to be opposed by those interested.

On Tuesday evening, in the House of Commons, Mr. Stansfeld succeeded in carrying his motion in favor of the repeal of the Contagious Diseases Acts. Their fate may, therefore, be regarded as sealed. Mr. Stansfeld secured a large majority—245 against a minority of 131.

OUR PARIS LETTER.

WHAT CONSTITUTES A GOOD SURGEON—HOW TO CULTIVATE STEADINESS OF HAND AND DELICACY OF TOUCH—THE MEANS WHICH SHOULD BE EMPLOYED TO PREVENT THE SPREAD OF PULMONARY TUBERCULOSIS.

PARIS, March 29, 1886.

DR. LANDOLT is a distinguished ophthalmologist, and for his age, he not being far from either side of forty, has already acquired a fame in his specialty which may be envied by many of his seniors. Like others of his colleagues, Dr. Landolt has a dispensary for eye diseases where gratuitous consultations are given to the patients of the poorer classes and demonstrations and lectures to those of the profession who may wish to attend. At the beginning of the year Dr. Landolt commenced a course of lectures on ophthalmic surgery at the École Pratique, a branch of the School of Medicine, the subject of his opening lecture being, "How to Handle Instruments in Ophthalmic Surgery." This lecture has just been published in pamphlet form, a short notice of which I thought would be acceptable to your readers. The lecturer began by indicating the points of difference that exist between ordinary and ophthalmic surgery. The difficulties attending operations on the eye are very great, but not insurmountable. As the organ we have to deal with is very small in proportion to other parts of the body its textures are delicate and it is particularly mobile. The essential requisites for an accomplished surgeon, says Dr. Landolt, are a steady hand, a clear head, good sight, and above all, self-confidence. If these qualities are necessary or indispensable in general surgery, how much more must they be in operations on such a delicate organ as the eye? In the former the whole arm of the surgeon is often called into requisition to complete a capital operation, such as cutting off an arm or a leg, whereas, in ocular surgery, this member should be altogether passive, simply acting as a lever to which the hand is suspended. But even this part of the limb is very rarely employed in ocular surgery; it is principally with the fingers that operations on the eye should be performed, and in order to render them effective they should be daily put through such exercises as will render them independent of each other, and the surgeon should cultivate that delicacy of touch and prompt manipulation which ophthalmic surgery demands. It is the fingering, added the lecturer, which makes a good ophthalmic surgeon; any movements directed by the wrist may destroy an eye. Dr. Landolt divides ophthalmic instruments into three categories, viz., instruments in handles, scissors, and forceps. Manipulation with those in the first category depends entirely on the position of the fingers on the instrument; with those in the second, the contact of the finger ought to be light and unremitting. Manipulation with forceps demands excessive freedom of the fingers, and a thorough manual command of them. It has often been said that manual exercises militate against the requirements of a good surgeon, particularly as regards manipulation. This Dr. Landolt states is an error, for, on the contrary, all that contributes to strengthen the physical and moral health of a surgeon will be of the greatest benefit to him.

At its last meeting the Council of Hygiene and of Salubrity of the Seine discussed a report submitted to it by Dr. A. Ollivier on the means that should be employed to prevent the spread or development of pulmonary tuberculosis. The following conclusions were adopted by the council: The agent, the most active in the transmission of tuberculosis, resides in the sputa. These, therefore, should never be thrown on the floor, nor on the linen, where they are transformed into dangerous pulverulent substances. Consequently phthisical patients should be recommended to spit into vases containing wood shavings. These vases should be emptied at least once a day and washed with boiling water. Their contents should be thrown into the fire and burnt. These

measures should be strictly applied to large conglomerations of persons, such as in schools, factories, barracks, hospitals, etc. In the case of a furnished room that has been a long time occupied by a phthisical patient, and particularly in the event of his death, it will be necessary to disinfect the room and the bedding with the fumes of sulphur. The clothing of phthisical patients should not be worn by other persons before being thoroughly washed in boiling water and then submitted to steam.

The next Congrès Français de Chirurgie, which will be its second session, will be held in Paris from October 18 to 24, 1886. The following are the subjects that will be discussed on the occasion: 1. The Nature, Pathology, and Treatment of Tetanus. 2. Nephrotomy and Nephrectomy. 3. Orthopedic Resections. 4. Operative Intervention in Traumatic Irreducible Dislocations.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from March 28, to April 3, 1886.

McElderry, Henry, Major and Surgeon. Relieved from further duty in connection with New Orleans Exposition, and ordered, on the expiration of his present leave of absence, for duty in Department of the East. S. O. 71, A. G. O., March 26, 1886.

Loring, Leonard Y., Assistant Surgeon. Granted leave of absence for one month, provided that during his absence he furnishes the necessary medical attendance at San Diego Barracks, Cal. S. O. 19, Department of California, March 24, 1886.

Hoff, John Van R., Assistant Surgeon. Granted one month's leave of absence. S. O. 29, Department of Missouri, March 29, 1886.

Banister, J. M., Assistant Surgeon. Granted leave of absence for one month, to commence on or about April 2, 1886. S. O. 63, Department of the East, March 26, 1886.

Appel, Aaron H., Assistant Surgeon. Granted leave of absence for one month. S. O. 66, Department of the East, March 30, 1886.

Johnson, Richard W., Assistant Surgeon. Relieved from duty at Fort Buford, Dak. Terr., and ordered for duty (temporary) at Fort Snelling, Minn. S. O. 28, Department of Dakota, March 29, 1886.

Official List of Changes in the Medical Corps of the U. S. Navy during the week ending April 3, 1886.

Atlee, L. W., Assistant Surgeon. Ordered to duty on U. S. R. S. Vermont.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 3, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
April 3, 1886.....	0	15	58	4	5	59	5	0
Deaths.								
April 3, 1886.....	0	5	12	4	1	10	4	0

The Late Dr. Austin Flint—In Memoriam.—At a special meeting of the Executive Committee of the New York County Medical Association the following was unanimously adopted:

Whereas, It has pleased God to remove from our Association our beloved and highly honored friend, Professor Austin Flint, M.D., LL.D., one of our founders, and an ever-willing co-worker, we desire to record the great appreciation of our loss. Professor Flint, from early manhood, has ever been an indefatigable laborer in the field of medical science, and for half a century has been one of the most accomplished teachers and writers in the profession. His varied experience, extending over different portions of our country, enabled him on his settling in New York City at once to take the foremost place in the profession. As a consultant he was without a peer; his calm judgment, urbane manners, and strict conscientiousness made his presence ever welcome to his brethren. As a gentleman, he will be held in grateful remembrance by all with whom he came in contact; his charities were proverbial. His death will be the cause of universal sorrow, especially occurring at a time when his deliberate counsels are most needed. We can never forget that genial countenance, those cheerful words, and that buoyant disposition, which, amid the greatest of sorrows, always pointed out the ray of light affording hope.

Therefore, In testimony of your respect for the deceased, it is earnestly hoped that you will attend the funeral services at Christ Church, corner of Thirty-fifth Street and Fifth Avenue, on Tuesday, March 16, 1886, at 2 o'clock P.M. The members of the Association will assemble in the Sunday-school room, entrance on Thirty-fifth Street, at 1.45 P.M.

Charles A. Leale, M.D.,
Glover C. Arnold, M.D., *President.*
Secretary.

Whereas, This Association has heard with sorrow of the death of Dr. Austin Flint;

Resolved, That in the death of Dr. Flint the profession has lost one of its brightest ornaments as a practitioner, as a teacher, as a writer, and as a man.

Resolved, That the members of this Association mourn the loss of a teacher who, during his long association of a quarter of a century with their Alma Mater, shed lustre upon her name, and whose instructions have been their safe guide in their practice.

Resolved, That above all it was the noble manhood of Dr. Flint that endeared him to his associates and pupils. In his intercourse with them there was no self-seeking, no desire for self-aggrandizement. No one ever solicited his aid at the bedside without feeling assured that Dr. Flint brought to it the resources of his learning and ripe experience, with the most sincere wish to use them for the cure, cheer, and comfort of the patient, and for the assistance of the physician.

Leroy M. Yale,
Laurence Johnson,
L. Putzel,
Committee.

The Late Dr. Alfred C. Post.—At a recent meeting of the Faculty of the Medical Department of the University of the City of New York, the following minute was adopted:

Resolved, That by the death of Alfred C. Post, M.D., LL.D., who has been for so many years a most honored and distinguished member of this faculty, and for thirteen years its president, the college has sustained a great loss which will be long regretted by its faculty, and by thousands of its alumni, both in our own country and abroad.

Resolved, That his service of thirty-five years links the name of Dr. Post inseparably with the remarkable men who founded this institution, and who won for it such a secure and influential position in the world of medicine.

As the last survivor of that distinguished faculty, he perpetuated its spirit and illustrated its traditions by his profound and varied learning, by his ability as an instructor, and by the lofty integrity of his character.

Resolved, That the faculty tenders its regretful sympathy to the members of his family, with the assurance that none appreciate better how much cause his children have to cherish a memory and a name so justly honored as that of their revered father.

CHAS. INSLEE PARDEE, *Dean.*

April 2, 1886.

THE LATE DR. CASPAR GRISWOLD.—At a meeting of the New York Clinical Society, held March 26, 1886, the following resolutions were adopted:

Whereas, One of our members, Caspar Griswold, M.D., M.R.C.S., has been suddenly removed by death;

Resolved, That we, the members of the New York Clinical Society, hereby express our sense of the great loss the Society has sustained, in common with the medical profession in general, in Dr. Griswold's death. During the several years of his membership in our Society the part which he took in its proceedings was of value to all his fellow-members, whether in the form of papers read by him, of oral contributions from his clinical experience, or of remarks in the discussions. To a frankness and pointedness of statement that always commanded attention he added a deference to the opinions of others that endeared him to all of us. By his early death we have been deprived of an esteemed and most valuable member.

Resolved, That we as a body respectfully tender to the family of our deceased associate this expression of our sympathy in their bereavement.

Resolved, That these resolutions be entered upon the secretary's minutes, on a page to be set apart for that purpose; that a copy of them be sent to the family of the deceased; and that they be furnished to the medical journals of this city for publication,

F. P. FOSTER, M.D.,
W. H. KATZENBACH, M.D.,
L. B. BANGS, M.D.,
Committee.

A. A. SMITH, M.D., *President.*
B. F. CURTIS, M.D., *Secretary.*

THE LATE DR. S. W. FRANCIS.—At a special meeting of the Newport Medical Society, the following resolutions were adopted:

Whereas, Through the Providence of Almighty God, there has been withdrawn by death from the Newport Medical Society, in the very prime of life, its Vice-President, Dr. Samuel Ward Francis; and

Whereas, It is the duty of man not only to mourn with those who mourn a mutual friend, but to acknowledge and put upon record social loss and public bereavement, thereby honoring the dead and stimulating the living to more faithful following of their good example; therefore,

Resolved, That in the death of Dr. Francis the medical profession of Newport, as well as all lovers of sound learning, literature, philanthropy, indeed of all that elevates and humanizes mankind, and the whole community in which he lived, have parted with one who in every sphere in which he moved, was always a bright and shining light.

Resolved, That our colleague, the most kind, affectionate, and tender-hearted of men, ever cheerful and light-hearted under cares that would have crushed most others, constant to duty, self-sacrificing and patient, was a worthy son of the illustrious parent whose memory he so revered, and that his active, beneficent life, true to the guiding-star of a steadfast faith in our Saviour, to whom he offered its every experience, was crowned by a most lovely and enjoyable death.

Resolved, That the sympathy of the Society be communicated to the bereaved family of the deceased.

Resolved, That copies of the above resolutions be sent to the Newport newspapers and to the New York MEDICAL RECORD.

HORATIO R. STIVER, M.D.,
EZRA DYER, M.D.,
FRANCIS H. RANKIN, M.D.,
HENRY ECROYD, M.D., *Secretary.* *Committee.*

BISMARCK AND HIS DOCTOR.—Prince Bismarck is again indisposed, it is said, and pleurisy is feared. That means work for Professor Schwenniger, the Prince's doctor. Schwenniger is the Roose of Berlin. Munich was to him what Brighton was to our English rising medico, and Bismarck's eldest son was his discoverer. This gentleman, having had some sixty or seventy pounds weight taken off him, and having been brought out of the very back teeth of death by following Dr. Schwenniger's advice, suggested that his father should also become a patient. The Chancellor was willing, but he could not go to Munich, and the doctor could not leave his practice there without a *quid pro quo*. The quid—several hundred quid—was found by his appointment to a Professorship in Berlin, which he now holds, in addition to an enormous private practice. He sees Bismarck daily, had brought him into perfect health, and had so tamed the tiger that the former periodical explosions in the Reichsrath had entirely ceased, and there had been no change in the Government since Schwenniger had charge of the Chancellor's digestion. Diet, not medicine, is what Professor Schwenniger swears by. No drugs, no mineral waters, no "kur" of any kind. Eat of only one dish, no matter what that may be. Oysters, lobsters, beef, mutton—eat your moderate fill of that, but touch nothing else at a meal; no vegetables, save perhaps a little salad, no sweets, no savories, and do not touch one drop of liquid until half an hour, in some cases an hour, after your meal is ended! There is the *crux* for those who like Chablis with their oysters, Madeira with their turtle, Marcobrünner with their fish, and D. and G.'s Gold-Lack with their first entrée. One dish only, and no drink until long after the meal is over? What does Lucullus—what does Sir Henry Edwards, of the statue—think of that?—*London World.*

THE CHINAMAN FROM A MEDICAL POINT OF VIEW.—The *Southern California Practitioner* does not consider the Chinaman a healthful element in society. It says: "The Chinamen, with their opium-joints, their universal habit of using tobacco excessively, their intemperance, their venereal diseases, their leprosy, their parsimonious way of crowding together in small sleeping apartments, their concubines, their lack of the good influence on health that is exerted by wife and home, their filth, their utter disregard of all sanitary and hygienic rules, their cold-blooded heartless neglect of each other when sick or wounded, and their continuous nightly round of dissipation, have long been a serious menace to the health of every city on the Pacific coast." About the same thing can be said of the lower class of Italians, and of Russian and Polish Jews which are now being poured upon these Eastern shores.

THE "DRY-BREAD CURE" is the latest craze, and it comes from "Lindenweise." It consists of the cold pack, a diet consisting of dry bread, twice a week a little rice and barley, and three times a week Hungarian wine, all to continue for six weeks. In cases of rheumatism, gout, etc., it is said to be effectual.

ACIDS IN THE PROPHYLAXIS OF CHOLERA.—A correspondent writes that Dr. Worms, of Paris, used diluted sulphuric acid in the treatment of the premonitory diarrhœa of cholera in 1849, and again in 1853, with great success. As Koch has found that acids are prejudicial to the life of the comma-bacillus, the writer says, the enthusiastic claims of Worms would seem to have received further confirmation. As hydrochloric acid is found in the normal stomach, it is suggested that that be used in place of the sulphuric.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 29, No. 16 NEW YORK, APRIL 17, 1886 Whole No. 806

Original Lectures.

ON CERTAIN PROBLEMS IN THE PHYSIOLOGY OF THE BLOOD-CORPUSCLES.

THE CARTWRIGHT LECTURES, DELIVERED BEFORE THE ASSOCIATION OF THE ALUMNI OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK, APRIL 3, 1886.

BY WILLIAM OSLER, M.D.,

PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

LECTURE III.

THE RELATION OF THE CORPUSCLES TO COAGULATION AND THROMBOSIS.

I PROPOSE, in this lecture, to consider the question of the relation of the corpuscles to the processes of coagulation and thrombosis, and I will first call your attention to the action of the *colorless corpuscles*. Our knowledge of the connection between these elements and coagulation dates from the observations of Buchanan in 1831. He attributed the action of what he called washed blood-clot, in inducing clotting, to the colorless blood-corpuscles included in the meshes, and which he said acted as a sort of ferment, comparing the action to that of rennet. These views have been greatly elaborated by Schmidt, of Dorpat, and his pupils, to whose researches we are indebted for an important extension of our knowledge in this department of physiology.

According to these well-known observations, the colorless corpuscles furnish the fibrinoplastin or paraglobulin, and the ferment, while the third element, the fibrinogen, exists naturally in the bloodp-lasma. Schmidt and his pupils hold that in furnishing these two elements to make up the fibrin, the colorless blood-corpuscles undergo disintegration and destruction. The evidence which they bring forward in proof of this is as follows: The blood-plasma of the horse may be readily collected by keeping the blood at a low temperature and allowing the red blood-corpuscles to subside, when a clear layer of plasma remains, consisting of plasma with a few red and many colorless corpuscles. Now, if a portion of this plasma is taken and whipped with twigs, the difference between the number of colorless corpuscles remaining in the serum and those in the original plasma represents the number of colorless corpuscles which have undergone destruction in the process of the formation of fibrin, and Schmidt and his pupils estimate that at least seventy per cent. of the colorless corpuscles undergo destruction in this way. They found that, instead of 15,000 colorless corpuscles in a cubic millimetre of the plasma before it is whipped —*i.e.*, before the fibrin is extracted—there were, subsequently, not more than 4,000 per cubic millimetre remaining in the serum. Examining the clot so obtained, it is stated that the colorless corpuscles have largely, if not entirely, undergone destruction in the formation of fibrinoplastin and the fibrin ferment. This is, perhaps, the most convincing experiment which any one of Schmidt's pupils has brought forward to sustain his view, that colorless corpuscles undergo destruction in the process of coagulation. There are many other points urged by Schmidt, to which I need not refer, as they are readily accessible in the works on physiology.

The researches of Wooldridge[1] have also shown that the colorless corpuscles play an important part in the formation of fibrin. He has been able to procure leucocytes from lymph-glands in a tolerably pure condition, by means which he has described at length in his paper. These leucocytes when added to an equal volume of a ten per cent. solution of common salt seem thus to be converted into a material resembling very closely ordinary fibrin. By experimenting with what is known as peptone-plasma he has obtained very striking results, which would appear to indicate still more clearly that leucocytes play an important part in this process. Peptone-plasma is obtained by injecting peptone into the blood-vessels and then bleeding the animal. Coagulation is prevented entirely by the influence of peptone and the red blood-corpuscles may be entirely removed from the serum by the centrifugal machine. This plasma shows no special inclination to coagulate, and is, of course, particularly suitable for experimental purposes. If the leucocytes prepared from the lymph-glands be added to this plasma coagulation at once occurs. If a small quantity of leucocytes are added the amount of fibrin produced is small; if a larger quantity is added, more fibrin is produced. In fact, Wooldridge has shown that the amount of fibrin produced in the peptone plasma is directly proportionate to the leucocytes added. The leucocytes seem themselves to form the fibrin—perhaps the entire mass, for the weight of the fibrin produced is the same as the weight of the leucocytes added. Moreover, the albumins in the peptone-plasma, after coagulation, can be shown not to have undergone any change, but remain the same, quantitatively and qualitatively; and a third point is that the leucocytes appear to have undergone disintegration.

There are other points in Wooldridge's researches to which I shall not have time to refer at length; but he concludes that it is only the dead plasma which converts the cells into fibrin, as the injection of leucocytes into the blood of the living animal produces no effect.

Such facts appear to show very conclusively that the corpuscles do undergo disintegration, and yet if the blood-plasma of the horse is examined after it has been whipped, leucocytes may be found in the serum, and also in the clot which has been produced, so that all the leucocytes have not undergone destruction. The existence of a certain number of the leucocytes after clotting has occurred has caused one of Schmidt's pupils, Heyl,[2] to divide the leucocytes into two sets: the alpha-leucocytes, which undergo destruction during clotting; and the beta-leucocytes, which remain. From observation, I do not believe that the number of the leucocytes which undergo disintegration in the clotting of the horse's blood is anything like so extensive as Heyl states.

Although the evidence in favor of the destruction of the colorless elements seems conclusive, yet if the fibrin formation is studied under the microscope, it appears to take place without any disintegration of colorless corpuscles, and it is extremely difficult to demonstrate their participation in the process. As is well known, it can be studied in a blood-drop examined in the ordinary way, or, better still, in the moist chamber. The time which elapses before coagulation begins is vari-

[1] Proceedings of the Royal Society [illegible] London, 1885.
[2] Dorpat Dissertation, Fortschritte der Medecin, 1885.

able in different individuals and under different conditions. Usually, however, from fifteen seconds to two or three minutes elapse before the first appearance of the fibrin filaments is noticed. A slide can be prepared in a very few seconds, and there is sufficient time before clotting begins to examine the colorless corpuscles, the red corpuscles, and the blood-plaques. I must say that, in a very careful examination of the process of the formation of fibrin in this way, I have never seen any appearance in the leucocytes which would indicate that, as the fibrin was formed, they underwent disintegration or dissolution. On the contrary, they seem most stable elements, and the amœboid movements persist long after the fibrin network is thick and dense in the field. Certainly in the microscopical examination of the ordinary slide, or in the examination of the blood-drop in a moist chamber, I do not think anyone has seen the direct disintegration of leucocytes in the production of fibrin. An interesting and instructive experiment is to draw the blood of a frog, or of the horse (in which Schmidt and his pupils hold that the colorless corpuscles so rapidly undergo disintegration) into a fine capillary tube in which the process of clotting can be watched under the microscope. At first, the entire tube is filled with corpuscles; but, before long, it is seen that the clot contracts, and there is a peripheral layer of serum squeezed out. In a short time, leucocytes can be seen emerging from the clot in numbers, either squeezed out or migrating from it. This experiment, which can be readily demonstrated, forms an admirable mode, as Shäfer showed some years ago, of studying the process of coagulation.

A study of the histogenesis of fibrin as seen in the moist chamber, in the capillary tube, and in the ordinary slide, affords, I think, no evidence in favor of the destruction of the colorless corpuscles, but, on the contrary, is directly opposed to this view. In a certain number of instances the aggregations of blood-plaques, to the connection of which with the process of coagulation I shall shortly refer, have possibly been mistaken for colorless corpuscles.

The relation of the *red corpuscles* to coagulation is not regarded as very important; they play a more passive part. But Landois and others have described a process which can be readily seen in the blood of the frog and in mammalian blood, examined in serum. If we take the blood of the frog and examine it in the serum of the blood of the rabbit, it will be seen that the red corpuscles of the frog crowd into columns, and in a short time the hæmoglobin leaves the corpuscles, which become granular, and fibrin filaments form in their vicinity, and, according to Landois, the red corpuscles break down into a material which resembles granular fibrin very closely, indeed. These observations were made ten or eleven years ago by Landois, and they have been confirmed by others; but whether the corpuscles undergo transformation into the fibrin filaments. or whether fibrin only clots about these groups of corpuscles under the influence, perhaps, of a ferment which they extrude, it is impossible to say.

The relation of the *blood-plaques* to coagulation is particularly interesting, and is at present attracting a great deal of attention.

In the study of fibrin formation, as seen under the microscope, it has long been noticed that the fibrin filaments spread out as distinct rays from the minute aggregations which have been known as Schultze's granular masses. Schultze noticed these, as did also Ranvier, in 1873, who regarded these masses as centres of coagulation. That the fibrin sets in a thick, dense network about the plaques is readily seen, but it can also be noticed, particularly if healthy blood is examined in which the plaques are not very numerous, that the fibrin also appears quite independently of the plaques. It forms as distinct little needle-shaped bodies, presenting an appearance not unlike that of crystals. That these crystal-like portions of fibrin appear in regions of the field quite apart from the blood-plaques, is well seen in studying the process of coagulation in the moist chamber. Although the fibrin needles, when first formed, may appear in portions of the field unoccupied by blood-plaques, yet the network is usually most dense in their neighborhood, and when the entire field is covered with fibrin filaments, the disintegrated blood-plaques look like centres from which the filaments radiate.

The relation of the blood-plaques to coagulation, as examined experimentally, is even more interesting. If an ordinary ligature is passed through the femoral vein of a dog and allowed to remain for five or six minutes, or even less, the threads become coated with the plaques, as represented in Fig. 1. It is well to separate

Fig. 1.—Aggregation of plaques on a thread of cotton passed through femoral vein of dog and allowed to remain ten minutes.

slightly the filaments of the thread, and if exposed to the blood-stream for as long as ten minutes they become uniformly beset with the plaques. A few white corpuscles may be entangled among them, but undoubtedly the plaques are the first elements to aggregate about such a foreign body. The outlines are usually distinct, but if allowed to remain long in the vein those nearer the threads become more granular, and the distinct corpuscular nature is less evident. If a small brush of thread is tied to the end of a pen-handle, or any suitable object, then whipped in the blood, as freshly drawn, for four or five minutes, and then examined, the threads will have precisely the same appearance and are uniformly covered with blood-plaques. The colorless corpuscles are adherent here and there, but the blood-plaques form the striking elements. They adhere to the filaments of the thread, and several of the finer fibres of

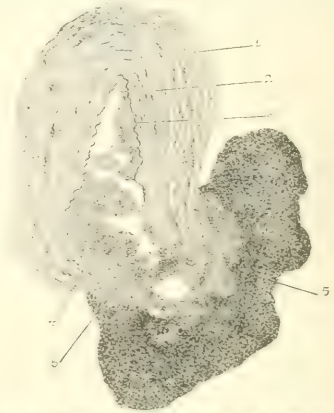

Fig. 2.—Section of Femoral Artery of Dog at the Site of Longitudinal Incision through which the Animal Bled to Death. [illegible] under oblique low power. 1, 2, 3. Adventitia, media, and elastic lamina of intima. 4. Aggregations of blood-plaques at extremities of incision and on the internal and the cut margins of the vessel. 5. clot composed chiefly of red corpuscles. 6. the cut end from which Fig 3 was sketched.

the thread may be entirely agglutinated by the aggregation of the blood-plaques about them. I can fully confirm these original observations of Bizzozero and Hayem, and the experiments have now been repeated by a number of observers. If the threads, after having been whipped in the blood, are carefully washed in a saline solution, all the red corpuscles can be washed away, so that few, if any, can be seen, and then if these threads are dipped into a coagulable solution, clotting will occur. This experiment was performed by Bizzozero in 1882, and has been repeated by other ob-

servers. It has been urged against it that possibly the threads beating about in the blood have absorbed some of the fibrin ferment. This is, of course, possible, but certainly in such threads the chief elements to be seen are the blood-plaques, and the leucocytes are very scanty; besides, the greater the number of the blood-plaques adherent to the thread the denser the coagulum will be, as if the blood-plaques furnished the material for the production of the fibrin or the ferment in large quantity.

Still more conclusive evidence of the participation of the blood-plaques is their relation to thrombi, as experimentally produced.

The femoral artery of a dog is exposed and a linear slit made in the vessel, through which the animal is allowed to bleed to death. This portion of the vessel is rapidly excised and placed at once in alcohol; or, still better, first in osmic acid, and then sections carefully cut through the part where the incision was made, when such an appearance as seen in Fig. 2 will be found. Occupying the cut edges, and filling in places the lumen of the vessel, a finely granular material is seen under a low power. Surrounding it, to the outside, as represented at 5 in the figure, there is a darker material made up largely of dark clots composed of red blood-corpuscles. In the central portion, in immediate contact with the cut edges of the vessel, in contact with the elastic lamina of the intima, and occupying the interstices of the ragged surfaces, are the blood-plaques. This was so stated by Bizzozero in 1882, and it has been confirmed in an elaborate investigation from the laboratory of Langhans,[1] in Berne. My own observations are in harmony with these, and we may say that the plaques are the elements which first settle on the edges of a wounded vessel, and which form the basis of the thrombus.

Fig. 3.—[illegible] Portion of Adventitia indicated at [illegible] in Fig. 2. The fibres are everywhere surrounded with granular disintegration-plaques.

Fig. 3 represents the end of a portion of the adventitia indicated by a cross (×) in Fig. 2. The sketch shows the blood-plaques in a condition of granular disintegration, but under a high power the outlines can be distinctly defined, and anyone with a knowledge of these elements and of the changes they undergo has no difficulty in recognizing them. If the cut ends of the vessel are examined when fresh, in osmic acid or Pacini's fluid, the elements are still more clearly seen, and are readily determined to be identical with those in the circulatory blood and in the granule masses. The elaborate investigations of Eberth, published in the January number of Virchow's *Archives*, 1886, clearly demonstrate that the plaques are the first elements to settle and lodge on the lacerated portion of the vessel or on a portion of vessel destroyed by acid or by caustic.

The relation which the blood-plaques bear to the so-called white thrombi is particularly interesting. Zahn[2] appeared to prove by his observations that white thrombi are composed exclusively of colorless corpuscles, and the current idea is that to a lacerated portion of a vessel the colorless corpuscles adhere and undergo disintegration, become granular, and form in this way a white thrombus. Bizzozero, Hayem, and Eberth have shown, I think pretty conclusively, that if a needle is passed across a vessel in the omentum, or in the mesentery, so as to injure it, the first elements which are collected at the site of the injury are not the colorless corpuscles, or the red corpuscles, but the blood-plaques, which form distinctly aggregated masses—white thrombi. There may

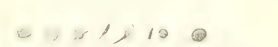

Fig. 4 [illegible]

be colorless corpuscles as well, but the chief bulk of the thrombus, which has formed at the site of the injury, is undoubtedly made up of blood-plaques.

A study of white thrombi as met with in man leads us to the same conclusion. These structures have been long recognized, and have been supposed to be made up largely of colorless corpuscles. We find them on atheromatous ulcers, forming thrombi in the femoral veins, in the auricles and ventricles, on the valves in endocarditis, and as the lining of aneurismal sacs. The examination of the superficial part of a white thrombus in osmic acid, Pacini's fluid, or even salt solution, reveals the fact that it is composed of blood-plaques in closest contact with the blood-column. So far as my observation goes, without exception, in the peripheral part where they have not undergone disintegration, such thrombi are made up of small circular, disk-like elements which anyone familiar with the blood-plaques will readily recognize as such. Fig. 5 represents two

Fig. 5.—White [illegible] aorta [illegible] Medical Gazette, [illegible] Medicine, [illegible] Medicine, [illegible] Medicine

white thrombi, more particularly the superficial parts of them in contact with the blood-current. I think they will find, without exception, that they are composed not of colorless corpuscles, nor of a reticulated fibrin network, but almost exclusively of these plaques which, in the deeper parts, have undergone granular disintegration, but in the superficial parts still retain their normal shape and appearance.

The observation that these white thrombi consisted of blood-plaques was confirmed in 1882 by Bizzozero, and in the same year by Hayem, and since then it has been noted by a number of observers.

Fig. 7 represents a small aneurism of the thoracic aorta, which shows on its lining membrane a number of soft, grayish-white curvilinear elevations, such as all observers have noted, and on examination these will be found to be made up of elements similar to those which

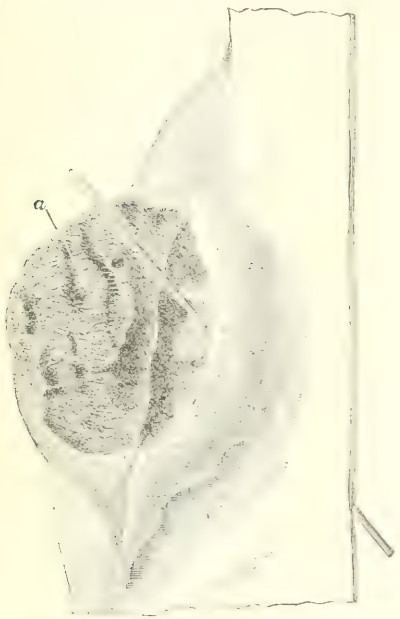

Fig. 7.—Small Aneurism of Thoracic Aorta. Showing the internal wall of the sac covered with numerous curvilinear elevations, grayish-white in color, and composed of blood-plaques. (Specimen in Museum of McGill Medical Faculty, Montreal.)

compose the white thrombi, namely, distinctly circular, disk-like blood-plaques. The changes which these bodies undergo are very peculiar. As I mentioned in my first lecture, they appear in masses as soon as they are withdrawn, and then undergo remarkable transformation, whereby they lose their outline and become converted into a granular material in which the individual plaques become unrecognizable. That change occurs in the blood-plaques as they form these white thrombi. In the deeper portion of the thrombus, represented at Fig. 5, the blood-plaques had disintegrated and become granular, and were no longer distinctly recognizable; but at the superficial part they were distinct, their outlines were well marked, and in osmic acid, in teased preparations, distinctly made out and readily preserved.

Eberth's researches are of special value in this connection, and appear to place the experimental evidence of this important point on a firm basis, and explain the production of white thrombi. In the circulating blood the blood-plaques keep with the red corpuscles. In the rapidly circulating blood the central portion of the vessel is represented by a dark line in which you see no corpuscles whatever; nothing but a red streak, on either side of which there is the so-called still layer, with an occasional leucocyte. This represents the blood-current in its active rapid condition. If the circulation becomes slower, then it is seen that, in addition to the leucocytes which collect in the still layer, the blood-plaques appear; but in the rapidly circulating blood, as seen in the mesentery or the omentum of the guinea-pig or the rabbit, the still layer, the peripheral portion, contains no blood-plaques, and only occasionally a leucocyte—in fact, the corpuscles are separated from the wall of the blood-vessels by a distinct tube of plasma.

Eberth brings forward these facts in explanation of the development of white thrombi. So long as the circulation is active the plaques remain central, and adhere neither to each other nor to the vessel-wall; but when, from any cause, the current is slow, this natural disposition of the corpuscles is disturbed, and the plaques tend to collect at the periphery, and aggregate in groups at any point which has been injured, or which has been deprived of the endothelium. Slowing of the blood-stream is, then, in this view, one of the essentials in the formation of white thrombi, and this is entirely in accord with what we know of the pathology of these structures. It is not alone the presence of intact endothelium which prevents the formation of thrombi in the vessels, for we frequently find in aneurisms, on the heart-valves, and on the aorta, denuded and rough regions upon which thrombi do not form. Indeed, thrombi are not often found on atheromatous ulcers, which would offer most favorable localities for their formation if it is the epithelium alone which prevents it. The other condition would appear to be slowing of the blood-stream, which has long been known to play such an important part, and the true significance of which is well seen in the light of these observations of Eberth.

What I contend is, that the white thrombi are composed chiefly of plaques, and that the colorless corpuscles play an altogether insignificant part in their formation, and the experimental evidence which has been offered of the relation of these structures to thrombosis is borne out completely by a study of morbid anatomy.

The further development of the thrombus results from the disintegration of the plaques, and the formation of a finely granular material in which there may be no fibrin filaments. We must recognize a granular or stroma fibrin, as Landois calls it, and a fibrillar or plasma fibrin. The former is a granular material which develops when cells undergo the peculiar metamorphosis described by Weigert as coagulation-necrosis, and it is this in reality which goes on in the white thrombi. There may be no trace of fibrin filaments, but the chief mass is made up of a granular matrix in which the outlines of the plaques are no longer visible. The stages of this transformation I have traced in thrombi of the femoral vein, and it is well seen in passing from the superficial parts to the deeper parts. The plaques on the surface of a white thrombus, as at Fig. 5, may be intact, or they may show signs of disintegration and conversion into a granular débris. The central softening of a white thrombus results from the liquefaction of the plaques, and is a result possibly of the presence of fluid in greater abundance than is necessary for the process of coagulation-necrosis. Quite recently, in a case of typhoid fever, I had an opportunity of studying the histological characters in thrombi in the femoral veins. In both they were mural, and had originated behind the valves. The attached portion was a light brown-red color, but the upper half was of a dead-white color, and the extension into the iliac was of the same character. The line of demarcation between the two was pretty clearly defined. At the thickest portion the superficial white thrombus had softened to an opaque milky liquid, but at the prolongation it was firm and consistent. A few colored and colorless corpuscles were scattered through

the white thrombus, but the great mass of it was composed of blood-plaques, and a study of the softened milky region showed clearly that the granular detritus was composed of the altered plaques. In the deeper parts the plaques became less and less distinct, until a point was reached at which the individual cells were no longer visible, and there was nothing but an indifferent matrix. The contrast in color between the outer and inner portions indicated a difference in age, possibly in mode of formation, though in the outer portion of the brown and the inner part of the white, close to the line of demarcation, the structure seemed identical.

In the light of these new observations on the connection of the blood-plaques with thrombi, the entire question may be restudied with advantage, particularly the relation of the white and mixed thrombi, and the mode of formation of the clot in aneurisms. Of the truth of the statements here made regarding the connection of the plaques with thrombosis, I feel assured from careful observation on the structure of the white thrombi (1) on atheromatous ulcers, (2) on the valves of the heart, (3) in aneurisms, and (4) in thrombi of the veins. I have not lately had an opportunity of examining a "globular vegetation" of an auricle or ventricle, but I venture to state that they are composed originally of similar structures.

Original Articles.

NITRO-GLYCERINE IN THE TREATMENT OF CHRONIC NEPHRITIS.[1]

By FRANCIS KINNICUTT, M.D.,

NITRO-GLYCERINE, discovered by Sobrero in 1847, is a colorless (when perfectly pure), transparent liquid, with a sweetish, aromatic odor, slightly soluble in water, readily soluble in absolute alcohol and ether, soluble also in oils and fats. Its action resembles that of the nitrites. Mathew Hay [2] has shown that nitro-glycerine is really a nitrate of glyceryl, but that in the course of its decomposition by an alkali, two-thirds of its nitric acid are reduced to nitrous acid, and unite with the alkali to form a nitrite, while the remaining third is set free without reduction and forms nitrate of potash; and that such a decomposition is probably effected in the presence of the alkaline constituents of the blood and other alkaline fluids of the body. Its physiological effects have been investigated by Demne, Albers, Eulenberg, Pelikan, Werber, Tait, Lauder Brunton, Hay, Huchard, Marieux, Thompson, and others. Its physiological effects upon man, so far as ascertained, may be summarized as follows: A dose of one to ten minims of a one per cent. alcoholic solution produces, in six or seven minutes, a sensation of intra-cranial fulness, more or less intense headache, often accompanied by vertigo, ringing in the ears, and occasionally a temporary amblyopia. The cardiac pulsations become stronger, more rapid; the arteries throb violently; the pulse is accelerated; arterial tension is markedly lowered, the face flushes. The respirations are observed in certain cases to be slightly quickened. A moderate diaphoresis sometimes occurs. The lachrymal and salivary secretions are unaffected. A diuretic action is very generally claimed by English and German observers, although denied by several French investigators. The above phenomena are frequently followed by a feeling of lassitude and an irresistible inclination to sleep.[3]

In physiological doses the circulatory system is apparently chiefly affected.

The ventricular contractions become more rapid and *forcible*, the peripheral vessels dilate, arterial tension is lowered.

Dr. William C. Thompson's [1] new and valuable method of instantaneously photographing the living organs of animals *in situ* clearly illustrates the effect of nitro-glycerine upon the ventricular contractions.

One per cent. solutions applied directly to the surface of the heart, or injected hypodermatically, produce contractions, which are apparently *quite similar* in degree to those obtained by digitalis used in a similar way.

The physiological effects of nitro-glycerine upon the circulation were first conspicuously taken advantage of by Dr. Murrell [2] in his use of the drug in angina pectoris. Its efficiency in relieving the arterial tension and spasm which so frequently exist in this disease was brilliantly demonstrated and has obtained general recognition. During the past several years nitro-glycerine has been introduced gradually into the therapeutics of renal disease. I shall consider its use, first, in the treatment of those grave disturbances of the nervous system which are included under the general term of uræmia. Notwithstanding the time and labor which have been expended in the investigation of the pathogenesis of this condition, no *single* theory of the very many which have been advanced seems adequate to explain either *all* its symptoms or their occurrence in *all* cases. It seems not improbable that *many factors, acting in varying combinations and intensity in different cases*, are concerned in its production.

Increased arterial tension is so constantly associated with the symptoms of acute and chronic uræmia, that it is impossible to disregard its probable participation in their production. The assumption of arterial spasm in connection with high tension harmonizes with many of the paroxysmal phenomena of the uræmic state, and with the results obtainable from therapeutic agents which unquestionably relieve spasm.

That normal or low-blood tension and feeble heart-action not infrequently obtain at certain stages of both acute and chronic nephritis is well recognized; but in the experience of many careful observers, and certainly in my own, well-marked uræmic symptoms are absent under these conditions.

While inclined to believe that active purgation, diaphoresis, and, under certain circumstances, venesection, are oftentimes useful means for relieving uræmic symptoms, I would suggest that their action admits of a two-fold interpretation. Assuming that the retention of excrementitious products in the circulation may be *one* of the factors in the pathogenesis of uræmia, and that their elimination may be facilitated by the use of the above therapeutic agents, at the same time it must be borne in mind that relief of arterial tension and spasm also may be *directly* effected by similar measures. The remarkable power of nitro-glycerine in lowering arterial tension and relieving spasm has been referred to in the consideration of its physiological effects, and is to-day widely recognized. The uræmic symptoms, which from analogy and other theoretical considerations would seem to point especially to arterial spasm as their chief pathogenetic factor, are the well-known intense and persistent headache, asthma, and convulsions; and it is in the treatment of *these* symptoms that nitro-glycerine yields perhaps its most brilliant results.

I possess the notes of a large number of cases of uræmic headache which have been promptly and wholly relieved by the use of this agent alone. Free purgation, opium, and chloral are certainly often efficient in controlling this distressing symptom, but quite as often the relief is only temporary and their continued use is without effect. The daily systematic use of nitro-glycerine, on the contrary, is capable, in my experience, of continuously controlling this symptom, in many cases.

The comparative frequency with which an isolated convulsion occurs in uræmia may be urged as an objec-

[1] Read before the Section of Medicine of the New York Academy of Medicine, February 16, 1886.

[2] The Practitioner (London, 1883, vol. xxx, p. 428.

[3] The cumulative effect of nitro-glycerine is still under discussion.

[1] A paper by Dr. Thompson, describing [illegible] and containing some of his results, has been published since the date of writing. See Medical Record, March 13th.

[2] Lancet (London, [illegible]

tion against assigning to nitro-glycerine the efficiency in often controlling this grave disturbance of the nervous system which I believe it possesses. I have the notes of several cases in which there was no recurrence of the convulsive attack following its administration. In relieving renal asthma or dyspnœa its action has been somewhat variable in my hands. Complete relief has been obtained in certain cases, in which opium and chloral failed to procure it. On the other hand, I have seen its use unattended with any appreciable benefit. The widely varying susceptibility to nitro-glycerine in different individuals, and the duration of its effects, should be regarded in its administration. In the treatment of *acute* symptoms I have found the following the most efficient method. The initial dose should not exceed one minim of a one-half per cent. alcoholic solution, which represents gr. $\frac{1}{200}$ of pure nitro-glycerine. If no unusual susceptibility is exhibited, one minim of a one per cent. solution (gr. $\frac{1}{100}$) may be given at the expiration of a half hour, and repeated at intervals of an hour, until relief is obtained or the inefficiency of the drug is demonstrated. Two or three single doses of gr. $\frac{1}{100}$ may be given at intervals of a quarter of an hour, in the presence of grave symptoms, and then at intervals of half an hour to an hour. From the extraordinary tolerance of nitro-glycerine which is occasionally shown, I prefer at first to produce a slight feeling of discomfort (sensation of intracranial fulness, flushing of the face, slight constriction about the throat), with the single dose. Its proper strength can be thus accurately determined.[1]

During the past year papers have been published by Professor Rossbach,[2] of Jena, Burzhinski,[3] of St. Petersburg, and Lentovsky,[4] of Cronstadt, on the systematic use of nitro-glycerine in the treatment of chronic interstitial nephritis. Rossbach reports several interesting cases, in which distressing uræmic asthma, accompanied with greatly increased arterial tension, was promptly relieved, *pari passu*, with diminution in the blood-pressure, by its use in doses of gr. $\frac{1}{130}$ repeated at varying intervals of a quarter of an hour to two hours. In one of the cases morphine and chloral hydrate had failed to give relief. Œdema of the feet and bronchial catarrh, which were present, also disappeared under its use. Rossbach recommends single doses of gr. $\frac{1}{130}$ to gr. $\frac{1}{65}$, ten or fifteen times daily, at hourly intervals. Both Rossbach and Burzhinski give tabulated reports showing the effect of nitro-glycerine upon the daily excretion of urine, the percentage and actual amount of urinary albumen, and the specific gravity of the former.

Their results very closely coincide.

I append the following table, given by Rossbach, of a case of interstitial nephritis in a male, twenty-two years of age, with extraordinarily high blood-pressure and retinitis albuminurica :

Daily quantity of urine.	Actual daily excretion of albumen.	Percentage of albumen.	Treatment.
Cub. centimetres.	Grammes.	Per cent.	
4.168	14.812	0.354	
3.789	11.132	0.289	
4.350	11.[illegible]	0.2[illegible]	
4.538	13.[illegible]	0.290	Without treatment.
4.734	13.[illegible]	0.287	
5.505	17.347	0.257	
4.435	13.[illegible]	0.294	
4.068	13.[illegible]	0.277	Nitro-glycerine, gr. $\frac{1}{130}$, every three hours.
4.985	11.[illegible]	0.242	
4.810	11.149	0.232	
5.115	13.[illegible]	0.250	

Rossbach[5] deduces from his observations the following conclusions :

1. That the increased urinary excretion in interstitial nephritis must depend upon other conditions than high blood-pressure.

2. That the increased blood-pressure probably has a causal share in the production of the severe symptoms of interstitial nephritis, such as retinitis, asthma, etc.

3. That nitro-glycerine is an excellent remedy in chronic nephritis ; that it prolongs life and relieves severe symptoms.

Burzhinski[1] summarizes the results of his investigations as follows :

1. Nitro-glycerine in small does diminishes the quantity of urinary albumen passed per diem, and still more markedly the percentage of albumen in the urine.

2. The diurnal quantity of urine is perceptibly increased by nitro-glycerine, this increase persisting some time after the nitro-glycerine has ceased to be given.

3. Gradually increasing doses of nitro-glycerine influence still more decidedly the excretion of albumen.

4. With the exception of slight and transient headache, nitro-glycerine does not give rise to any disagreeable symptoms.

Lentovsky's[2] results correspond with those obtained both by Rossbach and Burzhinski. He also states that during the use of nitro-glycerine dropsy rapidly disappeared, the general condition improved, the body-weight augmented.

During the past three years I have had the opportunity of *systematically* treating a number of cases of chronic nephritis, both of the parenchymatous and interstitial (presumably) forms, with nitro-glycerine. My investigations were undertaken without preconceived views in its favor, but with the earnest desire to impartially observe its effects. The following cases illustrate the effects which I have observed from its use, upon acute and chronic (uræmic) symptoms, upon the excretion of urine and albumen in chronic nephritis, and finally upon the course of this disease.

Case I.—Miss A——, aged thirty-six. There is a history of gout on both the paternal and maternal sides. A brother died of chronic nephritis associated with gout. The patient's mother has chronic nephritis and gout. Two brothers suffer respectively from chronic nephritis and gout, and from gout alone. The patient has had a number of attacks of acute gout during the past five years. Albumen was apparently discovered in the urine prior to or about the time of the first attack, and has been present constantly since. During the past two years she has suffered from a great deal of headache and occasional attacks of violent vomiting, apparently independent of errors of diet. The patient is markedly anæmic. There is moderate cardiac hypertrophy, with accentuation of the aortic second sound. There is increased arterial tension without appreciable thickening of the radials. The urine contains a large amount of albumen, hyaline and granular casts ; specific gravity 1.008.

October 14, 1885.—The patient has suffered almost continuously since September 1st with headache, so intense much of the time as to incapacitate her for all work ; there has been more or less accompanying nausea, and on two occasions during this period violent attacks of vomiting have occurred. Arterial tension is very marked ; the bowels move freely. Nitro-glycerine, gr. $\frac{1}{100}$, in pill form, three times daily, was ordered.

October 17th.—The headache has greatly diminished. The patient says that "she feels her head," but is not made uncomfortable by it. Ordered nitro-glycerine, $\frac{1}{100}$ gr., every three hours.

October 18th.—Patient is *wholly* free from headache, the first time since September 1st. The pulse is 78, and has lost its hard, persistent character. Ordered the nitro-glycerine to be continued in the same doses. Up to the present date, four months, there has been complete freedom from headache, except on a single occasion. The patient also has been free from nausea and vomiting. The nitro-glycerine has been taken continuously in the same doses and at similar intervals.[3]

[1] Gelatine-coated pills, each containing $\frac{1}{100}$ gr., I have found quite as efficient as the alcoholic solution.

[2] Berliner Klinisch. Wochenschr., No. 3, January [illegible], 1885.

[3] Practitioner (London), vol. xxxv., No. 111, pp. 167-170. (Translated from the Vratch, St. Petersburg.)

[4] Meditz. Pribavl. k'Morsk. Sborn, September, 1885, p. [illegible]. [5] Loc. cit.

[1] Meditz. Pribavl. k'Morsk. Sborn, September, 1885, p. 188. [2] Loc. cit.

[3] The $\frac{1}{100}$ grain of nitro-glycerine produces a slight feeling of constriction about the throat, and often a slight flushing of the face in Miss A——.

Case II.—Mrs. A——, aged sixty-five, first consulted me in the autumn of 1883. The patient is the mother of Miss A——, whose history has above been given. The patient's symptoms had been referred to a disordered digestion. Examination revealed distinct cardiac hypertrophy (apex beat in fifth space, one inch outside of mammillary line), accentuation of aortic second sound, thickening of radials, and marked arterial tension. The urine contained a trace of albumen, hyaline and granular casts; specific gravity, 1.010. During the following year the patient was troubled, more or less, with severe "palpitation" and frequent attacks of violent vomiting, apparently independent of errors of diet. The urine was examined frequently; it was of uniformly low specific gravity, and was never free from a trace of albumen. The arterial tension was constantly high. Nitro-glycerine in $\frac{1}{100}$ gr. doses, three times a day, was ordered in December, 1884. The patient is a very intelligent woman, and has noticed in her attacks of palpitation that the pulse becomes "hard," and that additional doses of nitro-glycerine taken at such times have the effect of relieving both conditions. The drug has been taken continuously from the above date up to the present time—four to six times daily, in $\frac{1}{100}$ gr. doses. The patient has been under my constant observation during this period; she has had no more than two or three attacks of vomiting, the palpitation is almost wholly under control, the arterial tension is, comparatively, rarely high. The urine at times is wholly free from albumen, at times it contains a trace. Aside from a careful regulation of her life, of the bowels by means of simple laxatives, and the use of some preparation of iron,[1] no other treatment has been employed. The attacks of palpitation, inasmuch as they are uniformly associated with high arterial tension, and are as constantly relieved by nitro-glycerine, I am inclined to ascribe to temporary arterial spasm, through which increased work is thrown upon a heart already overtaxed.[2]

Case III.—Mrs. C——, aged sixty-seven, first consulted me in the autumn of 1881. She was suffering from disordered digestion, impaired nutrition, and frequent headache. The patient was anæmic. There was high arterial tension, with markedly thickened radials and temporals. The aortic second sound was accentuated, the apex beat was felt in the fifth space, three-quarters of an inch outside of the mammillary line. The urine contained a small amount of albumen, hyaline and granular casts; specific gravity, 1.009 There was polyuria. Although the patient's life was carefully regulated, and the more or less routine treatment usual in such cases employed, she grew gradually worse during the succeeding two years. Symptoms of acute uræmia, associated with great arterial tension, occurred on several occasions. Almost daily attacks of distressing uræmic asthma finally supervened, and on two occasions retinal hemorrhage occurred. In the autumn of 1883 I first instituted a systematic use of nitro-glycerine. The initial doses were $\frac{1}{100}$ gr., three times daily, almost immediately increased to similar doses every three hours. Relief of the asthma was immediate and complete, greatly to the astonishment of the patient. The improvement in the character of the pulse was marked, and was quite uniformly maintained. The general condition also gradually improved, and very fair health was enjoyed. From the above date until November, 1885, the nitro glycerine was continuously taken in the above doses, and during this period the patient was entirely free from attacks of dyspnœa and all other uræmic symptoms. The urine continued to be of low specific gravity, and to contain a small amount of albumen, hyaline and granular casts.

In November the patient paid a visit to a neighboring city. The nitro-glycerine was discontinued, contrary to my directions, a rich diet was indulged in, with little or no out-door exercise. On her return home I was hastily summoned to find the patient hemiplegic, with a pulse of great tension, severe headache, and distressing dyspnœa. The urine contained a large amount of albumen. Nitro-glycerine was again given in $\frac{1}{100}$ gr. doses, every two hours, and later every hour, ten to fifteen times daily. The headache and dyspnœa were quickly relieved, coincidently with a marked lowering of arterial tension. The patient was not purged, a daily dose of the cascara sagrada alone being given to procure a movement from the bowels. The amount of albumen in the urine rapidly diminished, attaining in a few days its former level. There has been no recurrence of uræmic symptoms. The nitro-glycerine has been given continuously; at present $\frac{1}{100}$ gr. is taken eight to ten times daily. Beyond an occasional dose of chloral hydrate to procure sleep, and iron, no other drug has been used. The striking relief of the acute symptoms, which had been present on so many occasions during a period of two years, the improvement in the patient's general condition, with the systematic use of nitro-glycerine, can only be fully appreciated by the physician in constant attendance. The result has been to convince me that in this case life has been made much more comfortable and has been prolonged by its use.

Case IV.—H. L——, aged twenty-two. Family history without gouty taint. The patient had scarlet fever when five years old, and diphtheria at thirteen years, without known renal complication. The patient has never had any venereal disease. Good health was enjoyed until January, 1885, when he suffered from an attack of cystitis. He was under the care of my friend Dr. Robert Weir, from the latter part of March. The cystitis did not wholly disappear until May. In February a large amount of albumen was discovered in the urine, with numerous hyaline casts. During the summer and autumn the patient enjoyed fair health. He was free from headache, disturbances of digestion, etc., and complained only of becoming easily fatigued after very moderate physical exercise and mental application. I was first consulted by him, at Dr. Weir's request, on October 15th. He was then slightly anæmic, but complained only of the above symptoms. On examination there was an absence of physical signs of cardiac hypertrophy beyond a slightly increased impulse. There was no appreciable thickening of the radials. The pulse was persistent, and the sphygmograph showed increased arterial tention. The urine contained a large amount of albumen and hyaline casts; specific gravity, 1.020. Specimens of urine passed at different times in the day were examined; all contained a large amount of albumen.

Oct.	[illegible]	[illegible]	[illegible]	[illegible]	Without medication.
"	[illegible]	[illegible]	[illegible]	[illegible]	
"	[illegible]	[illegible]	[illegible]	[illegible]	
"	[illegible]	[illegible]	[illegible]	4.24	
"	[illegible]	[illegible]	[illegible]	[illegible]	N[illegible] gr., from mid-day 22d, t.i.d.
"	[illegible]	[illegible]	[illegible]	[illegible]	
"	[illegible]	[illegible]	[illegible]	[illegible]	N[illegible] gr., four times a day, from mid-day 24th.
"	28.....	42½	[illegible]	[illegible]	
"	[illegible]	[illegible]	[illegible]	[illegible]	N[illegible]
"	[illegible]	[illegible]	0.104	2.65	gr., every three hours, from mid-day 26th.
"	[illegible]	[illegible]	[illegible]	2.27	
Nov.	1	[illegible]	[illegible]	[illegible]	N[illegible]
"	2.....	48	0.204	[illegible]	continued from mid-day November 2d.
"	3.....	[illegible]	[illegible]	[illegible]	
"	4.....	43	0.330	[illegible]	
"	5.....	[illegible]	[illegible]	[illegible]	
"	6.....	[illegible]	[illegible]	[illegible]	
"	7.....	[illegible]	[illegible]	[illegible]	

A careful regulation of the patient's daily life was advised, and residence in a warm climate during the winter months.

[illegible]

[1] Mrs. A—— [illegible] to take more than [illegible] gram [illegible] suffering from a feeling of fulness in the head and headache, [illegible] doses has not been established by prolonged use.

[2] It should be remembered that the [illegible] increased force of the heart's contractions, without increased frequency.

Previous to his departure I was able to observe the effect of nitro-glycerine upon the daily excretion of urine and albumen. The daily amount of fluids taken was carefully measured, and varied only within two to three ounces. The patient, throughout the period that the observations were made, was leading his usual life, taking a moderate amount of out-door exercise. The estimation of albumen excreted daily (per centage and actual amount) were kindly made by Mr. Adolph Tsheppe, whose careful work is a guarantee of their accuracy.

The foregoing table records the results of this investigation.

They may be summarized as follows :

1. The daily loss of albumen without medication was sufficiently large, presumably, to interfere with the proper nutrition of the tissues.

2. From the date of the administration of nitro-glycerine the total daily amount of albumen excreted diminished markedly and almost continuously; with increasing doses the percentage amount was similarly reduced.

3. The *immediate* effect of the discontinuance of nitro-glycerine, apparently, was to produce a marked increase in both the percentage and total daily amount of albumen excreted.

4. The effect upon the diurnal excretion of urine was to increase it moderately.

(It should be stated that on the 24th, 25th, and 26th the patient took more than his customary physical exercise, indulging in lawn tennis, and sweating profusely.)

Korkunoff[1] (St. Petersburg) has lately shown that the excretion of albumen in chronic nephritis, in individuals placed under as nearly as possible identical conditions, varies considerably from day to day, both under rest and exercise, and that this variation would seem to depend upon several factors, such as the quality and amount of sleep, upon the mental condition, etc. The above observations illustrate this point, but at the same time clearly show that the variation was slighter and less irregular during the use of nitro-glycerine than on the days when no medication was employed.

Case V.—E. R——, aged forty-five, painter by trade. Admitted to St. Luke's Hospital, January 23, 1886. Has always been a free drinker. Considered himself well until a year ago, when he suffered from a severe attack of dyspnœa at night while in bed. Similar attacks of temporary duration frequently recurred, and finally incapacitated him for work. He has occasionally suffered from a temporary dimness of vision. During the past year he has been obliged to get up at night to pass water. He has had a troublesome cough for the past few weeks. On physical examination the heart's apex beat was found in the sixth space, three-quarters of an inch outside of the mammillary line; there was marked accentuation of the aortic second sound, increased arterial tension evident to the finger, and confirmed by sphygmographic tracings, thickened radials, thickened and tortuous temporals. There was no œdema of the lower extremities, but a slight puffiness about the eyes. Subcrepitant râles were heard over the whole of the chest, in front and behind. Examination of the other organs was negative. The urine contained a rather large amount of albumen and casts—specific gravity, 1.012. Ophthalmoscopic examination showed retinitis albuminurica. The patient was markedly anæmic. There was more or less continuous dyspnœa, with paroxysmal exacerbations. The bowels were regular. Temperature normal.

From February 2d until the evening of the 7th no medicine of any kind was given. His condition remained the same as on admission. The daily quantity of urine has been very carefully measured from February 2d until the present date, February 18th, and daily estimations of the percentage and total amount of urinary albumen excreted have been made by Mr. Tsheppe. On the evening of February 7th nitro-glycerine was ordered in $\frac{1}{100}$ gr. doses, every three hours, during the twenty-four.

February 8th.—No subjective symptoms have been caused by the nitro-glycerine. There is marked improvement in the dyspnœa.

February 9th.—The patient's dyspnœa has improved still further. There is an absence of râles over the chest anteriorly; they are still present posteriorly. Ordered nitro-glycerine $\frac{1}{50}$ gr., every three hours, for eight doses daily.

February 15th.—No subjective symptoms have been caused by the nitro-glycerine, but the arterial pressure has markedly diminished. The patient has been *completely* relieved of his asthma since the 10th; says he feels better than for many months. There is still some crepitation at the bases of both lungs posteriorly.

The following tabulated report shows the daily quantity of urine passed since February 2d, with the estimations of the daily excretion of albumen :

Date.	Daily quantity of urine.	Percentage of albumen.	Total amount of albumen.	Treatment.
	Ounces.		Gms.	
February 3–4...	42	0.124	1.562	
" 4–5...	50	0.098	1.470	No treatment from
" 5–6...	20	0.056	0.436	3d to 7th.
" 6–7...	48	.....	.....	
" 7–8...	73	0.022	0.415	At 4 P.M., 7th inst.,
" 8–9...	66	0.018	0.356	ordered nitro-glycerine
" 9–10...	65	0.020	0.390	$\frac{1}{100}$ gr., every three
" 10–11...	62	0.018	0.373	hours, during the
" 11–12...	63	0.026	0.491	twenty-four.
" 12–13...	58	0.038	0.661	On 9th inst. nitro-
" 13–14...	79	0.034	0.806	glycerine $\frac{1}{50}$ gr., every
" 14–15...	66	0.046	0.911	three hours, during the
" 15–16...	94	0.060	1.152	twenty-four.
" 16–17...	94	0.060	1.152	Without treatment
" 17–18...	70	0.068	1.428	from 4 P.M., 14th inst.

In this case the amount of albumen excreted daily was very small. It will be seen that both the percentage and total amount of albumen was already diminishing before the administration of nitro-glycerine, and this fact, in connection with the variations in these respects which obtain from day to day in cases of chronic nephritis, militates against a correct judgment of the effect of the drug upon the albumen excretion.

It is possible that its discontinuance may have been the cause of the immediate subsequent increase of albumen (percentage and total amount). The investigation is particularly valuable in showing the immediate and marked increase in the diurnal quantity of urine following the use of nitro-glycerine, an increase which was maintained after its discontinuance.[2]

Exact investigations of the influence of nitro-glycerine upon the daily excretion of urine and serum albumen in chronic nephritis are not yet sufficiently numerous to justify positive conclusions on these points. The daily variation in both, in individuals suffering from this disease, placed under as nearly as possible identical conditions and without medication, are very considerable in my experience, and are an embarrassing element in all investigations of this kind.

If the above results are corroborated by further observations, the interesting phenomenon is presented of an *increase* in the diurnal amount of urine, and a *decrease* in the urinary albumen, during the use of a drug which very markedly *lowers* the general blood-pressure.

I would add a few suggestions before concluding, in regard to the method of administration of nitro-glycerine, which I have found most efficient in cases of chronic nephritis.

The strength of the single dose should be just *within the limit* of producing any subjective symptoms. It can only be determined in the individual case by careful trial. This dose, in the absence of acute symptoms, should be

given four to six times daily, at equal intervals, and over a prolonged period. It is well, from time to time, to increase the strength of the single dose sufficiently to produce slight subjective symptoms, in order to ascertain whether an increased tolerance of the drug has been established by its prolonged use. On the occurrence of acute symptoms during its systematic use, it should be given more frequently in accordance with the rules already given.

I have never seen any disagreeable symptoms produced by the prolonged use of nitro-glycerine; my experience in this respect corresponds with that of Dr. Murrell,[1] who has given it daily, often in very large doses, and during a period of several years, in cases of angina pectoris.

The increased frequency of the pulse which usually follows its use is of very temporary duration.

I have occasionally observed a decided *decrease* in the pulse-rate, with diminution in arterial tension, follow its administration in critical uræmic conditions.

My investigations, so far as they have been carried, permit of the following summarization:

1. That in nitro-glycerine, given in small doses and frequently repeated, we possess a powerful agent for lowering the increased blood-pressure which is very constantly associated with the development of uræmic symptoms.

2. That it has the power to control or relieve many of the paroxysmal disturbances of the nervous system which are included under the general term of uræmia; of these headache and asthma are especially benefited by its use, the relief being more marked and continuous than that obtainable either by opium or chloral.

3. That its influence upon the daily excretion of urine and serum albumin in parenchymatous and interstitial nephritis is apparently to increase the former and diminish the latter.

4. That in the systematic and prolonged use of nitro-glycerine, in appropriate doses, in chronic nephritis, we possess a means of maintaining more or less continuously a lowered blood-pressure, of often averting or relieving critical conditions, and thereby prolonging life.

THE USE OF BROMIDE OF ARSENIC IN SKIN DISEASES.[2]

By WILLIAM THOMAS CORBETT, M.D., L.R.C.P. Lond.,

PROFESSOR OF DISEASES OF THE SKIN IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF WOOSTER, CLEVELAND, O.

Having almost unconsciously drifted into some of the journals[3] in connection with the use of the bromide of arsenic in certain diseases of the skin, it may be of sufficient interest to give more in detail my limited experience with the drug.

In the first place, it is of prime import that we have a definite idea as to what we are giving when we prescribe the arsenious bromide. It is formed from the two elements in the presence of carbon disulphide; it is colorless, crystalline, and of a peculiar garlic odor. It is deliquescent and on contact with water is instantly decomposed, arsenious acid (As_2O_3), or white arsenic, and hydrobromic acid (H. Br.) being formed; therefore the arsenious bromide, as found in the shops, is incompatible with water, be it ever so little, and dangerous as a medicament.

A solution of bromide of arsenic introduced many years ago by Dr. Clemens, of Frankfort-on-the-Main, the formula of which is published in the "National Dispensatory," contains one part each of arsenious acid and pure potassium carbonate dissolved in ten parts of boiling water, to which eighty parts of water is added and two parts of bromine. After this liquid has become colorless by standing, sufficient water is added to make one hundred parts, which makes it of the same arsenical strength as Fowler's solution. But this solution, according to trustworthy authority, consists of bromide and arseniate of potassium. Mr. Hoppe informs me that "in Clemens' solution the bromide of arsenic cannot exist as bromide of arsenic, it being decomposed by contact with water." The solution of this question, however, belongs to the domain of the chemist; let me say a few words as to the therapeutic effect. Clemens' solution was first given to the profession in 1860 (*Gazette des Hôpitaux*, No. 11).

Later, in 1875 ("Ziemssen's Cyclopædia"), Dr. Hertz recommended it in chronic malarial poisoning; he adduced in its favor that it could be taken a long time without producing unpleasant symptoms. From its supposed chemical status it is quite probable that it might.

The only real solution of arsenious bromide which I have met with is the alcoholic solution recommended by Dr. H. G. Piffard.[1] He directs that one part of arsenious bromide be dissolved in one hundred parts of alcohol, of which one to two minims may be given in a wineglass of water after meals. Of late I have used the following formula prepared for me by Mr. Louis Hoppe, to whom I am indebted for some valuable and timely suggestions relative to the drug:

℞ Arsenici bromidi (Merck's) ..... gr. j.
Alcoholis ..... ʒ ij.
Solve et adde
Elix. simplicis ..... ʒ viij.

M. Sig.—A teaspoonful to be taken in water after meals, gradually increased.

The bromide of arsenic was first employed in the treatment of cutaneous diseases by Dr. H. G. Piffard, who, in 1881,[2] spoke favorably of its use in acne; since then little has been said of it. My first experience with the arsenious bromide—or what I thought to be arsenious bromide—was in a rather obscure case of psoriasis[3] which I saw through the courtesy of Dr. Z. T. Dellenbaugh. The patient was taking Clemens' solution in two minim doses after meals, to which chrysarobin (grs. xv. to vaseline ʒ j.) was suggested as an external measure, whereupon the eruption cleared up and to my knowledge has not returned since. The favorable termination of this case in about eight weeks, after it had resisted able treatment other than the combined use of Clemens' solution and chrysarobin, induced me for a time to follow this method in all cases of psoriasis. To determine the relative value of the two drugs, in September, 1884, four cases were treated with the internal use of Clemens' solution, gradually increasing the dose to six minims, and four other cases with the inunction of chrysarobin. It did not take long, however, to settle the point as to their relative value; of the first series some improved slowly, others not at all, and the result was unsatisfactory; whereas the second series, or those using the chrysarobin inunction, improved as readily as the cases previously treated with the internal and external methods combined. Since then I have used the formula herein given, but with what success I am not prepared at present to say. My impression is that psoriasis treated with the alcoholic solution of arsenious bromide is less liable to return than it is when treated solely by external means—but of this later.

In acne vulgaris marked improvement has followed its use in my hands, but only in cases of reflex origin, as I take it, from undue irritation of the reproductive organs in neurosthenic persons. A marked case of this kind was reported in the *Columbus Medical Journal* of October, 1883, in which acne appeared in a female aged twenty, at the time of her becoming a *fille de maison de joie*; this patient returned to the Dispensary for Skin

[1] Jour. cit.
[2] Read before the Clinical Society of the Medical Department of the University of Wooster, Cleveland, O.
[3] Jour. Cut. and Ven. Diseases, New York, July, 1884, and August, 1885. Albany Med. Annals, October, 1885.

[1] Jour. cit. and Ven. Diseases.
[2] Med. Record, [illegible]
[3] Jour. Cut. and Ven.

Diseases from time to time, but treatment proved unavailing until, September, 1885, she was given arsenious bromide, gr. $\frac{1}{60}$ increased to gr. $\frac{1}{45}$, when she made a speedy recovery. For a time there was a tendency for the disease to return at each menstruation, but this yielded to the increased dose last given.

In another case of a like nature, in a male aged nineteen, who contracted gonorrhœa, the history shows the following points of interest: The active discharge from the urethra subsided into what the patient termed the "gleet," accompanied by a copious eruption of flesh-worms" on the forehead. I saw him for the first time in August, 1885, at which time the urethral discharge had disappeared, but the acne, in spite of treatment, was persistent. The patient thought a vestige of the "gleet" still remained, as the lips of the meatus were sometimes adherent of a morning. A No. 24 French sound passed into the bladder readily and without pain, although the entire tract was hyperæsthetic, whereupon I assured him he had nothing to fear from gleet.

He was directed to keep the forehead clear of comedones by squeezing them out daily, and to apply the following lotion at night:

℞. Hydrargyri chlor. corrosivi..... gr. iij.
Glycerini..... ʒ iv.
Tinct. benzoini..... ʒ iv.
Aquam rosam adde..... ℥ vj.
M.

This he followed faithfully for six weeks, and returned worse than before; he was then put on the arsenious bromide, gr. $\frac{1}{80}$, as an additional measure, and directed to continue externally as before; a fortnight afterward the acne began to improve; a week later it was found necessary to increase the dose, which was gradually increased to gr. $\frac{1}{60}$, and finally to gr. $\frac{1}{45}$, before recovery was complete. The treatment produced no marked gastric disturbance at any time, and the patient said he had never felt better. Time of treatment with the arsenious bromide, nine weeks. There has been no return of the disease since. In pruritus hiemalis, or winter-prurigo, the drug seems to be of equal, if not greater, service. The treatment of this affection, which is so common along the chain of lakes, has given medical men more annoyance and less reputation than almost any other affection. External treatment may relieve for the time, but the average patient, according to my experience, objects to spend much time frescoing his legs when the objective symptoms are so slight; besides, the paroxysms in the more severe cases come on during sleep, when the finger-nails are applied unconsciously. For two or three winters preceding the present a number of cases under observation have taken the potassium bromide with but partial success, because it was found extremely difficult to get them sufficiently under its influence for a malady that gave annoyance only once or twice within the twenty-four hours. Less inconvenience and better results were noted to follow the use of hydrobromic acid, yet here again the full therapeutic effect was objectionable.

Theoretically, in October last, the bromide of arsenic was given two patients who had yearly, upon the first approach of frost, suffered from pruritus; the treatment was begun several weeks before the usual advent of the disease, beginning with gr. $\frac{1}{60}$ after meals; as the weather grew cooler the dose was increased to gr. $\frac{1}{60}$, which had been maintained in one case to within a fortnight of the present writing, the patient remaining entirely free from the pruritus. In the other two or three slight attacks have followed prolonged exposure to cold, but these were allayed by the local use of liquor carbonis detergens (℥ ss. to ℥ iv.), which had previously been used without benefit.

In two other cases in which treatment was applied for after the discomfiture had become sufficiently severe to prevent sleep, it was found necessary, in addition to the arsenious bromide, to employ a solution of caustic potash (gr. x.–xx. to ℥ j.) externally to give immediate relief.

In brief, I have endeavored to outline a few instances in which the use of bromide of arsenic has, to all appearances, fulfilled what other drugs have repeatedly failed to accomplish; at the same time I am well aware that impressions rather than opinions are justifiable from the meagre data at my disposal. In the *neuroses cutaneæ*, which American physicians are destined to encounter more, and to more fully appreciate, there is a dearth of drugs to meet certain indications which are brought to light by the unravellings of clinical and pathological research; in this direction it seems to me the one under observation will find its proper scope.

SIMPLE DISLOCATION OF THE FIBULA.

By JAMES H. PARKINSON, M.D.,

SACRAMENTO, CAL.

The following case, which occurred in the practice of Dr. W. A. Briggs, of this city, is apparently unique:

T. P——, aged twenty-four, robust and well developed, in wrestling with a companion fell with the right foot adducted and resting upon its outer aspect, the knee being adducted and slightly flexed, his antagonist falling on the limb. A loud snap was clearly audible; on rising he found it impossible to walk; severe pain was felt in region of knee, and a "lump" noticed on the superior tibio-fibular articulation. When seen within half an hour after the accident no swelling had taken place. The head of the fibula was found to have been dislocated backward; the tumor formed by the displaced bone was plainly defined. The external lateral ligament of the knee-joint was intact, and could be felt tensely stretched from bone to bone. No movement was detected, the fibula being firmly fixed in the abnormal position. Reduction was attempted by pressure on the head of the bone from behind forward, with the limb in the flexed and semi-flexed position, aided by rotation of the foot inward; also by flexing and suddenly extending the limb, but without any apparent effect. The pressure necessary being unbearable, ether was administered, and attempts at reduction were renewed without success; finally the leg was flexed on the thigh until the heel touched the posterior surface. Firm pressure, in the manner already described, was again made, and it was thought that the bone could be felt moving. While this was being maintained pressure was applied to the head of the bone directly inward, when it slipped in with the characteristic snap.

Luxation of the head of the fibula is very uncommon, and but few cases are recorded.

Fergusson (American edition, p. 288) deems the accident to be "so rare, and in all likelihood accompanied with fracture," as not to require separate comment. "This is a rare accident, due, according to Bryant, to violent adduction of the foot and abduction of the knee, and is reduced by firm pressure over the head of the bone" ("The International Encyclopædia of Surgery," vol. iii., p. 705).

Bryant (2d edition, vol. ii., p. 347) mentions having only seen three cases, and from the absence of any directions as to reduction, evidently met with no difficulty.

Erichsen (7th edition, vol. i., p. 512) as occasionally, though very rarely, met with, Boyer and Sanson having each recorded one. In his own case the injury had not been seen till some time after the accident, when "the tension of the tendon of the outer hamstring effectually prevented any attempts at reduction.

Gant has seen one instance of displacement forward, and refers to three cases described by Malgaigne.

Hamilton (3d edition, p. 714) mentions three cases only; one by Sanson, one by Debreuil, and one by Richardson.

Holmes ("System of Surgery," 2d edition, vol. ii., p. 917) says that the accident is occasionally met with.

Gross (vol. i., p. 1132) states that there are few examples on record, and cites Boyer's case.

Cooper (p. 199) had two cases, in both of which reduction was easy.

The foregoing summary shows the lesion to be very infrequent, rarely occurring in its simple form, but most usually as a complication of some graver injury.

This case is remarkable for the extreme difficulty presented in reduction. The principal opposing force appeared to be the external lateral ligament, which bound the head of the bone down to the surface of the tibia. This seems evident from the fact that the only procedure by which it was possible to relax it ultimately reduced the displacement.

Clinical Department.

INTRA-UTERINE ASCITES.

Dr. W. F. Morgan, writes: "The case of 'ascites developed in utero' reported in The Medical Record of March 13th, recalls one which happened in my own practice about eighteen years ago. The mother was colored, and a primipara; labor was tedious, and the fœtal heart-sounds were absent. After the head and shoulders were born, a delay occurred which caused me much perplexity until the cause was ascertained. The fœtus had apparently been dead for some days. Dr. Samuel Phillips tells me that he has met with one case of fœtal ascites in a practice of thirty years. The child was of enormous size, was hydrocepalic, and was still-born The cord was nearly as large as the wrist. The mother was colored."

PERMANGANATE OF POTASSA — AMENORRHŒA.

Dr. Lee O. Rodgers, of San Francisco, reports the following case in corroboration of the article of Dr. Billington in The Medical Record of March 6th: "Miss F——, aged nineteen, was sent to me for advice, and gave the following history: She leads an active life when at home, spending much time in the open air. In July, 1884, she came to a town adjacent to this city on a visit to friends. She began shortly after to grow 'stout,' her abdomen particularly becoming prominent. Her menses disappeared entirely after the period in July, previous to which she had always been perfectly regular. In March, 1885, she was sent to me by her hostess, who thought her pregnant, for the purpose of being kept in the city and confined. The girl seemed to be remarkably healthy and was very 'fat,' and she proved, upon physical examination, to be a virgin. I immediately put her upon potassium permanganate, a two-grain compressed tablet, four times a day, each tablet to be followed immediately by a large gobletful of water. Much nausea and some vomiting occurred during the administration of the medicine, but I attributed this to the fact that I gave the tablets on an empty stomach, as I accepted Bartholow's theory of the action of the drug. On the fourth day of the administration of the permanganate the menses appeared and lasted four days, after which the patient was sent to her home. She was instructed to inform me if her menses failed to appear on time after her return home, but I have not heard from her."

COLD WATER COMPRESSES IN SPASMODIC CROUP.

Dr. J. T. Jelks, of Hot Springs, Ark., writes: "In your issue of February 27th appears an extract from the *Therapeutic Gazette* concerning the efficacy of cold water compresses in affections of the respiratory tract. The cold water compress in spasmodic croup is one of my earliest recollections, my brothers and myself having been sufferers from this distressing disease, and I many times witnessed and felt the speedy relief afforded by cold water. In a practice of fifteen years I have never given a dose of medicine of any sort for the relief of spasmodic croup, and claim that there is no necessity for giving alum, turpeth mineral, aconite, or, indeed, any remedy whatever. A napkin or handkerchief is wet in cold water and wrapped about the throat, and over this is applied a dry towel. In ten or fifteen minutes the child will be breathing easily and will probably be asleep. This seems to be an exceedingly simple thing to do when the family and patient are in such distress, but it has always been successful in my hands."

A CASE OF OVARIOTOMY WITH SOME PECULIAR FEATURES.

Dr. A. R. Smart, of Hudson, Mich., reports the following case: "The patient, aged twenty-six, had noticed a gradual enlargement of the abdomen for three years, and it was now the size of that of a woman at full term. There was moderate emaciation and the patient presented the cachectic appearance commonly associated with well-developed ovarian cysts, but was otherwise apparently in fair health. A diagnosis was made of unilocular cyst of the right ovary, and an operation was determined upon. Upon incision the peritoneum was found closely adherent to the tumor, and even after the opening was prolonged above the umbilicus, no line of separation could be found between the tumor and the abdominal wall. The cyst was not tapped, but was drawn out, being stripped from the adherent peritoneum during the process. A separation was thus gradually effected between the tumor and the abdominal wall, arch of the colon, and portions of omentum, several vessels and vascular bands requiring ligature, until the deeper attachments were reached. It was now found that the cyst-wall was firmly adherent to the brim of the pelvis, to the posterior surface of the uterus and to a small portion of the bladder. The adhesions to the uterus were carefully broken, when the patient was seen to be suffering from shock, and it was deemed best to abandon further efforts in this direction. The contents of the cyst were removed as carefully as possible and the wall brought out at the lower angle of the wound and secured by two sutures passing deeply through the abominal parietes. The cyst was then cut away leaving a portion, the size of the thumb, protruding half an inch above the surface of the abdomen. The carbolized silk-ligatures within the abdomen were cut short, and the cavity was cleansed, as well as possible, of clots, and some sero-purulent fluid which had escaped from the cyst through a rupture in its wall. The wound was closed by sutures including the peritoneum, a drainage-tube was passed deep into the pelvis, and an antiseptic dressing applied. The operation lasted one hour and a half. The patient recovered soon from the symptoms of shock. At the end of four hours about four ounces of bloody serum were withdrawn through the drainage-tube, and this was continued for six days, the quantity continually lessening. Injections were made into the abdominal cavity every day until the discharge ceased. The drainage-tube was removed on the seventh day. The stump ceased to discharge on the eighth day when it had sunk a little below the surface of the abdomen. The temperature rose only once to 103°, and the patient progressed steadily to complete recovery. No spray was employed, but the strictest antiseptic precautions were used." Dr. Smart writes: "This case is of value in its bearings upon the most desirable disposition of portions of the cyst which, for any reason, it is thought best not to remove. After completing the operation my mind was troubled about the outcome of the cyst-stump, and I regretted that I had not placed a drainage-tube in it so that I might have irrigated its cavity, but the result proved the uselessness of such procedure."

Progress of Medical Science.

A Result of Extension in the Treatment of Fracture of the Thigh.—Dr. Fischer reports a case of fracture of the thigh in a child six years of age, which was treated by extension with weight and pulley. A cure was obtained in four weeks, but it was then found that the ligaments of the knee had been so stretched that the ends of the tibia and femur slid over each other with an audible sound, and hyper-extension occurred when an attempt was made to stand. The trouble was relieved by retention for a month in a silicate of soda splint. The cord passed over two pulleys and a weight of eleven pounds was used. Dr. Schmidt, in referring to this case, reports a similar instance of over-stretching of the knee in an old woman, with fracture of the femur just above the condyles. In both cases the trouble was due to the continuous traction maintained by plasters attached only to the leg and pulling through the knee-joint.—*Centralblatt für Chirurgie*, January 23, 1886.

Epidemic Hemeralopia.—Night-blindness is a symptom met with in many affections of the fundus of the eye, and especially in pigmentary retinitis; but it is also met with as an epidemic condition especially among soldiers. M. Laveran relates that an epidemic of this sort, occurring at Besançon in the spring of 1855, was so severe that it was found necessary to send out parties every day at sunset to lead back to the barracks those who had been overtaken by nightfall and were unable to find their way. The disease never affects officers or those subalterns who enjoy a relative degree of comfort, such as the musicians, but attacks chiefly the common soldiers. It has been supposed that hemeralopia was due to the effect of bright sunlight, or of the reflection from snow or sand; others have attributed it to the sudden lowering of temperature at sundown, and others again have regarded the symptom as an expression of latent scurvy. It has recently been asserted that night-blindness was caused by fatigue of the retina, but this does not account for the fact that certain classes only are attacked, and that others who make no less use of their eyes are exempt. M. Laveran classes it among the diseases of alimentation, and thinks it is caused by a deficient supply of animal and fatty foods. Dr. Eugène Martel, in an article of which this is an abstract, published in the *Revue Internationale des Sciences Médicales* of January 31, 1886, says that he has never found any constant changes on ophthalmoscopical examination; there may be a serous infiltration of the retina, a spasmodic contraction of the arteries, venous congestion, etc., but no lesions of such frequent occurrence as to deserve special mention. Weber has noted dilatation of the pupil and epiphora, and the connection of these symptoms with night-blindness seems to be a pretty constant one. Dr. Martel's theory is that epidemic hemeralopia is simply the first stage of sleep, in which the sight is dimmed and the eyelids fall. He says that the affection is observed only in soldiers who are obliged to undergo considerable fatigue, are exposed to the cold, and who receive an insufficient amount of flesh meat in their rations. He relates the case of a man who had attacks of apparent blindness, occurring during the day as well as at night. He could discover nothing abnormal in the fundus of the eye, but, meeting his patient one day in the street, noticed that his eyes were half closed; he could raise the lids perfectly, but did so with a certain effort. Appropriate treatment effected a speedy cure. The results of treatment in hemeralopia also lend some weight to this theory. Cod-liver oil, strychnine, and rest are found sufficient to effect a cure in most cases. The oil removes the condition of inanition, strychnine is a general tonic and muscular excitant, while with rest the patient gets a sufficient amount of sleep and is not troubled with the first unconscious stage of this process as night falls. In a recent number of *Vratch*, Dr. Roussanoff states that all the inhabitants of a little village of Southern Russia, built upon marshy ground, suffer every spring from hemeralopia. As soon as they notice the symptom they begin to take cod-liver oil, and the night vision is usually restored in two or three days. Of all the inhabitants of the village treated in this way, for five years in succession, only two have been found who were not cured by the oil.

Diagnosis of the Sex of the Fœtus from the Number of Cardiac Pulsations.—Dr. Juan Bidart asserts that a certain relation exists between the sex of the fœtus in utero and the rapidity of action of the heart, by which it is possible to determine almost with certainty whether the infant be male or female. When the pulsations are below 135 to the minute the child is a boy, and when from 135 to 145 it is a girl. In one hundred cases in which he made observations on this point, he foretold the sex correctly ninety-two times.—*Deutsche Medicinal-Zeitung*, January 21, 1886.

Joint-Inflammation Occurring with Purulent Ophthalmia.—Dr. Lucas reports the case of a child, eighteen days old, who suffered at the same time from purulent ophthalmia and inflammation of the left knee and wrist. The mother had had a purulent discharge from the vagina for some days before the birth of the child, and the affection of the eye was undoubtedly the result of direct infection. M. Debierre reports a similar case of a child suffering from severe suppurative inflammation of both eyes. On the twelfth day of the disease the child was seized, without the occurrence of any traumatism, with severe pain and swelling of the left elbow. The inflammation developed like gonorrhœal rheumatism and subsided slowly after about three weeks. These joint affections were most probably attributable to the purulent inflamnation of the conjunctiva, and, like gonorrhœal rheumatism itself, should be regarded as infectious in their nature.—*Journal de Médecine et de Chirurgie Pratiques*, January, 1886.

Aphonia Caused by Morphine.—Dr. Trevelot reports the following case in the *Journal de Médecine et de Chirurgie Pratiques* for March, 1886. Being called to see a young man, nineteen years of age, suffering from delirium tremens, he gave him morphine in doses of from one-fourth to one-third grain hypodermically. The attacks were speedily relieved, but each injection was followed by complete aphonia. The patient moved his lips, but could not enunciate at all, and the voice returned only after the expiration of twenty to thirty minutes. The same phenomenon was observed during a second attack when morphine was made use of; but in a third seizure, when the drug was not employed, aphonia did not supervene.

Malignant Tumors of the Fauces.—The following are the conclusions of M. A. Castex, in an article on this subject in the *Revue de Chirurgie* for January and February, 1886: Malignant tumors of the fauces are most frequently epitheliomatous in nature. They usually originate in the tonsil. They appear generally in later adult life, but it is not possible to attribute their occurrence especially to the use of tobacco. The most marked functional symptoms are pain in the ear, ptyalism, and difficulty and pain in deglutition. Among the objective characteristics may be noted the tendency of the ulceration to spread on the surface rather than to increase in depth, the grayish and pulpy mass which covers the ulcer, the peculiar shapes (sometimes as if flattened out, and sometimes in disseminated islets) which the neoplasm assumes, occasionally anæsthesia of the pharynx, and enlargement of the glands at the angle of the jaw. The general symptoms are relatively late in manifesting themselves. The progress of the disease presents frequent remissions, and the neoplasm spreads usually along the pillars of the fauces, and then over the veil of the palate. Certain epitheliomata of the pharynx have a boring tendency, and perforate the base of the skull. Adenomata of the velum, at first encapsulated, may rupture their en-

velope and take the course of sarcomata. Secondary adenopathy is often slow to appear in epithelium of the pharynx. As regards diagnosis, any unilateral hypertrophy of the tonsil in those advanced in age should be regarded with suspicion. It is sometimes difficult to decide between cancer and the tonsillar manifestations of syphilis in any of its stages, especially chancre of the tonsil. The diagnosis between malignant disease and the tuberculous and scrofulous lesions of the fauces is more easily made. As regards surgical interference, M. Castex formulates the following rules: 1. When the neoplasm is circumscribed and the neighboring glands are not involved, an operation should be performed; 2, intervention will also do good rather than harm when, although the disease is extensive and the glands are affected, the tumor is nevertheless circumscribed and movable; 3, when this degree is exceeded an operation can be but palliative in its result, and is justifiable only when the pain is excessive or other imperative indications are present. Access may be gained to the seat of disease either through the natural openings or by incision from without, but in either case free drainage to the exterior should be provided for. As a rule, M. Castex concludes, if the operation be performed early and the entire neoplasm be removed, a considerable period of comfort and freedom from the disease will be obtained, but it is very important to intervene at as early a period as possible. The operation itself is not wholly free from the dangers of hemorrhage, secondary pneumonia, and septic infection.

Incontinence of Urine Caused by Nasal Stenosis.—Dr. Ziem confirms the statement made by Dr. Major, of Canada, that nocturnal incontinence of urine occurs very frequently in children who are forced to breathe through the mouth by reason of some nasal obstruction. He rests his assertion upon some cases recently observed by him, and he regards it as very probable that the infirmity might be cured by the re-establishment of the normal mode of respiration. The author endeavors to explain the relation existing between buccal respiration and nocturnal incontinence of urine by regarding the latter as due to insufficient hematosis and a consequent accumulation of carbonic acid in the blood.—*Journal de Médecine de Paris*, February 21, 1886.

Oil of Santal in Urinary Affections.—Dr. A. P. Gipoulou writes, in the *Journal de Médecine de Paris* of February 14, 1886, concerning the good results obtained by him from the use of the oil of yellow sandal-wood in the treatment of the various affections of the urinary organs. The results of his experiments may be tabulated as follows: 1. In chronic and obstinate gonorrhœa no especially remarkable effects were produced. 2. In acute gonorrhœa accompanied by severe vesical tenesmus, frequent and painful micturition, etc., the acute symptoms were speedily relieved, though the discharge diminished only gradually in quantity. 3. In a case of suppurative nephritis of the left kidney, in which there was frequent micturition, and the urine was loaded with pus, an improvement was noted within twenty-four hours, and at the end of a fortnight the pus had entirely disappeared from the urine. 4. A railway employé was suffering from acute cystitis, accompanied by tenesmus and bloody urine, which had resisted the action of ordinary remedies for over a month; he was relieved permanently in a few days by the use of yellow sandal-wood oil. 5. In a number of cases of vesical catarrh equally rapid and permanent results were obtained. 6. In three cases of simple acute unilateral nephritis speedy relief was afforded by the same remedy. 7. In two cases of nephritic colic excellent results followed the administration of santal oil; the attacks were promptly cut short, and an apparent cure was the result. 8. Finally, Dr. Giloupou relates a case of acute Bright's disease following scarlet fever, in which there was general anasarca and the urine was heavily loaded with albumin. During a treatment for four or five days with diuretics the œdema increased, but within two days after giving santal oil the improvement was marked, and at the end of a week the anasarca had disappeared and no more albumin could be found in the urine.

Belladonna as a Corrective of Iodide of Potassium.—Dr. Aubert employs belladonna as a preventive of the unpleasant effects produced by iodide of potassium upon the naso-pharyngeal mucous membrane. One-half of a grain of belladonna administered with the iodide is sufficient to prevent these disagreeable symptoms. It is unnecessary to continue the belladonna for a great length of time, for in a little while the mucous membrane ceases to be sensitive to the action of the potassium salt.—*Journal de Médecine de Paris*, February 14, 1886.

Acute Rheumatism in Mother and Child.—Dr. Schaefer reports in the *Berliner Klinische Wochenschrift* of February 1, 1886, of a woman who gave birth to a child while she was suffering from an attack of acute articular rheumatism. Delivery was speedily accomplished, but had no apparent influence upon the course of the fever nor upon the articular affection. Five days later the infant was also seized with fever and a painful swelling in several of the joints. The course of the disease in both mother and child was a very protracted one and rebellious to the action of the usual remedies. The writer believes that the disease in the child was due to infection from the mother during intra-uterine life, and regards the case as conclusive proof of the infectious nature of acute articular rheumatism.

Treatment of Scrofulous Ozæna by Turpentine.—Dr. G. Malacrida writes in the *Gazetta degli Ospitali* of March 7, 1886, concerning the excellent results obtained by him from local applications of oil of turpentine in scrofulous ozæna. After cleansing the nostrils with a solution of chloride of sodium and drying the mucous membrane with pledgets of absorbent cotton, he introduces a bit of cotton moistened with a few drops of the essential oil of turpentine. In a number of cases in which this method was employed the disagreeable odor was almost immediately destroyed, and a permanent cure was obtained within less than a month. The first applications having caused considerable pain and irritation, the author subsequently adopted the precaution of covering the cotton containing the turpentine with a thin, dry layer of the same material, and found the good effects in no degree lessened by this procedure.

Spontaneous Evolution of a Living Child at Term.—Dr. E. Lvoff reports the following rare case in the *Russkaya Meditsina* of February 9, 1886. The woman, a strong, well-nourished peasant, thirty-five years of age, had given birth to six children by normal head-presentations. At the birth of the seventh child, after the bag of waters had ruptured, a hand came down. The midwife thought, however, that there was no occasion for alarm, and did not send for assistance until four hours had elapsed. When the writer was summoned, he found a transverse presentation with the left hand down in the vagina. The head lay high up on the right side, the back of the child was directed forward, and the breech was to the left and rather tightly wedged into the entrance to the true pelvis. The child was alive, and the pulsations of the heart were distinctly audible. The pains were strong and frequent. Just as Dr. Lvoff was about to introduce his hand to turn, during a severe pain, the breech slipped a little and came into the outlet, while the head passed upward. After this the labor was quickly terminated without assistance, and a living child, weighing nine pounds, was delivered. Spontaneous evolution is not very infrequent in the case of a dead or immature child, but it exceedingly rarely happens that a well-developed living child is born in this way—indeed, some writers have denied that such a termination is possible.

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THE CAUSE AND PREVENTION OF DIABETIC COMA.

THE two most frequent causes of death in diabetes are phthisis and diabetic coma. In young persons, and those confined too exclusively to a meat diet, it is coma which most frequently ends the disease. This coma is sometimes uræmic, and sometimes that of a cerebral apoplexy, but in the great majority of cases it is neither, but a peculiar state characteristic of the disease. It is natural that this peculiar and fatal incident of diabetes should receive much attention, and this has been the case, especially since Petters, in 1855, and Kaulich, in 1860, noted the fact that, in many instances, the urine and breath of comatose diabetics exhaled a peculiar odor due to acetone, and since Kussmaul, in 1874, gave some solid support to the view that the coma was due to the accumulation of acetone in the blood and tissues.

Since Kussmaul's article appeared, a great many contributions have been made, some bearing out and some entirely opposed to the view of a toxic coma from acetone. Some positive evidence against the acetone theory has been furnished by Frerichs, who gave acetone in doses of gr. xx. to gr. xxx., without causing any severe symptoms. Albertoni also gave as much as an ounce and a half to a man, without producing any symptoms but that of stupor. Frerichs has said that the term acetonæmia should be expunged from pathology. He was inclined to believe, however, that the coma was a toxic one due to some products allied to acetone. Some authors have attributed diabetic coma to the presence of an excessive amount of fat in the blood (lipæmia), with resulting pulmonary embolism (Sanders and Hamilton, 1877). Fitz and Starr, who have observed the lipæmia, have not been able to attribute to it the coma.

Ebstein believed that the saccharine blood caused a necrosis of the renal epithelium, with consequent imperfect elimination of acetone, and that the kidneys are primarily at fault.

Abeles has found, in some diabetics dying of coma, a hyperglycæmia of the brain-tissue, while Scott, Donkin, Schmitz, Paget, and Dickinson, found an atrophy of the heart so great, that in some cases diabetic coma might be attributed to a weakness and failure of this organ.

With so many conflicting views and so much contradictory evidence, it might well seem difficult to come to any definite conclusions.

Still this is not perhaps impossible. It will be admitted at once, that some cases of diabetic coma are simply cases of uræmia or of cerebral apoplexy. Frerichs found that among 250 cases of diabetes, 8 died of nephritis, 10 of cerebral apoplexy, and 2 from cerebral softening. Griesinger found the kidneys diseased in 32 cases out of 64, and Dickinson in 22 cases out of 24.

Such cases, therefore, can be set aside. They may illustrate coma in diabetics, but they are not instances of the diabetic coma, which we are now discussing.

Of the remaining cases, two divisions, according to M. Lecorché (*Archives de Neurologie*), can be made. In the first class, sudden coma comes on without the evidence of acetone in the blood or excretions. The patient falls gradually or suddenly into a state of torpor and great general weakness which ends in coma. The limbs are cool, the pulse feeble, there is no evidence of asphyxia, but the face is pale or even livid. In these cases there is sometimes a hyperglycæmia with desiccation of the tissues, as shown by Abeles, but the dominant factor is cardiac failure from the atrophied and fatty heart.

In the second group of cases there is marked evidence of acetonæmia, as shown by the chloroform-like odor of the breath and urine, and by the Burgundy-red color of the latter when a few drops of perchloride of iron are added. But here the clinical symptoms are entirely different. The patient shows at first evidence of restlessness and excitement. His speech is rapid and vivacious, the pulse quick, the temperature, perhaps, somewhat elevated, and there are in general the signs shown in the first stage of alcoholic intoxication. Besides this, the patient develops gastro-intestinal and respiratory troubles. There is anorexia, vomiting, or diarrhœa, coliky pains. Dyspnœa appears later, of a somewhat peculiar character; the whole chest is deeply and rhythmically expanded, while no physical signs of trouble can be discovered in the lungs.

After the stage of nervous excitement comes stupor, and finally coma.

The cause of the symptoms in this latter group is most likely the acetone or some allied product in the blood. It was Frerichs who believed that it was antecedent decomposition products which were really the toxic agents; yet none of these other substances, such as acid ethyl diacetic, or ethyl ether, injected by Quincke and Gehrardt, seem any more poisonous than acetone, and it is not necessary to assume that a stronger poison than acetone is needed to kill the already weak and debilitated diabetic.

The testimony of most observers, therefore, still supports the view of Petters and Kaulich, that diabetic coma, occurring in the group of cases just described, is due to the presence of acetone or some closely allied body in the blood. And much of the contradiction and confusion regarding the subject is due, no doubt, to the fact that many have supposed that all cases of coma in diabetics were also cases of acetonæmia.

Some important practical points may be mentioned, in conclusion, regarding the influence of treatment upon the development of coma. Pavy and Lasègue have independently stated that severe forms of diabetes, when not treated, died of phthisis; when treated, died of coma.

While this is putting it too positively, there can be little doubt that a sudden reduction in the amount of sugar in the urine by the enforcement of a rigid meat diet may bring on coma. When diabetics have a tendency to acetonæmia, also, they should not be too rigidly restricted to a meat diet, and they should be given opium sparingly.

PRACTICALITY IN MEDICINE.

THE word "practical" has a fascinating sound. It suggests a getting at the bottom of things. But much that passes current as practical is spurious coin. A practice implies a theory, though the latter may not present upon superficial examination. In time past our teaching may have been too theoretical. But the hue and cry of the times is blinding us to the true meaning of the word "practical." In our anxiety about the superstructure, are we not getting careless about the foundation?

A well-ordered education combines both the theoretical and the practical. In our efforts to succeed, we are apt to magnify the latter element and disparage the former. This leads us to strive to reach the goal by short cuts. This spirit has affected our educational institutions. Some of them are merely huge incubators, and their progeny is feeble and dwarfed. In the cold blast of competition only the fittest survive and achieve success. Circumstances have given to this latter word a meaning which it did not possess fifty years ago. How are we to define it? It is certainly not for the great mass of men what it was formerly, so far as pecuniary reward is concerned.

We regard that man as successful in the highest sense who does his own thinking and acts out the convictions to which it leads. This is the highest type of practicality.

If a man can be rightly trained in his habits of thought he will naturally make himself practical. This training must be begun in very childhood. All of our so-called educational reforms have not been unmixed blessings. Every agency which has ever wrought for human good has had in itself the potential for working a vast amount of evil. The good has resulted from a knowledge of the limitations of each agency and its applicability to the wants of men. The liability to evil results from either an endeavor to make, or a willingness to allow, an agency to work contrary to the regular laws of expansion of mind and matter. Over-production in literature has in every profession led to a lessening of individual mental exertion. To a certain extent it has removed one great aid to practicality. A sort of intellectual parasitism has sprung up. Nothing parasitic is ever truly practical. Knowledge gained without sturdy, independent thought is never lasting. We can never employ it with certainty. It cannot be converted into practical endeavor. Functional activity alone prevents mal-assimilation. "The knowledge which we can use is the only true knowledge."

The relation of practicality to independence of thought is thus seen to be very close.

The teachers of the natural sciences in many of our higher institutions of learning complain of a lack, on the part of their students, of originality, and of that mental tone which enables them to stand alone on whatever basis of mental endowment they may profess to have. The student regards the teacher much as a man overboard regards a life-preserver—a sure means of safety. This it is, but it is not a great aid in learning how to swim. The student can throw the blame in part back upon his preparatory school and his previous instructors. Both have suffered to a certain extent from the objective effects of over-production in literature. The many new books produced are in themselves good enough. In fact they are so good, and present their subject-matter in such an attractive form that the student will not go over the premises involved. He contents himself with merely accepting the conclusions. "There can be no doubt," says a recent writer, in speaking of biological studies, "that many teachers take the very books which emphatically urge the necessity of observation and use them just as they would a grammar or history, so that the observation in this case may be said to consist in observing what is said in a certain page of a certain book." The same criticism holds true of many students, and in medical study often leads to the formation of deplorable mental habits.

What, then, is the great guide to practicality? We regard it to be the power of close observation, a studying by each man of those clinical facts which come to his own notice. Experience will eventually show their relation to other facts to which they may seem antagonistic. The cultivation of this power should begin in the earliest student days. The "how" should be regarded as of no less importance than the "what" in considering mental acquirement. He will be the most successful in the true sense who holds, with puritanical sternness, to honesty toward himself as well as toward his fellows.

THE TREATMENT OF RACHITIS BY PHOSPHORUS.

RACHITIS has usually been regarded as a disease dependent upon malnutrition, and, as such, amenable to no specific treatment, but to be managed on general principles by tonic, dietetic, and hygienic measures. Some three years ago, however, at the meeting of German Naturalists and Physicians at Friburg, Kassowitz announced that he had discovered a true specific for rickets, as far, at least, as the osseous manifestations of the disease were concerned. The softening of the bony framework, he maintained, was due to an undue vascularization of the layers of new osseous tissue, the increased activity of the circulation interfering with the normal deposit of calcareous salts. It had been shown by the investigations of Wegner that, when phosphorus in small doses was given to a growing animal, the newly formed bone was very dense, so that the cancellous tissue was as firm and compact as the shaft of the bone. Kassowitz attributed this change to an arrest of development of the young vessels supplying the parts, and he reasoned that the drug would, therefore, be of value in rickets. He accordingly experimented with phosphorus in doses of $\frac{1}{130}$ grain ($\frac{1}{2}$ milligram), and claimed to have obtained most excellent results. He reported over five hundred cases in which he tried the efficacy of phosphorus, in every one of which very marked improvement in all the symptoms followed in the course of a few weeks.

Such a glowing account of the virtues of phosphorus

naturally led others to experiment in the same direction, and since then many reports have appeared from time to time in the journals, some coinciding with those of Kassowitz, and others apparently demonstrating the worthlessness of the drug in this disease.

The question was recently the subject of an animated discussion at a meeting of the Society of Physicians in Vienna (*Centralblatt für Klinische Medicin*, January 30, 1886). It was introduced by Kassowitz, who presented a case of so-called late rickets in a girl ten years of age, in whom an almost complete cure was obtained in a little over two months. Thereupon Hryntschak presented a report of 24 cases of rachitis treated by phosphorus, of which 5 were benefited, 12 remained without change, and 7 grew worse while taking the remedy. Herz, Eisenschitz, and Genser each reported favorably on the action of the drug, having observed an improvement in the general condition, consolidation of the bones, especially those of the cranium, subsidence of abnormal sweating, and cure of laryngismus stridulus.

The principal opponent of this method of treatment was Monti. He said that he had, in certain cases, seen the fontanelles grow smaller during the administration of phosphorus, while at the same time the rachitic changes in the cranial bones were advancing. And even the craniotabes might disappear while the deformity of the thorax was increasing. He doubted very much whether phosphorus exerted any favorable influence upon the laryngeal spasm or upon the eruption of the teeth. He had never seen any improvement in the general condition follow upon the exhibition of phosphorus, except in cases which were placed under good hygienic and dietetic regulations. He was not prepared, however, despite his unsatisfactory experience, to condemn the drug, but was willing to experiment further in the hope of finally seeing more favorable results. The middle ground, and probably the safer one, was taken by Fürth, who believed that phosphorus was a remedy of great value in rachitis, but that it should not be relied upon solely, to the exclusion of measures directed to the improvement of the hygienic and dietetic conditions. He said that the remedy could be given in small doses to children for weeks and months without danger. Some exception must be taken to this statement, however, in view of the fact that Boas (*Berliner klinische Wochenschrift*, No. 25, 1885) has reported two cases of periostitis of the jaw occurring after the exhibition of phosphorus in doses of $\frac{1}{40}$ to $\frac{1}{13}$ grain per diem.

In concluding the discussion Kassowitz referred briefly to his reported cases, over twelve hundred in number, and affirmed his belief that a great revolution in the mode of treatment of rachitis would soon occur. And in order to hasten the coming of this revolution, he begged his colleagues to make a conscientious trial of phosphorus, but cautioned them against impatience; for it was only in exceptional cases that a complete cure could be obtained in a few weeks, although a marked improvement in some or all of the symptoms should be observed in that time.

As far as any judgment can be formed from the many reports that have appeared during the past two years, the weight of testimony would seem to show that phosphorus is a drug of considerable value in the treatment of this disease, though we cannot agree with its most enthusiastic advocates, who look upon it as a true specific. But it certainly ought to be combined with abundant alimentation, for Wegner's experiments have shown that in animals fed with phosphorus, but deprived of phosphates, the newly formed bone, while dense, was not hard, but was precisely like that occurring in rachitis.

DISCUSSING PROPRIETARY MEDICINES.

THE *Philadelphia Medical Times* says: "Dr. Carl Seiler, several months ago, before the Alumni Association of the College of Pharmacy of this city, and within the hall of the college, delivered a lecture upon 'Hay Fever.' . . . In impressing his points upon his audience, speaking extemporaneously, he condemned all powders, and told his audience not to use them. Among the examples which he mentioned was a proprietary article in the form of a snuff, which had been advertised in this city as a 'cure' for hay fever. The professional experience of the lecturer, and his knowledge of the nature of the disease in question, he believed, enabled him to form, and qualified him to express, a positive opinion as to the dangers of a remedy of the kind indicated when used in this highly objectionable manner.

"For this statement, made before a medical audience (for pharmacy is a branch of medicine), Dr. Seiler has been prosecuted by the owner of the nostrum, who claims exemplary damages for injury to his business."

The suit, as our contemporary, the New York *Medical Journal*, truly states, involves the question whether doctors have not a right to discuss freely the value of medicinal agents. If Dr. C. Seiler's case goes against him it follows that medical men and journals will have to keep silent in all therapeutical discussions as to proprietary nostrums.

Surely it will not be for the public good if such a state of things is brought about. No doubt it is unjust for medical men wantonly and maliciously to inveigh against special proprietary preparations, but instances of such action are extremely rare if they ever occur.

The evil effects of the present practice of forcing proprietary mixtures upon the profession and public, have received, in Dr. Seiler's case, a new illustration. We trust that it will be a fresh inducement to the profession to stick to the Pharmacopœia.

SUCCESSFUL LUNG-SURGERY.

THERE is, perhaps, no operation in the whole range of surgery that seems to hold out so little immediate or ultimate success as that of the removal of a malignant growth from the lung. Yet this has been done successfully by Professor Krönlein, of Zurich. The case was one of sarcoma of the chest-wall and left lung, occurring in a woman eighteen years old. The operation was performed in 1884, and its immediate success was chronicled in the *Berliner Klinische Wochenschrift*, No. 9, 1884.

The patient was lost sight of for two years, and it was feared that she was dead. She reappeared, however, a short time ago, and Professor Krönlein states that she is still in blooming health. A careful examination of the lung led to the conclusion that there had been no return of the disease. Cases of sarcoma of the ribs and lung are, of course, extremely rare, but this does not make

Krönlein's contribution to surgery any the less brilliant.

It is impossible not to contrast the striking results of which modern surgery boasts—such as resections of the stomach and intestines, removal of the diseased thyroid, of the larynx, etc.—with the operations upon which our surgical fathers took pride, which were lightning-like amputations, lithotomies, and ligaturing the large arteries. But doubtless our descendants will think with just as pitying smiles of our trivial dabblings in laparotomy and lung resection.

THE INOCULATION OF A CONDEMNED CRIMINAL.

From the Hawaian Islands comes the news of the first attempt to use a condemned criminal for the solution of an important hygienic and scientific question. Over two years ago, the government procured the services of an accomplished bacteriologist and pathologist, Dr. Edward Arning, for the purpose of having a thorough and scientific study made of leprosy. For two years Dr. Arning followed up the subject, and apparently with great industry and skill.

Special attention was, of course, paid to the *Bacillus lepræ*, which was uniformly found in great numbers in the diseased parts, but not in the blood.

Attempts were made to cultivate the bacillus by Koch's method, using various media, but so far Dr. Arning has failed entirely. In this respect, Dr. Neisser, of Breslau, appears to have been more successful, for he has recently stated (*Virchow's Arch.*, 103, Bd. 1886) that in a few cases he has observed an exceedingly slow growth. Neisser also claims to have recognized spores, which Arning, so far, has failed to do. The latter made numerous inoculation experiments upon lower animals. The bacilli would grow at the points of inoculation for a long time, but the animal never became infected.

Finally, by permission of the Privy Council, Dr. Arning was allowed to make an inoculation upon the condemned criminal Keanu, whose sentence was commuted to imprisonment for life. With Keanu's written consent, an inoculation was made of leprous matter in the convict's arm. Bacilli were found in the sore or the scar until fourteen months later, but no constitutional symptoms were observed.

One further observation of importance was made by Arning. He found that in putrid leprous tissues, and even in the body of a leper who had been dead for three months, the bacilli were found in great numbers. This seems to bear against their specific pathogenetic function.

We regret to learn that owing to difficulties with the Health Board, Dr. Arning's work will probably be discontinued.

ALCOHOLISM AND ITS PREVENTION.

A great deal of interest is being taken in France regarding the subject of alcoholism. "This word," says Lanceraux, "was unknown to French physicians previous to 1850, but since that time the pathological phenomena of chronic alcoholic poisoning have been carefully studied." All the French writers agree that the manufacture and sale of alcoholic drinks should be regulated by the State. All seem to agree also in the view, that the most serious physical and moral ills that alcohol produces are the result of using distilled and falsified liquors. Dujardin-Beaumetz and Andige, Lanceraux, M. Girard, and M. Mottet, have given evidence to this effect. M. Mottet cites cases of explosive mania brought on by these adulterated drinks. Lanceraux shows that most of the cases of alcoholism admitted to the Paris hospitals occur in persons brought up in the provinces where brandy is used.

"Children of vinous drunkards," he says, "do not inherit the vice, but the children of parents who indulge in liqueurs and drinks manufactured from cereals and potatoes, show marks of degeneration." He regards wine, beer, and cider as harmless, or only slightly dangerous. But wine must not be fortified (as it usually is) with alcohol.

The French remedy for intemperance is to allow the sale of the weaker liquors above mentioned, but to watch their manufacture and composition. The sale of distilled liquors should be carried on by only a few responsible persons; these liquors should be heavily taxed, and the most stringent regulations should be made to prevent their adulteration, and secure their careful manufacture.

THE "CRAMMING METHOD" IN PHTHISIS.

Many observers, in this country and elsewhere, have attested to the therapeutic value of the method of "cramming" in phthisis. It has not been found necessary in all cases to use the syphon-tube, although that is usually a most effective help.

Quite recently some interesting observations upon this subject have been made by Dr. M. G. Kurloff, of St. Petersburg. He made six experiments upon five phthisical patients who had been rapidly emaciating. These patients were given a mixture of milk and meat-powder, nearly a pound of the latter being given at a time. The average amount of nitrogenous food daily was equivalent to $3\frac{1}{3}$ pounds of fresh meat, while the maximum was equal to $5\frac{1}{3}$ pounds of fresh meat. The average amount of nitrogen ingested daily in this mass of food was from 50 to 80 grammes, against the average, in an ordinary diet, of 18 grammes.

The effect of this cramming was to increase greatly the excretion of nitrogen (not necessarily the tissue-waste, as Kurloff states). Thus the nitrogen excreted by the urine rose from a mean of twelve grammes daily to thirty-four and fifty-six grammes.

Of more importance was the fact that the nitrogen assimilated was increased, or, in other words, tissue was built up at a rapid rate. Thus the mean assimilation, expressed in grammes, per kilogramme of body-weight before, during, and after the cramming process, was respectively 0.24, 0.89, and 0.29. The patients' appetites improved, and the body-weight increased at the rate of nearly one pound a day. The treatment was, however, kept up for too short a time to obtain anything but experimental results.

These confirm previous experience as to the value of the cramming process, and point especially to the need of genuine cramming, *i.e.*, of giving food in very large excess.

News of the Week.

A Duel among Doctors.—The editor of the *American Practitioner and News* appears to have had a genuine challenge to fight a duel. This must be an agreeable change from the hard routine of the medical editor's life, and we trust our esteemed contemporary is enjoying it. The "challenger" is at present an individual who wrote a ridiculous tirade for the *News*, and sent it anonymously. The *News* printed some specimen imbecilities, and concluded by saying: "The communication is anonymous, and it is well for the writer that it is so." Whereupon the writer pens the following: "If you feel that you would like to have any sort of personal satisfaction from the writer, and can furnish a respectable indorser to that effect, my name shall be forthcoming." We may yet have some gunshot surgery in Louisville.

The European Medical Press.—For unblushing misrepresentation we imagine that nothing can much exceed a statement in *The Medical Bulletin*, to the effect that the present organization of the Congress "receives the earnest support of *The British Medical Journal*, *Le Progrès Médical* (not *Medicale*), and other influential European journals." We are furthermore told that the *Medical Times and Gazette* had to suspend because it attacked the American Medical Association! It is a bad case when such trumpery statements have to be brought in to its support. They only promote bad feeling, and make concessions and settlement more difficult. The fact is, that there is not a European medical journal, except perhaps two, which is not in a quandary over the Congress.

A New Reason for Banishing the Classics.—Professor Theophilus Parvin, in a recent eloquent and learned lecture, said: "It is sadly true that the study of the classics is calculated to breed and foster immorality. Virgil, in immortally beautiful language, really makes arguments in favor of onanism and pæderasty. If for no other reason, for this alone, I would favor the banishment of the classics from college courses, for they have a tendency to sow that terrible seed about which I have spoken." We can hardly believe that Professor Parvin is serious in the above statement. There is certainly nothing worse in the best classic writers than in the best English classics, while one modern French novel can outdo the whole Augustan age in nastiness. As for Virgil, we cannot have him slandered so. From a pretty thorough knowledge of what is medical, at least in Virgil, we recall only one passage that at all appears to "encourage immorality." This amounts to not much more than Tennyson's

"In the spring the young man's fancy lightly turns to thoughts of love."

Virgil, says Horace, was the best of men and of friends.

The American Analyst makes the charge that The Medical Record has "attacked" the cigarette-makers of a certain Richmond firm, and has accused them of immorality, etc. Our astute critic is quite mistaken, as he would see if he had read the article in question more carefully. What we did say was that working-women who pull up their dresses when being photographed for the public, are presumably of loose character. We advise our contemporary not to press this discussion.

The Arkansas State Medical Society will meet at Helena on April 28th.

Another Point of View.—"If we might express our own observations, we would suggest that a thorough education is one of the least factors in the elements which go to make the practice of medicine successful from a monetary point of view; and we fail to see how any profession could be attractive to thoroughly educated young men in which success, in its usual acceptation, bears no ratio to learning and proficiency."—*Miss. Valley Med. Monthly.*

The Medical Practice Act of Illinois has accomplished the following in its eight years of existence: In 1877 there were 7,400 persons engaged in practice, of whom 3,600 were graduates, and 3,800 non-graduates. In 1886 the total number engaged in practice was 6,065, the graduates being 5,327, the non-graduates 738. The effect of the law has been, therefore, to keep down an increase in doctors and to reduce the proportion of non-graduates from fifty-two per cent. to thirteen per cent. Assuming that the population has increased by several hundred thousands, it would be a fair estimate to suppose that the proportion of physicians to population in Illinois is not far from 1 to 600. In the neighboring State of Indiana it is 1 to 396, and in Ohio 1 to 500.

The Louisville Medical College graduated a class of eighty-seven at its Annual Commencement, February 25th.

Two Newspapers and a Moral.—We have received two newspapers, one a German daily, published in St. Louis, and the other *The Kansas City Journal*. One contains the woodcut and glowing biography of a gentleman somewhat known in gynecological circles, and hitherto standing well in the profession; the other, published in much the same style, is evidently that of a confessed quack. There used to be a geometrical axiom to the effect that "two things equal to the same thing are equal to each other." Does it apply here?

Bad Water and Typhoid in Philadelphia.—At a meeting of the County Medical Society, held in Philadelphia on March 24th, a resolution was passed advocating the completion of the East Park and Cambria reservoirs. Dr. Thomas said that Philadelphia water is contaminated by sewer water and cemetery leakings. Many ladies would not drink the water, and many diseases were caused by too little water drinking. The water is no longer fit for domestic uses. There is more typhoid fever in Philadelphia than in any city of its size in the world. —*Sanitary News.*

More "Successful" Treatment of Diphtheria.—Dr. H. Heyder, of Plau, in Thuringen, states in the *Centralblatt für Klin. Med.*, 1886, No. 12, that he has treated two hundred and fifty cases of pure diphtheria, in the past two and a half years, with a mortality of only seven, or two per cent. He has uniformly used chlorate of potash and muriatic acid, giving these drugs alternately. To older persons he gave also a gargle of corrosive sublimate (1–3,000), to babies he gave a solution of the salt.

Trichinæ have been found in wild hogs by the persons at Potsdam engaged in examining their flesh.

A State Charities Aid Association has been organized in New Jersey.

The Annual Meeting of The Medical Association of Georgia will be held in Augusta, on April 22, and 23.

A Polyclinic is to be organized in Atlanta, Ga. Commenting upon this the *Atlanta Medical and Surgical Journal* speaks of the "Polyclinic in Vienna." There is no "Polyclinic" in Vienna, but there is a Policlinic.

The French Government has passed a law permitting persons to make a will giving their bodies to learned societies.

Sir Henry Thompson has written a new novel entitled "All But." He has illustrated it himself with numerous sketches.

The Death of Professor C. C. F. Gay, a well-known surgeon of Buffalo, is announced. Dr. Gay was Professor Emeritus of Operative and Clinical Surgery in the Niagara Medical College.

Double Cataract Extraction at an Advanced Age.—An old Russian tailor whose age is one hundred and one has just had cataract extraction performed successfully on both eyes.

Medical Books in Germany.—There were nine hundred and four medical works issued by German publishers in 1885, as against nine hundred and twenty-eight in 1884.

Professor Billroth, of Vienna, accompanied by one of his assistants, recently went to Alexandria, Egypt, to perform an operation upon the person of a rich banker there. For the expenses incurred and his services he was to receive the sum of 25,000 francs.

A Pasteur Institute in Russia.—Prince Alexander of Oldenburg has created, at St. Petersburg, an establishment on a small scale for applying Pasteur's method. Experiments are made on dogs and rabbits before operating on man. Prince Alexander defrays all the expenses of the establishment.

Beri-beri is ravaging the whole coast line of Brazil, and is causing a greater mortality than yellow fever. Beri-beri in Brazil, according to a correspondent of the *Journal of the American Medical Association*, is widely different from the disease of the same name in India. The Brazilians do not seem to know its true nature, viz., that of a multiple neuritis.

A Novel Operation in Liver Surgery has been performed by Dr. George Harley (*Med. Press*). In a case of acute hepatitis with enlarged liver, ascites, and other symptoms pointing to an inevitable fatal termination, Dr. Harley introduced a trocar and cannula deep into the centre of the liver and drew off twenty ounces of blood. The patient made a good recovery, and Dr. Harley thinks that hepatic phlebotomy is destined to take rank in therapeutics as a safe and effective measure.

Reversion of the Blood to a Lower Type.—Dr. Frederick P. Henry, of the *Philadelphia Medical Times* advances the theory that in pernicious anæmia there is a reversion of the blood to a simpler ancestral type. He finds that the blood-corpuscles in this disease are reduced to half a million or a million per cubic millimetre; that the proportion of hæmoglobin is often increased above normal; that many of the corpuscles are greatly increased in size and are altered in shape, being oval. In all these respects the blood approaches, as he believes, the character of that of cold-blooded animals. Dr. Henry calls it a case of "tissue reversion;" but blood is not now generally regarded as a tissue but as an internal medium. We fear that the hypothesis of Dr. Henry must be considered somewhat fanciful.

Dr. A. M. Shew, Superintendent of the Connecticut Hospital for the Insane at Middletown, was stricken with apoplexy on April 12th, and died on the same day. His health had not been good for several years, and much of the time he had been absent from his duties. He was born in Jefferson County, N. Y., September 18, 1841. In 1862 he accepted the office of Assistant Physician in the New York Asylum for Insane Convicts, at Auburn, after which he went to Philadelphia and graduated at the Jefferson Medical College. Later he became Assistant Surgeon of United States Volunteers. In the spring of 1866 he was appointed Assistant Physician of the New Jersey State Lunatic Asylum at Trenton, and remained there until the following September, when he was appointed to superintend the construction and organization of the Middletown Hospital.

New Medical Societies in Russia.—Two new medical societies have recently been started in Russia. One is for the study of syphilis and dermatology, and has already met several times, the president being Professor B. Tarnovski, and the vice-president Professor Polotebnoff. The other, devoted to ophthalmology, is in process of formation.

American Public Health Association.—The Executive Committee have selected the following topics for consideration at the next meeting of this Association, which will be held at Toronto, Canada, October 5 to 8, 1886: 1. The Disposal of the Refuse Matters of Cities and Towns. 2. The Condition of Stored Water-Supplies, and their Relation to the Public Health. 3. The Best Methods and the Apparatus Necessary for the Teaching of Hygiene in the Public Schools, as well as the Means for Securing Uniformity in such Instruction. 4. Recent Sanitary Experiences in Connection with the Exclusion and Suppression of Epidemic Disease. 5. The Sanitary Conditions and Necessities of School-houses and School-life. 6. The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them. 7. Plans for Dwelling-Houses.

Poisoning from the External Application of Aconite.—We have received some communications which make it doubtful whether the case of supposed poisoning by the external application of aconite, reported in The Record of February 27th, page 243, was really one of that character. It is certainly very unusual for tinct. aconite to be absorbed by the skin.

A Ready Method of Making Koumiss.—Take one square cake of compressed yeast, dissolved in a tumbler of warm water, a dozen cubes of sugar, and two quarts of milk; then put all in patent beer bottles; let it stand twenty-four hours, [illegible]

Reviews and Notices.

Rome in Winter, and the Tuscan Hills in Summer. A Contribution to the Climate of Italy. By David Young. Pp. 283. London: H. K. Lewis. 1886.

This book describes the principal elements in the climate of Italy: "The prevailing diseases are compared with those of England and northern countries generally, and the *type* of diseases likely to receive benefit in Italy is dwelt on at some length, while the sanitary state of the city" [of Rome] "and the important and increasingly interesting subject of malaria are also considered." The author considers the subject of climate generally, and that of Rome in particular, in the first two chapters; in the third and fourth chapters he discusses the unhealthiness of Rome and Roman fever. There is a very interesting chapter on "The Water-Supply of the City," both ancient and modern, and one on "How to live in Rome." The description of "Summer Quarters near Rome and in Tuscany" are of special interest, and embrace two chapters. The ninth chapter is devoted to "The Class of Invalids likely to derive Benefit from a Residence in Rome." A feature of interest is the description of the so-called "Roman fever." This disease is compared to the "typho-malarial" fever which so generally affected raw soldiers during the War of the Rebellion. It would appear that Roman fever is a sickness due to exposure to thermal vicissitudes during nervous exhaustion; thus "Some, after a shorter or longer period devoted to sight-seeing in Rome or Naples, began to feel fatigued and ill, this condition being soon followed by an attack of diarrhœa. Others attributed their illness to a chill caught on their return homeward about sunset." The author claims a malarial influence as causative, but thinks the disease more akin to typhoid than any other fever. The fever is not liable to recur. There seems to be three principal theories in respect to the origin of "malaria" in Italy: "(*a*) That the disease is produced by weather influences alone; (*b*) that it is due entirely to the soil; and (*c*) that it is essentially a disease of parasitic character." A great deal of space is taken up with a discussion of this subject, but the reader is left in the same state of doubt that has always existed in respect to the character of malaria; perhaps it would be well to banish from medical nomenclature a term used to obscure rather than clear up the causes of much of the illness to which mankind is subject. The "evil one" of theological form has scarcely served to create more illogical disputation than has "malaria." The author gives much information of value to both physician and tourist.

The Adirondacks as a Health-Resort: Showing the Benefit to be derived from a Sojourn in the Wilderness in Cases of Pulmonary Phthisis, Acute and Chronic Bronchitis, Asthma, "Hay-Fever," and various Nervous Affections. Edited and compiled by Joseph W. Stickler, M.S., M.D., Visiting Physician and Pathologist to the Orange (N. J.) Memorial Hospital, Member of the New York Pathological Society, etc. Pp. 198. New York and London: G. P. Putnam's Sons. 1886.

In view of the somewhat chaotic and unsatisfactory condition in which we find the literature pertaining to the New York wilderness as a resort for invalids, it is a matter of congratulation that so competent an investigator as Dr. Stickler has taken the trouble to make a careful study of the subject, and to bestow upon us the benefits of his labors in the little volume which lies before us.

Chapter I. treats of the importance of climatic treatment in pulmonary affections, chiefly by quotations from acknowledged authorities on the subject. The author then briefly describes (Chapter II.) the chief localities of interest to physicians and invalids in the Adirondack region, the methods of access to them, their altitudes, variations in temperature, etc. Chapter III. treats of "Camping," and contains some useful hints regarding this (in many cases) valuable adjunct to a sojourn in the mountains. The remainder of the book is taken up with communications to the editor from physicians, clergymen, and others who have had personal experience in the woods. Among the medical contributors are Drs. Loomis and Leaming, of New York; Levick, of Philadelphia; and Ward, of Albany. A striking unanimity of opinion in favor of the climate of the Adirondacks for many forms of disease is observed in the correspondence. Indeed, a superabundant enthusiasm leads several of the contributors to draw rather heavily on the credulity of their readers. For example, the statement on page 48, by a distinguished Boston divine, to the effect that the water in some localities is so lucid that a newspaper might be read through eight or ten feet of it in a perfect calm! Barring these occasional overflows, the book is to be highly commended, and merits a careful perusal, not alone from invalids contemplating a change of climate, but from every progressive practitioner of medicine as well. The contributions of Drs. Loomis and Levick are especially worthy of attention. A map of the region would enhance the practical value of the book.

The Methods of Bacteriological Investigation. By Dr. Ferdinand Hueppe, Docent in Hygiene and Bacteriology in the Chemical Laboratory of R. Fresenius, at Wiesbaden. Translated by Herman M. Biggs, M.D., Instructor in the Carnegie Laboratory, and assistant to the Chair of Pathological Anatomy in Bellevue Hospital Medical College. Illustrated by thirty-one woodcuts. New York: D. Appleton & Co. 1886.

The study of bacteriology is one which at the present day is of exceeding importance, but which in this country has hitherto been pursued by but a very few even of the younger generation of physicians. One great cause of this neglect has been the want of a suitable manual of instruction in the method of bacteriological investigation. Another has been the lack of instructors and of institutions in which the rudiments at least of the science might be taught. The latter want has been supplied in a measure in the large medical centres, and now the former, without which the latter would be incomplete, has been met in a most satisfactory manner by the work before us. Dr. Hueppe needs no introduction to those who have any acquaintance with the literature, already so voluminous, of this new and fascinating branch of medical science. The work treats in a most thorough and comprehensive manner of the whole subject of bacteriological study, and includes a description of the different forms of bacteria, the manner of isolating them by culture, the methods of staining, etc. A brief notice is given of the process of inoculation for the determination of the etiological relation of bacterial growth to disease, and also of the methods of investigation employed to ascertain the presence of micro-organisms in the earth, air, and water. The translation is well made, and illustrations are inserted wherever they are necessary to make the text more clear. We can commend the book to all who desire to acquire a general knowledge of the subject of bacterial pathology, even though they may not have the opportunity or the inclination to study the question practically. To those who wish to have more than a mere theoretical knowledge of the subject, the manual will be found to be indispensable.

"One Hundred Doses for a Dollar," is the way a patent medicine heads its "ad." Man takes a dollar's worth. Then the undertaker comes along, and it costs the man one hundred dollars for one dose. Thus we see all things come around even in this old world, after all.—*Burdette.*

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 24, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. G. C. FREEBORN, from the Committee on Microscopy, reported that the tumor of the brain presented in behalf of a candidate at the last stated meeting was a *small, round-celled sarcoma.*

DR. H. MARION SIMS presented, in behalf of a candidate, a specimen of *dermoid cyst and carcinoma* in the same ovary, accompanied by a microscopic section.

DR. GEORGE F. SHRADY presented, in behalf of a candidate, specimens removed from the body of a child that died of *acute miliary tuberculosis.*

DR. T. MITCHELL PRUDDEN presented, in behalf of a candidate, a specimen of *intussusception.*

DR. L. WALDSTEIN presented a specimen which showed

STRANGULATION OF THE JEJUNUM BY A DIVERTICULUM.

The patient was admitted to the German Hospital with symptoms of perforative peritonitis. The autopsy revealed a loop of the jejunum cyanosed and filled with bloody liquid, constricted under a diverticulum from the ileum which had become adherent lower down as the result of an old inflammatory process. He had presented two similar specimens within a year.

Dr. Waldstein also presented a specimen which illustrated

ELONGATION AND ABNORMAL FIXATION OF THE VERMIFORM APPENDIX,

attended by perforative peritonitis. It was removed from the body of a child nine years of age, who died after an illness of five days. The specimen confirmed an opinion expressed at a former meeting, that fixation of the vermiform appendix in abnormal positions by adhesions was favorable to the development of typhlitis. In this specimen there was evidence of chronic inflammation involving the mucous membrane, followed by acute inflammation and perforation.

Dr. Waldstein also presented a specimen of

FIBROMA OF THE MESENTERY,

removed from the body of a woman thirty-one years of age, who was never specially sick, although anæmic in girlhood, whose menstruation was regular, painful in the beginning, and who was the mother of three children, all the labors being normal. In 1884 she aborted at the fourth or fifth month. Since the spring of 1885 she had suffered from constant pain in the abdomen, but it was especially severe after exertion. Since November last pain has occurred in paroxysms, extending to the small of the back, down the thighs, and, on account of vomiting, she supposed herself to be pregnant. Menstruation ceased. She also began to emaciate. The bowels were usually regular. Occasionally there was discomfort in urinating.

When admitted to the hospital, January 10, 1886, she was pale and somewhat emaciated, with a temperature of 99.3° F., and pulse of 100. In the median line, from the symphysis pubis to nearly the umbilicus, there was dulness on percussion, and pressure in this region elicited pain. A little to the right of the median line, when the patient was lying upon her right side, a tumor could be felt distinctly, which was adherent to the abdominal walls. The patient was anæsthetized, when it was found that the tumor could be easily moved over to the right side of the abdomen, but not to the left, and even up to the lower edge of the liver, while the uterus remained in its normal position, and the tumor had no connection with the ovary. The left kidney could be felt, but the right one could not be recognized. The tumor seemed to be ovoid in shape, and the diagnosis of movable kidney was made.

The patient died on January 22, 1886, with symptoms of perforative peritonitis.

The autopsy revealed a dilated and cyanosed small intestine, with bloody serum in the pelvis. To the right of the umbilicus there was an oval tumor, hard, and measuring twelve centimetres long, eleven wide, and ten thick, which carried the jejunum with it when moved; but on close examination it was found that it was situated between the folds of the mesentery, which accounted for its close proximity to the intestine. The vessels of the tumor were large and distended, and in several places there were extravasations of blood.

Microscopical examination of the tumor showed that it was a pure fibroma. There was no enlargement of the lymphatic glands.

DR. J. C. PETERS said that Dr. Alonzo Clark had reported a case of tumors connected with the intestines, which were decided to be adipose rather than fibrous; there were several, and some of them had become detached and were loose in the peritoneal cavity.

DR. MENDELSON asked Dr. Waldstein if the tumor he presented was a true fibroma, or was it a myo-fibroma? showing that it may have originated in the muscular coat of the intestine.

DR. WALDSTEIN replied that he examined carefully with reference to the presence of muscular tissue, but was unable to find any; and he also examined with reference to the condition of the lymphatic glands in the region of the tumor, but had no reason to suppose that it originated in this kind of tissue.

ABNORMALITY OF THE PLACENTA.

DR. H. J. BOLDT presented a placenta which showed an abnormality that he had been unable to find reported. There was a peculiar corrugation of the fetal surface leaving it 11 c.c. in diameter, while the maternal surface was 15 c.c. in diameter. The fetal side showed an unusual vascularity and a number of small cysts. On the margin of the fetal surface there was a hard rim from which the three layers of membrane sprang, and in the middle portion of it there was also a layer of apparently fibrous tissue which encircled that side of the organ. The cord exhibited the same varicosity seen upon the placenta, and a fold of the amnion had been thrown of and become attached to the cord at a point situated at a considerable distance from the placenta. The labor was normal, and the pregnancy one which followed immediately on recovery from an attack of septicæmia. The specimen was referred to the Committee on Microscopy.

Dr. Boldt also presented specimens taken from the body of a child five months old that died with symptoms of

TUBERCULAR MENINGITIS.

It was said to have been well up to March 6th, with the exception of a suppurating eczema behind the ears, which then ceased to suppurate and healed quickly. The symptoms were such as at first to lead both the attending physician and Dr. Boldt to the diagnosis of bronchial catarrh. Afterward the child was found rather sluggish and having had a number of attacks of vomiting and some diarrhœa. Dr. Boldt made the diagnosis of tubercular meningitis, which was confirmed by Dr. Janeway. At no time did the child's temperature rise more than one degree above the normal.

At the autopsy the pia mater was found injected with blood, but free from tubercles. The lateral ventricles were distended with serous fluid, and their walls were soft, as was also the entire central portion of the brain. At the base of the brain and in the fissure of Sylvius only were tubercles found. The lungs showed only a few tubercles. The bronchial glands were enlarged, as also

were the mesenteric somewhat. The other organs were normal.

Dr. Peters asked Dr. Boldt whether the drying up of the suppurating processes had anything to do with the internal disease, or was it rather that the severity of the internal disease had caused it to disappear.

Dr. Boldt thought that the latter was more probable than the former.

Dr. T. Mitchell Prudden presented a specimen of

ANEURISM OF THE HEART, WITH CHRONIC ENDOCARDITIS AND MYOCARDITIS FROM CHRONIC INFLAMMATION OF THE CORONARY ARTERIES.

He was indebted for the clinical history of the case to Dr. Lambert, of Bellevue Hospital.

The patient was a married German cigar-maker, aged fifty-five. On admission he was unable to talk, but it was learned by signs that he had been sick for two months; in what way he could not explain. Two days before admission he was suddenly attacked with aphasia and paralysis of the right arm and leg. During the twenty-four hours preceding his admission to hospital his aphasia and paralysis had somewhat diminished.

On admission, March 20th, the temperature was 99° F. There was paralysis of the right side of the face, and partial paralysis of the right arm and leg. He could walk with assistance, but could not use the hand at all. He could feebly move the muscles controlling the elbow and wrist. His articulation was thick, and there were many words which he could not utter. He could write backward with his left hand (mirror-writing). He had well-marked Cheyne-Stokes respiration. Urine: Amber-colored; acid; sp. gr. 1026; fifteen per cent. albumin.

Physical examination.—Heart: A double murmur of the usual quality of a friction sound was heard at the apex. Apex beat displaced or diffuse. Heart's action regular. Lungs: Flat over both sides; behind there were subcrepitant râles. Tongue déviates to right. On the following day there were four loose movements of the bowels, and the heart-beats were feebler. He died on the third day after admission.

Autopsy.—Twelve hours after death. Brain: Meninges and brain-substance very œdematous. Patches of atheroma in all the large arteries at the base, particularly those of the middle cerebral and basilar. There was no hemorrhage, and no evidence of embolus. The abdominal visceræ were bound together by abundant loose old adhesions. About six hundred cubic centimetres of fluid in each pleural cavity. Pericardial sac contained about fifty cubic centimetres of fluid. The heart was large and extended toward the left. Both ventricles were widely dilated and their walls considerably hypertrophied. Both auricles were dilated. The pulmonary and tricuspid valves were slightly thickened. The aortic and mitral valves were somewhat thickened, and the latter presented numerous large patches of fatty degeneration. The lower right anterior third of the left ventricle was pouched outward about three centimetres, forming a broad ovoidal pocket about ten centimetres long and four centimetres wide. The wall of this pouch—*i.e.*, the heart-wall—at the thinnest point, which was just to the right of the apex, was about two millimetres thick, and composed almost entirely of dense connective tissue, which enclosed a few atrophied bundles of muscle-fibre. Over about one-third of the pouch the wall was nearly five millimetres in thickness, and from this it gradually thickened toward the sides, until it merged into the hypertrophied ventricle-wall, which, in its thickest part, measured about twenty millimetres. The endocardium lining of this aneurismal pouch was much thickened, and in places fatty and calcified. There were no adherent clots in the pouch. The endocardium of the left ventricle was everywhere moderately thickened. A large red clot lay against the papillary muscles in the cavity of the ventricle, and very voluminous red and white clots were entangled among the muscles. These clots showed very well ribs and striæ upon their surfaces, caused by the heart's movement. The larger trunks of the coronary arteries showed numerous layers and smaller patches of chronic endarteritis, some of which had encroached considerably upon the lumen of the vessels. This was most marked in the trunk leading to the pouched region. The aorta throughout its entire extent was the seat of numerous larger and smaller patches of fatty degeneration and atheroma. The radial artery was also thickened. Lungs: Slight adhesions of right lung behind. Both were congested and œdematous. Spleen: Slightly enlarged; very dark in color, and hard. Kidneys: Slightly enlarged; capsule free. Kidney-substance very dark red in color, dense, and hard. Liver: Showed dilatation of the central veins of the lobules. Microscopically, the kidneys showed the lesions of chronic congestion. There was no thickening of the walls of the blood-vessels.

The President presented a mounted specimen, prepared by Dr. J. S. Thatcher, from an

INFLAMED MOLE OF THE FACE,

which he removed by operation from a lady thirty-four years of age, the mother of two children, the last six or eight months old, that had scratched and irritated this growth until there was marked thickening of the skin about it, and of the tissues underlying it, and the patient became alarmed because of the existence of cancer in the family—an aunt and grandmother having died of that disease. Dr. Wyeth removed the nodule, with the skin to the distance of half an inch surrounding it, and carried the incision down to the lower jaw and entered the corner of the mouth. Microscopical examination showed the thickened tissue was made up largely of embryonic tissue with giant-cells belonging to the benign process of inflammation. The surgical point in the case was, that such benign growths under irritation might become malignant.

The President also presented a specimen of

MYXOMA OF THE BREAST,

removed from a patient thirty-eight years of age, who had never been pregnant. The tumor had a history of six months' duration, and began in the inferior portion of the left breast. Of late it had been exceedingly painful. It was an inch by an inch and a half in area. The entire breast was removed, and the axillary space was explored, although there was no external evidence of enlargement of the axillary glands. The surgical point was, that with all tumors of the breast, whether malignant or not, of six months' duration, exploration of the axilla should be made to determine whether or not there exists any secondary affection of the glands, and if so, to remove them at once.

The President also presented a mounted specimen of

FIBRO-MYOMA,

removed from the left side of the tendo Achillis. It was of two years' duration, had been intensely painful, and was about as large as the end of his little finger. No nerve-filaments were detected in the mass.

Dr. Carpenter asked Dr. Wyeth if he still adhered to his former statement that there was no sarcoma without giant-cells, and if so, could it be reasonably inferred that the presence of giant-cells in a growth of the character just reported indicated the presence of sarcoma.

Dr. Wyeth said that when he made the statement in the Society, a year or so ago, he based it upon the authority of Cornil and Ranvier. He would not, because of the presence of giant-cells, regard a specimen as necessarily sarcomatous.

Dr. Carpenter remarked that he did not accept either proposition.

Dr. Prudden said that the statement that sarcoma did not occur without giant-cells could not be sustained.

Dr. Waldstein had very often found giant-cells in tissues which were in the state of chronic inflammation, and also had frequently found them where they were evi-

dently developed in connection with degeneration of striated muscle-fibres; also associated with diseased glandular structure, where they possessed no special significance. In the growth excised by Dr. Wyeth both striated muscle-fibres and sebaceous glands were involved.

At the stated meeting, January 13th, Dr. A. Jacobi presented, in behalf of Dr. Willy Meyer, a specimen of

SUPERNUMERARY MAMMA,

with the following history, which, on account of the rarity of the specimen, the Society voted that it be printed with proceedings, together with the discussion.

"On October 6th of last year, I extirpated from the left axilla of a woman, twenty-seven years of age, a tumor, the clinical and microscopical appearance of which were of some interest.

"Mrs. Ph. F——, of this city, a healthy though delicate-looking person, passed three pregnancies. During the five months before her last confinement she noticed a small tumor in her left axilla, which gave rise to a slight pain now and then, but caused no other inconvenience. It grew slowly but steadily. In the middle of September she was confined of a healthy baby. A few days afterward she found a small tumor of the size of a walnut in her left breast, with more pain than that ever caused by the one in the left axilla. This gave her a good deal of mental trouble, as her mother had died of cancer of the breast.

"As soon as she was able to walk, she therefore consulted Dr. A. Jacobi, who did not think much of the last-mentioned tumor, but advised the extirpation of that in the left axilla, and sent her to me for that purpose.

"On examination I found in the axilla an oval, rather hard, flat tumor, with an uneven surface, firmly attached to, and movable with, the skin, which was folded over it, the folds running in all directions. By palpation it consisted apparently of several connected parts of an acinous structure, the touch of it being very similar to that of a lipoma. Pressure not painful. A broad but thin and smooth pedicle (fascia) led to the depth of the axillary cavity. No round strings could be felt in it. Around it were many swollen, soft axillary glands. A little above the exterior upper quadrant of the left breast was the above-mentioned tumor, apparently a small so called 'mamma aberrata' seu 'accessoria.'

"According to this condition, it seemed rather impossible to make a positive diagnosis.

"The diagnosis of lipoma was excluded, on the ground that the tumor was too hard and too firmly attached to the 'folded' skin, and had grown too quick to its present size, although it was possible that the patient did not pay any attention to it when in its first development.

"For a fibro-sarcoma of the skin the tumor's fat-development under the skin, and the unchanged though folded surface of it, was strange.

"For a 'cancer' of the skin the patient seemed too young.

"The most probable diagnosis was 'supernumerary mamma' (aberrata). But then it seemed rather curious that this scattered tissue had displayed its physiological character only in the course of the third pregnancy.

"On account of the uncertainty of the diagnosis, and the anxiety of the patient, the removal of the tumor seemed most advisable.

"On October 6th I performed the operation, which required a thorough preparation of the whole axillary cavity—as the broad pedicle was a continuance of the deep pectoral fascia—and consisted in the removal of all the contents of the cavity and a portion of the skin. The diagnosis, supposed to be the right one, became evident in the course of the operation, when, by a superficial incision into the tumor, a white fluid mixed with serum (milk) escaped. (Of course it had to be proved by the microscope that it was not 'cancer'-juice.)

"The operation, performed antiseptically, had the usual good results. The wound healed by first intention, under the first dressing, up to the spot where a small drainage-tube led to the depth of the axilla. The tube was removed at the first change of the dressing (fifth day post operat.), and union was perfect ten days later. During this time the smaller node in the left breast had almost entirely disappeared, as I had assured the patient it would do.

"*Microscopical appearance.*—Dr. L. Waldstein was kind enough to examine the tumor and the glands microscopically. The tumor was evidently an adenoma, as it showed plainly acini and milk-ducts such as are seen in the mammary glands. The epithelial cells covering the inner surface of the acini and the ducts, as well as their ramifications, were more or less enlarged and showed a granulated protoplasm (production of milk). In many spots they were very numerous, reminding one of the nests of epithelial cells in cancer. But these nests evidently did not send the characteristic prolongations into the adjoining connective tissue; they only filled the lumen of the ducts. Besides, there was not the more or less dense infiltration of the connective tissue with smaller round cells, as is usually found in cancer. Nevertheless it seemed necessary, to clear up this part of the diagnosis, to examine the lymphatic glands which had been extirpated also. These showed the signs of the irritation only originating from the lactation process—'enlarged follicles and dilatations of the lymph-sinuses.' The epithelial cells which were discovered here and there showed the same granulated protoplasma as those seen in the tumor, and were carried away from there by the lymph-vessels.

"After all this, it is evident that the tumor represented an 'adenoma' consisting of normal breast-tissue. It belongs to the class of the 'supernumerary mammary glands,' as they are not so very infrequently found—but with a mammilla—on the lower and inner side of the normal mamma or in the axilla, more rarely in the median line of the abdomen, on the acromion, on the thigh.

"Certainly removal of the tumor was indicated, even with this benignant character. For it is a well-known fact that cancer of the breast likes to take its origin from these 'partes aberratæ,' a circumstance still more important in regard of the hereditary predisposition existing. Proper attention is therefore to be paid in this case to the above-mentioned, now scarcely observable, smaller tumor in the left breast. Should it grow in later years, its early removal is advisable."

Dr. A. G. Gerster remarked that supernumerary mammæ in the vicinity of the axillary cavity were more common than was usually believed, and during lactation they can be felt very frequently, especially in thin women. They are detached bodies which become distended, but may be connected with the mammary gland by lacteal ducts which terminate in a nipple. As many as four or five of these bodies have been found in the axillary cavity with a common excretory duct.

Another fact is that these detached bodies of mammary tissue sometimes become the seat of carcinoma. Dr. Waldstein had examined a specimen for him, and found that the carcinomatous growth commenced in one of these bodies situated close to the axillary cavity. Under such circumstances, of course, the mammary gland proper becomes involved first in the part nearest to the detached body.

Dr. Jacobi said that Dr. Gerster's remarks made the case which he had presented still more remarkable. First, the woman was rather thin; second, she did not have a large mamma; and, third, she had not noticed anything at all after the first and second pregnancies, and it was only in the third that this tumor made its appearance.

Dr. Waldstein remarked that supernumerary mammæ were not at all rare, and were found over the thorax, but they nearly always had nipples of their own. It seemed remarkable in the specimen presented by Dr. Jacobi

that there was no such excretory duct connected with it. In addition to what Dr. Jacobi had said, he would take the liberty of adding that some of the axillary glands were also examined in this case, and they showed simple intumescence; besides, it was interesting to notice that colostrum was found in these enlarged glands. The connection between the supernumerary gland and the mammary gland proper could not be found, which made it additionally interesting, because the milk was obliged to seek an outlet through the lymphatic system.

Correspondence.

DETERMINATION OF THE SEXES.

To the Editor of The Medical Record.

Sir: Having read much that has been written of late years in the current medical literature on the "Influences that Determine the Sex of Infants," I have reached some conclusions which may, perhaps, merit discussion in your journal.

The contribution of Dr. Charles Ambrook, in The Medical Record for January 16, 1886, is particularly interesting, as it attempts a solution of the question by references to the lower organisms. Observations on the mating of cattle, dogs, rabbits, and other domesticated animals, though carefully tabulated for many years, have added nothing to our knowledge on the subject. To eliminate all disturbing factors from the question, we must commence by a study of the lower organisms, where growth and reproduction are the sole functions of existence, applying our deductions afterward to the condition influencing the higher forms, for our theory must be broad enough to cover every form of life.

From a study of the lower organisms, as well as from the rudimentary portions of sexual organs now possessed by the higher animals, we are led to consider unisexual organisms to have been preceded by and to be descended from a type possessing both male and female sexual organs in a perfect condition, as is customary with many forms at the present day.

In the long process of evolution many species gained a decided advantage in the struggle for existence, in the disuse or loss of the organs of one sex, permitting the individuals of either sex to concentrate their energies in one direction; but, unlike Dr. Ambrook, I conclude that those which lost the ability for reproduction have suffered a degradation of type rather than an advance.

The superiority of the female, in a sexual or physiological point of view, seems to me evident, when we consider the necessity of reproduction to the continued existence of the species.

For instance, among plants which are sexually separate, that one is far higher in grade which reproduces its seed and fruit, than that which merely liberates its myriads of pollen grains to drift at the mercy of the breeze, though in their present stage of development each is necessary to the other. Among most insects, too, the life of the female is practically the life of the species, the male being little more than a perambulating spermatozoa holder, with just enough intelligence to enable it to seek its partner. That man and many male animals have reached a higher muscular and nervous development than the female is owing to their relinquishment of this highest and most vital function, reproduction, and consequently their liberty to direct their energies into other channels, the most important of which was probably the ability to struggle with rival males for the possession of the female. The individual advantages they have gained in freedom from the great vital drain and exhaustion of child-bearing have been more than compensated by loss of function. They have, as it were, *parted with their birthright* for personal independence. Although man, by his inheritance of superior mental and physical characteristics, is still able to produce a strong impression upon the embryo, it must be acknowledged that he is, in a sense, childless, and that in a natural arrangement of the family the children would derive their names as well as blood from the mother.

The law, as I would interpret it, is this: The ovum only is essential to reproduction. The spermatozoid is primarily non-essential—has no direct influence on the sex, nor is it always necessary to the life of the germ. This is a bold statement, which needs to be supported by strong arguments. I will instance several, though the list may be indefinitely extended.

Among many species of insects the females unite very irregularly with the males. The aphis can propagate a whole season, during sixteen generations, without the presence of the male. Their ova not only develop into adult insects without the aid of the spermatozoid, but, what is more uncommon, they become perfect females, filled with ova, which, in their turn, produce perfect females. On the approach of winter some cause—diminishing temperature or supply of food, diminishing vitality of the germ through the long chain of generations, perhaps all these combined, result in this: that the ova are not all capable of developing into females, but take the opposite sex; the necessary consequence of the failure of one set of organs or functions determining the flow of blood and nutrition to the other.

The remaining males and females then pair, and the next batch of eggs are laid, to hatch out the ensuing spring, and with renewed vitality to repeat the generative circuit.

In like manner the queen bee can lay ova which will develop without ever meeting the drone; but, unlike those of the aphis, all such progeny are male. It is only after uniting with the drone that she can produce female ova, and she can then produce males or females at will, by admitting or excluding the spermatozoid to the ovum.

Would Dr. Ambrook insist that the female alone can produce ova of a higher type (male) than she can with the assistance of the drone? The contrary statement is the only possible solution of the question. Or would any one argue that the spermatozoid supplied the sexual element? That is the way the boy reasoned when he defined salt as "a mineral that causes meat to stink by not putting any on." On the contrary, the conclusion is so plain that it is my only excuse for placing the subject before you, having never seen these views advocated and being unable to see how they have been overlooked.

The ovum of the queen bee was perfect; it subdivided, absorbed nutriment, and developed into the adult insect, only it lacked just that modicum of vitality to determine the flow of blood or nutrition to the ovaries, and to enable it to take its place in the female line and carry on the process of reproduction. Hence, of its two sexual possibilities, one, the most important, failed; and the second went on to development in its turn. The new insect can never reproduce itself, but through its spermatozoa is still capable of assisting another and more favored individual. Had the spermatozoid met that ripe ovum at the proper moment, its contents, rich in nitrogen, carbon, and that most stimulating of all cell-food, phosphorus, would have been absorbed into the ovum and supplied just that energy or vitality which before was lacking to produce the female. Further, as the bees need but one female in the nest, the interests of the family are best subserved by a modification of the remaining female ova into *workers*.

This is effected by supplying the young larvæ with a scant diet, which stunts the whole sexual apparatus, besides modifying the body and external organs of the bee in a wonderful manner.

In these cases the attempt to depress the vitality of the embryo was begun too late to affect the male organs, and can only prevent the full development of those of the female.

Mrs. Mary Treat, in studying the habits of several spe-

cies of butterflies at Palatka, Fla., a few years since, made some interesting discoveries in this connection. Of a large number of larvæ which she confined and fed profusely, almost all became females; while another batch selected at the same time and under the same conditions, but sparingly fed, almost all developed into males. Obviously the circumstances which in these experiments determined the sex were such as more or less interfered with the nutrition of the organism, and, acting while the sexual bias was undecided, turned the scale in a certain direction. Such investigations, conducted especially among insects, would throw a flood of light on the various causes which direct the flow of sexual energy; but it is probable that in most cases, particularly in higher organisms, the sexual bias is determined at the moment the ovum and spermatozoid unite, and long before the organism can be subjected to any influence outside the egg.

In applying my conclusions to animals of the higher types, it appears probable that their ova possess much less vitality; the size and complexity of the organism and its varied environment withdrawing much of the vital energies to other functions than the reproductive. Hence their ova invariably require the stimulus of the spermatozoid, without which they soon die, their sex in turn depending on the degree of vitality remaining in the ovum after its combination with the spermatozoid. I believe that in all cases those ova endowed with an excess of energy become female, and *vice versa*. At the very beginning of the separate existence of the ovum, when it is still but a single cell, the action of the spermatozoid upon it is probably that of a highly stimulant food increasing its capacity for future growth; yet, as this food undergoes no digestive change, but is bodily absorbed and mingles with the previous contents of the cell, it exercises an immense influence on the future being, second only to the original elements. Hence the progeny of a female resemble in some respects the male parent, though many, and in fact most, of its male characteristics may be inherited from its maternal grandfather. In defining a male we can hardly consider his masculine qualities as due to inheritance from his male parent; they are rather the sum of his inheritance from all his ancestry, back to the first separation of the sexes.

The female, then, is the type of the species—she is, I might almost say, the species itself; the male is only that form or modification of the species developed by the difference in his life and habits.

Holding the views I have here presented, the influence of natural selection in determining the relative proportions of the two sexes is easily understood.

When the vitality of the germ falls below a certain point, the resulting organism is a male whose sexual organs furnish the material necessary to raise the standard again above that point. In some insects, as the aphis mentioned, that influence lasts for generations; in others, as the bees, it affects only the sex of the particular ovum concerned, while in the higher animals the standard of vitality of the ovum has fallen to an extent which requires the presence of the male element in all cases, any further depreciation being resisted by the slight excess in the number of males.

Thus the internal forces constantly endeavor to correct the influences of the external.

In regard to methods of controlling sex, the possibility of devising anything practicable is very doubtful, especially in the human subject. The ovaries and their contents are developed at an early period of fœtal life, and the ova themselves appear to be very little affected by subsequent diseases of other portions of the body.

For this reason, women suffering with severe diseases, as consumption, may bear children of either sex unaffected, except as to want of nutrition while *in utero*. The testes are not so free from special disease, nor the spermatozoa so unaffected by the general health of the body, because an interference with the general health may interrupt their elaboration in countless millions in the testicle to a much greater extent than the ripening of a single ovum.

Nevertheless they do enjoy a remarkable immunity from disease in spite of that fact.

Any attempt at artificial selection will be likely to prove fruitless, since persons of superior muscular and mental development may be, for that reason, very poorly developed sexually.

A long list of exceptionally brilliant men might be given who have left no descendants, and not a few noted women, but the latter sex are not so productive in individuals of extraordinary qualities.

Women of strong mental and so-called masculine qualities are generally unfruitful.

Among animals, one fact has been noted which may have some influence on the sex. As they only mate at regular periods, the plan of influencing the ovum by an earlier or later fecundation has been attempted, and, as claimed, with some success, but the results are not yet on a sufficiently large scale to be reliable. A large breeder of dogs asserts that when the bitch has been served at the commencement of heat, she is more apt to produce females; if fecundation is delayed till near the end of heat, males. This is quite possible, and even probable, considering that an early impregnation of the ovum should insure its highest grade of vitality, and that, the favorable moment passed, its subsequent progress is toward disintegration and death.

Even this hint, valuable as it may prove to breeders of stock, is of no use to the human race, who unite more frequently, and in disregard of periods of ovulation; and even if this were not a fact, the meeting of the spermatozoa and ova in the Fallopian mazes is subject to so many uncertainties, and varied by such an immense personal equation, that experiment would probably be useless.

I cannot close this already too lengthy article without referring to a curious bearing of natural law upon human, or, may be, unnatural, laws. In man and many animals the embryo is known to exert in its turn a most extraordinary influence on the mother. Stock-raisers are aware that a domestic animal of pure breed, if once mated with a male of another breed, can never be depended on afterward to breed true. If this be a natural law, as is now generally admitted, the eldest child is more especially descended from the female parent than any subsequent offspring. Consequently the English law of primogeniture, while it aims to secure the inheritance steadily in the nearest male descendant, is necessarily an ingenious device for transferring the succession at each generation to an heir more especially descended, through the female, from another family. Where the mother happens to be an eldest daughter, her eldest child would be most nearly related to the *family of its maternal grandmother*. This is not a physiological enigma, but an inevitable corollary of natural laws.

ALBERT C. BEALE,
Hospital Steward, U.S.A.

ROCK ISLAND ARSENAL, ILL.

"CONTROLLING SEX IN GENERATION."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: My attention was promptly called to your kindly notice of my book, with above title, in THE MEDICAL RECORD of December 26th last, by a medical friend of your city, and I ought sooner to have made some grateful acknowledgment to you for it. But expecting that your review would draw out some objections, or at least some inquiries from others, I deferred the thanks till I could see what these might require, and make one communication suffice for both purposes.

My home is in, or near, New York City, but I am spending the winter in this Southern resort, where I had not a ready access to the numbers of THE MEDICAL RECORD as they came out, which must be my excuse for this delay.

The difficulty which all new ideas have is to get a hearing. They are generally regarded as intruders and denied even a hearing. As Professor Tyndall says, "A great theory has never been accepted without opposition; . . . all have to push their way through conflict to victory." And when, after long years of experiment and research, a man succeeds in evolving a new truth that he knows will be of high value to his fellow-men, he is yet far off from the ultimate success which utilizes his work. Many a meritorious invention is strangled in its birth by the carping critics who "know it will not work."

When, therefore, as in your case with my book, a helping hand is held out by a stranger, and even in the face of his preconceived ideas the new idea is recognized as meritorious and worthy of being considered, it is an encouragement that calls for thanks in return, and please, sir, accept mine for this service.

It is over thirty years since the investigation of this abstruse subject first pressed itself upon my attention, and nearly twenty years since the first rough manuscript of my book was written. My book was, therefore, no hasty publication, and I have such confidence in the truth of the main theory, that I am emboldened to say you will never have occasion to regret the favorable notice you gave of the book.

In saying this I am not blind to the fact that much of the collateral matter, at least, is yet not proven to the extent that the world will accept it as positive. When, after long years of investigation, one becomes satisfied in his own mind that he has elaborated a true theory of the action of one of nature's many mysterious laws, if he would not let his life-work die with him, and all his labor be fruitless, he must put it forth, as it were, tentatively, with such confirmations and support as he has been able within his lifetime to gather. The theory then appeals to others interested in the subject, who may be investigating in the same or a different channel, for further confirmation or for refutation. Through the wide jurisdiction of such a tribunal some things in my book may have to be modified, but the general principle therein enunciated —that the stronger sexual energy of one parent at the moment of impregnation will control the sex of the offspring, throwing it to the other sex, will, I am sure, abide and stand. This principle embraces a wise and beneficent biological law, of universal application in the generation of all organic beings by sex, through which the equilibrium of the sexes in numbers is everywhere maintained. For, as soon as either sex, through unfavorable conditions, is so weakened that the offspring tends to one side, these offspring will have been so re-inforced from the strength of the stronger parent that they in their turn will produce offspring of the opposite sex, and thus the equilibrium will tend to be restored.

There is no such general law found in any other theory of sex advanced; in fact, the equilibrium is left entirely to chance.

Further, my theory will properly explain and embrace many, if not all the other, theories or conclusions of writers on the subject. For example:

Carl Dühring, in a series of articles in *The Jenaische Zeitschrift* (favorably reviewed by Professor W. K. Brooks, of Johns Hopkins University, in *The Popular Science Monthly* some months back), gives as a positive fact, from statistics, that "as the mares increased in number put to the same stallion, there were more male colts," showing that as the male's sexual vigor was weakened by more frequent service, the sexual influence of the female was oftener prepotent to the production of males. These statistics ran up to over one hundred thousand colts. Dühring further concludes from his statistics, that "a favorable environment causes an excess of female births, and is unfavorable to male births." His statistics show that he means by "favorable environment," city life, where is found more wealth and luxury—though I would deem this an unfavorable environment for the vitality of the human race. My book explains this on my theory, that the malign influences of city life bear more especially on women, reducing their sexual vigor to a greater extent than they do that of the other sex; hence their ability to conceive males is reduced.

The theory that sex is determined by the age of the ovum when fecundated, that in the early, or, as called, immature state, a female is generated, and later, in its maturity, a male, finds many advocates; and some have thought from their experiments it nearly, or quite, solved the mystery, though it would fail at times. At one period of my investigations I held a view somewhat kindred to this, but finding it incomplete, discarded it. And yet, if the reader will reflect, he will see it is but a phase of the principle I present. The conditions surrounding the production of the ovum tend to excite the sexual desire, which naturally has its first feeble impulse and increases gradually in intensity as the period of heat progresses, till the ovum is impregnated, or is lost. If impregnation occurs early in this period there is likely to be less desire and female offspring the result; if late along a greater desire with a better chance for male offspring. But it is obvious that a strong female in the first or weaker stage may overbalance a weak male; and a weak female, in the later or stronger stage, be overborne by a stronger male, so that contrary results will be produced.

It is unnecessary to multiply these comparisons, they are quite obvious to those who seek; and I therefore suggest to your readers who may be unwilling to accept this biological law of mine as positively true, that they try it as a working hypothesis for a time and see if they will not be satisfied and really astonished at the number of peculiar cases it will fit; as an example, that of the conception of a daughter mentioned in THE MEDICAL RECORD of February 13th, p. 186, second column.

And now in answer to the objectors. One, January 16th, p. 81, remarks:

(*a*) "It is probable that energy will result in a greater effect than listlessness . . . but how can it be proven that this energy is transmitted to the spermatozoa or ovule?"

Ans. By the results of sex different from the parent of stronger vitality, where all the children are of one sex.

(*b*) "None so capable as physicians to testify on this subject."

Ans. Very probable. Though they do not likely propagate more children than other men through which the parental conditions at conception can be most accurately known, they have better opportunities to observe these conditions in the wives of others, if they give it their attention.

(*c*) "Thinks sex is a degree or phase of development."

Ans. Quite possible, but not probable, that an incipient female develops into a male, or the reverse.

(*d*) "In bees the same egg, according to environment, develops into a neuter gender (the worker), or into a female (the queen), or into a male (the drone)."

Ans. All wrong. The so-called neuter or worker is a female, the analogue of a girl before puberty. The development of the procreative organs is permanently arrested by deprivation of proper food, which, in case of need for a queen, is supplied to the larva, not to the egg. Instances are known of the worker occasionally laying a few eggs. The male larva cannot be developed into a female, nor the female larva into a male.

(*e*) "Some lower orders (frogs) show signs of an ovary and a testes in same animal, and this a proof that the testes are a more highly developed, not a differentiated tissue."

Ans. Not a proof of a more highly, but of a different, development, as I treat of in my book. All men have paps, but this is no sort of proof that they could at any stage of existence have further developed into females.

(*f*) "Regards an excess of females in a family as indicating the physical degeneracy of the family." Instances the British peerage as showing this.

Ans. As the parents are from different families, have both families degenerated when the female offspring are in excess? I show that this condition indicates a weakened mother, or a father too ardent; and that it may run to the extent, on the mother's side, of a degeneration. If the degeneracy is on the father's side alone, boys will be born, but they will not have strong vitality, and likely die early.

(*g*) "It is a fact that a long time can pass before the wandering spermatozoa meets its shipmate" (the ovum), from which an inference that "sexual excitement at the time these were launched cannot determine the sex."

Ans. Even admitting a long time can pass (which I doubt, as conception occurring in mid-menstrual periods is no proof), the *vis vitæ* with which the male and female products were separately started would inhere in each at their meeting, and the same results would follow as if the junction was immediate.

(*h*) "The present summit of sexual development seems to be a male."

Ans. A woman would doubt that, as would the man himself, when satisfied that his three boys are due to their mother's vigor rather than to his. Thomas Meehan, of Germantown, State Botanist of Pennsylvania, a long-time observer in the field of sexual development in plant life, says: "In dicœcious plants the more vigorous shoots produce the females, the less vigorous the males," indicating that the female is the highest development, or at least the one which nature takes most care to perfect.

In reply to the objector in No. 795, January 30, 1886, p. 139 of THE RECORD, I remark, I have no experience with such abnormal cases as he presents, of women conceiving without any sexual desire. There is a general disposition in the sex to conceal this desire, because men, while vaunting their own sexual energy, condemn its exhibition in women. The most I have met in this way is the not infrequent excuse of unmarried women for having an illegitimate child, that conception occurred while they were asleep and unconscious. I never knew them to find many of their own sex, who had been wives and mothers, to believe them. However this may be, any repression of the exercise of this function in a healthy woman, whether through disinclination, prudery, or fear of pain from malformation, would add to the power when conception did occur, and thus operate to produce males, on the same principle suggested in my book, that a too frequent use of the sexual organism by women, through its weakening effect, tends to the conception of females.

In the communication "Women and Bees," February 13th, p. 195, there are only three points the writer makes against my theory, and these clearly show she never read the book. These are:

(*a*) "Doubts of there being any locality where more girls are born than boys."

Ans. Read the statistics in my book and be convinced. The New York records of births are very defective, and mostly record the foreign born, as I have shown. Instead of 30,030 births, there must have been, according to all ordinary rules of proportion from vital statistics, fully 50,000. There were 35,696 deaths; the increase of population per annum, aside from immigration, is two to three per cent., and the births should be at least 65,000 to make the annual increase of population *two* per cent. This rate would double the population in fifty years, while it is held to double by births over deaths in thirty-three years.

(*b*) A deduction that because I say "the more sickly the wife, the more debilitated the children," I "make female and debilitated synonymous terms."

Ans. My proposition is so self-evident that it cannot be doubted, but the correspondent's deduction is not a logical one. There is no foundation for it.

(*c*) That I "have not realized that it is not deficient passion, but deficient breathing-room, that cripples (kills?) boys. The nourishment fails . . . because her blood cannot enrich the milk that is made."

Ans. This is precisely what I have realized and teach. First, that a lack of vital power in the wife, found in certain environments, makes her often deficient in the sexual power, from which she is less able to conceive boys; and second, that, from the same lack of vital power in her, the boys she does conceive cannot be properly nourished after they are born, while the girls, with their ability to passively endure privation, survive on the inferior pabulum.

SAMUEL HOLCH TEERY.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 4, to April 10, 1886.

HARTSUFF, ALBERT, Major and Surgeon. Granted leave of absence for fifteen days. S. O. 71, Department of the East, April 7, 1886.

MCELDERRY, HENRY, Major and Surgeon, U.S.A. Ordered for duty as Post Surgeon, Fort Wayne, Mich. S. O. 69, Department of the East, April 2, 1886.

MERRILL, JAMES C., Captain and Assistant Surgeon. Granted leave of absence for three months. S. O. 81, A. G. O., April 7, 1886.

BIART, VICTOR, Captain and Assistant Surgeon. Sick leave of absence still further extended one year on account of sickness. S. O. 79, A. G. O., April 5, 1886.

BIRMINGHAM, H. P., Captain and Assistant Surgeon. (Camp Grant, New York City), temporarily assigned to duty at Fort Columbus, New York Harbor. S. O. 72, Department of the East, April 8, 1886.

LAUDERDALE, JOHN V., Captain and Assistant Surgeon. From the Department of Dakota to the Department of Texas. S. O. 79, A. G. O., April 5, 1886.

ADAIR, GEORGE W., Captain and Assistant Surgeon. From the Department of Dakota to the Department of the East. S. O. 79, A. G. O., April 5, 1886.

FINLEY, JAMES A., Captain and Assistant Surgeon. From the Department of Texas to the Department of Dakota. S. O. 79, A. G. O., April 5, 1886.

KILBOURNE, H. S., Captain and Assistant Surgeon. From the Department of Dakota to the Department of Columbia. S. O. 79, A. G. O., April 5, 1886.

GARDNER, E. F., Captain and Assistant Surgeon. From the Department of Columbia to the Department of the East. S. O. 79, A. G. O., April 5, 1886.

GRAY, WILLIAM W., Captain and Assistant Surgeon. From the Department of the East to the Department of Dakota. S. O. 79, A. G. O., April 5, 1886.

BANISTER, J. M., Captain and Assistant Surgeon. From the Department of the East (upon the expiration of his present leave of absence) to the Department of Columbia. S. O. 79, A. G. O., April 5, 1886.

CARTER, E. C., First Lieutenant and Assistant Surgeon. From the Department of Arizona to Columbus Barracks, Ohio. S. O. 79, A. G. O., April 5, 1886.

JOHNSON, R. W., First Lieutenant and Assistant Surgeon. From the Department of Dakota to the Department of the East. S. O. 79, A. G. O., April 5, 1886.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. From the Department of Columbia to the Department of Dakota. S. O. 79, A. G. O., April 5, 1886.

ROBERTSON, R. L., Assistant Surgeon. On expiration of his present leave of absence will be relieved from duty in the Department of Texas and will report in person to Commanding General of the Department of Dakota for assignment to duty. S. O. 78, Department of Dakota, April 3, 1886.

Official List of Changes in the Medical Corps of the U. S. Navy during the week ending April 10, 1886.

DRAKE, N. H., Passed Assistant Surgeon. Detached from duty at Naval Hospital, Philadelphia, Pa., and ordered to duty at Naval Hospital, Brooklyn, N. Y.

FITTS, H. B., Passed Assistant Surgeon. Detached from duty at Naval Hospital, Brooklyn, N. Y., and ordered to duty at Naval Hospital, Philadelphia, Pa.

ANDERSON, FRANK, Passed Assistant Surgeon. Detached from Naval Laboratory, New York, and granted six months' leave from May 1, 1886, with the privilege of going abroad.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 10, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
April 10, 1886.....	5	8	40	2	16	60	4	0
Deaths.								
April 10, 1886.....	0	1	9	2	3	19	1	0

PARANOIA is the term adopted by German alienists, and gradually being introduced into this country, as a substitute for "*Primare Verrucktheit*" and "primary monomania."

WYOMING TERRITORY AS A PLACE FOR PRACTICE.—A physician living in Wyoming Territory writes, asking us about the West Coast of Mexico as a place for practice. He says: "We have one physician to every two hundred inhabitants in this place. Business of all kinds, for the present at least, is suspended, owing to the overproduction of lumber and coal, the staple products. I have been here two years, and am just barely making a small living for my family." We cannot give our correspondent definite information regarding Mexico. He had better write to the United States Consul.

"FACTS FOR THOUGHTFUL CHRISTIANS."—Under this title, the New York Medical Missionary Society says: "About forty millions of heathens die every year with scarcely any medical aid. There are two white missionaries to about one million of heathens. There is one medical missionary to about ten millions of heathens. Modern medicine and surgery appear miraculous to the heathens; it is often very difficult to prevent them from even worshipping a doctor. Their gifts in gratitude for medical aid would shame many Christians. A medical missionary can, to a large extent, obtain his own support. His medical skill will open doors otherwise closed to the gospel."

RESPECTS TO THE SPECIALISTS.—*The Quarterly Bulletin* of the Post-Graduate Medical School for April contains a poem, read at the annual dinner of the School, and entitled "The Specialists." The author begins:

> 'Mid sulphurous fumes, in antiseptics rich
> Enough to please our Peters—cure the itch,
> Great Satan [illegible] upon his throne,
> And when he found [illegible] he came
> Fiercely he muttered: "Twenty doctors more
> Within two days have come within my door,
> And now at last the news quite deafens me dumb—
> The porter says some Specialists have come.
> Should old ambitions once these fellows seize,
> If they put out their signs, take in their fees,
> Sure all my toils of little use would be,
> Then I must go, this is no place for me."
>
> The Demon rose, and shook from off his coat
> The yellow films of *U. S. Sulphur lot.*,
> Uttered a cough which all Hell's regions racked,
> And ordered out his baggage, to be packed.
> "I'll up to earth," he said, "for I must know
> Why doctors are now rattled on me so."
> Out into space he shot—a curious sight,
> The Devil bent on setting things aright.
>
> Now, since he knew the Old World quite too well
> To try to keep the doctors there from—She'll,
> He went to Boston, thinking that perhaps
> Since Holmes 'd resigned he there would find a lapse.
> (I pray my hearers to remove their frown—
> I mix the Devil with so good a town
> Because poetic doctors who must rhyme with pills
> Care do it best where there are seven hills;
> I'm sure, myself, that half the fame of Holmes
> From this unevenness of Boston comes.)
> And so from off her very highest mound
> Our new Asmodeus cast his eyes around:
> He saw the doctors' gigs below him creep,
> He thought the ruts they rode in rather deep;
> He saw great doctors whom big fees did fatten,
> He saw the lady-doctors whom they sat on.
>
> He saw a college, beautiful and old,
> He saw another where degrees were sold;
> He saw our Art lift up its banners high,
> But saw that quacks and mind-cures were close by.
> Yet 'midst it all he found such virtues grew—
> The righteous rigid, but the wicked few;
> The Devil thought, "I'll let this place alone,
> The case is one of gravel, not of stone."
> (The simile is old, but then I might
> In Boston be a little litho-trite.)
>
> As when a meteor skims earth's airy shell,
> Or doctor jumps at the obstetric bell,
> So Satan, leaving ancient Boston, down
> He in one breath flew to a Quaker town—
> (A town, dear friends, of which you've heard some talk;
> Its people say it's better than New York.)

The visit to Philadelphia is described, and the Traveller, not finding much there to worry him, starts for this city.

> "For sure," he said, "unless all stories lie
> The doctors there are all much worse than I."

On his way, however, he meets with an explosion, by which he sustained a convenient multiplicity of injuries.

> A much bruised party rose from up the ground,
> He'd every ill that's in the body found—
> A spine concussed, a fractured bone or two,
> A dozen sprains, his skin quite black and blue,
> Disordered function of each inner part,
> Uneasy stomach, damaged lungs and heart,
> But sweet philosophy some comforts bore,
> "I don't mind much," he said, "I've fallen before,
> And sure the fates do in my cause enlist
> To fit me for each New York specialist."

He visits the surgeons, the votaries of Neurology:

> "So great her Science, and so small her Art."

The Orthopædists:

> "Harmonious children of a thousand braces."

Also the Ophthalmologists:

> It is not strange—at least it is a fact—
> That Satan's *falls* had caused a *cataract*;
> Or that, with all the errors to him due,
> Some errors in refraction he had too.
> Some learned eye-men, therefore, soon were seen,
> Who ply the art that's based on cocaine,
> Atropia sulph., some glasses, and the trick
> Of snipping off the iris double-quick.
> But great among the specialists they rise—
> They made the Devil open both his eyes,
> And soothed them, so that when no longer sore
> Th' insatiate patient clamored still for Moore.

Finally the Gynecologists are gently dealt with, as follows:

> Besides, he found they'd stolen his own wares,
> And caught their victims all in painful snares.
> Some pleasures still in Satan's lot prevail,
> For he at least unquestionably is male.
> For him no gynecologist could seek
> Within persuasive specula to peek,
> Or, with some learned name his troubles labelled,
> Like Parliamentary motions, have him tabled.
> I'm sure that once the Devil stopped and prayed,
> 'Twas when he found that he could not be spayed.
> (O gentle Art, I'm sure I am not blind
> To all the good you've done for womankind;
> But once 'twas woman's part to cut and sew,
> While now to cut and sew her parts you go
> Too oft', perhaps. Might it not be a gain
> If you made less of womb and more of brain?)

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Original Articles.

PELVIC ABSCESS IN THE MALE.[1]

By T. HERRING BURCHARD, M.D.,

By reason of their comparative infrequence, the indefiniteness of their symptoms, and the natural difficulties in the way of diagnosis, pelvic abscesses in the male have not attracted the same surgical attention as have those occurring in the female.

The serious nature of the affection is quite as great, however, in the one as in the other, and its occurrence we believe to be more frequent than the meagre literature of the subject would lead us to suppose.

Indeed, in the standard English and American authorities, the subject is either entirely ignored or dismissed with a passing allusion—an omission that is especially felt when we are brought in personal contact with a case of this kind.

Five cases have fallen under my immediate observation. The last case I have the pleasure of presenting to the Academy this evening.

By pelvic abscess I wish to be understood as meaning a phlegmonous inflammation occurring in the superior portion of the pelvic cavity, below the cavity of the abdomen, from which it is separated by the pelvic reflections of the peritoneum, and above the muscular floor formed by the levator ani muscle.

It must not be confounded with abscesses of the abdomen—typhlitic, perityphlitic, etc.—nor with those originating below the levator ani, in the ischio-rectal fossa.

In the loose connective tissue which occupies this region, described by Richet as the *pelvi-rectal space* ("Traité pratique d'Anat. Méd. Chirurg.," p. 93, fourth ed., Paris, 1873), abscesses occasionally form.

From the peculiar anatomical construction of this space, with its bony lateral boundaries and its dense and almost impervious musculo-membranous floor, abscesses may originate here, producing most acute constitutional disturbance, and even very extensive local disorganization, and yet unaccompanied with any distinguishing symptoms that would call the surgeon's special attention to their existence. Not only this, but following the general law of abscesses to travel in the direction of least resistance, they will burrow internally to very distant parts without manifesting their presence by coming to the surface. Thus they will dissect their way through the foramina of the pelvis, and appear externally under the gluteal muscles; they have penetrated the acetabulum and destroyed the hip-joint (Mr. Morris, of Middlesex Hospital, London, amputated the thigh at the hip-joint in a lad of seventeen in such a case); they have dissected up the aponeurosis of the iliac muscles, produced necrosis of the ilium, and appeared (as in the case I shall exhibit this evening) upon the external surface of that bone. Or again (as in Case II. to be described), the abscess having emerged from the pelvic cavity, may travel anteriorly, following the course of the femoral vessels beneath Poupart's ligament, and make its appearance on the anterior surface of the thigh; or again, it may penetrate the hollow viscera and evacuate itself into the bladder, the rectum, or the peritoneal cavity. In fact, having once escaped its bony confines, there is no direction in which it might not travel.

Mr. Henry Morris (Ashhurst's "International Encyclopædia of Surgery," vol. v., p. 1024) divides such iliac abscesses of pelvic origin into two groups, (1) the sub-peritoneal, and (2) the sub-aponeurotic. The former, he claims, are prone to spread widely, in both an upward and a downward direction, reaching the upper boundaries of the abdomen, even burrowing behind the diaphragm; while the latter are more circumscribed, forming between the fascia iliaca and iliac muscle, and producing caries or necrosis of the bone.

Clinical history and symptoms.—The clinical history and symptoms vary naturally according to the acuteness or latency of the attack. Should the attack be acute, both the constitutional and local disturbance is proportionately the greater. In such cases the phlegmon forms rapidly, with great pain and corresponding febrile phenomena. Such an attack might readily be mistaken for one of general or circumscribed peritonitis. With the pain we have more or less abdominal distention, tympanitis, vomiting, flexion of the thighs, all of which are characteristic of that disease. Micturition is difficult or altogether impossible. The tumefaction may project into the rectum, setting up proctitis and tenesmus. Should the inflammation spread upward, localized or general peritonitis may result. "Inflammation beginning in the pelvic cellular tissue is anatomically prone to spread to the iliac fossa" (Morris, *op. cit.*).

Abscesses that form thus acutely are more likely to evacuate themselves spontaneously, in either the rectum or the bladder, than are those of a subacute or chronic character.

The following case, published by Dr. Bowditch ("First Medical and Surgical Report of Boston City Hospital," p. 64, 1870), is illustrative of the truth of this statement:

"A slater, aged twenty-five, was admitted into Massachusetts General Hospital, having fallen a height of thirty feet, striking his face and hands.

"Intense pain in the lumbar and umbilical regions, with bloody urine removed by the catheter, were the immediate symptoms. His condition grew worse. Pain was intense. Abdomen tympanitic and very tender. Later on an induration was detected deep in the left lumbar and hypochondriac regions. At the end of the fourth week, the abscess pointed in the left inguinal region. On introducing a tube into the rectum to relieve the flatulent distention of the bowels, an abscess was punctured, and a large quantity of pus with bloody mucus came away. The swelling in the inguinal regions and tympanites nearly disappeared thereupon; but pus continued to be discharged daily per rectum. The patient never recovered. The abscess refilled, and burrowed up into the inguinal region, and down under Poupart's ligament into the thigh. The patient died from phthisis consequent upon long-continued suppuration, within eleven months after the injury."

Just how speedily the inflammation may terminate in suppuration in these acute cases, it would be difficult to say. The inference is logical, that suppuration, when it occurs, occurs some considerable time before it makes itself manifest by external tumefaction. That the delay in getting the evidences of abscess is not due to absence of pus, but rather to the difficulty the pus experiences,

[1] Read before the New York Academy of Medicine, April [illegible]

on account of the depth of the suppurative process, in coming to the surface.

During all this time, however, the constitutional evidences of internal suppuration are more or less pronounced, and a carefully conducted examination at this stage may forestall and prevent many months of tedious suppuration with its attendant evils.

Chronicity, rather than acuteness, however, seems to be the rule with pelvic phlegmons in the male, except in cases having a traumatic origin. The affection most frequently occurs in the poorly nourished and cachectic, and in such inflammatory processes are slow and suppuration tardy. A widely diffused induration may pervade the pelvic cellular tissue months before its final breaking down into pus.

The diagnosis in such cases is often very baffling, owing partly to the inaccessibility of the parts affected, and partly to the perplexity of symptoms that arise from so many different tissues, organs, blood-vessels, and nerves being affected by the inflammation.

As bearing upon the clinical history, the following cases are submitted :

Case I.—C——, Scotchman, cloth-printer, forty years of age, was admitted to Bellevue Hospital, Ward 14, June 4, 1872, with the following history :

Always a hard-working, temperate man. Father and one brother died of phthisis. Mother died of cancer. General health prior to the attack fairly good. Eight months before, while sitting on a wet bridge fishing, fell asleep, and awoke after the lapse of an hour with a severe chill. Went immediately home and to bed. Had severe chills with high fever for seven or eight days. Excruciating pain in bowels, back, and thighs. Bowels became moderately bloated and constipated. Had darting pains through pelvis and in both testicles. Constant desire to pass water. Micturition impossible after first night. Passage of catheter caused great pain.

Had to be kept constantly under morphia or opium. Hot applications were made to loins and abdomen. About the tenth day an abscess discharged itself into rectum, perhaps a pint of pus escaping. Immediate relief experienced, which lasted three or four days. Discharge of pus from rectum then ceased. Pelvic pain returned, but not so severe as before. Fever also returned, with sweating. In less than a week the abscess burst again in the rectum, with immediate relief succeeding. Discharge of pus kept up all winter, the quantity sometimes amounting to a pint in twenty-four hours. Twice during the last two months discharge ceased for three or four days at a time. Pain in perineum, back, and abdomen immediately succeeded, accompanied with high fever.

On admission : Patient half moribund and very feeble, having lost over forty pounds in weight. Body jaundiced, and teeth and tongue covered with sordes. Abdomen moderately extended and tympanitic. Pressure over bladder produced deep gurgling in pelvic cavity. Rectal examination showed an irregular tumefaction high up in the pelvis. When counter-pressure was made over hypogastrium, excessive fetid pus escaped from rectum.

Diagnosis of pelvic abscess with septicæmia was made by Dr. McBride, House Surgeon.

Death occurred the following day.

The autopsy revealed an old abscess-cavity, the size of a small cocoanut, in upper part of pelvic cavity, reaching just above the brim, and containing perhaps a gill of offensive pus. Walls of cavity gangrenous and sloughy, but entirely shut off from peritoneal cavity by a dense layer of plastic material. No recent peritonitis. Pelvic veins filled with thrombi. An opening large enough to admit the little finger connected the abscess-cavity with the rectum. Pyæmic abscesses in liver and spleen.

Case II.—Seen in consultation with Dr. J. Grafton, Watertown, N. Y., August 19, 1873.

Mr. ——, aged thirty-two. Had been generally well up to a year ago, when he developed a severe gonorrhœa after a prolonged spree. This lasted off and on for four or five months, during which time he had a severe attack of gonorrhœal rheumatism of left hip-joint and knee.

His present trouble dated back some five months, and immediately succeeded the rheumatism. Patient was awakened from sleep by a dull pain deep in the perineum and a sensation of chilliness, although no distinct rigor occurred.

Pain became more intense, the abdomen began to bloat, and when seen by his physician the following day, there was well-marked peritonitis. This became general, and lasted nine or ten days. After its subsidence a small tumefaction was observed in the left iliac fossa. This ultimately disappeared. Some ten days later, while being lifted from bed to lounge, a sharp pain was experienced in the lumbar region, extending down into the pelvis. Pain increased greatly through the night, and the swelling reappeared in the left iliac fossa. Fluctuation being detected, a small abscess was opened without giving any relief. The following day, however, a deeper abscess burst through this opening and discharged nearly a pint of pus. The incision was now enlarged, and an oakum tent was carried down toward the floor of the pelvis. Great relief followed this, but despite every attention the abscess would fill, discharge itself through the fistulous opening, and refill.

During the summer a phlegmon formed deep in Scarpa's space. This was lanced. The finger introduced into the abscess-cavity followed the crural sheath beneath Poupart's ligament into the iliac fossa.

When I saw the patient, who had just come under Dr. Grafton's care, he was greatly emaciated and œdematous, and had well-marked waxy degeneration of the kidneys.

Two sinuses led by circuitous routes into the pelvic cavity, one through the inguinal region, and the other from the anterior crural. A large, soft catheter, introduced through the former opening, could be readily passed into the pelvis. Warm carbolized water, gently injected, caused a perceptible tumefaction on anterior wall of rectum, high up. Upon my suggestion, and with a view of establishing thorough drainage, a counter-opening was made at this point, and considerable necrosed tissue washed away. Drainage-tubes of oakum were introduced.

Improvement, both in the patient's general condition and locally, was very marked after this. An inter-current attack of nephritis caused death within the following fortnight.

Case III.—Seen in consultation with Dr. McKnight, of Brooklyn. A slight-built and delicate lad, aged seventeen, received a severe strain some six months before by being lifted by "the seat of his breeches" over a friend's head in play. Faintness, succeeded by vomiting and intense pains in back and down the thighs, followed. This pain in back and thighs continued about a month, and then, without apparent cause, the boy being in bed the while, it shifted from the back to the hypogastrium, and became distinctly throbbing in character. Paroxysmal pains shot down the sciatics and into the perineum. Defecation was invariably accompanied with great pain, and the bowels were permitted frequently to go a week without movement.

When I saw him, April 6th, in addition to the above the patient was badly cinchonized and almost absolutely deaf from quinine, which had been administered with a view of breaking up what was supposed to be a malarial or neuralgic condition. A most careful examination under nitrous oxide was now made, both externally, by rectum, and, as the boy was very thin, by conjoined manipulation, with bladder both empty and distended ; but neither tumefaction, induration, or any other cause, was found to account for his excessive pain, pyrexia, and loss of flesh. Within a few days after this, while straining at stool, an abscess burst within the rectum and discharged several ounces of pus. The most marked relief followed. Pus continued to be discharged for some days, and a permanent recovery followed. In recalling this case and

the thoroughness with which the examination was made, it was rather mortifying to learn that a dense mass of indurated cellular tissue posterior to the rectum, which at the time was taken for the promontory of the sacrum, in less than a week broke down in suppuration.

Case IV.—A cachectic and feeble old Italian was admitted to my service, Charity Hospital, June, 1883, with what was supposed to be a chronic suppurating bubo of left inguinal region.

A very unsatisfactory history of pelvic pain of two years' standing was obtained. He complained on admission of weakness, loss of flesh, and pain referred to the hypogastrium, perineum, and gluteal regions. There was partial incompetency of the sphincters.

On examination, an unhealed incision, leading into the rectum, above the internal sphincter, with a deep sinus running up into the pelvis, was found. The operation had been performed about a year previously—for what or by whom he did not know.

A vertebrated probe passed up this sinus to a depth of eight inches, and there met another probe passed through the abscess-cavity in the groin. Of this latter we could learn nothing definite except that it had been there for several months. With considerable difficulty a soft rubber catheter was passed through this opening and down into the pelvis. Injections made through this escaped by the perineal opening.

The patient refused to submit to any treatment and left the hospital. He presented himself at my office the following fall for charity. An examination revealed the upper opening closed, the perineal sinus still open. A vertebrated probe readily passed about seven inches.

Case V.—Peter M——, aged twenty-eight, married, a porter by occupation. Always temperate, robust, and strong up to March, 1882, at which time he was suddenly seized, after some unusual exertion, with sharp pains in the right iliac fossa, which lasted thirty hours. This paroxysm terminated in a dull, heavy pain, which extended across the hypogastrium into the left iliac region, and has continued with greater or less severity up to the time of the operation.

In June 1884, he was admitted to St. Luke's Hospital, suffering from the same intense pain. Poultices were applied, but no suppuration occurred. The diagnosis of typhoid fever was there made.

In the following August, after several unsuccessful aspirations, an abscess of the right lumbar region, midway between the iliac crest and ribs, was evacuated by the late Professor James L. Little. The case was regarded by him as one of perityphlitic abscess.

At this time patient's condition was very bad. Severe pain deep in the pelvis and perineum. Darting pains through the rectum into the right testicle and down the sciatics. Priapism, with involuntary nocturnal emissions.

In December, a second abscess formed and was opened by Dr. Little. Although suffering more or less constant pain his health improved during the winter; but in March and July following, other abscesses formed in the side and over the body of the ilium. These were also opened. In August and September he had the pain and constitutional disturbance of forming abscesses, but free incisions failed in giving vent to pus.

October 5th.—Patient's health evidently failing. All the old pains have returned. A careful examination under ether was made by me, Drs. Seneca D. Powell and Henry A. Mandeville assisting.

Owing to the thickness of the abdominal walls from fat, this was very unsatisfactory. Rectal examination revealed nothing.

A localized phlegmon over the ilium, two inches below and to the front of the posterior superior spinous process, was opened and carious bone detected. This was removed by gouge and rongeur. The superficial caries led into a large abscess-cavity in the ilium, and this in turn communicated by a direct opening with the iliac fossa. The finger introduced through the bone could detect nothing abnormal within the abdomen. The carious bone being thoroughly removed, a tent of bichloridized oakum was introduced through the ilium, and the wound partially closed.

October 29th.—After great pain, referred to the hypogastrium, right iliac region, and right testicle, another abscess formed and discharged through the opening in the bone. The source of this could not be detected, and both external and rectal examinations failed to throw light on the case.

In early December another abscess formed within the pelvis, and, instead of discharging through the opening in the ilium, pointed over the crest and was evacuated at this point.

The patient's condition was now critical in the extreme. He was rapidly losing strength and flesh, and was being worn out with constant pain and suppuration. Albumen with hyaline casts appeared in his urine. It was felt that something effective ought to be done, and yet there was nothing tangible upon which to found a diagnosis beyond the fact that, at irregular intervals, abscesses in the right iliac region would form and discharge. Repeated examinations were negative in their results.

From the first the case was regarded by my assistant, Dr. H. A. Mandeville, as one of abdominal abscess of deep origin, and the carious bone as secondary to that; and hence from the first he advocated an exploratory abdominal section.

From this I at first differed, thinking the recurrent abscesses were due to the bone disease. In either case the indications clearly were to open the abdominal cavity (of course employing every antiseptic precaution), and, if possible, by stripping up the peritoneum from the right iliac fossa, to seek and remove the source of irritation.

In this opinion we were supported by Prof. R. F. Weir and Dr. H. Marion Sims, who kindly saw the case with me.

Operation.—St. Elizabeth's Hospital, February 13th, Drs. Sims, Mandeville, and C. W. Stimson assisting. An incision was made, commencing just above and posterior to the posterior-superior spinous process, and following the bone downward for a distance of five inches. The dissection was carried through the abdominal muscles and the peritoneum exposed. This I endeavored to detach from the subjacent fascia, but so firmly adherent was it that, in spite of very gentle manipulation, it tore. A flat sponge was introduced through the laceration to hold back the intestines, while with the hand a thorough exploration was made. Almost immediately a mass of adhesions were found that led to an old abscess cavity, which occupied the posterior half of the fossa, and that extended like a great sinus directly from the ilium, over the line of the pelvis and down into its cavity.

No dead bone could be detected. The sinus having been laid open, its walls, which were almost cartilaginous, were thoroughly revivified with a dull curette. The sinus through the bone was likewise curetted and some carious bone removed. Two drainage-tubes of soft rubber, eight inches long, were carried directly to the bottom of the sinus, and the whole thoroughly irrigated with a solution of bichloride of mercury, 1 to 2,000. The abdominal wound was now closed with deep and superficial sutures. The incision leading through the bone was kept open and dressed from the bottom with iodoform and bichloridized oakum. A superficial dressing of borated cotton was made over all.

The patient rallied nicely. On the third day the temperature rose to 102⅕°, and the pulse to 120, and there was a very slight circumscribed peritonitis. On the sixth day the patient's temperature was practically normal, and the discharge from the tubes scarcely amounted to half a drachm. After this the tubes were shortened gradually, and at the end of three weeks were entirely removed, firm granulations having filled up the cavity of the sinus.

The opening through the bone has likewise been filled

in with new tissue, and is now closed. To-night I have the pleasure of exhibiting the patient in better health than he has enjoyed for years.

Diagnosis and treatment.—The length of this article precludes any elaborate presentation of these important subjects, the object of the paper rather being to call attention to a much neglected class of cases.

It must be remembered, however, that whenever cellular tissue exists in the body, there suppurative inflammation is likely to occur. The male pelvic cavity, as the grossest dissection will show, contains a large amount of cellular tissue, and pathologically it is no exception to the rule.

Inflammation occurring here manifests itself in addition to local distress or pain, which is generally severe in character, by the usual constitutional disturbances. After tumefaction has occurred, another set of symptoms arise, which are due to pressure on sensitive nerves and organs. Recall in the histories cited how uniform have been the pain in the hypogastrium and pelvis, the excruciating pains down the sciatics and into the testes and rectum. Another feature peculiar to these abscesses is their tendency to burrow, and the very great dangers attendant thereupon. Their natural destination should be the perineum, and such doubtless would be the case, were it not that the extremely dense fibres of the levator ani and prostatic muscles, which are largely composed of firm fibrous tissue, present an almost impenetrable obstacle.

The next most natural route would seem to be the rectum, and here many of these abscesses are evacuated. Many, however, mount the pelvic cavity and appear within the abdomen, as the pelvic abscesses.

After this, their course is erratic. Most of the abscesses appearing anterior to the bladder, in the so-called *Cavum Retzii* (after the distinguished Swedish anatomist, Retzius), the prævesicular abscesses of French surgeons, are abscesses of pelvic origin (see a most interesting account of such by Leusser in Langenbeck's *Arch. für klin. Chirurgie*, No. 32, vol. 4, p. 851).

Clinically, it is important to distinguish between an inflammatory condition pure and simple—a cellulitis simplex—and the same condition after it has passed into a suppurative stage.

The presence of pus cannot be recognized at too early a period.

It is likewise necessary to distinguish between a pelvic cellulitis and general or localized peritonitis; also between this and cystitis, proctitis, and prostatitis. Rheumatism and neuralgia must be borne in mind.

Surgically, it is necessary to differentiate between abdominal abscesses, ileo-pelvic abscesses, pelvic abscesses, abscesses of the ischio-rectal fossa, and perineal abscesses.

Exceptional possibilities must be carefully considered. Hernia strangulated in the pelvic foramina; passage or impaction of renal calculi; acute inflammation of the psoas muscle; typhlitis and perityphlitis; and lastly scrofulous, malignant, tubercular, and syphilitic disease of the pelvic glands.

Treatment.—The treatment naturally resolves itself into treatment of the cellulitis before suppuration, and treatment after suppuration is established.

In the former case, rest, morphia, quinine in free doses, local refrigeration, and possibly local depletion by leeches to perineum. In employing cold in this or any other inflammatory condition about the rectum, nothing equals in efficacy and comfort, in my experience, the continuous use of cold water, which passes up and immediately returns through a double-flow blind tube. The great mistake that is often made by the inexperienced in the application of either this or the ice coil is in applying it too cold at first. The water at first should be warm, then gradually cooled until ice-water can be used, with astonishing relief. During acute inflammation frequent rectal explorations should be desisted from, as calculated to do more harm than good. After suppuration may reasonably be suspected a careful examination under anæsthesia should be made, in order that the abscess may be evacuated into the rectum at the earliest possible moment. If evidences of internal suppuration persist, and there is reason to believe the pus to be burrowing upward, an abdominal exploratory incision is obviously demanded.

If this can be made without opening the cavity of the peritoneum, it certainly should be done. The object to be attained, however, is the evacuation of the pus. We cannot always be successful in this. Adhesions will form impossible barriers at times. Mr. Tait met with failure in such a case in a male. The principle, though, is surgical and conservative.

MEMOIR OF AUSTIN FLINT, M.D., LL.D.[1]

By A. JACOBI, M.D.,

PRESIDENT OF THE NEW YORK ACADEMY OF MEDICINE.

The life of Dr. Austin Flint, one of my most distinguished predecessors in the presidency of the New York Academy of Medicine, was singularly fortunate. We may say that now that he has passed away, and avoided the dangers incident upon any human existence, which made the Greek philosopher exclaim that nobody must be called fortunate before he died. His birth, his life, and finally his sudden and painless death are peculiarly happy.

In the year 1638 Thomas Flint emigrated from Derbyshire, England, to Concord, Mass. Thus the family, of Puritan stock, is one of the oldest of the country. Austin Flint's father, grandfather, and great-grandfather were physicians in Massachusetts. Thus both the number of ancestors, and their labors and culture, constitute what even in this our country we may claim as genuine aristocracy.

This term I do not wish to be taken in anything like its usual European meaning. The aristocracy of the continent of Europe, hundreds of years ago, was composed of the men who spent their days in idleness, robbery, and violence. Their right consisted in the strength of their swords and the elasticity of their consciences. It required the invention of powder and guns to make their castles useless, change the hitherto unprotected into dangerous adversaries, and thus render the aristocrat virtuous. This compulsory virtue changed them into willing servants of the princes, whom they obeyed, either on the battlefields or in the waiting-rooms. They and their offspring, unless they have consented to take part in the physical or intellectual labors of the world, have contributed nothing to the development of morals and culture.

This is not what we may designate aristocracy in America. Our country has the advantage of not suffering from the evil inheritance of the mediæval period. What it has grown into being, it has become by hard work both of hands and brains. That kind of aristocratic family was the one Austin Flint hailed from; in it he might well have rejoiced, though pride would never be pardonable in anything accidental and not accomplished by one's own efforts.

With such hereditary advantages he was born in Petersham, Mass., on October 20, 1812. They were followed by those resulting from a liberal education in Amherst, and in Harvard, where he graduated in medicine in 1833. Since that time, without any interruption, he has been in the practice of his profession, adding to the daily practical labors much and varied literary work, and for the last forty years constant services as a teacher of medicine in six different colleges.

In Northampton and Boston he practised three years, until he moved to Buffalo, N. Y., in 1836. Here he resided sixteen years, with the intermission of a short period in 1844, in which he taught clinical medicine in Rush Medical College, Chicago. He founded the *Buffalo Medical Journal* in 1846, and edited it through a course of ten years; he organized, in connection with Frank H. Hamilton and James P. White, the Buffalo Medical Col-

[1] Read [illegible] the New York Academy of Medicine, at the Stated Meeting, April [illegible].

lege, in 1847, but left Buffalo in 1852 to take charge of the chair of clinical medicine in the University of Louisville. Thence he returned to Buffalo in 1856, spent the winters of from 1858 to 1861 in New Orleans, teaching medicine and attending Charity Hospital, and settled in New York in 1859. His position as the teacher of clinical medicine in the Long Island Medical College he resigned in 1868; the same chair in the Bellevue Hospital Medical College he retained to his end. Its last Commencement took place while he lay dead in his house, and a day before he was carried to his last silent home.

As a teacher he was eminently successful. Thousands of the present practitioners of the United States were his pupils; there is no county but has those who listened to his lectures; and there is none but who gratefully remembers the breadth of his knowledge, and the systematic clearness and elegant simplicity of his diction.

Whoever has not listened to him in the lecture room has made his acquaintance by his writings. For forty years he has contributed largely and worthily to the medical literature of the country. Many of his first papers appeared in the *Buffalo Medical Journal*, which owed the high regard in which it was held mainly to his contributions. From 1848 to 1850 he published articles on diabetes, the pathology of typhoid fever, on the epidemic of cholera in Buffalo, on serous effusions into the arachnoid cavity, on pleuro-pneumonitis complicated with pericarditis, and on fifty-two cases of typhoid fever. These essays were followed, in 1852, by clinical reports on continued fever and on variations of pitch in percussion and respiratory sounds, and their application to physical diagnosis; in 1853, by clinical reports on dysentery, and on chronic pleurisy; by (1856) his physical exploration of the chest and the diagnosis of diseases affecting the respiratory organs, and (1859) his practical treatise on the diagnosis, pathology, and treatment of diseases of the heart. In 1865 he wrote his compendium of percussion and auscultation, and of the physical diagnosis of diseases affecting the lungs and heart; and finally, in 1866, his treatise on the principles and practice of medicine.

It is not necessary to enumerate his many essays and papers, before and after that time. The publications of the United States Sanitary Commission, and the better journals of the country, bear evidence of his ever increasing experience, willingness to contribute to the common stock of knowledge, and the eagerness of the journals to print his papers.

His literary reputation was deservedly a very great one. Some of his works have been translated; his treatise had an immense sale. The method and mode of his writing is characteristic and instructive; if some of the modern writers would imitate him, it would be better for them and for literature. It is apparent that for many years he wrote nothing but clinical reports and studies. They were papers replete with careful observations plainly described, with their immediate results. These were followed, when his experience grew and his judgment became matured, by monographs on special subjects. He was fifty years old, and already a celebrity, when he published a treatise on the whole subject of internal medicine. It was the work of a man who had given two dozen years and more to the study of his subjects before venturing before the profession with his great book. Let the young manufacturers of text-books of nowadays, who collate the pigeonholed pilferings from the older books of better men into a volume, and try to build up a reputation with its hoped-for pecuniary advantages, learn from Austin Flint the period of life in which a man may be expected to write a text-book for the use of either the student or the physician.

In his writings nobody ever was more straightforward and honest. What he did not know he would not state. When he felt that the latest editions of his text-book could be made more scientific and serviceable by elaborating the pathological anatomy of his themes, he selected William H. Welch to write the required chapters, and gave him full credit for his work in his preface. As he was modest in his writings, so he was in discussions. He was always as anxious to be taught as capable to instruct. Some may remember a discussion on pepsin in the American Medical Association, many years ago. When, the next day, he received a note from one of those present, in which the necessity was urged to add muriatic acid to the doses of pepsin he had advised, he called in person to express his appreciation of the, then new, suggestion and the letter containing it. There was, however, one thing he was jealous of, viz., the honor of his country. When, in a discussion, he once complained of the oblivion of Carr's name in connection with the causation of the crepitant râle, and the pre-eminence attributed to foreign authors in regard to the explanation of respiratory sounds, he was rejoiced and proud when he was shown the page on which Winterich gives full credit to the American practitioner. Vanity and exalted opinion of himself were not his faults. He would never have accepted the eulogistic exaggeration proclaimed in a recent obituary, in which it is claimed that nobody in this century has done so much as he, or more than he, for the diseases of the respiratory organs. He would have urged that friendship and esteem must never go so far as to obscure the names of Laennec, the Frenchman, Skoda, the Austrian, and Stokes, the Briton.

Still, he was original in many things. His discussions on pitch and resonance will always be read with pleasure and profit. Though we owe him no great discoveries, we and our successors shall always admire his clear way of dealing with known facts and new observations, and of popularizing for the medical mind the latest evolutions of medical thought and the most mature fruit of scientific research.

The peculiar qualities displayed by Austin Flint the writer he would also exhibit as a teacher, both didactic and clinical. He taught general medicine, and preferred to study, and give particular attention to, the diseases of the systems of respiration and circulation. He was clear, painstaking, and accurate. He occupied a chair in which there are, to the average student, no amazing features or feats. The student who applauds when a bone is sawed through, or a spouting artery is caught by a dexterous hand, or the actual cautery sends fumes and odor through the amphitheatre, is quite apt to gaze with sleepy indifference at the master whose lips utter the finest points of a difficult diagnosis, or whose brain is exercised over the greatest intricacies of pathological physiology. In the teachings and the daily work of the practitioner there is rarely anything surprising, amazing, or brilliant. In spite of that, it did not take long for Austin Flint to make a great and ever-increasing reputation as a teacher. Let our young men never forget, and let them learn from the example of the illustrious dead teacher, that a good preliminary education, systematic work, earnestness, and solidity are the corner-stones on which alone a teacher and an author can build up a name worthy to be enjoyed and capable of being handed down to posterity. What Flint's importance as a teacher has been, and will be, can be best proven by his thousands of pupils. Still, even as fortunate and successful a man as he was has his disappointments and curtailments. One ambition of his life was never fulfilled.

Look at this fact: At the meeting of the American Medical Convention, since called Association, at New York, on May 5, 1846, he was appointed on a committee to report on a resolution offered by Dr. Isaac Hays, for a uniform and elevated standard of requirements for the degree of M.D. in all the medical schools of the United States. The report is signed by R. W. Haxall, Chairman, and can be found on pp. 63–77 of the "Proceedings of the National Medical Conventions, held in New York, May, 1846, and in Philadelphia, 1847" (Phil., 1847). The very first of the ten resolutions embodied in that report is this: "That it be recommended to all the colleges to extend the period employed in lec-

turing from four to six months." And it is true what a late number of a journal[1] says: "That that report is still to-day a most interesting, applicable, and valuable document." But alas! the slowness of spontaneous evolution, and the predominance of circumstances, and the weight of impediments are such as to cripple even a strong man like Austin Flint, who, though his life was spared long, never saw the hopes of his younger years fulfilled.

His successes as an author and a teacher were equalled by those accomplished in his consulting practice. In those special branches to which he had given so much of his time and attention, his counsel was frequently requested. No matter whether he had anything new to say, or had only to confirm the diagnosis or fortify the position of the practitioner, everybody here knows that he was always kind, mild, and modest. There is nobody here but has often either admired his superior knowledge and experience, or blessed his pleasing demeanor and generous words. He was an eminently just man and, for that reason, could afford to be mild and generous.

These qualities he exhibited in a period which has been a critical one in the development of the last few years in the life of the medical profession. During the first successful year of preparations for the International Congress he was true to the *bona fides* entered upon in Copenhagen. From the very beginning he was, like all the greatest and wisest men in the profession of both this country and Europe, earnest in excluding medico-political differences and difficulties from the organization of the Congress. In regard to the latter there was to him no Code question at all. I have good reason to believe that the demoralization and disorder in the ranks of the profession, growing out of these differences, caused him the greatest possible pain, and many of the most unhappy days of his life. It is a great satisfaction, however, to know that everybody wished to distinguish and honor the man who had served the profession half a century, to his credit and to the advantage of his fellows.

In regard to important moral and ethical questions, it is of graver import to study a man's own words than to listen to what others would wish us to believe; and when that man is Austin Flint, that mode of inquiry is still more indicated. Not that the Code question is so grave as some would have it. Indeed, it has begun already to have a historical interest only.

But some time ago everybody took sides in regard to the Code question. So did you, so did I, so did Austin Flint. But to belong to a party does not mean to be an offensive partisan. And if ever a party man—so I believe—was impartial, that man was, or tried to be, Austin Flint, whom we honor as much for his words as his actions. When a man works himself up into celebrity, his memory must serve the surviving as did his life. His opinions ought to be learned from his own papers published in the *New York Journal*.[2] Read them as if he were still among you. He is among you. For those who have lived a life worth living do not die. I am willing to abide by the platform laid out in those essays. They contain the same thoughts expressed by your presiding officer in an address delivered from this place on October 1, 1885. Two days afterward that address appeared in print. Two days after its publication I received from the great and good man who is now gone a letter which I shall be proud of preserving as a legacy. I hold in my hand this note of Austin Flint's, which begins with the words: "I have read your address with pleasure"—and finishes with these: "How beautiful, lovely, and salutary it is to promote peace, harmony, and brotherhood."

On the evening of his inauguration as President of the Academy, in 1871, his predecessor, one of the most illustrious types of American erudition and versatility, Edmund Peaslee, had a right to say to him: "We have always found you the high-minded and sympathetic man, and the genial gentleman, as well as the finished scholar, the distinguished author, and the skilful practitioner."

All that he proved during his presidential term which extended over the two years, from 1871 to 1873. The routine work performed during that time did not differ much from that of many other years or terms, but some of the papers were of unusual excellence. It would be improper to go into the merits of the essays read and discussed. They were by Allen S. Church, Charles A. Leale, Willian Detmold, Alfred A. Loomis, Samuel S. Purple, Charles P. Russell, Gouverneur M. Smith, J. Lewis Smith, Frank P. Foster, Gurdon Buck, Ernst Krackowizer, J. C. Dalton, Lewis A. Sayre, E. C. Seguin, Salvatore Caro, and Allan McLane Hamilton.

Flint's contributions to the scientific work of the Academy were not numerous, but their character was high. Amongst others, "The Management of Pulmonary Tuberculosis, with Special Reference to the Employment of Alcoholic Stimulants," June 3, 1863 ("Trans.," ii., p. 353); "Discussion of Dr. Leaming's Paper on Pleuritis," March 17, 1870 ("Bulletin," iv., p. 48); "Discussion on the Etiology and Pathology of Bright's Disease," October 1, 1862 ("Bulletin," vol. ii., p. 1); "Discussion on Dr. Loomis' Paper on Typhus Fever," February 15, 1865 ("Bulletin," ii., p. 388); "Last Illness of Valentine Mott, M.D.," May 3, 1865 ("Bulletin," ii., p. 434), will always be referred to with sincere pleasure.

His membership in the Academy ceased a few weeks before March 13th, on which he breathed his last. You remember the universal reluctance on the part of those present to accept his resignation, and the silence with which the remarks of the presiding officer were listened to. *Malevolence only could misconstrue, and has misconstrued, into their opposite, his words of appreciation and regret.* There is one great gratification even in that resignation of his. His good will toward the Academy is best exhibited by his staying as long as he did, under rather peculiar circumstances, and moreover we shall know, by the gift or his library which he bequeathed to the Academy, that the latter was dear to his heart. For the Academy not to speak words of praise and remembrance in behalf of his memory, in this hall which he graced and in which he taught, in spite of suggestions and even demands to the contrary, of a personal character; not to keep his memory green among us, is an impossibility. As it is for us, so for the medical men of the country. His name and reputation form part of the history of our profession, and this Academy means to honor its dead who have gone into history.

In listening to or reading the eulogies of the dead, I have often been struck with the well-meant, but still obtrusive, exaggerations of their characters and services. It then appeared to me that the writer buried the memory of the friend under an oppressive weight of high-strung flatteries. It reminded me of the manner in which an inconvenient beggar is forever cast aside by buying him off with a large sum. That plan may do well enough for the mediocre, who never excelled, and therefore is extolled for once. But if there be any among us who rise above mediocrity and average, or those even whose intellectual stature fills a large space between the soil on which their feet walk, and the skies to which their brows are turned, let them, while they live, harbor the ambition, or when they are dead, enjoy the honor of serving mankind even after and through their very deaths. To accomplish that, let the truth be stated, and the truth only. Thus it was the truth only I aimed at in this brief sketch. As its object was great, I found it an easy task to omit the trite platitudes of a commonplace eulogy.

Austin Flint had great advantages, and developed and utilized them for the benefit of the many. Born with an enviable inheritance, he enjoyed a thorough general and special education. He had great physical endurance and uniform health, an imposing presence, pleasant manners, and an equable temperament. With physical

[1] Journal of the Am. Med. Assn., Minneapolis.
[2] Appleton's Journal for Literature, Science, etc.

and intellectual powers he combined indefatigable love of work, which he performed systematically and energetically. He was a thoroughly modest man, who knew how difficult it is to master the depths of knowledge; thus he had an unusual degree of common sense, which limits aspirations and aims. Thus he became thorough in what he undertook to practise and to teach. Thus he was successful in practice and enjoyed the confidence of both the profession and public. As a teacher he is remembered by thousands; his pupils loved him and his colleagues honored him. His writings obtained for him a national and international reputation. There was no place of honor in the possession of the profession of the city, State, or country, which he has not filled. The profession of Europe was anxious to show its respect for him. Thus he lived and worked to an advanced age, disturbed by but few symptoms of evanescing powers, and when the time came he ceased to labor and live on the very same day.

As a profession, let us hope that we shall have many like him.

REMINISCENCES OF PROFESSOR AUSTIN FLINT, M.D., LL.D.[1]

By J. LEWIS SMITH, M.D.,

NEW YORK.

In 1836, Professor Flint, in his twenty-fifth year, and three years a graduate in medicine, commenced the practice of his profession in Buffalo, without acquaintances and with no reputation. In a young and bustling city, with few facilities for study and improvement in medicine, he possessed the qualities which enabled him to create the opportunities which he needed, and to make in time the city of his residence one of the medical centres. Buffalo, at that time without a medical organization worthy of the name, with physicians intent on acquiring and retaining a practice, having no regard for the higher demands of the profession, did indeed seem an uncongenial and unsuitable place for Professor Flint, whose highest ambition was to improve in medical knowledge, and whose life-long endeavor was to make discoveries in the nature and treatment of diseases which would benefit the profession and the world.

Among the first diseases investigated by Professor Flint after his settlement in Buffalo were those due to marsh miasm, and it was not long before he had made a sufficient number of observations to enable him to publish some novel but correct views in reference to their treatment. In 1841, forty-five years ago, the *American Journal of the Medical Sciences* published from his pen a statistical paper, designed to show that intermittent fever, which he had treated among the troops stationed at Buffalo, required no preparatory treatment by mercurials or otherwise before the use of quinine, and that quinine would control the disease more certainly and with safety, if given in the intervals of the paroxysms in as large doses as ten or fifteen grains. Both these opinions, then new to the profession, and contrary to the usual practice, attracted attention, since they were supported by statistics; and, as we all know, they are now accepted as true, and the present mode of treating the disease is the same as he recommended.

In the same year he published a paper on dyspepsia as related to the state of the mind. From this time, during his entire life, he was a frequent contributor to the medical journals. Among his early papers, that to which I think he attached the most importance bore the title, "The Pathological Relations of the Medulla Spinalis;" it was published in the April number of the *American Journal of the Medical Sciences*, in 1844. This paper was also statistical, the views expressed in it being derived from an analysis of fifty-eight cases. The opinions contained in this article, as well as the instruction upon the same subject, which in former years he never failed to give to each class of students, have been of great value to the profession. Patients in a depressed state of system, and especially the anæmic, frequently have pain and tenderness at some point upon the lateral or anterior aspect of the trunk, and pressure along that part of the spine where the nerves originate which supply the affected part increases the pain, and is therefore a safe and certain means of diagnosis. When pressure upon the spine intensifies the pain, the latter is neuralgic, and not inflammatory; and yet the mistake is often made of diagnosticating an inflammation, and treating the patient accordingly, when the simple test mentioned above would have corrected the diagnosis.

Professor Flint recently stated to the writer that many years after the appearance of his paper in the *American Journal of the Medical Sciences*, he was still more deeply impressed with the importance of the subject upon which he wrote, when in accompanying the most distinguished clinical teacher in Europe through the wards of a Parisian hospital, he was able to correct, by the simple tests with which he was familiar, the diagnostic error of the professor, who had stated that one of the patients whom they were examining had "*péritonite*."

My acquaintance with Professor Flint commenced in 1851, when a medical student in the Buffalo Medical School. The *Buffalo Medical Journal*, established and conducted by him, was then in its fifth year. From the ability apparent in its editorials and original articles, many of them from his pen, it was widely taken in Central and Western New York, in the adjoining States, and in Canada, and it no doubt aided very much in drawing students to the Buffalo Medical College, then in its fourth year, and in which he held the Professorship of Theory and Practice.

At this time he read his lectures, and they were listened to with interest and always by the entire class. It was not, however, till the following year (1852), when, as an advanced student, I was appointed one of the house staff of the Hospital of the Sisters of Charity, that I became more fully acquainted with the subject of this sketch. No one more highly appreciated hospital advantages as affording the opportunity for medical improvement than he at this time, and indeed through his whole life. He had previously made use to the best advantage of the clinical opportunities which the old almshouse afforded, and now he had the privilege of studying diseases among a better class of patients, and with better surroundings. During my stay in the hospital every case in the service of Professor Flint that possessed any interest was recorded in his note book, and his thorough examination of patients, in order that the notes might be complete, necessitated a prolonged stay on his part at each visit in the hospital.

The late Professor Bennett, of Edinburgh, said that "a large metropolitan practice is the bane of the profession," since it prevents the proper examination of cases, and the investigation of subjects which are of interest to the profession. Professor Flint appeared to have the same belief, for he seemed annoyed and disappointed when professional engagements in the city prevented his daily visit to the hospital, or compelled a shortening of his stay there. It was apparently his endeavor that each day should add something to his stock of medical knowledge, and to a better understanding of the diseases which he met in the hospital.

It may not be improper to state that at this time some of the more prominent physicians of Buffalo, who had not participated in the founding of the college, were not in sympathy with it. This hostile element in the profession was represented by its ablest men in the board of visiting physicians of the hospital. The college, of course, sustained little injury, for it had a strong faculty, consisting of such men as John C. Dalton, Frank H. Hamilton, George Hadley, and James P. White, but the consciousness of living and working in an unfriendly atmosphere would have been dispiriting to

[1] Read at the memorial meeting of the College of Physicians, April [illegible]

one less occupied in medical studies than Professor Flint. The ill-feeling manifested toward the college, and those connected with it, was apparently ignored by him.

During my stay in the hospital, among the subjects which occupied the attention of Professor Flint was what he designated "Variations of Pitch in Percussion and Respiratory Sounds," and his pocket note-book, in which he recorded his observations, was his constant companion. He contemplated sending an essay relating to this subject to the committee on prizes of the American Medical Association, at its next session, and the interest which he manifested in obtaining the material for the paper seemed to increase from day to day, and was noticed by all who followed him through the wards, and who were often asked to verify his observations. No one who saw the interest which he manifested in this subject, and his careful examination of cases, was surprised when the announcement came from a distant city, and appeared in the daily papers, that the annual prize of the United States Medical Association had been awarded to Austin Flint, of Buffalo.

Another subject which engaged his attention was the differentiation of typhus and typhoid fevers. A considerable number of Irish immigrants were admitted into the hospital having a malignant form of typhus fever, which they had contracted on shipboard, and when they reached Buffalo, on their westward journey, they were too sick to go farther. I have never met in this city, in a practice of thirty years, so severe and fatal a form of this disease, in which most of the patients presented a mottling of the surface like that of measles. Although sisters and nurses were stricken with it, some of them dying, each case was thoroughly examined, and the symptoms, and in fatal cases the lesions, were recorded. In due time a statistical paper containing the results of these examinations appeared from the pen of Professor Flint.

To me it was evident that the example of a life so devoted to the study of diseases had a very salutary effect upon the students of the college, many of whom, having no previous knowledge of medicine except what they had learned from the country practitioner and his obsolete books, and having chosen the profession of medicine simply as a means of livelihood, as one would learn a trade, appreciated for the first time the dignity and importance of the calling upon which they had entered, and saw that it merited the consecration of the entire life to its study and practice.

The life of Professor Flint during the thirty years which have elapsed since the period of which I have been writing is known to the profession. That he became the most prominent physician in America, and was honored throughout Great Britain as no other American physician has been, was due to his life-long and uninterrupted study of diseases. Nothing that arose in politics, or church, or society, diverted him from it. His investigation of any disease or subject in medicine which engaged his attention was thorough, and while he treated with proper consideration the views of others, and listened to suggestions from any source, even from students, the information on which he most relied he obtained at the bedside; and he did not express a positive opinion until he had made so many observations that he was certain of its correctness. Therefore no pupil of Hippocrates had greater faith in the teachings of the great master than those who were brought into intimate relation with Professor Flint had in his. Whenever he made a positive statement in regard to any medical subject, those acquainted with him knew that it was true, since it was based on a thorough investigation. In matters of doubt, he always gave prominence to facts which conflicted with theories which he believed to be true.

The success of Professor Flint in his profession seems to me to have been largely due to his practice of taking and preserving notes of cases at the bedside, which he began to do soon after he commenced the practice of medicine, and continued to do for many years, and I think, more or less, till the close of his life. By recording the history and symptoms of a case he made a more thorough examination of the patient, and in time he obtained an amount of statistics which were of the utmost value to him in his writings. Very few discoveries which threw light on the nature of diseases, or were likely to be beneficial in their treatment, escaped his notice. Only a few days before his death he questioned the writer in reference to intubation of the larynx in the treatment of croup, so successfully performed by Dr. O'Dwyer in the New York Foundling Asylum; and at an age when most physicians think of retiring from the active duties of life he continued to devote half an hour each day to the study of German, in order that he might read German medical literature with more facility.

The Sydenham of the nineteenth century is taken from us, but his great work, his "Treatise on the Principles and Practice of Medicine," the revision of which was his last professional labor, remains with us. No book has had a more salutary effect on the medical profession in America than this, for while it is extensively read by physicians in the cities, as well as in country towns, it contains the most recent opinions which have been established by clinical observations and experiments, while the treatment which it recommends is in a high degree conservative, and is that which is accepted by the most skilful and experienced practitioners. The writings of the great teachers in our profession have sometimes, as we know, done harm, more, perhaps, than benefit, like those of Broussais; and even in the writings of so recent and practical a physician as Trousseau there are passages which we now wish had never been penned; but in the treatise of Professor Flint, so painstaking and thorough was he in the investigation of any subject on which he wrote, that, in my opinion, very few sentences can be found in the eleven hundred pages that do not possess enduring worth.

I recently heard him say of the "System of Surgery," written by his intimate friend, the late Professor Gross, that even if its modes of treatment should become obsolete, it would always be valuable as showing the status of surgery in the nineteenth century. A similar remark might be made of Flint's treatise, that it will always possess value as showing the state of medicine in the last half of the nineteenth century, as that of Sir Thomas Watson does in the first half, but this is too low an estimate of so valuable a book. No one can read Flint's treatise without recognizing in it an enduring basis, so that with the additions made to it, from time to time, of discoveries, as they occur in medicine, it will probably continue to be one of the text-books consulted for information and guidance long after the present generation have passed away.

Rabies and Muzzles.—M. Gibier writes to the Académie de Médecine that there has not been seen a single case of rabies for three years at the Imperial Veterinary School of Berlin, although there are as many dogs in Berlin as elsewhere and they are always muzzled. During two weeks in November nineteen dogs suffering from rabies were brought to the veterinary school of Lyons, a city where the practice of muzzling dogs is not in vogue. The *Lyon Médical* observes that this does not bear out the assertion of some fanatical cynophiles that the wearing of muzzles is the cause of rabies.

Bacteriotherapy.—Dr. Salama reports another case of advanced pulmonary phthisis treated according to Cantani's method, by inhalations of bacterium termo. Within five days an improvement was noted, the fever was less pronounced, and the expectoration was diminished in quantity, and contained a smaller number of tubercle bacilli. In two weeks the bacilli had wholly disappeared from the sputa, and the patient began to increase in weight and in general health.

REMARKS ON LATERAL CURVATURE, WITH SPECIAL REFERENCE TO ITS OCCURRENCE IN CHILDREN.[1]

BY SAMUEL KETCH, M.D.,

In the whole range of that department of medicine now specialized as Orthopædic Surgery there is no subject which has attracted so much attention from those engaged in the practice of it as has the study of the problems connected with rotary lateral curvature of the spine. Much has been written in defence of the various theories which have been advanced at different times concerning its etiology, pathology, and treatment, and yet to-day it remains as mysterious in its origin, as complex in its manifestations, and as resistant to treatment as ever. It is but natural, therefore, that in the study of this perplexing disease many ideas which have been advanced should have been received, then rejected, and for the time forgotten, until again presented in a newer garb and made prominent by some unusually zealous advocate. In this way many truths have been transmitted, these being the crystallization, so to speak, of the various theories which have been held from time to time, and in the same way errors have been perpetuated, and of these none has been more commented on than puberty in its relation as a causative agent to the disease in question.

It is not the object of the present paper to discuss the whole subject of rotary lateral curvature of the spine, but believing that the isolated study of certain points connected with it will do much to place our collective knowledge on a surer and more scientific basis, it will be the aim here only to investigate the relations of age and sex to this deformity, and thus, if possible, arrive at conclusions, supported by statistics, concerning the period of life at which we may first look for its manifestations. In watching the progress of a case of rotary lateral curvature one cannot fail to be impressed by the very slow, but nevertheless constant and progressive character of the disease. Its insidious nature, both in onset and course, are among its most striking characteristics, and it is against this element of progression that we have mostly to contend. Whatever the primary cause of the disease may be, it must be something which is remote in its origin and constant in its action, and what are ordinarily described as causes are frequently only effects of it. Thus there must be something which acts long before these effects are noticed, and we must look beyond these to find the causation of an idiopathic rotary lateral curvature. Whilst we fully recognize the difficulty of obtaining pathological evidences early in the disease, owing to the fact that it is not one which ends in death *per se*, we believe that the study of analogous deformities in other parts of the body is beginning to show us the right path.

The formidable deformity which most cases of rotary lateral curvature present to us when first seen, precludes the possibility of a rapid development of the disease, months and years being occupied in its advance. Of the so-called cases of "pernicious" or rapid lateral curvatures, I have seen no examples, and when they occur I am sure they are connected with acute coincident troubles. Yet, as will hereafter be shown, the mass of authorities speak of the disease as being for the greater part connected with a certain period of life, namely, *the age of puberty*. That the cases most frequently present themselves to us at this age there can be no reasonable doubt, but the explanation of this fact can be made apparent in many ways. On close questioning, the histories of most of the cases I have developed show that the parents or attendants have noticed something peculiar about the patient for a long time, this peculiarity being shown either by a slight irregularity of form or of the position of the patient in sitting or standing. This, however, on account of the painless character of the affection, has not given rise to anxiety, or been thought of sufficient importance to demand more than passing attention, either being entirely ignored or more often ascribed to habit. Arrived at puberty, however, when the question of form and dress becomes a matter of greater importance, especially in females, in whom the majority of cases occur, the patients are subjected to a more rigorous examination. This at once reveals the presence of a curvature, and usually of a character far advanced. Being discovered at this time it has been assumed that there must be a causative connection between this epoch and the disease. While we cannot deny that the conditions at this time are most favorable to the increase of a curvature, as indeed they are of any pathological condition which may be present in a latent form, and which may be well exemplified, for instance, by the apparently sudden invasion of phthisis at this period, it does not follow that this is the time of the origin of the trouble, but would rather tend to prove that the general efflorescence was the means of bringing the disease into more active participation. It has been my experience to see very few cases of lateral curvature at this age where the symptoms would indicate that they were of recent origin, and where they occurred the curves were mostly of the character termed functional, due to relaxation of the long spinal muscles, rather than a typical rotatory curvature. Thus it becomes a matter of great importance, in determining the time of origin in rotary lateral curvature, that the first appearance of the symptoms should be carefully ascertained, this being our criterion, rather than the age at which the curvature is first discovered. It cannot have failed, in this connection, to have struck those familiar with this class of cases, what a large rôle the dressmaker plays in their discovery. It is among the most frequent answers given to my inquiry as to the duration of the trouble, to be told, "Only a few weeks," and on asking for the first symptoms noticed, to be told that the dressmaker had called attention to the high shoulder and prominent hip.

Another remarkable thing is the complacency with which the disease itself is usually regarded by the parents, a fatal idea prevailing that the patient will "grow out of it," and which is not uncommon in regard to certain deformities where the element of pain is either very slight or totally absent. Should the disease have been attended with the pain consequent on an inflammatory lesion of the spine, such as occurs in Pott's disease, the many cases of terrible deformity seen in lateral curvature would probably occur less often as a reproach to the orthopædic surgeon. In the painless and insidious character of the affection lies another obstacle to the early discovery of the disease, and in these elements are comprised the greatest danger to the patient. The very earliest indications of the disease, namely, those which are shown by some peculiarity of posture, are the ones which, being ascribed to habit, are undoubtedly the efforts of nature to equalize the forces acting on the spine in order to preserve the integrity of its curves, and accomplished through the action of its muscles. Here the patient endeavors to place himself in that position where it is most convenient for their perverted action; but although, like the reflex muscular spasm of joint disease, it is in a measure protective, it is so to the ultimate disadvantage of the spinal column, unless relieved by suitable treatment. This habit, which has been assigned a prominent etiological position, is in reality a result of the disease, and not a cause of it, and I doubt exceedingly whether any habit, however long continued, will, unaided by other factors, do more than result in a functional non-rotary curvature. The proper appreciation of these early symptoms, and an immediate examination of the spine would, at this period, undoubtedly give indi-

[1] Read before the Orthopædic Section of the Academy of Medicine, January 22, 1886.

cations of danger; and as in joint and Pott's disease, give the surgeon the best opportunity for checking its further progress.

For the past eight years my attention has been called to the occurrence of many cases of lateral curvature in children presenting themselves at the New York Orthopædic Dispensary, and in most of them I found all the symptoms of advanced scoliosis. The histories of these cases, as a rule, are negative. Nothing irregular has occurred at birth; hereditary histories, with a few exceptions, showed no especial peculiarities of form or of deformities in parents or relatives; the patients have generally been healthy children, and at time of examination were in good general condition. Various causes, as stated by parents, were assigned, these being for the greater number unknown, and in others were attributed to accidents or illness. The local symptoms referable to the deformity were identical with those observed in adolescent cases. They had the prominent scapula, the protuberant hip, and the well-marked rotation of the vertebræ observed at a later period of life.

In none of the special works on lateral curvature of the spine which I have been able to consult do I find more than the scantiest mention made of this disease occurring in childhood, and although cases not infrequently come under the notice of the orthopædic surgeon, they would seem rather to be regarded as rarities than as of frequent occurrence, or as constituting a large and important class of these cases. Thus, Adams, in his "Lectures on Curvature of the Spine," states: "But as to the age at which severe cases of lateral curvature most frequently commence, I have no hesitation in stating that, if *we omit those* which occur in infancy and early childhood, say before five years of age, which are generally of an hereditary character, the next class—a very numerous one—are those which most frequently commence between the ages of seven and twelve years. These cases have also, not uncommonly, a history of hereditary tendency, but in many instances this cannot be traced, and the constitutional cause *seems* to consist in a strumous diathesis. Consumption is very frequently to be traced in the family history, and the death of the mother by this disease is of common occurrence. Whether the cases included in this class are numerically equal to, or exceed those in the next class to which I shall allude, viz., such as occur between the ages of twelve and sixteen years, I am unable to say from statistical data; but, speaking from private practice, I think they are at least as frequent, if not more so. Still keeping below the age at which stiff stays are commonly worn, or tight-lacing indulged in, we have the class of cases of lateral curvature in quickly growing girls between the ages of twelve and sixteen years. *This is assumed to be the typical and popular class of cases by the great majority of authors on lateral curvature.*"

Alexander Shaw, in his article on "Lateral Curvature of the Spine," published in Holme's "System of Surgery," says: "Lateral curvature is incident to youth. Commencing insidiously, without warning from bad health, it can only be stated generally that the first appearance of it may be looked for at about ten or fourteen years of age." And again: "The age at which the deformity commences coincides with that at which a notable change takes place both in the physical and moral constitution of a female."

Bauer, in his work on "Orthopædic Surgery," 1868, speaking of lateral curvature, remarks: "Scoliosis originates most usually at the time of puberty, and in young ladies whose sexual development is protracted; whose menstruation is either imperfect or has not yet made its appearance; whose condition is feeble from rapid growth and confinement, and whose spine is endowed with an unusual degree of flexibility." Furthermore he says: "In summing up these facts, and in excluding from consideration traumatic and dyscrasic causes, we are reduced to a few points, which proves that *scoliosis bears a close connection to a certain age, to the female sex, its evolution, and a certain general condition of the system and the spine.*"

Davis, in writing on the subject of "Conservative Surgery," 1867, says: "There are some facts in the preceding pages that have not been fully considered, and others that have not even been noticed by writers upon this subject, which we think are worthy of attention. We refer particularly to facts in connection with the common form of lateral curvature, commencing about the period of puberty, always, we believe, in connection with it. In the first place, lateral curvature of any form can almost be said to be a deformity confined exclusively to females. The relative number is so great as to render us unable to make any approximation to the proportion, and when it does occur in males it is attributable either to some mechanical cause or to some defect in the nervous system. Therefore, we may say that lateral curvature is a disease peculiar to females. We have said the period of its development is at puberty."

Brodhurst ("Lectures on Orthopædic Surgery," 1865), states that "lateral curvature is the most common form of spinal curvature. It occurs more frequently in the female than in the male sex; it seldom commences after the age of puberty, and it does not commonly occur as a primary affection."

Noble Smith ("The Surgery of Deformities," 1882) says: "Lateral curvature commences most frequently at about the period of puberty, between the tenth and sixteenth years of age, but it frequently occurs at later or earlier periods of life."

Neither in his work ("Orthopædic Surgery," etc., 1879,) nor in his "Spine and Spinal Diseases," does Dr. Sayre make any special reference to this point.

Taylor ("The Pathology and Treatment of Lateral Curvature of the Spine," 1868) remarks: "It is at the age of purberty when the legitimate lateral curvature is formed." He says, furthermore, in speaking of treatment: "It will be remembered that we found that the most common form of lateral curvature occurs only at a certain period of existence; that this period embraces about three years, more or less, about the age of puberty; commencing a year or two before, and the liability continuing not later than the sixteenth year, and often ending much earlier, after which time the formation of the lateral curvature is impossible."

Shaffer, in "A Lecture on Lateral Curvature of the Spine," 1881, states as follows: "It is known, for instance, that lateral curvature develops most frequently in females between the ages of twelve and eighteen years; that it presents as a deformity involving the right side more frequently than the left, and that a peculiar nervous state, called hysterical or emotional, almost always accompanies its development. But the relation of age to this particular lesion is not at all peculiar—almost all chronic diseases have a similar history in this regard; poliomyelitis is rarely anything else than a disease of infancy, joint and spinal diseases are typical lesions of childhood, and lateral curvature develops much more frequently in children and in boys than is generally supposed—with sufficient frequency, anyway, to warrant us in saying that its etiology has nothing to do with either age or sex. It is fair, however, to state that the conditions that finally produce lateral curvature are more likely to exist in girls who are just approaching or who have just passed puberty; but there are many conditions present, just at this particular time, which may have no direct relation either to the sexual development or to the strictly physiological processes then occurring. If typical lateral curvature can exist and progress in babies of six months, or in boys of eight years, or in young men of eighteen, we must take a much broader etiological view than has heretotore been held.

M. Eulenberg ("Die seitlichen Rückgrats-Verkrümmungen"), 1876, Berlin, has given statistics regarding

the age at which scoliosis originates, his researches covering 1,000 cases. The results are as follows:

	Cases.		Per cent.
Before the second year	5	=	0.50
Between the first and second year	21	=	2.10
" " second and third year	9	=	0.90
" " third and fourth year	14	=	1.40
" " fifth and sixth year	3	=	0.30
" " sixth and seventh year	23	=	2.30
" " seventh and eighth year	4	=	0.40
" " eighth and fourteenth year	15	=	1.50
" " fourteenth and twentieth year.	28	=	2.80
" " twentieth and thirtieth year...	7	=	0.70

He also gives the results of an analysis of 500 cases of rachitis scoliosis, as follows:

	Cases.		Per cent.
From birth to the first year	58	=	11.60
Between the first and second year	272	=	54.40
" " second and third year	124	=	24.08
" " third and fourth year	23	=	4.06
" " fourth and fifth year	10	=	2.00
" " fifth and sixth year	7	=	1.04

Eulenberg regards congenital scoliosis as of the rarest occurrence, only having been noticed in connection with congenital rachitis (Malgaigne) or anenkephalics (Depaul). On the contrary, he considers heredity as a marked factor, and that in at least twenty-five per cent., and possibly more, of the cases it is due to this cause. Hueter in his "Gelenkrankheiten," Leipzig, 1877, says: "The disease occurs most frequently in females, and seldom happens before the sixth year. The greatest number of scolioses originate from the sixth to the tenth year, although it is not unusual for them to occur between the tenth and fifteenth year. They rarely originate in the latter years of growth, those occurring at this period having an entirely different etiology.

Vogt, in the "Moderne Orthopädik," 1883, speaks of the disease, when occurring in children, of being principally rachitic in origin.

Dubrueil simply remarks, in his "Eléments d'Orthopédie," 1882, that it is generally toward the age of twelve that scoliosis usually develops.

De Saint-Germain ("Chirurgie Orthopédique") remarks: "It is usually the mother who first notices that her daughter, aged from ten to fourteen years, has one shoulder prominent.

Enough authorities have been quoted in the preceding pages to show the almost universal consensus of opinion regarding puberty as a most important etiological factor, and as the most frequent time for the occurrence of lateral curvature. The exceptions to this have been found in the writings of Adams, Eulenberg, Hueter, and Shaffer.

In order to arrive at proper conclusions concerning the age at which lateral curvature of the spine is most frequently first observed, I have, with the valuable assistance of Dr. Thomas L. Stedman, collected 229 cases, taken from the records of the New York Orthopædic Dispensary, and representing those applying for relief during the years 1878 to 1885, inclusive. The cases selected are only those where the typical symptom of rotation was present. Before giving the results of the analysis made of these cases, I wish to explain that I have divided them into three classes.

1. Those where the deformity was first observed from birth to the twelfth year, or the age of childhood.

2. Those where the deformity was first observed from the twelfth to the eighteenth year, or the age of puberty.

3. Those where the deformity was first observed from the eighteenth year and upward, or the age of complete development.

Of the 229 cases analyzed, 189 occurred in females and 40 in males. The youngest case observed was two weeks old, the oldest, sixty years.

During the first period, or age of childhood, the deformity occurred in 120 cases. Of these 120 cases, 42 occurred in the first seven years of existence; 26 cases being in females and 16 in males. From the seventh to the twelfth year there occurred 78 cases, of which 64 were in females and 14 in males; the total per cent. of cases in this period to the whole number being about fifty-two. During the second period, that of puberty, 94 cases were recorded, 80 occurring in females and 14 in males, being about forty-one per cent. of all the cases collected. In the third period, from eighteen years and upward, 9 cases occurred, 6 in females and 3 in males, or about three and a half per cent.

In 6 cases it has not been stated at what age the deformity was first observed, all of these occurring in females, and constituting about two and a half per cent.

To recapitulate briefly:

	Cases.		Per cent.
During first period	120	=	52
" second "	94	=	41
" third "	9	=	3.5
Age not stated	6	=	2.5

The whole proportion of females to males was about four and one-half to one.

I wish to call attention to the fact that in analyzing these cases I have been particular to ascertain the age at which the curvature was first observed, and not, as has been frequently done, the age at which the case presents for examination. From the nature of the disease previously alluded to, it is fair to conclude that even at this time the disease had been present for a long period. From the results of the foregoing analysis I have arrived at the following conclusions:

1. That rotary lateral curvature is principally a disease of childhood, and may be either congenital or acquired.

2. That puberty, except as a concomitant occurrence, which may by its attendant circumstances increase it or bring it into unusual prominence, has no direct causative influence.

3. That lateral curvature should be looked for early in life, and as a factor in treatment the early inspection of children's spines becomes most important toward the prevention of the deformity.

RECENT MEDICO-LEGAL CASES.

By HENRY A. RILEY, ESQ.,

New York.

A CURIOUS insurance case is reported in the Supreme Court of the Territory of New Mexico. The Travellers' Insurance Company was defending a suit on an accident policy where the insured person was injured by a rupture of the tympanum of the ear, caused by diving while in bathing. The plaintiff testified that the ear was injured by the external violence of the water, and that the injury was really an accident such as would make the company liable. The defendants, on the contrary, asserted that the harm to the ear came from coughing, or at most only from contact with water by diving in the usual and ordinary course of common bathers. The judge decided that the evidence warranted the conclusion that the bather leaped from a plank for the purpose of diving into deep water, and said that "a slight accidental turn of the body while descending into the sea might very easily bring his ear in contact with the water in such manner that the force of his passage through it would create the injury." Consequently the company had to pay. It would seem that an insurance company which pretends to insure against accidents would not be able to do much business if it makes a practice of fighting claims apparently as clearly accidents as this one.

A testator who recently died in Brooklyn made some curious mistakes in his will. He left $2,000 each to a number of charitable institutions, but as the titles of the societies were wrong, the executors declined to pay the bequests until directed to do so by the court.

The matter was referred to a lawyer for examination, and he now reports that the bequest to the Female Em-

ployment Society was intended for the "Brooklyn Female Employment Society." The bequest to the Half Orphan Asylum on Atlantic Street was intended for the "Orphan Asylum of the City of Brooklyn." The bequest to the Graham Institute was intended for the "Brooklyn Society for the Relief of Respectable Aged and Indigent Females." The bequest for the Brooklyn Industrial School was intended for the "Brooklyn Industrial School Association and Home for Destitute Children."

The referee having reported in favor of paying the bequests to the institutions which seemed really intended to be benefited by the will, the court has directed this to be done.

The estate has suffered pecuniarily by the neglect to have the will carefully drawn, and the moral is an evident one.

Washington is now the headquarters for a stubborn fight between the oleomargarine and anti-oleomargarine men. The measure, which is proposed by the farmer element, is a tax upon all oleomargarine exported. This was a mode of attack thought to be certainly constitutional, and Congress has without question jurisdiction over general commerce. The outcome is quite uncertain, as thus far there has not been much done except skirmishing along the line. In Connecticut the farmers have influence enough to get a law through the House which will make the persons using the imitation quite uncomfortable. All stores selling oleomargarine must have signs plainly stating the fact; hotels, restaurants, and boarding-houses are required to place notices where all guests can see them. If a baker uses the imitation or sends a wagon about with his wares he must put a sign on the wagon with the legend "Oleomargarine Used Here." The penalty is a fine of from $5 to $50, or imprisonment for thirty days.

The authorities of Stockton, Cal., have been trying the health dodge to drive out the Chinese, but have found the Circuit Court of the United States in the way. An ordinance had been passed to regulate the laundry business, which prescribed certain parts of the city where the business could be carried on, and certain other portions where it could not. The forbidden portions turned out to be the habitable parts of the city, and the area where the business was to be carried on without hinderance proved to be uninhabitable marshes. The court said that such an ordinance meant simply destruction to the whole laundry business, and was so intended. It was not proper to regulate a business in such a way as to inevitably destroy it. The great objection, however, was that it was unconstitutional; the law of the land permitted the carrying on of lawful occupations, and as the regulation might affect Americans as well as Chinese, it was void. The meaning of the ordinance, Judge Sawyer said, was "The Chinese must go," but they could not be forced out in an illegal way. This is not the first instance where the courts have stood out honorably against the unjust persecution of the Chinese.

Remarkable Fecundity.—Dr. F. W. Putnam, of Binghamton, N. Y., writes: "July 21, 1884, I delivered Mrs. H. B——, a German lady forty years of age, and married twenty-two years, of her twentieth child. February 16, 1886, I delivered her of her twenty-first child. All have been single births except one pair of twins."

Cancer of the Stomach.—Many remedies have been proposed for the relief of the pains of carcinoma of the stomach, among others chloroform and cocaine. The following is recommended as of special efficacy by Germain Sée: Tincture of hyoscyamus and tincture of conium, each two drachms; tincture of gentium, one drachm; oil of anise, two drachms. Of this from ten to thirty drops may be taken after each meal.—*La Riforma Medica.*

Clinical Department.

TRYPSIN IN DIPHTHERIA.

Dr. E. W. Saunders, of St. Louis, Mo., writes: "I wish to call the attention of the members of the profession who have not used the new remedy, trypsin, to its efficacy in dissolving diphtheritic membrane. In every case in which I have tried it, all the membrane in sight was dissolved in less than one day, and in one case of extensive formation in the fauces, and also in the larynx, it certainly retarded the fatal issue. The symptoms of stenosis were only partially relieved, owing, no doubt, to the fact that the solution was not effectually applied to the larynx, and to the additional fact that the œdema of the glottis persisted. Tracheotomy was not urged, as the systemic infection was profound. The solution which I have used is of the strength of fifteen grains to the tablespoonful of water, with five grains of bicarbonate of soda added. This is sprayed upon the parts once every half-hour until the membrane disappears. The solution should be kept in a cool place."

SCARLATINA IN UTERO.

Dr. Wilson Saffin, of Carthage, O., reports the following case: A lady of good general health, who had had scarlatina when young, was delivered of a male child, labor being normal and of short duration. During the two weeks preceding delivery she was in constant attendance upon her older child, who was suffering from malignant scarlet fever, and who died three days after her confinement. During the first week of this child's illness the mother contracted a very sore throat, characterized by intense hyperæmia and involvement of the submaxillary glands. Immediately after delivery, upon examination of the child, the characteristic rash of scarlatina was observed. The disease was well marked, and ran a course of nine days. Desquamation occurred on the fifth day, and was as natural and well marked in large and small flakes as in any other and older child. The temperature ran from 100° to 104°, and was highest on the third day of life. Considerable nausea and diarrhœa were manifested on the third and fourth days, but no other symptoms than those mentioned presented themselves. The mother and child both made a good recovery, although the woman was confined in the same room in which her other child died. Dr. Saffin diagnosed the case as one of scarlatina in utero, as the rash was fully developed at birth.

VACCINATION IN PULMONARY PHTHISIS.

Dr. John W. Taylor, of Crawfordsville, Ind., writes that some years ago his brother, Dr. H. W. Taylor, conceived the idea of vaccination in the treatment of pulmonary phthisis. A case presented itself, showing cough, night-sweats, progressive emaciation, and the physical signs of tubercular lung affection. The patient was vaccinated over the diseased lung, and it "took" handsomely, and very decided relief followed. The patient was now vaccinated repeatedly during the next two years, and each time there was improvement, until finally the virus failed to make any impression on his system. His gradual decline then began, and he died in a year's time. The benefit he derived from these repeated vaccinations was much greater than that obtained from any other procedure. It was subsequently tried upon a number of similar cases, and every time that the vaccination "took" there was marked improvement, much more, Dr. Taylor thinks, than could be accounted for on the theory of simple counter-irritation. The writer suggests that this plan be tried in hospital practice, in order to ascertain how much value it really possesses. Owing to various causes no experiments on a large scale could be made by him or his brother.

MORPHINE IN THE TREATMENT OF CONVULSIONS OF INFANTS.

Dr. George T. Fanning, of Stony Brook, N. Y., reports the two following cases of convulsions in infants, in which morphine was given with ultimate good results. The first case was that of a girl, two years of age, who, when first seen, had been in rigid convulsions for about two hours. Potassium bromide and belladonna were given at short intervals for nearly three hours without relief, when it was determined to try morphine, and a dose of one-eighth of a grain was accordingly given. In about half an hour the convulsions stopped, and the child stopped breathing at the same time. Artificial respiration was at once begun, and kept up for nearly an hour, at the end of which time natural breathing began again. The second case occurred in a boy, two and a half years old. Supposing the convulsions to be due to intestinal irritation, Dr. Fanning ordered an emetic and an enema, and gave chloroform to relax spasm. The convulsions ceased, and the writer went away, but was recalled in about an hour, the messenger stating that the child was worse than ever. He was found in a very rigid condition, with one pupil widely dilated and the other contracted. After an unsuccessful trial of chloroform, one-thirtieth of a grain of morphine was given hypodermically, and in an hour one-sixteenth of a grain more. The pupils both became contracted, the breathing was slow and stertorous, but the convulsions continued on one side. The chloroform inhalations were continued for about two hours, when improvement occured very slowly, and the child finally recovered.

A CARBUNCLE CURED BY A GONORRHŒA.

Dr. F. N. Smith, of Allentown, N. Y., writes: "I had been treating a young man for boils and carbuncles some ten days, when, on one day, a large carbuncle on the back of the neck was just on its way toward maturation, acutely painful, and preventing all work—my patient was a railroad-bridge builder. The next day, very early in the morning, he came to me, saying that his carbuncle was about well, but that he had a private disease, just showing itself that morning, and would like that attended to now. On examination I found a well-marked case of gonorrhœa. He had no more trouble with carbuncles from that day; the specific disease passed away in due time. There is no doubt that the occurrence of the gonorrhœa had the effect of arresting at once the progress of the carbuncular inflammation."

UNUSUAL SOURCES OF INFECTION IN THE PUERPERAL STATE.

Dr. J. J. Smith, of Boston, Mass., sends us a report of two cases of infection in puerperal women, which he regards as of interest, as illustrating the sometimes unsuspected sources from which such infection may come. The first case was that of a woman who was confined in a room directly over one in which two children were sick with measles. The windows in both rooms were kept open, while the temperature was maintained at 70° by means of a fire. The woman was also instructed to wash out the vagina daily with a one per cent. solution of carbolic acid. On the morning of the third day she awoke with a severe headache, and soon had a chill lasting half an hour; the pulse was 128, and the temperature 104°. The lochia disappeared, profuse sweating occurred, and no milk was secreted. These symptoms continued for a few days, and subsided after the children had recovered from the measles. The second case was one of normal labor, with an exceptionally good convalescence. Some eleven days afterward Dr. Smith was called to vaccinate some other members of the family, and, on entering the room in which his former patient was, noticed a very strong and disagreeable odor. On inquiry, he learned that a drain in the yard had just been opened. He advised that the rear window be closed, and ventilation be secured from the front of the house. This advice was at once acted upon. But the writer was called the next morning, and was informed that the patient had a very severe headache. She had soon after a chill, lasting nearly an hour; the pulse was 120, and the temperature 103⅘°. There was some sweating, and the milk was reduced nearly one-half in amount. After a few days, during which time the drain had been closed, these symptoms gradually wore away and convalescence proceeded uninterruptedly. There was no fœtor to the lochia at any time in either of these cases. Dr. Smith does not assert that infection certainly occurred either from the measles or from the sewer-gas, but he regards it as very probable, since there were no lacerations, nor was there any evidence of decomposing blood-clots or of fragments of decomposing placenta in the uterus.

Progress of Medical Science.

Non-Operative Treatment of Dupuytren's Contraction.—Dr. Costilhes has collected a number of cases of contraction of the palmar fascia, from a study of which he concludes that, though local causes may often play an important part in the production of this affection, the prime and predisposing cause is to be found in a general dyscrasia, such as rheumatism, gout, diabetes, lead-poisoning, and perhaps also syphilis. Far from being usually progressive, as is commonly supposed, the disease, he maintains, is often stationary, and may even show periods of spontaneous improvement, and a purely medical treatment is frequently productive of excellent results. The author relates some cases in which a cure was obtained by the local treatment recommended by Vulpian. This consists in the prolonged use of the following ointment: Tincture of iodine, one-half drachm; iodide of potassium, two and a half drachms; lard or vaseline, five drachms. This ointment should be applied liberally over the entire surface of the palm, and over this is placed a double layer of wadding retained by a few turns of a bandage. The application is removed once a day until the epidermis of the palm is entirely exfoliated. The results are sometimes very rapid, so that a notable improvement may be obtained within a fortnight. To this treatment may be added with advantage, in certain cases, the internal exhibition of the iodides and methodical massage of the affected parts.—*Giornale Internazionale delle Scienze Mediche*, January, 1886.

Albuminuria in Strangulated Hernia.—Dr. J. Englisch found albuminuria present in thirty-two out of fifty-four cases of strangulated hernia. It was manifested almost immediately upon the occurrence of strangulation, and the greater the degree of the latter the more pronounced was the albuminuria. There was no albumin in the urine in the cases observed of strangulated hernia of the omentum or epiploic appendages, nor was there any in simple inflammation of the hernial sac. The albuminuria was very marked in gangrene of the intestine, and after the release of the strangulated gut by operation the albumin usually became gradually diminished in quantity. In fatal cases of strangulation the albuminuria was most marked, and the quantity of urine became less as that of the albumin increased. The author believes that death in certain cases of strangulated hernia, in which no sufficient explanation for it can be found post-mortem, is often due to the existence of albuminuria. He deduces a practical conclusion from his studies, which is, that when albuminuria appears in conjunction with strangulated hernia, no attempts at taxis should be made, but an operation should be resorted to at once to free the imprisoned intestine. —*Gazzetta Medica Italiana Lombardia*, February 6, 1886.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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INTUBATION OF THE LARYNX.

THE question of operation in croup or laryngeal diphtheria may be said to be yet *sub judice*, although of late years the tide of professional opinion has been setting strongly toward the side of surgical interference. And although authorities are now almost unanimous in advising that tracheotomy be employed at one time or another in membranous croup rather than to let the child die from strangulation, they are by no means at one in counselling an early operation, some maintaining that it should be undertaken immediately upon the appearance of the first sign of stenosis, others averring that it is a desperate measure which is justifiable only when all other means have been tried in vain. And practitioners in general are still very loath to even suggest what they are wont to regard as an heroic measure and one of little practical utility. There is much reason for this. The parents and friends are naturally distressed at the thought of an operation, and, unless they can be assured of its success, will often refuse their assent to its performance. Again, tracheotomy is by no means the simple procedure which some of its enthusiastic advocates, with a greater fund of theory than of practical experience to draw upon, would assume. Tracheotomy performed on the living subject, especially a child, struggling for air, with the larynx rising and falling at each labored respiration, and with the blood pouring from the turgid veins to obscure the delicate field of operation, is one of the difficult tasks of the surgeon, and, taking into consideration the problematical chances of final success, is one which he assumes with no light heart. It is, therefore, not surprising that the operation has been slow in gaining recognition as a justifiable therapeutical measure despite the fact that many lives have been undeniably saved by its timely performance. And if any more simple operation could be devised which could be shown to be of at least equal value it would be welcomed.

We referred recently in these columns to the method of intubation of the larynx first proposed and practised by Dr. Joseph O'Dwyer, of this city. This method does away with the use of cutting instruments, and consists simply in the insertion of a tube of peculiar shape between the vocal cords, thus permitting of the passage of air into the trachea. Dr. O'Dwyer's experiments have been conducted very unostentatiously, and it is only through some very recent publications in the journals of New York and Chicago more particularly, that we have been able to obtain any data upon which to base an estimate of the merits of the procedure. Every new therapeutical measure must be judged by its results, and if on extended trial it cannot prove that it is better than some older and tried remedy, it deserves to, and surely will, fall into oblivion.

The largest number of reported cases of intubation of the larynx for pseudo-membranous laryngitis have been performed by Dr. F. E. Waxham, of Chicago,[1] who has had 17 cases with 8 recoveries; Dr. Dillon Brown[2] reports 15 cases with 4 recoveries; Dr. E. F. Ingalls,[3] 2 cases, both fatal; and Dr. W. P. Northrup,[4] one successful case. In addition to these, Dr. A. B. Strong[5] has employed the method with success in one case of acute catarrhal laryngitis.

These are all the published statistics which we have been able to discover in a somewhat hasty search, and, excluding the case of catarrhal laryngitis, we have 35 operations with 13 recoveries, or slightly over 37 per cent., certainly a very favorable showing, when we consider that nearly one-half of the cases were foundlings, and many of them infants.

If now we turn to the results of tracheotomy we find a smaller percentage of recoveries, taking the statistics of hospital and private practice together, as has been done in the case of intubation. Gay[6] states that of 206 cases of tracheotomy performed for croup in the Boston City Hospital during twenty years there were 65 recoveries, about 31 per cent., and in his own practice he has had 29 recoveries in 86 operations, nearly 34 per cent. Of 77 cases operated upon during the year 1885 in the same institution, Lovett[7] states that 20, or nearly 26 per cent., recovered. These results are not very different from those formulated by Agnew[8] in a study of upward of 11,000 cases, and we may therefore assume the average percentage of recoveries after tracheotomy to be not far from 30, although Solis-Cohen[9] is disposed to regard the operation in a less favorable light, notwithstanding his own brilliant series of successes.

We thus find that Dr. O'Dwyer's method already compares very favorably with tracheotomy as regards the saving of life, while certainly, to consider it from an æsthetic point of view, it is much to be preferred. It is, however, too soon to pronounce absolutely upon its merits, for the figures are too small and the operators too few to serve as anything more than an encouragement for further trials. It is only after a method has become in a measure popularized, and the number of cases has mounted into the hundreds, that we can form an adequate judgment of its worth. But if intubation of the larynx proves itself to be as valuable as these first essays would lead us to hope, it will be accounted one of the great advances in this age of medical discoveries, and we may only wish that such will be its fate.

[1] The Chicago Medical Journal and Examiner, June, November, and December, 1885, and March, 1886.

[2] The Medical Record, April 17, 1886.

[3] Journal of the American Medical Association, February 6, 1886.

[4] New York Medical Journal, April 3, 1886.

[5] The Medical and Surgical Reporter, March 27, 1886.

[6] Reference Handbook of the Medical Sciences, vol. iii., Article Croup.

[7] The Medical Record, April 3, 1886.

[8] Principles and Practice of Surgery, vol. iii.

[9] International Encyclopædia of Surgery, vol. v.

BACTERIA VERSUS LEUCOMAINES.

NOTWITHSTANDING the rapid spread and very general acceptance of the theory of the bacterial origin of infectious diseases, there are yet many who are still unconvinced of the truth of the new doctrines, and not a few who are absolutely incredulous. The theory is certainly a very plausible one, and seems to be borne out by many incontestable clinical and histological facts; and its opponents have been hampered by their inability to formulate any other theory, by which the phenomena of contagion could be explained, which could rest upon tangible and indisputable facts. The results of some recent investigations of M. Armand Gautier and others have, apparently, at last given them a rock, or at least a raft, upon which they can rest their cannon and fire their shots into the enemy's fleet without themselves being swamped by the recoil. And we may now see the war begin in earnest.

The Academy of Medicine of Paris was the scene of the first effective battle. It was opened by M. Gautier, who presented a paper embodying the results of his investigations concerning the animal alkaloids, ptomaines, and leucomaines, found respectively in dead and in living tissues, and which were capable of inducing toxic symptoms similar to those caused by many of the vegetable alkaloids. One of these leucomaines, he stated, had been isolated from the tissues of the spleen and pancreas by Kossel, of Berlin. It was formed in the living organism by the destructive decomposition of a complex albuminoid substance known as nuclein, constituting the greater part of cell nuclei, and was isomeric with hydrocyanic acid, its formula being $C_3 H_3 N_3$. Morelle had also discovered in the spleen a second alkaloid, which had been found, by experiments on the lower animals, to be a motor paralyzer and to produce effects analogous to those caused by muscarine and digitalin. He also stated that, in addition to these alkaloids, there are other non-crystallizable bodies, formed in the living organism as a result of vital processes, which are even more poisonous than the leucomaines and are capable of producing an intense auto-infection. The poisoning from these substances differs from that caused by leucomaines in that it is accompanied by fever.

M. Peter, who has always been one of the most active opponents of bacteriologists in general, and of Pasteur in particular, hailed this communication as marking a new era in medicine. This discovery, he exclaimed, freed scientific medicine from the thraldom of bacteria; the phenomena of disease were the result of vital actions, were produced within the organism itself by living and active cells, with which microbes had nothing to do. All through life, he said, there is a continual circle of change, new elements are brought in, old ones are removed, and the "cadaveric portion," the result of the wear and tear of the tissues, is eliminated. Whenever the production of these effete matters is in excess of the powers of the emunctories to get rid of them, whether through increased waste of the tissues or decreased power of elimination or destruction, the phenomena of disease arise. The disease so produced will vary, according to the greater or less accumulation of the toxic material, all the way between typhus and a mild ephemeral fever. Cholera, too, can be more easily explained as a poisoning by ptomaines or leucomaines than as the result of a secretion from the comma-bacillus. The speaker went much further than M. Gautier, who admitted that there were certain diseases, such as the eruptive fevers, in which one must recognize the action of a contagious germ coming from without.

M. Cornil replied at some length to this arraignment of the bacteriologists, and maintained that M. Peter had failed to offer any satisfactory substitute for the prevailing theory of contagion. He said that a disturbance of equilibrium between the different parts of the economy was indeed a most important condition in the pathogenesis of infectious diseases, in that it gave occasion to the development of the specific micro-organisms; but how was it possible to explain, other than by the intervention of these, the diversity of form of infectious and contagious maladies? Certain forms of bacteria were found constantly associated with the distinguishing phenomena of certain diseases, and there must be some reason for this. It had never been shown that microbes were formed *de novo* within the organism, and M. Peter had failed to account for their presence in disease.

It is unnecessary to reproduce the arguments of those who contended for the doctrine of infection through the agency of micro-organisms, for they are familiar to all. Thus far in the discussion the bacteriologists seem to have had the best of the argument, but many of the facts brought forward by M. Gautier are new, and there has not yet been time to digest them and to study them in all their bearings. M. Peter's followers are like a newly-equipped army fighting with strange weapons, with the use of which they are not yet familiar, and we cannot judge from the first battle what they may be able to accomplish when they have learned how to handle effectively their new arms. And though the best generals are now on the side of the bacteria, it does not follow that the leucomaines will not be able to make a good fight for recognition.

A CRITICISM OF THE NEW YORK ACADEMY OF MEDICINE.

THE New York correspondent of the *Journal of the American Medical Association* sends to that journal a criticism upon the New York Academy of Medicine which will, we think, be looked upon as unwise and unnecessary, if not actually malicious. The writer refers to the various changes which have been made in its organization, and admits that many of these are improvements. In fact, the only point which he criticises is the alleged removal of all ethical elements from the Constitution and By-laws.

"Practically," he says, "the only reference to the matter of discipline now found is in the eighth article of the Constitution, in which it is provided that the Academy may, by a three-fourths vote of the resident Fellows (the printed call for the meeting having contained a notice of the motion to suspend or expel), suspend or expel a Fellow 'for violation of its regulations.' The only other reference to discipline in the Constitution is in Article VII., where it is stated that the certificate of fellowship may be revoked for cause; but as there is no provision whatever for the manner in which this revocation is to be accomplished, it really amounts to nothing. The only reference of the kind in the By-laws is in the eleventh sec-

tion of No. X., which reads as follows: 'It (the Council) shall, on a written statement signed by a complainant, and duly forwarded through the Recording Secretary, take cognizance of any complaint against a Fellow. The Council may, after investigation, dismiss a complaint or transmit its finding thereon to the Academy for further action.' From this it will be seen that the matter of disciplining is therefore wholly comprised in Article VIII. of the Constitution, which, as just mentioned, prescribes that he may be suspended or expelled for violation of the Academy's regulations. As there is nothing whatever in these 'regulations' of the faintest ethical import, it is evident that a Fellow can be suspended or expelled solely for a breach of certain routine rules. He may be a debauchee or sot, a blackleg or a thief, but so long as he acts in accordance with these 'regulations,' the Academy cannot touch him; and if it attempted to do so, the defence that he had not violated the regulations would hold good in any court of law. There is not even the saving clause of 'conduct unbecoming a gentleman' anywhere to be found.

"Furthermore, it is not necessary, so far as any statutory provisions are concerned, that in order to belong to the Academy a person should be a *regular* graduate in medicine. So far as regards any restriction in the Constitution or By-laws, a homœopath, eclectic, 'physio-medical,' 'herb doctor,' or any kind of a charlatan whatever is entitled to become a Fellow if only he is the possessor of a diploma or license, and has resided in New York or its vicinity for three years. There is absolutely nothing said about what sort of a college or other body the candidate must have derived his diploma or license from; it is simply required that he "must have been a graduate or licentiate in medicine." It is noticeable that the committee on education, as well as that on ethics, has been entirely abolished."

The conclusion to which the writer points is that the Academy is now not in a position to have representation in the American Medical Association.

It will seem to all fair-minded persons that it would be time enough to attack the Academy when some actual offence had been committed. No one in the city doubts that care will be taken as to the character of its membership. The object of the Society has always been that of a scientific body, and its present organization is intended to promote that object.

After a year of unexampled prosperity and useful work, some one must, forsooth, cry out that the Academy has no Code! Well! neither has the French Academy. It does not live among barbarians, and its membership is of such a character that it does not need to incorporate the Ten Commandments into its By-laws in order to keep out rascals. Doubtless there are societies which do require such written safeguards, but the New York Academy, we presume, believes that they are not necessary for the prosecution of its work.

THE LAST VANDERBILT GIFT.

THE College of Physicians and Surgeons of this city has now received half a million dollars for a college building and its endowment, a quarter of a million for a Maternity Hospital, and a quarter of a million for a Dispensary. Including considerable already owned by its faculty, the institution is now by far the richest medical college in the country. As its management is in the hands of wise and conservative men, there can be no doubt but that it will before long do educational work, which will very greatly redound to the credit of our city and country.

We trust that it will soon remove the reproach which now falls upon this city, of having no medical college, except the Woman's, which compels a three years' graded course.

ANOTHER OBJECTION FROM ABROAD TO THE WASHINGTON MEETING.

DR. L. H. PETIT, writing in the feuilleton of *L'Union Médicale*, asks what is to become, now that there has been a reorganization of the American Committee of the International Congress, of the magnificent promises made in Copenhagen by Dr. Billings. He says that when the proposition to hold the Congress in Washington was made, M. Verneuil observed that the expense of the voyage would be a considerable tax upon the resources of many European physicians, who would like to attend the meeting if held nearer home; that those who could afford to go were advanced in life and could not stand the fatigue of the voyage; while those who were able to endure the fatigue were young and could not afford the five or six weeks out of their time, and three or four thousand francs out of their purses, required for a trip to Washington. To which Dr. Billings replied that the United States would feel so honored at being the place of meeting of the Congress that he was sure that they would take upon themselves the expense of the voyage and of the sojourn in Washington of the European physicians who might wish to attend the Congress. It was this promise, M. Petit says, which decided the vote of the assembly. Well it might!

We fear, however, were such a promise made and fulfilled, that the District of Columbia would be too confined a space in which to receive and care for the recipients of our oriental hospitality. But the United States is not in that sort of business just now, we imagine. And it is to be feared that our visitors will be obliged to content themselves with the remission of the $10 admission fee, which is promised them, we believe; although the writer from whom we have quoted thinks that that would hardly be a sufficiently tempting bait to allure physicians across the Atlantic, however great may be their love for international medical science.

How large this world of ours is; and how small men sometimes appear in comparison with it!

A COLD IN THE HEAD.

DR. DAVID LEE recently read before the Harveian Society, of which J. Hughlings Jackson is president, a paper on the "Neurotic Treatment of Catarrh." He considers the diaphoretic treatment of catarrh as entirely opposed to the pathological condition, which is a neurosis in which the vaso-motor system is very largely concerned. An impression of cold from draughts, insufficient clothing, or wet clothing, makes an impression on the surface of the body or the cutaneous-nerves which is by them transmitted to the nerve-centres. The effect is not immediately manifested, but after a few hours a chilliness of the surface is experienced, clearly due to a

general vaso-motor spasm of the cutaneous vessels, and accompanied by flying pains and aches in the limbs which are probably really central and not peripheral, and due to disturbed vascular conditions of the nerve-centres themselves. The doctor, after describing the territories which the vaso-motor spasm thus invades, goes on to outline his treatment, the indications being to soothe the reflex disturbance of the central nervous system, to quiet the local congestion and hyperæsthesia of the nasal mucous membrane, and to arrest the flux if it has already commenced. To completely win the confidence of the learned body before whom he read his paper, he tells what he does for himself when he has a cold. He takes forty to sixty grains of bromide of potassium, repeating the dose in six hours, and if necessary repeating it again after the same interval has elapsed. He paints the nasal mucous membrane, especially of the inferior turbinated bones, with four per cent. solution of hydrochlorate of cocaine by means of a camel's-hair brush; and for the flux he uses fifteen minims of the tincture of belladonna in a little water every hour or two, until his throat feels somewhat dry. He says: "Since I have hit upon this plan I have never failed rapidly to arrest my own catarrhs, nor have I failed in any instance in which I have myself been able to superintend the administration of the remedies."

In the discussion which followed the reading of this paper the learned members defended diaphoretics, one because experience had proved that they had been of use; another made a plea for the time-honored theory of a chilled exterior and an overheated interior of the body; while still another thought "diaphoretic treatment most in accord with the natural process of cure."

The contagiousness of colds was also discussed, but, unfortunately, our English brothers did not throw any light on this question, which is evidently often asked to vex the practitioner on the other side of the Atlantic as well as this.

THE HISTORIES OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The occasion of laying the foundation-stone of the new hall for the joint examination of students in medicine and surgery, by the Queen of England, has called to mind the many strange circumstances connected with the history of the Royal Colleges of Physicians and Surgeons. Until the year 1422 there was no restraint in the practice of medicine in England, when "the persons, male and female, who practised physic" were called upon to pass an examination before one of the universities. In 1513 the next step was taken, by giving the bishops and their vicar-generals the power to license practitioners. This plan continued for five years, when Linacre persuaded Henry VIII. to found the College of Physicians. Slow progress was made from this time, and their home was destroyed in the great fire of London; they struggled on, however, until the time of Harvey, who gave a series of lectures describing his then novel views as to the circulation of the blood and action of the heart. Still they lost ground and could not pay their rent, and their building was about to be confiscated and sold by auction, when Dr. Baldwin Harney purchased it and gave it to the College in perpetuity. Matters afterward took a turn for the better, and after changing to a new building in Warwick Lane, eventually moved to their present home in Pall Mall East.

The policy of those who have from time to time controlled this college has been often condemned. Even during the eighteenth century they maintained their high and dry isolation from general practitioners, and insisted on graduation at Oxford or Cambridge as a preliminary to membership. As one of their own presidents once wrote, they were "wrapped up in the contemplation of their own dignity." Evidently too much ignorance, pedantry, and conceit were sheltered by the ægis of their protection.

The College of Surgeons was not incorporated until the year 1800, so that it is quite a modern institution, so to speak. The history of the English surgeons, however, can be traced back to mediæval times, when they had as associates the barbers; for in those days the barber was called upon "to shave, to perform cold affusions, to bleed, and perform operations." They formed part of the London city corporations under a charter granted by Edward the Second. The two branches of the profession did not agree and they parted company, but in 1540 again united, on the understanding that, with the exception of teeth-drawing, no barber should perform any operation. This union lasted two centuries, until 1745, when they finally separated for ever; but the barbers seemed to have had the best of the bargain, for they retained the building, nearly all the property, and even the anatomical preparations and drawings.

The surgeons from this time increased in number, but were bitterly opposed by the physicians, who would not allow them to prescribe any internal remedy, even when in a surgical case it was necessary. As Chevalier remarked, "if a man had but a boil, he must have a surgeon to apply a plaster, a physician to order a purge, and lastly, an apothecary to put it up." Early in the last century there were but two hospitals in London—one received no pupils, and the other but nine at a time; while the barbers, having a monopoly of dissection, enforced rigorously the prohibition of dissection outside their hall.

Happily, all this is now reversed, the city charter was abandoned, and in 1800 they were constituted the "Royal College of Surgeons." With the traditions of Hunter, the great surgeon, and the possession of his museum of priceless value, they have made rapid strides, and with the liberal steps taken in 1844, have to this day increased yearly in importance and public estimation.

The co-operation between the two representative English medical colleges, after so many years of strife and jealousy, will doubtless be productive of much good, and the joint examinations will remove many difficulties from the path of the medical student.

A Bill for an Act to Regulate the Practice of Medicine and Surgery in the State of Iowa has recently passed the Legislature of that State and become a law, though its penalties are not to be enforced until January, 1887. The law is similar in many of its features to the well-known Illinois law for regulating the practice of medicine and surgery.

News of the Week.

Compulsory Vaccination has been established in Japan, since January 1, 1886.

Extraordinary Prevalence of Aneurism among Foreign Residents in Chinese and Japanese Ports.—At a meeting of the Sei-I-Kwai, Dr. Eldridge, in reporting a case of aneurism, said: "That for some reason, as yet unexplained, residents of European blood in the Chinese and Japanese ports are perhaps more subject to this disease than are any other people on earth. In Yokohama, during seven years, aneurism ranked fourth among the causes of death, every case included in the return being undoubted, and nearly all submitted to post-mortem examination."

The Journal of Nervous and Mental Diseases has appeared in the form of a monthly, under the able direction of Dr. B. Sachs.

The Appointment of Dr. E. G. Janeway, as successor to Dr. Flint, in the Chair of Medicine at Bellevue Medical College, is a most fitting one, and cannot fail to be generally approved.

Another State Board of Health.—The bill to create a State Board of Health in Ohio, having already passed the Senate, was passed by the House on April 17th, by a vote of 78 to 12.

Dr. Fancourt Barnes published, some time ago, a German Medical Dictionary, which Dr. George R. Cutter, of this city, claims was stolen from a dictionary of the same kind published by him a year or two before. We learn from the *Journal of the American Medical Association* that the charge is an unjust one, for one reason because Dr. Barnes' work contains 22,000 words, Dr. Cutter's only 13,000. The charge against Dr. Barnes is a serious one, and we should be glad to see his name cleared.

The Chicago Medical Society.—We are glad to learn from the report of its Secretary, Dr. Montgomery, that this Society is in a state of greater prosperity than ever before. It now has a membership of 325, and during the past year held twenty-four meetings.

A Knighthood Declined.—We never before have had the pleasure of recording the refusal of knighthood by an English doctor. Mr. Savory, President of the Royal College of Surgeons, has done this.

Heroism and Rabies.—We are informed of a courageous act on the part of a medical student named Harris, attached to Charing Cross Hospital, who one day last week seized a mad dog which had attacked a lady at the Charing Cross Restaurant. The animal, notwithstanding it was muzzled, managed to bite Mr. Harris in the hand, who did not, however, relinquish his hold, and called a policeman to his aid, who refused assistance until Harris said, "If you do not help me I shall let the dog loose on you." He then managed to twist the chain round the dog's neck, producing insensibility, during which it was taken to the station by four constables. The hero of this exploit left London for Paris on Thursday, accompanied by four fellow-students, to submit to the treatment of M. Pasteur. The dog died two days after its seizure, from rabies.

Extraordinary Subject for a Prize Essay.—The Paris Academy of Medicine has chosen an extraordinary, not to say an impossible, subject for a prize essay this year—"Préciser par une Série d'Observations s'il existe un Traitement Abortif de la Syphilis Confirmée" (to determine by a series of observations if there exists an abortive treatment of confirmed syphilis), upon which M. Diday has suggested that the Academy must have been seized with an economical fit, and that it would be interesting to see if any one could manage to write a paper of four hundred pages on abortive treatment directed against confirmed syphilis.—*The Lancet.*

College Commencements in St. Louis.—The St. Louis College of Physicians and Surgeons has graduated a class of 17, the Missouri Medical College a class of 86, the St. Louis Medical College a class of 18.

The Fifty-second Annual Commencement Exercises of the Medical Department of the Tulane University of Louisiana were held on March 31st. A class of 63 was graduated.

The Columbus Medical College graduated a class of 19 at its Annual Commencement on March 5th.

On Account of the Cyclone which recently devastated Helena, the Arkansas State Medical Society will meet (April 28th) at Little Rock.

International Congress of Hydrology and Climatology.—The next International Congress of Hydrology and Climatology will be held at Biarritz, France, October 1, 1886, instead of Beyreuth, Bavaria, as previously stated.

Medical Association of the District of Columbia.—At a stated meeting of the Medical Association of the District of Columbia, held on the 6th inst., the following were elected officers for the ensuing year: Dr. J. M. Toner, President; Dr. J. W. Bulkley, First Vice-President; Dr. George Byrd Harrison, Second Vice-President; Dr. Lachlan Tyler, Secretary; Dr. S. S. Adams, Treasurer.

Dr. Ed. C. Harwood has been appointed Visiting Physician to the Hospital for Nervous Diseases on Blackwell's Island, to fill the vacancy caused by the death of Dr. Delany.

Sensible Words from the South.—The *New Orleans Medical and Surgical Journal*, the leading journal of a large Southern section of our country, says editorially, with regard to the next meeting of the American Medical Association: "We sincerely hope that the sturdy and conservative members may finally come to an amicable agreement over the policy and plan of organization which best accord with the purposes of the international body. Our foreign brethren demand the local organization of the Congress upon a broad and liberal basis. They demand that the various sub-committees and sections shall be composed of the representatives of American medicine, men of international prominence, regardless of their State residence, their Association membership, or their opinions on questions of medical ethics. The wishes of our invited guests are entitled to some respect. Without their co-operation the coming Congress will certainly lose its international character and become simply a local gathering."

STARLING MEDICAL COLLEGE graduated a class of 28 at its Commencement on March 4th.

THE MEDICAL COLLEGE OF VIRGINIA, at its annual commencement, March 10th, graduated a class of seventeen.

THE INTERNATIONAL CONGRESS AND THE APPROACHING MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The Executive Committee appointed by the "Enlarged Committee" of the Association has been actively at work for several months. Just what it has succeeded in accomplishing no one seems to know. The organ of the Association, and those journals which echo its oracular utterances, assure us weekly of the high degree of success which it is attaining, but give us no particulars. Their assurances, however, strongly resemble those which a late Ohio politician was accustomed to give to the faithful: he would "claim it, and claim it exultingly," until the official returns rendered further deception impossible. But there are many evidences that all is not well with the Executive Committee. They can find plenty of men who will gladly accept the offices, but the men who would honor the offices are slow to accept them. The death of Dr. Flint and the paralysis of Dr. Davis have still further weakened their arrogance. They can have a successful Congress, so far as numbers will render it successful; all will admit that; but unless many of those who are now holding aloof can be induced to assist, the Congress cannot be successful, in the best and proper sense of that word.—*Columbus Medical Journal.*

SIR JAMES PAGET, Professor Burdon Sanderson, Dr. Lauder Brunton, and Sir H. Roscoe have consented to serve on the Commission to inquire into M. Pasteur's method of inoculation for hydrophobia.

A LOW TEMPERATURE.—Dr. G. F. Harvey, of Parsons, Kan., reports in the *Kansas City Medical Index* a case of a young woman who had suffered since childhood from cardiac asthma and emphysema. A few days before death, while suffering from general anasarca, she had a temperature under the tongue of 92° F.; two days later it was 94° F. She died three days subsequently.

THE ACADEMY OF MEDICINE OF ROME has voted to send a delegate to Paris to learn Pasteur's method of prophylactic inoculation against rabies. It is rumored that the German Government will send a commission, composed of Drs. Virchow and Koch, to study Pasteur's methods. M. Pasteur is being loaded with honors, as he has been decorated by nearly all the sovereigns of Europe, for his remarkable discovery of the means of prevention of hydrophobia, and the King of Portugal has just sent him an autograph letter, conferring on him the Grand Cordon of the Order of St. Jacques, a decoration specially designed to recompense scientific merit. This letter was handed to M. Pasteur by Dr. Bournay, one of the doctors who arrived in Paris on the 2d inst. with three children from Portugal, reported to have been bitten by a mad dog. The children are sent at the expense of the Queen, to undergo M. Pasteur's treatment.

A MILLION DOLLARS TO A MEDICAL COLLEGE.—The daily papers of April 17th announced the following: Messrs. Cornelius Vanderbilt, William K. Vanderbilt, Frederick W. Vanderbilt, and George W. Vanderbilt have each contributed $62,500, or a total of $250,000, for the erection and endowment of a new building to be supplementary to the two already endowed, and to be known as the Vanderbilt Clinic of the College of Physicians and Surgeons.

This will be a building devoted entirely to the clinical instruction of students, except the lower floor, which will be a free dispensary. Of the $250,000 donated by the young Messrs. Vanderbilt, $150,000 will be used in the construction of the building, and the balance will be used as the endowment for the running expenses of the clinical school and the free dispensary. The new building will be erected at the corner of Tenth Avenue and Sixtieth Street, adjoining the Sloane Maternity Hospital, and, like it, will be 75 by 100 feet. The Vanderbilt Clinic will be under the control of a board of five managers, in which Frederick W. Vanderbilt will represent the donors, Dr. John C. Dalton, the president of the college, will represent the institution; Dr. William H. Draper, the Board of Trustees of the college, and Drs. Henry B. Sands and James W. McLane the Faculty. To these gentlemen will be entrusted the erection of the building, the investment of the surplus funds, and the equipment and furnishing of the institution. The plan proposed includes the free medical dispensary on the first floor, an amphitheatre for clinical purposes on the floor above, and a number of small rooms for private instruction or instruction in specialties. The Vanderbilt Clinic will not be in the nature of a hospital, as the only cases to be treated here, in the presence of classes, will be those of patients who are able to move about, and who are not confined to beds. The clinical work will be on diseases of the eye, ear, throat, heart, lungs, nerves, and genito-urinary organs, skin diseases, and diseases of women and children. In the great amphitheatre-shaped room all lectures on medicine and diagnoses of diseases which fall under a physician's rather than a surgeon's care will be delivered.

THE LOUISIANA STATE MEDICAL SOCIETY held its annual meeting at New Iberia, on April 14th.

THE CORNER-STONE OF THE NEW BUILDING of the College of Physicians and Surgeons, at the corner of Tenth Avenue and Sixtieth Street, is to be laid to-day. Mr. Chauncey M. Depew delivers the oration.

PROFESSOR PASTEUR PROSECUTED.—Pasteur has been prosecuted for practising medicine and surgery without being legally qualified. The case, however, fell through, his defence being that he employed a duly qualified medical man to perform his operations.

A RIVAL TO PASTEUR.—Hoang-nan appears to prevent hydrophobia when given systematically in full doses, *i.e.*, one to two grammes daily of the powder. So says Dujardin-Beaumetz, who has given it to twenty-four persons who had been bitten by rabid dogs.

THE INNOMINATE ARTERY WAS RECENTLY LIGATURED by Mr. Bennett May, of London. The patient, who so far has done well, was a laborer suffering from a large subclavian aneurism. Dr. V. Mott first performed this operation, his patient living four weeks. Dr. Smyth, of New Orleans, is, we believe, the only surgeon who has successfully tied this artery.

Removal of a Tumor of the Brain.—Dr. J. O. Hirschfelder, of San Francisco, reports a case of brain tumor in which the disease was diagnosticated, its locality mapped out, and an operation performed. The bone was removed, and the tumor found as expected. It was a gliomatous mass, however, and infiltrated so that only a part could be removed. The patient died eight days later. The symptoms pointed to a tumor of the middle part of the right post-central convolution, and it was found in that locality.

The French Association for the Advancement of Science will hold its fifteenth meeting at Nancy, August 12th next, under the presidency of Professor Friedel.

An Unhealthy Country.—Among the 8,259 districts into which Italy is divided, there are 1,876 in which there are no water-closets, or no substitutes for them, except mother earth. In 2,836 districts the dwellings are small and unhealthy. In 1,483 districts the houses have no chimneys. In 4,965 districts meat is not eaten, and 3,637 have no slaughter-houses. Among 10,000 Italians, only 23 are meat-eaters. In 1,437 districts there are no regular physicians. In 1881 there were 104,067 cases of pellagra. From 1835 to 1881 Italy was visited by the cholera seventeen times.

Cholera has reappeared in Italy near Padua; also in France. Several cases suspected to be cholera have appeared in Spain.

Medical Reform Abroad.—Complaints of overcrowding of the profession and of abuse of medical charities are being made in Belgium, Berlin, and Vienna. In the latter city it is stated that there is one physician to every 500 inhabitants. As one-half the inhabitants get medical services at the hospitals, it leaves practically only one doctor to every 250 inhabitants. The free dispensaries are especially charged with injuring the practice of the physicians.

Peach-root Tea is an Efficient Remedy for epilepsy, according to Dr. J. L. Dorset, of Dorset, Va. (*Medical Age*). Three or four ounces of an infusion are to be given daily. Dr. Dorset reports one case in confirmation of his view.

Lanolin, the new basis for ointments, has been used in this city to a considerable extent, and so far it has caused considerable disappointment.

The Microbe of Dengue.—A Texas physician, Dr. McLaughlin, claims to have discovered and cultivated the microbe of dengue. It is found uniformly in the blood of patients suffering from this disease.

The Archduke Charles Theodore of Bavaria, who practises medicine, has obtained permission from M. Pasteur to be present at the inoculations in the laboratory of Rue d'Ulm. The Archduchess, who helps her husband in his professional labors, will accompany him as an assistant.

Sir Andrew Clark paid a professional visit to a lady in the south of France, being absent from London five days. For this he received a fee of $7,500. The lady also gave him a sum of $25,000 for distribution among the London medical charities. The London Hospital and Medical College got $15,000 of this.

For Diabetes Insipidus give valerian, according to Demange. Trousseau and Bouchard also have recommended this drug. Ergot is also much used.

Alveloz in Cancer is a disappointing drug, yet worth a trial, according to late experiments by French physicians.

The Curette and a Caustic are the best things for lupus, according to Unna. The fashionable caustics are pyrogalic acid and ichthyol.

Ichthyol, of which there is now much talk, is described chemically as sulpho-ichthyol-ammonium. The best results from it, says Unna, are obtained by a local application in acne and acne rosacea. It is also useful given internally (gr. xv. daily) in pityriasis, seborrhœa, sicca, and ichthyosis. It is unfortunate that the manufacture of ichthyol is in the hands of a company which has certain patents or proprietary rights over it.

Professor Strümpell, of Leipsic, has received a call to Erlangen. He is to be succeeded by Professor F. A. Hoffmann, of Dorpat.

The Late Austin Flint, M.D., LL.D.—At a regular meeting of the New York County Medical Association, held at the Carnegie Laboratory, April 19, 1885, the following was unanimously adopted:

Whereas, It has pleased God, in the exercise of his Divine Will, to remove from the sphere of his usefulness our esteemed co-worker, Austin Flint, M.D., LL.D., revered abroad but best loved at home; and whereas it is but proper that we take to ourselves that consolation which comes from the rehearsal of his many virtues. Therefore be it

Resolved, That as an Association, to whom he gave his latest work, and ever his cherished counsel, we add our own to the many other testimonies of his worth.

Resolved, That we recognize in him an author of marvellous industry, who has made his impress on the medical thought of the age; modest and just, but still a master of deliberate statement; conscientious in the recognition of the labors of others, and despising not the humblest contributor to that science to which he devoted his life; a practitioner of his art without device; zealous for the dignity of his calling; suave, considerate, and gentle; one who worthily gained the gratitude of his patients, and will ever live in their most blessed memories; a consultant who dispensed rich stores of knowledge, ever judging kindly, more careful of the rights of others than his own, cheery and abounding in charity for his brethren; a teacher, hand-in-hand with his pupil, analytical, painstaking, less eager for glory than exactness, ever approachable, and always ready with a reason for the faith that was in him, and a man in all the walks of life blameless, "who hath borne his faculties so meek," and "hath been so clear in his great office," and who, laboring to the last, hath fallen in sight of the promised land of his cherished hopes. And be it also

Resolved, That we tender to those of his own household and kinship our heartfelt sympathies, knowing full well that to his son his life was a pæan of touching affection, and to his widow one long benediction.

John Shrady, M.D.,
E. S. F. Arnold, M.D.
J. W. S. Gouley, M.D.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 15, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT introduced DR. A. VANDER VEER, of Albany, N. Y., ex-President of the Medical Society of the State of New York.

THE CORRESPONDING SECRETARY acknowledged the receipt of a communication from the Corresponding Secretary of the Nebraska State Medical Society, accompanied by a volume of the Society's transactions.

DR. A. B. JUDSON reported from the Section in Surgery.

DR. H. F. CHAMBERLAIN reported from the Section in Public Hygiene, and asked the Academy to adopt resolutions adopted by the Section, condemning the Cullen Bill already passed by the State Senate, and providing for establishing a manure-dump in the city of New York.

The resolutions went over under the rules, and when brought up subsequently, Dr. Roosa announced that their adoption had been rendered unnecessary by the defeat of the bill in the Assembly.

DR. J. C. PETERS said it was worthy of special note that the defeat of the Cullen bill was due largely, if not entirely, to the vigorous opposition made to it by the committe sent to Albany from the Section in Public Hygiene. The first work of the Section had thus been crowned with success.

DR. H. GRISWOLD reported from the Section in Obstetrics.

DR. STEPHEN SMITH then read a memoir of

ALFRED CHARLES POST, M.D., LL.D.,

which was a calm and dignified exposition of the spotless life and character of our Nestor in Surgery.

DR. A. VANDER VEER, of Albany, N. Y., read a memoir of

S. OAKLEY VANDER POEL, M.D., LL.D.,

which was a chaste, sympathetic, and lifelike delineation of the work and worth of one who had been an ornament to his profession, and whom his profession had been delighted to honor.

THE PRESIDENT, DR. A. JACOBI, read a memoir (see p. 464) of

AUSTIN FLINT, M.D., LL.D.,

in which he paid a glowing and most worthy tribute to the purity, the scholarly acquirements, the eminence, and the great knowledge of his highly distinguished predecessor.

DR. T. HERRING BURCHARD then read a paper (see p. 461) on

PELVIC ABSCESS IN THE MALE,

after which the Academy adjourned.

PROFESSOR R. T. EDES should be credited with the lecture on the subject of "Success in the Medical Profession," referred to in THE RECORD of March 6th. Our account was based upon an Associated Press despatch, which got mixed (as usual). Dr Edes is Jackson Professor, not Professor Jackson.

THE FIRST USERS OF NUTRIENT SUPPOSITORIES.—Mr. Thomas Latham, of this city, writes: "The *British Medical Journal*, Mr. Godlee, and Dr. Barlow are mistaken in supposing the application of nutrient suppositories to rectal feeding to be a new idea. Upward of ten years ago, while with Mr. Sands, of Vanderbilt Avenue, I prepared such suppositories, using Valentine's extract of beef and sufficient gelatine to solidify the extract, care being taken that the mass was soft enough to be readily absorbed."

Correspondence.

OUR PARIS LETTER.

[illegible]

THE INFLUENCE OF THE STUDY OF HYGIENE ON THE DURATION OF LIFE—EPIDEMIC OF TYPHOID FEVER—ANTISEPTIC METHODS—SCURVY—THE LATE ACADEMICIAN FAUVEL.

DR. PROUST, the successor to Professor Bouchardat in the Chair of Hygiene at the Faculty of Medicine of Paris, delivered his inaugural lecture on Saturday last, March 27th, when the amphitheatre was quite crowded, and many of the professors of the faculty also attended to welcome their new colleague. Dr. Proust began his lecture by a graceful tribute to his predecessor Professor Bouchardat, after which he confined himself to the advantages of a proper study and strict application of the principles of hygiene. Before the revolution, the mean duration of life in France was twenty-nine years; it is now from thirty-seven to forty years, and in women it has even been raised to forty-two years. But it is, particularly as regards the mortality in early childhood that this difference is more striking. Before the application of "the law of Roussel," which regulates the duties of nurses toward their nurslings, the mortality used to be thirty per cent. in the Calvados (one of the centres of baby-farming); it is now no more than five or six per cent., it used to be eighty per cent. in the department of the Seine, whereas now it is scarcely twenty per cent. It is also to the progress of hygiene that is due the disappearance of purulent infection from the hospitals, the improved method in dressing wounds contributing in a great measure to the same end. The beneficial results obtained by a more rigorous attention to the principles of hygiene have been in obstetrics still more remarkable. It is not so very long ago when, at the old Hôtel Dieu, a woman awaiting her confinement had to lie in the same bed with a corpse or with a patient suffering from puerperal fever. Even in those times this state of things was strongly condemned, and women of the most sensible class of the community used to go out to the country to be confined. The Constituant then caused the Maternity to be built. In the new hospital, although each patient had her own bed, the mortality was ten per cent., that is to say seventeen times greater than that among women confined in the neighborhood outside the hospital. Professor Tarnier, who is the principal accoucheur of the Maternity, has effected great improvements, which has brought the mortality down to three per cent., and since the strict application of the antiseptic methods during the last few years, it is no more than one per cent. Scurvy, which used to decimate the sailors and those proceeding on long voyages, is now scarcely ever heard of. The disease is due principally to the want of vegetable food, but the administration of lime-juice contributes in a great measure to ward off the disease. During the last thirty years great strides have been made, by means of International Congresses, to prevent the incursion of infectious diseases, and it must be said with some success, a result mainly brought about through the instrumentality of the late Dr. Fauvel, the eminent Academician and hygienist.

At a recent meeting of the Société Médicale des Hôpitaux, Dr. Debove read a note to illustrate the contagious nature of typhoid fever. He was called in to attend five children of the same family suffering from typhoid fever. Another family of six children came from the provinces to live in Paris, which place they reached on November 15, 1885. One of the children was ailing before he left the country. On the 20th he presented all the symptoms of typhoid fever. Another brother was seized with the disease on November 23d and died on January 24th following. A third fell ill on November 29th,

a fourth on December 17th, a fifth on December 29th. The sixth escaped. The children affected with typhoid fever were separated from the others; hygienic precautions were observed, and the linen was disinfected, as well as the dejections, cesspools, and water-closets. From the above cases Dr. Debove concludes that typhoid fever can be contracted by direct contact and added that in Germany it is believed that the germs of typhoid fever are expelled by the dejecta, and, after undergoing certain modifications, are capable of communicating the disease to healthy organisms.

It is usually easy to distinguish the soft chancre from the syphilitic chancre, but as Dr. Balzer observed at a recent meeting of the Société de Biologie, the diagnosis is sometimes surrounded with great difficulty. In this case inoculation is frequently resorted to, but this operation is not always free from danger. Dr. Balzer therefore proposes another procedure, which is applicable to all cases. It consists in examining histologically the products secreted by the suspected ulcerations. If one has to do with a simple herpetic ulceration, it will be found that the secretion contains pus-globules and epithelial cells, the same is the case with a syphilitic lesion. When, on the contrary, it is a soft chancre the latter is found to contain elastic fibres in more or less great number, mixed with the pus-globules and epithelial cells. The explanation of this difference proposed by the author is that herpes and the hard chancre, are ulcerations purely epithelial, whereas the soft chancre is a lesion exclusively dermic. Dr. Balzer had recourse to this means of diagnosis fourteen times, and he was always successful.

Dr. Edward Fournié, the editor of the *Revue Médicale*, died on March 24th after a long and painful illness. He was a distinguished laryngologist and aurist, and was for a long time director of the National Asylum for the Deaf and Dumb. He was fifty-three years of age.

I have also to report the death of Dr. Gillette, which has just taken place at his residence in Paris. He took his degree in 1867, and was a distinguished hospital surgeon.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE ROYAL CEREMONY ON THE EMBANKMENT—THE MEDICINE OF THE PAST—CLERICAL LICENTIATES AND BARBER-SURGEONS—SURGICAL MEDICINE AND MEDICAL SURGERY—HEPATIC PHLEBOTOMY—PARACENTESIS FOR BRONCHIECTASIS—SUPRA-PUBIC LITHOTOMY—THE HYDROPHOBIA SCARE—THE LATE MR. STREATFEILD—THE PARKES MUSEUM AND THE SANITARY INSTITUTE.

LONDON, March 27, 1886.

THE past week has been marked by the occurrence of two noteworthy events in the medical world of London—one social, the other scientific. By the former, I mean the laying of the foundation-stone of the new Examination Hall of the Royal Colleges of Physicians and Surgeons, on Wednesday last, by the Queen in person. By the latter, I mean the discussion at the Royal Medical and Chirurgical Society on the treatment of bronchiectasis by paracentesis.

The royal ceremony, on Wednesday last, merits more than a passing word. The actual participation of the nominal head of the State in the proceedings was in itself noteworthy, and the more so considering the virtual retirement in which the Queen has lived of late years. She was, moreover, not the only member of the royal family present. The pageant was conducted in semi-state, and attracted a large concourse of spectators. "Royal weather" favored the occasion, the bitter weather of a week previous, with bleak east winds, having changed by magic, as if on purpose. The laying the foundation-stone of an examination hall does not in itself appear an affair of much importance, but more is implied in the circumstance than appears on the surface. By the erection of a building for their joint use, the two colleges have taken the first step toward their virtual union, and this step has received the patronage of Her Majesty the Queen, of several members of her family, and of many representatives of the Government present in their official capacities. No one can imagine that when the building is completed its spacious chambers will be devoted solely to examination purposes. It is more probable that a new university may see birth in the building in the Savoy, looking down on the Thames, and the events of the past week render it almost a foregone conclusion that the two colleges will not have much difficulty in obtaining a royal charter empowering them to grant degrees in medicine and surgery.

The ceremony on Wednesday last implied a greater recognition of medicine and surgery by the State than has hitherto been accorded. Many readers may be surprised to learn that five centuries ago there was no such recognition at all. It was only in 1422 that any notice was taken of the profession, and then a State order was made that those who had not a university degree should forthwith be examined at one of the universities, on pain of condemnation by the Privy Council. In 1513 the authority of the Church was recognized to such an extent that the Bishop of London was made supreme in authority over the London practitioners, who had to be examined by him, he being *assisted by four doctors of medicine or surgeons!* The provincial Bishops were similarly entrusted with the licensing of country doctors. The London College of Physicians was founded in 1518, by royal letters-patent, and remained under the control of the Bishop of London for five years. In 1523 it was set free by statute, but the Bishops long retained their licensing power. A relic, in fact, still remains in the power which the Archbishop of Canterbury still has of giving degrees in medicine, and which he occasionally exercises. The distinction in question is termed M.D. Lambeth, the archiepiscopal palace being situated at Lambeth, on the south side of the Thames, not far from St. Thomas' Hospital. The degree is nowadays scarcely ever conferred, except on persons already qualified as medical practitioners, though the opposite was frequently the case in bygone years. The first home of the College of Physicians was near St. Paul's. It occupied more than one building in the city, and only removed to its present site at the West End (Pall Mall) in 1825.

The College of Surgeons is of much more modern date. For many years only barber-surgeons existed. A company of these barber-surgeons was formed in 1308, and incorporated, 1462. Subsequently to the latter date the barbers and surgeons quarrelled and separated. They were reunited in 1540, with the proviso that "no barber shall occupy anything belonging to surgery, drawing of teeth only excepted." Distinct surgeons can therefore scarcely be said to have existed till 1540, and even then they and the barbers belonged to the same company. This nominal union persisted till 1745, when the barbers and surgeons again separated, and this time for good. The barbers managed to retain nearly all the joint property, including even the anatomical preparations. The surgeons remained merely a city company till 1796, when through an illegal election the charter was forfeited. A new charter was obtained in 1800, establishing the present Royal College of Surgeons. They were then housed, as now, in Lincoln's Inn Fields, and had just acquired the Hunterian Museum. The present buildings were built in 1813, re-modelled, in 1836, and enlarged in 1852-53. Parliament voted a sum of twenty-seven thousand pounds toward the erection of a museum to contain Hunter's collection. This collection had been, no doubt to their subsequent chagrin, declined by the College of Physicians.

Great have been the changes since the foundation of the two colleges. What would the old barber-surgeons have thought if, flanked by the medical licentiates of the Bishop of London (who would no doubt have snubbed

them heartily), they could have looked down from an adjoining roof on Wednesday's proceedings? They would doubtless have been amazed, but would perhaps have been reassured when, on proceeding to the present College of Surgeons and inspecting the annual calendar, they found the ancient manners still referred to by a formal recital in the present charter (1800) of the former charters and acts of Parliaments granted to the barber-surgeons.

Leaving the past and reverting to the present, I would now claim for the late discussion on bronchiectasis the attention it deserves. The surgery of the viscera is rapidly advancing, and it really seems as if the surgeons were determined every year to encroach more and more on the domain of the physician. The surgeons, if trodden upon in the past, are determined not to be behind in the present. The physicians, to do them justice, are equally eager to avail themselves of surgical methods where desirable. A physician of this era does not send for a surgeon to perform venesection if it be required, but does it himself, usually, unless a general practitioner is in attendance. Dr. George Harley has lately been startling the medical public by performing what he calls "hepatic phlebotomy," for the relief of chronic indurations of the liver. In one case he withdrew a pint of blood in this manner from the hepatic substance. He is about to publish a work on the subject. What a change from the day when a physician is said to have allowed a patient to die because it was beneath his dignity to bleed him, and there was no surgeon at hand to do it!

To return. The discussion referred to was based on a paper prepared jointly by Dr. Theodore Williams and Mr. Rickman Godlee. They described two cases of bronchiectasis which had been successfully treated by them by means of paracentesis. The first was that of a gentleman sixty-seven years of age, who had suffered for two years from chronic bronchitis and emphysema. The expectoration was profuse and fetid. Dr. Williams diagnosed the existence of a bronchiectasis. At his request, Mr. Godlee (having first tapped it with an aspirating trocar and cannula) opened the cavity with antiseptic precautions, and inserted a drainage-tube. The cough nearly ceased, the expectoration became reduced from a pint to a few pellets daily, and also lost its fetor. The patient gained flesh rapidly. The discharge ceased at the end of six weeks, the channel closed, and the wound healed up. Examination of the chest revealed complete disappearance of tubular breathing and shrinking of the chest-wall. Nine months after the operation, the patient remained free from cough or expectoration, and was able to walk four miles.

In the second case, the success attained was not so marked, although considerable relief was afforded. The patient was a girl, aged twenty-one, who, following an attack of typhoid fever, suffered from cough and copious fetid expectoration. Hæmoptysis occurred on three separate occasions—on one of these to the extent of a pint. In this case also paracentesis was performed, though some difficulty was encountered, and an inch of the eighth rib had to be excised before the bronchiectatic cavity could be reached. The wound gradually healed, and when the patient left the hospital there was only slight cough, the expectoration had diminished to about three ounces a day and was only occasionally fetid. The authors considered that the partial success was attributable to the presence of other bronchial dilatations which could not be reached. In four other cases treated by them, complete success was, in their opinion, similarly precluded.

The authors considered that paracenteses of bronchiectases were indicated under the following circumstances:

1. To prevent death from septic pneumonia, where antiseptic treatment had failed to correct the fetor of the sputum and allay the cough.

2. Where the bronchiectases appeared to be confined to one lung, were in the lower lobe, and an adherent pleura overlay them.

Experience had shown the invulnerability of the lung tissue. The operation was not without difficulties, of which the chief was the difficulty of diagnosing exactly the position of the bronchiectasis. This was due to (1) the presence of emphysema; (2) the reverberatory character of the auscultatory sounds in the bronchiectasis.

These difficulties in diagnosis were emphasized by several speakers in the subsequent discussion, the difficulty being considered especially great when total obstruction of a bronchus had occurred. Several of the speakers expressed the opinion that operative treatment should be confined to cases associated with fibrosis and adherent pleura, but Dr. Williams and Mr. Godlee expressed their unwillingness to concur with this view. There was some discussion as to the danger of hemorrhage. It was admitted by most that this danger was but slight, though hemorrhage might occur, and the possibility of this should not be overlooked. Mr. Godlee acknowledged the possible danger of hemorrhage. When the patient's mouth became full of blood, he thought a bronchial vessel must have been wounded, and, under deep anæsthesia, this might cause suffocation. Sir Andrew Clark suggested that hemorrhage might be prevented by sclerosis of the arteries diminishing their calibre. Fibrosis was generally present, he remarked, and in fibroid tissue the arteries participated in the sclerosis.

The Royal Medical and Chirurgical Society held a special meeting on Tuesday last to discuss the subject of supra-pubic lithotomy. The discussion occupied the whole evening, and was participated in by many of the leading authorities on the subject, both metropolitan and provincial.

Mr. Barwell, of Charing Cross Hospital, read a paper on the subject, narrating some cases. In one, a girl of nine, a stone measuring over two inches in its longest diameter was extracted by the supra-pubic operation. The child suffered nothing after the operation, and the wound healed in a fortnight. Mr. Barwell said that the high operation had been too much neglected, and might with advantage be used in other cases than those of very large stones. There was no danger of a permanent urinary fistula, and that of urinary infiltration might be avoided with care. The peritoneum could be raised by injecting the bladder, and as it was barely attached to that viscus, it yielded upward to the slightest touch of the finger. Mr. Barwell maintained that for female children no other form of lithotomy should be practised.

Mr. Rivington, of the London Hospital, read the notes of a case in which he had employed the supra-pubic operation to remove an unusually large stone. The patient had suffered from symptoms of stone for sixteen years, but no stone could be detected on sounding, though on rectal examination a large, round, smooth swelling was detected in the situation of the prostate gland. Median urethrotomy for the purpose of exploration was performed, when it was found that the hard mass was not connected with the prostate, and that the bladder-wall was pressed over to the right by it. A sound pushed far back at length struck a stone. It was grasped by forceps, but could not be moved. Supra-pubic lithotomy was then decided on, and was performed. The stone was found to be contained in a pouch. It could not be moved with forceps, and the lithotrite was found equally useless. The calculus was therefore broken up with a chisel and mallet. The pieces removed weighed collectively twenty-three ounces. The patient recovered from the operation, but cystitis came on some months later, the urine became ammoniacal, and death ensued. At the autopsy, suppurative inflammation of the left kidney was found, with inflammation of the bladder and the pouch in the latter. Mr. Rivington remarked that though

not absolutely the largest stone ever removed from the human bladder during life, it appeared to be the largest removed during life with recovery of the patient from the immediate effects of the operation.

Mr. Jacobson, of Guy's Hospital, read an account of a case in which the high operation had been performed. The patient was a laborer, aged nineteen, who had suffered from bladder irritability all his life, from symptoms of stone for five years, and from cystitis for one year. The sound showed several stones to be present. The supra-pubic operation was selected in consequence of the long duration of the symptoms, and the probability that the kidneys were impaired. The bladder was distended with water (ten ounces), and the rectal bag introduced. The peritoneum was not seen. Only one stone was found at the operation, but two smaller ones escaped through the wound some weeks later, following a rather severe venous hemorrhage. Mr. Jacobson maintained that the operation had a future of revived usefulness before it; and that it would be found of great value by operators who only had to deal with stone occasionally, and who found themselves face to face with good-sized stones in adults. He thought it wise not to attempt to close the bladder with stitches.

A discussion then took place on the papers read. This was opened by Sir Henry Thompson, who prefaced his remarks with a brief tribute to the value of Bigelow's work. The alteration in lithotrity resulting from Bigelow's treatment had, he said, changed the conditions under which lithotrity was now performed, and left a different category for those cases requiring a cutting operation. Stones of two ounces could be removed safely by lithotrity, but an operation was needed to meet cases of stones of over two ounces or two ounces and a half. He agreed with the opinion expressed by both foreign and English surgeons, that the surgeon with little experience or skill had better use a cutting operation, and the best for him was a supra-pubic lithotomy adopting the modern improvements. He considered distention of the rectum valuable, as not only increasing the supra-pubic interval, but as rendering the bladder immobile and raising it out of the pelvis. The views of Bouley and Hildanus were quoted. The latter had shown that in children it was possible to push up the stone above the margin of the pubes by pressure within the rectum. Rectal distention was also valuable in removing large tumors of the bladder by the supra-pubic operation. Sir Henry Thompson concluded his remarks by saying that in supra-pubic lithotomy the wound should not be closed for some days.

Mr. Cadge, of Norwich, thought we should be cautious in our deductions. He was not sure that we ought yet to conclude that the lateral operation might be abolished in favor of the new supra-pubic method, and thought many of the already reported cases might have been dealt with by the former method. He agreed with Mr. Barwell that distention of the rectum was not of much value in raising the prævesical fold of peritoneum, but that it was mainly useful in raising the fundus. Mr. Cadge admitted that an advantage of the high operation was the fact that no stone could be left behind, an occurrence which might happen with the lateral operation. Freedom from hemorrhage had been quoted as another advantage of the high operation, but decided hemorrhage had occurred in three out of twelve cases reported that evening.

Mr. R. W. Parker, of the East London Hospital for Children, had performed the high operation once, and found it easy of performance. He could not go as far as Mr. Barwell in recommending it for female children, and had found urethral dilatation satisfactory in them.

Mr. Bryant, of Guy's Hospital, considered the supra-pubic operation to be probably preferable in dealing with all large stones, especially if there were any kidney disease, though the latter complication would render any operation more dangerous. He concurred with Mr. Parker that in females rapid dilatation of the urethra followed by lithotrity would prove sufficient in most cases.

Mr. Lund, of Manchester, urged that the supra-pubic operation entirely removed the danger arising in the lateral operation from bruising of the tissues. The use of anæsthetics rendered the revival of the supra-pubic operation more easy, as by employing them the pain arising from lifting the floor of the bladder was avoided.

Messrs. Barwell, Rivington, and Jacobson then replied. Mr. Barwell admitted the possible danger of distending the rectum, especially in old people. Mr. Rivington remarked that in females he should mostly prefer vaginal lithotomy, unless the stone were very large. He had, however, removed (by vaginal lithotomy) a stone measuring six inches by five inches, and the wound healed by first intention. Mr. Jacobson recognized the danger of distending the rectum by more than twelve or fourteen ounces of fluid, but expressed his general preference for the supra-pubic operation.

The hydrophobia scare continues, and the "dog order" has been renewed for a further period. According to this, any dog not led or muzzled, or otherwise under control, may be seized by the police, and, if not claimed by his owner, destroyed. The "dog order" may be disagreeable to owners of dogs, but has certainly been beneficial to the public at large, as it has led to a large number of stray dogs—many of them probably diseased in some way, even if not rabid—being seized and destroyed. Thousands of dogs have been killed at the "Dogs' Home," the process employed being to painlessly asphyxiate them in the lethal chamber devised by Dr. B. W. Richardson, F.R.S. Their bodies have been sent into the country, and used as manure. Meanwhile a Hydrophobia Commission is about to be appointed. Although many still exercise a wise scepticism as to Pasteur's results, the opinion is growing that there is something in it, and the appointment of a committee is virtually brought about by the pressure of public opinion.

I lately chronicled the death of Mr. Wordsworth. Another distinguished ophthalmic surgeon—Mr. Streatfeild—has also joined the majority. Like Mr. Wordsworth, he also served as a surgeon in the Crimean War before he commenced his career as an ophthalmologist.

The Parkes Museum and the Sanitary Institute are about to be amalgamated.

ACTINOMYCOSIS IN MAN.

To the Editor of The Medical Record.

Sir: Having read an article entitled "A New Form of Lung Disease" in the March 20th number of The Record, I thought I might profitably contribute on the same subject, more especially because the article has an unimportant error or two. The author of the article made a mistake in attributing to Ponfick the discovery of the germ in the human subject. To Israel, of the Jewish Lazarette, Berlin, belongs that honor, *vide Virch. Arch.*, vols. lxxiv. and lxxviii., *Centralblatt f. Med. Wiss.*, 1883. Ponfick was the first who proved the identity between the actinomycen of men and cattle (Ziegler). But preceding this I have the personal statement of Professor v. Esmarch, that thirty years ago, while he was first assistant to Professor v. Langenbeck, in the microscopical examination of some peculiar-looking pus, from a supposed case of vertebral scrofulosis, he discovered this peculiar- (strahl pilz) looking pilz (germ). He submitted his specimen to his chief, who concurred that it looked like a germ. Professor v. Esmarch made copies of the preparation, which he says he still has in his possession, and was not surprised, when he read the description of Israel, to find that his supposed case of scrofulosis had really been one of actinomycosis. Professor v. Esmarch made this statement before *Ober Staats Arzt*, Albert Köhler, first assistant to Professor Bardeleben, and my-

self (apologies for any breach of courtesies, for I was Dr. Köhler's guest). So this gives Professor Esmarch the credit, and no doubt he deserves it, of being the first discoverer of the germ actinomycen. Professor Esmarch said he had had success in treating the disease by free drainage and free irrigation, and parenchymatous injection of saturated solution of boric acid, frequently used. All observers agree that it is a most malignant germ. The disease, as far as known, occurs in three forms, namely, lung actinomycosis, intestinal actinomycosis, and general actinomycosis. The first form is very well described in the article in THE RECORD. The second form begins primarily in the intestine, and rapidly spreads to the tissues. It has a selective predilection for connective tissues. It generally makes its appearance in the parietal fold of the pelvic fascia, and in the right inguinal region, and may easily be confounded with osteosarcoma of the ileum, if the history of the time of evolution is not carefully taken into account. It is with this form that Esmarch has had the most success with his method of treatment. The third, or general form, was the variety that Israel described. Infection generally goes out from the mouth, by the germs getting under the gums to the alveolar ridge, or infection may take place through a decayed tooth; in fact, the germ has been found in the normal state in the crypts of the tonsils, in the nasal ducts, and in hollow teeth. Bergmann says it is quite the rule to find them in the tonsils of swine, and illustrates the truth of the statement with many specimens. From the mouth the germs progress into the deep cervical fascia, thence down the vertebræ into the mediastinum anterior and posterior, causing mediastinitis, and caries of the bodies of the vertebræ, ribs, and sternum. Infection progresses in nearly all cases by local progression, seldom by metastasis. Of all tissues in the body, it probably has the greatest affection for the connective tissue about the spinal column. The principal diagnostic characteristic of the disease, microscopically speaking, is the presence of innumerable little straw-yellow bags, about the size of a pin-head, which contain the specific germ (Virchow), and on this account making it different in appearance from any other sort of pus. Another diagnostic sign is the severity of its local processes, but with every aid the diagnosis is usually difficult. The disease it is most likely to be confounded with, generally speaking, is *general tuberculosis*.

Respectfully,

A. R. JENKINS, M.D.

HEMPSTEAD, N. Y., March 24, 1886.

[Our correspondent is himself in error in his criticism of our editorial. Israel published two cases shortly after Bollinger's communication, but he regarded it as a peculiar form of septicæmia, and not as identical with the disease described by Bollinger. Esmarch also, although he recognized a peculiar disease, did not understand its nature.—ED.]

THE PATHOLOGICAL FUTURE OF THE NEGRO.[1]

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The negro in towns and cities is in a much better condition as to longevity than in the country, although our census reporter may make a different statement for political purposes. The fact is, in towns and cities negroes are better fed, clothed, and housed, and when sick usually receive very good medical attention; in the country it is the very reverse.

In most Southern States where there is a preponderance of negroes we have what is called stock, or no fence law; the object is to prevent the negro from accumulating, and to make him a hewer of wood and drawer of water as long as he lives. Now, what is the result? It makes him in the country dependent on the landlord, who is dependent on the commission merchant, who often is dependent on the courtesies of the banks for accommodations (financial).

Let one of these negroes get sick, say with any protracted disease—say even pneumonia, which we all know is terribly fatal to the black man. By the time the landlord becomes responsible for, say two or three visits—which he will do if there is a fair prospect for a crop (and if the crop is gathered in the winter months he will not, only in very exceptional cases), he will serve notice to the doctor that he will not be responsible for any further medical attention. What is the end of it generally? A pauper's coffin and a pauper's burial.

There are plantations ten to twenty miles remote from railroads and rivers where before the war you could find from fifty to three hundred negroes; now they are the *huntsman's home*. He kills his game on lands that in days gone by would produce from one-half to one bale of cotton to the acre.

Negroes, appreciating the disadvantages of living away from them, have clustered around towns, etc. You would infer from this, as some of our Southern Democratic friends would tell you, that it would swell our population proportionally; but that this is not so, is my observation. Our white population is gradually increasing, but the reverse is the case with the negro.

(Our correspondent here inserts a table of the vital statistics of one of the smaller Southern cities, which shows a death-rate among the colored twice as great as that among the whites, and adds:)

The negro race in this section, there is no doubt, is gradually diminishing. An honest vital statistic report would verify this assertion. I have very little hope for the colored doctor in the South. Some few will succeed, but many will fall by the wayside of temptation. They will have to live out of (so to speak) a penniless community. They can never attain eminence and have the confidence of their race, because of their poverty, being unable to keep up appearances. You know this is a peculiar characteristic of the colored man. He wants to imitate his employer, even in getting a doctor. Pardon me for writing so long a letter, but this is a subject in which I have been long interested. Respectfully,

[illegible]

OTOLOGY AT THE UNIVERSITY OF AMSTERDAM.

A MODIFICATION OF [illegible] INSUFFLATION — SOUTH-BRUNS-IN — A SIMPLE INSUFFLATOR — ACCIDENT IN TONSILOTOMY—INSPISSATED CERUMEN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The methods of Dr. A. Guye, Professor of Otology in the University of Amsterdam present some novel and interesting features, which are here reproduced for the readers of THE MEDICAL RECORD.

The clinic is held at the Binnen Gasthuis (Central Hospital) of Amsterdam, at the head of the canal Oude Zyds voor Burgwal, on Monday and Friday, from four to five P.M. From thirty to forty patients are generally in attendance. There are fewer that are able to pay than with us. At the first visit patients are examined with more care than I have observed at many clinics. At the subsequent visits they are handled rapidly, as from the nature of the cases the treatment is more or less routine. The name, age, and other items, are entered in a register, and also a drawing of anything of interest about the membrana tympani. Before Politzerization the professor always cleanses the nares, using a small bulb-syringe, with water at a temperature of 70° or 75 F., as he thinks the use of water at a higher temperature predisposes to attacks of acute coryza.

After two or three syringefuls are thrown into the nostrils the patient is directed to blow his nose, after which the bag is used in the usual manner. It is surprising that nature's method of cleansing the upper respiratory tract

[1] Referring to THE RECORD of March 27, 1886.

is not more largely used. In very young children he has modified Politzer's method by having an assistant pour a teaspoonful of water into the mouth of the crying cherub, who involuntarily swallows it, when he at once presses the bag.

The so-called adenoid vegetations are scraped away with the finger-nail, scraping from before backward. A scraper is sometimes used for the same purpose, which is a device of the doctor's invention. It consists of a handle long enough to reach the pharyngeal cavity, to which is attached, at right angles, a blade one inch long, one-fourth inch wide, and one line in thickness, the end of which is bevelled to a dull edge. With this instrument no harm can be done to the normal mucous membrane. It would probably be more effective if it were a little wider.

Chronic nasal catarrh he treats with :

℞. Ammonii chloridi 40.00
Sodii chloridi 80.00
Aquæ 400.00
M. et ft. sol.
Sig.—Teaspoonful in a glass of water to wash the nose, t.i.d.

For this purpose the patient is furnished with a bulb-syringe, and instructed to cleanse the nasal cavity in the manner above described. After cleansing the nostrils a snuff is insufflated. The doctor's insufflator, for simplicity and cheapness, cannot be excelled. It consists of a rubber tube, into each end of which a goose-quill is inserted. It answers the purpose as well as more elaborate instruments.

Mouth-breathing he treats with a contra-respirator. This is a simple but useful instrument, consisting of an oval piece of leather, to which tape is sewed, so that it may be tied over the mouth. These patients are furnished with a copy of the following circular, which is printed in Dutch, English, German, and French :

"THE CONTRA-RESPIRATOR AND RESPIRATION THROUGH THE MOUTH.

"Respiration through the mouth is a bad habit which is very common, the pernicious consequences of which have been shown by Mr. Catlin in his book 'Shut your Mouth;' by Mr. Paul Neimeyer, in Magdeburg, and others. The habit originates, generally, from a catarrh of the nose or cold in the head. Respiration through the nose costs them too much effort, and the mouth is opened accordingly. But when the passage through the nose is free again, the bad habit very often persists, and causes a fresh catarrh or swelling of the nose, because the normal quantity of air is not passed through it. The results of respiration through the mouth are injury to the teeth by exposure to cold and dry air; various diseases of the throat and chest, by the dryness of the mucous membrane of the throat, and by the small foreign bodies, dust, smoke, etc., which would otherwise be kept back by the mucous membrane of the nose. As a sequel to the catarrh of the nose and throat, very often follow deafness, and other diseases of the ear.

"The consequences of respiration through the mouth are specially injurious during sleep, because then the disagreeable and pernicious dryness is not felt, and can accordingly attain a much higher degree. The bad influence of sleeping with the mouth open can be seen daily by comparing the calm, refreshing sleep of one sleeping with his mouth shut, with the restless, painful sleep, often degenerating into a nightmare, of another sleeping, ofttimes snoring, with the mouth wide open.

"The contra-respirator is used very effectually against the bad habit, especially in the beginning. When in bed fasten it so that it very slightly presses on the lips. Should it prevent sleep, take it off after some time, say ten minutes, trying it every night for the same length of time.

"After a few days you fall asleep easily with it on, and after a shorter or longer period you learn to sleep with your mouth shut without the use of the contra-respirator.

"When there are obstructions in the nose, which prevent absolutely respiration with the mouth closed, of course the use of the contra-respirator alone is not sufficient, but a medical man must be consulted, who should examine and treat the mucous membrane of the nose. By neglect polypi and other diseases of the nose may be occasioned."

For excoriations about the nose :

℞. Tinc. benzoin 1.00
Vaselinæ 10.00
M. Sig.—For external use.

Pleasant for its agreeable odor. Note that the compound tincture is not to be substituted in the above formula. It is also useful in chapped nipples.

In performing a tonsillotomy on a young man, about seventeen years of age, with the Fahnestock instrument, the blade broke when the operation was about half completed. The instrument was fast in the tonsil, and could not be with drawn until it was dissected out with a scissors. On examination it was found that about one-half inch of the blade was missing. The patient remained in Amsterdam until the fourth day. Returning home on the boat, he was seized with a pain in the bowels, and a diarrhœa. He passed several stools, which he did not examine, as he had been instructed. The missing part of the blade was never discovered. The doctor had had a similar experience before, but did not think that two accidents in as many thousand cases was any argument against the use of the instrument.

Inspissated cerumen, says the doctor, is caused, not by increased secretion, as the books say, but by diminished secretion. The wax is too dry to be removed by natural means. The accumulation is but a symptom of a disease of the middle ear. After it has been removed several times the patient presents himself with the usual deafness, but no wax. To prevent the accumulation olive oil is dropped into the meatus, three drops once a week.

As a diagnostic point, headache due to congestion of the frontal sinus is relieved by Politzerization. This is cured by treating the nose. In using the Politzer bag the impulse is normally greater in the ear on the side opposite to the nostril in which the bulb is introduced. If it is felt in the ear on the same side, it is due to some pathological condition.

FRANK T. SMITH, M.D.

AMSTERDAM, HOLLAND, March 1, 1886.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 11, *to April* 17, 1886.

PATZKI, J. H., Captain and Assistant Surgeon. Relieved from duty at Jackson Barracks, La., and ordered for duty as Post Surgeon at Mount Vernon Barracks, Ala. S. O. 75, Department of the East, April 12, 1886.

HOFF, JOHN VAN R., Captain and Assistant Surgeon. Leave of absence extended eleven months, with permission to leave the United States. S. O. 85, A. G. O., April 12, 1886.

BARNETT, RICHARDS, Captain and Assistant Surgeon. Granted leave of absence for two months. S. O. 16, Division of the Atlantic, April 12, 1886.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months. S. O. 85, A. G. O., April 12, 1886.

New Instruments.

IMPROVED VAGINAL SPECULUM.[1]

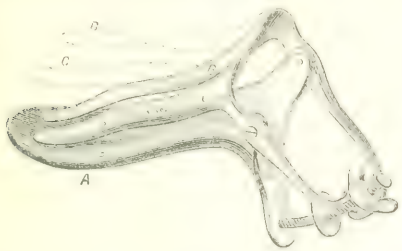
By JOHN BLAKE WHITE, M.D.,

VISITING PHYSICIAN TO THE HOSPITAL, BLACKWELL'S ISLAND, N. Y.

THE speculum we use to-day is a composite instrument, the result of successive improvement at the hands of experts.

Although important features about it have from time to time been added, not one alone of these instruments can be relied upon to the exclusion of the rest. There is, therefore, latitude yet open for the exercise of invention to those who are in the habit of employing the various forms of this essential auxiliary to diagnosis and treatment of uterine diseases.

Having been, therefore, by experience, made sensible of the want of certain features about even the most practical form of speculum now in use, I ventured into the field of invention and directed one of the following pattern to be made. Its success in my own hands, and that of a few of my professional friends, for the past three years, in facility of introduction, in readiness of adaptability and perfect command of the parts to be examined and treated has been so satisfactorily demonstrated that I have esteemed it a duty I owed to the profession to place it at the option also of those from whom I have at various times received similar favors :



The lower blade, *A*, is so constructed that, when introduced, it follows the posterior vaginal wall, which, owing to the concavity of the sacrum, is curved, and the cup-shaped extremity rests directly behind the cervix uteri.

If the uterus is displaced, the curved end of the speculum will assist in bringing the cervix into view. By its aid the vagina is more easily distended posteriorly and inferiorly. The two upper blades, *B* and *C*, are concavo-convex, so that full dilatation may be effected superiorly at points where least resistance is offered by the anatomy of the region.

The part of the pelvis through which the vagina courses and admits a speculum, contains no organ or tissues that can possibly suffer by considerable distention of the vagina. This fact is well shown during the act of parturition.

The Sims speculum is rendered far more useful, constructed in accordance with this natural vaginal curve posteriorly.

[1] Presented at a meeting of the Manhattan Medical and Surgical Society, February 8, 1886.

The cylindrical specula are also more useful when made to conform more fully to this posterior vaginal curve. The improved Nott's speculum has another advantage in that the two upper blades, *B* and *C*, are so arranged that they admit of independent action, which device enables the operator to lift one or the other lateral half of the vagina as he may desire. This mechanism facilitates the search for the cervix uteri, especially in displacements.

The introduction of the uterine sound, as well as tents, is rendered more practicable when this curved speculum is used, and local treatment of the endometrium can be far more thoroughly and satisfactorily accomplished. When this instrument is closed for withdrawal, the folds of the vaginal mucous membrane are less apt to be pinched than with the other trivalve specula. A smaller-sized instrument than the one presented should be used in nulliparous vaginæ.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 17, 1886 :

Week Ending	Typhus Fever	Typhoid Fever	Scarlet Fever	Cerebro-spinal Meningitis	Measles	Diphtheria	Small pox	Yellow Fever
Cases.								
April 17, 1886	1	6	8	1	30	24	6	0
Deaths.								
April 17, 1886	1	4	13	4	4	20	2	0

THE LATE DR. S. OAKLEY VANDER POEL.—At a recent meeting of the Faculty of the Medical Department of the University of the City of New York, the following minute was adopted :

Whereas, The Faculty has heard with the deepest regret the unexpected announcement of the death of their late colleague, Professor S. Oakley Vander Poel, M.D., and hereby tender their sincere sympathy to the members of his family, in the great loss which they have sustained;

Resolved, That the distinguished abilities of Dr. S. O. Vander Poel, and the services which he rendered for so many years, and with such universal acceptance to the whole country, in the important public trusts which he held as a medical man, rendered him peculiarly well-fitted for the duties of the Chair of Public Hygiene, which he held in this College, and which he discharged to the great advantage of the institution :

Resolved, That while his high qualities as a man commended him to the esteem of all, his personal characteristics caused his friendship to be highly prized, and will make his loss to be long felt by all who came into relations with him.

CHARLES INSLEE PARDEE,
Dean.

THE LATE DR. GASPAR GRISWOLD.—At a meeting of the Alumni Association of the Bellevue Hospital Medical College, held Saturday, April 3, 1886, the following resolutions were adopted :

Whereas, It has pleased Almighty God in his mysterious Providence to remove by death one of our number, Gaspar Griswold, M.D., M.R.C.S. :

Resolved, That the Alumni Association of the Bellevue Hospital Medical College hereby expresses a sense of its great loss in the death of Dr. Griswold. Although

young in years he had already taken a prominent place in the profession, and gave promise of great usefulness and eminence. He was direct and practical as a teacher, genial in his manner, kindly and considerate toward others, an honor to his Alma Mater and the medical profession. This Association particularly feels that in his early death it has lost a much respected and most valuable member.

Resolved, That the Association tender most respectfully to the family of Dr. Griswold this expression of its profound sympathy.

Resolved, That a copy of these resolutions be sent to the family of the deceased, and that they be furnished to the medical journals of this city for publication.

A. A. Smith,
V. P. Gibney.
L. Putzel,
R. Van Santvoord, M.D., *Committee.*
Recording Secretary.

The New Name for Tartar on the Teeth.—There once was a trouble known as tartar on the teeth, but of late some enterprising dentists have named this "Rigg's Disease," a condition requiring "treatment" in place of the old-fashioned scraping off the tartar.

Syphilis in the Thirteenth Century.—It is commonly believed that syphilis first made its appearance in Europe toward the close of the fifteenth century, about the time of the discovery of America by Columbus, and it has even been said that it was brought from the new world by some of the virtuous followers of the great discoverer. Some recent researches of Dr. Leon Duchesne would seem to show, however, that its origin was at least two centuries earlier than this (*Journal de Médecine de Paris*). In a surgical work compiled by Theodoric, a Dominican monk, in 1250, a chapter is devoted to the *malum mortuum*, and a treatment by means of mercurial inunctions is recommended. Lanfranc, of Milan, in his treatise on surgery, composed in 1296, has a chapter on "Chancre and Ulcer of the Penis in Man." Guillaume de Salicet and Gérard, in their works on surgery, written during the same century, also describe a disease which could be no other than syphilis.

Breathing Cold Air in a Warm Room.—An apparatus is advertised in Europe by which a person is enabled to breathe the air from without while sitting indoors in a warm room. It consists of a simple tube, communicating through the window with the external air, to one end of which an attachment to fit over the mouth and nose is attached. The inventor claims that, as tubercle bacilli are destroyed by a low temperature, so pulmonary phthisis may be cured by breathing frosty air through this apparatus.

Another Cure for Rabies.—A Hungarian journal states that seventeen individuals were recently bitten by a mad dog in the town of Varadino. A peasant named Nemcsics offered to cure them, and as they were unable to bear the expense of a visit to Pastëur, they accepted his offer. One of the number relates that the peasant made them drink a fluid of a red color, tasting like brandy, and containing what seemed to be little pieces of Spanish fly. In a short time they were seized with excruciating pains, had attacks of furious mania, and finally became unconscious. When they came to themselves they felt great hunger, combined with a repugnance to every kind of food. Nemcsics thereupon declared that they were cured, and up to the time of the report none of them had had any symptoms of rabies.—*La Riforma Medica.*

A Singular Case of Deep-Sea Diving Drink.—M. Legrand du Saulle, in his work on legal medicine, reports a little-known fact relative to the private life of Peter the Great. On a certain occasion, shortly after his second marriage, this monarch desired to send a very urgent message to the Czarina, and entrusted it to a Frenchman named Villebois to deliver in person. The weather was very cold, Villebois liked his vodka, and when he arrived at his destination he was very drunk. The Czarina was in bed, and her ladies retired when the messenger from the emperor was introduced. At the sight of the young and beautiful woman he became furious and precipitated himself upon her, and although assistance was speedily obtained the honor of the absent husband was not saved. Villebois was put in the lock-up, and at once fell asleep, and could not be aroused even after the Czar, who had been summoned in great haste, arrived. Peter, who had good reasons to excuse drunkenness, contented himself with sending the Frenchman to the galleys. In six months he granted him a pardon and reinstated him in his former office.

Congress of Russian Physicians.—On January 7th (December 26th, O. S.) the first Congress of Russian physicians was opened with much ceremony in St. Petersburg. The proposal to hold an annual convention of this sort has been under consideration for a number of years, but it is only now that the project has been realized. The Congress will be held each year, alternately in Moscow and St. Petersburg. The President of the Congress was Professor Krassovski; Dr. Ebermann, Secretary; Dr. Sutugin, Treasurer. The meeting was closed on January 12th (December 31st)

Soap in the Preparation of Certain Ointments.—When it is desired to combine oil of cade with vaseline or glyceride of starch, it is impossible to make a homogeneous mixture. But, according to Pierre Vigier (*Gazette Hebdomadaire de Médecine et de Chirurgie*), a perfectly smooth ointment can be made by adding one part of soap and two of water to thirty parts of the ointment desired.

A Premium for Large Families.—A decree was recently enacted in France reaffirming the law of the 29th Nivôse, year XIII., according to which every father of a family having seven living children may have one of his sons educated at the expense of the State. The object, of course, is to increase the population of the country, and the immediate occasion of the decree was the publication last year of statistics showing a large falling off in the average size of families in France.

An Opening for Physicians in India.—According to a letter in an Austrian journal, a most promising field for medical practice exists in India, especially in the inland parts of the peninsula. There is plenty of sickness, and physicians receive large fees. A knowledge of the language, sufficient for all practical purposes, is readily acquired, and beyond that, the writer states, nothing is needed for the acquisition of a large practice and a handsome income.

The Poetry of Attenuation.—In The Record of October 24th appeared the following:

Little drops of water,
Little grains of milk,
Make the little doctors
[illegible]

A correspondent from Massachusetts supplements this:

Precious little bottles,
Sitting in a row,
Filled with potent liquid
[illegible]

[illegible]
Humble though it be,
Makes the tenth dilution
When poured into the sea.

Of all the gulls delusive
The greatest is to know
Where lies the healing power
In a drop of H_2O.

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Original Articles.

THE MALARIAL "GERM" OF LAVERAN.

BY GEORGE M. STERNBERG, M.D.,

THE space and time at my disposal will not permit me to preface this paper by a recapitulation of the arguments in favor of the view that the malarial fevers—properly so called—are due to the presence, in the body of those attacked, of living "germs" or micro-organisms. This view was suggested by Lucretius (95 B.C.), and was ably advocated in this country as long ago as 1859 by Dr. Mitchell, of Philadelphia. Nor can I refer to the earlier claims to the discovery of a specific malarial germ. But before proceeding to a consideration of the "malarial germ of Laveran," the discovery of which was announced in a communication to the French Academy of Medicine, dated November 23, 1880, I desire to refer briefly to the claim made during the previous year (1879) by Professor Klebs, the distinguished German pathologist, and Professor Tommasi-Crudeli, of Rome. These gentlemen, as a result of an experimental research made in Rome, with material obtained from the malarious marshes in the vicinity of that city—Pontine Marshes—announced the discovery of their *bacillus malariæ* in a communication published in German in Klebs' *Arch. f. exper. Path. u. Pharmakol*,[1] and in Italian in the "Trans. R. Acad. Lincei." [2] This alleged discovery attracted great attention at the time, and considerable evidence, which seemed to strongly support the claim made, was subsequently offered by several independent observers—Marchiafava, Cuboni, Marchand, Ziehl, Ceri, and others. It is not surprising, therefore, that by many physicians the *bacillus malariæ* was accepted as a veritable contribution of modern science to our knowledge of etiology, and as entitled to rank with the spirillum of relapsing fever, the anthrax bacillus, and the tubercle bacillus of Koch, among the demonstrated disease germs. The fact that no well-informed person any longer maintains this view, shows how easy it is to be mistaken in estimating the value of experimental evidence, and of recorded microscopical observations, in this new and difficult branch of pathological investigation.

Soon after the publication of the memoir of Klebs and Tommasi-Crudeli, the writer, under the direction of the National Board of Health, made a series of control experiments in New Orleans, as a result of which the following general conclusions were reached:

"Among the organisms found upon the surface of swamp-mud, near New Orleans, and in the gutters within the city limits, are some which closely resemble, and perhaps are identical with, the *bacillus malariæ* of Klebs and Tommasi-Crudeli; but there is no satisfactory evidence that these, or any of the other bacterial organisms found in such situations, when injected beneath the skin of a rabbit, give rise to malarial fever corresponding with the ordinary paludal fevers to which man is subject."

"The evidence upon which Klebs and Tommasi-Crudeli have based their claim of the discovery of a *bacillus malariæ* cannot be accepted as sufficient; (*a*) because, in their experiments and in my own, the temperature curve in the rabbits experimented upon has in no case exhibited a marked and distinctive paroxysmal character; (*b*) because healthy rabbits sometimes exhibit diurnal variations of temperature (resulting, apparently, from changes in the external temperature) as marked as those shown in their charts; (*c*) because changes in the spleen, such as they describe, are not evidence of death from malarial fever, inasmuch as similar changes occur in the spleens of rabbits dead from septicæmia produced by the subcutaneous injection of human saliva; (*d*) because the presence of dark-colored pigment in the spleen of a rabbit cannot be taken as evidence of death from malarial fever, inasmuch as this is frequently found in the spleens of septicæmic rabbits." [3]

Notwithstanding the "confirmatory evidence" subsequently published by several Italian observers, the writer remained skeptical with reference to the *bacillus malariæ*; and in 1884, when my work on "Malaria and Malarial Diseases" was published, I was not prepared to admit that the more recently discovered germ of Laveran was entitled to any greater confidence. Referring to this I say:

"These observations of Laveran and of Richard are entitled to equal consideration with those of the Italian observers who find the *bacillus malariæ* in the blood of their malarial-fever cases in the vicinity of Rome.

"We cannot doubt that a true account has been given in both cases of what the observers believe they have seen. But there is a wide field for doubt as to the deductions made from the various observations recorded; for in microscopical studies of the blood made with high powers there is a great liability to error, and to misrepresentation of what is seen. We may question, for example, whether the belief of Laveran and Richard that the appearances noted by them are due to parasitic invasion of the blood-corpuscles is well founded, without calling in question the accuracy of their observations.

"As the Italian observers make no mention of the *oscillaria malariæ* of Laveran, and as the French observers seem not to have encountered the *bacillus malariæ*, each series of observations is, in a negative way, opposed to the other. It is evident, therefore, that physicians in this country who wish to know the exact truth as regards the nature of malaria will do well to investigate for themselves, or at least to encourage investigations at home by those who seem fitted by education and inclination [4] to undertake them." [5]

The argument here used as regards negative evidence from Italian investigators has no longer any force, for the discovery of Laveran is now confirmed by Marchiafava and his associate Dr. Celli.[6] The fact that Marchiafava formerly published observations which he supposed to be in favor of the alleged discovery or Klebs and Tommasi-Crudeli, and that so far as national or personal prejudice can influence a scientific man he would naturally have a bias in favor of the *bacillus malariæ*, gives to his evidence relating to the parasite described by Laveran especial value.

The object of the present paper is to give an account of the researches referred to, and to introduce to the

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[illegible] especially to search for the malarial germ of Laveran, but has not had an opportunity of meeting with typical cases since the date mentioned (until quite recently in Rome), having been stationed for three years at an extremely healthy post in [illegible]

[illegible]

[illegible]

[4] Nuove richerche sulla infezione Malarica, Archiv. per le Sci. Mediche, vol. [illegible]

profession in this country this interesting blood-parasite, which was demonstrated to the writer, by the gentlemen named, during a recent visit to Rome, and which there is good reason to believe is the long-sought malarial germ.

It will first be desirable to call attention to certain dark-colored granules and irregular masses of pigment which have long since been recognized by pathologists in the blood and tissues of the victims of malarial disease, and which are considered pathognomonic of such affections. The earlier observers were in doubt whether the pigment-granules found by them in the blood during life, or post-mortem, were formed *in situ* or distributed from the spleen, where similar pigment is found in considerable quantity. The latter view was supported by Virchow,[1] by Frerichs,[2] and by Mosler.[3]

The first-named author having discovered numerous pigmented cells in the blood and in the spleen of an individual, who died of dropsy resulting from repeated attacks of intermittent fever, maintained that the pigment in the blood has its origin in the spleen. Frerichs, in supporting the same view, supposes that this formation of pigment in the spleen is peculiar to malarial fever, because some peculiar chemical change in the "splenic liquid" occurs in this disease, as a result of which the red corpuscles are destroyed in the enlarged and hyperæmic organ and the black pigment produced.

On the other hand, Arnstein[4] maintains that the pigment is formed in the blood in circulation during a febrile access, and that the melanæmia is primary and the accumulation of pigment in the spleen and other organs secondary.

According to this author the pigment-granules are produced by some change in the hæmoglobine of the red corpuscles, which are destroyed during the febrile access; these granules are taken up by the white corpuscles, in the interior of which they are found in masses of various sizes; and, finally, these white corpuscles are destroyed in the spleen and other organs where their burden of pigment is deposited.

Recent investigations, and especially those of Laveran, of Marchiafava and Celli, and of Councilman and Abbott,[5] indicate that this is the true explanation of the melanæmia, and of the pigmentation of the spleen and other organs. At all events it is beyond doubt that pigment-granules are formed in the blood in large numbers during a fatal attack of pernicious malarial fever, for they may be plainly seen *in the interior of the red blood-corpuscles*, lying in the capillaries of the brain, the liver, and other organs, when properly-made sections are examined under the microscope. The writer has been able to verify this fact to his entire satisfaction in sections prepared by Dr. Councilman from the two cases referred to in his interesting paper[6] and also in sections exhibited to him while in Rome by Drs. Marchiafava and Celli.

The distribution of the pigment-granules in the capillaries of the brain is shown in Fig. 1, which we take from the late work of Laveran.[7] The dark masses distributed through the capillaries are not single granules, as would appear from the figure, but collections of pigment-granules included in red blood-corpuscles, the outlines of which are not seen, but the presence of which is indicated by the separation of the little masses by clear spaces, and their rather uniform distribution in the capillary vessels.

Upon examining a section of this kind with a good objective we ascertain not only that these pigment-granules are included in the red blood-corpuscles, but also that they are included in a hyaline mass which seems to be differentiated from the substance of the corpuscle. These hyaline bodies were described by Councilman and Abbott in their paper referred to, and were demonstrated by these gentlemen to the writer in numerous sections. At the close of their paper the question as to whether these hyaline bodies are organisms is discussed, but no definite conclusion is reached, and indeed it may be

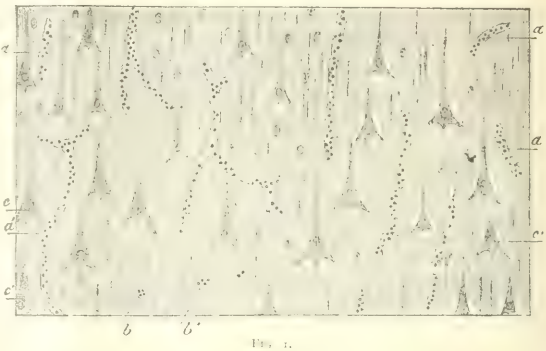

Fig. 1.

doubted whether this question could be settled by the examination of post-mortem material alone. Marchiafava and Celli find the same hyaline bodies in the interior of the blood-corpuscles in similar sections of brain-tissue, etc., from cases of pernicious malarial fever, and they have been successful in differentiating these masses in a most satisfactory manner by the use of staining reagents—methylene blue, alkaline, in saturated alcoholic solution, or an aqueous solution of visuvine. Moreover, the gentlemen referred to have demonstrated the presence of similar hyaline bodies, in the interior of the red blood-corpuscles, in certain cases, without any accompanying pigment-granules, showing that while the pigment may be secondary and a result of their presence, they are not dependent upon the presence of pigment. In Fig. 2 we have these bodies represented in the

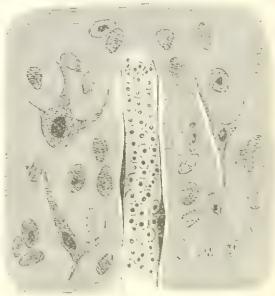

Fig. 2.

interior of the red blood-corpuscles in a capillary of the brain, from a case of "comatose pernicious fever." The figure is copied from the memoir of Drs. Marchiafava and Celli upon the "Alteration of the Red Blood-globules in Malarial Infection and Genesis of Melanæmia."[1]

In the memoir referred to the hyaline bodies appear as pale blue masses in the interior of the corpuscles, the figure having been made from a preparation in which they were stained with methylene blue. In reproducing this figure in the present paper, we must content ourselves with plain black and white, and it is to be feared that the woodcut will fail to convey the idea of hyaline masses, hardly to be distinguished except by the use of

[1] Trans. R. Acad. Lincei, 1884.

[2] Zeitschrift für Heilkunde, vol. viii., part

[3] Berliner klinische Wochenschrift, 1866, and Medical Sciences, April, 1885.

[4] Archiv für Psychiatrie, vol. of Medical Sciences, April, 1885.

[5] Loc. cit.

a suitable staining reagent, and differing essentially from the pigment-granules shown in Fig. 1. When pigment is also present, it will be remembered that the granules are included in this hyaline mass.

A comparison of the figures which illustrate the paper of Councilman and Abbott,[1] heretofore referred to, will show that in the two cases so well recorded by these gentlemen the same hyaline bodies were found in great numbers; and a reference to the text shows that they also found the hyaline bodies independently of pigment-grains, and that "sometimes they were free"—*i.e.*, not included in the blood-corpuscles. They say: "From the great numbers of these masses in the brain they could be studied better here than in any other place. It could be distinctly seen that they were stained and appeared to be composed of a hyaline or very finely granular substance. Their diameter, as said before, was about one-third that of a red blood-corpuscle. The pigment within them presented the same appearance and arrangement as in the spleen. In some, the circular arrangement of the pigment-granules was very obvious. There was scarcely a capillary in the gray substance of the brain that did not contain these bodies in greater or less numbers. Some of the vessels were filled with them, and no corpuscles could be seen. Others contained both the hyaline masses and blood-corpuscles. At various places, in stainings made both with Bismarck brown and gentian violet, hyaline masses were found containing *no* pigment, which stained in the same way, and were of the same shape and size as those which contained the pigment. Others were found which contained but one or two pigment-granules."[2]

It is evident that the question as to the nature of these so-called hyaline bodies is likely to have a very important bearing upon the etiology of the malarial fevers; for if they are in truth parasitic organisms, their position in the interior of the red blood-corpuscles, their presence in vast numbers in quickly fatal "pernicious" forms of malarial disease, and their association with the pigment-granules, which are recognized as pathognomonic of malarial poisoning, makes it appear extremely probable that they bear a causal relation to the morbid phenomena which constitute the disease. That the red blood-corpuscles are destroyed on an extensive scale during an intermittent paroxysm has been repeatedly demonstrated by actual counting, and it is a matter of common experience that a series of such paroxysms induces profound anæmia. This result will be easily comprehended if we have indeed to deal with a parasite which invades or destroys the red blood-corpuscles. The writer, from a general review of the evidence, and as a result of personal observations recently made in Rome, through the courtesy of Drs. Marchiafava and Celli, is inclined to believe that this is the case, and confidently anticipates that, when the opportunity presents itself, he will be able to verify the fact in this country by direct observations upon blood drawn during life from patients suffering from typical forms of malarial fever.

There can be no doubt that the hyaline bodies heretofore referred to as found within the red blood-corpuscles in sections of the brain, etc., obtained from fatal cases of pernicious fever, correspond with similar bodies described by Laveran, and found by him in blood freshly drawn from the finger of patients suffering from intermittent fever.

As we have now arrived at the point where it becomes necessary to refer more explicitly to the work of Laveran, I shall take the liberty of quoting somewhat extensively from his book, published in Paris in 1884.[3] In the Introduction to this work the author says:

"This work is the fruit of five years' researches pursued without remission in Algeria; in writing it my principal object is to make known the parasites which I have been fortunate enough to find in the blood of patients attacked with malarial fever.

"At the time of my arrival at Bone, in the month of September, 1878, I did not entertain the hope of discovering the causes of 'paludism,' and my first labors were not directed in this direction; I occupied myself at the outset with the clinical history and pathological anatomy of the malarial fevers, seeking to free myself from preconceived ideas and from the influence of all of the classical theories.

"An analysis of the anatomical lesions observed in patients who had succumbed to a pernicious access, or to malarial cachexia, showed me that the characteristic lesion, and the only one constant in malarial poisoning, consisted in the presence of pigmented elements in the blood. These pigmented elements were known; they had been, in particular, very well described by Frerichs; but their origin and their nature were yet very obscure. It was while studying the mode of formation of these pigmented elements in the blood that I was brought to recognize their parasitic nature.

"On November 6, 1880, while examining the blood of a patient under treatment for intermittent fever in the military hospital of Constantine, I recognized for the first time the existence of mobile filaments which were attached to the pigmented bodies, and of which the animated nature was not doubtful. I had at this moment the intuition that I was in presence of the veritable malarial germ, '*microbe du paludism*,' and all the facts which I have observed since have gone to confirm this first impression.

"I have verified the presence of this particular organism in four hundred and thirty-two patients attacked with different forms of malarial disease, and I have never encountered these microbes in subjects attacked with other diseases.

"All of the military physicians who at Constantine have interested themselves in my researches, and who have done me the honor to frequent my laboratory, have been able to recognize the existence of this microbe, and to verify the facts which I have stated. . . .

"In 1882 I made a voyage to Italy, for the special purpose of seeking in Rome the parasites which I had observed in Constantine, and I have been able to convince myself that the blood of fever patients from the Roman Campagna contains microbes identical with those which I have described in the blood of similar cases in Algeria. . . .

"The search for the malarial parasite requires, it is true, a certain familiarity with the use of the microscope in general, and with the examination of the blood of malarial cases in particular, but these are difficulties which it is easy to surmount with a little patience."

We pass now to Chapter III., in which a detailed account of the morphology of the parasite is given, together with explicit directions for finding it. As we hope that the present article may induce microscopists in our own country, who are favorably located for such researches, to attempt to verify the alleged discovery, we shall quote from this chapter so much as seems necessary to serve as a guide for such researches.

"The technique which permits of the observation of the parasitic elements in the blood of malarial cases is very simple; it is, however, necessary here to enter into some details for the search is not unattended with difficulties.

"1st. *Choice of patient.*— . . . It is at the outset of the access of fever, or during the hours which precede the invasion of the febrile paroxysm, that the parasites are found in the greatest number in the blood, and that they are consequently most easily found. It will be best to choose a patient who has already had several malarial attacks and who is decidedly anæmic; the parasites are usually numerous in these cases and more easy to find, inasmuch as the blood is poor in red corpuscles; it will, above all, be necessary to choose a patient who has not taken sulphate of quinine for some time.

"2d. *Technique for the preparation of the blood.*— . . . Prepare two thin glass covers, and two glass slides, which

[1] Op. cit. [2] Op. cit., p. 413. [3] Op. cit.

are very level; it is well to wash these first with water and then with alcohol, although the microbes of malaria are so characteristic that there is little danger that they will be confounded with dust or with the spores and bacteria suspended in the atmosphere, and which may fall upon the preparation.

"One preparation will usually suffice for the examination of blood, but it is wise to make two, as one may not be satisfactory on account of the thickness of the layer of blood or for some other reason.

"After having washed one of the patient's fingers, first with water and then with alcohol, it should be compressed at the base, and a puncture made with a new needle, or with a perfectly clean lancet, at the extremity —*la pulpe*—care being taken to choose a locality where the epidermis is not too thick. The drop of blood obtained in this way should be of moderate volume; when the skin is dry, the drop takes a rounded form; when the weather is warm and the skin is covered with sweat, or when one proceeds to the examination of a patient who is in the sweating stage of an intermittent paroxysm, the drop of blood spreads out and mingles with the perspiration. In this case it is necessary to dry the skin with care and collect the blood very rapidly.

"The drop of blood which is formed at the extremity of the finger is collected by bringing in contact with it one of the glass slides; the slide should not touch the skin; the little drop of blood adheres in part to the glass slide and is to be immediately covered with one of the thin glass covers previously prepared. It is well to slightly moisten the slide and cover-glass by breathing upon them; the cover-glass is applied to the drop of blood in such a manner as to form at first an angle of about 45°, and is then quickly lowered and at the same time made to slide upon the glass slide in order that the blood may be spread out without the interposition of any air-bubbles.

"The preparation should present a very pale color; if the layer of blood is too thick, it will be necessary to press gently upon the cover-glass, and afterward to wipe away the blood which is forced out from around its margin; care must be taken not to use too strong a pressure, as this would destroy the parasitic elements, or at least alter their aspect.

"At the outset of my researches I always took the precaution to place paraffine around the margin of the cover-glass; this precaution is not essential. The blood dries rapidly upon the edges of the preparation, especially when the air is warm and dry, and forms a solid cement which prevents the central portion from drying. At the end of twenty-four or of forty-eight hours one generally finds the central part of a preparation made in this way still liquid. . . .

"The blood ought to be examined pure, without mixture with any liquid, for it is in blood-serum that the parasites retain for the longest time their vitality after having been withdrawn from the circulation." . . .

"There is no advantage in taking the blood for examination from one part of the body rather than from another. . . . . The parasitic elements are found in the blood coming from natural hemorrhages—epistaxis, hæmoptysis, hæmaturia, etc. I have looked for them in vain in the serum obtained from the vesicles of labial herpes, and in the urine of malarial patients.

"3d. *Mode of examination of the preparations.*—An amplification of 400 to 500 diameters suffices for the observation of all the details presented by the parasitic elements found in the blood of malarial patients. . . . In the examination preference should be given to those parts of the preparation in which the red corpuscles lie flat and form but a single layer. . . . The corpuscles which adhere strongly to each other at the moment when the blood is drawn frequently become isolated in a few minutes, and present themselves *de face;* the examination of the blood is therefore, in general, more easy after ten or fifteen minutes, or even at the end of half an hour. . . . The search is rendered somewhat difficult by the fact that in general the parasitic elements are not found in great numbers in the blood. One finds sometimes as many as eight, ten, or fifteen parasitic elements in a single field of the microscope, but this is a somewhat rare event, and the observer should have for this study a provision of patience. In the cases, sufficiently frequent, in which the parasites are not numerous, it will often be necessary to make a prolonged examination—ten or fifteen minutes, or even more—in order to discover them.

"The pigment-granules which are usually found in the parasitic elements serve to call attention to them; the parasites themselves are so transparent that it would be difficult to see them if they were not pigmented; we shall see further on that the mobile filaments which represent the most perfect form of the malarial microbe, and which do not include any pigment, are only visible when in motion. The observation of the movements of these filaments, which is so interesting, is particularly difficult. It often happens that these movements are arrested under the influence of the cooling which the blood undergoes upon being withdrawn from the vessels, and only reappears after an interval of a quarter of an hour or half an hour. Warm weather is the most favorable for the observation of these mobile filaments; or one may make use of a hot stage, the temperature of which should be 37° to 38° C."

Description of the microbes of malaria.—"The parasitic elements present themselves under several forms, which appear to correspond with different phases of the evolution of the same parasite. These forms, to the number of four, were described in my first communications relating to the malarial parasite under the following names, which I think it well to preserve in order to prevent confusion: cellular bodies—*corps kystiques*—No. 1 and No. 2, or simply bodies No. 1 and No. 2; mobile filaments; and body No. 3, which seems to be simply the cadaveric form of bodies No. 1 and No. 2.

"To this enumeration we might add the leucocytes containing pigment which borrow the pigment grains with which they are charged from the parasitic elements undergoing destruction, and which consequently are very characteristic of malarial disease."

"*Cellular bodies No. 1.*—These are cylindrical elements, having pointed extremities, most frequently curved in the form of a crescent, and pigmented toward the centre as shown in the following figure."

FIG. 3.—A, B, bodies No. 1 with pointed extremities. C, body No. 1 attached to a red blood-corpuscle. E, oval body, intermediate between No. 1 and No. 2. (Magnified about 1,000 diameters.)

"The length of these bodies is from eight to nine micromillimetres, the diameter about three micromillimetres in the broadest part. The extremities are sometimes pointed (A, B, Fig. 3), sometimes more rounded (D). The contour is generally indicated by a single delicate line; but it is easy to verify a double contour in certain preparations. These bodies are transparent, and colorless, except toward the central portion, where there are always some pigment-granules more or less agglomerated. Occasionally the pigment may be situated at one of the extremities. One may often perceive on the concave side a very fine line, which seems to unite the extremities of the crescent (B, Fig. 3). When one of these bodies is attached to a blood-corpuscle (C, Fig. 3) the extremities of the crescent pass the line of the contour of the corpuscle; the adhesion to the corpuscles is not strong, and appears to be purely accidental. . . . Beside these cylindrical elements of crescent shape are found almost always oval bodies (E, Fig. 3), which seem to be inter-

mediate forms between body No. 1 and body No. 2, which will be described further on; in these oval bodies the pigment grains are often arranged in the form of a crown, as in body No. 2. These bodies No. 1 do not appear to be endowed with movement, they do not change place in the field of the microscope, and when their form is modified it is in a very gradual manner; one may follow the transformation of these cylindrical bodies with pointed extremities to an oval and then to a spherical body. . . . In general it will be found that at the end of twenty-four or forty-eight hours these bodies, No. 1, have taken an irregularly spherical form. In the cadaver the bodies No. 1 change their form still more quickly than in the fresh blood; in order to find them it is necessary to collect the blood shortly after death."

"I will attempt further on to determine the conditions under which one meets these bodies No. 1 in the blood of malarial patients. It will suffice to say here that *the presence of these elements in the blood is much less constant than that of body No. 2*; if I have described them first it is in order to preserve the order which I have adopted in my first publications. Sometimes these bodies No. 1 are not found at all in blood rich in parasitic elements (bodies No. 2, and mobile filaments); sometimes, on the contrary, the blood only contains these bodies; in certain cases these elements exist in very great numbers in the blood; it has several times happened to me to find ten or twelve in a single field."

(To be continued.)

UNUSUAL CAUSES OF COUGHING.[1]

By CLARENCE C. RICE, M.D.,

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It is the most important, and frequently the most difficult, task of the physician to ascertain the causes which produce coughing; to define exactly the locality upon which the irritant is at work. I wish to speak now only of those varieties of cough which are produced by disturbances in the upper portions of the air-passages, leaving out of consideration cough as associated with chest disease. Here it is but one of the many symptoms of the general disturbance, and it can be controlled with the other manifestations. Its importance, too, is outweighed by the constitutional condition of the patient, which may threaten to produce a fatal result. It is not the cough which is to be cured in pneumonia and phthisis, but the abnormal condition of the lungs or the associated bronchial catarrh which cause the coughing. On the other hand, there are many patients who consult a physician with whom the prominent and sometimes the only symptom is an aggravating, teasing cough. This is the only complaint, and the physician's aid is sought solely for relief from this annoyance. It is not enough in these cases to examine the throat and lungs critically, and to assure the visitor that his respiratory tract is healthy, and therefore it is useless and unnecessary for him to cough. He will be pleased to know that he has not contracted consumption; but he will continue to cough, and as a result may develop chronic pulmonary trouble. A glance at the patient is sufficient to exclude phthisis, bronchitis, emphysema, etc. He is a strong, healthy man, and laughs when questioned as to his appetite, strength, and weight; yet there is in this case some abnormal factor at work which is doing all the mischief, and which must be discovered to be successfully corrected. For this reason no apology is necessary for mentioning pathological conditions, however slight they apparently may be, provided only they are sufficient to produce these grave disturbances. Irritants are always slight in the commencement, but may lead to chronic inflammatory diseases of large dimensions unless treated early, as Riegel[2] says: "The intensity of the paroxysms of cough is in no way immediately dependent upon the extent or intensity of the local alterations, so that we cannot form any definite conclusions from the nature and severity of the cough as to the seat and extent of the pathological alterations."

Uncertain diagnosis renders the prognosis and treatment equally unsatisfactory. It is a great point gained when the physician can account for all symptoms on a pathological basis. From the tip of the nose to the larynx there is ample space for the location of numerous cough-producing factors. Many points of irritation have been discovered, during the past few years, which had never been dreamed of as having any possible connection with a troublesome cough. But now that we know that there is so intimate a relation between parts so distant from one another—as, for example, that asthma may be occasioned by an obstruction in the nasal passages, and that wax in the ear, or a polypus in the vault of the pharynx, may be sufficient to provoke the most harassing cough—we are inclined to investigate thoroughly before admitting ignorance, and classifying the cough in question as a nervous, irritative, reflex, or hysterical one. There are undoubtedly some few coughs which, for want of a better name, but more for want of clearer knowledge, may be so styled; but hysterical coughs are not so frequent as they were five years ago, and they will be less frequent at the end of another five years. Nor do I believe that reflex coughs are very common, provided by that term we mean that the cough-producing irritant is situated in a portion of the body remote from the respiratory tract, as in the so-called "stomachic" cough. Careful investigation will usually reveal an irritant much nearer than the stomach. In uterine coughs, too, although there may be undoubted uterine disease which produces general nervous irritability—yet, granting that a person may possess this predisposition, and that a very slight irritant is enough to produce so marked objective symptoms as a paroxysm of coughing—still an irritant there is, and careful investigation will locate it in the upper air-passages much more frequently than in or about the uterus.

The whole diagnosis is not made, even if a catarrhal laryngitis or bronchitis is discovered; these, like the cough, may be the result of the irritation for which we are searching, and not the irritant itself. We are in the habit of giving the indefinite name of bronchitis to many cases of cough. The lungs are examined, and if a few mucous râles are heard this diagnosis is thought to cover the whole ground. But this, after all, is not going deeply into matters; for mucous râles are present in the chests of thousands of healthy people who have no cough. In our climate, redness of mucous membrane and mucous secretion are commonly found in larynges and bronchial tubes without apparent detriment to the health of the patient, and too much stress must not be placed upon these phenomena as cough-producing factors. Experiments have clearly demonstrated that there are certain localities in the pharynx, larynx, and trachea which are much more sensitive to irritation than the remaining parts—for example, the posterior wall of the junction of the middle and lower pharynx; in the larynx, the interarytenoid fossa, the folds of tissue extending between the epiglottis and the arytenoids, and the glosso-epiglottic ligament. Irritation at any of these points produces a spasmodic cough; while the mucous membrane of the trachea, as a whole, is moderately sensitive, it is particularly so at its bifurcation. All these parts are necessarily intimately associated in sensibility, obtaining, as they do, their sensitive nerve-supply from the same source. No matter how callous any portion of this tract is to irritation, the neighboring tissues will quickly become affected, and coughing will result if the irritation is long continued. Early investigators concluded that cough occurred primarily only in the larynx, but it is now known that cough may be produced by irritation of the terminal filaments of the pharyngeal and superior laryngeal branches of the pneu-

[1] Read by title before the Medical Society of the State of New York, February 3, 1886.

[2] Riegel, Von Ziemssen, vol. iv., p. 277.

mogastric at any point of their distribution—the most sensitive points, however, being those mentioned above.

Perhaps a more appropriate title of the communication would be unrecognized rather than unusual causes of cough, for I believe the ones to be mentioned are not infrequent, but they are certainly apt to be overlooked. For the purpose of intelligent therapeutics, it is as important to understand the exact sources of irritation about the respiratory mucous membrane as to discover the foreign body which is the cause of an ophthalmia. The analogy is a close one; for, as will be seen, it is nearly as unreasonable to prescribe mucilaginous cough-medicines in the one case as to rely on soothing lotions for the eye in which the foreign body is allowed to remain.

I can give the history of a case illustrating this point in a few words. A young woman, nineteen years of age, the picture of health, assured me that she was very well in every particular, except that she suffered from spasms of coughing which were very violent, and which resembled whooping-cough in character, the paroxysms sometimes ending in vomiting. This was the most severe of three similar attacks, which had followed each other at short intervals during eighteen months. She had the inclination to swallow continually, and there was frequently a sensation as though food was lodged in the commencement of the œsophagus. A slight tickling in the larynx was constant; this she could control, but any movement of the throat, as in swallowing, loud talking, deep full inspirations, increased the irritation so much that she was powerless to prevent the cough and

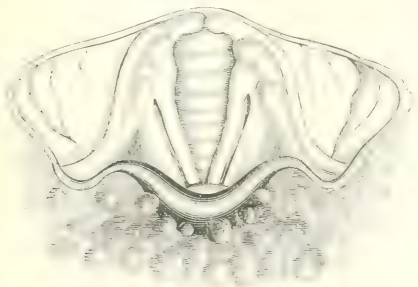

Fig. 1.

glottic spasm. It will be noted that all the symptoms pointed to the pharynx, or the upper part of the larynx, as the locality affected. Her cough was so constant and loud that she greatly annoyed her friends, who thought it could be in a measure controlled, as her general health was so good. A physician, too, had pronounced it a nervous cough, so that family sympathy was not abundant. She had taken expectorants and sedatives, with partial relief for a time. I was greatly interested in searching for the location of the irritant which was causing the cough, as its character demonstrated that it was not a reflex affair (as that term is commonly used), but occasioned by actual lesion. I expected to find, in this particular instance, either an irritable nasal mucous membrane, an elongated uvula, erosions on the posterior wall of the pharynx or tip of the epiglottis, or possibly some laryngeal disturbance. Nothing of this kind was seen, but the following condition was present, as shown by Fig. 1: The papillæ at the base of the tongue were greatly hypertrophied, and the superficial lingual veins were much enlarged. They appeared like a number of large earth-worms. There was no special sensitiveness here, and the probe was rubbed over the whole of the base of the tongue without exciting muscular spasm. The mischief this condition of the tongue was producing was apparent, however, when an attempt to swallow was made, or during sharp, quick inspirations. At such times, the base of the tongue being drawn backward, the large, rough, glossal papillæ folded themselves over the free edge of the epiglottis, so that the latter was bent forward and held securely down; buried beneath them, one-fourth of an inch of the summit of the epiglottis was concealed. The parts remained in this position during ordinary respiration until a strong muscular movement was made, when the epiglottis freed itself and became nearly vertical. It soon became apparent that here was the source of irritation. By careful observation I ascertained that the paroxysms of coughing were not produced when the tongue and epiglottis met.

In fact, at almost every examination the base of the tongue was found overlapping the epiglottis, and this seemed to be the usual position during rest. It was when the epiglottis struggled to throw off the tongue that the patient experienced the irresistible impulse to cough. This appearance truly represented a struggle between the two parts, and the epiglottis was forced to rub its sensitive laryngeal surface across the horny prominences of the tongue. This would seem sufficient occasion for glottic spasm, when it is remembered that the posterior surface of the epiglottis will not tolerate the touch of a probe until it has become educated to such contact. It will be said, in objection to this condition being a frequent cause of cough, that the epiglottis does become accustomed to the touch of the tongue; and this to a certain extent is true. It is well known that the anterior face of the epiglottis is far less sensitive to irritation than its laryngeal surface, exposed as it is to the passage of solid and liquid food. It is a common occurrence to find the base of the tongue lying against the epiglottis, and it is not unusual to see the glossal papillæ extending over its free margin, and touching its laryngeal surface, without creating any disturbance. It is a different matter when, as in this case, the follicles of the tongue overlap the epiglottis to the extent of one-fourth an inch, and rub over so large an area of sensitive surface. Such a condition may, and undoubtedly occasionally does, exist without exciting reflex spasm; but if it occurs in a person having a sensitive mucous membrane, and the irritation is sufficient to provoke coughing, the epiglottis will become more and more irritable, the paroxysms more frequent and severe, until secondarily the pharynx and larynx will become actively congested. In this hyperæsthetic condition everything will act as an irritant and provoke coughing—change in the temperature of the air breathed, dust in the atmosphere, loud talking, fast walking, or even different positions of the body. The patient coughs when he first lies down, and again when he rises. The coughing-fit itself acts as an irritant, and the more violent it is the sooner and more severe will be the following one. It is well to bear in mind the injury done to mucous membranes by the *mechanical violence of coughing*. It is itself a more potent cough-producing factor than most external irritants. Such a condition of the upper respiratory tract will account for spasm of the larynx, laryngismus stridulus of adults, and attacks of suffocation without apparent cause. In such cases great caution should be used in making local applications to the larynx, as alarming glottic spasm may be easily produced.

By further examination, I became convinced that the enlargement of the glandular tissue of the tongue was not wholly at fault in assuming this abnormal position in relation to the epiglottis. The epiglottis must be in some degree peculiar to invite this contact. In all cases that I have seen, the epiglottes have been remarkably thin and supple, and the normal degree of anterior curving of the free margin has been considerably exaggerated. In some instances the epiglottis is rolled up like a scroll. I have seen cases where the tip was bent backward until it touched its own lingual surface. Long and lax aryteno-epiglottidean ligaments, or impaired action of the muscular fibres of the thyro-epiglottideus, may be the cause of such pronounced anterior position. It would seem impossible that an epiglottis of such a shape could become erect or curved backward far enough

to cover the orifice of the larynx during deglutition. The weight of the epiglottis has much to do with its position. In inflammation of this cartilage it is a rule to find it leaning backward toward the œsophagus. It is frequently seen in a horizontal position when inflamed and thickened by phthisical and syphilitic disease; and as the inflammation subsides, it will, little by little, become erect. The following case shows how much the weight of the epiglottis regulates its position. A middle-aged woman came to the office, complaining of cough and slight dyspnœa. A fibroma as large as a small grape was found attached to the posterior surface of the epiglottis near its summit. The epiglottis was otherwise normal. It was bent backward beyond a horizontal plane, and enough to cause the dyspnœa. The growth was removed with the galvano-cautery. That the weight of the tumor was the cause of the depressed position of the epiglottis was apparent, for after its removal the epiglottis gradually became erect, and the dyspnœa ceased. It is, then, in those patients where *the epiglottis has not been attacked by disease*, that we find it tipping forward, and inviting contact with the tongue.

To satisfy ourselves beyond doubt that this condition alone is the cause of cough, we must exclude all other sources of irritation about the ears, nose, pharynx, and larynx. And here I can pay still another compliment to the much-lauded cocaine, by mentioning its great value as a means of diagnosis. Apply a four per cent. solution of cocaine to the nose, pharynx, and larynx, not allowing it to touch the tongue and epiglottis, thus quieting all irritability except at the location. If the cough and tickling continues, it is fair to conclude that we have discovered the cause and source of the cough.

The treatment of these cases is quite satisfactory. The indication is to remove the enlarged papillæ at the base of the tongue, or to diminish their size sufficiently to prevent them overlapping the epiglottis. This is best accomplished by burning them with a galvano-cautery electrode. It is not always necessary to use the laryngoscope when applying the cautery. If the tongue is forcibly depressed, its base can be seen and reached, and frequently the epiglottis, too, can be brought into view. The epiglottis, too, is more easily seen in this class of cases, on account of its high position in the pharynx and its forward curvature. The various caustics may be employed instead of the electric cautery, but great care must be used in limiting their application to the enlarged glossal papillæ. I have found, too, that simple pressure, by means of cotton or sponge attached to a sponge-holder, will produce absorption of this glandular tissue. I have seen most beneficial results from this line of treatment. And in the case reported above, the cough ceased when the hypertrophied tissue of the tongue had been removed.

In another class of cases where, as in those just described, cough is the prominent symptom, the shape and size of the epiglottis will be found to be the cough-producing factors, the base of the tongue being normal. I do not wish to speak of the various well-known varieties of ulcerations which attack the epiglottis in the course of syphilis, phthisis, lupus, carcinoma, etc. There is nothing subtle about these processes; they may be readily seen by looking, and the lesion is usually so well marked as not to escape observation. The epiglottis has always been considered one of the most sensitive portions of the respiratory tract. Its position is one of peculiar exposure; protected somewhat more than the pharynx, it never, like that, becomes thoroughly accustomed, and so eventually insensible, to the irritation of all kinds of solids and liquids, and to the extremes of temperature both in the air breathed and the food eaten. But while it is much more exposed than any other part of the larynx, it retains the fine sensibility necessary to its functions as a sentinel. Erosions along the tip of the epiglottis are spoken of in text-books as one of the results of catarrhal inflammation, and as capable of producing an harassing cough. I am sure they rarely occur in a simple inflammatory process, unless the epiglottis is exposed to friction; and I believe, too, that their presence alone will not account for a constant cough, unless the friction is continuous. In addition, then, to the discovery of an eroded epiglottis, it is wise to ascertain in what manner its epithelial covering became rubbed off. The point I wish to emphasize is this, that where the free margin of the epiglottis is seen reddened and irritable, the merest touch producing a paroxysm of cough, it will usually be found that *the shape of this cartilage* is at fault—it is asymmetrical. A condition spoken of and illustrated by Dr. J. Solis Cohen in his book,[1] but frequently much more exaggerated than there represented. One angle or one-half of the summit is prolonged beyond the level of the other half. The prolongation sometimes ends in a well-curved border, and sometimes extends to a point. The commencement of the asymmetry is congenital, and is not more remarkable than the several other malformations of the epiglottis which commonly occur. No discomfort ensues from this elongation of the epiglottis until it comes in contact with some neighboring tissue, as the prominent papillæ at the base of the tongue, if the epiglottis is bent forward, and I have noted one instance in which the long point of the epiglottis touched the posterior wall of the pharynx during deglutition. The congenital unilateral enlargement of the epiglottis is increased by chronic inflammatory thickening as soon as this condition of contact with other structure becomes permanent. We have now all the conditions favorable for a constant irritative cough—a sensitive epiglottis, so long as to necessarily impinge upon the tongue with every movement of the larynx. A case in point came to the office to-day. The young woman while sitting in a room at some distance from my office coughed constantly and so loud as to be easily heard. I had in this way, before seeing the patient, an opportunity of judging of the character of the cough. It was spasmodic, irritable, and unsatisfactory in that no mucus was expelled from the larynx. The patient was an unmarried woman. Good general health. Family history excellent. The commencement of her cough dated back almost a year. She thought it the result of a cold contracted at that time. The cough, she said, was excited by a tickling, and she placed her hand over the larynx as the location of the irritant. She said, too, that she was "forced to cough until she reached the spot," meaning that the tickling continued until the point where it was felt was forcibly agitated, then there was a brief feeling of relief. Where coughing has for its object the expulsion of an accumulation of mucus, it is natural that the cough should cease so soon as the irritant is removed. This is the legitimate function of coughing, to expel all foreign substances from the upper air-passages and to prevent their entrance into the lungs. And the unusual expiratory efforts are continued until this object is accomplished. But how shall we explain the relief obtained by coughing, and the longer or shorter intervals between the paroxysms, in those cases where, as in the one cited, there is no hypersecretion, but the sensory nerve-fibres are excited by an irritant which remains constantly present, and which no effort can remove or relieve? The act of coughing itself increases the feeling of sensitiveness in the throat until finally the irritation reaches its maximum intensity and then suddenly disappears and the cough ceases. It is probable that the sensory nerves become so shocked by the mechanical violence of the cough that they are for a time insensible to irritation. Their muscular irritability is exhausted, and during the time necessary for recuperation there is no tickling and no cough.

I have already described the lesion and cause of the cough which were found in the case just referred to, and they are well shown in Fig. 2. An epiglottis elongated at its left superior margin, one-third of an inch beyond that of the remainder of the free border—this prolonga-

[1] [illegible]

tion ending in a point. The epiglottis was bent sharply forward over the base of the tongue, and rested upon, or was buried beneath, some of its papillæ. The point of the epiglottis was in a condition of chronic inflammation, red and thickened, and the mucous membrane rough and granular. The unusual length of the epiglottis was evidently steadily increasing under the constant friction against the horny tissue of the tongue. It required but a moment to prove that here was the seat of the trouble, for when the long point of the epiglottis was touched with a probe the patient recognized the location as identical with that of the seat of chronic irritation, and the same cough was produced. Most positive evidence, however, was obtained by the action of cocaine, and this is a use of this drug which I have not heard spoken of. It was employed in this manner: It was applied only to the elongation of the epiglottis by means of a small pledget of cotton wrapped about a probe. This effectually excluded from consideration an irritation arising from this point, and as the entire feeling of tickling was gone, it was just to conclude that this was the entire irritant. The value of cocaine, then, as a means of diagnosis by exclusion, is another point to be recorded in its favor. This drug is particularly useful, too, in the treatment of these patients. And in those cases where there is but slight elongation of the epiglottis, cocaine may be all that is required. Its effect on the epiglottis is similar to that on other mucous surfaces: it reduces its size by con-

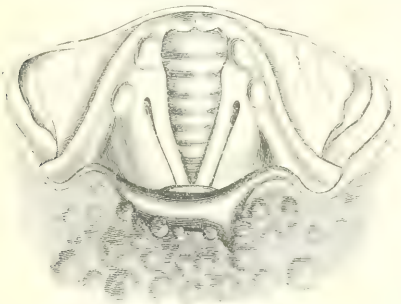

Fig. 2.

tracting the enlarged capillaries and forcing out the blood. The decrease in size is in proportion with the degree of congestion which exists. In the same way cocaine levels the hypertrophied tissue of the base of the tongue. By applying the drug several times daily some permanent reduction in size may be gained by obliteration of capillaries. If the length of the epiglottis is too great to be removed in this manner, more radical measures must be employed, and the galvano-cautery is the best instrument.

With the platinum point the hypertrophied tissue of the epiglottis can be removed and its elongated free margin be made symmetrical.

The "unusual causes of coughing," then, are two: First, *hypertrophied, glassy papillæ, overlapping an epiglottis, which is bent far forward, but otherwise normal;* and second, *a congenitally assymmetrical epiglottis, which has been made still longer by inflammation, caused by constant friction with the tongue.* Abnormal conditions of the tongue and ulcerations of the epiglottis are mentioned in text-books as sources of irritation and causes of cough, but this relation between the tongue and the epiglottis has not been specially recognized as a strong cough-producing factor. I believe it is very frequently so. I consider the recognition of this lesion to be of great importance to the physician; for it explains the etiology of many coughs the causes of which have not hitherto been accurately determined. Since my attention was first called to this lesion, I have seen many cases in which it existed, and in which it could be demonstrated beyond a doubt that it was the sole cause of cough.

A SUCCESSFUL CASE OF LAPAROTOMY FOR PERITYPHLITIC ABSCESS.[1]

By JOHN HOMANS, M.D.,

INSTRUCTOR IN HARVARD UNIVERSITY IN THE DIAGNOSIS AND TREATMENT OF OVARIAN TUMORS, VISITING SURGEON TO THE MASSACHUSETTS GENERAL HOSPITAL.

In The Medical Record of March 6, 1886, appeared an excellent article, by Dr. William T. Bull, on the subject of early interference in cases of perityphlitic abscess. The case which I have lately operated upon is one of earlier interference than that of Dr. Bull, if we date from the first symptom of pain, but a later one by about a day, if we date from the time the patient took to his bed. At the same time, as my patient was a boy aged eleven, he may not have remembered his symptoms and the duration and locality of his pain as well as an adult would have done. Dr. J. S. Greene, of Dorchester, was called to see the boy on Saturday evening, January 9, 1886. I operated on Monday, January 11th. Laparotomy was done without previous aspiration over the most tender point, which was one and a half inch above, and a little posterior to, the right antero-superior spine of the ilium. Nothing like pointing existed. You will notice that this laparotomy was done within forty-eight hours of the doctor's first visit, and when the patient had been in bed less than four days. The very first symptom of pain and uneasiness had appeared within five days. All the cases of acute perityphlitis that I had seen demonstrated by dissection during the last twenty-five years had been at autopsies, and death had usually taken place about a week after the first symptom had appeared. Dr. Greene and I decided not to wait for the autopsy.

Dr. Bull's patient had a steady, dull pain in the inguinal region for ten days before he took to his bed, so that if we date from the period of decubitus Dr. Bull's operation is the earlier; if from the first symptom of disturbance, mine is the earlier. But this is a question of little importance. The point on which Dr. Bull and myself would agree in urging upon the profession is that in most of these cases an operation, to be of any service, must be done early, *very early*. I could not find a dull place in which to pass a needle, and so I thought it more intelligent to dissect down through the locality of greatest tenderness. I think the wisdom of this was shown by the operation, for I came down first on perfectly healthy bowel, and it was only by separating and poking the loops of intestine apart that I was able to open the abscess. If I had thrust in the needle at the point where I made the incision, I should have perforated the bowel at least four times before I could have struck the collection of pus, and I might have missed it entirely. If I had aspirated just below the kidney, in the right loin, I should have hit the right spot, and perhaps this would have been better surgery in point of drainage, and as not opening the peritoneum. However, as the patient was cured, it may be that my incision was as well placed as one further behind would have been. I will give you the history of the case that you may understand it more clearly. The patient was a boy, eleven years of age, never robust. On Wednesday, January 6th, he had some pain in the bowels; on Thursday he had more pain, but he still kept about. On Friday his pain became worse, and he called attention to it and remained in bed. On this day he had a dejection. Dr. Greene saw him on Saturday evening the 9th, and found him in bed with a temperature of 102.4°, and a pulse of 120. His tongue was coated white. There was dulness on percussion over the right iliac and lumbar regions, with the centre of tenderness about one and a half inch above the anterior spine of the ilium. There was no swelling. The other parts of the abdomen were somewhat compressible. Morphia was given, and a poultice applied.

[1] Read before the Surgical Section of the Suffolk District Medical Society, April 13, 1886.

On Monday, the 11th, the pulse was more frequent and the abdomen less yielding; small quantities of liquid nourishment had been taken and retained. Dr. Greene called me to see the patient in the afternoon, and I performed laparotomy at the point above mentioned. No spray was used. An incision about two and a half inches long was made, and the peritoneum opened; the healthy bowel presented itself. On passing my finger below and behind the presenting loops I felt coils of intestine filled with fecal masses, or perhaps also enlarged glands. The loops of intestine were adherent to each other by a recent plastic process, but by poking about with my finger and separating them I opened an abscess, and about two ounces or more of foul-smelling ("rotten egg") pus welled up out of the wound. So far as we could, we prevented the pus from running in among the coils of intestine, and after emptying the abscess as well as possible, a double drainage-tube was passed into its cavity and the incision closed around the projecting ends of the india-rubber tube. The boy did not sit up out of bed till February 3d, about three weeks after the operation. His temperature varied from 99° to 102.9°, and he required opiates for four days. His bowels moved on January 15th. The wound discharged freely for a fortnight, and united by granulation. He is now well, hearty, strong, and is gaining flesh. The credit of the cure belongs more to Dr. Greene than to me, as I was only his instrument in the case. There is not the least tendency to hernia, but I have had an elastic abdominal supporter fitted, as I always do after a recovery from laparotomy, for whatever purpose done.

(Dr. Homans now showed the patient undressed, and pointed out the site of the incision and the cicatrix, which was firm and solid. The boy looked healthy and strong, and had gained many pounds in weight. He is perfectly robust and active.)

POINTS IN THE THERAPEUTICS OF DISEASES OF THE JOINTS.

By A. B. JUDSON, M.D.,

NEW YORK.

It is sometimes said that the treatment of joint diseases is enveloped in obscurity, and that the methods in use are various and conflicting. As an attempt to clear up the therapeutical atmosphere, I would like to make two or three points, as our legal brethren would say.

In the first place, I think we fail to recognize and acknowledge that articular osteitis is, from the nature of the case, an affection of long duration, and one in which absolute restoration to perfect symmetry and complete function is very decidedly the exception and not the rule. In these days of brilliant and painless operations and marvellous discoveries in physics we resent being limited to simply reducing deformity and placing the part and system in a favorable position for the slow processes of natural repair. Until a perfect cure has been found, however, and tested by time, it is better not to disappoint our patients, but to give them the assurance that they will receive at our hands all that the present state of science can grant.

In the second place, I think obscurity has been caused by the mistaken precedence which has been unwittingly given to mechanics over pathology. The machinery of the joint being out of order, and certain muscles abnormally contracted, we have concluded that it is a question of dynamics, and that the pressure incident to muscular action is the cause of the destruction of cartilage and bone. Instead of prudently stopping to verify this conclusion by the examination of morbid specimens, which prove that muscular action plays but an insignificant part, we seek a mechanical remedy for what appears to be a mechanical lesion, and invent an apparatus for counteracting the muscles. And when the apparatus is adjusted and the symptoms abate we congratulate ourselves and imagine that the relief experienced is a proof that the muscles were causing all the mischief, failing to see that we cannot directly oppose the muscular action at all, and that, without knowing it, we have fortunately been applying fixation, which is a constant accompaniment of traction, and which a timely resort to pathology would have told us was the very thing which the inflamed joint needed. I have none of my fellow-workers in view (we have all been followers of Dr. Henry G. Davis), but have simply tried to show how pathology and mechanics have failed to walk hand in hand, as they should have done, in the treatment of joint diseases. The therapeutical precepts suggested above have been expressed in detail in former papers,[1] and sustained by reasons which seem to me conclusive.

The third point I wish to make is, that anchylosis has not been given its proper value in the formulæ of this therapeutical problem. When long-continued inflammation has rioted in the tissues of a joint, deforming the articular surfaces and locking them up in organized lymph and shortened ligaments, we have anchylosis, the ultimate degree of which will depend, in my opinion, on the promptness and success of our efforts to arrest the inflammation. And I think that we are wrong when we fear adding to the amount of ultimate anchylosis by early and thorough fixation of the joint. To me it seems reasonable that such a course will diminish the resulting anchylosis by subduing the inflammation and preventing an excess of its products. The statement has been made, and I believe can be sustained by records, that fixation of a healthy joint, no matter for how long a period, is powerless to produce anchylosis. It causes a temporary arrest or impairment of motion, such as can be overcome by habitual effort on the part of the patient, a disability very different from the anchylosis following inflammatory disease, which is, with rare exceptions, permanent. If this view be correct, then fixation is to be applied as early in the case as possible, and with uncompromising persistence, in the belief that, so far as the joint is a healthy one, fixation is absolutely harmless, and that so far as the joint is diseased, fixation will, by subduing the inflammation, increase ultimate mobility.

There are, of course, other sources of obscurity, and this will be the case until we attain omniscience. I cannot but think, however, that the three points which I have tried to make dissipate some of the difficulties in the way of the unanimous recognition of correct methods.

[1] St. Louis Courier of Medicine, May, 1882, pp. 1–17; January 31, 1885, pp. 116–126. New York Medical Journal, July, 1882, pp. 1–17; January 31, 1885, pp. 116–126. Medical Record, May 1, 1886, pp. 497–504.

HEMIGLOSSITIS.—Dr. R. Delaine reports (*Wiener Medizinische Wochenschrift*, No. 7, 1886) a case of a child, aged six months, whose tongue became rapidly swollen, so that it projected from the half-opened mouth. Examination showed that the swelling was confined chiefly to the right side, the surface of which was covered with yellowish-white vesicles, from the size of a millet-seed to that of a pin-head, arranged in groups. Similar vesicles were visible also on the inner and outer sides of the right cheek. On the fourth day the swelling subsided as rapidly as it had come, and the vesicles dried up and disappeared. From the similarity in symptoms and course of the disease to those of herpes zoster, the writer regarded it as a form of this affection. Two similar cases, occurring in adults, are reported by Dr. P. Güterbock (*Centralblatt für Chirurgie*, No. 7, 1886). In both of these cases, also, the affection was confined to the right side of the tongue. In these and other cases the seat of the disease corresponded almost exactly to the area of distribution of filaments of the trigeminal nerve, and in some reported instances there seemed also to be a participation of the chorda tympani in the disturbance. The glosso-pharyngeal and the hypoglossal nerves, on the other hand, seemed in none of the cases to have any etiological relation to the affection.

Clinical Department.

THE MODE OF PERFORMING COLOTOMY—WITH A CASE.

Dr. William H. Sherwood, of Painesville, O., writes: "In performing colotomy the colon has been approached in several different ways. Litter, in 1710, was the first, perhaps, to suggest this operation, and recommended reaching the sigmoid flexure through the left iliac region; but it was not until about sixty-five years afterward that his suggestions were carried out by Pillore, who cut into the cæcum through the right iliac region, and stretched the bowel to the parietes. This operation was undertaken in consequence of malignant disease of the rectum.

"About a quarter of a century later, in 1797, Fine operated through to the transverse colon in the umbilical region for cancer of the rectum. A short time previous to this, Callisen advised the left lumbar region as the best route, and the sigmoid flexure as the most proper portion of the intestine to be opened. When the obstruction is situated in the rectum or sigmoid flexure, undoubtedly the operation is most successful. In my judgment, left lumbar colotomy is much preferable to any other, and there is less danger of wounding the peritoneum. The incision as recommended by Amussat, and more recently modified by Bryant, is the best, as we more effectually avoid the inferior lumbar arteries, and on account of the gaping nature of the wound we can much better distinguish the parts. If an immediate incision into the bowel be demanded after the dissection down to the bowel, the method recommended by Agnew is the safest and best that has come under my observation. But this should always, if possible, be avoided. The intestine should be held *in situ* for four or five days, until adhesions have taken place. Bryant, Davies Colley, Lucas, and others have been in the habit of covering the blades of their dissecting forceps with French rubber tubing, and including a small portion of the bowel between them, with the forceps situated crosswise the wound. It occurred to me that a two-pronged, hard-rubber, ladies' hairpin, with the prongs covered with French rubber and the inner surface lined with rubber adhesive plaster, would be just as effectual, and much lighter; and I am happy to say it served every purpose. The prongs, concave in their long dimension, admirably adapt themselves to the transverse surface of the lumbar region. Davies Colley had an instrument constructed that rested on each side of the wound, and fixed the gut in position by a screw with a universal end. But I think the hair-pin equally as good, much lighter, less cumbersome, less expensive, and not as likely to get displaced.

"Through the kindness of my friend, Dr. E. B. Root, of this city, I was called to see Mrs. F. S——, a lady aged fifty-seven, married, who had never borne children. She was much emaciated; pulse, 120, and the countenance denoting great suffering. Upon endeavoring to pass the finger up the rectum there seemed to be a very small and tortuous channel; in fact, it was impossible to explore it with any degree of accuracy. The vagina also was involved to that extent that hardly a semblance of an os or cervix could be distinguished, and during the imperfect, scanty, and painful evacuations a small amount of fæces could be observed escaping from the vagina. She did not suffer from tympanitis or emesis as much as usual in these cases, on account of the judicious use of the bougie in the hands of her family physician. As nearly as could be ascertained, the disease had commenced about eight months previously.

"Colotomy was advised as a palliative measure, and January 1, 1886, after she was thoroughly anæsthetized and placed in the proper position, assisted by Dr. E. B. Root and others, I commenced Bryant's incision on the left side, one inch above and one inch behind the anterior superior spinous process of the ilium, carrying it obliquely to the inferior rib, and within one inch and three-quarters of the spine. After carefully dissecting through the obliquus externus, internus, and transversalis facies the border of the quadratus came into view; after pushing my finger through the little bed of cellular tissue, the left kidney was found displaced downward, and somewhat enlarged, but not otherwise diseased. The kidney was pushed to one side, and after considerable difficulty in manipulating I succeeded in hooking my index-finger under the colon and bringing it into the wound, where it was securely fixed with the above-described clamp. The wound was dressed with carbolized oil, and its cutaneous portion, up to the intestine, nicely closed with silver suture. Then a thick compress of carbolized jute was placed over the wound, and a broad bandage was passed around the loins, securing the dressing.

January 2d.—Reaction had come on nicely, no elevation of temperature; pulse, 100.

"January 3d.—Very comfortable, very slight elevation of temperature; pulse, 90.

"January 4th.—No alteration; expressed a desire for food, was allowed beef-tea.

"January 5th.—No elevation of temperature. Examined the wound; adhesion had taken place perfectly. We removed the hair-pin and made an incision into the intestine three-fourths of an inch long; gas escaped quite freely.

"January 6th.—Is very comfortable, free from fever; pulse, 84; is hungry, and has had a slight movement through the new opening. Nothing new has occurred up to this—January 23d—in her case; the wound has entirely healed; the artificial anus is thoroughly established."

Progress of Medical Science.

Transplantation of Tendons.—Dr. Assaki states that it is possible to replace a portion of a tendon an inch or more in length by a similar piece taken from another animal. When the operation is performed under antiseptic precautions union takes place in about a week, without any impairment of function of the tendon, which glides in its sheath normally, unrestricted by adhesions. He has made successful transplantations, not only from one animal to another of the same species, but also from dogs to rabbits, and the reverse, and even from birds to mammals. Subsequent examination of the animals operated upon showed complete union of the sutured tendons, the only trace of the operation being an increased vascularization of the tendon sheath. The author argues that the operation ought to be equally successful in the human subject. In his experiments the transplanted portions were united to the divided tendons by catgut sutures, and strict antisepsis was maintained.—*St. Petersburger Medicinische Wochenschrift*, No. 7, 1886.

The Recurrence of Stone in the Bladder.—Mr. Reginald Harrison reports, in the *Liverpool Medico-Chirurgical Journal* for January, 1886, the case of a man, sixty-two years of age, upon whom he performed lithotomy twice at an interval of less than fourteen months. The first operation was very thoroughly performed, and it was thought that every portion of calculus had been removed, but the wound in the bladder never completely closed, and the writer believed that a sacculated stone had escaped detection. This view was strengthened by the appearance of the calculus removed at the second operation, as it was seen to consist of two layers, a nucleus and an outer friable phosphatic crust evidently of recent formation. Mr. Harrison regards the case as instructive in showing how impossible it is to be absolutely sure that every bit of calculus has been removed, and consequently how unjust would be the criticism passed, more particularly in the case of a young surgeon, if in a similar instance the patient should die and an encysted stone be found at the autopsy. In discussing the causes

favoring the reproduction of stone he says that an enlarged prostate is a very prominent one, and it seems to bring this about in two ways. In the first place, persons who may have been in the habit of voiding renal calculi for a considerable number of years find, after a certain age has been reached, that they no longer do so, and continued vesical irritation follows an attack of renal colic. The explanation lies in the fact that their prostates have commenced to enlarge, and thus stones which previously escaped spontaneously are practically trapped. In the second place, the large prostate, by permanently altering the shape of the outlet from the bladder, and thus causing urine to be constantly retained, engenders a state of chronic cystitis and excessive excretion of mucus, which are the invariable preliminaries to the formation of phosphatic stones. Mr. Williams has found, from the statistics of operations for stone in the bladder in the Norfolk and Norwich Hospital, during a period of ninety-seven years, that relapses occur in the proportion of one to thirty-six; but in these statistics both males and females are included, whereas, relapses occurred only in males, so that the proportion is really somewhat greater than these figures would indicate. Mr. Harrison prefers lithotomy in cases associated with enlarged prostate, with a view of improving the condition of the prostatic urethra by a free section, according to the method described by him at the International Congress of Copenhagen.

Araroba in the Treatment of Psoriasis.—Dr. Borogoditsky has used with success an ointment composed of one part each of araroba and acetic acid, in thirty parts of lard. The ointment is to be rubbed upon the affected parts two or three times a day. The author speaks highly of the good results obtained by him by this method.—*Centralblatt für Chirurgie*, No. 7, 1886.

Treatment of Sweating of the Feet.—Dr. Hebert gives, in the *Journal de Médecine et de Chirurgie Pratiques*, No. 2, 1886, the details of a method first suggested by Dr. Legoux, which he has found most efficacious for the relief of sweating of the feet. For three days the feet are bathed, for half an hour at a time, morning and evening, in tar-water. At the end of the third day the pediluvia are omitted, and the soles of the feet are painted once a day with perchloride of iron. After four days more the epidermis of the soles is found to be dry and hard. Dr. Hebert succeeded in obtaining a complete cure by this simple means.

Congenital Dislocation of the Patella.—Dr. Besselhagen has met with two cases of this rare condition, occurring in brothers, one of whom had a bilateral luxation, and the other a unilateral dislocation of the patella, with congenital dislocation of the hip. He has succeeded in obtaining the records of fourteen other cases, from a study of which he is led to divide the affection into three classes: 1, Complete luxations, in which the patella lies to the outer side when the leg is extended, but returns to its normal position on flexion of the knee; 2, intermittent luxations, occurring only during flexion, the patella resting on the outer condyle of the femur; 3, permanent luxations, in which the patella rests constantly on the external condyle in whatever position the limb may be, though the degree of dislocation may be increased by flexion. It was noted with some surprise that there was no in-deviation of the knee in any of these cases, but it was probably due to the fact that the internal condyle of the femur was always found to be smaller than normal, and also that the lower end of the shaft of this bone had an inward twist. In three of the cases studied there was an upward dislocation of the patella.—*La Riforma Medica*, No. 30, 1886.

Tubercular Meningitis Following Lupus.—Dr. Doutrelepont reports the case of a young man who came under treatment for lupus. He had cervical abscesses, and was pale and thin, but nothing abnormal could be discovered on physical examination of the chest. He was seized some time later with symptoms of meningitis, and died. At the autopsy miliary granulations were found in the pia mater at the base of the brain, and at the level of the fissure of Sylvius. Examination of a drop of blood drawn a few days before death showed three tubercle bacilli, and the same micro-organisms were found in the blood of the jugular vein after death.—*Rivista Internazionale di Medicina e Chirurgia*, No. 1, 1886.

Nux Vomica in the Treatment of Prolapse of the Rectum.—Dr. Schwartz has employed with success nux vomica for the cure of prolapse of the rectum, not only in children but also in adults, and in chronic as well as in recent cases of the affection. He dissolves a grain to a grain and a half in an ounce of distilled water, giving from six to ten drops to adults, five drops to a child ten years old, and two or three drops to an infant, every four hours. The author asserts that the prolapse disappears under this treatment in the course of twenty-four hours. In order to prevent a relapse he gives the remedy twice a day for a week. When the prolapse is of long standing and does not respond promptly to the action of the nux vomica he adds some extract of rhatany, which, by its astringency, prevents the increased action of the bowels sometimes caused by the nux vomica.—*Gaceta Médica Catalana*, February 15, 1886.

The Treatment of Ring-worm.—Dr. Saerlis recommends oil of turpentine for the cure of ring-worm of the scalp (*Medicina Contemporanea*). The hair should be closely cut over the affected part, and for a short distance around, and then turpentine is to be liberally applied, and rubbed in well with the finger. This is allowed to remain for about five minutes, and is then washed off with carbolic soap, and afterward with hot water, and the patch is then painted with dilute tincture of iodine, or with a two-per-cent. solution of iodine in turpentine. The application is to be made once or twice a day, and is not painful, though it causes a slight smarting. The writer asserts that he has cured, in ten days, by this method, cases of ringworm that have resisted all other modes of treatment.

Hemostatic Powder.—Professor Bonafoux, at a recent meeting of the Academy of Medicine, at Paris, read a paper upon a powder which possesses great hemostatic powers, and is capable, it is said, of arresting the bleeding of large arteries, so that it will prove serviceable in important surgical operations. The powder is prepared by mixing equal parts of colophony, carbon, and gum arabic.—*Medical and Surgical Reporter*, March 13, 1886.

Anæsthesia of the Hand.—At a meeting of the Midland Medical Society, held on February 3d, Dr. Suckling showed a man who had been under his care suffering from complete anæsthesia of the left hand (*The Lancet*, March 13, 1886). Ten months previously, in lifting an eighteen-gallon can of milk with a fellow-porter, his assistant dropped the can, and the patient suffered a severe strain of the arm; anæsthesia and paresis of the hand immediately followed. There was no trophic or electrical change, and the only symptom that might have indicated actual injury to the roots of the brachial plexus was a slight dilatation of the left pupil, which might have been due to irritation of the root of the first dorsal nerve. Dr. Suckling concluded that the case was one of functional hyperæsthesia, and probably due to hypochondriasis, the man seeming depressed. The functional nature of the affection was proved by his rapid recovery after faradization, and by the fact that if, when blindfolded, a mark was made some distance below the line where he said he could feel, when the bandage was taken off he always felt down to this mark, so that a daily diminution of the area of anæsthesia was produced by deceiving him in this manner.

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SYPHILIS AND RACHITIS.

A CURIOUS example of a theory founded upon pure reasoning without the support of facts behind it—indeed, in the face of facts against it—was Parrot's assumption of the syphilitic origin of rickets. It will be remembered that, in the paper which he presented at the seventh International Medical Congress, held in London in 1881, he asserted that hereditary syphilis was the sole cause of rachitis, and that the latter was simply the most advanced stage of the osseous changes occurring in inherited syphilis.

Professor Parrot's argument, upon which his theory was based, is well summed up in the *Progrès Médical* of January 23, 1886. A careful examination of a number of anatomical preparations taken from the museum of the Hospice des Enfants-Assistés, led him to the following conclusions: 1. In still-born fœtuses, in abortions, and in newly born children dying from hereditary syphilis there is a production of new layers of bone-like tissue, true osteophytes, at the periphery of the long and flat bones; at the same time, in many cases, the cartilage in the neighborhood of the epiphyses is infiltrated with calcareous salts. 2. In a second type, certain portions of the bone are replaced by a soft, succulent, jelly-like tissue (gelatiniform atrophy), sometimes causing syphilitic pseudo-paralysis. 3. In a third type is found the spongoid tissue described by Jules Guérin. According to Parrot, the osteophytic change was the specific and characteristic lesion, and the others were merely degrees of the first, and did not differ from it in their essence or origin. If, therefore, the cause of one could be discovered, that of the others would be the same. The first two changes above described were to be found, he maintained, only in children presenting on the skin or in some of the viscera incontestable marks of hereditary syphilis, and he therefore urged that the third lesion, the spongoid tissue, was also dependent upon the same disease. Up to the day of his death Parrot maintained this theory, in spite of the strongest evidence to the contrary based upon clinical facts and upon the results of treatment.

It would seem to be a work of supererogation at this day to bring forward any new facts in opposition to these views, but yet, so well did Parrot and his followers argue their case, that there are still some who regard with suspicion the parents of every rachitic child, and we think, for their sake, and for the sake of the innocent parents, it may not be out of place to reproduce two striking cases published in *La France Médicale* of January 7, and February 9, 1886. The first case was that of Dr. L. Gaillard, who was called to attend a primipara in childbirth. Everything passed off well, and the case was lost sight of. Eight months later he was called to see the child, and found him suffering from well-marked rickets. On inquiry it was learned that the infant had been nursed for but a brief period, and was fed early on soups and bread-pap; he had also been poorly cared for, and was seldom taken out into the open air. A sufficient cause for the rachitis was therefore existent in the hygienic and dietetic conditions, and this was emphasized upon the birth of the second boy, who was well cared for and properly nourished, and who showed not the faintest signs of the disease. Over two years after the birth of the first child, and nearly a year after that of the second, Dr. Gaillard was consulted by the father, who had an indurated chancre on the prepuce, and soon after suffered from roseola, mucous patches, and cervical adenopathy. It was thus demonstrated that the father could not have been syphilitic at the time of the conception or birth of his children. The mother, had she been unfaithful to her husband, and had she had a syphilitic child by another man, ought (according to the general opinion of syphilographers), even though she manifested no specific symptoms at the time, to have acquired an immunity from the disease. But soon after her husband's misfortune she too presented all the symptoms of secondary syphilis.

This case demonstrates that a rachitic child may be born of non-syphilitic parents, and the second case, related by M. C. Giraudeau, shows that a non-syphilitic child may be born of rachitic parents, who themselves may acquire syphilis at a later period. Both the man and his wife presented numerous rachitic deformities of the bony framework. The first child was born dead, forceps being necessary to effect its delivery. At the second pregnancy premature labor was induced at the eighth month. This child lived, and was eight years old when first seen by Dr. Giraudeau. He then had impetigo, was suffering from suppurating cervical glands, and presented many well-marked scrofulous symptoms, but was free from any signs of rickets. Some months later the mother presented herself with all the evidences of secondary syphilis, and the father confessed to having had a chancre six months previously, which was followed by roseola and mucous patches. Some of the latter were still present at the labial commissures, and there was an indurated cicatrix on the penis. If these people, having had rickets, were the subjects of hereditary syphilis, it is difficult to believe that they could have acquired the disease in later life.

M. Giraudeau refers to other cases of like nature, but it is useless to relate them here, as these two seem to be all-sufficient to demonstrate to a certainty that rachitis is not solely and invariably dependent upon hereditary syphilis. It does not follow, however, that the two affections may not exist in the same individual, and react one upon the other to intensify the osseous lesions. It may well be, as Mr. Hutchinson remarked in one of his Lettsomian lectures, that the existence of the rachitic state in an infant who has also an inherited taint of syphilis may

give a decided tendency to bone-disease, and more especially to affections near the epiphyses. The local pathological product may also be a mixed one, and partake of the combined influence of the two causes. There is, indeed, no reason why the two causes should not mix. But this is very far from admitting that the two processes are identical, or from imputing syphilis to one or both parents of a rachitic child.

A WARNING TO THE CARELESS.

Cleanliness is said to be next to godliness, but we are not sure that this order might not be reversed, in many cases at least, with the result of increasing the sum total of physical comfort and health. One immense advantage of Listerism, which even the most obstinate opponents of the method will not venture to deny, is that it insures absolute surgical cleanliness, and many, indeed, believe that herein consists its sole merit. But, be that as it may, the medical profession, or rather the community at large, has cause to congratulate itself that it is living under the new dispensation of the gospel of cleanliness, and not dying from poison unconsciously administered by a careless and dirty medical attendant.

A case occurring in the service of M. Lancereaux, at the Hôpital de la Pitié, and reported by M. Bezançon in *L'Union Médicale* of March 23, 1886, contains so evident a moral that we think it deserves prominent mention. The patient was a robust man, fifty-three years of age, who came under treatment for acne syphilitica. He denied ever having had an impure connection; there were no evidences of a primary lesion about the genital organs, and the inguinal glands were normal. In the neck, however, and about the inferior maxilla, were several enlarged and indurated glands; these were confined to the right side, the left side being entirely free. Upon inquiry as to the possible means of infection, it was ascertained that the man was deaf in the right ear, and that catheterization of the Eustachian tube upon this side had been performed several times. The second operation, practised some six weeks after the first, had been followed by a sanious and bloody discharge, which, it seems probable, came from the then fully developed primary sore. Allowing twelve weeks from the inoculation to the appearance of the cutaneous lesion, the correspondence in dates would be perfect, and would point to the first catheterization as the period at which the disease was communicated.

Other cases of like nature have been reported. During the years 1864 and 1865 there was quite an epidemic of syphilis in Paris, due to the negligence of a physician who, among other specialties, had that of communicating the disease through the nasal passages. And we doubt not that many an unfortunate has acquired syphilis from catheterization of the urethra, although, as there was a sufficient cause already existing, the instrumentality of the medical attendant may never have been suspected.

A physician or a surgeon cannot be too careful in cleansing his instruments—especially those employed in the various mucous cavities for the purposes of diagnosis—every time that they have been used. They ought always to be washed in a sublimate or carbolic solution, and, if possible, passed through a flame. The practice of putting a clinical thermometer under a patient's tongue, and then returning it to its cloth-lined case after a hasty wipe (as is often done), is particularly deserving of condemnation.

CARELESS INDORSEMENTS BY PHYSICIANS.

We publish below the letter of a prominent physician of this city, and trust that our readers will take note of the warning which he gives.

The petition referred to may be a very good one, but, on the other hand, there is unfortunately some reason to suppose that it may contain some job. Aside from any other consideration, the language of the petition is so extraordinarily ungrammatical, and in parts meaningless, that we cannot believe that it has been carefully read by the distinguished gentlemen who have so far signed it.

Our correspondent says: "I have just been asked to sign the most innocent-looking document—an appeal to the Health Officer to rigidly disinfect all rags, etc., coming into this port. It is already signed by probably fifty of our leading men, who in signing it doubtlessly thought that they were performing a praiseworthy act of good citizenship in giving their approval to this appeal. Now, what are the probabilities in this piece of business? Is it not more than likely that as time goes on it will be discovered that the good name and great influence of our profession have been made instrumental in promoting, not the welfare of the community at large, but the invested interests of some great monopoly?

"Perhaps I am all wrong in my fears, but when I recollect how, on more than one occasion, the good name of the profession has been dragged through the mud through the good-natured signing of just such an innocent-looking appeal as this, by the very best physicians of our city, I feel like begging you, in your editorial capacity, either to investigate and demonstrate the groundless character of my fears, or to sound a timely note of warning."

FURTHER OBSERVATIONS WITH REGARD TO INTRA-PULMONARY INJECTIONS.

Dr. Shingleton Smith has made intra-pulmonary injections forty-two times in five cases. The ethereal solution of iodoform, in solutions of one grain to five minims, was used for the purpose. No harm was done by any of the injections. The positive results were, in a case of lung gangrene there was diminution of fetor and some temporary alleviation of symptoms. In one case of chronic tubercular pleurisy there was very marked improvement; in two other cases there was a slight improvement. Dr. Smith injected the fluid into cavities in the lungs, not into consolidated tissue.

At a meeting of the Clinical Society of the Post-Graduate School, February 7, 1885, Dr. M. Putnam-Jacobi reported one case in which injections of iodine had been used; Dr. Wendell C. Phillips reported two cases, and Dr. A. H. Smith reported one case. In all instances dilute solutions of iodine were used. No bad symptoms followed, while in one of Dr. Phillips' cases, and in the case of Dr. Smith, some improvement was apparent. In this latter case the injections were given every three hours for two weeks, during which time the patient gained three pounds and a quarter. From five to ten minims of

a solution containing one part of Lugol's solution to five of water were employed.

Dr. Gouguenheim has recently described his experience with parenchymatous injections of bichloride of mercury in phthisis. These he made both into the consolidated lung (in solutions of 1 to 2,000) as suggested by B. Robinson, and into cavities (in solutions of 1 to 1,000 and 1 to 500). About fifteen drops were used at a time.

Dr. Gouguenheim employed this method in thirty-three cases, in twenty-one of which there was much improvement. Cough and transitory hæmoptysis occasionally occurred, and no pain was caused. The needle used was a long one, and the injection was made in the first or second intercostal space. Arsenic, quinine, and cod-liver oil were given during the course of treatment.

A novel method of employing intra-pulmonary injections has been devised by Dr. Max Reichert, of Rostock, and an account of it is given in *The Medical and Surgical Reporter* of March 6th. This method consists in injecting medicated liquids directly through the larynx into the trachea and bronchi. The method was tried six years ago for chronic bronchitis, but Reichert introduces and systematizes its use in phthisis. Some experiments on animals led him to believe that the injections are distributed throughout the lungs. The substances used were solutions of the volatile oils, salicylic acid, and chloride of zinc. The best results were from eucalyptus oil and salicylic acid. A description of the technique is given in *Archiv für klinische Medizin*, vol. 37, H. 5. Reichert claims to have employed his injections in sixty cases, always with favorable results.

DIPHTHERIA NOT A SEWER-GAS DISEASE.

Dr. Erwin F. Smith, in an elaborate paper on the "Influence of Sewerage and Water-supply on the Death-rate in Cities" (Report of Michigan State Board of Health, 1885), claims to establish the three following propositions:

1. Typhoid fever and cholera decrease in proportion as a city is well sewered.

2. There is no direct relation between diphtheria and sewers.

3. The general death-rate falls after the sewering of a city, and, other things being equal, never again reaches the maximum of its anti-sewered condition.

4. The cost of sanitation is incomparably less than that in sickness and death resulting from neglect of sanitation.

Dr. Smith's statements with regard to diphtheria and sewerage are:

"1. Diphtheria is as frequent in the country as in the city, *i.e.*, in non-sewered as in sewered districts.

"2. Diphtheria has been more frequent and fatal in certain rural districts than in any city whatsoever.

"3. Diphtheria is not more frequent or fatal in sewered cities than in unsewered ones.

"4. Of two given cities, equally well- or ill-sewered, diphtheria, during a long series of years, may be widely prevalent in the one and rare in the other.

"5. Certain sewered cities have never suffered seriously from diphtheria, while others have been afflicted very much worse in recent years (*i.e.*, since the houses have been protected from sewer-air), than formerly, when with the same sewers, but much less perfect plumbing, flushing, and ventilation, the sewer-air found its way into a majority of the houses.

"6. When an epidemic of diphtheria appears in a city the sewered and unsewered portions generally suffer alike.

"7. No relation of interdependence can be traced between diphtheria and the sanitary state of a city, such, for example, as enables us to predict with almost absolute certainty the typhoid fever mortality of a city from a knowledge of its sanitary condition, or conversely, the sanitary condition from its typhoid mortality.

"8. The annual mortality from diphtheria fluctuates greatly, and this, too, in cities where the sanitary conditions are very nearly constant.

"9. Diphtheria is a disease of cold weather, being most active when putrefactive decomposition in sewers is presumably least so.

"10. Diphtheria is a contagious disease, transmissible from person to person and place to place, like small-pox and scarlet fever.

"11. The closing of schools and other places of public gathering checks an epidemic; and the isolation of the sick from the well, with the subsequent proper disinfection of the sick-room and its contents, extinguishes it.

"12. The data relied upon to prove a connection between sewerage and diphtheria either cover too short a period to be trustworthy, or are drawn from single cities having incomplete and defective sewerage.

"If these propositions be true, it follows as a necessary corollary that there is no direct relation between sewers and diphtheria."

These conclusions are based upon a study of the vital statistics of a large number of European and American cities and districts.

These are not at variance with any settled views as regards the origin of diphtheria. Many individuals have reported cases which seemed to originate from sewer-gas, but the most careful authorities have not been disposed to attribute to sewer-gas more than a predisposing influence.

A Better Fee than Billroth's.—Dr. C. Beard (retired), late of New Orleans, now of Boston, writes: "Referring to your mention, in your last number, under 'News of the Week,' of the fee, 25,000 francs, to be received by Professor Billroth, of Vienna, for an operation to be performed upon a wealthy banker of Alexandria, Egypt, in 1858 I was paid a somewhat larger sum—$5,000—for a cataract operation on Mr. Lastie Duprée, of Opelousas, La., and did not leave my home. Judging from the unction with which the announcement is made abroad, the foreign estimate of the value of distinguished services, at the present day, must be at least no higher than it was in this country before the war, and fees paid to distinguished men much lower than they were, according to my recollection, when I was in Europe in 1849–52."

There are Nine Physicians in the House of Representatives, according to the *Weekly Medical Review*, which journal at the same time hopes from them a benign influence on legislation.

News of the Week.

The Sultan of Turkey has decided to send a commission to M. Pasteur's laboratory to study his method of inoculation for hydrophobia. The members of the commission are Zocros Pasha and Hussein Bey, medical men, and Husni Pasha, veterinary surgeon. Zocros Pasha will present M. Pasteur with the Order of Medjidie and $2,000, a subscription from the Sultan for the Pasteur Institute.

Death of Dr. William L. Hardy.—The sudden and unexpected death of Dr. Hardy, of this city, has excited sorrow and regret among a very large circle. Dr. Hardy's name was a familiar one to the profession and public, and he had long been a faithful worker in the field of mental diseases. His death is believed to have been caused by the exposure and overwork incident to his duties as physician to the Tombs and city examiner of the insane. Dr. Hardy was born in this city on May 18, 1849, and was educated at the New York College. He studied medicine at the Bellevue Medical College, and at his graduation was appointed Inspector in the Health Department. He was afterward surgeon of the old Park Hospital, and of the city schoolship Mercury. In 1875 he was placed in charge of the Insane Asylum on Ward's Island, and he remained there five years. He was recently appointed by Mayor Grace one of the Board of Civil Service Examiners.

Clear Water in the Adirondacks.—Mr. Joseph T. Duryea, of Boston, writes: "I notice that a writer who reviews the book of Dr. Stickler on 'The Adirondacks as a Health Resort,' doubts the statement that in some regions the water is so pure that one might read a newspaper through seven or ten feet of it. Of course, if one could not read a newspaper seven or ten feet from the eye under any conditions, he could not read it through seven or ten feet of the purest water. Every person who has travelled much in the woods will remember springs in which he has seen labels lying on the bottom, fallen from bottles of claret hung by cords in the water to cool. There is such a spring near one of the Tupper lakes, and any number of them here and there can be seen. Let the writer visit Clear Pond, near Long Lake, or the chain of ponds on one of the routes between the Upper Saranac and St. Regis Lake. There is not a fisherman of any experience who has not seen the spots of a trout many a time through 'seven or ten feet of water,' in many a 'spring-hole.' The doubt is of small importance to me; but I would not like the expression of it by the reviewer to cause any doubt as to the accuracy of the contributors to a very useful book."

No Promises to Pay the Expenses of Foreign Delegates to the International Congress.—Dr. John S. Billings, of Washington, D. C., April 26, 1886, sends us the following explanatory note: "Before seeing your editorial of April 24th, my attention had been called to the statements of Dr. Petit. as to what he understood I had promised European physicians who might wish to attend the International Medical Congress in this country, and I had written to him to explain what I really did say. It now seems proper to send you the same information for publication, in order to do away with possible doubts and misapprehensions among physicians in this country. I did not make any promise, or express any belief, that the expenses of European physicians coming to the Congress would be paid by the United States, or by any other party than themselves. Even had I had such a belief, I should not have mentioned it as an argument to induce the Committee to select the United States as the place of meeting, for it would have seemed to me exceedingly bad taste to have done so. What I did say, in reply to the objection as to the expense of the journey, was, that I hoped and believed that arrangements could be made with some of the lines of transatlantic steamers by which the expense would be reduced. One of the English members of the Committee then spoke of the very liberal arrangements as to excursions, etc., which are made in this country in connection with scientific meetings, and asked me whether, at the meeting at Montreal of the British Association for the Advancement of Science, a free trip to Philadelphia and return was not given to the members, to which I replied that such was the case. I also said that while we should do our best to take proper care of our guests, it must be remembered that we should not be favored with government and municipal appropriations, as was the case at Copenhagen, but that the necessary funds must be raised by American physicians, and hence that we could not promise to rival the magnificent entertainments of the London and Copenhagen Congresses. I regret very much that my remarks should have been misunderstood by Dr Petit, who is, I feel sure, perfectly honest in his belief that his statements are correct. I can only account for the mistake by supposing that he is not as familiar with spoken English as he is with our literature. I had not seen his *feuilleton*, and have endeavored to correct the misunderstanding as soon as it was brought to my notice."

Forewarned, Forearmed.—"Good morning, children," said an Austin physician, as he met three or four little children on their way to school, "and how are you this morning?" "We darsn't tell you," replied the oldest of the crowd, a boy of eight. "Dare not tell me!" exclaimed the physician, "and why not?" "'Cause papa said that last year it cost him over fifty dollars to have you come in and ask us how we were."—*Texas Siftings*.

A New Dodge on Physicians.—A correspondent sends us the following: "Please call the attention of the profession to a little, black-haired crank, or blackguard, who makes appointments with physicians to meet Dr. Blank in consultation. The writer was by this token treated to an agreeable interview with two well-known physicians of our city, who had also received a visit and summons from the Gallic vagrant. I turn him over to your columns herewith."

Association of American Medical Editors.—The annual meeting of the Association of American Medical Editors will be held in St. Louis, May 3, 1886. The programme for the occasion has not yet been announced, but will embrace an address by the president, papers by well-known authors, and perhaps a banquet.

The Death of Dr. R. H. Benjaman, of Riverhead, L. I., is announced. He graduated in medicine at the Berkshire Medical College in 1842.

Dr. William H. Forbes has been elected Professor of Anatomy at Jefferson Medical College, Philadelphia, in place of Professor Pancoast, who recently retired.

The Corner-stone of the New Medical College Building.—As announced last week, the corner-stone of the new College building to be erected by the College of Physicians and Surgeons was laid last Saturday afternoon, with impressive and interesting ceremonies. The site of the building is at the corner of Fifty-ninth Street and Tenth Avenue. The exercises were opened with prayer by the College chaplain, Rev. S. H. Weston; Dr. John C. Dalton, President of the College, then lifted a metal box by a strap, gently deposited it in a square bed of fresh cement, and covered it with a marble slab. The box contained, so he told the people who watched him do it, several catalogues of the College, copies of the city newspapers and medical journals, the original letter of William H. Vanderbilt proffering the Trustees the gift of the new building, and the original resolutions of thanks in which the gift was accepted. Then Mr. George W. Vanderbilt, youngest son of William H. Vanderbilt, stepped forward and performed the ceremony of laying the corner-stone. An address by Chauncey M. Depew followed. After alluding to the enduring and wide-spread influence for good which results when wealthy men establish great charities, he said: "But how most wisely to invest the money which is to carry out a charitable purpose is not an easy problem. It is often partly wasted to gratify the vanity of the donor. Mr. Vanderbilt had become familiar by his own sufferings, so patiently endured that none but his intimate friends knew of them, with the beneficent effects of medical skill and the possibilities of its growth. With his strong common-sense he saw that here was practically an untried field, where the advancement of science might work out the most beneficent and benevolent ends. Libraries, hospitals, and art and literary institutions existed in numbers, each doing in its own way admirable work. While in the Old World governments fostered schools of medicine, here their only patrons were the profession, and there was not a single great endowment in the land. To build a college to be called by his name was a temptation, but in a city where so many excellent universities already existed he saw that the wiser use of his money was to develop and enlarge an old institution, whose age, traditions, and experience were of incalculable value, and constituted a permanent capital which wealth could not create. In selecting the College of Physicians and Surgeons he chose the oldest in years, and the equal in rank and equipment of the best." Mr. Depew then outlined the history of the College, its early struggles, and its influence on the progress of medicine in America for a century. Its founders established the first free dispensary New York ever had. Mr. Depew recited the incidents of the old struggle for supremacy with Columbia College, which became one of the political issues of the time, and ended in triumph for the Physicians and Surgeons. Then he said: "The College of Physicians and Surgeons becomes one of the strongest and best-appointed schools in the world through the medium of the splendid benefaction we this day commemorate. Upon these grounds, donated by William H. Vanderbilt, whose gift erects, furnishes, and endows a building equal to all the requirements of the present and the needs of the future, Mr. William D. Sloane builds the Maternity Hospital, and the generosity of his wife endows all the beds, making them free; while the four sons create the clinic, which will be a vast dispensary, giving without charge to the poor, for all time, medicines and the best professional attendance, as a memorial to their father—more grateful to him if living, and to his spirit now that he is dead, than stately shaft or gorgeous mausoleum. A private benefaction renders possible the construction and equipment of a medical college superior to any ever known in this country, and equal to the best in the world. With this endowment, and the impulse and inspiration which will follow it, New York will become the centre of medical learning, education, and acquirement for the American continent." Among the listeners were numerous students, the Faculty of the College, and many prominent physicians of the city. A delegation of Columbia College boys attended in a body, with blue and white ribbons streaming from their canes, and at the close of the ceremony they gave three rousing college cheers for the Vanderbilts collectively, Chauncey M. Depew, and Dr. McLane.

The Dose of Morphine in Infantile Convulsions.—Dr. C. S. Scofield writes: "I find by my notes, which were mislaid when I wrote the report of a case of infantile convulsions treated by injections of morph. sulph., that the amount used was $\frac{1}{12}$ gr., half of a $\frac{1}{6}$-gr. morphine tablet being used at each injection, instead of half of a $\frac{1}{4}$-gr. tablet. All the cases which I have seen reported were treated with a large single dose. I prefer small repeated doses as being safer."

Dr. B F. Harrison, of Wallingford, Conn., died on April 24th, in the seventy-fifth year of his age. He was a graduate of the Yale Medical School, and it is reported that part of his estate will go to that institution.

The Presentation of a Loving Cup to the College of Physicians of Philadelphia.—On Wednesday evening, April 14th, on the occasion of the ninety-ninth anniversary of the founding of the College, more than one hundred of the Fellows sat down together at dinner, Dr. S. Weir Mitchell, the president of the College, occupying the head of the table. After the cloth was removed, Mr. Horace Howard Furness, on behalf of two ladies, descendants of two of the founders of the College, presented to the College, in a happy speech, a massive silver loving cup.

Pasteur and His Patients.—M. Pasteur has been unfortunate in his treatment of the ten Russians bitten by a mad wolf, for three of them have already succumbed, but they were those who were the most severely wounded. Pasteur believes that the rabies of the wolf is more active than that of the dog, and that the period of incubation is shorter. He intends submitting the remainder of the Russians to a triple series of inoculation. Six persons from Finland have arrived at the Rue d'Ulm, and up to the present over seven hundred persons have been treated by him. The subscription in favor of the institute amounts to over $100,000.

Aural Hallucinations.—Alluding to Dr. Sexton's case, presented to the Practitioners' Society, and reported in The Record for April 3d, a correspondent writing from Millwood, Kan., states that he now finds this symptom in alcoholism so invariably as to regard it as pathognomonic. Dr. C., our correspondent, will note that Dr. Sexton's case had become one of cerebral disease, and that the hallucinations which occurred subsequently remained. We cannot agree with our correspondent that aural hallucinations depend on the impurity of the whiskey drunk in his neighborhood, since these symptoms are not unusual during the progress of delirium tremens.

Willard Asylum, which has upward of one thousand eight hundred insane chargeable to counties, has reduced its price per capita to $2.20 per week. At this rate the insane have the highest grade of care at a minimum cost to the counties. It is poor economy for any county to build and maintain an asylum when its insane can have better care at a much lower rate in a State asylum.

The School for Attendants, organized in the Buffalo Asylum for the Insane, is about to hold its first Commencement. Six attendants have completed the course of instruction, and have been found qualified to receive the diplomas of the school. The occasion will prove interesting as the first in the annals of the public care of the insane. The exercises will occur on Tuesday the 20th inst. The example of the Buffalo Asylum should be followed by other asylums of the State, and thus raise the grade of qualification of attendants in all our large asylums.

A New Sign in Auscultation.—Professor Pitres, of Bordeaux, indicates a new sign in auscultation. Dr. Davezac describes it as follows in the *Journal de Médecine de Bordeaux:* The patient is seated, and is auscultated in the dorsal region. An assistant places a sou on the thorax, in different parts, according to directions, and percusses. The ear of the auscultator listens at the opposed corresponding parts. The healthy side is first examined; then the side with pleurisy, where the note is much higher. A clear metallic sound indicates pleuritic effusion; when this sound is absent there is no effusion. —*British Medical Journal.*

Gambetta's brain was stated by Mr. A. Bloch, a few months ago, to be of unusually small size, weighing only 1,160 grammes, or 38.4 ounces. At the meeting of the Société d'Anthropologie of March 18th. Professor Duval added, further, some interesting details of its conformation and structure. In comparison with brains of subjects who were known to have been of deficient mental powers, such as possess only a feeble development of the third frontal convolution, Gambetta's brain was found to have an extreme development of this convolution, and the fissures very numerous and very complicated. This development furnishes confirmatory evidence of Broca's discovery of the localization of speech in this convolution. In addition to other peculiarities, the right quadrilateral lobe was found to be very complicated, with numerous fissures in its lower part; and the occipital lobe was extremely reduced, especially on the right side. —*Science.*

Reports of Societies.

MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND.

Eighty-eighth Annual Convention, held at Baltimore, Md., April 27, 28, and 29, 1886.

Tuesday, April 27th—First Day.

The Eighty-eighth Annual Convention of this body was convened in the medical library, Athenæum Building, corner St. Paul and Saratoga Streets, Baltimore, Md., Tuesday, April 27th, at 12 M., Dr. John. R. Quinan, President, in the chair, and Drs. G. Lane Taneyhill and Robert T. Wilson, Secretaries.

THE PRESIDENT'S ADDRESS

was the first order of business after organization. It was

ON THE CHARTERED RIGHT OF THE MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND TO ISSUE LICENSES TO PRACTISE IN THE STATE.

After a few preliminary remarks, the speaker proceeded to lay before his hearers the results of his examination of the legal records of the State bearing upon the above subject. As early as 1795 the physicians of Maryland saw the need of protection against quackery. As the result of meetings summoned through the press, the Medical and Chirurgical Faculty was finally incorporated under its present charter in 1798. Power is granted to the Faculty through its Medical Board of Examiners "to grant licenses to such medical and chirurgical gentlemen as they, either upon a full examination, or upon the production of diplomas from some respectable college, may judge adequate to commence the practice of the medical and chirurgical arts; each person so obtaining a certificate to pay a sum not exceeding ten dollars." No one practising was allowed to receive payment for his services without having obtained such certificate, under a penalty of fifty dollars for each offence, to be recovered in the county court where he may reside by bill or presentment and indictment, one-half for the use of the Faculty, and the other for that of the informer.

In 1801 they secured a supplementary act to enforce under penalties the same power. In 1816 and 1818 further slight amendments were made. In 1821 persons not licensed were disabled from suing or receiving compensation for professional services. In 1838 an act was passed by the Legislature, entitled "An Act to authorize Thompsonians or Botanic physicians to charge and receive compensation for their services and medicines," which made it lawful for each and every person being a citizen of the State to charge and receive compensation for their services and medicine in the same manner as physicians are now permitted to do. He cited the whole of this absurd act to show the inconsistency between the title and body of it—one for the benefit of a certain class of quacks, styling themselves Thompsonians, the other for the benefit of every white citizen of Maryland who chose to assume the rôle of doctor. The inside history of this legislative monstrosity was, he had been told, "that a bill of this kind for the benefit of these charlatans was gravely offered by some Solomon, and its absurdity was so transparent that some waggish member tacked on its present body to the original title, and made a hybrid equal to Barnum's mermaid, thinking thus to kill off its supporters."

This, however, with the early death of Thompsonianism, soon became inoperative and void, and is now only remembered as a grim legislative joke. These are the only statutes on record, except unimportant ones of 1861 and 1862. It is thus evident that since 1798 there has been no legislative act offered or passed to infringe upon or impair the power of this Faculty to require licenses throughout the State (except the absurdity of 1838, now inoperative); but, on the contrary, many acts secured by

the efforts of this Faculty to confirm, enlarge, and enforce this power, and he confessed that, as he had been led to infer from the opinions of others that our statute-books bristled with hostile legislation, he was the more agreeably surprised at the result of his examination. Nor did the privilege granted to the College of Medicine of Maryland—later the University of Maryland—to grant diplomas render the licensing power of the Faculty nugatory, this charter being subsequent to ours, and, of course, not impairing a prior contract. Such a thing would violate the Constitution of the United States and Bill of Rights of the State. The above institutions sprang from this Faculty, and always showed warm attachment to it. The governing power of the College of Medicine consisted in greater part of the Board of Examiners of this Faculty. The Medical and Chirurgical Faculty constituted its patrons and visitors, and the President of the Faculty its chancellor. The Faculty of the College was required to report biennially the progress of the College to this body. All this shows that no interference with the licensing power of the Faculty was intended, and *that act of* 1798 is to-day the law of the *State, and can be enforced as such.*

The President's address was listened to with rapt attention and frequently applauded. It was a genuine surprise to everyone present, as it is a prevalent impression among the Maryland physicians that the right to regulate the practice in the State, and to issue licenses therefor, has long since passed out of the hands of the Faculty. The subject of a medical law in the State is one which has lately been much in the minds of the physicians here, and the difficulties of securing acceptable legislation are generally appreciated. If, therefore, a forgotten law can be revived, in which we get rid of the bugbear of irregular practitioners and their recognition, it will prove to us a great boom. The conclusions of the President were therefore received with great applause.

After adopting a vote of thanks for the address, Dr. Waters moved the appointment of a committee, consisting of the President and two others, to investigate the matter still further and report.

Dr. P. C. Williams inquired as to the expense connected with such an investigation and the employment of legal advice.

Dr. Gundry thought the law had lapsed by neglect to enforce it, and that moral sentiment would be an insuperable obstacle to its enforcement.

Others spoke in favor of the motion, which was adopted. Drs. Waters and B. B. Browne were appointed to act with the President on the committee.

THE TREASURER'S REPORT

showed the assets of the Faculty to amount to $9,549.40. This includes value of library, estimated at $9,000. The total receipts for the year were $1,628.29 ; disbursements, $1,769.79, leaving a deficit of $141.50. The building fund of $500 had been reduced, by the expenses of moving last October to our present quarters, to $192.70. The Library Committee had received $539.81 for the maintenance of the library. Nine members had been added, 2 resigned, 4 dropped for non-payment of dues, 5 died.

The Board of Examiners presented the names of seven persons—one a lady, the first who has applied—who are candidates for membership.

The Library Committee presented an interesting report, showing a very prosperous condition of the library and very satisfactory growth during the year. Considering the very insignificant resources at command, the development of the library may be considered very remarkable. The number of bound volumes now amount to 5,000, 830 having been added during the year, chiefly through the generosity of individual donors. Sixty-six journals are now regularly received, besides a large number of foreign and domestic society transactions. The donation of several portraits, old diplomas, and other interesting relics was also acknowledged.

WEDNESDAY, APRIL 28TH—SECOND DAY.

After the reading of the minutes, Col. George E. Waring, of Newport, R. I., proceeded to deliver

THE ANNUAL ORATION,

the title of which was

THE REMOVAL AND DESTRUCTION OF ORGANIC WASTES.

The speaker began by stating his embarrassment in finding a suitable subject for a medical audience, as he was absolutely ignorant of nearly every detail of the science and practice of the art. He could hardly claim even a subjective knowledge of the latter, as among the good things which had befallen him had never been the training of a good patient. He belonged to a profession that was called on to do some of the rough mechanical work on which the improvement of certain conditions of living depended.

In discussing his subject he very properly referred to the influences of organic waste on the health of communities, and of their association with the advances of civilization. The diseases of civilization were those of bad sewerage. Their prevention was the removal of the cause. The cardinal rule should be that every organic substance, of whatsoever sort, when its usefulness has passed, and its stability is threatened, should be immediately and completely removed to a distance. Being so removed the safety of the household or community by which it was produced is essentially assured. Its subsequent history is interesting chiefly with reference to those into whose presence we may have sent it. Their safety is to be secured by insuring its destruction under conditions which will not favor the pernicious results attendant on restricted and aborted decomposition. It seemed prudent to predict that the world will before long accept what now seems to be the demonstrated proposition that all that we need consider with regard to municipal organic wastes, to prevent their interference with health and life, is to get them out of our neighborhood while still in their fresh condition, and then to secure their rapid resolution into their inorganic elements. Briefly, speedy and complete removal with speedy and complete decomposition. It was not simple nor easy to apply such a formula in its entirety, owing to prejudices and preconceived ideas.

He then concluded by sketching a detailed plan for the more effective sewerage of Baltimore.

Dr. Randolph Winslow, in the Surgical Section, discussed the following subjects :

TREATMENT OF PENETRATING WOUNDS OF THE ABDOMEN AND OF INTESTINAL OBSTRUCTIONS, OPERATIONS FOR PYLORIC STENOSIS, AND RESECTION OF THE LARGE INTESTINES FOR CARCINOMA.

Under the first head was mentioned Dr. John B. Hamilton's remarkable and successful case of laparotomy for pistol-wound of the abdomen. He operated three hours after the injury, suturing eleven wounds in the small intestine, two in the ascending colon, and ligating a bleeding artery in the mesentery. On the seventh day fæces passed per anum. On the twelfth the ball was evacuated, and a good recovery ensued. Allusion was also made to the case of Dr. A. V. Park, of Chicago, who performed laparotomy unsuccessfully for penetrating gunshot wound of the abdomen in a boy, aged sixteen, entering the small intestine in two places and tying a small mesenteric artery. Death ensued sixteen hours later from peritonitis, and the autopsy revealed an undiscovered contusion of the rectum. The chances for success in this case were much diminished by the length of time between the injury and the operation, and the moving of the patient twice, which necessitated his travelling a number of miles.

The remarkable experience of Dr. Edmund Andrews, also of Chicago, was commented on. We have here four cases of penetrating wounds of the abdomen, occurring

in Chicago. Two recovered promptly without any operation, one recovered in spite of laparotomy, and one died notwithstanding it. Truly an interesting commentary. By far the most interesting contribution to the elucidation of the subject is Dr. Dennis' elaborate article; but the speaker took issue with him when he says, "all these patients are necessarily mortally wounded, if penetration and perforation have taken place," numerous cases having recovered after intestinal as well as stomachal perforation. Quoting Otis' statement that there was no incontestable instance of recovery in penetrating gunshot wounds, Dr. Winslow thought this might apply in military, but it did not in civil practice, probably because the pistol figures much more largely in the latter. Dr. Winslow criticised quite severely Dr. Dennis' method of dealing with a stab-wound of the abdomen, and thought it was carrying the principle of ocular inspection a little too far. It is just such a procedure which is likely to bring discredit upon the operation of laparotomy in these cases of abdominal injury.

The discussion upon this subject at the New York Academy of Medicine, last December, was commented on. In summarizing the prevailing professional opinion in regard to the treatment of penetrating abdominal wounds, it appears that there is an almost unanimous consent to the propriety of performing laparotomy when there is reason to believe that serious injury of any of the hollow viscera has occurred, or that hemorrhage is taking place; but there are certain cases in which the nature of the lesions is doubtful, and it is in such cases that diversity of opinion exists. For my part, I am more firmly convinced than ever that where there is a strong probability that serious intestinal injuries have been received, a laparotomy ought to be performed; but I think a certain amount of conservatism ought to be indulged in, especially in regard to wounds from bullets of small size or from stab-wounds, many of which either do not penetrate the viscera or produce such small holes as to do no material harm. He took this opportunity to mention one fact in regard to the suturing of intestinal wounds, and that was, never to bring the cut surfaces together edge to edge, but by means of the Lembert suture invest the peritoneal borders so that narrow bonds of peritoneum are approximated. When this was done union was effected easily and effectually.

Under the second head Dr. Winslow said the confusion in regard to treatment arose from inability in a large majority of cases to make an accurate diagnosis. He characterized Jonathan Hutchinson's abdominal taxis under anæsthesia as a rather rude and unsurgical method. In Dr. Winslow's opinion a case of intestinal obstruction should first have the benefit of rational medical treatment, first by laxatives, to overcome a possibly obstinate constipation; then by copious enemata, with the patient in the genupectoral or completely inverted position. If the symptoms are not severe, belladonna or opium may be administered in large doses; but if the patient present urgent symptoms—severe pain, obstipation, constant vomiting—especially if the character of the latter become feculent, no time is to be lost. The abdomen should be opened in the linea alba, below the umbilicus, the cause of the arrest ascertained, and the constriction released. He thinks a strangulated bowel within the abdominal cavity should be treated pretty much as a strangulated bowel outside of it.

If a patient with hernia present symptoms of strangulation, an anæsthetic is administered and gentle taxis employed. If this fail, most surgeons proceed at once to kelotomy, as in internal hernia and other obstructions. It is not often possible to locate either the nature or the seat of the lesion: he does not think much manipulation of the abdomen should be allowed, lest harm, and not good, result; but after the failure of enemata and laxatives, laparotomy should be performed, and the incarcerated bowel released. He regards enemata under heavy pressure, as advised by Illoway, of Cincinnati, as fraught with great danger. The bowel may rupture, or a gangrenous intussusception may be thrust backward into the peritoneal cavity. Dr. Winslow then alluded to the case already reported by him in the *American Journal of the Medical Sciences*, in which he had opened the abdomen of a young woman suffering for seven days with obstruction, stercoraceous vomiting, etc., and released a constriction of the ilium, with complete and speedy recovery; also the case of Dr. Frank West, of Baltimore, who had operated on account of the adhesion of a knuckle of intestine in the femoral ring, without producing symptoms which could be recognized from the outside. A good recovery ensued here also. A third case of laparotomy had recently been done in this city, but was unsuccessful.

Four operations of pylorectomy have now been done in this country, two being in this State, but all proved fatal. Two cases of digital divulsion of the pylorus have been done in New York, both dying.

Weir, of New York, had successfully resected five and a half inches of the sigmoid flexure for carcinoma. Lange, of New York, had twice done it previously without success. In Europe it had been done thirty-two times with sixteen recoveries. According to Weir, Kocher, of Bern, removed five feet of gangrenous intestine from a patient, who was discharged well in eighteen days.

Dr. J. W. Chambers presented the second paper, on

REMOVAL OF INFLAMMATORY AND SUPPURATING GLANDS OF THE NECK,

illustrating it by several cases treated at Bay View Hospital. The surgical fear of deep-seated cellulitis of the neck, he said, has lost its terrors under the influence of antiseptic surgery; and with anæsthetics and deliberate dissection with the handle of the knife and the fingers, bleeding and shock were not now prominent dangers. We were only limited in the extent to which we should attempt the removal of these glands by anatomical considerations. Even the latter were shown, by some of the cases reported, to be more elastic than many were willing to believe. In each case there was a transient rise of temperature within the first twenty-four hours, but no signs of septic absorption.

Dr. Branham presented the third paper from the Section, entitled

CLINICAL NOTES ON GENITO-URINARY SURGERY, FROM BAY VIEW HOSPITAL.

Among the conclusions set forth was this:

THE UNCERTAINTY IN THE DIFFERENTIAL DIAGNOSIS BETWEEN SOFT AND HARD CHANCRE

is so great in hospital patients, where the history is of little value, and where the sores have usually been irritated by caustic, filth, and continued exercise, that we should always wait for secondary symptoms. If internal medication be begun before the latter manifest themselves, it will be imperfectly carried out, because patient and physician are both in doubt as to the nature of the malady.

Among those elected to membership to-day was Dr. Amanda Taylor Norris, a graduate of the Woman's Medical College of Philadelphia, a native of Maryland and Professor of Materia Medica, Therapeutics, and Chemical Medicine in the Woman's Medical College of Baltimore. But one ballot was cast against her, which was rather remarkable for so conservative a place as Maryland, she being THE FIRST WOMAN WHO HAS APPLIED FOR MEMBERSHIP IN THE SOCIETY. It will be recalled that two colored physicians were admitted two years ago without opposition.

(To be continued.)

Dr. Saundby says that the styptic taste of tincture of perchloride of iron may be disguised by administering it in sweetened milk. This mixture has the further advantage of not affecting the teeth.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 26, 1886.

LAURENCE JOHNSON, M.D., VICE-PRESIDENT, IN THE CHAIR.

DR. A. B. JUDSON read a paper on

WHITE SWELLING OF THE KNEE.

in which he advocated the doctrine that it was essentially an inflammatory affection, and that an inflamed organ or tissue demanded arrest of function in the treatment, if the best results were to be obtained; that inflammatory conditions were relieved or removed by arrest of function wherever it could be secured.

The essential feature of the treatment for diseases of joints should, therefore, be fixation, and to obtain this in the cases of white swelling of the knee he had devised a very simple, inexpensive, readily adjusted, and in his hands efficient splint. This was a simple steel retentive splint, consisting of a posterior upright, occupying the greater part of the length of the thigh and leg, and four arched cross pieces, making pressure at the upper and lower part of the entire limb behind and pressure in front above and below the knee. He did not use plaster-of-Paris, and believed that better results could be obtained by simpler means.

Prolonged fixation with disuse of a joint would not produce anchylosis, provided the joint itself was free from disease. Of course, it would be followed by stiffness, but that would yield by persistent passive movements, and was entirely different from anchylosis. The anchylosis which followed joint diseases and was caused by the final products of inflammation was best prevented by reducing or removing the inflammation, and to do this most effectually arrest of function was essential.

Fixation applied to a joint would, so far as the joint was free from disease, be powerless to add to the ultimate degree of anchylosis, and, so far as the joint was diseased, it would diminish the ultimate anchylosis by arresting inflammation and preventing an excess of its products.

On these premises thorough fixation was required in the treatment of articular ostitis. Dr. Judson thought it was impossible to establish the statement that motion was required to prevent inflammation.

In the treatment of joint disease, in the lower extremities particularly, another important function must be considered, namely, that of supporting weight and concussion. Protection of the articular surfaces from pressure and concussion was very important, and to accomplish this most certainly the best method was to convert the affected limb into a pendant member, putting it into very much the same condition, in this respect, as were the upper extremities. To bring this about, the apparatus which had served him the best was Thomas' splint, which was really an ischiatic crutch, and a high sole upon the shoe worn on the foot of the healthy limb. The crutch was to be worn only when the patient was up.

When these indications had been thoroughly met, Dr. Judson believed that the patient had received the highest degree of assistance which surgery could afford, and the conclusions reached by the author of the paper were such as naturally follow from the premises and the outline of the argument given.

DR. J. F. RIDLON complimented the author of the paper because it had seemed to him that orthopædists in general had endeavored to devise apparatus which was so complicated and expensive that no one except themselves could manage it. The splint exhibited was so simple that any parent could manage the treatment effectually between the visits of the surgeon. It also was inexpensive, which was a very important item, and it could be used with some form of apparatus that acted as a crutch.

All that was required, in most cases, was fixation; only a very few cases required traction. When these patients were out of bed some form of apparatus was required to prevent motion during locomotion. Dr. Ridlon had been unable to secure fixation by means of Thomas' splint without the aid of some other apparatus.

The chief, if not the only criticism he would offer on the paper, was with reference to Dr. Judson's condemnation of plaster-of-Paris. In his hands a certain number of cases, probably of syphilitic origin, had done better in plaster-of-Paris dressings than with any form of apparatus which he had used. There was one idea, however, which should be eradicated, and that was with reference to expense; the plaster-of-Paris was an *expensive* method, for the reason that to be effectual it must be changed every two or three weeks, whereas a steel brace would last throughout the course of the disease.

With regard to elastic traction Dr. Ridlon thought more had been claimed for it than it was justly entitled to.

In gouty joints motion was desirable, and the articulations were benefited by as much exercise as they could get; but in pure chronic joint disease, where there was fungoid degeneration, motion with elastic traction did harm. Although the simple splint exhibited did not protect the joint during locomotion in all cases, he was sure that in the vast majority, if put on carefully, and the patients were treated to a little extra confinement to the bed, and, when up, wore a high shoe upon the well foot, etc., good results could be obtained and the patients would be cured. The danger of anchylosis he regarded as nothing at all; he had never known of a case of anchylosis occurring as a result of fixation. If, however, anchylosis must occur, it was a mistaken idea that it should be allowed to occur with the joint at a slight angle; the limb should be straight. He had never met with a case in which there was lengthening of the limb.

DR. JUDSON said, with regard to lengthening of the limb, that although not personally familiar with many cases, he was not surprised to find it in the case reported, because it had been observed by Howard March, who, in 1877, directed attention to its occurrence, and by Berry, who had published a series of hospital cases in which it was found that in over one-half there was more than one-half an inch of lengthening.

He did not wish to condemn plaster-of-Paris severely, as he regarded it, through the labors of Dr. Sayre, as one of the greatest boons in surgery, and he was not surprised at Dr. Ridlon's success in the use of plaster-of-Paris. His only reason for preferring a steel apparatus was that when watchfully applied the bone could be more closely approximated, and a closer grip obtained, which would give a firmer fixation than could be expected from the plaster dressing. After all, the fact remained that the skilful surgeon, understanding the principles on which treatment should be conducted, would get good results with almost any kind of mechanical apparatus.

UNFINISHED BUSINESS.

Under this head the *Comitia Minora* reported and recommended that the Society approve of a bill, pending in the Legislature, entitled "An Act to Regulate the Licensing and Registration of Physicians and Surgeons, and to Codify the Medical Laws of the State of New York." The design of the act was to remove obstacles which, from time to time, had been encountered in attempting to execute the medical laws now upon the statute-books. The recommendation was adopted.

THE VICE-PRESIDENT announced the death of

WILLIAM HARDY, M.D.,

in a few appropriate remarks.

The Chair also appointed Joseph D. Bryant, M.D., to read a memoir of Gaspar Griswold, M.D., M.R.C.S.

The Society *disapproved*, by a vote on the question, of the reading of any communication before it

ON ANY MEDICINAL PREPARATION OR ARTICLE THAT HAD BEEN PATENTED.

Remarks were made by several members, after which the Society adjourned.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, April 22, 1886.

ALEX. S. HUNTER, M.D., CHAIRMAN.

DR. H. J. BOLDT read a paper on

CARDIAC NEUROSES WITH OVARIAN AND UTERINE DISEASE,

in which he referred to functional disturbances of the heart unaccompanied by organic changes. These might arise from disorders of the cardiac ganglia, or might be of reflex origin, and to the latter class of cases attention was directed. According to Dr. Boldt's observations, cardiac neuroses were present to a greater or less degree in about eight per cent. of the cases of uterine and ovarian disease, and occasionally cases were met with which presented symptoms that were referred to the heart alone; but disturbances of the uterus or its adnexa were associated, and the symptoms were removed by treatment of the pelvic organs.

The most frequent neuroses were palpitation, disturbance of rhythm or irregularity, intermittency or distinct loss of a beat, and angina pectoris.

The first was by far the most common, and might be more or less constant, or occur in paroxysms. Well-marked intermittency was very likely to be accompanied by palpitation, and if permanent, was probably indicative of organic cardiac disease; yet such cases occurred in which organic disease of the heart was absent.

With regard to angina pectoris, there existed a difference of opinion as to whether or not it could occur independently of organic disease of the heart.

Dr. Boldt then reported briefly several cases which he regarded as illustrations of cardiac neuroses associated with uterine and ovarian disease, and in which symptoms referable to the heart were relieved by treatment of the pelvic disorders. So far as the cardiac symptoms were concerned, the cases did not differ from those of like character depending on other causes.

DR. E. H. GRANDIN said that there seemed to be, at first sight, a clear connection, in Dr. Boldt's cases, between the cardiac symptoms and the disorders of the pelvic organs. He had frequently met with cases in which cardiac palpitation, intermittent pulse, etc., had been associated with uterine and ovarian disease; but he had not felt quite certain that they bore the relation to each other of effect and cause, for the reason that he had encountered the same symptoms in cases where the uterus and ovaries were healthy. Ordinarily he had found that these cardiac disturbances were associated with gastro-intestinal derangements. There were cases, however, in which cardiac symptoms, such as had been mentioned by Dr. Boldt, existed, and doubtless were due to the fact that the patients were suffering from uterine and ovarian disease. But he did not think that one was justified in making an examination of the reproductive organs, if no other evidence of disease of these organs could be obtained than that referable to the cardiac disorders. The particular point which he wished to make was that the stomach and intestines were more frequently at fault in this class of cases than either the uterus or the ovaries.

DR. BURRALL referred to a case which illustrated, in a remarkable way, reflex disturbances which were entirely relieved by free menstruation.

DR. H. C. COE said that it must be extremely difficult to distinguish between obscure cases of hysteria and cases of severe cardiac disturbance. The symptoms, palpitation, and pain referred to the cardiac region, were quite common in all disorders of the pelvic organs. He had not been very much in favor of the doctrine of reflex uterine neuroses, having never seen more than five or six cases in which cardiac disorders were associated with laceration of the cervix, etc. During a single year, at the Woman's Hospital, he met with three cases of sudden death after minor operations on the pelvic organs. In one case the diagnosis of fatty heart was made; but in another nothing could be found to account for the death. Whether or not there was any special connection between the disease of the pelvic organs, the heart, and the sudden death, he was not prepared to say.

DR. GOELET had frequently had patients object to taking ether for such operations as dilatation of the cervix, saying that they had been told that they had heart disease, and that they had been troubled very much with palpitation, pain, etc. Although these patients had suffered from cardiac disturbances, he had found that, in most of them, there was no evidence of organic disease of the heart.

DR. H. GRISWOLD referred to a case in which there were well-marked anginal symptoms associated with uterine disorder. The patient had been operated on, rather unsuccessfully, for laceration of the cervix, and subsequently suffered from repeated attacks of endometritis with distressing cardiac symptoms, which promptly disappeared on treatment of the uterine disease.

DR. BOLDT remarked, with regard to Dr. Grandin's statement, that he said an examination should be made only when no other cause for the neurosis could be found. With reference to Dr. Coe's remarks, he did not wish to convey the impression that laceration of the cervix was the cause of cardiac neuroses; that is, he did not believe that cardiac neuroses occurred with laceration of the cervix so frequently as had been indicated by some writers.

DR. F. A. BURRALL then read a paper on

ARTIFICIAL SUBSTITUTES FOR WET-NURSING IN PRIVATE PRACTICE,

in which he first referred to the best method of feeding infants, namely, nursing by the mother. The next test, according to most writers, was wet-nursing, although strong objections had been made to rearing infants by the aid of a wet-nurse; and they were such as to make him believe that this plan did *not always* stand second best to nursing by the mother. Dr. Burrall also discussed the question of the propriety of allowing an infant to be nursed by a syphilitic woman. Although it was doubtless true that wet-nursing was to be preferred to artificial food, yet extreme care must be exercised with regard to the choice of a nurse. The moral objections to wet-nursing were usually overlooked, but Dr. Burrall regarded them as very important. By many it was believed that the moral and intellectual qualities of the nurse were transmitted to the infant. Again, the moral effect upon the mother produced by nursing her own child ought not to be disregarded.

With regard to artificial food, Dr. Burrall believed that the results obtained by its use were very much influenced by the surroundings and the hygienic care of the children; that is, better results would be secured in well-regulated and well-to-do families, than among families which did not offer to their children the advantages attending such care.

Dr. Burrall then referred briefly to several of the artificial foods in common use, and also to several formulæ that had been given for preparing cow's milk to make it best adapted to feeding infants.

He regarded it as important to indulge in as little night-feeding as possible, and believed that night-feeding should be discontinued as soon as it could be.

In general, the practice was to feed infants too frequently and too much, rather than at too long intervals and too little.

No formula could be used exclusively for the preparation of food best adapted to each child. But, with our

present knowledge, wet-nursing could usually be safely avoided.

Dr. Dawbarn gave something of the comparative analyses of cow's and human milk. He thought that if starchy material was to be added to cow's milk probably Dr. Jacobi's formula for the preparation of barley-water was the best, but he did not use any starchy substance in the management of young infants.

He spoke of the artificial foods, and also of the faults belonging to condensed milk diluted, such as excess of sugar, etc. He would do away with the nursing-bottle altogether, and feed with the spoon. He favored the free use of cool, not cold, water in the intervals between feeding, in cases of summer diarrhœa.

Dr. Dessau was opposed to all foods as substitutes for wet-nursing. He approved of the use of condensed milk, such as is served at private residences in this city (not that put up in tin cans), instead of cow's milk, because in the process of its dilution it could be always made of a uniform strength, which could be changed as the age of the infant advanced. His usual mode of preparing it for food was to add a tablespoonful to a nursing-bottleful of tepid water, with a pinch of salt. It was less likely to undergo chemical changes in warm weather than cow's milk, and did not require boiling nor the addition of an alkali. To a certain extent the disturbing influence of casein was avoided by using condensed milk, because in the process of its preparation the casein was acted upon in such a manner as to prevent coagulation thereafter by the action of the fluids of the stomach. It had served him better than any food he had used, and was the only preparation which he would recommend as a substitute for wet-nursing. He had used it largely at the New York Foundling Asylum, and with satisfactory results.

Dr. H. D. Chapin agreed with what had been said concerning artificial foods. They could be easily imitated. Casein, the most disturbing substance, could be attenuated by boiling, or digested by peptonizing the milk with the addition of an alkali; but it was not yet decided whether or not this method was a good one, because of the large quantity of alkali required. Kumyss had, by some, been added, for the purpose of disposing of the casein.

Dr. Winters said, with regard to wet-nursing, that anything should be welcomed which would obviate the necessity of the child having a foster-mother. He had not, for a number of years, found it necessary to employ wet-nurses. One reason why artificial feeding was so unpopular was because an attempt was made to substitute something unnatural for mother's milk, namely, artificial foods. There was no artificial food which was natural to the child, all contained more or less of starch; and if that was certainly transformed so that it could be digested, the nutritive power of the food was destroyed by the process, and the consequence was the production of an inferior article. No artificial food would sufficiently nourish a child without the addition of cow's milk.

Why was not cow's milk used more, and, when used, why did it fail so frequently? In the first place, sufficient care was not exercised in getting the milk. Secondly, nearly all bottle-fed children were over-fed; excessive feeding, therefore, was a cause of failure. Third, too rapid feeding was accountable for failure in many cases. The child should be fed with the same care and time when the bottle was used as when it was nursed by its mother.

Dr. George B. Fowler advocated the use of mother's milk first, cow's milk second, and then spoke of the different methods that had been resorted to for making it as near like mother's milk as possible. He thought it quite possible that many times too much alkali was added in the method by pancreatizing and the use of an alkali, as only a distinct alkaline reaction was required. He had found that the addition of a small quantity of pepsin to cow's milk, and then heating it, gave a clot which could be easily broken up, and when crushed it did not reclot in the stomach, and therefore had answered an excellent purpose. He believed that the milk obtained now in this city, thanks to the vigilance of the Board of Health, was equal to that which could be obtained in the country.

Dr. B. F. Dawson said that it was absolutely easy to bring a child up without the aid of mother's milk and without wet-nursing. The frequency, the quantity, and the rapidity with which children were fed were of as much importance as the quality of the food. He believed that the entire evil in feeding children consisted in feeding them too much at a time, too often, and too rapidly.

Cow's milk was all that was necessary, with something added to prevent the coagulation of the casein; if anything more was to be added it should not be water, but fat—for example, a piece of pure fresh butter as large as a hazel-nut at each meal. He said that if an infant was only looked upon as an animal that could take care of itself if let alone, all those who had to do with the rearing of children would get along much better than they did. He regarded it as important that the child should have plenty of water between meals.

A child should not be fed in the night, if possible to avoid it. The child should not be allowed to sleep at the breast. Make the interval between meals as long as possible both day and night—three, four, six, or even twelve hours. Never give an infant food until certain that it is hungry. His rule was to have the child fed at seven in the evening, once during the night—at two o'clock—and the next time in the morning, at six o'clock or thereabouts.

Dr. Winters said that the healthiest infants he had ever seen had not been fed during the night. In early infancy children occasionally might be fed at night, but in the majority of cases when the child awakens, and it is supposed that it is hungry, the application of a dry napkin or giving it a little water would be sufficient. After the first two months, as a rule, children did not require to be fed between ten o'clock in the evening and six or seven in the morning.

As to day-feeding, he should be governed by the instinct of the child, taking care that crying was not mistaken for hunger. He directed that the child should never be awakened for feeding, let the time be four, six, or more hours. Usually children were fed every two or three hours, and feeding every two hours was very likely to bring on indigestion. *On an average*, once in three hours during the day, and during the night at as long intervals as possible, and indigestion will rarely occur. A child should never be allowed to sleep while being nursed by its mother.

Dr. Burrall, in closing the discussion, said it was doubtless true that barley-water was constipating to some children and laxative to others.

The Section then adjourned, to meet on the fourth Thursday in October.

SECTION IN SURGERY.

Stated Meeting, April 12, 1886.

Stephen Smith, M.D., Chairman.

The Chairman reported, for discussion, a method of treatment of

FISTULA IN ANO,

in which he gave the details of an operation as performed successfully in several cases. He regarded the operation as applicable to all varieties of fistula in ano, and the average time of cure had, in his cases, been ten days, by a single operation, which consisted in laying the fistula open completely in all directions, completely excising the lining membrane, and then bringing the surfaces into thorough coaptation. He prepared his patients by

giving an ounce of castor-oil for two successive days before the operation, omitting it on the last day, on which an opiate was given at bedtime. The diet consisted of milk. The operation was performed with technical antiseptic details.

Shave the anal region and irrigate it, and also all the folds of the rectum, with the bichloride solution. Put a clean sponge, having a string attached to it, into the rectum. Place the patient upon the side corresponding to the external opening of the fistula. Incise the fistula in the usual manner, dissect away the pyogenic membrane throughout the tract, and from whatever pockets may have formed. Cut away the ragged margins and leave a clean, healthy surface for approximation and union. Control the hemorrhage completely before closing the wound. Secure perfect apposition of the margins of the wound and the deeper surfaces, with superficial and deep sutures. Introduce a drainage-tube, which is usually removed on the day following the operation. Use an opium suppository. Confine the patient upon the back, with the limbs straight. Keep the bowels quiet for five or six days. Restrict the diet to milk.

Dr. A. Jacobi asked, What does the most modern surgery think of the contra-indication to operating for fistula in ano in cases of advanced or incipient phthisis? The old view was that the existence of phthisis was a contra-indication to operating upon fistula in ano; or, in other words, that to operate upon fistula in ano in phthisical patients was not justifiable. He regarded it as an important question, and would be pleased to hear of it in the light of modern surgery.

The Chairman said, that if it were left to him to answer, he would say in reply to Dr. Jacobi's question, that surgeons in our times were inclining very much to operate in tuberculous cases. Wherever they could remove tuberculous conditions, as, for instance, in a joint, by excision and amputation, they did not hesitate to resort to operative procedure. So far as his observations went he did not believe that these fistulæ were, as they were at one time regarded, drains through which the system obtained relief by the exit of deleterious material; and he believed that they were drains only in the sense of affording an escape to discharge which weakens the patient. He had never seen any bad results follow surgical operations under these circumstances, but he had seen immediate good results follow the operation.

He referred to one case in which the patient had had repeated hemorrhages, and it was said by competent physicians that there were large cavities in the lungs. This patient had caries of the wrist-joint, which was the chief source of complaint. Amputation of the wrist was performed, and the patient recovered very promptly, and had since remained in an apparently healthy condition.

Dr. Jacobi then asked if he was to understand that surgical opinion had changed somewhat with regard to the operation for fistula in ano in cases of consumption?

The Chairman said that, so far as his knowledge of the opinion of surgeons went, it was one of the operations which surgeons would regard as justifiable in cases of phthisis.

Dr. Jacobi said he could see that there was a difference between the relation of fistula in ano to pulmonary consumption, and the relation of tuberculous bone to pulmonary consumption. Tuberculous bone might be not only a constant cause of new infection, but also be the original seat of the disease, which, if removed, would facilitate recovery. It was probably not so with regard to fistula in ano. He referred to the subject especially for the reason that it had been taught, and we had been led to believe, that fistula in ano occurring in phthisical subjects was not to be interfered with surgically. It appeared, however, from what the Chairman had said, that he did not hesitate to operate in such cases.

Dr. J. C. Peters remarked that it was worthy of note that in the older operations it was customary simply to lay the fistula open, whereas the operation described by Dr. Smith contemplated removing the lining membrane of the sac, in the expectation of saving the patient from the dangers which attended the old method of procedure.

The Chairman said that unless it could be proved that fistula in ano was a necessary drain, and that its closure would precipitate a tuberculous condition of the lungs, certainly modern surgical methods rendered it wise to rid the patient of such a source of exhaustion.

Dr. Robert T. Morris then reported a case of

AMPUTATION OF THE LEG OF A MAN AGED OVER EIGHTY-THREE YEARS.

He regarded it as one of the test-cases in antiseptic surgery. Gangrene occurred in the toes and foot as a result of senile changes. The arteries upon the right side of the body were tortuous and exceedingly hard to the touch; on the left side they were soft and apparently normal. The operation was performed with technical antiseptic details. The first dressing remained fifteen days, and when removed union was complete. The patient had since remained in good condition.

Dr. Morris also reported a case of

INJURY OF THE MEDULLA AND SPINAL CORD, WITH AN ACCOUNT OF AN EXPLORATORY OPERATION.

The patient was twenty-seven years of age, who received a severe injury by falling upon the head, attended by almost immediate development of paraplegia below the neck. Diagnosis of fracture of the body of the sixth cervical vertebra, with crushing of the cord, was made. The patient retained the full enjoyment of his intellectual faculties. After giving more extended details of the history of the case and the various clinical phenomena, Dr. Morris gave an account of the details of the operation which he made, with the idea of exsecting the damaged portion of the cord and bringing the divided ends together and fastening them with sutures. The necessary incisions were made under full antiseptic precautions, the spinous processes and the laminæ of the sixth and seventh cervical vertebræ were removed. In this way the cord was exposed, and it was found that its membranes had become united in a firm, dense mass; that the spinal cord itself was very much flattened, not thicker than a sheet of writing-paper; that a few distinct glistening fibres of apparently normal nerve-tissue could be seen passing through this injured part to the parts below, and that the cord below was very much atrophied. The condition of things was such as to preclude any further operative interference, and the wound was closed with full antiseptic details, united by primary union, and the patient was in no way damaged by the procedure. Dr. Morris then gave an account of the symptoms which have developed in the course of the case subsequently.

Dr. C. M. Jones reported a case of fracture of the twelfth dorsal vertebra, and had in his possession the specimen, which illustrated fracture of the laminæ, with pressure upon the cord. The conditions were such as to suggest that if the bone could have been removed by operation, possibly the paralysis might have been relieved. At the time of the occurrence of the injury he suggested such an operation, but it was not accepted by the consultants.

The Chairman had operated in one case of depression of a spinous process in which he found, after removal of the laminæ of one of the vertebræ, extensive extravasation of blood within the spinal canal. The operation gave no relief to the patient, and the case terminated in the usual manner, without recovery of the use of the lower extremities. He thought that operations on the cord for injuries had almost entirely been discarded by surgeons. But the operation contemplated by Dr. Morris was a new field altogether.

Dr. Morris said that in looking up the literature of the subject he had found a large number of cases reported, and all unsuccessful; but he had thought that

the present advantages of obtaining primary union in nerve-tissue and the other soft parts, gave new encouragement to attempt to afford relief by surgical procedure in this class of cases.

Dr. Jacobi spoke of a case on which he operated, some twenty-five or twenty-six years ago, that of a little boy, who received a gunshot wound which was followed by paraplegia. On examination there was a small wound over the second lumbar vertebra. He removed a portion of the body of the vertebra, and found the dura mater very much thickened and very much paler than he had expected to find it; but there was a good deal of organized tissue in that locality, and there it was that he found the bullet, between the bone and the dura mater. He removed the bullet, and also opened the dura mater in order to see the cord, which was found to be flattened and considerably atrophied. The wound healed kindly, but the child died a number of months afterward, in the usual way, and without any improvement following the operation.

Dr. J. C. Peters referred to the oldest and first work on surgery which he ever read, a book written by a French surgeon, who said that almost every part of the body had been invaded by surgical operation, and the author also stated further that, *unfortunately*, the connections of the head with the trunk were such that it could not be removed with the slightest chance of saving the patient's life. The word *unfortunately* Dr. Peters regarded as being very suggestive in connection with the statement made by the author.

The Chairman said that the first case reported by Dr. Morris, that of amputation of the leg, illustrated certainly an advantage which surgeons now possessed, of healing almost any kind of wound. It also illustrated how surgeons now-a-days could perform operations which were essentially curative and not depressing, even under the most unfavorable circumstances, and he believed that some surgical procedures were even more remedial than mercury in syphilis in a large number of cases of chronic diseases.

The Section then adjourned.

The Treatment of Hydrocele.—Dr. T. M. McIntosh, of Thomasville, Ga., writes, in regard to the communication of Dr. Keyes in The Medical Record of February 20th, upon the treatment of hydrocele, that he has in several cases used a somewhat similar, but more simple, method. It consists in the injection of iodine or carbolic acid through a hypodermic needle without previous evacuation of the sac. There are certain cases of encysted hydrocele in which there would be some danger of wounding the testis by the point of the trochar, and other cases in which, owing to thinness of the walls of the sac, and their consequent collapse after the removal of the fluid, great difficulty would be experienced in throwing the fluid into the sac and not into the surrounding tissues. The mode of procedure is to insert the ordinary hypodermic needle, withdrawing just enough fluid to establish the diagnosis; then the barrel of the syringe is disengaged from the needle, filled with the desired quantity of carbolic acid or other injecting fluids, then reattached, when the piston is driven down. It is claimed that there is no pain beyond that caused by the puncture of the needle, and no disability, as the patients are able at once to leave the office and attend to their ordinary duties. It is also, it is claimed, a most effectual mode of treatment. Dr. McIntosh states that the method is not original with him, but that he read about it in a short paragraph in some medical journal about five years ago. The writer had used it for a number of years, and during the war had operated on many cases, the reaction in not a single instance being sufficiently severe to necessitate relief from military duty. In every case a complete cure had been obtained. The material used by the originator of the method was tincture of iodine, from 20 to 40 drops being used for each injection.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE GULSTONIAN LECTURES ON SPASM IN CHRONIC NERVE DISEASE—A SANITARY SCANDAL.

London, April 13, 1886.

Dr. Seymour Sharkey's recent Gulstonian Lectures on Spasm in Chronic Nerve Disease contained some pregnant suggestions. Referring to the knee-jerk and allied contractions, Dr. Hughlings Jackson, he said, had formulated the opinion that they are increased in disease which interrupts the continuity of the pyramidal tract, because the suppression of the functions of the pyramidal tract allows increased activity of the spinal centres—the latter being "let go." This explanation was accepted by Dr. Sharkey, and he claimed that partial or complete suppression of nerve-impulses passing from the cerebral motor centres down the pyramidal tract might occur under a considerable variety of circumstances. They might even occur without any tangible lesion being present, for contractures had been observed in typhoid, typhus, and relapsing fevers.

Dr. Sharkey narrated in detail some interesting cases in which tremors, paralysis, and muscular contraction had been produced by pressure on the pyramidal tracts at various points in their course. If the motor tracts of the two sides of the body were affected simultaneously, or soon after one another, the disease was likely to be situated between the basal ganglia above and the medulla below, and was in all probability a tumor.

Rigid contractions and tetanic seizures had been held to be characteristic of cerebellar disease. But as they occurred in disease of other parts of the brain, this could not be so. When occurring in cerebellar disease, they were really due, said Dr. Sharkey, to pressure on the motor-paths, and not to the cerebellar disease *per se*. Dr. Hughlings Jackson, he said, had remarked that in the case of extensive rigidity and tetanus-like seizures occurring in cerebellar tumor, the tumor had been (in his experience) in the middle lobe, and large. Dr. Sharkey said he would put the case thus: "A tumor of the cerebellum does not produce contractures and tetanic seizures, unless it be in such a position and of such a size as to produce pressure on the pons Varolii or medulla oblongata." Dr. Sharkey furthermore said: "I do not think we are justified in considering that disease of it [the cerebellum] produces spasmodic contraction of muscles, except indirectly by pressure upon underlying structures."

Dr. Sharkey regards contractures of cerebral origin as due to injury to the intra-cranial portion of the pyramidal tract, and he pointed out that the results are similar whether the lesion is situated in the motor area of the cortex, in the central ganglia, in the crus, pons, or medulla, provided that the function of the fibres of the pyramidal tract be interrupted. Congenital defects or portions of the central nervous system were, he remarked, as capable as destructive diseases of producing paralysis of limbs accompanied by spasm. Some clinical and post-mortem records were quoted in support of this view.

The lecturer then referred to the various forms of mobile spasm. He admitted that these could not be attributed to any lesion constant either in its nature or its position, but suggested that they result from a mixture, in varying proportions, of paralysis, spasm, and irritation, and that their development depends upon lesions which interfere with the perfect functions of the motor centres and nerves but do not completely interrupt them.

Dr. Sharkey then reiterated a statement which he had made in commencing the course, viz., that "our present knowledge of anatomy, physiology, and pathology does not justify us in concluding that there is any efferent motor connection between the brain and spinal cord,

except the pyramidal tract, direct and crossed, disease of which gives rise to chronic muscular spasm." In making this statement he had wished, he said, to exclude from consideration the cerebellum and central ganglia. Any rigidity or spasmodic contraction of muscles arising in connection with diseases of either the cerebellum or the central ganglia really depended upon involvement of the pyramidal tract, which passed close by them. He had brought forward evidence in support of this view, so far as the cerebellum was concerned. He would now give some evidence of the statement so far as it related to the central ganglia. Dr. Sharkey accordingly related a case in which disease so severe as almost totally to obliterate the corpus striatum, produced hemiplegia, but the latter passed off without leaving rigidity, paralysis, or any other symptom behind. The internal capsule had not been invaded by the lesion.

The lecturer then proceeded to speak of spasm in connection with chronic spinal disease. He observed that the continuous degeneration of the lateral column through the whole length of the spinal cord in cerebral lesions shows that the fibres are not interrupted by entering ganglionic centres, but pass straight to their several destinations in the anterior cornua. It would, he said, be readily understood that if disease destroy them at any level in the spinal cord, degeneration will occur in them below, and produce symptoms of hyper-physiological activity of the spinal centres with which they are connected, similar to those occurring when the disease is intra-cranial. In the latter case, however, all the spinal centres which are under voluntary control are affected, but in the former only a certain number, varying according to the situation of the spinal lesion, whether high up or low down in the cord. Another difference was that in cerebral disease the resulting contracture is, as a rule, unilateral, but bilateral when caused by spinal lesions. The reason of this was that the pyramidal tracts in the spinal cord are so close together as usually to be both involved, whereas, in that portion of the brain where they are most liable to be interrupted by disease, they lie at some distance from each other. The symptoms of disease of the lateral columns of the cord are the same, said Dr. Sharkey, whether it follow cerebral or spinal lesions. The affections of these columns differed slightly according as they are primary or secondary. Disease of the lateral columns might be combined with that of some other tract of fibres, and a combination of symptoms result. Moreover, although pressure on the pyramidal fibres interrupts their functional activity, the symptoms were very different, according to the manner in which the pressure be applied, whether from without or within the cord. A tumor growing in the spinal canal outside the cord might produce few symptoms until it pressed the cord against the walls of the canal, but after this had occurred the course of the disease was rapid. On the other hand, a tumor arising within the spinal cord disturbed its functions even from the commencement, but as the nerve-substance appeared to be elastic, and to allow a good deal of stretching, a tumor might go on growing for a long time before producing striking phenomena either by pushing the cord against the bony walls of the spinal canal or by exhausting the elasticity of the membranes enveloping it. Dr. Sharkey described and explained these various points in detail, and illustrated them by narrating cases.

I referred on a former occasion to the continued existence of a large dust-sifting yard adjoining the filtering beds of a water company at Battersea, as a sanitary scandal. Last year it was proposed to compel the owners of the yard to sell it to the water company; but they opposed this before Parliament, and as this clause had been inserted by the Parliamentary Committee, the Water Company's Bill was thrown out last year in consequence of this opposition. The bill has now again come before Parliament, and it appears that the Water Company and the Railway Company owning the dust yard, have been able to come to an agreement as to the matter, whereby the Railway Company (who are unwilling to part with the ground) undertake to put a stop to the dust-sifting. Meanwhile the nuisance has been going on, although the Local Government Board has issued a report condemning the continued existence of the yard. Public opinion has also not been idle, but in spite of all, we are only now on the verge of settling what would appear—to one unversed in sanitary law—to be a very simple question, viz., the removal of a nuisance which is also a danger to health. I have a very strong suspicion that, despite the present virtuous sanitary stand of the Local Government Board, the nuisance would be as far from being abated as ever, were it not for public and professional opinion.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 18, to April 24, 1886.

TAYLOR, M. K., Major and Surgeon. Granted one month's leave of absence, on surgeon's certificate of disability, with permission to leave the limits of the Department. S. O. 39, Department of the Missouri, April 16, 1886.

GRAY, WILLIAM W., Captain and Assistant Surgeon. Ordered to Fort Maginnis, M. T. S. O. 33, Department of Dakota, April 16, 1886.

WOODRUFF, EZRA, Captain and Assistant Surgeon. Ordered to Fort Missoula, M. T. S. O. 33, Department of Dakota, April 16, 1886.

ROBERTSON, REUBEN L., First Lieutenant and Assistant Surgeon. Ordered for temporary duty at Fort Snelling, Minn. S. O. 33, Department of Dakota, April 16, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending April 24, 1886.

LOVERING, P. A., Passed Assistant Surgeon. Ordered to Navy Yard, New York.

BIDDLE, CLEMENT, Passed Assistant Surgeon. Detached from Monocacy. Ordered home and wait orders.

AMES, H. E., Passed Assistant Surgeon. Detached from Navy Yard, New York, and ordered to Monocacy.

CRAWFORD, M. H., Passed Assistant Surgeon. Ordered to Naval Hospital at Washington.

Medical Director W. T. HORD, U.S.N., and Medical Inspector J. C. SPEAR, U.S.N., delegates to the American Medical Association, to be held at St. Louis on May 5, 1886.

A LONG CORD, A KNOTTED CORD, AND A LARGE INFANT.—Dr. J. T. Faucett, of Idaville, Tenn., writes to the *Mississippi Valley Medical Monthly*: "I was called to Mrs. F——, February 5th. In about an hour after my arrival she gave birth to a twelve-pound female child. The umbilical cord measured four feet seven inches, and had two perfect knots. Doubtless you have seen longer cords with more knots in them, but this is my longest; and I doubt not but that you have delivered larger children, but this is my largest. In looking over the authorities upon the subject I find that Cazeaux, Leishman, Tyler, Smith, Lusk, and others, give the average length of the cord at from twenty to twenty-four inches. At the same time they all say that instances are on record where the length exceeded the one I report, being five, six, even seven feet in length. The weight of the child, while not sufficient perhaps to excite the wonder of obstetricians, is still quite enough to arouse the astonishment and admiration of a neighborhood."

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 24, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
April 24, 1886.....	1	7	46	7	25	75	1	0
Deaths.								
April 24, 1886.....	0	4	12	6	4	33	0	0

HYSTERICAL SINGULTUS.—There is a form of hysteria peculiar to the inhabitants of Archangel, in which one of the most prominent symptoms is hiccough (*Russkaya Meditsina*, March 9, 1886). Women are chiefly affected, though the men are not all exempt. The attack begins after some mental excitement, or without such cause, by a sudden intermittent spasm of the diaphragm. The patient cries out, the muscles of the upper extremities contract and relax, the eyes roll, and consciousness seems to be lost. The hiccough continues throughout the attack, which seldom lasts more than half an hour.

SUICIDE BY BUTTING THE HEAD AGAINST A STONE WALL.—Mr. William Allan reports, in the *Dublin Journal of Medical Science* for March, 1886, a case of a prisoner who, on being informed that his wife had just been arrested, started off at full speed toward a wall some fifty feet away, and dashed the vertex of his head against it. So great was the concussion that the body rebounded three feet from the wall, and the man dropped dead without a struggle. The case was of interest from a medico-legal point of view, as if the man had not been seen by witnesses to commit suicide it might reasonably have been supposed that he had been struck by a keeper, or a fellow-convict.

CHLORAL AS A VESICANT.—Hydrate of chloral has, according to the London *Medical Record*, been successfully employed instead of cantharides for blisters. For this purpose powdered chloral is sprinkled on previously slightly warmed adhesive plaster. Vesicles are raised by it in about ten minutes. The advantages of this blister over other kinds are rapid and perfectly painless action, and absence of any of the troublesome effects sometimes caused by cantharides.

ETHER AND OPIUM IN SMALL-POX.—During a recent meeting of the Medical Society of the Paris Hospitals, MM. Dreyfus-Brissac and Balzer mentioned that they had tried M. du Castel's ether-and-opium method of treating small-pox for a considerable time, and had convinced themselves of its efficacy. It consists in subcutaneous injections of ether, a daily dose of from fifteen to twenty centigrammes of opium being administered by the mouth. In severe and confluent cases the papules become abortive, suppuration is diminished, and the general improvement is rapid. M. Balzer prefers administering the ether as well as the opium by the mouth, but M. du Castel considers this less efficacious than the hypodermic method.—*The Lancet.*

EARLY PUBERTY.—A curious case of early puberty was shown by Mr. Bruce Clarke at a recent meeting of the London Pathological Society (*British Medical Journal*). The child was only three years and eight months old, but was three feet eight and a half inches high and weighed sixty-two pounds. There was some down on his cheek, and though there was no hair on the chest or in the armpits, he was as hairy as a man about the pubes and in the perinæum. His penis was as large as a man's, and was noticed to be erect every morning, though the testicles were rather smaller than those of an adult. The pomum Adami was well-developed, and his voice was cracked like that of a boy losing his "childish treble." The development of his brain, however, had not kept pace with the growth of his body, and his mental state was about that of a child of his years. The girth of the head round the occipital and frontal protuberances was twenty-one inches, which is certainly not very small for his bulk. It is interesting to note that, in spite of the great development of his sexual organs, he has never given any evidence of sexual desire, and that no seminal emissions are known to have occurred. The boy was the third child in a family of five, and he was bigger than the eldest child, who was over seven years old. He was suckled for nine months. At about one year of age he began to grow rapidly and to eat voraciously, so that nothing seemed to satisfy him. Hair began to grow on the pubes, and, before he was a year and a half old, he was as hairy as a man. At about that time this very rapid rate of growth ceased, and, since then, his mother thinks he has only grown with ordinary rapidity. A few cases are on record where puberty developed between the ages of two and three years, but Mr. Clarke stated that he had been unable to find any other case recorded where it developed before eighteen months of age.

THE LANDLORDS WHO BLOOM IN THE SPRING.—

The doctor who hunts in the spring, tra la,
For a bright pleasant office up town,
Finds it rather a difficult thing, tra la,
To get a landlord on a string, tra la,
And make his rent figure come down.
And that's what I mean when I say or I sing,
To the devil with landlords who bloom in the spring.
Tra la, tra la, tra la, tra la,
To the devil with landlords in spring.

PERVERSION OF SEXUAL SENSE IN AN EPILEPTIC.—Professor P. J. Kovalevsky reports the case of an epileptic peasant suffering from religious ecstasy and aversion to women, the patient invariably having sexual connections only with animals (at first with hens and ducks, then with cows and mares).

THE OPERATING ROOM OF A VIENNA OPHTHALMOLOGIST.—Dr. G. H. Claiborne, Jr., writing from Vienna to the *Virginia Medical Monthly*, describes the operating room of Professor Hirschberg. "His operating room is a model of scientific care and accuracy. The floor and tables are of marble; the walls are painted with an oily substance which allows of their being washed with soap and water. Glass and porcelain are the materials of which the basins for instruments and disinfecting fluids are composed. The hands of all parties concerned in the operations are washed with soap and water and bathed with a sublimate solution ($\frac{1}{1000}$). The instruments for operations on the ball lie in absolute alcohol; those for muscle and lid operations in a three per cent. carbolic acid solution. Cocaine and atropine are dissolved in $\frac{1}{5000}$ sublimate solutions, and a separate new bottle is used for each case. Professor Hirschberg disinfects the conjunctiva by wiping it carefully with antiseptic gauze wet with a $\frac{1}{5000}$ sublimate solution, and instils one or two pipettefuls of the same solution over the wounds after the operations are finished. He never operates out of this room. Each patient has his own box of solutions, pencils, bandages, etc."

RUSSIAN PHYSICIANS AND THEIR GOVERNMENT.—In Russia medical students are to a very large extent supported and educated by the government, but a pledge is exacted of them to serve in any capacity that may be required, for a certain number of years after qualification. This pledge is felt to be a burden, and a number of medical men, at present under the obligation of serving the government, have petitioned to be absolved from it.

THE INEQUALITY OF THE UPPER EXTREMITIES AND THE CAUSE OF LEFT-HANDEDNESS.—DR. Charles A. Bacon, of this city, writes: "Yours of the 19th inst. received. The extract from the *British Medical Journal*, given on pages 262–63 of THE MEDICAL RECORD for February 27th, recalled to my mind Hyrtl's views on that subject, a translation of which I append. § LXXIV. 'Inequality of the two Upper Extremities. The two upper extremities are very seldom of equal length. There is a difference of two to three lines in favor of the right. Laurent Vitry and Noble found the right clavicle and humerus four lines longer than the left. . . . Moreover, the strength, which means the muscular development, of the two is very seldom in exact correspondence. An original dissimilarity in the mass of muscular tissue in favor of the right upper extremity, and not its more intense use, gives to it its greater importance. We use the right upper extremity more than the left, because it is stronger; it is not stronger because more used. . . . The mass of muscular tissue on the right side is greater than that of the left in the proportion of 1 to 0.929 . . . a difference of more than seven per cent. That the predominating use of the right hand is based on this numerical proportion, is best appreciated on observation of left-handed persons. Such a person's left upper extremity is by natural construction stronger, and, for this reason, he makes use of it from babyhood in spite of correction and punishment, and although all tools and implements are so constructed as to favor the convenient use of the right hand. . . . § LXXV. Anatomical Cause of Left-Handedness. The stronger development of the right upper extremity, and its consequent greater availibility for use, depend upon purely anatomical considerations, just as does left-handedness. They lie in the results of the place of origin of the arterial branches of the arch of the aorta. The right subclavian is given off nearer the heart than the left. The power of the heart's systole will have a greater influence on it than on the left. The right subclavian, as well as all its branches, will necessarily have a greater capacity than the left, because the blood in it circulates under a greater pressure. More blood in it means so much more nutritive material, and also so much more tissue change, and stronger development of all belonging to the upper extremity. That this stronger development should manifest itself in the muscles is to be expected, since the bulk of the extremities is composed of muscle. Our attention is here claimed by an anomaly in the origin of the great blood-vessels, in accordance with which the right subclavian arises behind the left. Nor is it so very rare; I put it at two per cent. This proportion corresponds with the experience of many years in the dissecting-rooms of Vienna, and approximately with Malgaigne's observations on the frequency of left-handedness. If the right subclavian takes its origin behind the left, then, as regards the pressure under which the blood circulates in the two subclavian arteries, we find the opposite from what must occur when the origin is normal. In blood-supply the left extremity has the preference. Consequently it will be stronger and in use preferred to the right. Dr. Oehl, of Pavia, first communicated to me the cases of two left-handed men, in whom the anatomical examination demonstrated the misplacement of the origin of the right subclavian behind the left. Two other recently observed cases establish beyond doubt the causal and necessary relation of anomalies in the blood-vessels to left-handedness. A body with complete transposition of the viscera came into our hands in the anatomical department. The left upper extremity was not noticeably stronger than the right (just as the right is not always perceptibly the stronger); but callosities on the left hand showed that the man—a carpenter—had been accustomed to use his plane in that hand. Almost at the same time I learned that a man—by trade a locksmith—was under treatment in Professor Oppolzer's clinic. On being questioned he asserted, as I expected he would, that from babyhood he used his left hand for everything, until in his fifteenth year his master compelled him to use the right; still, that even now, when he wants to do his best, his left hand is more serviceable than his right. The anatomical cause of left-handedness is consequently no longer a riddle.' The above is a translation of passages occurring on pages 304, 305, 306 of vol. ii. of Hyrtl's 'Handbook of Topographical Anatomy,' sixth edition, published at Vienna by William Braumueller, and is substantially what I heard Professor Hyrtl state in one of his lectures. Being not quite certain as to the solution of 'the riddle,' I spoke with him about it afterward, and I believe it would be correct to thus formulate that great anatomist's answer: Any original abnormal distribution or arrangement of the great arteries causing greater blood-pressure, beginning during fœtal life, in the left than in the right subclavian, is competent to cause increased calibre of the left subclavian, a more copious blood-supply to the left arm, a consequent superiority in its muscular development and left-handedness; and such is always the cause of original left-handedness."

NEWSPAPER ADVERTISEMENTS.—A correspondent, "L. J. B.," writes: "It is stated that when a clergyman raised his prayer-book to throw it at the liar in his congregation every one present dodged their heads. Now, as one of the dodgers, I wish to question a statement made in the recent editorial on 'Newspaper Advertisements.' I cannot vouch for the state of things in New York, but in smaller towns everyone assumes the mantle of reporter, and considers it a privilege to report current events to the newspaper. Thus a man's neighbors—friends or enemies, for that matter—are constantly striving to be the first to announce such events at the paper offices, particularly if something extraordinary to them. Thus, if Dr. so and so performs an operation, not wonderful to himself or the profession, but wonderful to the public, it soon reaches the papers without the knowledge or intent of the operator." [Our correspondent further asks us why we have singled out a certain town of which to make an example. To which we answer that we have not singled out any town or man, but during the past years have made such criticisms as we deemed needful and right, no matter what was the locality. A small proportion of newspaper advertising is inadvertent and accidental, and this proportion is very much smaller than our correspondent appears to think.—ED.]

A CURIOUS DEFENCE.—Dr. Peyrol, head surgeon at the Hôtel Dieu, was called upon to extract a bullet from a young lady who had accidentally shot herself, and made a charge of eight hundred francs for the operation. The bill was disputed, and the case was brought before the Paris Civil Tribunal. Here the defence was set up that the plaintiff had stated erroneously that the bullet was lodged in the right thigh. But the tribunal very justly overruled the plea, saying that it mattered very little whether the bullet was on the right or left side, so long as the patient's sufferings had been relieved, and judgment was accordingly given for the plaintiff.

A TRUSS WITH A GLYCERINE PAD.—A truss is manufactured in England, which has a pad made of india-rubber and filled with glycerine. It has been found that the glycerine does not evaporate or leak through the rubber, and the pad always remains soft and comfortable. The latter has sufficient resistance to overcome the ordinary forms of hernia, and, from its peculiar construction, adapts itself well to the surface, and completely closes the external ring without enlarging it.

THE DIET IN DIABETES.—*Articles permitted:* Almonds, plain, in rusks and in biscuits, bread toasted or stale maccaroni, bacon, butter, cheese, eggs, fat and oils, beef-tea and soups, beef, mutton, fish, game, and poultry, cabbage, lettuce, pickles, and spinach, custards without sugar, cream, jellies unsweetened, nuts; coffee, cocoa, sherry. *Articles forbidden:* Peas, beans, lentils, pota-

toes, sweet potatoes, celery, carrots, beets, radishes, mustard, oysters, arrow-root, buckwheat, sago, tapioca, and puddings generally, apples, bananas, and fruits generally, including raisins; milk, sugar, chocolate, ale, sweet wines. —*Journal of Reconstructives.*

The Digestibility of Various Kinds of Foods According to Vanderbeck. *Meats.*—Easy to digest: Mutton, venison, hare, sweetbread, chicken, turkey, partridge, pheasant, grouse, beef. Hard to digest: Pork, veal, goose, liver, heart, brain, lamb, duck, salt meat, sausage. *Fish.*—Easy: Turbot, haddock, flounder, sole, oysters, trout, pike. Hard: Mackerel, eels, salmon, herring, salt fish, lobster, crabs, mussels, cod. *Vegetables.* —Easy: Asparagus, French beans, cauliflower, beets, potatoes, lettuce. Hard: Artichoke, celery, spinach, boiled cabbage. *Fruits, etc.*—Easy: Baked apples, oranges, grapes, strawberries, peaches, cocoa, coffee, black tea, claret. Hard: Apples, currants, raspberries, apricots, pears, plums, cherries, pineapples, chocolate, pickles, beer.—*Journal of Reconstructives.*

The Comparative Cost of Foods.—Oatmeal is one of the cheapest foods we have; that is, it furnishes more nutritive material, in proportion to the cost, than almost any other. Wheat-bread and rice, on the other hand, are the most expensive, in proportion to their cost, of the staple vegetable foods. By taking into account all the nutritive substances, it is estimated that twenty-five cents will pay for 0.29 of a pound of nutrients in beef sirloin, 0.40 in round beef, and 0.92 in neck beef; oysters, 0.12 to 0.17; shad and bluefish, about 0.28; smoked-herring, 1.21; cheese, 1.08 to 1.35; milk, 0.99; wheat-bread, 2.08 to 2.75, etc. Of course, in the comparative value of foods, their actual physiological use is not unimportant. Foods rich in nutrients may not be readily assimilable, and only physiological experiments can finally determine their actual nutritive value. From a study of the dietaries of factory and mill operatives, mechanics, and other people engaged in manual labor in Massachusetts and Connecticut, the most noticeable features observed were the large quantity of food consumed, especially of animal food and fats. The total amount of nutrients per man per day varies in the Massachusetts dietaries from 690 grammes to 1,052 grammes; while in the European dietaries the normal range is from 653 to 863 grammes. In the European the consumption of fats ranges from 13 to 100 grammes, while in the Massachusetts dietaries in no case does it fall below 127, and reaches as high as 304 grammes. If common usage in Europe, and the standards which are currently accepted there, are correct expressions of the proper quantities of food and of fat for healthful nutrition, the quantities of total food, of meats, and especially of fats, in the New England dietaries examined, are needlessly large, and in some instances excessively so. The dietaries studied, all pointed in one direction, indicating that in this country a large excess of food is consumed, not only by well-to-do people, but also by those in moderate circumstances. This excess consists mainly in meats and sweetmeats, which are expensive, as well as physiologically injurious when consumed in too large quantities.—*Science.*

Artificial Cocaine.—Merck is said to have prepared cocaine by synthesis. Cocaine is benzoic methylecgonine. Benzoic ecgonine is treated with iodide of methyl in slight excess, in the presence of methylic alcohol at 100° C.; the excess of iodide and methylic alcohol is driven off by heat; from the resulting syrupy liquid cocaine is extracted. This artificial cocaine melts at 98°, like its prototype, and it possesses all the reactions of the natural product.

The Results of Treatment in Diphtheria.—Dr. Wooster Beach, of this city, takes exception to a statement made in a paper on "Diphtheria and its Treatment," concerning the mortality of the disease, which is stated, on the authority of the statistics of the Health Department, to be over forty-two per cent., and which was reduced by treatment in the cases described to about fifteen per cent. Dr. Beach writes: "Now, without attempting to prove the fact by statistics, I state very confidently, first, that not one case in ten, except it be fatal, is reported to the Health Department; and, second, that the average mortality from the disease in this city does not reach fifteen per cent." Allowing for cases of tonsillitis, diagnosticated as diphtheria, and for other errors in diagnosis, the writer expresses his confidence that practising physicians will sustain him in his estimate of the mortality of true diphtheria, although when the larynx is invaded the death-rate is enormously increased. He says that he has tried many of the plans advocated by reliable authorities, and that now his treatment of the disease is practically nil, yet he sees very little difference in the results obtained. "Dr. Smith's percentage of cures does not, then, exceed that following ordinary treatment, and this leads me to the object of my communication: to protest against this harassing, I might say, torturing, of the little patients by the almost continual syringing, spraying, and dosing. I cannot better illustrate this point than by extracts from the article. One 'little patient was very intractable, so that I was never able to satisfactorily syringe out his nose and throat.' Another 'required the united efforts of my assistant, nurse, and father of the patient to hold him in a chair while I syringed out his throat and nostrils.' I have had personal experience in such scenes, and firmly believe that the baneful effects of the fright, excitement, and exhaustion must counterbalance any advantage of the treatment, allowing it to be of service at all. Two cases of death immediately following, and not improbably caused by violent resistance to the syringing process have come to my knowledge. I hold that in this disease, in fact in all others, remedies or measures that may do harm should never be employed unless the evidence of their superiority over more innocuous means can be fully sustained."

Primary Carcinoma of the Omentum.—Dr. E. D. Coonley, of Mariner's Harbor, writes: "With reference to a statement made by Dr. Ferguson at a recent meeting of the New York Pathological Society, that he had never seen a case of primary carcinoma of the omentum, and that they were exceedingly rare, I would like to quote the following from notes of an autopsy made by me in October, 1883: The great omentum was the seat of large cancerous deposit; was greatly thickened and increased in weight. The kidneys were not examined, but were probably normal, judging from the character of the urine examined a few hours before death. The spleen, stomach, and liver were perfectly normal."

A Large Fibroid Tumor.—Dr. Atherton, on October 22d last, removed a fibroid tumor of the uterus weighing about sixty pounds. The patient was thirty-five years of age, and the tumor first showed itself immediately after marriage, twelve years ago. Its seat of growth was in the anterior wall of the uterus and was firmly adherent to the abdominal wall, evidently receiving a large part of its blood-supply through the enlarged branches of the epigastric arteries. The patient has gained twenty-eight pounds since the operation.—*Canada Medical and Surgical Journal,* March, 1886.

The Need of a Law to Regulate the Practice of Medicine in Maryland is apparent from the following certificate of death of a bride of two months. The document was filed with the Health Department after having been used as a subscription paper to collect funds to enable the remains to be buried. It was given by Dr. Johnson, a colored herb doctor, of Stockholm Street, and read as follows: "March 3, 1886.—Mrs. Larro Jones, she dide with Liver dease & New Moner she daparted from this life & Mat with chance to Make her leafe & got to glory. We ask freands & Brother & Sister for what they Can give to halpe to Bary the body away."

The Medical Record

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Original Articles.

THE MALARIAL "GERM" OF LAVERAN.

BY GEORGE M. STERNBERG, M.D.,

MAJOR, U.S.A.

(Continued from p. 453.)

IN a plate accompanying the recent memoir of Marchiafava and Celli,[1] these crescentic bodies are figured, not as attached accidentally to red blood-corpuscles, but as developed in them, and as being a later stage in the development of body No. 2, shortly to be described. We cannot attempt to reproduce the excellent lithographic plate which illustrates the various phases in the development of the parasite, as interpreted by these observers, and must content ourselves with the remark that according to them the crescentic bodies are developed from body No. 2 in the interior of the red blood-corpuscles, and simply represent a more advanced stage in the evolution of these bodies at a time when the corpuscle has been nearly (as in B, Fig. 3) or entirely destroyed. Subsequently the crescentic body, according to these observers, becomes oval, and then spherical in form. Whether the life-history of the parasite has been correctly worked out by the Italian observers is a question which we cannot attempt to decide. However, the exact relation which this body No. 1 of Laveran bears to body No. 2 is a question of secondary importance, which we may leave for future investigation. The main interest, from an etiological point of view, attaches to body No. 2, *which is found in the interior of the red blood-corpuscles*, and which corresponds with the hyaline bodies found in such vast numbers, in the same situation, in the capillaries of the brain, liver, spleen, and other organs, in fatal cases and pernicious malarial fever.

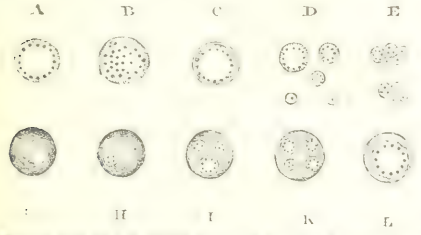


FIG. 4.—A, body No. 2 of Fig. 3, volume B, body No. 1, containing pigment granules; C, body No. 2, containing pigment granules; D, body No. 2, containing pigment granules; H, body No. 2, containing pigment granules; I, body No. 2, containing pigment granules; K, body No. 2 of small size to the number of one, two, three and four; L, a red blood-corpuscle, to which are attached body No. 2 and crescentic body. (Magnified about 1000 diameters.)

This body No. 2 is described by Laveran as follows:

"These elements are without question the ones most frequently encountered in the blood of malarial patients. Fig. 4 shows the principal aspects under which they present themselves to the observer. Their form is spherical; but we will see further on that this form may be modified under the influence of movements comparable to amœboid movements.

"The dimensions vary considerably; the smallest of these bodies are scarcely one micromillimetre in diameter, the largest may have a diameter of ten to eleven micromillimetres.

"The contours are indicated by a very fine line, and we may sometimes distinguish a double contour (C, Fig. 4), especially in preparations treated with osmic acid, colored with picrocarmine and mounted in glycerine.

"These elements appear to be made up of a very transparent hyaline mass enclosing rounded granules of pigment of a black, or deep-red color, identical with that found in bodies No. 1. The smallest of these bodies often enclose only one or two granules of pigment (D, Fig. 4); in the bodies which have a greater volume the pigment grains are often disposed regularly in the form of a crown (A, C, Fig. 4), or they may be distributed without order (B, Fig. 4), and in this case are animated with active movements comparable to particles of solids in a liquid in ebullition. This agitation of the pigment granules has a certain resemblance to the Brownian movement, but has not the regularity of this latter; sometimes the movement is arrested completely, sometimes it is exaggerated without any change having occurred in the physical condition of the preparation. *A priori* one would be tempted to believe that the pigment granules are animated by a movement proper to themselves; we will see further on, in studying the mobile filaments, that the movement is probably communicated. The pigment granules are immobile in the bodies No. 2 of small volume, while in those of average dimensions and of large size they may almost always be seen to move at certain times, especially in a preparation maintained at a temperature sufficiently elevated.

"These spherical bodies are sometimes free in the serum, sometimes attached to the red blood-corpuscles (H, I, K, L, Fig. 4). The bodies of small size free in the serum are often united in groups of four, five, six, or more (E, Fig. 4). The spherical bodies attached to the blood-corpuscles have a variable size; sometimes there is but a single body of small dimensions, enclosing one, two, or three granules of pigment, or there may be two, three, or four such bodies attached to the same corpuscle (H, I, K, Fig. 4); sometimes these bodies are more voluminous and have a diameter almost equal to that of the diameter of the corpuscle, which becomes more and more pale, and is only recognized by a zone of a pale yellow color surrounding the parasite. A moment finally arrives when the corpuscle can no longer be distinguished except by its contour; its color has disappeared; its transparency is the same as that of the parasite which is attached to it. This last body then appears to be surrounded by a transparent zone, which is more or less concentric to it; soon the corpuscle disappears entirely, and in proportion as it is effaced the body No. 2 augments in volume.

"We find often in preparations of the blood of malarial cases red blood-corpuscles which present little clear spots which might be designated under the name of *hématies piquées* (G, Fig. 4). It is probable that these clear spots are produced by the spherical bodies just born, so to speak, which do not yet contain pigment. MM. Marchiafava and Celli[1] seem to have observed this phase of the alteration which occurs in the blood of malarial cases.

"Certain bodies No. 2 enclosing pigment granules have exactly the diameter of the red corpuscles; we may, therefore, ask whether we have to do with parasitic

[1] Trans. R. Acad. Lincei, 1884.

[1] Gazz. degli Ospitali, 1883, No. 66.

elements having an independent existence, or with corpuscles altered by the presence of parasites which have penetrated into the interior of the corpuscles, as weevils penetrate grains of wheat. This hypothesis and this comparison have been made by Richard.[1]

"Besides these bodies No. 2 which have nearly the diameter of the red corpuscles, there are others which are only one or two micromillimetres in diameter, and which are consequently smaller than the smallest blood-corpuscles in diameter; the existence in the blood of bodies No. 2 of small size, free, and independent of the corpuscles, shows that these bodies have a proper existence; besides, a blood-corpuscle which has no envelope, properly so called, and of which the elasticity is so great that it yields to the slightest pressure, cannot be compared to a grain of wheat.

"Richard himself has abandoned the hypothesis which he had proposed. In his last communication upon the microbes of paludism he expresses himself as follows: 'These bodies are sometimes isolated, sometimes attached to each other in twos, in threes, or even in fours. But much more frequently, in place of swimming freely in the plasma they are attached—*accolés*—to the red corpuscles, at the expense of which they are nourished. Sometimes the corpuscle with its parasite preserves its discoid form, more often it assumes the shape of a cap and embraces the microbe by its concavity. One might then believe that the parasite is included in the corpuscle itself, and I have thought for a long time that this is the case; to-day I am persuaded to the contrary.'"[2]

The writer has heretofore spoken of these bodies as being "in the interior" of the red blood-corpuscles; this was the impression I obtained when they were demonstrated to me by the Italian observers heretofore named, and is an inference resulting from their supposed identity with the hyaline bodies, which appear to be included in the red corpuscles, in the capillary vessels of the brain, etc., in fatal cases of "pernicious fever." This is also the view of Marchiafava and Celli, who have made extensive observations during the past summer in the Santo Spirito Hospital of Rome,[3] where the material for such studies is most ample. Moreover, the stained preparations made by these gentlemen from blood drawn from the finger of a malarial patient, in my presence, seemed to justify this inference. But in view of the different opinion held by Laveran and by Richard I am not disposed to consider the point as definitely settled, and would commend it to the special attention of future observers.

In Laveran's account of his body No. 2, as above quoted, he remarks that "their form is spherical; but we shall see further on that this form may be modified under the influence of movements comparable to *amœboid movements*."

This phenomenon, referred to by Laveran, has been repeatedly observed by Marchiafava and Celli, and was demonstrated to me during my recent visit to Rome. Passing through the Santo Spirito Hospital, Dr. Celli selected a case in which the initial symptoms of a malarial paroxysm were developed, and drew a little blood from the patient's finger in the manner recommended by Laveran. This was immediately placed under the microscope, and after a little search a red blood-corpuscle was found which, *apparently, contained* a refractive spherical body, corresponding in size and location with the hyaline bodies which I had often seen in Councilman's sections of brain, etc., from the two cases of pernicious fever described by him. I would have been unable to determine whether this body was in truth a living organism by its appearance alone, but watching it for a time I had the most unequivocal evidence that such was the case. I observed, first, that, after a period of quiescence, a minute bud was put out from one side of the spherical body; this was the commencement of a change in form, amœboid in character, which continued for some time, and during which the body under observation assumed a variety of shapes, as shown in Fig. 5, which is copied

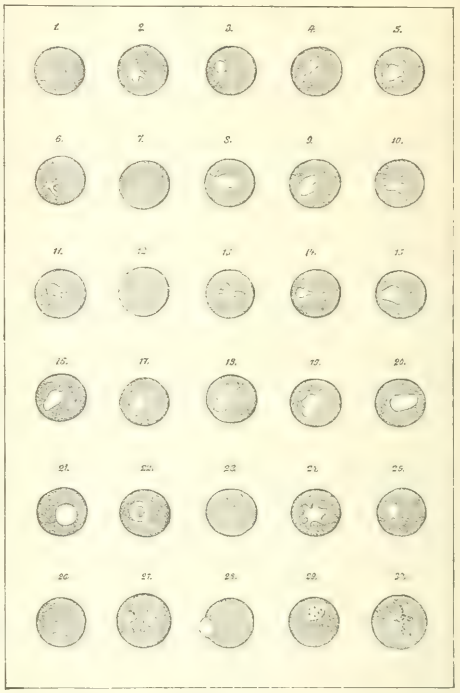


FIG. 5.—Figures 1 to 22 represent the changes in form which a single plasmodium, included in a red blood corpuscle, was observed to undergo within a period of twenty minutes. Figures 23 to 27, 29, and 30 show other forms assumed by plasmodia, some with and some without pigment. Figure 28 shows a motionless plasmodium emerging from a red blood-corpuscle; the blood was taken after the paroxysm of fever and administration of quinine. (Copied from the latest paper by Marchiafava and Celli, published in Friedlander's Fortschritt der Medicin, December 15, 1885.)

from the paper of Marchiafava and Celli, heretofore referred to. This I saw repeated not in one corpuscle only but in several, and had thus an ocular demonstration that these bodies are living amœboid organisms. The motions were quite slow, and were manifested by a gradual change of outline rather than by visible movement. After a period of amœboid activity of greater or less duration the body again assumed an oval or spherical form and remained quiescent for a time. While in this form it was easily recognized, as the spherical shape caused the light passing through it to be refracted and gave the impression of a body having a dark contour and a central vacuole; but when it was flattened out and undergoing amœboid changes in form, it was necessary to focus very carefully and to have a good illumination in order to see it. The objective used was a Zeiss' one-twelfth inch hom. ol. im.

We find further reference to this amœboid movement in Laveran's work (p. 168):

"When one examines these bodies No. 2 of average dimensions, or of large size, at a temperature of 30° to 35° C., one may often see that they undergo changes of form, while the pigment-granules in their interior are agitated in a very lively manner; these changes, which are produced slowly, as in the amœbæ, are easy to verify when the same element is left for a considerable time in the field of the microscope, and when a drawing is made, every five minutes for example. Little buds of proto-

[1] Communication to the Academy of Sciences, [illegible], 1885.
[2] Revue Scientifique, 1885, p. 111.
[3] Since this paper was written I have received from Marchiafava and Celli, a reprint of their last communication, published in the Fortschritte der Medicin, No. 24, December, 15, 1885. This paper embodies the results of their researches during the past summer, which are confirmatory to those previously published.

plasm are sometimes formed upon the margin of body No. 2.

"When body No. 2 is examined attentively, it happens sometimes that we see it undergo segmentation into three or four similar elements of small volume; these elements may again coalesce to form a single body, resembling in all particulars the primitive body No. 2."

Marchiafava and Celli have also observed this segmentation, and believe that it represents an important phase in the life-history of the parasite, and, in fact, that it is the usual method by which it multiplies. They have found evidence of segmentation also in the hyaline bodies included in the red blood-corpuscles in some of their sections of brain-tissue from cases of pernicious fever. I have in my possession a preparation, which they kindly gave me, in which the hyaline bodies (Laveran's bodies No. 2) are deeply stained with visuvine, and in which groups of two to six or eight small spherical bodies are to be seen included in the red corpuscles, which it seems probable may have been developed as a result of the segmentation of the larger bodies.

Continuing to quote from Laveran, we find the following:

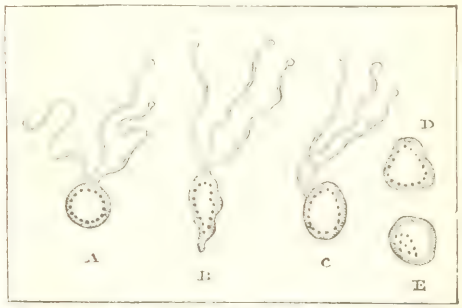
"*Mobile filaments.*—When a preparation of blood containing the spherical bodies described is examined attentively, it often happens that upon the margins of some of these elements we may distinguish filaments which are in active movement, and which impart to the neighboring blood-corpuscles very rapid and varied movements. These mobile filaments, of which the vital activity is incontestable, appear to represent the adult state of the malarial microbe; their study, then, is of great importance, but, unfortunately, is attended with considerable difficulties. The mobile filaments are very long for microbes, as they are at least three or four times as long as the diameter of a red blood-corpuscle, that is to say, twenty-one to twenty-eight micromillimetres long. But their tenuity and their transparence is such that when they are in repose one does not see them. It is thus that in repose the vibratile cilia of certain infusoria are invisible. It is well known that a glass rod plunged in Canada balsam becomes invisible, the index of refraction of the glass being nearly the same as that of the balsam. Still more difficulty attends the detection of very fine and transparent filaments in a state of repose in the serum of the blood.

"The movements of these mobile filaments are often arrested for a time when the blood has been collected upon a glass slide, especially if the exterior temperature is low, and if one does not make use of a hot stage. I have several times remarked at Constantine, during the summer, when the external temperature is quite elevated, that the movements of these filaments may be observed at the commencement of the examination of the blood; while in winter, when the temperature of the laboratory was low, it was often necessary to wait a long time in order to see the mobile filaments. We note, finally, that those mobile filaments correspond to a certain stage in the evolution of the malarial parasite, and that consequently we should not expect to find them permanently," *i.e.*, at all times, "in the blood of malarial patients.

"For these different reasons the search for these filaments is quite difficult, and it will be understood how it has happened that these microbes, notwithstanding their length and the vivacity of their movements, have so long escaped the attention of observers.

"Sometimes these mobile filaments are free in the midst of the blood-corpuscles, sometimes they adhere by one of their extremities to the spherical bodies No. 2. The free filaments move in the midst of the red corpuscles like an eel, and it is difficult to follow them; the filaments which still adhere to the bodies No. 2 are more easy to study, because they move vigorously without change of location and remain in the field of the microscope. . . .

"Dr. Richard has given an excellent description of the varied movements presented by these mobile filaments; he says: 'These filaments are animated by extremely active and energetic movements, by which the neighboring blood-corpuscles may be deformed or even displaced. From time to time the movement relaxes, to take the same activity after an interval of some instants; when they encounter some obstacle which interferes with their evolution the filaments redouble their activity; to see these movements one would almost say that they have an intentional character: thus one day it happened to me to observe a filament wrapped around a mesh of fibrinous reticulum, immediately its activity increased, it was agitated by veritable jerks, by movements of impatience, if I dare express myself thus, as if it sought to disengage itself. These little dramas in the field of the microscope are varied and often very attractive."



. . . "The movements of the mobile filaments may persist for two or three hours, in general they cease in much less time. When pressure is made upon the cover-glass in such a way as to act mechanically upon one of these bodies No. 2 furnished with mobile filaments, the motions are almost always arrested. When one examines one of these spherical bodies furnished with filaments, the first idea which presents itself is that the object in view is a pigmented mass of spherical form having pseudopodia. Such was the first hypothesis which I made with reference to the structure of these bodies; a more attentive examination soon showed me that it was necessary to abandon this interpretation. In the first place, it is often impossible to discover any mobile filaments upon the margin of the bodies No. 2, even when they have attained their average dimensions; in the second place, the number of the mobile filaments is variable; finally, when we examine for some time one of these bodies No. 2 furnished with mobile filaments, it will be found almost always that in the end these filaments are detached from the body No. 2, in which they had been inserted; these filaments circulate then at liberty in the midst of the red corpuscles, while the body No. 2, like a cyst which has been emptied, remains motionless and soon becomes deformed. The spherical bodies are probably little cysts, in the interior of which the mobile filaments are developed; it has happened to me several times to see the mobile filaments which had only partially escaped from body No. 2, and which during the examination completed the process of liberating themselves from their cyst. . . . Dr. Richard has also verified the fact that the mobile filaments adherent to body No. 2 often become detached from these bodies. He says: 'The filaments often take an independent existence; they become detached from the mother-element, and then, with prodigious agility, they precipitate themselves like little serpents through the pile of red corpuscles, and it is very difficult to follow them for a long time on account of the

rapidity and extent of their movements. In those cases in which these filaments are numerous the blood appears to be literally living.' "[1]

Marchiafava and Celli have also seen these mobile filaments attached to body No. 2. Their observations and figures indicate that they are flagelliform pseudopodia, which are developed during a certain phase in the evolution of this remarkable micro-organism, rather than independent bodies set free from a cyst. Whatever may be the truth in this regard, it can hardly be questioned that the flagellate bodies containing pigment granules, which have been seen by all of the observers mentioned in the blood of patients suffering from malarial fever, are derived from the far more numerous bodies No. 2 of Laveran, and constitute one stage in the development of this blood-parasite; and that the free mobile filaments described by Laveran and by Richard are detached from these bodies under certain circumstances, and may for a time retain their vital activity independently of them.

Laveran describes a third form, "body No. 3," which he considers a "cadaveric form" of the parasite. He says: "These elements are composed of little masses of hyaline material enclosing pigment-granules, disposed in various ways. . . . It is easy to satisfy one's self that these elements are only the cadaveric forms of bodies No. 1 and No. 2. When we leave under the microscope a preparation containing bodies No. 1 and No. 2, and examine them at the end of twenty-four or forty-eight hours, it will nearly always be found that these elements are distorted—*se sont déformés*—and that they have taken the aspect of the bodies No. 3. . . . In the bodies of individuals dead from malarial fever bodies No. 1 and No. 2 rapidly take the aspect of body No. 3; it is in this condition that the parasitic elements are found in great number in the small vessels of the various organs in subjects dead from pernicious fever, notably in the spleen, in the liver, and in the brain; these are the elements which, when agglomerated in masses, constitute the hyaline concretions which Frerichs has very well observed and described."

Laveran, in his first communication, gave to the blood-parasite, which he had discovered, and which he believed to be the cause of the disease with which, according to his observations, it is constantly associated, the name of *oscillaria malariæ*. He has since abandoned this name, which had been criticised, and says in his recent work, from which we have already quoted so extensively: "I renounce this name the more willingly for the reason that the *oscillariæ* are to-day classed among the vegetables, while the malarial parasite appears to me to belong to the animal kingdom rather than to the vegetable." The account above given fully sustains this view, and it is evident that this organism does not belong to the *bacteria*, the class which includes the spirillum of Obermeier, the tubercle bacillus, and other known "disease germs," but is rather one of the *protista*, which, according to Haeckel's classification, includes a large number of the lowest forms of life, which are neither distinctly animals nor vegetables, but form "a kingdom of organic nature intermediate between these two." Marchiafava and Celli, in their latest paper (*loc. cit.*), propose to call this organism *Plasmodium malariæ*.

The etiological relation of this amœboid blood-parasite to the form of disease with which it is associated can scarcely be questioned, if additional researches sustain the conclusion of the observers heretofore quoted as to its constant presence in the blood in typical cases of malarial fever, and its absence from the blood of healthy persons or of those suffering from other forms of disease. The idea that a parasite of this kind, which attacks directly the blood-corpuscles, and which in fatal cases of pernicious fever is found in vast numbers in the interior of these essential histological elements of the blood—or, according to Laveran, attached to them—is to be considered a mere epiphenomenon, until such time as its causal relation to the morbid phenomena has been proved by inoculating lower animals with pure cultures, can scarcely be entertained in the present stage of scientific investigation in this direction. We have no satisfactory evidence that the lower animals are subject to malarial diseases, and this final proof, however desirable, may be unattainable. We have, however, some recent inoculation experiments upon man, which give some support to the view that this parasite is the essential cause of the periodic fevers denominated malarial.

Marchiafava and Celli have, in five cases, made the direct experiment of injecting blood drawn from the circulation of a malarial patient, and demonstrated by microscopical examination to contain the parasite heretofore described, into the veins of individuals free from malarial disease, and from exposure to malarial influences (?), and claim that typical attacks of intermittent fever have resulted from such injections. The temperature charts given sustain this claim in three of the five cases, and the only doubt which arises as to the value of the experiment is that which is based upon the possibility of an attack developed as a result of exposure to malarious influences from without rather than from the injections made. The circumstances, as detailed, and the number of cases subjected to the experiment (five) seem to exclude this source of error; but additional experimental evidence from other sources will be necessary before we can admit that intermittent fever is an infectious disease transmissible from individual to individual by intravenous injection of the blood of one suffering from a malarial attack.

We select Case 3 as the most characteristic of those given in the memoir[1] of the authors referred to.

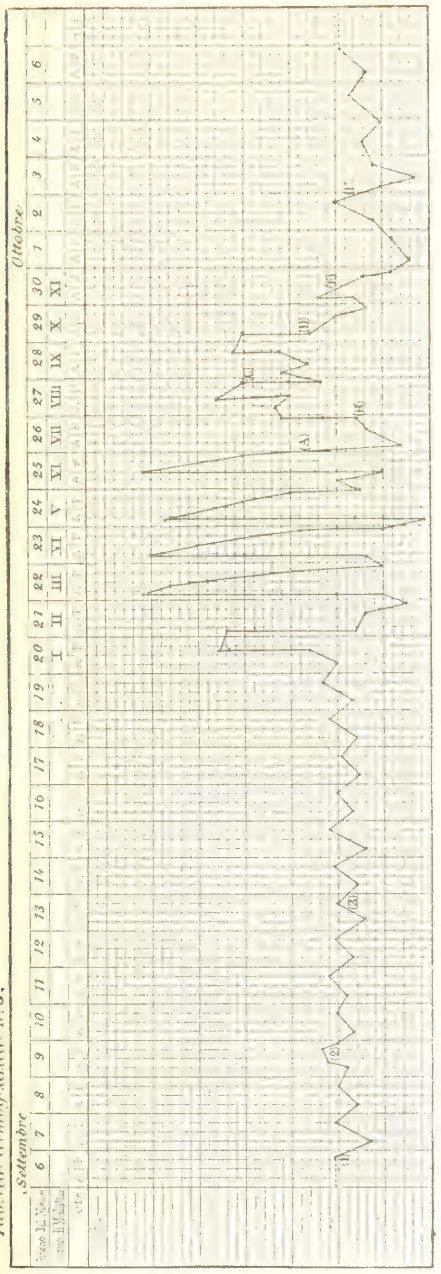
The subject of the experiment, M. C——, was a patient in the hospital of Santo Spirito, aged thirty-two, under treatment for multiple sclerosis. He had never suffered from malarial fever, and his temperature, taken for several days in advance of the experiment, showed no abnormal elevation. On September 6th, one gramme of blood from a patient in the cold stage of an intermittent attack—quotidian—was injected subcutaneously. Three days after, an intravenous injection was made of one gramme of blood taken from a patient in the hot stage of a quotidian intermittent attack. These injections were not followed by any immediate rise of temperature, or other noticeable effects. A third intravenous injection of one gramme of blood from a patient with malarial cachexia, and irregular febrile attacks, was made September 13th.

No elevation of temperature occurred during the seven days following this third injection, but on the afternoon of September 20th, a sharp access of fever occurred, as shown in the accompanying temperature chart. Defervescence took place the following morning, with abundant perspiration. This was followed on the 22d by another paroxysm, in which the temperature quickly rose to 41.2° C. (106.2° F.), and by other characteristic paroxysms occurring on three successive days. The administration of quinine was commenced on the 27th (45 grains), and continued as indicated by the letters in the chart: A, 3 grammes; B, 2 grammes; C, 2 grammes; D, 1.50 gramme; E, 1.20 gramme; F, 1 gramme. The spleen was notably enlarged during the attack and the case bears every evidence of having been a typical one of quotidian intermittent fever. Examination of the blood, repeated every day, demonstrated the presence of pigmented leucocytes and of the "initial form" of the parasite. Both disappeared under the administration of quinine. Two other cases similar to this are reported, and in one (Case 1) the remark is made that the microscopic examination of the blood fully confirmed the diagnosis as to the malarial nature of the fever, the parasite having been found in the red cor-

[1] Revue Scientifique, 1883, p. 11[illegible]

[1] Nuove ricerche, etc., [illegible]

puscles, at first in small numbers, and subsequently in great abundance, and having disappeared after the administration of full doses of quinine, by which the febrile paroxysms were arrested.



The authors quoted refer to two cases reported by Gerhardt,[1] in which a similar result was obtained by inoculations, in man, with malarial blood. The period of incubation in these cases is said to have been seven and twelve days. They remark that in their own experiments it is difficult to fix the period of incubation, owing to the fact that several successive inoculations were made in each case.

Laveran finds an additional argument in favor of the etiological rôle of the parasite discovered by him in the curative action of quinine. According to his observations, the parasite quickly disappears from the blood under the administration of quinine, and in this he is also confirmed by Marchiafava and Celli. In experiments made with blood drawn from the veins of a malarial patient which was rich in the parasitic elements, and contained notably body No. 2 furnished with mobile filaments, it was found that very dilute solutions of quinine—a drop of a solution of a salt of quinine containing 1 : 1,000—quickly arrested the motion of the mobile filaments, and caused the parasite to assume its "cadaveric form."

The writer has elsewhere shown[1] that laboratory experiments made to determine the germicidal power of quinine do not justify the belief that this agent can be introduced into the circulation in sufficient quantity to arrest the development of such an organism as the *bacillus malariæ* of Klebs and Tommasi-Crudeli. "A dose of ten grains of quinine, if absorbed at once and retained in the blood, would not constitute, in an adult weighing one hundred and sixty pounds, $\frac{1}{150}$ part of one per cent. (1 : 15,000) of the entire mass of blood." But the experiments of Professor Ceri[2] and others,[3] show that this amount would be entirely inadequate to prevent the development of bacteria in culture fluids, from 1 : 800 to 1 : 3,000 of a soluble salt of quinine—muriate—being required.

As long ago as 1871, Vulpian,[4] from experimental data, arrived at the conclusion that it would be necessary to administer more than thirty grammes of muriate of quinine to patients with malarial fever, in order to destroy vibrioniens in their blood. We have also very satisfactory clinical evidence in support of the conclusion, based upon biological experiments, that it is impracticable to destroy bacteria in the blood of a patient by the administration of the salts of quinine, or by any other known germicidal agent. The experience of Carter,[5] Pepper,[6] and others, shows that quinine in full doses has no power to arrest a paroxysm of relapsing fever, or to prevent a relapse. Carter says: "In practice, however, the blood-spirillum and the febrile symptoms remain unaffected after quinine given largely, to cinchonism, after narcotism by chloral and the freest exhibition of spirituous liquors; also, after the administration of the carbolates and very large doses of the salicylates. Hence, as yet, there is no evidence that the drugs named, when administered variously and in doses consistent with safety, possess a manifest parasiticidal efficacy in relapsing fever. . . . Interesting details have been published, and some were acquired in India, showing that large doses of quinine and of sodium salicylate, given persistently at short intervals through the entire first apyretic period of relapsing fever, have entirely failed to prevent or even mitigate the first relapse."[7]

It is evident, then, that the results of laboratory experiments are in accord with clinical experience as regards organisms of this class—*bacteria*. But, on the other hand, there is evidence that the *infusoria* are far more susceptible to the action of quinine, and the data available rather favor, than contradict, the assumption that the specific curative power of this drug may depend upon its restraining influence upon the development of an *amœboid* blood-parasite like that discovered by Laveran. And in support of this hypothesis we have the tes-

[1] Zeits. heilt. i. klin Med., vol. vii., fasc. 4.

[1] Malaria and Malarial Diseases, p. [illegible]
[2] Arch. f. Exper. Pathol. und Pharm., Bd. [illegible], Heft 1/2 (1884).
[3] The writer has repeated [illegible] experiments and [illegible]
[4] Cours d'Anatomie [illegible]
[5] Spirillum Fever, in Von Ziemssen's Cyclopædia, [illegible]
[6] Stricker's Medical [illegible]
[7] Op. cit.

timony of Laveran, and of the Italian observers mentioned, as to the disappearance of the parasite, *pari passu*, with the morbid phenomena, under the influence of the administration of quinine, and the direct experiments of the first-named author, showing that this drug in very dilute solution promptly arrests the vital activity of the parasite discovered by him.

Further researches are no doubt necessary to establish definitely the claim of this amœboid parasite to be admitted into the family of recognized "disease germs," and it may be that we shall find eventually that its life-history is more complex than is indicated by the observations of Laveran, or that he has not properly interpreted what he has seen. But I cannot doubt the fact that the objects described by him as found in the blood of malarial-fever patients are in truth parasitic micro-organisms; and the evidence above recorded seems to me to support very strongly the inference that this peculiar blood-parasite is directly concerned in the etiology of the malarial fevers.

If this proves in the end to be true, it will be another illustration of the fact that we often arrive at the truth through a series of errors, and that veritable discoveries are often viewed with unreasonable scepticism because they do not correspond with preconceived ideas; while pseudo-discoveries which fall in with the current of prevailing opinion may receive general credence upon a very poor foundation of experimental evidence.

Post Scriptum.—Since writing the above, I have had an opportunity to verify the presence of the amœboid organism, demonstrated to me by Drs. Marchiafava and Celli at the Santo Spirito Hospital in Rome, in the blood of a malarial patient in this country. Through the courtesy of Dr. R. Nordman, resident physician at the Bay View Hospital, I received, on the 24th inst., a specimen of blood drawn from the finger of a patient at the outset of an intermittent paroxysm. The blood had been collected and mounted by Dr. Nordman, in accordance with my directions, and was brought under the microscope as quickly as possible. I was fortunate enough to find the amœboid organism, which I had previously seen in Rome, and was able to demonstrate its presence in the interior of a red blood-corpuscle, and its vital movements, to Professor Wm. H. Welch, in whose laboratory the microscopical examination was made, and to several other medical gentlemen who happened to be present.

GEO. M. STERNBERG.

BALTIMORE, March 26, 1886.

PUNISHED FOR NOT ATTENDING A PATIENT WHEN SUMMONED.—A correspondent of *The Lancet* calls attention to the punishment of a Russian physician who is being sued for refusing to treat a patient. Until the termination of the process he is prevented from leaving his dwelling-house; and as the lawsuit has lasted fifteen months (and, it appears, is not likely to be speedily concluded), all professional occupation, excepting in the cases of patients who are well enough to visit him, is impossible. He has also been prevented from going to a watering-place, to which he has of late years been in the habit of repairing for his health's sake, and this prohibition will endure until the suit is ended. Refusal to attend a patient in Russia evidently means ruin to the luckless practitioner.

TO PREVENT COAGULATION OF THE BLOOD.—A student in Professor Stricker's laboratory, Herr Ernest Freund, has suggested a most simple and convenient method of preserving blood in the fluid state. His plan consists in coating the interior of a glass vessel with pure oil. Into this receptacle blood freshly drawn is poured, and a layer of oil is then run over the surface exposed to the air. In this way, it is stated, fresh blood may be kept from coagulating for days if necessary. If this assertion be true, the discovery may be turned to great advantage in the process of transfusion of blood.

A CASE OF TRAUMATIC TETANUS, FOLLOWED, EIGHT MONTHS LATER, BY TETANOID SYMPTOMS AFTER VACCINATION.

WHISKEY TREATMENT IN EACH INSTANCE, WITH RECOVERY.

BY HOBART CHEESMAN, M.D.,

NEW YORK.

EDWARD T——, American, aged five, bright, well developed, and previously healthy, but of rather nervous temperament. I first saw the patient, a dispensary case, in May, 1882. Twelve days previously he had wounded the sole of his foot by stepping upon a fragment of glass, and two days previously symptoms of tetanus had begun to develop. There was no sign of inflammation in the wound, and it seemed insignificant, but had not healed. He had well-marked and characteristic symptoms of tetanus. A dose of calomel was given, and a teaspoonful of whiskey and half a cup of milk ordered every hour. The whiskey was increased at each succeeding visit, it doing good and producing no symptoms of intoxication. On the third day I directed the mother to give a tablespoonful every hour, and if this failed to quiet him after a number of doses, to give more. She declared that a tablespoonful was given every hour until two o'clock the next morning, but without intoxicating or putting him to sleep. In desperation she then gave a tumbler half full. This produced the desired effect, and he slept for several hours, awaking much better, and having no more severe paroxysms. From this time he rapidly improved, and was well in about two weeks, and remained so until February, 1883. After taking the half-tumbler dose of whiskey he could not tolerate it, but would show symptoms of intoxication if a teaspoonful were forced upon him. During this attack there were no head symptoms.

On February 22, 1883, I was summoned to him again. He had been vaccinated by the Health Board on February 1st. In place of the vaccination I found an ulcer half an inch in diameter, skin deep, and with clear cut edges and inert surface. He had complained occasionally for a week of pains in it, and in the front of the wrist and forearm, and lately had had cramps in this hand, and could not hold his food in it. Some feverishness had been noticed, and also nocturnal incontinence, and a desire, when at play, to pass urine on any little disturbance. The appetite and bowels had been normal. On the morning of the 21st he had complained of headache, and in the evening vomited, became delirious, and stiff in the neck and back; had spasms, with grimacing, setting of the jaws, and pain in the stomach. He had slept none since the night of the 20th. The mother thought he had diphtheria, because of difficulty in swallowing and swelling at the sides of the neck, but my examination of the throat discovered a little frothy saliva and mucus only. I found the axillary temperature 102.3° F., the pulse rapid, especially during paroxysms, lively delirium, extreme restlessness, some stiffness of the jaw, bulging of the muscles at the side of the neck, stiffness of the back, with a tendency to opisthotonus, and signs of epigastric pain. At intervals of ten or fifteen minutes there were paroxysms, in which the jaws were firmly set, with the lower one protruding, grimacing, extreme opisthotonus, in which the lower extremities participated, being rigidly drawn back or violently thrown about, the patient sprawling over the bed and screaming with pain and delirium. The upper extremities were not noticeably affected, and there was no frothing at the mouth, no biting the tongue, but there was severe dyspnœa. On attemping to administer fluid the mouth had to be forced open with the spoon, and the patient would not swallow until he was forced to by holding his nose. Articulation was defective, but the voice strong. The sounds of the heart and lungs were normal, the pupils equal, dilated moderately, and active, the eyes rather prominent and staring, tongue coated.

Treatment.—I gave calomel, grs. iij., ordered a cup half full of milk and a teaspoonful of whiskey every hour, and quinine, gr. jss., every four hours. At noon the next day I found him with the same symptoms aggravated, and ordered, in addition, a mixture of chloral, bromide, and paregoric. I was sent for again at nine P.M., and found, in addition to the other symptoms, which were constantly getting worse, violent palpitation of the heart; the whole chest-wall could be seen to vibrate with its violent and tumultuous beating. This so aggravated the dyspnœa that the mother had feared that he would suffocate during the paroxysms. Temperature was 102.8° F. At 9.30 I gave him two large tablespoonfuls of undiluted whiskey directly after a fit. This excited another mild fit, but he soon after got quieter, the pulse declining to 100 and the palpitation nearly ceasing, and at 9.50 he fell asleep. In five minutes he awoke with a fit. As soon as possible I gave another tablespoonful of whiskey, and he was asleep again at 10.10. The spasms had lately affected the upper extremities, which during the paroxysms were extended and held out rigid and trembling.

At 10.20 continues restless. After a tablespoonful of whiskey he sleeps restlessly, and wakes at 10.30 with a fit, which is milder than usual. Two tablespoonfuls of whiskey are given after the fit. The face continues rather pale, the eyes are more natural, the pupils smaller, and he speaks rationally once, for the first time. Red patches appear on the face; they soon spread, and the face becomes flushed. At 11.55 he wakes with a fit. After it subsides he is given two tablespoonfuls of whiskey, and sleeps until five minutes after twelve, awaking without a fit for the first time; he passes four ounces of normal-colored urine. At 1.5 o'clock A.M., after sleeping quietly for another hour, he wakes without a fit, takes a cup of milk and two tablespoonfuls of whiskey, and then goes to sleep directly. I left him at 1.30 still sleeping. From 9.30 P.M. to 1 A.M. he had taken ten tablespoonfuls of whiskey, and still did not seem to be drunk. The whiskey was of good age and full strength. During the next thirty-six hours about a pint and a half of whiskey was required to control the violence of the symptoms; in the twenty-four following this period about three or four ounces, after which an occasional dose, and that only as a stimulant, he having, after the fits of convulsions ceased, occasionally, for several days, attacks showing symptoms of collapse, with palpitation and præcordial pain. Whiskey always relieved them.

On the 24th, about noon, I visited him, and he answered rationally, but continued for two days after this more or less delirious. At this visit he was covered with a rash, scarlatina-like, but it soon faded and had disappeared at next visit.

On the 25th I noticed, for the first time, that the left hand was held constantly in a cramped condition, with the thumb and little finger crossed. He complained that needles were sticking through his temples, and of pain in the top of his head. Two leeches were applied in front of each ear, but he continued to complain of the same pains for several days. He had at this visit very decided Cheyne-Stokes respiration. This was noticed on one or two other occasions, in a less degree.

On the 26th, loud, coarse mucous râles were heard all over both lungs, and he raised a frothy sputum like that in the fauces. These symptoms lasted two days.

On the 27th he kept saying that there were worms in his feet, and that the soles were sore, and his mother declared that in the evening both feet and legs became hot and considerably swollen, and remained for three or four hours in this condition.

On the 28th the tongue began to clear, and on March 2d the temperature was normal, and remained so thereafter. It had ranged as follows: 22d, 102.5°; 23d, 102.3°; 24th, 102.5°; 25th, 102.8°; 26th, 101.8°; 27th, 101.3°; 28th, 101°, taken each day in the afternoon. On March 6th considerable stiffness and soreness remained in the neck and back, but it was diminishing rapidly, and had disappeared from other parts. Formerly, when raised to a sitting posture, the spine would curve in and be held very rigid, while he would cry with the pain.

On March 12th he seemed well, but was rather nervous, and the eyes had a wild, startled expression; the same symptoms had been noticed after the former attack. During convalescence, his mother says, he would lay all day flat on his back, very listless, appearing too exhausted to care for anything. A year later he remained well, but had not been so bright as formerly, and showed more nervousness.

This case presents all the characteristic symptoms of tetanus, viz., presence of an unhealed wound; cramps beginning in the wounded limb (this is a symptom sometimes but not often observed); stiffness of the jaw, swelling at the sides of the neck and dysphagia were early symptoms, followed by stiff back and lower extremities, and opisthotonus; at intervals there were violent and painful spasms of these parts and grimacing, while the upper extremities were not noticeably convulsed until the disease had progressed to its most violent stage; epigastric pain, indicative of cramp in the diaphragm; severe dyspnœa; indistinct speech; slight disturbance excited a fit; pupils dilated (the usual condition), but otherwise normal; no loss of control over the bladder or bowels, nor priapism; sleeplessness; no tongue nor cheek biting; accumulations of a frothy character in the fauces; muscular stiffness and soreness remaining for many days (most easily explained on the theory of the tetanus I think). Superadded to these are other symptoms not usually associated with the disease. Whether they signify anything more than sympathetic and functional disturbance I leave the reader to decide. The delirium was early and conspicuous for several days. It is well known that head symptoms may develop during tetanus, especially in children, and sometimes in adults during the latter stage of the disease. There were other nervous phenomena, which, I presume, are of about the same import as the delirium. Is it surprising that extraordinary symptoms of this nature should occur during this disease in a nervous child, when we consider the mobility of the nervous system and the close sympathy between its different functions? As to the range of temperature, I do not know that it is more satisfactorily explained by meningitis than by tetanus.

I have not seen it stated that the heart is ever affected by cramp of its muscles in tetanus, but does not the character of the palpitation noticed on the night of February 23d suggest this as a plausible explanation?

It might be interesting to inquire if the former attack was the predisposing cause of the second, and, if so, how long after an attack of tetanus would it be safe to vaccinate the patient. For evident reasons such an emergency will not often arise.

The effect of the whiskey was so decided and beneficial that I think it should be tried in similar cases oftener. That large quantities are tolerated in tetanus is well known, but not so often remembered, perhaps, as it deserves. Why should not this peculiarity furnish an urgent indication for its use in tetanus, as it is thought to do in snake-bite? I believe its success in tetanus, as in snake-bite, will be found to depend upon its being given in the largest quantities that the patient will bear.

244 West Fifty-sixth Street.

RACHITIS, OR RHACHITIS?—A somewhat animated discussion is in progress between Virchow and certain other German physicians as to the correct spelling of the scientific term for rickets. Etymologically rhachitis is certainly correct, but custom, which often knows not etymology, would seem to have established rachitis upon too firm a basis to be overthrown.

FLUID EXTRACT OF KAVA KAVA IN THE TREATMENT OF GONORRHŒA.

By HERBERT C. ROGERS, M.D.,

ADJUNCT SURGEON, LONG ISLAND COLLEGE HOSPITAL, BROOKLYN.

For several years I have substituted for the balsam copaiva, or cubebs, or both, according to circumstances, the fluid extract of kava kava. I have rarely found copaiva or cubebs alone sufficient for the cure of the disease. The former very often causes annoying skin-eruptions before it has produced the effects for which it has been prescribed, and I have been obliged to lay it aside. Cubebs has not proved more successful in my hands. I have tried cubebs alone, in powder and in a fluid extract, and when it has not succeeded I have combined it with the balsam copaiva. One of the great objections to the use of copaiva is its extremely nauseating taste, and another is the amount of disturbance it produces in the stomach. The fact last stated is the reason why I have given up entirely the use of copaiva in my hospital practice. The cases one meets with in a large hospital practice, suffering from gonorrhœa, are generally those of broken-down subjects who have more or less catarrh of the stomach, and in which their digestion is very poor.

A patient and friend, when abroad a few years ago, unfortunately contracted a gonorrhœa while visiting Paris. He wrote to me and asked for a prescription. I sent him one containing balsam copaiva and fluid extract of cubebs. Several months later the patient called on me at my office, told me he had received my prescription, and had it prepared, but that after taking a few doses he was compelled to give it up, as it caused so much disturbance to his stomach. He went a few days without treatment, when his testicle commenced swelling and caused him so much annoyance and pain that he was compelled to send for a surgeon, who strapped the organ, and ordered him some medicine to take, remarking at the same time that it was the new drug for gonorrhœa. In two weeks my friend was all right.

It so happened that another one of the party contracted the same disease shortly after, and was also cured with but little loss of time. This gentleman was so much pleased with the medicine (having had the disease several times, and always having copaiva or cubebs prescribed for him, which invariably produced more or less nausea and destroyed his appetite) that he secured a copy of the prescription for future use.

After my friend had related the above, I asked him if he would try and obtain for me a copy. This he did in a few days. The prescription was for infusion of kava kava, half-ounce four times a day.

Having a little leisure, I looked the matter up, and found that the drug has been used in France for a considerable period. It was first recommended for gonorrhœa about 1857.

The best account of the drug that I have been able to find is in the *New Remedies* for October, 1876. From this I give a short extract:

"Kava kava is a shrub about six or eight feet high, with stems varying from one to two inches in thickness. The leaves vary from six to eight inches in length, and are nearly as broad as they are long. They are cordate, tapering somewhat suddenly into a very short acute apex. The petiole is usually one to two inches long, and is dilated at its base. The root is large and fibrous, but rather light and spongy in texture. The root has a pleasant odor, resembling lilac. It has a slightly pungent taste, and causes an increased flow of saliva, with a slightly astringent sensation in the mouth, with a little bitterness. The root and base of the stems are the portion generally used.

"The form in which it is generally used in medicine is an infusion made by macerating about one drachm of the scraped root in a quart of water, and also a fluid extract, one minim representing one grain of the root. The latter preparation is the best suited for general use.

"The action of kava-root appears to vary with the amount taken. In small doses it is said to act generally as a stimulant and tonic; but when taken in large doses it produces intoxication, which differs from that caused by alcohol in being of a silent and drowsy nature, accompanied by incoherent dreams, the drinker not being quarrelsome or excited. The taste of the plant is pleasant, while its bitterness improves the appetite and does not produce nausea."

During the past two years I have treated in all 105 cases of gonorrhœa; of these, 34 were in private practice, and 71 were at the hospital. The majority of those treated in hospital practice had had the disease once or oftener previous to the attack from which they were suffering when they first consulted me. One patient, a Swedish sailor, claimed that he had had the disease a dozen times, and stated that he had been operated upon by the late Dr. George Atkinson for stricture. When I first saw him he was suffering from a sharp attack of gonorrhœa; his testicle was swollen, and altogether he was in a bad condition. He was ordered to take fluid extract of kava kava in thirty-minim doses four times a day, and to apply a wash of liq. plumbi et Aopii to the inflamed organ. In three weeks the discharge had dwindled down to a watery condition, which remained in spite of all I could do. After trying all known means, I was compelled to cut him. He stood the operation badly, and made a slow recovery; but in two months the wound had healed, and the discharge had entirely dried up. This case was the longest one on my table.

Of the 71 cases treated at the hospital, 43 were discharged, in from six to nine weeks, cured; 13 improved, but were lost sight of before two weeks had passed; 7 never returned; and in 8 the drug did not seem to have any effect.

Of the cases in private practice, nearly two-thirds were suffering from the disease for the first time when they consulted me. The longest period that a patient of this class remained under my care was thirteen weeks. This case was that of a gentleman, and a member of one of the New York clubs. He was a bachelor, addicted to good living, and particularly fond of champagne. In spite of my warnings, after he came under my treatment, he took his wine occasionally, with the invariable result of starting up a brisk discharge. After repeating this several times, he at last left his wine alone for three weeks, when the discharge entirely ceased.

The shortest period that any patient suffering from this disease has been under my care was twenty-seven days. This was the case of a young man at college, who, while spending a few days at home, chanced to contract a mild gonorrhœa. When he first consulted me about the discharge, he could hardly believe what I told him. To convince him, I examined the young woman with whom he had had intercourse, and found her recovering from gonorrhœa. She had been treated by a New York surgeon, who informed me by letter that she had been under treatment for six weeks. It so happened that this young woman shared her favors with several young men. The morning following this examination, I was called upon by a friend of the last patient, who acknowledged having had intercourse with this same girl on the morning of the day she called upon me. Having learned that his college friend had contracted his disease from her, he was greatly alarmed, fearing that he also might have taken it. I examined him carefully, but could not discover the least evidence of any trouble. To pacify him, I injected his urethra with a solution of hyd. bichlor., one in five hundred, and placed him on twenty-minim doses of kava kava three times daily. At the end of one week he presented no evidence of disease, and was discharged.

The average period of gonorrhœa patients under my

treatment has been about nine weeks. I had but few complications. In only three cases was there swelling of the testicle. About one-fifth suffered from chordee.

In none of the cases was there any trouble with the stomach resulting from the use of kava kava. In over one-half the appetite was improved and increased. In one case the peculiar effect of the drug was manifested. The patient was a married man, whose wife was in the country when he contracted the disease. As he expected her home in three or four weeks, he was anxious to get well. Under the influence of this feeling, he took much more of the drug than had been prescribed. Instead of taking it every four hours, he took it every three. At the end of the third day, I was sent for. I found my patient suffering from a mild form of delusion. I stopped the medicine and gave a small dose of opium. By morning he was feeling all right. This is the only case that showed this symptom.

My usual prescription is from twenty to thirty minims of the fluid extract of kava kava, in water, to be repeated every four or five hours, as the case may be. The patient is restricted to plain food and plenty of milk, with Vichy water. He is not allowed to indulge in alcoholic drinks, in tea or coffee. Smoking (if he has the habit) must be given up for the time. The bowels must be moved gently, and care must be taken that the patient does not become constipated. From what I have seen, however, in connection with the use of the drug, I am inclined to think that it is mildly laxative, as all my patients, while taking it, had one or more movements from the bowels each day.

News of the Week.

The Act for the better Preservation of the Health of Children in institutions has been passed by the Assembly, and now goes to the Governor to receive his signature before becoming a law. This act has been indorsed by the medical societies of both county and State, and its passage has been urged by the Board of Health. The Record has repeatedly urged the great need of this legislation. No more important measure of sanitary reform than this has ever received the attention of our State Legislature.

The Report of the National Board of Health for 1885 has just been issued from the Government press at Washington. It is a volume of three hundred and sixty-three pages, and contains a full history of epidemic diseases during the year in different countries, especially of cholera and small-pox, and the preventive measures that have been adopted in different localities, besides other matters of interest to the profession. Physicians can now secure copies through their representatives in Congress, by writing them personally.

The President and Anatomical Study.—The daily papers report from Washington that the Senate took up last week the President's veto of the bill "To Provide for the Promotion of Anatomical Science and to Prevent the Desecration of Graves." The bill relates to the District of Columbia, and provides that the unclaimed bodies of deceased paupers, now required by law to be buried at the public expense, might be turned over to the medical colleges of the District of Columbia. The President declined to approve the bill, on the ground that certain of its provisions were indefinite and did not supply sufficient safeguards. After a short debate the Senate refused to pass the bill over the President's veto—yeas 6, nays 48.

The Medical Record:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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AMERICAN MEDICAL ASSOCIATION.

We learn from our St. Louis despatches that the American Medical Association voted to leave the present Executive Committee of the International Congress undisturbed in its work. This Committee has elected Dr. N. S. Davis President of the Congress, and Dr. J. B. Hamilton Secretary-General.

There was no opposition made to these changes or to the adoption of the present policy. The much dreaded descent of Philadelphia's delegates upon the Association did not occur. All was harmony and smiles.

The attendance at the meeting was fairly good, but naturally was made up almost entirely of men from the West and Southwest. That part of our great country is determined to hold an international congress which shall be truly representative.

A MONUMENT TO THE LATE DR. AUSTIN FLINT.

We believe it wise and just to create memorials of those great physicians whose work has left an impress upon our history. A monument is to be erected to the memory of Dr. Marion Sims and of Dr. Rush. What more appropriate than that the name of Austin Flint, Sr., receive the same recognition from the profession. A movement to secure a fund for the erection of a suitable monument would meet a hearty support from all American physicians.

LAPAROTOMY IN ABDOMINAL WOUNDS.

We do not know whether or not *The Lancet* is trying to poke fun at some of our eminent professors. If not, it shows that it possesses a remarkably chaotic notion of American surgical work. In a recent elaborate leader upon the "treatment of perforating wounds of the abdomen," it says that "the most important result" of the labors "of American surgeons in this line, since the death of Garfield, is a paper lately read by Professor F. S. Dennis, of this city, on the subject." It is rather too bad to load down Dr. Dennis with such a compliment. It is very well known to American surgeons that it was the cases of Dr. William T. Bull, and subsequently those of Dr. J. B. Hamilton, and others, which especially turned the attention in this country to laparotomy in abdominal wounds. This Dr. Dennis himself acknowledges, in his very thorough and creditable article.

Reports of Societies.

American Medical Association.

Thirty-seventh Annual Meeting, held in St. Louis, Mo., May 4, 5, 6, and 7, 1886.

(By Telegraph to The Medical Record.)

TUESDAY, MAY 4TH—FIRST DAY.

THE Association met at the Exposition Building, and was called to order at 11 A.M., by Dr. Le Grand Atwood, of St. Louis, Chairman of the Committee of Arrangements.

DR. ATWOOD introduced Dr. Brodie, President. Prayer was offered by REV. MONTGOMERY SCHUYLER, D.D.

THE ADDRESS OF WELCOME

was given by HON. D. R. FRANCIS, Mayor of St. Louis.

DR. ATWOOD welcomed the Association on behalf of the medical profession of St. Louis. The ex-Presidents were invited to take seats upon the platform, and Drs. N. S. Davis, of Chicago; J. M. Toner, of Washington; T. G. Richardson, of New Orleans, and D. Yandell, of Louisville, were present.

Dr. Atwood then announced the programme for the entire meeting, with entertainments numerous and inviting. He also announced the presentation of

PROTESTS AGAINST DELEGATES

from the following organizations: Philadelphia County Medical Society; Davidson County, Tenn.; the Tri-State Medical Society, the Mississippi Valley Medical Association, the Tennessee State Medical Society. All these were referred to the Judicial Council.

The following gentlemen were elected

MEMBERS BY INVITATION:

Colonel Manfred Johnson, of McHenry, Ill.; Drs. William W. Morrison, of St. Louis; H. J. McKellops, of St. Louis, W. H. Atkinson, of New York.

DR. WILLIAM BRODIE, of Detroit, Mich., then delivered

THE PRESIDENT'S ADDRESS,

in which, after referring to the facts that no epidemic disease had invaded the country during the last year, that a general state of health had been given to the members, then made special reference to the inroads made among our ranks by the removal by death of Drs. Bowling, John L. Atlee, and Austin Flint, of whom he gave brief biographical sketches. From this he passed to a sketch of the history of the organization of the Association, beginning with 1846, when it was conceived by Dr. Hayes, of Philadelphia; special reference was made to the influence of the Association on the question of the elevation of the standard of medical education. The influence of the Code, as sustained by the Association, was dwelt upon, and the chief interest in this part of the address centred in the statement that the movement in the State of New York against it was due chiefly to financial considerations.

Dr. Brodie then referred by title to the papers which had been read before the Association, and which had made a healthy impression upon the mind of the profession.

He regarded the Association as no pent-up Utica, but as sufficiently broad to meet all the necessities of the profession, through its Sections, and, therefore, that additional national associations were unnecessary. He favored the adoption of resolutions sustaining the National Board of Health.

He recommended the abolition of the metric system from the "Transactions" of the Association. He recommended the formation of a Section on Dermatology and Syphilis, also that the secretaries of Sections be permanent officers, subject to removal in the wisdom of the Section. He spoke of the success of the *Journal*, and directed attention to the by-laws, which make every paper received by the Association its exclusive property, and said that it was improper to give copies to outsiders; but that if medical journals were sufficiently enterprising to employ competent men to take notes from which abstracts were to be made, while the papers were being read, no obstacle should be thrown in the way. Practically, there was no difference between a patented and a proprietary medicine, and whoever lent his name to the support of either should be disciplined in local societies.

With regard to the question of establishing branches, after the manner of the British Medical Association, he recommended that the subject be referred to a committee for report.

CONCERNING THE INTERNATIONAL MEDICAL CONGRESS,

all that remained to be done was for the Association to adopt the report of the Committee, which would soon be made, and thus relieve itself of all further responsibility in the matter.

He entered into a history of the Congress, and closed with an expression of the belief that the general sentiment of the profession was in favor of adopting the report of the Committee, and when adopted that personal feeling should yield to the common good of the profession.

The address was closed by the President returning to the Association his thanks for the honor it had conferred upon him.

DR. MURPHY, of St. Paul, moved that the thanks of the Association be tendered to Dr. Brodie for his address; that it be referred to the Committee on Publication, and that all its recommendations and special points be referred to the appropriate committees. Carried.

A memorial from the Woman's Christian Temperance Union was introduced, and referred to the Committee on State Medicine.

DR. J. S. LYNCH, of Baltimore, from the Committee on

PRELIMINARY ORGANIZATION OF THE NINTH INTERNATIONAL MEDICAL CONGRESS,

reported that the Committee had adopted rules for the organization, had nominated the general officers for the Congress, Local Committee of Arrangements, etc., and respectfully submitted the list.

DR. GIHON, of Washington, moved that the report be accepted and adopted. Unanimously carried.

DR. HENRY SMITH, of Philadelphia, moved a reconsideration of the vote just taken.

DR. GIHON moved that the reconsideration be laid upon the table. Carried.

DR. N. S. DAVIS introduced the following

AMENDMENT TO THE BY-LAWS:

Section two, paragraph three, shall be amended so as to read: "On the second day of each annual meeting, each Section shall nominate its own officers to serve for the next ensuing year; their duties to commence with the close of the annual meeting at which they are nominated, and to continue until their successors are elected." The proposed amendment gave rise to discussion, which was participated in by Drs. Roberts, of Tennessee; Quimby, of New Jersey; Kinloch, of South Carolina; E. Smith, of Michigan; Reynolds, of Kentucky; Murphy, of Wisconsin; Murdock, of Pennsylvania, who spoke against it, and by Dr. Allport of Illinois, who favored the amendment. A rising vote was taken, and the President declared the amendment adopted by a four-fifths vote.

DR. A. REEVES JACKSON, of Chicago, presented a paper on the "Use of the Intra-uterine Stem in Flexion," which was referred to the Section on Diseases of Women.

Dr. William W. Morrison, of St. Louis, presented a paper, which was referred to the Section on Dental and Oral Surgery.

The Association then adjourned, to meet at 10 A.M., May 5th.

Wednesday, May 5th—Second Day.

The Association was called to order by the President, after which prayer was offered by the Rev. M. Rhodes, D.D.

Dr. J. A. Thacher, of Cincinnati, was elected a member by invitation.

The Secretary announced as

THE COMMITTEE ON PRESIDENT'S ADDRESS,

Drs. Murphy, of Wisconsin, Gihon, of the Navy, and Garcelon, of Maine.

The Secretary announced the following

COMMITTEE ON NOMINATIONS.

District of Columbia, J. W. Bulkley; Arkansas, P. O. Hooper; Colorado, J. W. Graham; Connecticut, W. C. Wile; Dakota, J. B. Van Velsor; Florida, T. O. Summers; Georgia, J. W. Bailey; Illinois, John E. Owens; Indiana, Thomas B. Harvey; Iowa, W. Watson; Kansas, C. V. Mottram; Kentucky, W. H. Wathener; Louisiana, Joseph Jones; Maine, Charles E. Webster; Maryland, G. H. Rohe; Massachusetts, E. W. Cushing; Michigan, H. O. Walker; Minnesota, H. H. Kimball; Mississippi, P. W. Rowland; Missouri, G. F. Dudley; New Mexico, W. R. Tipton; Nebraska, W. M. Knapp; New Jersey, E. L. B. Godfrey; New York, E. S. F. Arnold; North Carolina, C. J. Ohagan; Ohio, H. J. Sharp; Pennsylvania, J. C. Lang; Rhode Island, H. R. Storer; South Carolina, R. A. Kinloch; Tennessee, Duncan Eve; Texas, J. F. Y. Payne; Vermont, A. T. Woodward; Virginia, G. B. McCorkle; West Virginia, G. W. Baird; Wisconsin, W. T. Galloway; United States Navy, W. T. Howard; United States Marine Hospital Service, W. Wyman.

Dr. Savage protested against Dr. Eve of Tennessee until the protest against the Tennessee State Medical Society should be reported upon by the Judicial Council.

Dr. Nicholas Senn, of Milwaukee, then delivered

THE ADDRESS OF THE CHAIRMAN OF THE SECTION ON SURGERY AND ANATOMY

in which he directed special attention to

THE PRESENT STATE OF ABDOMINAL SURGERY

by a condensed account of the advancement which had been made within the last few years in that department. He limited his remarks to the consideration of such injuries and lesions of the abdominal organs as were liable to be presented to physicians and general surgeons, aiming particularly to point out

THE LIMITATIONS OF ABDOMINAL OPERATIONS,

and to draw a distinct line between feasibility and justifiability. The first topic was penetrating wounds of the abdomen. The Chairman mentioned the distinctions between punctured and gunshot wounds, and spoke of these as important with reference to diagnosis and treatment.

EXPLORATIVE LAPAROTOMY

had for its objects positive diagnosis, arrest of hemorrhage, restoration of breach of continuity, and removal of extravasations. Dr. Senn prefers the bichloride to carbolic acid, and for uniting divided ends of intestine the Czerny-Lembert suture was the only one which should be used. If any doubt exists concerning the aseptic condition of the peritoneal cavity, a drainage-tube should be inserted. He insisted upon the justifiableness of explorative laparotomy in all doubtful cases.

LAPARO-COLOTOMY

was the next topic, which was followed by that of subcutaneous laceration of intestines. Then came intestinal obstruction. The treatment of this condition by laparotomy was in its infancy, yet sufficient good results had been obtained to stimulate additional efforts in studying its limit of application. The results would improve as soon as physicians recognized the insufficiency of the expectant plan of treatment. Intussusception and enterostenosis followed, and for internal strangulation the rules given by J. Greig Smith were endorsed. These were followed by enterectomy, rupture of the diaphragm, and

TREATMENT OF PERITONITIS BY ABDOMINAL SECTION AND DRAINAGE.

The last had been most successful in cases where the disease had not become diffused, and where the original cause could be removed. Tubercular peritonitis was considered next, and this was followed by gastrotomy, which was of questionable propriety in cases of malignant disease, but was recommended in all cases of non-malignant stricture. Pylorectomy, duodenostomy, and jejunostomy were the last topics considered.

The general conclusion was that abdominal surgery was a legacy of inestimable value, left to us by McDowell, Gross, and Sims, that it should be cherished and studied, and that our knowledge of it should be carefully cultivated.

Dr. H. F. Campbell, of Georgia, ex-President, was invited to take a seat upon the platform.

Dr. S. C. Gordon, of Portland, Me., then delivered

THE ADDRESS OF THE CHAIRMAN OF THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN,

in which he said that nothing remarkable had been done or discovered in these departments during the last year. He could only emphasize matters which had been alluded to, and perhaps weigh inferences which had been made on topics that had been more or less discussed. With reference to attending cases of labor after having made an autopsy or while in attendance upon cases of puerperal fever, etc., he believed that the weight of opinion sustained the view that with proper regimen and absolute cleanliness the daily work of the physician could be safely continued without delay or anxiety. The criminality was in the neglect to take proper precautions, and time might not be an element of safety if these were not observed. Concerning the early signs of pregnancy, he regarded Hegar's test as specially valuable, and one which was applicable early, namely, increase in the anterior curvature of the uterus, with increased elasticity of the uterine wall. For the obstinate vomiting of pregnancy no one measure was of so much value as forcible dilatation of the cervical canal below the internal os. In producing premature labor he recommended the use of the bougie, and when done on account of disproportionate head the eighth month was the most favorable time. He favored the use of a nutritious diet during the parturient period. For ameliorating suffering and shortening the process of labor anæsthetics and the forceps had done much, and had thus prevented many of the injuries formerly incident to the parturient process. Under the judicious use of the forceps vesico-vaginal fistula was diminishing in frequency.

The treatment of the placenta in both normal labor and abortion had been written of so satisfactorily by Pajot that nothing need be added. At full term the placenta was best removed by prompt and gentle traction on the cord, and the earlier after the delivery of the child this was effected the more easily could it be done and the less evils come therefrom. Forcible removal of membranes in abortion was by no means the safer prac-

tice. Remove them if it can be done without much trouble or instrumental interference, otherwise carefully tampon the vagina, and less harm would be done than by resorting to forcible means.

In the department of gynecology only one theme was introduced, and that was the removal of uterine appendages, included under the three operations known as Battey's, Tait's, and Hegar's. After making some remarks, the chairman spoke particularly of hysteria and its relation to diseases of the uterine appendages. This part of this subject was discussed at much length, and accompanied by the histories of illustrative cases in which cure had been effected by the operation. He had removed the uterine appendages in twenty-five cases, and with only one death. The conclusions reached by the speaker were based upon his study of the subject and the favorable results obtained in these cases.

Dr. A. L. Gihon, of Washington, chairman of the

RUSH MEMORIAL COMMITTEE,

reported that in obedience to the resolutions adopted by the Association at its last annual meeting, the committee had been instituted by the appointment of one member from each of the States, Territories, and national services represented in the Association, and that the Standing Committee thus organized would proceed at once to collect funds for the erection of a statue of Dr. Benjamin Rush, in the city of Washington, by the members of the profession of medicine in the United States. No further time should be lost by the medical profession in completing its enduring testimonial of one who was not only a great physician and teacher of medicine, philosopher, philanthropist, and accomplished writer, but a fearless patriot and founder of the Republic, a signer of the Declaration of Independence, an officer of the army of the Revolution, and one of the authors of the Federal Constitution.

With this announcement the Rush Memorial Committee will at once undertake the work of obtaining subscriptions, which have been limited by resolution of the Association to one dollar from each member of the profession of medicine in the United States, and receiving such voluntary donations as may be made by persons interested in this great undertaking. The secretary of the committee is George H. Rohe, of Baltimore, and the treasurer, J. M. Toner, of Washington, D. C.

The report was accepted and referred to the Committee on Publication.

Dr. I. N. Quimby, of New Jersey, moved to take from the table the resolution introduced at the last annual meeting, providing for a new section, namely, one on medical jurisprudence, which was carried.

A motion for its adoption gave rise to discussion by Dr. Logan, of New Orleans, who thought that the necessity for such a section did not exist, and by Dr. Campbell, of Georgia, who originated the idea of establishing this section.

The resolution was adopted.

The President acknowledged the receipt of a communication from the Texas State Medical Society, extending its congratulations to the Association on its growth and usefulness, which was accepted and ordered entered upon the minutes.

The Association then adjourned to meet on Thursday morning, at ten o'clock.

Thursday, May 6th—Third Day.

The Association was called to order by the President.

Prayer was offered by the Rev. R. G. Brant, D.D.

The report of the Committee of Arrangements, including the announcement of receptions and special invitations to excursions and entertainments, was then made.

The Secretary read the following

REPORT OF THE COMMITTEE ON NOMINATIONS,

signed by P. O. Hooper, of Arkansas, Chairman, and William Wile, of Connecticut, Secretary.

President—E. H. Gregory, St. Louis, Mo.

Vice-Presidents—First, B. H. Miller, Stillwater, Minn.; *Second*, W. B. Welch, Arkansas; *Third*, William H. Pancoast, Philadelphia; *Fourth*, William C. Wile, Connecticut.

Permanent Secretary—William B. Atkinson, Philadelphia.

Assistant Secretary—J. Nevins Hyde, Chicago.

Treasurer—Richard J. Dunglison, Philadelphia.

Librarian—C. H. A. Kleinschmidt, Washington, D. C.

Committee on Necrology—J. M. Toner, Washington, D. C., Chairman.

Judicial Council—N. S. Davis, Illinois; H. Brown, Kentucky; William Brodie, Michigan; D. J. Roberts, Tennessee; R. C. Moore, Nebraska; T. A. Foster, Maine; James A. Gray, Georgia.

Trustees of the Journal of the American Medical Association—P. O. Hooper, Arkansas; Alonzo Garcelon, Maine; L. S. McMurtry, Kentucky.

NEXT PLACE OF MEETING, CHICAGO, ILL.,

and the time the first Tuesday in June, 1887.

Chairman of Committee of Arrangements—Charles G. Smith.

OFFICERS OF SECTIONS,

nominated by the Sections and elected by the Association.

Practice of Medicine—J. S. Lynch, Baltimore, Chairman; J. B. Martin, St. Louis, Secretary.

Obstetrics and Diseases of Women—F. M. Johnson, Kansas City, Chairman; W. W. Jaggard, Chicago, Secretary.

Surgery and Anatomy—H. H. Mudd, St. Louis, Chairman; John B. Roberts, Philadelphia, Secretary.

Ophthalmology, Otology, and Laryngology—X. C. Scott, Cleveland, Chairman; J. H. Thompson, Kansas City, Secretary.

Diseases of Children—De Laskie Miller, Chicago, Chairman; W. B. Lawrence, Batesville, Ark., Secretary.

Oral and Dental Surgery—John S. Marshall, Chicago, Chairman; E. S. Talbot, Chicago, Secretary.

State Medicine— —— ——, Chairman; W. Wyman, New York, Secretary.

Dr. A. L. Gihon read

THE REPORT OF THE COMMITTEE ON PRESIDENT'S ADDRESS,

signed by John H. Murphy, of St. Paul, Chairman, and by A. Garcelon, of Maine. First, in their opinion, it was proper and desirable that this Association should without delay memorialize Congress in behalf of appointing a scientific commission consisting of three to visit the habitats of yellow fever and determine the value and the claims of Drs. Carmona and Freire, who maintain that they have discovered means of preventing attacks of the disease. Second, the committee were

NOT AGREED CONCERNING THE SUGGESTION OF THE PRESIDENT TO DISPENSE WITH THE USE OF THE METRIC SYSTEM.

Third, the committee heartily approved of the suggestion that the Association should establish a Section on Dermatology and Syphilis. Fourth, the committee endorsed the suggestion of the President that the

SECTIONS SHOULD ELECT THEIR OWN OFFICERS,

and were further of the opinion that the efficiency of the sections would be enhanced by the continuance in office of their respective secretaries. Fifth, the view that the papers read before the Association were its exclusive

property was endorsed. Sixth, that the Association should emphatically

DENOUNCE THE ENDORSEMENT, BY CERTIFICATE, OR ADVERTISEMENT, OR TESTIMONIAL, OR BY ANY FORM WHATSOEVER, OF PROPRIETARY REMEDIES

and appliances, and it should instruct the Judicial Council to take action in all such cases without the formal presentation of charges, and that it should be regarded as a stigma to endorse the use of such proprietary means for the relief and cure of disease. Seventh, that it is desirable that the Association should appoint a committee at this meeting, to consider the advisability of changing the organic law, by establishing branches or by some other plan, and to report at the next annual meeting. Eighth, they earnestly re-echo the wish of the President that the members of the profession will cordially co-operate

TO MAKE THE NEXT INTERNATIONAL MEDICAL CONGRESS ATTRACTIVE

and instructive to the foreign members, sacrificing personal and private piques and disappointments to contribute to that success which has been unconditionally pledged in the invitation extended to the Congress to meet in the United States in 1887.

The report of the committee was adopted.

Dr. N. S. Davis, Chairman, made the report of the Standing Committee on Meteorological Conditions and their Relations to the Prevalence of Diseases. Also concerning the subject of collective investigation in co-operation with the committee of the British Medical Association. The answers received to blanks already sent out would form the basis of a report at the next annual meeting, and also at the Ninth International Medical Congress.

Dr. J. M. Keller, Chairman, made a special

REPORT ON CREMATION,

in which reasons were given why fire should be substituted for earth burial with the following resolution: "That cremation has become a sanitary necessity in all highly populated cities, and this Association advises its adoption so far as practicable."

The report was also signed by Dr. Logan, of New Orleans.

The report was adopted. The vote by which it was adopted was, on motion by T. A. Reamy, of Cincinnati, reconsidered. The report was then referred to the Section on State Medicine.

Dr. John B. Roberts, of Philadelphia, moved that the Secretary of the Association be instructed to give official information why the report of the Judicial Council upon his table yesterday was not read at that time.

The President ruled that it was out of order, because the Judicial Council would soon report.

Dr. Roberts appealed from the decision of the Chair, and the decision of the President was sustained on a rising vote.

Dr. Toner presented the following resolution: "Resolved, That the Association be requested to return to the Judicial Council the report in the case of the Philadelphia County Medical Society, for the purpose of hearing additional testimony, and all parties interested be requested to appear before the Council now in session."

The resolution was adopted.

Dr. J. T. Whittaker, of Cincinnati, then delivered the

ADDRESS OF THE CHAIRMAN OF THE SECTION ON PRACTICE OF MEDICINE.

There are three planes in the history of medicine: First, the study of the symptoms or appearance of disease; second, the observation of the effects or lesions of disease; third, investigation into the cause of disease. The etiology of acute infections is comprised under the single term, bacteriology, for it has now been demonstrated that pathogenic micro-organisms do exist beyond dispute in distinct and definite entity. The speaker then considered the theory of spontaneous generation, the claims of convertibility of all germs, the question of mutability or immutability, the deviations that do occur, the doctrine that the germ, not the form, is essential, the morphology of bacteria, the destruction of bacteria, the formation of zoöglea, the subject of pure culture-soils, the necessities with reference to temperature and the need of oxygen, the fecundity of micro-organisms, the topic of spores and saprophytes, the mode of invasion and dissemination, the effects upon the tissues, their presence in neoplasms, in giant cells, in the blood. The question of immunity was studied, and also the manner in which micro-organisms, produce the phenomena of disease. The address concluded with a brief reference to the subject of ptomaines.

Dr. John H. Rauch, of Springfield, Ill., then delivered the

ADDRESS OF THE CHAIRMAN OF THE SECTION ON STATE MEDICINE,

in which he first defined State medicine and the branches of science which it included. He agreed with Richardson, who says of the so-called science and art of preventive medicine, "It is not a science, it is not an art, separated necessarily or properly from so-called curative medicine; on the contrary, the study of prevention and cure proceed well together. And he is the most perfect sanitarian and he is the most accomplished and useful physician who knows most, both of the prevention of disease and of the nature and treatment of disease. He who knows, in fact, the before and the after of each striking phenomenon of disease that is presented for his observation." To the above Dr. Rauch would add Dr. H. A. Johnson's conclusion, that it is the duty of the State to protect its citizens from the injuries they may sustain from the practice of incompetent physicians and surgeons, as well as from any other source of danger to public health. State medicine may, therefore, be now defined as the connection of the State with that branch of science which relates to the prevention, cure, or alleviation of the diseases of the human body. It embraces not only all public sanitary measures, but also the practice of medicine in so far as this is regulated by the State.

The first topic considered was the regulation of medical practice, which also and necessarily included the subject of medical education. The author then set forth the authority by which the State assumes to regulate the practice of medicine. It rests in the inherent and plenary power which resides in the State to promote all things helpful to the comfort, welfare, and safety of society. An unbroken line of authorities, from Blackstone down to the most recent decisions of the various Supreme Courts, hold that the police powers of the State are plenary and inalienable, co-extensive with the natural right of self-protection, that their exercise is demanded and justified by the law of overruling necessity, and that broadly they are the foundation of all laws and regulations for the well-being or government of the people, and specifically, of all laws, ordinances, rules, and regulations for the preservation of the health or safety of the community. A sketch of the legislation which has been done in this direction was then given, beginning with 1859, when North Carolina made a law creating a State Board of Medical Examiners. The general drift and tendency of this legislation are toward securing a recognized standard of professional attainments, evidence of which is afforded by the presentation of a diploma, of graduation from some legally chartered institution in good standing, or, in the absence of this, an examination more or less strict in the various fundamental branches of medical science. The exceptions are in the States of Alabama, Mississippi, North Carolina, and Virginia, where the diploma is ignored. A low standard of medical education, and the absence

of uniform legal requirements are responsible almost exclusively for the overcrowding of the profession. It was within bounds to say that the excess of the percentage of new graduates over the percentage of increase of population represents the number of unnecessary recruits to the ranks of the profession every year. Exclusive of the sessions of 1885–86, there were 106,947 physicians in the United States, and there had been an annual increase of over five and one-half per cent., while the population had annually increased in less than two per cent. As a matter of personal interest, he had followed up the careers of 789 out of 1,000 physicians who studied four years and attended three terms before graduating. These, with but few exceptions, were the successful and prominent members of the profession in the different communities in which they reside.

Dr. Rauch reached the following conclusions: First, that the best interests of the public welfare demand the highest attainable standard of educational qualification, skill, and ability among those engaged in the practice of medicine; second, that it is the duty of the State to exercise the inherent plenary power and authority which it possesses for the protection and promotion of the public welfare to secure such standard; third, that uniform State laws, exacting of every one aspiring to practise medicine proof of personal fitness and professional competency in improving the standard of medical education, and in enhancing the dignity and usefulness of the medical profession. Specifically he suggested that the Association should put itself upon record at this meeting as recommending the extension of the period of study to four years, and of attendance upon lectures to three full terms, with ample hospital practice and clinical instruction as the requirements for graduation in medicine. To this end he urged that the Committee on State Medicine be instructed to frame a law for the regulation of the practice of medicine, which law, when endorsed by the Association, shall be the standard with which all existing legislation on this subject should be made to conform as speedily as practicable, and which shall be urged for adoption by those States where no such law now exists

The second part of the address was on the advances and discoveries in preventive medicine, which referred to boards of health, branches of national service, and to what has been done in this department abroad.

Dr. A. Y. P. Garnett, of Washington, offered the following resolution, which was adopted: "That the delegates to this Association be requested, on returning to their homes, to adopt such means as may to them seem best to call the attention of their respective representatives in the Congress of the United States to the

DESIRABILITY OF MAKING AN APPROPRIATION OF MONEY TO ASSIST IN HEARTILY RECEIVING AND ENTERTAINING THE INTERNATIONAL MEDICAL CONGRESS IN 1887.

The Treasurer's Report was read and accepted, and referred to the Committee on Publication.

The Librarian's Report was read, and contained the recommendation that the sum of $10 be appropriated to subscribe for the "Index Medicus" for 1886. The report was referred to the Committee on Publication, and the recommendation adopted.

The report of the Committee on Publication was made the special order for Friday morning.

Dr. A. L. Gihon, of Washington, offered an amendment providing for a Section on Dermatology and Syphilis. Laid over for one year.

Dr. Gihon offered the following, which was adopted: "That a committee of nine, including the president-elect and the four vice-presidents-elect, be appointed by the Chair to consider various propositions looking toward amendment of the organic law of the Association by establishing branches, or in any other way, if any change may be deemed desirable, and to report at the next annual meeting." The Association then adjourned to meet Friday morning at ten o'clock.

Friday, May 7th—Fourth Day.

The Association was called to order by the President. Prayer was offered by the Rev. W. V. Tudor, D.D.

The Secretary announced the officers of the Section on Medical Jurisprudence: Isaac N. Quimby, Jersey City, Chairman; H. H. Kimball, Minnesota, Secretary.

GENERAL WILLIAM T. SHERMAN

was discovered seated in the audience, and amid tremendous cheering was called to the platform, from which he made a few exceedingly appropriate and complimentary remarks, including the statement that he had seen much of the surgeons of the United States, and believed that the medical profession in America ranks among the highest and in favorable comparison with the physicians and surgeons of the whole civilized world.

Dr. C. K. Mills, of Philadelphia, moved that the order of business be suspended for the purpose of receiving the report of the Judicial Council.

Dr. J. B. Hamilton moved to lay upon the table. Carried.

Dr. J. M. Toner reported from the Board of Trustees of the *Journal*, including the report of the editor, which was read by Dr. Davis. The *Journal* has a total weekly edition of 4,271, of which 3,276 are for members of the Association. There has been a net decrease of expenses. The small increase of subscribers was attributed to the dissatisfaction on the Code caused by the State of New York, and the unfavorable criticisms on the organization of the International Medical Congress. Dr. Davis has consented to remain editor of the *Journal*.

Dr. Garcelon, of the Auditing Committee, reported that the accounts of the Treasurer were correct.

Dr. J. M. Toner reported for the Judicial Council that the delegates from the Tristate Medical Society were not entitled to registration, that the delegates from the Davidson County Medical Society, Tennessee, were entitled to registration, that the protest against the delegates from the Mississippi Valley Medical Association had been dismissed, that the registration of W. W. Dixon had been granted, that the matter of the Philadelphia County Medical Society had been referred back with all the papers to the society from which the delegates came for adjudication.

Dr. Jackson, of Philadelphia, asked the President to rule on the status of the delegates who had registered, and whose dues had been received on the credentials presented.

The President ruled that it was out of order, as the decision of the Council was final.

The report suggested the return of the dues received from the delegates who had registered.

Dr. Eugene Smith, of Detroit, delivered the address of the Chairman of the Section on Ophthalmology, Otology, and Laryngology, in which he gave a brief summary of what had been done in these departments during the last year, making mention of transplantation of the eye, intubation of the larynx, laryngeal photography, etc. The address was brief, concise, and comprehensive.

Dr. W. D. Haggard, of Nashville, delivered the address of the Chairman of the Section on Diseases of Children, which was a plea for the better recognition of the importance of diseases of children.

Dr. John S. Marshall, of Chicago, delivered the address of the Chairman of the Section on Oral and Dental Surgery, which consisted of three parts, read by title: first, "Transplantation of Teeth in Artificial Aveoli;" second, "Sponge Grafting in the Mouth;" third, "Staphylorraphy in Early Infancy."

Dr. J. M. Toner, Chairman, formally presented the report of the Committee on Neurology, which from time

to time had appeared in the *Journal* of the Association.

The Section on State Medicine reported the following resolutions, which were adopted: That the Association reaffirm its utterances on the use and abuse of alcohol, and recommend the study of hygiene in our public schools; that a committee be appointed to consider the subject of cremation, and report at the next annual meeting; that the Association direct the Section on State Medicine, to prepare and report a form of law regulating the condition requisite to beginning the study of medicine, the requirements of graduation, etc.

The Committee of Arrangements were instructed to place the report of the Committee on Publication on the programme for the first day's proceedings at the next annual meeting.

Dr. John B. Roberts, of Philadelphia, offered a series of resolutions, asking the President and Secretary for information as to why the report of the Judicial Council, laid upon the Secretary's table yesterday and seating the delegates for the Philadelphia County Medical Society, was not read.

On motion by Dr. Octerlony, of Louisville, they were laid upon the table.

The President appointed a committee of nine, consisting of the President, President-elect, four Vice-Presidents-elect, and Drs. N. S. Davis, A. L. Gihon, and J. M. Toner, to report at the next annual meeting with reference to change in the organic law of the Association establishing branches, etc.

DELEGATES TO THE BRITISH MEDICAL ASSOCIATION:

N. S. Davis, Chicago; B. W. Dawson, Cincinnati; D. McLean, Ann Arbor; E. Smith and W. Brodie, Detroit; B. A. Watson, Jersey City; W. T. Briggs, Nashville; W. H. Pancoast and J. V. Shoemaker, Philadelphia; L. H. Montgomery, Chicago; E. Cutter, New York; G. C. Gordon, Portland, Me.; J. C. Cattell, Ontario Medical Association; H. O. Walker, Detroit.

Delegate to Canada Medical Association, W. Brodie, of Detroit.

Dr. John B. Roberts resigned as Secretary of the Section on Surgery and Anatomy. Accepted. The Chairman of the Section was authorized to fill the vacancy.

Dr. Baldwin, of Illinois, moved that the resolution introduced by Dr. Roberts reflecting upon the President and Secretary be expunged from the records. Adopted under the previous question.

Dr. Jackson, of Philadelphia, offered a

PROTEST AGAINST THE ACTION OF THE JUDICIAL COUNCIL, BY WHICH THE PHILADELPHIA COUNTY MEDICAL SOCIETY HAD BEEN DENIED REPRESENTATION AT THIS MEETING,

signed by Drs. C. K. Mills, J. B. Roberts, and others. Laid upon the table.

Drs. J. B. Johnson, N. S. Davis, and W. M. McPheeters were appointed a committee to conduct Dr. E. H. Gregory, President-elect, to the chair.

Drs. N. S. Davis and A. Garcelon introduced a general resolution of thanks to all in St. Louis for the cordial reception and most hospitable entertainment of the Association.

Dr. Keller offered an amendment to the by-laws that officers of sections be nominated by the Nominating Committee. Laid over until next year.

Complimentary and appropriate remarks were made by President-elect Gregory, and by President Brodie, and the Association adjourned to meet in Chicago on the first Tuesday in June, 1887.

Nineteen Russians and One Wolf.—It quite passes American comprehension to understand how one mad wolf was able, within forty-eight hours, to bite nineteen adult Russians, as is reported in *Le Progrès Médicale*. The wolves of Russia, when mad, must be very mad indeed.

SECTION ON PRACTICE OF MEDICINE.

Dr. J. F. Whittaker, of Ohio, Chairman; Dr. B. L. Coleman, of Kentucky, Secretary.

Tuesday, May 4th—First Day.

The first paper was

ETIOLOGY OF DUELAST,

by Albert C. Haven, of Illinois, in which the author reached the conclusion that it was an uncertain quantity.

The next paper, by Dr. Frederick N. Huston, of Rockland, Me., was entitled

THE EFFECTS OF CERTAIN PHILOSOPHICAL PRINCIPLES THAT HAVE NOT BEEN NOTICED, IN AID OF THE CIRCULATION OF THE BLOOD.

The writer assumed that the circulation of the blood is not so well understood that light would not be acceptable. He proposed to treat the subject in the light of certain philosophic principles self evident facts that need no demonstration from experiment. He took for his text the subject of cohesion, and quoted from a statement in "Reference Handbook of the Medical Sciences," vol. i., page 565, "Blood has greater cohesion than water," and stated that viscidity is a quality of all liquids, expressed in different degrees. It is greater in blood than water. While cohesion amounts to the same thing as a physical force, holding together particles of matter, viscidity and cohesion resemble each other. He claims there is no difference to the cohesion of liquids. It is a peculiar property whereby they resemble solids when acted upon by excentric forces. The venous system is compared to a cone, with apex at the heart and its base represented by the periphery of the body. It might also be said that its base is connected with that of another cone similarly representing the arterial system.

He stated that each contraction of the ventricles is a force exerted with the same, if not greater, effect on the venous circulation, as on the arterial through cohesion. Whatever may be the effect of valves in the inferior veins toward relieving gravity on the lower vessels, it must be remembered there is another column of blood without valves pressing downward with all the force of gravity as well as that of the arterial wave. If these lower vessels were compelled to sustain a pressure it is easy to see what the effect would be. Fortunately the force acting throughout the venous cone, reaching even the arterial wave, so far unloads the inferior vessels that the effect of gravity, during the interval this force is at rest, can do no more than fill these vessels to the normal tension.

The paper was a very exhaustive and scientific one, and in addition referred to topics such as the explanation of the untoward effects of hypodermic injections, syncope from chloroform, the action of nitrite of amyl, etc.

Dr. Brenner, of St. Louis, read a paper on

ESSENTIAL VERTIGO.

It was discussed by Dr. A. B. Arnold, of Baltimore, and others.

Dr. O. T. Shultz, of Mt. Vernon, Ind., read a paper on

THE USE OF SO-CALLED ANTIPYRETIC DOSES OF QUININE IN TYPHOID PNEUMONIA.

The paper was lengthy and exhaustive.

Wednesday, May 5th—Second Day.

The first paper was read by Dr. S. S. Laws, of Columbia, Mo., President of the Missouri University, on

THE LIFE AND LABORS OF LOUIS PASTEUR.

The labors of the great scientist were sketched with reference to their bearings upon the discovery of the true nature and the treatment of diseases in plants and animals. The diseases in the vegetable kingdom, as in the

case of vinegar, wine, beer, the potato, etc., have been traced to living organisms as their causes; the diseases of the silkworm, of fowls, of swine, of sheep, of cattle, and of other animals, which diseases have various technical names, have in like manner been traced to microbes, or microscopic living beings, and naturally enough this line of investigation and discovery has penetrated the dark and mysterious domain of human diseases. Infinitely minute living organisms, as the actual cause of some of these diseases, formerly attributed to the spontaneous peccancy of the humors of the body, have been certainly discovered, and also the rational means of combating them. The views presented were guarded against exaggeration and misconception, and it was not claimed that the conquest is completed, but that it is valiantly begun, and that, in the following strong language of Professor Tyndall, in a letter to M. Pasteur, to wit, "for the first time in the history of science we are enabled to entertain the sure and certain hope that, in relation to epidemic disease, medicine will soon be delivered from empiricism and placed upon a real scientific basis. When this great day shall come, humanity will recognize that it is to you (Pasteur) the greatest part of its gratitude is due."

Dr. Philip Zenner, of Cincinnati, read a paper entitled,

VALUE OF THE KNEE PHENOMENON IN THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM.

This phenomenon has been known to the profession since the simultaneous publications of Erb and Westphal in 1875. Its clinical significance is attached to the fact, pointed out by Westphal in his earliest publication, that it is present in health and is absent in cases of locomotor ataxia, usually disappearing at the very commencement of the disease. It may also be absent in anterior poliomyelitis and neuritis, when the lumbar portion of the spinal cord or its nerves are the seat of disease. It may also be absent in many cases of diabetes mellitus, and is sometimes temporarily abolished in chronic alcoholism, and after attacks of diphtheria.

Various examinations have been made to determine whether it is absent in health. Berger missed it in 22 out of 1,409 healthy men, Eulenberg in 4.8 per cent. of healthy adults and five per cent. of children, Bloch in 5 out of 694 school children; Polizans examined 2,404 school children, at first missed it in 6, but finally obtained it in every one. Jendassik examined 1,000 persons chiefly adults, not suffering with nervous diseases and elicited the phenomenon in all but one, a case of diabetes mellitus.

The author then gave his own observations, which had embraced the examination of 2,106 persons, all of whom were adults, and chiefly males. Of these 1,174 were inmates of various insane asylums; the others, excepting 106 in the medical wards of the city hospital, were mostly in apparent health. Of this number the knee phenomenon was abolished in 28, of whom 5 had fully developed locomotor ataxia, 12 were in the earlier stages of the same disease, while 11 manifested no other symptom of disease of the cord.

The cases of insanity were treated of separately, because Westphal had shown that, in such cases, the absence of this phenomenon, even when there are no other symptoms, is strong presumptive evidence of disease of the posterior columns of the cord, and because of its special value in diagnosing the form of insanity. Of the 28 cases of insanity with abolished knee phenomenon, 10 were cases of general paralysis, and in 2 it was doubtful whether there was general paralysis or not, notwithstanding the fact that there were at that time very few cases of general paralysis in the asylum. In many cases of general paralysis and locomotor ataxia we have reflexing rigidity of the pupils, they do not respond to light. In 4,000 insane, 492 had rigidity of the pupils, eighty-five per cent. of whom had general paralysis. Nine out of ten of the essayist's cases of general paralysis had pupil symptoms, one out of the two doubtful cases, and only two out of the eleven other cases. Absence of knee phenomenon and presence of refractory rigidity of the pupils are of great assistance in diagnosing obscure cases.

In 932 sane persons the knee phenomenon was found in 5. The fact that the phenomenon is absent in other pathological conditions does not lessen its significance in locomotor ataxia, for the other conditions can be easily differentiated. In the author's experience it is not so often absent in diabetes mellitus as some observers believe. Rosenstein missed it in 6 out of 9 cases and Bouchard in 19 out of 66; the author found it present in all. He did not think it often present in chronic alcoholism. He had examined quite a number of cases in the city hospital, and 404 men at the Workhouse, who were many of them hard drinkers. Strychnia restores it in chronic alcoholism, but does not in locomotor ataxia.

The author then spoke of the method of eliciting the knee-jerk. After careless examinations it is often said to be absent when it can be readily elicited. The ordinary method will answer in most cases, but in some it will not. Should it fail, the person should sit upon a table, with the legs dangling and the knees entirely exposed, and the ligament be struck in every part. In a small number there will still be failure by this method. For such cases Jendrassik has recently pointed out another method. The patient is seated as above, and, while the examiner strikes upon the ligament, he is requested to link the bent fingers with one another, and pull as hard as he can. This augments the muscular tonus and the response increases. This method has enabled the author to find it in a number of cases which did not respond before. So great was the difference that the author thought he might find it in some cases of locomotor ataxia, but failed. In some of his cases the response, though present, was so slight that it might be pathological.

Is the phenomenon always absent in locomotor ataxia? Westphal says yes, in typical cases, but present whenever the disease affects the posterior columns in the lumbar region, which occurs usually at an early period. Later writers have reported cases with post-mortems where it was present. This, however, is so rare as to be of little significance. The essayist had never seen it absent but once, and in this case the appearance was rather that of a diffuse myelitis than of a systemic disease of the cord. He had a number of cases under observation at present where the phenomenon was abolished on one side and difficult to elicit, but these were all still in the earlier stages of the disease.

The paper was discussed by Drs. A. B. Arnold, of Maryland, X. C. Scott, of Ohio, and Dr. Colhet, of Missouri.

Dr. Joseph Jones, of New Orleans, read a paper on

SOME PRACTICAL OBSERVATIONS ON THE RESULTS OF MEDICAL TREATMENT IN THE CHARITY HOSPITAL, NEW ORLEANS, DURING THE YEARS BETWEEN 1869 AND 1886.

The paper referred largely to malarial fever and its treatment.

Dr. A. F. Potter, of Boston, read a paper on "Potassium Chloride," in which he spoke of its value in pelvic cellulitis in doses of ten grains every three or four hours. In epilepsy he has found it even more valuable than the bromide of potassium, and gives it three or four times daily. He had never used it in goitre.

Dr. John A. Octerlony, of Louisville, Ky., read a paper on the "Clinical Aspects of Renal Cancer," which was well illustrated with charts, and referred particularly to the differential diagnosis between this and other diseases with similar features.

The Section adjourned to meet on Thursday.

THURSDAY, MAY 6TH—THIRD DAY.

DR. HERBERT F. WILLIAMS, of New York, read a paper on

PNEUMATIC DIFFERENTIATION,

and gave demonstrations with the pneumatic cabinet.

The discussion was opened by E. F. Ingals, of Chicago, and continued by the Chairman and others.

DR. F. H. PATTEN, of Dayton, O., read a paper on

PNEUMONIA IN THE OLD.

This was followed by one on

THE ETIOLOGY OF DENGUE,

by J. W. MCLAUGHLIN, M.D., of Austin, Texas.

The epidemic of dengue which prevailed throughout the State of Texas during the fall of 1885 was unusual in many respects; for example, first, in its universality; second, in the violence of its symptoms; third, in its manifest contagiousness; fourth, in its protracted convalescence of its subjects; fifth, in its hemorrhagic tendencies; and, sixth, in its numerous sequelæ. Many cases where direct contagion was the cause came under the observation of the writer. There can be no doubt that by this means it was carried and spread from one neighborhood to another, and from the city to the country by infected individuals. It would seem from the peculiar clinical history of dengue and its epidemic character, that it is a specific disease, that micro-organisms are the source of its infection, and that these micro-organisms find in the blood a suitable environment for their growth and multiplication. In order to determine the correctness of this theory, and, if possible, to obtain information with reference to the etiology and pathology of this malady, especially as medical literature is silent upon these matters, the following investigations were made: First, blood was obtained from living subjects during the various stages of dengue, and microscopically examined directly, *i.e.*, without the addition of chemical reagents. Second, after treatment with such agents, viz., glacial acetic acid with and without dilution, caustic potash in strong and weak solutions, chloroform, and ether, third, the blood was dried upon sterilized cover-glasses and subjected to the action of the various staining agents. Fourth, dengue, blood obtained from living subjects was introduced into test-tubes containing sterilized culture-media prepared for this purpose; these were closed with sterilized cotton plugs and kept at a temperature of 100° F. for the growth and multiplication of those organisms which were contained in the blood. Fifth, blood was drawn directly from the veins of a dengue subject into a series of sterilized glass bulbs, united by a capillary glass tube. This was done in such a manner as to effectually guard against the introduction of all foreign germs. The series of bulbs were then put into an incubator and kept at 100° F. Sixth, the matters vomited and urine passed by dengue subjects were microscopically examined. The following are the results obtained: In the blood examined directly or after treatment with the chemical agents named, stained or unstained, he found, often in great numbers, in the cell elements as well as in the plasma, micrococci spherical in shape and red or pinkish in color, often surrounded by gelatinous capsules. He always succeeded in growing in culture-tubes, upon the surface of the jelly, micrococci, and no other form of bacteria, which in size, color, shape, and behavior are identical with those seen in fresh dengue blood. The blood contained in the series of glass bulbs was examined, the first bulb at the expiration of six weeks, the other after three months. He found the blood to contain a pure culture of micrococci which in all respects were identical with those previously seen in fresh blood and grown upon culture-jelly. These organisms were also seen in the matters vomited in certain malignant cases of dengue which were characterized by much gastric catarrh, and also in the urine passed. In a very few cases he found this to contain casts of the uriniferous tubes, which were composed of these organisms held together by their gelatinous envelopes, at the end of these casts, where they were less firmly attached or cemented together. The shape, size, and color of the micro-organisms were found to correspond with those seen in the blood or grown upon the jelly. The blood used in these examinations was obtained from many different individuals at different times and places and during the various stages of dengue. It would seem evident that if spherical bodies, uniform in size, shape, color, and behavior are found in the blood in certain pathological conditions, and that these bodies can resist the destructive action of glacial acetic acid, caustic potash, chloroform, and ether, that these must be micrococci, inasmuch as all the blood-cells and granules are destroyed by these chemicals.

Sterilized cover-glasses upon which dengue blood had been dried were subjected to the action of many aniline dyes, to obtain, if possible, one for which these micrococci have an elective affinity. After many trials and failures he succeeded in staining the organisms with methyl blue in a solution of caustic potash in a permanent manner. These micro-organisms were uniformly found in the blood of about forty cases of dengue, the number from which blood was obtained. No doubt they would have been found in other cases if looked for. In every instance tubes inoculated showed, upon the surface of the jelly at the point of inoculation, a white spot elevated above the surface. When a small amount of this was examined under a high power, it showed invariably a pure culture of micrococci which in every respect are identical with those found in dengue blood. The uniformity of these results in growing pure cultures of dengue micrococci certainly indicates that the matter of inoculation came from a common source, *i.e.*, the blood.

A paper on "Meconeuropathia," by C. H. Hughes, of St. Louis, was read by title, as was one on "Laws Determining Sex," by Robert Funkhouser, of St. Louis.

SECTION IN SURGERY.

TUESDAY, MAY 4TH—FIRST DAY.

NICHOLAS SENN, OF MILWAUKEE, CHAIRMAN; H. H. MUDD, OF ST. LOUIS, SECRETARY.

The Secretary read a paper sent by WILLIAM M. MASTIN, of Mobile, on

VENOUS BLOOD TUMORS OF THE CRANIUM IN COMMUNICATION WITH THE INTRACRANIAL VENOUS CIRCULATION, ESPECIALLY THE SINUSES OF THE DURA MATER.

It contained the following propositions: Cranial venous blood tumors are to be classified into three types, 1, congenital, spontaneous, and traumatic; 2, these types are divided into the diffuse, the venous, or the vascular, in which the tumor is formed at the expense of the coats of the veins; 3, the venous type is most common, and of this type the diffuse is the rarest of all varieties; 4, the diffused variety is especially characteristic of the spontaneous and also of traumatic bruises. The venous type occurs most frequently congenitally. General surgical interference is not called for. When, however, operative interference is deemed proper, it may be for either the diffused or the varix. Exposure and ligation of the pedicle, or, if necessary, delegation in its course, the trephine being employed only to furnish the required space. Lateral ligation and section were preferred to complete ligature. For tumors composed of varicose vessels the electro-puncture or strangulation of the veins may be adopted, with preference for the former.

DR. MOSES GUNN, of Chicago, read a paper on

THE VALUE OF AN ATTEMPT AT ENUCLEATION IN A NEUROMA

which seems to demand resection of the nerve. The case was one in which a neoplasm involved the ulnar

nerve. Enucleation was followed by relief from pain, but the symptoms all returned at the end of four months.

Dr. B. A. Watson, of Jersey City, read a paper on spindle-celled sarcomas, and reported a case and presented the specimen.

Dr. Joseph Ransohoff, of Cincinnati, presented a paper on the

TREATMENT OF THORACIC ANEURISM

by the introduction of wire, with the report of a case.

Dr. W. P. Verity, of Chicago, was announced to exhibit

A SURGICAL ENGINE.

The Section then adjourned to meet Wednesday.

Wednesday, May 5th—Second Day.

Dr. Maclean, of Michigan, read a volunteer paper giving an account of

A SUCCESSFUL CASE OF AMPUTATION AT HIP-JOINT.

Drs. Logan, of Louisiana, Dawson, of Ohio, and Staples, of Minnesota, reported somewhat similar cases, and discussed to some extent the comparative indications for amputation and laparotomy.

Dr. J. McF. Gaston, of Georgia, read the next paper, entitled

SURGICAL RELATIONS OF THE ILEOCÆCAL REGION.

He designed by his title to include all the conditions calling for surgical interference in the ileocæcal region. There are two classes of such troubles, viz., those in which there is a degeneration of tissue in immediate relation with the cæcum and colon, which may result in malignant growths pressing upon and interfering with the function of the intestine, or there may be suppurative inflammation forming sinuses in all directions, and bursting through, either externally or into the bowel, may set up a long train of sequelæ by extension of inflammation to the adjacent tissues, or septic influences may be introduced and greatly aggravate the trouble, especially in cases of women. Sutton, in *The Lancet*, advanced the view that inflammation is not essentially pathological, but is reparative, and only becomes pathological when it is excessive. It may be simple or specific, and bacteria are destroyed by inflammatory action according to his view. Modern opinions in regard to laparotomy are far different from what they were a few years ago. In Germany surgical procedures in cases of ileocæcal trouble are generally too long delayed, still he holds that there can hardly be a grosser error than to adopt the position that such affection always demands surgical operation. Statistics show that less than ten per cent. of cases with invagination recover. He favors exploratory incision, and active procedures for the relief of obstruction, etc. He summed up his results with the following conclusions, viz.: 1, Certain forms of such trouble are sometimes spontaneously corrected; 2, in cases of extra-peritoneal inflammation and suppuration, puncture and incise; 3, in case of disorders involving the peritoneum, incise and explore; 4, when there is a stenosis or a malignant growth, ileocolostomy is to be performed; 5, gangrenous portions should be resected; 6, operative measures, if demanded at all in the ileocæcal region, should not be delayed, but performed at once.

THE COMMITTEE ON HONORABLE MENTION,

consisting of Drs. Logan, of New Orleans, Gunn, of Chicago, and Staples, of Minnesota, appointed by the Chairman on Tuesday, reported that only one paper had been submitted, and that, in the opinion of the Committee, did not merit the mention.

A discussion on the proper

TREATMENT OF PENETRATING WOUNDS OF THE ABDOMEN

was introduced by Dr. Henry H. Smith, of Philadelphia, who was followed by Drs. B. A. Watson, of Jersey City, and E. H. Gregory, of St. Louis, the appointed disputants. The volunteers were Drs. H. O. Marcy, of Boston, John B. Hamilton, of the Marine Hospital Service, Byrn, of Illinois, Kinloch, of South Carolina, and Jennings, of Arkansas, the discussion being formally closed by Dr. Gaston. Drs. Watson, Marcy, Hamilton, and Kinloch favored the aggressive mode of treatment —exploratory incision, arrest of hemorrhage, and careful aseptic cleansing and closing of the wound.

Dr. Gregory strongly urged a more conservative policy, and said never open the belly unless it is evident that some of the viscera have been wounded. The condition of the patient must determine the question of operation. Do not operate until it is demanded. He regards exploratory incision as justifiable only in extreme cases, not simply to find out what is the matter. If the operation were not so easy of performance, attended with so little immediate danger, and so brilliant in the impression produced, he thought that laparotomies would be made much less frequently than they have been of late years. He favors Listerism on account of rigid cleanliness—accepted methods without committing himself to the theories of antiseptic surgery.

Dr. Hamilton related some interesting cases, tending to show the advantage of immediate interference in all cases of penetrating abdominal wounds. He recognized the danger of laparotomy, and thought we should not expect as good results in treating gunshot wounds as after simple laparotomies, but he urged immediate interference, or as soon as possible after receipt of wound.

Dr. Jennings related a very interesting case, where the whole intestines gushed out through a wound of the abdominal wall, were washed with simple saline solution, a rent three-quarters of an inch long was closed with five interrupted sutures, and the patient made a complete recovery, and lived for years after.

Dr. Edmund A. Andrews, of Chicago, read a paper on

DIGITAL EXPLORATION OF LUMBAR ABSCESS,

in which he advocated opening such abscesses freely, so as to allow the introduction of the finger for the purpose of thorough exploration. His practice is to make counter openings and wash out the abscesses and sinuses with antiseptic solutions. He read only two cases of the nine which he had reported in his paper. Some cases of lumbar abscess recover after simple aspiration and washing out the cavity with antiseptic solutions. If this fails or is inapplicable by reason of the abscess having been already opened when coming under treatment, free incision and washing out with antiseptic solution should be resorted to at once. Modern treatment, aspiration, and antiseptic injections had exploded the old notion that it is a dangerous affair to open and evacuate the pus from such abscesses.

Dr. Byrd, of Illinois, said he heartily agreed with the views of Dr. Andrews. He desired simply to call attention to what he considered the very

BEST ANTISEPTIC INJECTION,

an agent which he had been using for some months with great satisfaction, viz., the peroxide of hydrogen, which would destroy and remove every particle of pus. It would also give the advantage of hyperdistention by the formation of gas in the cavities.

Dr. C. H. Finger, of Illinois, regards lumbar abscesses as simply symptoms, and does not think that simple evacuation of the contents can be regarded as good surgical treatment. It should be the aim of the surgeon to remove the cause.

Dr. E. R. Lewis, of Missouri, asked what means there are for early diagnosis of these cases.

Dr. Hamilton, of Ohio, said that in many years of practice and teaching he had found no other so common evidence of incompetency and inefficiency among practitioners as the frequent failure to recognize the presence of lumbar abscesses. He related two very remarkable cases illustrating such oversight on the part of practitioners generally regarded as well posted in their profession.

Dr. Ransohoff thought that the same charge of incompetency could not be truthfully brought against the practitioners of Southern Ohio as Dr. Hamilton had made against those of Central Ohio. He emphasized the statement of Dr. Finger that lumbar abscesses are only symptoms, and holds that unless the cause can be removed free incision and drainage of lumbar abscess is bad treatment.

Dr. Geiger said his experience with these cases had been unfortunate. He considered it a matter of great importance that the after-treatment of these cases should be in the hands of competent surgeons.

Dr. Ross, of Pennsylvania, here related a case of erroneous diagnosis of purulent accumulation in the chest, which had no apparent connection with the subject under discussion.

Dr. Andrews, in closing the discussion, said there was no way of diagnosticating these cases in the very commencement. When the pus has formed to such a degree as to cause pressure there will be some elevation of temperature, and as soon as there is reasonable probability of the presence of pus it may be determined positively by the use of the aspirator. He does not favor the use of the knife until there is some physical evidence of the presence of pus. Incision is only a means to an end, rendering possible fuller exploration and the adoption of means of treatment which would be otherwise impracticable.

Dr. Byrd, of Illinois, then read a paper, prepared by his assistant, recounting a case of

INTRAVENOUS INJECTION OF SALINE SOLUTION

for collapse from hemorrhage, in which he injected eighty ounces of a saline solution into a vein of the arm.

The Section adjourned to meet at 2 P.M. Thursday.

Thursday, May 6th—Third Day.

Dr. R. Harvey Reed, of Mansfield, O., read a paper on

SOME COMPLICATIONS IN STRANGULATED HERNIA.

He reported a case in which a small obscure femoral hernia was complicated with hydrocele, an enlarged and adherent testicle, and a large, reducible, inguinal hernia, which was supposed to be the chief source of the difficulty. Another case was one operated upon by Dr. Senn, who had furnished him an account of the case. The omentum was adhered to the whole inner surface of the sac, and in operation it was necessary to remove the whole mass, and unite the edges of the ring; these were freshened and closely sutured. The result was complete cure. Another case was one in which a patient made unnecessary muscular operation while the wound was yet ununited, with the result of a new protrusion and a rupture of the protruding bowel. The parts were thoroughly cleansed, the rupture of the bowel was closely sutured, and the patient made a complete recovery.

Dr. Henry O. Marcy's paper was

A PLEA FOR RADICAL OPERATION FOR THE CURE OF HERNIA.

His operation consists in the ablation of the sac, freshening the pillars, and suturing them with chromicized kangaroo-tendon sutures. He thinks this operation far superior to those which have been advocated so zealously of late years by Dr. Warren, of Boston, and others, viz., by injection of an astringent liquid; this method he objects to, as being essentially blind surgery. He thinks operative interference of this nature is demanded wherever there is strangulation, where there is failure of the instrument (truss) to retain the hernia, and in cases of infantile hernia, which is with difficulty controlled by the truss, he has found the kangaroo-tendon sutures exceedingly valuable and satisfactory. He was the first to introduce this material to the profession.

In discussing these papers Dr. Hoadley reported an operation in which he had taken pains to ligate the freshened edges of the pillars as closely as possible; he was disposed to lay considerable stress upon the importance of this close suturing in order to secure perfection.

Dr. Quimby urged the importance of early operation. He thought operation should be performed within twelve hours after indications are apparent.

Dr. Smith, of Iowa, used to be very timid of removing omentum, but now has no hesitation in doing this when necessary.

At this point a committee of three, consisting of Drs. Gunn, of Chicago, Dawson, of Cincinnati, and Barton, of Philadelphia, were appointed to examine a case supposed to be of surgical interest. It proved to be the case of a young man, who, some months ago, was thrown upon the pommel of his saddle. Since that time he has been subject to pains in the abdomen, not so severe as to necessitate a discontinuance of labor, but at intervals of about a month enough to occasion severe suffering. His physician, in examining him recently, had discovered an adventitious growth at upper inner part of the thigh, which it was thought might have some relation to his pain. The committee, after examination, were agreed that the hard mass which had developed there was the result of an ossification of about two inches of the tendon of the adductor magnus muscle.

Dr. C. A. Todd, of St. Louis, then read a paper which gave the result of some careful studies in the dissecting-room, showing how the iliac arteries act as valves upon the venous flow into the inferior vena cava.

The paper was brief, and was passed without discussion.

Dr. Charles Fenger, of Chicago, then read a paper on osteoplastic resection of the foot, excision of the heel, as devised by Whadirniroff and Miculicz. Only a portion of the paper was read, and Dr. Fenger illustrated by a large drawing, by a plaster cast, and by the bones of a normal skeleton, the method of performing the operation as devised by the Russian and German surgeons independently, exsecting the calcaneum and astragalus, and removing the cartilaginous ends of the tibia and of the scaphoid and cuboid bones, and bringing the sawed surfaces together so that the patient can step upon the toes. He described a modification in the lateral incision by which he secures a fuller supply of blood for the nourishment of the foot than is gained by the operation as previously performed, making a decided improvement in it. The indications for the operation are: 1. Extensive injury to heel and adjacent parts of the foot; of the nineteen recorded cases, not one has been done to meet this indication. 2. Caries or tuberculosis of the os calcis and adjacent tissues; this is the most frequent cause noted. 3. Extensive disease of the soft parts of the heel. The after-treatment consists of keeping the foot at rest upon a splint, either of plaster or an interior and posterior.

Dr. MacLean spoke quite strongly in favor of Syme's operation, which he much preferred to the one described in the paper. He said he had made Syme's operation thirty-three or thirty-four times with generally very satisfactory results.

Dr. Quimby, of New Jersey, described an operation of his own devising, in which there is only a partial exsection of the os calcis, and no disturbance of the cartilage of the tibia, but the cut surface of the os calcis is

turned up into contact with the cartilage of the tibia. He has found the results to be satisfactory, and specially advantageous in the case of young children, as by this method the development and growth of the tibia is not interfered with.

Dr. J. M. Barton, of Pennsylvania, read the next paper, on the

VERTICAL EXTENSION IN THE TREATMENT OF FRACTURE OF THE FEMUR IN CHILDREN.

In five cases which he has treated by this plan most satisfactory results have been obtained, and the treatment was much simpler and easier than by other methods in common use. Bryant is credited with the first proposal of this treatment. The treatment is vertical instead of horizontal extension. One of the special advantages is the facility with which the patient can be kept clean.

Dr. Quimby, of New Jersey, did not see the advantage of the position, and strongly favored Buck's extension.

Dr. Link, of Indiana, was of the opinion that too much stress had been laid on extension and counter-extension. The three points which he gives as essential in the treatment of fractures are bandaging, flexion, and rotation. He bandages to control spasmodic action of muscles, flexes, and rotates outward in order to relax them. He had not used extension or counter-extension for years.

Dr. Belfield, of Chicago, read a paper advocating

DIGITAL EXPLORATION OF THE BLADDER,

including a report of ten cases of vesical tumor and enlarged prostate. He gave indications for this procedure, and contra-indications.

Dr. Robert Newman, of New York, then read a paper on

THE GALVANO-CAUTERY IN DISEASES OF THE PROSTATE, BLADDER, AND URETHRA,

exhibiting apparatus and demonstrating the mode of using the same. There was no discussion of these papers.

Dr. Glover, of Terra Haute, Ind., read a paper on the

TREATMENT OF ANAL FISTULA ASSOCIATED WITH PHTHISIS.

It was a collection of the opinions of a large number of physicians and surgeons in regard to the advisability of operating in such cases. The greater number seemed to favor operation, on the ground that it is best to relieve the patient of one disease, if possible, rather than allow him to be afflicted by both of them.

Dr. J. B. Johnson opposed this view, holding that the effect of arresting the drain by the fistula was calculated to intensify the morbid process in the lungs.

The Section adjourned.

SECTION ON OBSTETRICS.

TUESDAY, MAY 4TH—FIRST DAY—MORNING SESSION.

Dr. S. C. Gordon, of Portland, Me., President; Dr. J. F. Y. Paine, of Galveston, Tex., Secretary.

After a few remarks by the President, the first paper was read by Dr. W. H. Wathen, of Louisville, Ky., on the

TREATMENT OF THE MEMBRANES IN ABORTION AND LABOR.

One year ago he read a paper before this Section on the "Treatment of Secundines in Abortion and Labor." He divided his subject into three stages, premature labor, labor at term, and abortion prior to the sixth month. In abortion after the eighth week the membranes should be removed entire, if not expelled in twenty minutes. Should the woman show symptoms of syncope from hemorrhage, the shock of the removal of the membranes is not more than that of tamponing the vagina. Seventy-seven per cent. of cases of secondary hemorrhage occurred after the expectant plan, thirty-two per cent. after expression. Pajot reports out of sixty-eight cases of retained placenta that sixty resulted fatally. If the operation is done without delay the os is dilated or dilatable. The fingers are best to insert. Tents should be avoided; dilators may be used. If the patient is under an anæsthetic the entire hand may be passed into the womb. In premature labor and labor at term the placenta is easier separated.

The membranes can generally be removed by judicious expression, but if not, it is better to remove by force. He recommended Crede's method, and that the hand be always kept over the uterus. Crede removes the membranes in four and a half minutes, with universally good results. It was better, however, to give more time for coagula to form. If the membranes are held in the uterus by a cicatricial contraction, dilate this contraction to remove them. We should always have a hypodermic syringe charged with ergot to use if necessary. We should never use ergot until the membranes are expelled.

Dr. Fuller, of Maine, thought the paper a very practical one. The speaker's course had uniformly been to deliver the after-birth as soon and readily as he could. His experience had been that prompt removal of the placenta stops and prevents hemorrhage. He is generally careful to secure the placenta in five minutes after the birth of the child. He regards this promptness as a matter of safety.

Dr. W. P. King, of Sedalia, Mo., during the past twenty years had 719 natural labors and twice as many abortions. If near term, he practised the early removal of the placenta, generally waiting a long enough time for the appearance of one other pain. He said he unbuttoned the placenta with his fingers, and turned it out as a boy turned his tongue out of his mouth. He recommended dilatation with the finger and with the forceps, then to go in with the duck-billed forceps. He never failed during the last few years to wash out the uterus with a hot sublimate solution—115° to 135°, and a strength of 1 in 4,000. He carried a concentrated solution and made it on the spot. He used the reflex catheter, and washed until the water returned clear, having first rendered the hand aseptic. The two cases so often quoted, the Indian and the white woman, were not analogous cases. He strongly recommended asepsis and the clean removal of everything.

Dr. Garcelon, of Maine, asked if he understood the last speaker correctly that he had twice as many abortions as natural labors.

Dr. King replied that he did.

Dr. Garcelon then asked what sort of people he lived among

Dr. King said they were chiefly immigrants from New England.

Dr. C. R. Reed, of Middleport, O., said he did not wait so long now to deliver the placenta as formerly. He found the longer you waited the more firmly the os contracted and the greater the difficulty to remove the placenta.

Dr. W. W. Potter, of Buffalo, thought this would always form an interesting point of discussion. He criticised the manner in which the terms massage and Crede's method had been used in the discussion. Merely pressure suprapubic was not Crede's method, but to place the fingers behind and the thumb before the fundus uteri, and press out the placenta as you would a peach-stone. Beyond and above the question of hemorrhage is that of hyperplastic subinvolution.

Dr. Morris, of Baltimore, favored the opposition to delay. He never allowed a woman to lie twenty minutes without delivering the placenta. He believed in heroic treatment, though in abortion we cannot treat so heroically.

(To be continued.)

AMERICAN SURGICAL ASSOCIATION.

Seventh Annual Session, held at Washington, D. C., April 28, 29, 30 and May 1, 1886.

WEDNESDAY, APRIL 28TH—FIRST DAY—MORNING SESSION.

THE Seventh Annual Session of the American Surgical Association was held in the reading-room of the Army Medical Museum, Washington, D. C.

The meeting was called to order at eleven A.M. by the PRESIDENT, MOSES GUNN, M.D., of Chicago.

After the calling of the roll, the President delivered his

ANNUAL ADDRESS,

an abstract of which follows:

FELLOWS OF THE AMERICAN SURGICAL SOCIETY: Custom, if not organic law, requires the President to open the proceedings by a more or less formal address. I shall indulge in a few thoughts on certain points in the

PHYSIOLOGY AND SURGERY OF MOTOR, SENSORY, AND MOTO-SENSORY OR COMPOUND NERVES.

Previous to the investigations of Magendie and Bell, no clearly-defined effort had been made to differentiate the motor and sensory nerves. It remained for these investigators to clearly establish the fact of the motor qualities of the anterior roots and the sensory qualities of the posterior roots. With this also came the idea that this difference was intrinsic and due to peculiarities in the anatomical and physiological organization of the nerve-fibres. This appears to have been the idea generally entertained. Is this a fact? or is the difference to be found in extrinsic conditions, viz., the anatomical organization at either end of the nerve, the nerve-trunk being simply a conductor of a form of force. Upon the facts of the case depends the possibility of satisfactory results in the section and physiological reunion of divided compound nerves, and the grafting of one compound nerve upon another, where there has been so great a loss of the trunk as not to permit of the approximation of the distal and proximal portions of the nerve. Success in achieving satisfactory results by such operations or a uniform lack of success must afford a tolerably reliable answer to these interrogatories, much more reliable than experiments on some of the inferior animals.

EXPERIMENTS ON ANIMALS

require severe scrutiny, or they may mislead. Some of the experiments on animals were then referred to. Philipeau and Vulpain divided in dogs the pneumogastric and sub-lingual nerves and united the central end of the pneumogastric with the distal end of the sub-lingual. They also divided the lingual branch of the fifth nerve and the sub-lingual, uniting the central end of the lingual branch of the fifth nerve to the peripheral end of the sub-lingual, and tearing out the central end of the sub-lingual. The result of these experiments was, that after a time motion and sensation were restored. Other similar experiments were cited.

In April, 1880, Dr. E. P. Davis made for the speaker the following experimental operation: Under an anæsthetic the axillary plexus was exposed. The median was severed after its bifurcation, and also the ulnar and radial. The outer head of the median was united to the ulnar. The inner head of the median was united to the radial in the same way. At the end of ten days, the dressing was removed and complete paralysis of motion and of sensation found. In four weeks this began to disappear, and later a perfect condition of motion and sensation was observed. By this operation the distal portion of the median was left entirely without nervous supply, and yet there was no paralysis of muscles or integument supplied by this portion of the nerve. Later investigation shows that in the dog and certain other animals there is an anastomosis of fibres between different nerves, forming an indirect route for the conduction of nervous force.

Nerve-suture in man has become a recognized operation, both as a secondary and primary procedure. It must be concluded from experiments that

MOTOR, SENSORY, AND TROPHIC POWERS DO NOT DEPEND ON THE NERVE ITSELF,

nor on a difference of nerve-force, but on the organism at the end of the nerve. Professor Stephani is reported to have succeeded four times in uniting the distal end of the median with the proximal end of the musculo-spiral and the distal end of the latter with the proximal end of the former. Immediately following the operation were complete paralysis and atrophy, but in the course of six or eight months there was not only restoration of muscular power, but harmony of action to an extent sufficient to permit the animal to run, but perfect extending power was not realized.

THE INTERGRAFTING OF A SECTION OF A NERVE

of an inferior animal to replace extensive loss of nervous structure will probably be of too uncertain success to constitute a standard operation, but can the grafting of the distal end of a nerve in such a case upon the side of or into the trunk of an adjacent nerve secure to it a supply of nerve-force? Experiments made by Kawa would indicate that such might be the case. To establish this point experiments on dogs are valueless on account of the free anastomosis. We must look for the solution of this question to the rare opportunities met with in the course of surgical practice to institute experimental operations on man. A case has been reported by Després, where there was such extensive destruction of the median nerve as to preclude the possibility of approximating its ends. He therefore engrafted the distal end of the median with the trunk of the ulnar. Fifty-four days after the operation the functions of the parts supplied with the median nerve were partially restored.

The speaker had occasion recently to resect over three inches of the right ulnar nerve in the removal of a neuroma in a male patient aged thirty-six. The sheath of the median was removed, and the broadly chamfered end of the ulnar laid in contact with it and secured by three fine catgut sutures. Immediately after the operation there was complete paralysis of the parts supplied by the ulnar. On the eighteenth day there was a slight return of sensation along the ulnar side of the ring-finger, and there seemed to be some contraction of the flexor carpi ulnaris. Four months after operation, the patient could feel a slight touch on the ulnar side of the ring-finger, no sensation to touch in the little finger, but an increased warmth in it. He can now adduct the hand with considerable vigor, but as yet has no power over the terminal phalanges.

The positive evidence which these two cases furnish at so early a date warrants further effort in this direction, and corroborates the other evidence of the correctness of the postulate that the function of a given nerve depends entirely upon the machinery at its ends, and not upon any intrinsic quality.

The speaker concluded with a few words of welcome to the Fellows of the Society, expressing the hope that this meeting would be the occasion of renewing old friendships and forming new ones.

Upon the conclusion of the address, letters from distinguished Honorary Fellows were read, and a proposition to form a

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS

was discussed, and referred to a committee of three, to report Thursday morning, the committee consisting of Drs. J. Ewing Mears, Wm. T. Briggs, and Christopher Johnston.

AFTERNOON SESSION.

DR. CHRISTOPHER JOHNSTON, of Baltimore, read a paper entitled

DIAGNOSTITIAL LAPAROTOMY.

This operation, he said, is as ancient as our race, but in early times was always practised on the cadaver. The rapid advance of abdominal surgery now demands the attentive consideration of surgeons, and requires the expression of opinion as to the position of the line limiting interference in certain classes of cases. The labors of gynecologists and surgeons have greatly lowered the mortality of laparotomy for ovariotomy and hysterectomy, but the pathological possibilities of the male and female abdomen still constitute many difficult problems, which the knowledge and zeal of surgeons are constantly striving to solve. The question arises, How shall the seat of the pathological change be reached? The answer is laparotomy, which makes the diagnosis positive in cases of doubt, and is preliminary to other operations which may be required. If the surgeon has no right to refuse to give air to a fellow-creature becoming asphyxiated from obstruction in the air-passage, has he the option of refraining from surgical interference when the primæ viæ are obstructed in their functions? The propositions, then, are, first, that for abdominal surgical affections all possible operations ought to be attempted after the establishment of a precise diagnosis; and second, that when a just diagnosis cannot otherwise be reached, it may, and ought to be, determined by an exploratory incision. The mortality of abdominal incision without complication is low. It is unfair to compare dissimilar operations involving the peritoneum, for some have been so frequently performed that new methods and resources have been applied to them. A great consecutive mortality following a surgical procedure in nowise determines the want of value of the operation, while most cases recovering are to be considered a certain gain.

The abdominal incision intentionally diagnostitial is fraught with so little comparative ill consequence that its high value or necessity may be fairly claimed as an established and proper aid to diagnosis. Of all operations requiring laparotomy, those involving the uterus and its appendages probably fill the largest space. Next we have those involving the alimentary tract.

Speaking of the

CÆSAREAN SECTION,

the speaker said that comparing the mortality of this operation in former days with the mortality of the Porro-Muller operation, we find that while shock and other dangers are greatly increased in the modern operation, the mortality remains about the same. The old operation is, as a rule, done under objectionable surroundings, by inexpert operators, while the modern operation is done by experts, with the best surroundings. We have yet to see what the old operation will accomplish when the same safeguards are thrown around it that are given to the newer operation.

WHEN IS EXPLORATORY LAPAROTOMY CALLED FOR?

It should be stated that to a certain extent every laparotomy is diagnostitial. Without establishing unnecessary groups, two great classes in which exploratory laparotomy is demanded or permissible are to be recognized. First, all sorts of cases in which the diagnosis cannot be made without its aid. Second, all those cases in which a diagnosis having been made no definite line of operation can be mapped out, and no abandonment of active measures be entertained or justified. As in these cases laparotomy holds the key in all cases of doubt, both as to what is the matter, and what is to be done, it should be called upon to surrender that key. In intestinal cases the early operations are those which save life the oftenest, but abandonment ought not necessarily follow delay in invoking the surgeon's aid.

DR. A. VANDERVEER, of Albany, said there could be no doubt that experience shows us that simple incised wounds of the abdomen without injury to the abdominal organs will usually heal without difficulty, even if left to themselves. The mortality is very slight indeed. Even when the injury is more serious, recovery often follows. The cases which give us anxiety are those in which the bowel is injured and its contents escape into the abdominal cavity. These die inevitably if nothing is done. In these cases laparotomy should be performed. This view is often opposed by the friends of the patient, and also by the attending physician. Much will have to be done in the direction of teaching the profession and the public the importance of early operation in these cases. Cases were cited of gunshot injuries of the intestine, and of rupture of the intestine produced by external violence, in which the operation might have saved life if it had been permitted by the friends of the patient. The operation, as a rule, will not be permitted until the patient is in collapse, and it is then too late. Dr. Johnston had presented points of great interest and importance. This operation should be done more frequently in the future than in the past. As regards the mode of operation, the incision in the median line is by far the best. In some cases it would be impossible to reach the seat of disease by any other incision. In the closing of the wound some recommend several lines of sutures, uniting the different layers of tissue separately. He considered this no advance on the old method of using sutures including all the layers of tissue. Where there is great distention of the bowel in intussusception the discovery of the seat of trouble is greatly facilitated by a procedure which he had seen Tait adopt in such a case. He opened the distended coil of intestine, permitted the gas to escape, and then closed the opening with sutures.

DR. J. EWING MEARS, of Philadelphia, said that in considering diagnostitial laparotomy he would arrange the subject in this manner. In the first place, we should use external manipulation; second, internal examination where this is possible; third, aspiration, and finally, laparotomy. He regarded laparotomy as much the most serious of all these methods. The more experience he gained the greater was his conviction that

THE ABDOMINAL CAVITY SHOULD NOT BE OPENED WITHOUT DUE CONSIDERATION.

Death is a severe penalty to pay for the perfection of the diagnosis. We have already learned a great deal in regard to methods of diagnosis by external manipulation, but the tendency at the present time seems to be in favor of opening the abdominal cavity rather than cultivating that essential skill by which the diagnosis may often be made without resorting to operation. . . . Tait's assertions, that opening of the abdominal cavity is a matter of very little consequence, has led many of the younger members of the profession to perform this operation without due consideration. I agree with Dr. Johnston that having exhausted other methods of diagnosis, if the patient's life depend upon it, we should open the abdomen. He believed that in intestinal obstruction the abdomen should be opened, and that many lives have been lost by want of courage on the part of the surgeon. There is no question as to the duty of the surgeon in the case of gunshot wounds of the intestines.

DR. CHARLES T. PARKES, of Chicago, thought that the size of the incision made very little difference so far as the final recovery is concerned, but when the incision extends above the umbilicus recovery is slower and attended with more inconvenience. In the cases which he had seen where post-mortem examination followed, there was no evidence that the abdominal incision had anything to do with the fatal issue. He related the case of a child, eighteen months of age, in which the operation was declined, and in which, at the post-mortem, intussusception

of the small intestine was found, which was without adhesions and could readily have been removed.

The abdominal opening should be made in the median line. In regard to closure of the wound, he thought that the simple suture going through all the tissues had been followed by such good results that we need use no other. Where there is much distention of the intestine, the method by opening the bowel is the best. When the exploratory needle is used, it is necessary to make a number of punctures. In two instances he had found extravasation of fecal matter through these punctures.

Dr. McLane Tiffany, of Baltimore, had lately seen four cases of intestinal obstruction. In all four laparotomy was proposed. Two refused, and both of these died. Two accepted, and one of these recovered. The case that died was that of a woman, aged seventy-three, in whom the obstruction had lasted seven days. The intestine was enormously distended, and in the examination ruptured with the escape of the gas. After this it was extremely easy to find the seat of constriction. The shock would be lessened if the intestine were emptied. He agreed with the speaker as to the great value of laparotomy as a diagnostic operation, and he said it was not possible for any human being to recognize through the abdominal walls the manifold conditions of the organs present.

Dr. J. F. Thompson, of Washington, reported

TWO CASES OF LAPAROTOMY

for the purpose of diagnosis. A woman, aged thirty-five, had the history of an abdominal tumor lasting for several years. It presented the appearances of an ordinary ovarian tumor, with the exception that it had two sinuses communicating externally. After frequent examinations by various surgeons, it was decided to make an exploratory operation. One of the sinuses was traced back to the peritoneum, without reaching any satisfactory explanation of the tumor. The peritoneum was then opened, and the finger introduced, but no tumor in the cavity could be felt. Toward the abdominal wall a mass could be distinguished apparently imbedded in the tissues. The wound was closed and the patient recovered from the operation, but she subsequently died from other causes, and the post-mortem showed that the tumor was an enlarged spleen which had fallen down below the umbilicus, and become attached to the abdominal wall.

The second case was one of carcinoma, involving the transverse colon which ran directly through the mass. There was also an attachment of the growth to the liver. The abdomen was closed, the patient recovered from the operation, and is still living.

The author of the paper, in closing the discussion, said that there was a certain hesitancy on the part of surgeons in regard to operating in cases of abdominal injury, on account of the people and on account of juries. To overcome these objections it would be necessary to educate the public to the true state of affairs. He was glad to find his opinions supported by so many of the able minds of the profession.

Thursday—Second Day—Morning Session.

Harold C. Ernst, M.D., of Jamaica Plains, Mass., read a paper entitled

A CONSIDERATION OF THE BACTERIA OF SURGICAL DISEASES.

After an extended description of the various bacteria met with in wounds, chronic abscesses, erysipelas, and other surgical affections, and an account of numerous experiments on animals, with an exhibition of specimens in culture mediums and under the microscope, the author presented the following conclusions: I. The experiments conducted over so long a time, with the successful inoculation at the end of that time, indicate very plainly the retention of pathogenic powers of these organisms indefinitely. II. Their permanence of form is also well established. III. In order to obtain either a modification of their pathognomonic forms or of their morphological properties, if this is possible at all, some different methods of investigation must be used than those which have hitherto been employed. IV. The probabilities indicate that work in this direction is not likely to be successful. V. So far as the experiments go, they tend to show that no form of the suppurative process in man is unattended by bacteria, and that the inoculation in the lower animals of pure cultures of these bacteria is followed by more or less acute and extensive suppuration. VI. The above conclusion is supported by the evidence of all workers in this field of research. VII. A number of different clinical phenomena may be produced by the same organism, all of these phenomena, however, coming under the general head of the inflammatory and suppurative processes. VIII. The difference in the results produced by the same micro-organism in different individuals depends upon influences outside of the bacteria themselves. IX. These differences are the result of differences in the amount of the infectious material received into the system, and of the locality or lesions by which it gains access, and also by variations in the individual condition—the personal equation being a very large factor in making up the sum of any results in bacteriological work.

Dr. S. W. Gross, of Philadelphia, said that the observations made by Dr. Ernst confirm those made by other observers, showing very conclusively that the suppurative processes are dependent upon vegetable organisms. The most interesting part of the paper was that which relates to chronic suppuration. Dr. Ernst had been the first, he thought, to show that chronic suppuration is due to the same micrococci as the acute form.

Dr. J. S. Billings referred to the difficulties encountered in this work. It is only by personal experience that they are learned. One of the difficulties in considering the probable relation between cause and effect is that there seems to be no relation between the number of micrococci present and the effects produced. A second difficulty is that we are by no means sure of the specific differences between these various forms of microscopical organisms.

Dr. N. Senn, of Milwaukee, desired to say a few words in regard to the conditions which predispose to the action of germs introduced into the body. The object of the surgeon should be, in the first place, to prevent the introduction of these germs, and, in the second place, to secure inocuity to the infection by preventing the occurrence of predisposing causes. The first predisposing condition is found in an unusual arrangement of the capillary circulation. This is well illustrated in

OSTEO-MYELITIS.

In this affection the germs are found in greatest abundance in those situations where the anatomical relations of the vessels predispose to engorgement and localization of the microbes. This is in the large vessels about the centres of ossification in the epiphyses of bones. The second predisposing influence is traumatism. The germs of osteo-myelitis may be present in the body for a long time, and produce no effects until the occurrence of traumatism, as a fracture favors the localization of the microbes.

Dr. David Prince, of Jacksonville, Ill., exhibited a diagram and described a form of room whereby

A STERILIZED ATMOSPHERE

could be secured for the patient by means of air treated with corrosive sublimate, and forced through a tube opening immediately above the seat of operation.

THE REPORT OF THE COMMITTEE

on the organization of a congress of American physicians and surgeons was then presented.

In view of the fact that there are many special medical organizations now in existence in the United States, and also that many representative men in the medical profession are members of two or more of these associations, the committee thought it would be advisable to make arrangements with these societies whereby uniformity as to the time and place of their several meetings might be obtained. In this way their members might be spared the expense and loss of time entailed upon them when obliged to make several distinct trips to different places each year.

The plan proposed was to unite the following-named associations into a congress to be called

A CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS:

The American Surgical Association, the American Ophthalmological Association, American Otological Association, American Neurological Association, American Laryngological Association, American Gynæcological Association, American Dermatological Association, American Climatological Association, and the American Clinical and Pathological Association.

THE PLAN OF ORGANIZATION

embodies the following: Each society is to elect its own officers; hold its own sessions apart from the others at the time and place of meeting; publish its own transactions; and do all other acts which by virtue of its constitution and by-laws it has the inherent right to do, thus preserving its own autonomy.

It was proposed that the congress be composed of these special societies when in convention, and that its meetings be held in the city of Washington; the constitution and by-laws of the congress to be formed by a committee of equal number from each special society. The opening session of each annual meeting of the congress to be devoted to such general business as may pertain to the interests of the association as a whole. The congress being presided over by a president elected annually, and who must deliver an opening address on the first day of the session. The president to be chosen by a nominating committee of one from each special society; the presidents of the special societies to be *ex-officio* vice-presidents of the congress. Membership in the congress to be acquired only by virtue of fellowship in one or another of the special organizations. The other officers to be elected as determined upon by the convention in session.

The committee disclaimed any intention of opposing any other organization in America, but proposed simply a plan of uniting into one great body the already existing special societies, doing so from an honest conviction that such a union will prove of inestimable benefit to them individually and collectively.

The committee appointed to consider this proposition reported that they viewed with great satisfaction the perfection of a plan through which the meeting of the above-named societies at the same time in Washington may be accomplished, and recommended the adoption of a resolution that a committee of five be appointed to confer with committees from other special organizations to arrange details and to report at the next annual meeting of the association. This was adopted.

The session then adjourned.

AFTERNOON SESSION.

The first paper was by DR. N. SENN, of Milwaukee, and was entitled

THE SURGERY OF THE PANCREAS AS BASED UPON EXPERIMENTS AND CLINICAL RESEARCHES.

The following conclusions were presented: 1. Restoration of the continuity of the pancreatic duct does not take place after complete section of the pancreas. 2. Complete extirpation of the pancreas is invariably followed by death, produced either by the traumatism or gangrene of the duodenum. 3. Partial excision of the pancreas for injury or disease is a feasible and justifiable surgical procedure. 4. Complete obstruction of the pancreatic duct, uncomplicated by pathological conditions of the parenchyma of the organ, never results in the formation of a cyst. 5. In simple obstruction of the pancreatic duct the pancreatic juice is removed by absorption. 6. Gradual atrophy of the pancreas from nutritive or degenerative changes of the secreting structures is not incompatible with health. 7. Physiological detachment of any portion of the pancreas is invariably followed by progressive degeneration of the glandular tissue. 8. Extravasation of pancreatic juice into the peritoneal cavity does not produce peritonitis. 9. Crushed or lacerated pancreatic tissue is removed by absorption, provided the site of operation remains aseptic. 10. Complete division of the pancreas by elastic constriction is never followed by restoration of interrupted anatomical continuities. 11. Limited detachment of the mesentery from the duodenum, as required in operations upon the pancreas, is not followed by gangrene of the bowel. 12. In all operations upon the head of the pancreas the physiological attachment of the peripheral portion of the gland should be maintained by preserving the integrity of the main pancreatic duct. 13. Partial excision of the splenic portion of the pancreas is indicated, in cases of circumscribed abscess and malignant tumors, in all cases where the pathological product can be removed completely without danger of compromising pancreatic digestion or of inflicting additional injury upon important adjacent organs. 14. Ligation of the pancreas at the point or points of section should precede extirpation as a prophylactic measure against troublesome hemorrhage and the extravasation of pancreatic juice into the peritoneal cavity. 15. The formation of an external pancreatic fistula by abdominal section is indicated in the treatment of cysts, abscess, gangrene, and hemorrhage of the pancreas due to local causes. 16. Abdominal section and lumbar drainage is indicated in cases of abscess or gangrene of the pancreas in which it is found impossible to establish an anterior abdominal fistula. 17. Thorough drainage is indicated in cases of abscess and gangrene of the pancreas, with diffuse burrowing of pus in the retro-peritoneal space. 18. Removal of an impacted pancreatic calculus in the duodenal extremity of the duct of Wirsung by taxis, or incision and extraction, should be practised in all cases where the common bile-duct is compressed or obstructed by the calculus, and death is threatened by cholæmia. 19. In such cases the principal source of danger, extravasation of bile into the peritoneal cavity, should be avoided by preliminary aspiration of the dilated bile-ducts, accurate closure of the visceral wound with fine silk sutures, and absolute physiological rest of the organs of digestion during the time required in the healing of the visceral wound.

Remarks in discussion were made by Drs. Conner, Fenger, and Parks.

DR. CHAS. T. PARKS, of Chicago, read a paper, supplemental to his paper of last year, reporting

TWO CASES OF CHOLECYSTOTOMY,

both of which ended fatally. In discussing the paper,

DR. W. H. CARMALT, of New Haven, described the following case: The patient, a woman, thirty-seven years of age, had suffered for several years with indefinite dragging sensations in the right hypochondriac region. This incapacitated her from performing her household duties. In 1883 she stated that she had been operated on in Berlin for floating kidney, and in evidence showed a large scar in the lumbar region. She also stated that three weeks after operation, as a result of violent sneezing, the organ had become loosened. She came to the speaker for the purpose of having the kidney removed. Examination showed the abdomen to be exceedingly pendulous. The tumor was rounded and could be readily grasped between the fingers. It was very movable. An incision

was made, and it was at once evident that it was not the kidney. Further examination showed it to be a dilated gall-bladder. An aspirator was introduced, and four ounces of inspissated mucus drawn off. Five calculi were found. The gall-bladder was closed with a continuous catgut suture. The wound in the peritoneum was closed in the same way. The muscles were united by interrupted silk sutures, and a continuous catgut suture was used for the incision in the skin. The patient made a good recovery, and is now able to attend to her duties.

In the absence of the author, DR. JOHN S. COLEMAN, of Augusta, the Secretary read his paper, entitled

A CASE SIMULATING ABDOMINAL PREGNANCY—LAPAROTOMY, CÆSAREAN SECTION, AND REMOVAL OF A LIVING CHILD.

February 27, 1886, the writer was requested to see B. A——, colored, primipara, aged twenty-four. The attending physician believed her to be the subject of extra-uterine pregnancy. She thought herself at the end of gestation, and for three days had suffered with pains which were quieted by the administration of laudanum. The entire abdomen was greatly distended, particularly in the upper portion. Vaginal examination showed procidentia, the os projecting three inches beyond the labia. The os was sufficiently patulous to permit the entrance of the index-finger. Rectal examination gave negative results. Palpation and auscultation showed the position of the fœtus to be dorso-anterior and obliquely transverse. Placental souffle could not be heard. The abdomen was so large, and the fœtal heart-sounds so distinct, that the writer also concluded that the case was one of extra-uterine pregnancy, and the patient was examined by a number of surgeons, who agreed in the diagnosis. The history and the symptoms indicated that the patient was at the full term of pregnancy, and it was decided that immediate surgical interference was imperative. An incision six inches in length was made in the linea alba. The exposed tumor much resembled the pregnant uterus. The incision was extended above the umbilicus, and it was positively determined that the case was one of uterine pregnancy. The uterus was drawn forward, and its anterior wall cut through. The writer had not conceived it possible for the uterine tissue to be prolonged from the epigastrium to three inches beyond the vaginal notch. A vigorous female child, weighing seven or eight pounds, was removed. The hemorrhage was not great. The placenta was removed without difficulty. The incision in the uterus was closed with deep and superficial catgut sutures. The peritoneum was closed with a continuous suture, and the abdominal wall with harelip-pins and superficial sutures. Antiseptic precautions were adopted throughout the operation, but septicæmia developed, the patient living but four days.

At the autopsy there was found no decided injection of the peritoneum. Two moderate-sized clots were found on the peritoneum, the cavity containing nearly a quart of bloody serum. The uterus was one-half its former size, measuring from fundus to os externum twelve inches. The cervix measured six inches. The wound was found gaping throughout.

The author then gave an extended review of the literature of the subject, and related similar cases by various operators.

To the paper was appended

A LETTER FROM MR. LAWSON TAIT,

indorsing the performance of abdominal section in the above case, and asserting his strong objections to operations looking to the breaking up of the fœtus. He thought that a preferable operation in the present case would have been the Porro operation. This would probably have been successful as regards both the mother and the child.

Adjourned.

THIRD DAY—MORNING SESSION.

DR. T. F. PREWITT, of St. Louis, read the first paper, which was entitled

TRAUMATIC ANEURISM OF THE INTERNAL CAROTID ARTERY.

The speaker first referred to those cases of spontaneous aneurism of the internal carotid artery which are found in literature, and the frequency with which this lesion had been confounded with cynanche tonsillaris. He had been unable to find more than one reported case of traumatic aneurism of this artery. This was reported by Dr. William T. Briggs, of Nashville. The aneurism in that case followed a stab wound, and was operated on successfully.

Dr. Prewitt then described the following case: E. J——, colored, seventeen years of age, was shot by her husband early in January, 1885. The weapon used was a revolver carrying a No. 32 ball. The shot was fired at a distance of two feet, and entered the cheek over the malar bone, ranging backward. There was profuse hemorrhage at the wound of entrance; there was no wound of exit; the bleeding was controlled by compression. There was hemorrhage from the ear at the time, and this recurred on two or three occasions. For some time after the accident the patient stated that there was some hemorrhage from the mouth and nose on rising in the morning. There was some swelling at the time, which gradually increased until April 2d, when she was seen by the speaker. It then projected into the pharyngeal cavity and rested against the uvula, and extended externally from the anterior petrous portion of the temporal bone to the hyoid bone. The swelling pulsated in every direction, and gave thrill and bruit. Immediately after the accident there was paralysis of taste and of the right side of the tongue; this continued. Pressure upon the carotid artery arrested the pulsation in the tumor. There was no difference in the pulsation of the two temporal arteries; the pupils were equal and responded normally to light. There was persistent headache, with sounds in the ear, which were increased by lying upon that side. The voice was greatly interfered with, owing to paralysis of the right vocal cord. The appetite was poor and the patient emaciated; she was unable to swallow solids, and fluids regurgitated when the attempt to swallow was made.

With this history and with these symptoms it was decided that there was an aneurism of the internal carotid artery, and that the vessel had been wounded near the carotid foramen, for nowhere else are the artery and nerve in such intimate connection.

It was determined to at once ligate the common carotid artery. The usual incision was made, and the dissection continued until the artery was exposed. A silk ligature was passed from behind forward. The vessel was then lifted, to be sure that the pulsation was arrested before the ligature was applied. Finding that it was, the vessel was then tied. The pulsation was at first arrested, but in a few minutes it could be again felt. In the absence of all precedent it was concluded to extend the incision upward in front of the tragus, and determine the feasibility of opening the sac and tying the distal end. This was a forlorn hope, for the diagnosis was that the aneurism was seated just external to the carotid foramen. An incision was then made below the ear, and extended upward back of the ear. A cautious dissection revealed the fact that the sac filled all the space between the mastoid process behind and the condyles and ramus of the jaw in front. It extended to the base of the skull, to which it was closely adherent. It was, therefore, impossible to reach the artery in that direction. Further attempts were abandoned, the wound was closed, a drainage-tube inserted, and an antiseptic dressing applied. On the eighth day there was some hemorrhage from an opening near the angle of the jaw. This was repeated, and she spat up some blood on the following

day. Examination showed a little coagulum at the angle of the jaw, which was removed, and the left forefinger thrust into the opening. No coagulum could be felt within the sac. The attempt to detect the entrance of the artery with the finger failed. In order to avoid the hemorrhage which would follow the removal of the finger, the sac was stuffed with lint treated with iodoform. This controlled the bleeding. The patient gradually became weaker, and died on the twenty-fifth day after operation, from exhaustion. Ten days after the sac was stuffed epileptiform convulsions, involving the facial muscles and the flexors of the forearm and hand, appeared. These continued at intervals until her death.

The post-mortem showed the ball in the posterior part of the sac. The opening of the carotid artery was found close to the carotid foramen, and seemed blocked up with clot. The blood-vessels of the membranes of the brain were congested, particularly on the right side. The inferior petrosal and lateral sinuses were filled with thrombi up to the torcular herophili.

DISCUSSION.

Dr. William T. Briggs, of Nashville, remarked that the case which he had reported at a previous meeting of the Association was that of a young man stabbed in the neck. Five weeks later the patient presented himself at the clinic with a swelling of the neck giving all the signs of a small aneurism of one of the branches of the external carotid artery that could be readily reached and ligated. An opening large enough to permit the introduction of the finger was made, and at once it was found that the condition was more serious. The hemorrhage was controlled by stuffing a sponge into the sac, and the common carotid ligated. When the sponge was removed, the hemorrhage was as free as before. The opening in the sac was then enlarged, the opening of the artery having been found and controlled by the finger. The vessel was then hooked up, and a ligature applied above and below the sac. The patient recovered, and is still living in perfect health.

Dr. D. Hayes Agnew, of Philadelphia, described the following case: About three years ago a woman presented herself at the University Hospital, with a tumor as large as an orange just beneath and behind the angle of the jaw. There was also a projection into the pharynx. This tumor had grown slowly for eight months, and was attributed to a blow on the side of the head. It was considered a case of aneurism of the internal carotid, and the speaker ligated the common carotid above the omo-hyoid muscle. The pulsation was diminished, but it could still be felt. He then tied the superior thyroid and the lingual; this stopped all pulsation. The patient did well for two weeks, when pulsation again returned. Pressure on the carotid of the other side controlled the pulsation, and he then placed a ligature around the primitive carotid of that side. During his absence from the city ulceration took place, and a gush of blood into the pharynx occurred. The resident stuffed the cavity, but the patient died eight days later, apparently from septic poison. In case rupture occurred, Dr. Agnew had determined to lay the sac open and have tied above and below. From the history of the cases he believes that in this condition the operation should be a formal one of section of the jaw and ligature above and below the sac.

Dr. A. Vanderveer, of Albany, reported the following: In December, 1882, a man, forty-two years of age, a farmer, was sent to him with a swelling of the neck, which was diagnosed to be an aneurism of the internal carotid artery. It was attributed by him to forced motion of the head to one side which was required in a certain part of his work. It was decided to first try compression. This was faithfully carried out, and at the end of six days the swelling was much diminished, and the tumor in the pharynx seemed more solid. He then went to his home, but returned one month later, the previous condition having returned. Compression was again tried, and at the end of five days there was a marked diminution in the the size of the tumor. He again returned home and continued in apparently good health for four or five weeks, when he suddenly complained of a severe pain in his head and fell dead. An autopsy was made, but no satisfactory explanation of his death could be found. The physician was inclined to attribute it to apoplexy.

Dr. L. McLane Tiffany, of Baltimore, said that in the case reported there was no room for a distal ligature. It might, however, have been possible to apply a compress, pressing the artery against the base of the skull. A record of such a case is found in Guthrie's "Commentaries." It is the case of Twitchel, of New Hampshire. A man had part of his neck blown away by a cannon-shot, exposing the carotid artery. Ten days later, while the physician was in the house, the artery gave way. The hemorrhage was controlled by the finger, and a ligature applied below the opening. The hemorrhage continued when the finger was removed. There was not room for a ligature on the distal portion of the vessel. The doctor made a graduated compress and pressed the artery against the base of the skull. The patient recovered.

Dr. T. F. Prewitt, of St. Louis, agreed with those who had taken part in the discussion, that the old operation is the proper one for traumatic aneurism where it is possible to apply it. In this case this could not be done. Compression had been alluded to, but we should not expect compression to succeed in a case where ligation failed. If the circumstances had been suitable, he would have tried compression, but the symptoms were too urgent to permit of this.

The next paper, by Dr. Roswell Park, of Buffalo, was entitled

LIPOMA TESTIS, OR A LARGE ACCUMULATION OF FAT IN THE TUNICA VAGINALIS.

J. P——, aged forty, was first seen in September, 1885. For eighteen months the patient had noticed a slow but continuous enlargement of the right testicle. This was almost painless, but caused inconvenience by its weight. At this time the tumor had reached the size of a cocoanut.

Examination showed the scrotum to be filled with a large mass, the testicles being crowded into a small pace at its upper part. This mass was solid, yet soft and not tender. Obscure fluctuation was noticed, but no fluid was obtained upon explorative puncture. The patient's general appearance excluded all idea of malignancy. The scrotal integument moved with perfect freedom over the tumor.

On October 4th the patient was operated on. A free incision through the tunica vaginalis revealed a mass of densely packed fat, which was slightly adherent but was turned out without difficulty. On separating the lobular masses by the fingers, the right testicle was found incorporated with the mass by apparently intimate tissue-connection. Finding the fibrous trabecula and blood-vessels radiating from the testicle to the fatty mass so numerous and distinct, it was decided to remove the whole en masse, which was done. The patient recovered without incident. After removal the mass weighed three pounds.

Dr. Park also read a paper entitled

NEPHRECTOMY ON A PATIENT TWENTY-THREE MONTHS OLD.

B. B——, born October 4, 1883, appeared at birth to be perfectly healthy. During the following winter the nurse noticed an enlargement in the right side of the abdomen.

July 31, 1885, the attention of the writer was called to the child, who appeared to be perfectly healthy. There was a history of steady enlargement of the growth. Examination of the abdomen revealed a firm, resisting tumor, about the size and shape of the fœtal head at term, occupying the right half of the abdominal cavity. A portion

of the fluid was removed and examined with negative results. The diagnosis was fibro-cystic tumor of the right kidney, probably of congenital origin. Five weeks later the tumor was found to have increased decidedly in size, and operation was decided upon.

The operation was performed September 15, 1885. An incision was made in the right semilunaris. Slight adhesions were found. The peritoneum covering the growth was incised, and the tumor shelled out without much difficulty. The pedicle was tied and dropped into the abdominal cavity. On the twelfth day the patient was removed to his home, and now, seven months after operation, is perfectly well. The tumor proved to be a fibro-cystic tumor of the right kidney, the cystic element predominating. Immediately after removal it weighed four pounds.

The case reported appears to be the youngest who has survived nephrectomy, he being twenty-three months old at the time of operation. The abdominal incision in this case was made not from choice, but from necessity, the tumor being altogether too large for extraction through a small opening in the lumbar region.

Dr. W. W. Keen, of Philadelphia, then read a paper on

STRETCHING OF THE FACIAL NERVE.

He first related a recent case in which he had done the operation, and added a table of the twenty-one cases so far reported.

His own case was that of a woman forty-eight years of age. She had had severe attacks of nervous trouble in early childhood, and had twice been paralyzed. Five years ago, coincident with menstrual disturbances, her right eyelids began to twitch, and in six months the whole face and the platysma were incessantly in spasm, which was increased by mental or muscular effort, such as eating, speaking, or being spoken to. Later, this was accompanied with constant pain.

In June, 1884, the right infra-orbital had been resected, with partial relief for only six weeks. Not long after the twitching extended to the right side and leg.

April 2d, Dr. Keen cut down on the seventh nerve by an incision behind the right ear, displacing the parotid gland forward and getting access to the nerve just after its exit from the stylo-mastoid foramen. Imbedded in connective tissue, it required considerable search and dissection to lay bare the nerve in this case. The exact point of its entrance into the parotid was quickly discovered by a very weak current of electricity, one electrode being placed on the cheek and the other, consisting simply of the wire, being touched at successive points from above downward. The trunk was then laid bare and stretched, the force being estimated at four or five pounds, just short of lifting the entire head.

Total facial palsy followed, with relief not only from the spasms in the face and neck, but also of that in the side and leg. The wound healed in four days, when the sutures were removed, the highest temperature having been 100.4°. The operation was done twenty-five days ago, and so far there has been no return of the spasms.

Next a table of the other twenty cases so far reported since Baum in 1878 first stretched the facial nerve was given, with remarks upon the operation.

The speaker preferred Baum's method of operating decidedly to Heuter's, in which the nerve is reached through the parotid gland. He bandages the lower jaw and gives fluid food for three or four days in order to keep the parts quiet while healing.

He called attention to two cases in which a palsy existing prior to the operation was benefited by the nerve-stretching, both electrical and voluntary control being obtained to some extent, and he suggested that in persistent facial palsy stretching of the facial nerve be tried as a therapeutic operation.

The discussion of Dr. Keen's paper was postponed to the afternoon session.

Adjourned.

(To be continued.)

THE FIFTH GERMAN CONGRESS FOR INTERNAL MEDICINE.

Held at Wiesbaden, April 14, 15, 16, and 17, 1886.

PROFESSOR LEYDEN, PRESIDENT, IN THE CHAIR.

WEDNESDAY, APRIL 14TH—FIRST DAY.

THERE was a full attendance at the opening of the Congress of the regular members, of which there are about two hundred, and there were also delegations of physicians from Switzerland and Holland.

The PRESIDENT, in his

OPENING ADDRESS,

said that while fully recognizing the great services rendered to medicine by recent discoveries in the exact natural sciences, it was important to remember that our art—applied medicine—must be practical, dependent mainly upon observation, and inseparable from the experience of former times.

PROFESSOR FRAENTZEL, of Berlin, then read the first paper, entitled

THE OPERATIVE TREATMENT OF PLEURITIC EXUDATIONS.

After a few general considerations, the author divided his subject according to the nature of the different exudations, giving the indications for operation and the mode of procedure in each case.

SERO-FIBRINOUS EXUDATIONS.

The indications for operative interference first given by Trousseau hold good to-day. Traube did much to propagate Trousseau's views in Germany, but it was through Bowditch's discovery of the possibility of uncovering the fluid by aspiration that the operation lost all the dangers that formerly surrounded it. Since 1871, the speaker had removed sero-fibrinous exudations by aspirations in more than four hundred cases, and without a single death attributable to the operation. He used a very small trocar and canula, made on the principle of Emmet's instrument for evacuating cysts, aspirates slowly, and withdraws no more than 1,500 c.c. in the course of half an hour at one sitting. He believed that in this way too sudden re-expansion of the compressed lung, with the symptoms of severe coughing fits, collapse, etc., are almost always avoided. The patient being always in the recumbent position (to avoid fainting), with shoulders slightly elevated, he drives his instrument with a rapid push through the fifth intercostal space on the left, through the fourth on the right side, between the mammillary and axillary lines, never posteriorly to axillary line unless it be for sacculated empyema prior to incision. The vital indications for operation are immense accumulation, suddenly disturbed or impeded circulation, threatening œdema in the lung of the sound side, and symptoms of collapse. In the general run of cases, the author considered it time to operate when the fluid reaches up to the third rib. Unless there be some vital indication, he waits until all fever has left the patient, and aspirates at the end of the second week in children, of the third week in grown persons. He never hesitates to repeat the operation as often as may be required in intervals of three or five or seven days.

HEMORRHAGIC EXUDATIONS.

Where the fluid contains but a slight admixture of blood, he does not hesitate to evacuate the chest, but real sanguinolent exudations should not be operated upon.

EMPYEMA.

In this condition the speaker advised the radical operation by one-inch or two-inch incision, with or without subperiosteal resection of a piece of rib in the same intercostal spaces as above. There should be thorough evacuation and cleansing of the cavity, to be continued until the warm water returns pure; then the

cavity should be washed with a weak antiseptic solution, and well drained, and the wound covered with an antiseptic dressing. The cavity must be thoroughly washed out again whenever the thermometer shows any rise of temperature; when suppuration continues, a broad rather flat silver or hard-rubber canula, without side plate, is introduced, and left as long as may be necessary.

PYO-PNEUMO-THORAX,

when of traumatic origin, is treated by the radical operation, when it is certain that the pleuritic exudation existed prior to the development of gas in the thorax.

PNEUMO-THORAX.

In the non-traumatic form of this affection, when a vital indication demands it, a puncture may be made, but great care must be taken to avoid the ingress of air. The author had seen several cases of pneumo-thorax in which the exudation has remained serous for three months.

With regard to the occurrence of rapidly developing and very large pleuritic exudations, he found that they mostly occur in individuals that are either phthisical or will soon become so—an experience in which all the members who took part in the discussion seemed to agree.

In the ensuing discussion, H. WEBER, of Halle, and FRIEDLER, of Dresden, were agreed that it is unnecessary to wait for aspiration until the patient is free of fever. They had operated in many cases in the second week, and even earlier, and repeated the operation as often as they saw fit, without apparent detriment to their patients. They also evacuated the fluid more rapidly than Fræntzel did, and do not hesitate to remove all, or nearly all, of it a tone sitting. They did not employ a trocar, but a sharp, good-sized aspirator-needle, in which a canula, with large eye on the side of the distal end, can be moved forward to and beyond the cutting point of the needle. To the proximal end of the instrument a tube, consisting partly of glass, partly of rubber, and from two to three inches in length, is attached. The tube, being filled with carbolized solution, is attached to the needle-apparatus, then dipped into a vessel at the bedside also filled with antiseptic liquid. The tube acts as a lever, and by depressing one end of it more or less down into the receiving-vessel, the exudation is withdrawn with varying rapidity and great ease, and no air can possibly enter into the thoracic cavity. The speakers preferred this apparatus to the aspirators generally in use, and have found it to facilitate the operation, making it perfectly safe at the same time.

DR. LITTUC proposed to resect, in the operation for empyema, a piece of the lower margin of one and the upper of the other rib, creating thereby an osseous channel which cannot contract, and would therefore have many obvious advantages. He said he had been pleased with this procedure, but others who have tried it found that they cut the intercostal artery in taking a piece off the lower part of the rib, and had great trouble in securing the bleeding vessel. Should the intercostal artery be injured after taking away an entire piece of a rib, there would be no difficulty in tying the vessel.

PROFESSOR JÜRGENSEN rose to say that for diagnostic purposes he as well as others had often thrust a hypodermic needle into the lung-tissue, and that it was never followed by any bad consequences. As to thoracic fistula in empyema, he had seen a number of cases that led him to believe that there was in consequence of this particular kind of chronic suppuration a great disposition to the development of amyloid degeneration.

A POOR JOKE.—Some would-be wag recently sent a check for $5,000 to St. George's Hospital, London, and its receipt was acknowledged with thanks. But upon presentation of the check at the bank it was ascertained that the donor had no account there.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from April 25 to May 1, 1886.

CORSON, JOSEPH K., Captain and Assistant Surgeon. Granted ten (10) days' extension of leave of absence granted in Orders No. 79, April 15, 1886, Jefferson Barracks, Mo. S. O. 97, A. G. O., April 26, 1886.

WILSON, WM. J., Captain and Assistant Surgeon (Platts-burg Barracks, N. Y.). Granted leave of absence for one month on surgeon's certificate of disability. S. O. 25, Division of Atlantic, April 27, 1886.

BENHAM, ROBERT B., Captain and Assistant Surgeon. Ordered from Department of Texas to Department of Dakota. S. O. 97, A. G. O., April 26, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 1, 1886.

WILBER, F. W. F., Assistant Surgeon. Detached from R. S. Vermont, and ordered to the Hartford.

TRACY, ELMER C., Assistant Surgeon. Ordered to the Vermont.

WAGGENER, J. R., Passed Assistant Surgeon. Detached from the Hartford, and ordered to the Iroquois.

BRANSFORD, J. F., Surgeon. Detached from the Iroquois, to proceed home and await orders.

KITE, ISAAC W., Assistant Surgeon. To duty at Naval Hospital, Brooklyn, N. Y.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 1, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
May 1, 1886.....	0	2	61	8	23	64	0	0
Deaths.								
May 1, 1886.....	0	0	9	7	1	30	1	0

BINIODIDE OF MERCURY.—The great drawback of the employment of the biniodide of mercury as an external application consists in its insolubility. M. Méhn, Member of the Academy of Medicine in the Pharmaceutical Section, has overcome this difficulty by recommending the salt to be rubbed up with castor-oil, which completely dissolves it. A solution of one part of the salt to fifty parts of castor-oil does not become cloudy. This solution is sufficient to satisfy the exigencies of therapeutics. The addition of iodide of potassium increases the solubility of the biniodide of mercury in castor-oil.—Paris correspondent of *The American Practitioner and News.*

SPONGE MUSTARD-PLASTERS.—Richardson makes use of a simple sponge, dipped in a mixture of flour and mustard, whenever it is desired to apply a sinapism. The sponge, filled with mustard paste, is covered with a moist handkerchief and applied to the part. The same sinapism may be reapplied three or four times without renewing the mustard, simply warming the sponge. When the application is no more desired, the sponge may be washed in warm water, and is then ready for any other use.

The Medical Record

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Original Articles.

DIABETIC COMA FROM A CLINICAL STANDPOINT.[1]

BY ROBERT J. DEVLIN, M.D.,

ASSISTANT PHYSICIAN [illegible]
INSTRUCTOR [illegible]

I INTEND, this evening, to consider a group of symptoms, usually associated with the more severe types of glycosuria, and forming the terminal phenomena in a large percentage of the fatal cases, at least in recent years.

It derives a special interest from the obscurity which surrounds its origin, its, for the most part, unsuspected onset, and the tragic course of symptoms toward a death which seems to be but rarely averted when once the condition has advanced to the stage of coma.

Broadly speaking, we understand by the term diabetic coma a series of symptoms occurring in a patient, the subject of glycosuria, of which the most characteristic are a more or less sudden failure of vital strength, a peculiar dyspnœa, and a condition of mental hebetude tending to progress into fatal coma.

It is certainly remarkable that while diabetes mellitus and its fatal tendency have been clearly recognized by the profession for over two centuries, it is only within the past twelve years that any special notice has been taken of these peculiar phenomena.

Cases of sudden death, preceded by coma, variously ascribed to exhaustion, uræmia, apoplexy, meningitis, etc., have been reported often enough; but details as to the terminal symptoms are scanty, and no reference is made to those we now consider most characteristic Even when an autopsy was made they are briefly dismissed with the comment that no lesions were found, with the naked eye, sufficient to account for death.

In 1874 Kussmaul[2] published three cases, possessing certain features in common, which exhibited a mode of fatal termination till then undescribed.

Since then a considerable literature has grown up on this subject, and a large number of more or less carefully recorded cases have been reported.

Perhaps, very properly, the pathological has taken precedence of the clinical discussion, but thus far with singularly barren results. At present we have no theory which will satisfactorily explain even a respectable minority of the cases.

It is my purpose to avoid, as far as possible, all reference to disputed pathology, and confine myself to the following clinical features of this so-called complication of glycosuria, in the endeavor to ascertain from the published cases: the class of diabetics most apt to fall into fatal coma; the various causes which seem to produce or precipitate it; the premonitory signs, if there be any of value in predicting its appearance; the onset and course; and subsequently to consider—the occurrence of abortive attacks, and the prophylactic care and medical treatment best suited to limit such cases.

In endeavoring to collect cases from which to obtain data there have been several sources of difficulty.

With the time and facilities at my disposal it has been impossible to collate all the published cases.

When references had been laboriously hunted through the various journals to their original source, they often proved entirely useless for the purpose intended. In many, from failure to mention the presence or absence of certain symptoms, or to note the condition of the chief viscera, the diagnosis was doubtful. In some nothing but the lethal symptoms are given. In others only facts bearing on certain pathological theories are stated. And in the great majority the details, when given, are expressed in such general and indefinite language as to defy any attempt at tabulation. Certain other groups are summarized, often with great clearness, but the individual histories are not accessible.

Even a superficial examination of the fatal cases shows such a wide range of difference in their phenomena that it is desirable, for the sake of clearness, to divide them into various groups, without, however, of necessity implying any essential difference in their pathology.

The division found most convenient is very nearly that adopted by Frerichs.[1]

The first class comprises those which are characterized mainly by sudden onset of collapse symptoms, followed speedily by coma and death.

There seems to be nothing, either in the age of the patient, the duration of the disease, the intensity of the symptoms, the previous medication, diet, or general nutrition of the patient, which specially predispose to this form. The majority of the patients had apparently been doing tolerably well, showing no marked signs of exhaustion or impending heart failure; nearly all of them had been able to be up and about until the seizure; in several cases there is nothing to show that the patients considered themselves invalids; in two cases the diagnosis of diabetes mellitus was only made by post-mortem examination of the urine; sometimes the attack has come on during a period when all the morbid symptoms were improving rapidly.

The exciting cause has usually been some unwonted physical exertion or a long journey. In one case—a patient for some time confined to the hospital ward—it followed great mental depression from the receipt of bad news.

There are usually no premonitory signs; the patient is seized with symptoms closely resembling those of surgical shock, preceded by a sudden profound exhaustion.

There is no pain, very rarely vomiting, no dyspnœa of the kind described by Kussmaul, although the respiration may be somewhat hurried and superficial. The pulse is very feeble and flickering.

There is nothing that can fairly be called a stage of delirium. The patient is rather apathetic, even while still able to answer questions. In a short time he becomes absolutely comatose, and death follows usually within a few hours.

In none of the reported cases is there any mention of an ethereal odor to the breath, or any reaction of the urine with ferri chloridum, such as will be spoken of later, although several are reported by observers who in other cases have noted these phenomena.

The indications as to prophylaxis are obvious enough, but unfortunately there seems to be no way by which to distinguish such cases in advance from those which live for years, enduring the ordinary fatigues and excitements of daily life, to which certain others succumb so readily.

Perhaps systematic physical examination of the condi-

[1] Read before the Section on Practice of Medicine of the New York Academy of Medicine, April 20, 1886.

[2] Deut. Archiv f. klin. Med., xiv., 1.

[1] [illegible]

tion of the heart and the use of the sphygmograph should be a routine procedure in diabetes, and the indications thus afforded may prove of value; but I have been unable to find any observations bearing on this subject.

It is not at all evident that the class of cases above mentioned have much in common with the variety described by Kussmaul, and to which perhaps the term diabetic coma should be restricted.

In all exhausting diseases which profoundly modify the conditions of nutrition, terminal phenomena are occasionally met with which are scarcely distinguishable from the above, except in the one feature of glycosuria. Sudden death from contracted kidney, with so-called uræmia, might be instanced.

By far the greater number of cases of diabetic coma fall into the second class, and exhibit phenomena having a remarkable likeness to the effects of an organic poison.

If we seek to discover the predisposing causes which influence—or, perhaps more accurately stated, the conditions which precede and appear to influence—the occurrence of this form of sudden death in diabetes, we shall enter upon a task of exceeding difficulty; for no statement can be made which is not challenged by numerous recorded exceptions.

Nevertheless there are certain factors which are sufficiently constant to give them a considerable value in prognosis.

Systematic treatises on diabetes recognize two types of the non-symptomatic cases. One is characterized by an ability on the part of the organism to assimilate at least a small amount of carbohydrate food. Such are free from glycosuria and its attendant evils when the diet contains a minimum quantity of such elements. Hence they are to a certain extent amenable to treatment. The other class of cases excrete sugar in excess of the quantitative equivalent contained in the food, and even when such elements are entirely withdrawn. These latter tend to every variety of fatal termination with much greater rapidity than the former.

This division, while convenient and of great clinical importance, is nevertheless quite artificial, for many cases pass from one to the other form at different periods of their history, and but few are observed with an accuracy which gives much confidence in the results stated. However, it would seem that death by coma is a more frequent termination in the severe than in the mild types; at all events such is noted in those which are under continuous treatment.

In a large number which have come under observation but a few days before the onset of coma, and in which rigorous treatment was adopted at once, the sugar has suddenly disappeared—its disappearance being shortly followed by grave symptoms. Of course, we are in doubt whether to class such cases as of the first type, or to attribute the disappearance of the sugar to the same unknown cause which determines the coma. Especially when we see that in certain cases under close observation but very lax dietary, the same diminution or disappearance of both the glycosuria and the polyuria has also preceded the fatal symptoms.

This subject will again be referred to in discussing the effect of diet.

The element of age has always been regarded as very important, namely, the younger the patient the more likely is death by coma.

Mackenzie,[1] in analyzing thirty-seven consecutive deaths from diabetes in the London Hospital, remarks, that with one exception all dying under the age of twenty-five years died of coma. Dreschfeld,[2] in an analysis of fifty cases, the details of which I have not been able to find, remarks that it occurs chiefly in early life. I have tabulated ninety-eight cases in which a definite statement is made as to the age, and find that the average is twenty-nine and two-thirds years. And in twenty-two other cases in which no exact statement is made, eight are designated as adults, nine as young, one each as middled-aged, boy, and child, and in two no hint is given. The extremes are a case reported by Dr. Schmitz, of Neuenahr,[3] aged seven years, and one reported by Dr. Quincke,[3] aged sixty-two years.

For comparison I have computed the average age of the fatal cases from all causes given in the clinical appendix to Siegen's[3] treatise on Diabetes, and those given in a table of all the deaths which occurred in New York City from diabetes, during a period of three years and three months, taken from a paper read before this Academy by Dr. Gouverneur Smith[4] in 1871, giving a total of ninety-five deaths and an average age of forty-nine years. No cases are included in both lists.

Any statement as to the duration of the disease is open to serious doubt, since the early history of diabetes is in general made up of very indefinite symptoms, and the diagnosis is rarely made until the condition has existed for some time. The histories I have examined afford very little information that is worth stating in figures. Nevertheless it is quite evident that as a class comatose cases are those which present an acute invasion and rapid progress of the usual diabetic symptoms. Southey[5] reports a case in which polyuria was suddenly developed two weeks before the patient—a girl, aged seventeen—came under observation; five days later death ensued by coma.

I have seen a case of still shorter duration, in which only sixteen days elapsed between the sudden onset of polyuria and the fatal termination. This patient was a boy, twelve years of age, who came under observation only two days before death, and after the onset of the comatose attack. He had not been under treatment, and from the time he was first seen the anorexia was complete. With these may be contrasted the case reported by Quincke, and referred to above, in which the patient was a man, aged sixty-two, diabetic for ten years, during which time the disease was held in check by dietetic treatment. He died within twenty-four hours after the onset of the attack, which, we are led to infer, was the result of excesses in diet, although this is not explicitly stated.

In these cases we have illustrations of extreme variations of age of patient, duration of the disease, and severity of type, with a similar mode of termination.

Pavy,[6] Taylor,[7] and others, call attention to the fact that those cases which terminate in coma are in all but a few instances free from pulmonary complications, or, at any rate, are free from the rapid form of phthisis frequently termed diabetic.

On this point the following statistics may be given: In 133 cases the lungs were stated to be normal in 82, phthisis was present in 14, pneumonia in 7, bronchitis in 2, pleurisy with effusion, 1. In 27 no record was made.

These figures are in part drawn from physical examination and in part from accounts of autopsies, when such were given. Of course the accuracy of the former data may be questioned. The following are those based on autopsies—bronchitis, pleuritic thickenings, hypernæmia, and œdema of the lungs being accounted as negative: Pulmonary changes found in 30; lungs normal in 30. In 45 unselected autopsies of diabetics given by Siegen the lungs were found to be normal in only 12, judged by the above standard. In by far the greater number of cases the patients exhibited the usual symptoms in a well-pronounced form. Emaciation and failure of strength had generally advanced to a profound degree, although there are exceptionally cases which showed very little depreciation of the general health and body-weight.

[1] Brit. Med. Journ., April 7, 1883.
[2] Ibid., October 2, 1886.
[1] Deut. Med. Woch., 1881, S. [illegible].
[2] Berl. Klin. Woch., 1880, S. 1.
[3] Der Diabetes Mellitus. Berlin, 1876.
[4] New York Med. Journ., vol. xiii.
[5] Lancet, February 8, 1879.
[6] On Diabetes.
[7] Guy's Hosp. Rep., xxv., p. 147 et seq.

Many were capable of active exercise, and even hard work, up to the last few days, or, in some cases until the actual onset of the symptoms. In a few the general health had continued so good that the diagnosis was only made post-mortem.

Observations as to the occurrence of albumen and casts in the urine, and the results of minute post-mortem examinations of the kidneys are not sufficiently numerous or systematic to warrant any general statement. In cases in which any record is made of the presence or absence of albuminuria before the attack, it is more frequent to record its absence. When albumen, in any notable amount, and casts have been found in cases of diabetes which terminated in coma, it is usual to state that the death was by uræmia, chronic Bright's disease, nephritis, etc., and to omit all details.

Hence we may infer that in cases reported as diabetic coma these appearances have not been present, or perhaps have not been looked for. More accurate observation in all cases of glycosuria is needed to settle this point.

The onset of urgent symptoms has been attributed to a great variety of exciting causes, the most constant of which are sudden fatigue or nervous excitement, intercurrent disease—particularly of a suppurative or gangrenous character—bronchitis, injudicious use of opium, insufficient supply of fluids, and lastly, errors in dietetic management.

Certain other elements, such as gastro-intestinal disturbances, neuralgias, and the like, may be regarded either as exciting causes or merely as prodromal symptoms. There are other cases which arise in the absence of any assignable cause, and when the patient's condition and environment have undergone no recent changes.

Of all the causes above mentioned, fatigue has been set down in the greatest number of cases, and yet the more closely we analyze the circumstances the less satisfactory will appear the reasons.

There seems no doubt of its potency in the class of cases first mentioned, in which the clinical picture is simply heart failure and collapse; but in those we are now discussing we must look further for the causes to which fatigue or mental excitement may act as an adjuvant. A journey to a hospital or to see a celebrated physician is shortly followed by bad symptoms. But patients in chronic diseases, as a rule, do not enter hospitals or undertake long journeys to consulting physicians or health resorts until symptoms arise which lead them to lose confidence in their former advisers. How many histories begin with: "While feeling tired and out of sorts he undertook to walk," etc.?

When we consider that patients are apt to set a higher value than their physicians upon the presence of vague symptoms, such as malaise, general tired feeling, loss of appetite, oppression about the chest, which often are the first premonitory symptoms, we can easily believe that these have been underestimated by the reporter who states that the patient left home in his usual health. When the connection between fatigue and coma seems unquestionable, the sequence is almost immediate. In many of the cases the physical exertion assigned as the cause is so slight that, if we ascribe much importance to this factor acting by itself, we may do harm by forbidding the exercise which is so helpful to the proper assimilation of a highly nitrogenous and at the same time superabundant diet.

Indeed Jaenicke[1] is disposed to attribute the relative frequency of nervous complications in those cases which are observed in hospital practice to the fact that the lack of exercise, combined with an exclusive animal diet, forming a sharp contrast to the previous mode of life, leads to faulty metabolic action.

However, fatigue as well as nervous perturbations, and perhaps more justly surgical injuries, carbuncle, alveolar abscess, suppurative otitis, gangrene, bronchitis, and the like, may be said to precipitate an attack of impending coma in the same way that similar accidents may precipitate uræmic phenomena.

Some of the English authorities have set down the use of opium and its analogues in the list of causes.

Dickenson[2] believes that opiates exert an injurious influence by favoring dyspepsia and constipation.

Fagge[3] believes that opium, used to control diarrhœa or pain, can be held responsible for some of the deaths.

However, since the opiates were used to combat symptoms which we shall soon see may belong to the first stage of the attack, and since the subsequent progress of the cases differed very much from opium narcosis, I think that we need not be deterred from a cautious use of the only remedy which will relieve the agonizing pain so often present.

The effect of diet can be more conveniently discussed in a later section.

The premonitory symptoms are very varied. Sometimes for a period of weeks the patient will have mild dyspeptic symptoms, alternating with periods of improvement. The appetite is almost always markedly lessened; any reduction below the standard for a healthy person should be looked upon with suspicion. The patient who has been constipated begins to have unexplained loose movements, sometimes a profuse diarrhœa; or the bowels, previously tolerably regular, become obstinately constipated. Especially during the latter condition a peculiar odor to the breath is developed, which has been variously likened to decaying apples, sour beer, chloroform, etc. In these early stages it is never very pronounced, but during the fully developed attack often pervades the whole vicinity of the patient, and even extends to adjoining rooms. Acid eructations and nausea, with or without vomiting, are sometimes noted. Accompanying these gastro-intestinal symptoms there is often a peculiar sense of general prostration; the patient is disinclined to all exertion, physical or mental. There is a tendency toward drowsiness during the day, and the patient is often very despondent. Attacks of intense vertigo, frontal headache, neuralgic pains in various regions, are quite common.

A very constant symptom is an accelerated pulse, with or without decrease in volume.

The urine is usually diminished and the percentage of sugar reduced. An increased acidity has been noted. In a large number of cases, even during this stage, the urine strikes a reddish-brown color on the addition of ferric chloride.

Sometimes, when the amount of urine, the percentage of sugar, and the excessive appetite are suddenly reduced, with the other premonitory signs but slightly marked, the change is attributed to successful treatment, which notion is rudely dispelled by the speedy onset of cerebral symptoms.

Any sudden improvement in the objective signs which is not confirmed by the subjective sensations of the patient should put the physician on his guard.

After a variable period of such indefinite symptoms as have been described, the patient begins to complain of a feeling of depression, is restless at night, eats nothing; if constipated, takes the usual laxatives without result, complains of colicky pains through the abdomen, which may be distended with gas, or perhaps retracted. There is a sense of constriction about the thorax which causes the patient to breathe more deeply than usual. He vomits from time to time, usually in connection with paroxysms of epigastric pain, but without obtaining relief. The vomited matter is usually scanty and greenish, often having the peculiar odor of the breath. The patient tosses about in bed; if able to be up is unsteady in gait. Sometimes the vertigo is too intense to allow him to rise from a horizontal position, although the muscular strength may be sufficient.

[1] Deut. Arch. f. klin. Med., xxx., S. 135.

[2] Urinary and Renal Affections, Part I.

[3] Guy's Hosp. Rep., vol. xix.

The mental condition varies from excitability to mild talkative delirium, alternating with drowsy or stupid intervals. Even during the latter the patient can be readily aroused to take drink or medicines, and will answer questions in a dazed sort of way.

When he rouses spontaneously, it is usually the result of a paroxysm of abdominal pain which causes him to cry out. Examination of the abdomen fails to give any adequate explanation of this symptom.

Gradually the intervals of consciousness become fewer and shorter, and the patient lies quietly, with partly closed eyes, and can only be roused by loud noises or violent shaking. Finally the coma becomes unbroken, although in a few cases the patient has had brief returns to consciousness, during which he has been able to answer questions with a certain degree of intelligence shortly before death.

When coma is once fully established, the power of swallowing fluids is usually lost. In a few cases there have been convulsive twitchings of the facial muscles at the time of death. I can only find three cases in which there were general convulsions. One, a typical case in other respects, reported by Dr. Murrell;[1] another, reported by Dr. Fürbinger,[2] in a case in which, some time before death, the glycosuria was replaced by oxaluria of high intensity, the patient dying with symptoms resembling diabetic coma, but considered by the author as due to oxalic-acid poisoning; and a third, reported by Dr. Schmitz,[3] in a child, aged thirteen, in which the gastric symptoms were especially pronounced.

During the progress of these cerebral symptoms, and often preceding their full development, there is the peculiar dyspnœa so frequently alluded to. Its characteristic feature is an exaggerated respiratory effort, independent of the patient's volition, and not due to any obstruction to the entrance or exit of air to the lungs, or the free access of air to the pulmonary vesicles.

Cyanosis is slight or entirely absent. The respirations are generally quickened, but regular at first, and later in the progress of the case both the frequency and the depth of the inspirations may undergo a rhythmical variation similar to that known as Cheyne-Stokes.

The expiration has an expulsive character, amounting to a sigh, from time to time intensified to a loud groan.

The accessory muscles of respiration are all brought into play, and the picture resembles that of an unexperienced runner after a sharp spurt.

During the attack the quantity of urine secreted is almost invariably diminished. Occasionally there is complete suppression. During the stage of coma retention is usual, sometimes incontinence, which will frequently be found due to overflow.

The amount of sugar in cases in which careful record has been kept is found to be markedly reduced, often absent.

Albumen in small quantity is usually, but not invariably, detected.

In all but a few of the cases in which the test has been made, the reaction with ferri chloridum is observed.

In a smaller number of cases a peculiar odor to the breath develops, which has been so differently described as to lead to the belief that it is not the same in all cases. It was present in each of the three cases I have seen, and closely resembled the odor produced by shaking up a small quantity of chloroform with a few drops of acetic acid in a little water.

With the exception of the muscles of deglutition, no paralysis seems to have been noted. In one of my cases there was marked rigidity of the muscles of the lower limbs, separation of the knees requiring all the force I could exert; when released they slowly returned to firm adduction. Flexion and extension at the knee resisted, but not so strongly.

The condition of the pupils is not characteristic. The absence of patellar reflex is often noted, but this probably belongs to an earlier period of the disease.

Cutaneous anæsthesia seems to be quite common.

The temperature, in the absence of complications, is generally subnormal. In one case I have watched it rise from the normal at the beginning of the attack to 106.4° F. in the axilla, the last record being made one hour before death—the total duration of the pyrexia being about twelve hours. No complication was detected by careful and repeated examinations.

A certain number of cases exhibit a mode of onset and course which differs in so many respects from the above type that Frerichs assigns them to a separate class. They are characterized by a comparatively sudden onset; there are no premonitory symptoms that are sufficiently definite to deserve mention; they are preceded at a short interval by a more or less obvious cause, such as a carbuncle, a gangrenous toe, or the patient is seized immediately after some violent exertion or excitement, running to catch a train, or an outburst of anger, for example. The first symptom is usually headache or vertigo, followed by a condition so closely simulating alcoholic intoxication that the majority of cases have been mistaken for drunkenness until investigated. The patient passes rapidly into a stupid condition, merging into fatal coma. There may be no dyspnœa, nor are the pulse and muscular strength so notably affected at the outset as in the other variety.

I do not think that this class deserves an extended description. The type is ill-defined, and but few examples can be found which conform to it. In the ordinary form exceptional cases are met with in which dyspnœa is not well marked, and the pulse remains fairly good until just before death. In a great many cases the delirium has been noted as resembling alcoholism.

I have recently had charge of a case which presented some unusual features which merit being put on record.

The patient, a boy, aged sixteen years, whose family history is exceptionally good, had suffered from occasional incontinence of urine for about three years.

There does not appear to have been any actual polyuria, and with this exception he seemed to be perfectly well until about ten months before his death, when, without any history of traumatism, or any obvious cause, unless perhaps an immoderate indulgence in athletics, he began to fail in health, and was noticed to pass an increased quantity of urine. About five months later, these symptoms having meanwhile slowly increased, he became much worse, apparently as the result of a day of excessive fatigue and excitement. At its close he was seized with severe cramps in the legs, which lasted all night; and the flow of urine suddenly rose to twenty pints. Examination of the urine being now made for the first time, sugar was detected. After a period of several weeks, during which he was not under treatment, and in which the ordinary symptoms of severe glycosuria developed, he was put on strict diet, continued for six weeks, but without any improvement.

From that time ordinary bread, to the amount of several ounces daily, was allowed, but in other respects a pretty strict diet was maintained.[4]

For three months previous to the time I first saw him he had been taking a secret remedy, which apparently consisted of salicylate and bicarbonate of soda, with bitter tonics, acid drinks, and a considerable quantity of glycerine daily. During this period there was nothing special to note except a gradual failure of flesh and strength. The amount of urine remained as before, until three weeks before my first visit, when it suddenly diminished to a daily average of ten pints, and exhibited very marked fluctuations from day to day. On examination I found him extremely emaciated, his weight having been reduced at least one-fifth from his former standard. Had voracious appetite and great thirst, dry skin, a few small furuncles; caries of the teeth, several of which are loose; no odor to breath except a slight sweetish quality; axil-

[1] British Medical Journal, November 27, 1880.
[2] Deut. Archiv f. klin. Med., xxv., S. 479.

lary temperature, 96⅕° F.; heart and lungs normal to physical examination; myoidema very well marked; pulse, 108.

Examination: Urine 1.036, very strongly acid, no albumen; sugar, thirty-two grains to the ounce; passed one hundred and sixty ounces in the twenty four hours. Microscopic examination negative. In view of the gloomy prognosis which I gave, the family asked to be allowed to continue the remedies already in use. For some symptom which I do not now recall, I prescribed am. bromid., gr. xv., t.i.d. During the next week the urine averaged one hundred and fifty-three ounces daily, but with wide daily fluctuations. Several examinations showed the percentage of glucose—six and one-half—to be pretty constant.

At the end of this week I was called to see him again, and found that he had been suffering from a small alveolar abscess, which had kept him in a restless condition. This was now discharging freely. He also complained of supra-orbital neuralgia on one side, which had kept him awake during the first night. Stopped am. bromid. Calx sulphid., gr. ¼, 5 in diem.; codeia, gr. ¼, t.i.d. Examination: Urine one hundred and forty-four ounces, 1.031, specific gravity; sugar, twenty-six and one-half grains to the ounce, no albumen; reacts to ferri chlorid. feebly, which was at that time attributed to the salicylate which patient was taking, and which was then ordered to be discontinued. Three days later I was called again, and found that the supraorbital pain had disappeared soon after the last visit, and that he had been tolerably comfortable, although very weak and disinclined to eat, until eleven o'clock the previous night, when he was suddenly seized with severe pain in the left hypochondrium. Bowels have not moved in two days. Customary dose of compound licorice powder given yesterday has had no result. Urine in last twenty-four hours one hundred and forty-four ounces.

Examination at 11 A.M.—Pulse, 120; respiration, 18. Chloroform odor to breath, which friends state has been noticed several times before when bowels were constipated, but not so intense as at present. Seems slightly delirious at times. Pain continues in paroxysms. Examination of abdomen negative, except increased fulness over seat of pain. Ordered magnes. sulph., ʒ ij. q. 1 h., till bowels move. Codeia, gr. ⅛.

1.30 P.M.—Has been slightly drowsy, but is now quite excited; pain severe, pulse very rapid and weak. Stimulants ordered. Breathing has become suspiciously deep, but not increased in frequency.

2.30 P.M.—Enema given without result.

5.30 P.M.—Severe pain. Codeia, gr. ⅛. Breathing labored, eighteen to minute. Is only semi-conscious. Temperature, normal; pulse, 150.

8.30 P.M.—Has passed no urine since morning. Catheterized, and thirty-two ounces obtained, which contains ten per cent. of albumen, estimated by precipitate on boiling.

Subsequent examination showed gr. 1½ to ʒ j. by weight, and glucose gr. xv. to ʒ j. Faint reaction of urine with tr. ferri chlor. No acetone by Ralfe's test. Patient cannot be fully aroused. Chokes in swallowing.

Has now taken nearly ʒ ij. of magnes. sulph. and one seidlitz powder without result, and purgatives were now discontinued.

9.30 P.M.—Rectum cleared of semisolid fæces. Stimulants given hypodermatically. Is fully comatose. Oxygen was now administered by continuous inhalation, the delivery tube being passed well back in the mouth. Chloroform odor, which had become so intense as to pervade the entire cottage, was markedly diminished, but the respirations are deepened. Rigidity of lower limbs and tendency toward adduction noticed. Skin is distinctly warm to touch.

Midnight.—Oxygen has just been suspended for a short time. Respirations have a cycle of frequency, which is inversely as the depth, with total duration of twenty to forty-five seconds. Pulse, 150. Examination of chest negative.

1 A.M.—Oxygen acts promptly as a stimulant to the pulse, but has no good effect on the breathing. Incontinence of urine. Bladder found empty when catheterized. Cups applied over kidneys. Temperature in axilla 102½°. Other conditions unchanged. Oxygen continued at intervals merely as a cardiac stimulant. No evidence of cyanosis. Swallows fluids in small quantities if placed well back in pharynx, but with a good deal of choking. Pupils symmetrical, react well, but undergo a rhythmical contraction and dilatation. Every third expiration intensified into a loud groan, while the others are simply noisy. They are chiefly thoracic; the groaning expiration follows a peculiar spasmodic inspiration of extra depth, which calls into play the accessory muscles in the neck, and results in a bending back of the head and a depression of the lower jaw. Respirations 24 to minute.

4 A.M.—Temperature in axilla 105⅕°. All treatment discontinued. Examination of chest negative.

5 A.M.—Temperature in axilla 106⅖°. Pulse failing rapidly. Respirations are diminishing in intensity; less moaning. No cyanosis.

6 A.M.—Patient died quietly. No convulsive movement, except that eyes opened widely for a few seconds and then closed. No autopsy obtained.

In this case the marked depreciation in the patient's condition had made his family very anxious to have him removed from their summer cottage to the city, that he might be under closer medical supervision. Had this been done, the journey would probably have been held accountable for the fatal attack. Preparations had been made to perform transfusion, in case the use of oxygen was unsatisfactory; but in an isolated country cottage, and with all the attendants so prostrated by nervous excitement as to make them unavailable, this was out of the question, even had the pyrexia not been considered to be a contra-indication.

The effect of the oxygen on the pulse and the breath odor suggests further trial of this agent as an auxiliary in treatment.

Diabetic coma is too often regarded as simply a very interesting complex of symptoms ending in death.

There are numerous recorded instances of symptoms presenting too close a coincidence with those of diabetic coma, in its earlier stages, to permit us to doubt their nature, which have disappeared spontaneously or by treatment, and left the patient no worse off than before. And it is to these cases that we are chiefly indebted for an opportunity to study the causes and treatment of this condition.

Foster,[1] Schmitz,[1] Frerichs,[1] Jaenicke,[1] Jaksch,[2] Quincke,[2] and others give histories of diabetics which detail the appearance of symptoms of general prostration, malaise, anorexia, headache, vertigo, vomiting, abdominal pain, delirium alternating with drowsiness or stupor; deep, labored respiration, aromatic odor to breath, associated with the excretion of a substance in the urine giving the red reaction with chloride of iron. In certain cases the resemblance of the delirium to alcoholic intoxication is specially noted, and in a few cases there was recovery after a stage of complete unconsciousness.

Several of the patients died at a later period with the usual comatose phenomena, which, up to a certain point, were identical with those of attacks they had previously recovered from.

It would be interesting to repeat some of these histories in detail, but the limits of this paper do not permit. It must suffice to consider a few of their most striking lessons.

The most obvious is, that in them the history of previous fatigue or over-exertion rarely appears.

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[1] [illegible]

[2] Arch. f. [illegible]

They were, for the most part, well-pronounced cases of diabetes, under treatment in hospital by the usual dietetic measures, and in almost every case the starting-point seems to have been in some digestive derangement. Now, diabetics as a class are not apt to suffer from the ordinary symptoms of dyspepsia, at least while on a mixed diet; and if we look into the particulars of these cases we shall find, in the great majority of instances, either that the patient, while pursuing a more or less restricted diet, suddenly consumed a large quantity of sugar-forming food, and was then seized with vomiting, etc.; or that the diet had been suddenly and sharply restricted, and in a few days anorexia, headache, drowsiness, etc., appeared; or that the attack began after a prolonged deprivation of carbohydrate food, with somewhat insidious onset.

Of the first class Schmitz narrates two cases which recovered quite promptly when the intestinal tract was thoroughly emptied by large doses of castor-oil, although the condition had reached a high grade of intensity. In these cases it is interesting to note that the sugar disappeared from the urine during the attack, and did not return till convalescence began.

Of the second class Jaenicke and Ebstein give cases which show a sudden onset of nervous symptoms immediately following a change to absolute meat diet, and disappearing promptly when the diet was relaxed.

Of the third class, in which the strict diet was tolerated for a considerable time, there is no good instance of the development of very intense symptoms. Usually the patient rebelled when the early symptoms appeared, or the treatment was modified with good results; sometimes because the physician feared coma, having regard to previous experience, as in a case by Jaenicke;[1] sometimes on general principles, in view of the evident derangement of digestion, and the onset of extreme prostration.[2] If we attempt to ascertain the influence of diet upon the one hundred and thirty odd cases of fatal issue, we are met by the fact that in only a very small number is any precise account given of the dietetic management. In a few of the cases it is noted that death seemed to have been accelerated by too strict dieting.

Cyr[3] mentions a case in which, while under treatment, various threatening symptoms appeared from time to time, and were relieved by allowing a moderate quantity of carbohydrate food, and thereby increasing the excretion of sugar and water.

Ebstein[4] makes a similar observation, and explains it in much the same way that uræmic manifestations are accounted for. Some toxic substance is developed within the organism, under certain influences which we cannot define, but so long as the kidneys are functionally active and the excretion of urine is not unduly diminished by treatment or otherwise, this agent is eliminated freely; when it is very rapidly formed or is retained the severe symptoms follow.

A careful survey of the many circumstances under which coma and its allied symptoms have arisen, as well as the conflicting results of experimental and pathological investigation, can only lead to the conclusion that there are many and diverse conditions producing symptoms having a general resemblance. Yet there is one element which seems to stand in a causal relation, whether it be primary or secondary, to the greatest number of cases, and that is gastro-intestinal derangement.

The digestive apparatus, it is true, seems to adapt itself to almost any conditions that are imposed upon it, provided the modifications be made gradually. But let an unusual strain be put upon this mechanism, which has been overburdened with work, poorly supplied with nervous force, and nourished by an abnormal blood, whether the strain be irregular nerve-supply from excessive bodily fatigue or mental excitement, the confinement of the patient to a hospital ward, abrupt changes of diet, a persistence in some unusual food-supply, or the advent of some complicating pathological process, then will this violence in all probability determine the faulty transformation which results in the toxic agent.

The further history of the case will depend on the relation which exists between the quantity of the morbid product and the ability of the organism to eliminate it.

Such, at least, seems to be the fair inference to be drawn from the clinical histories.

Heretofore but very brief allusion has been made to the frequent presence in the urine of a certain something which gives a reddish-brown reaction with ferri chloridum.

This reaction is now believed to be due to diacetic acid.

Concerning the origin and significance of this and certain other related compounds, a good deal has been written, and numerous painstaking observations have been made with very discordant results.

The following statements may be given as comprising the facts of most practical interest with reference to diabetic coma:

These bodies seem to result from a decomposition, occurring probably within the alimentary canal, which, except perhaps in minimum amount, is always pathological. The exact conditions which determine this decomposition are unknown, but they seem to be most favorable during early life. The excretion of these products has been occasionally observed in a variety of morbid conditions, among which are acute alcoholism, the exanthemata, pneumonia, cancerous cachexia, sulphuric-acid poisoning, meningitis, typhoid fever, and most frequently in diabetes mellitus. While bearing no constant relation to any special class of cases, or form of diet or medication, this phenomenon is more frequently observed in severe cases, in young patients, and in those pursuing a strict nitrogenous dietary.

Their appearance in diabetes may not necessarily be accompanied by any change in symptoms; yet a large percentage of cases of coma arise in patients who are excreting substances in the urine.

No special significance can as yet be attributed to the presence or absence of acetone, when diacetic acid is present, and occasionally acetone may be present in urine which does not react with ferri chloridum. Neither of these substances will reproduce the symptoms of diabetic coma, if administered experimentally.

I do not think it is permissible to draw any inference from the innocent nature of excreted substances, as to the relation of their appearance to the morbid phenomena. Neither albumen nor glucose are poisonous, and yet their excretion is closely related to serious symptoms.

The chemical transformations which occur within the animal body are usually much more complex than the formulæ which we employ to represent them. It is by no means improbable that during a decomposition, some of the ultimate products of which we detect in the urine, toxic influences are developed which are the true cause of the symptoms.

Routine tests with ferri chloridum should be made at short intervals in all cases of diabetes.

Add a few drops of a solution of ferric chloride to the urine in a test-tube, and if from excess of phosphates the iron is precipitated in sufficient quantity to obscure the reaction, filter the contents of the tube, and add a few more drops of the reagent to the clear fluid; if diacetic acid be present, a coloration results varying from a light claret to an opaque reddish brown. This color is dissipated by heating, and will not appear if the urine has previously been boiled. The solubility of the color thus obtained in ether is insisted upon by Jaksch as an additional test to exclude the presence of salts of formic and acetic acid, which give a similar reaction in other respects. But it does not seem that from the standpoint of clinical significance this distinction is of much importance.

[1] Deut. Arch. f. klin. Med., xxx., S. 112.
[2] Harnacke, [illegible]
[3] Archives Gén. de Méd., 1878, vol. 1, p. 542.
[4] Deut. Arch. f. klin. Med., xxviii.

When the above reaction is obtained it is desirable to ascertain the presence or absence of acetone by some of the approved methods, in order that the record may be complete.

These tests are of importance on account of the pathological theories which the presence of these substances has suggested, and also because they afford in a great many cases valuable warnings of impending danger. But there is great need of further observation to determine just how great that value is, and also how frequently and under what other conditions these bodies may appear in the diseased, and perhaps also in the healthy organism.

During the past three months I have examined about three hundred specimens of urine with this object. Among them were six cases of diabetes, which were pursuing an uneventful course. Of these six I obtained a reaction in one case only, and that in four specimens covering a period of ten days. Tests for acetone made by the iodide of potassium and caustic potash method gave no result either in the urine or in the expired breath. There was no albuminuria.

These specimens were obtained through the kindness of the house staff, from a patient at St. Luke's Hospital, a man, aged thirty-two, diabetic for about fifteen months, who had been on pretty closely restricted diet, with codeia in doses gradually increased from one and one-half to eight grains daily, for about six weeks. During this time all the symptoms had improved, the patient had gained in weight, the polyuria had been reduced from about two hundred to one hundred ounces daily, and the sugar percentage from five to two and one-half.

During his stay in the hospital he had short periods of marked drowsiness, but this symptom was not present at the time the above tests were made. There were no dyspeptic symptoms, and the bowels were regular. He left the hospital soon after. (See note at end for further history.)

The five other cases were all adults, having from two and one-half to seven per cent. of sugar and well marked polyuria. They were either on ordinary or very slightly restricted diet, all able to be up and about, and in fairly good condition. The results in these cases were entirely negative.

The other cases included of special pertinence a pneumonia in the first stage, a case of advanced cancerous cachexia, an acute alcoholic gastritis, several cases of acute follicular tonsillitis, a dilated stomach, a large number of the usual dispensary cases of chronic dyspepsia, one case of chronic uræmia with prominent gastric symptoms, and the remainder were from the usual routine examinations. With the exception above noted no reaction was obtained. I regret that the number of specimens obtained from children was small, and that no cases of the exanthemata were available.

Unquestionably there are deaths, preceded by coma, in diabetes which can be explained by manifest lesions of the chief viscera; their symptoms and progress need no special comment. However, it is probable, from the endless variety seen in comatose cases, that there are many which are difficult to class in the absence of a careful autopsy; and it is to such cases that we owe a good deal of the confusion which marks any discussion on this topic.

The diagnosis must be reached by a careful process of exclusion, which will often be attended with great difficulties, and sometimes, in the absence of previous history, it may be impossible. Cases seen for the first time during an attack, and nothing being known of the previous history, have been mistaken for alcoholism, hysteria, peritonitis, cerebral injury, uræmia, narcotic poisoning, or internal hemorrhage, according to the symptoms most prominent. When we recollect that there may be suppression of urine and absence of glycosuria, the mistakes are easily accounted for.

The ordinary treatises on the practice of medicine seldom give more than a passing notice of this subject, and omit it altogether from the discussion of differential diagnosis in diseases liable to be complicated by coma.

In the treatment of diabetes mellitus, with reference to the possibility of this complication, there are certain precautions which seem to be desirable from the considerations which have been advanced.

The most prominent of these is the necessity of paying a close attention to the condition of the alimentary tract; the avoidance of sudden changes in dietetic management; the allowance of a certain, though small, quantity of carbohydrate food in those cases in which a fair trial has demonstrated that strict diet does not completely arrest the glycosuria; the free allowance of fluids in all cases, for there is everything in favor of considering the polyuria as a conservative factor. All sudden changes in mode of life are dangerous.

When complications arise the diet should be relaxed, particularly when the ferric chloride reaction appears.

On the appearance of symptoms suggestive of a comatose attack, in addition to the above, free and repeated purgation should be employed, guarded by suitable stimulant measures. For the relief of pain opium must be used on ordinary principles.

For those cases in which the condition has advanced to any marked degree, repeated transfusions of salines, or, perhaps better, of blood, the continuous inhalation of oxygen, the administration of antifermentatives and stimulants seem to offer the best hopes, judging from the partial successes which have been attained. To these, measures which promote diuresis should be added.

Although the treatment of this condition has been very unsatisfactory, yet, in view of the many cases which have recovered from a perilous position, there are none which should be abandoned, even after coma has set in.

The great fatality of diabetic coma, the obscurity of the causes which bring about its occurrence, and the importance of estimating at their proper value the indefinite symptoms which seem to be premonitory should urge us to closer observation in all cases of diabetes. The terminal phenomena are interesting, but much less valuable than a careful record of the previous history; and it is in this particular that the existing literature is barren.

How many patients live daily on the verge of comatose catastrophe, and escape it by the happy chance of judicious treatment, or perhaps because they disregard all recognized rules, we shall not know until we can read the natural history of the disease in fuller details.

NOTE.—Since the completion of the above paper, and only a few days ago, I secured the address of the patient referred to above as showing the ferric chloride reaction while pursuing an apparently very favorable course of the disease, and undertook to hunt him up for the sake of making further tests of the urine. I then learned that he died about three weeks after leaving the hospital, with symptoms which tend to confirm the value of the test referred to.

The following history was obtained from his family, and great care was used in framing the questions to avoid suggesting symptoms:

After his return from the hospital, on March 9th, he continued the hospital diet very carefully. It is said that the only lapses were in the use of an occasional oatmeal cracker.

March 15th.—His appetite suddenly failed, and he felt out of sorts generally. Nevertheless he paid a visit to some friends in a part of the city about two miles distant from his home, making use of the horse-cars, so that he walked in all about one mile. On his return in the evening he was very prostrated, ate nothing, and passed a very restless night, complaining of a burning pain in the epigastrium. Whether he had eaten anything unusual during the day could not be ascertained.

March 16th.—He was very drowsy, sleeping a good deal of the time, and during the intervals walking restlessly about his room. Ate nothing. Pain continued;

very great diuresis; passed over a pailful of urine during the day. Marked "heavy" odor to breath, which the relatives, when asked if there was any special odor they could compare it to, promptly mentioned a liniment which on examination proved to be the ordinary chloroform liniment. During the night continued to suffer from pain and restlessness.

March 17th.—In the morning able to go down-stairs and across the street to get shaved. Returned in a very dull and tired condition. Took a little mutton-chop, and soon after extreme epigastric pain came on, followed by vomiting, which did not bring relief. In the evening had "a sudden spell of weakness," with extreme abdominal pain, and was believed to be dying. Breath odor very intense. Panting respiration. No coma. Bowels have not moved for two days. A physician who was called in gave some powders which relieved the pain, and recommended a diet which was by no means as strict as the previous.

During the following ten days the patient slowly improved, and by the end of a week was able to be about again. The breath odor disappeared.

On March 28th, and the two days next succeeding, the bad symptoms returned. No cause assignable for the onset. He was much inclined to sleep, but too restless to remain quiet. Complained that the room was close, wanted the windows opened, and finally insisted on going out, although the weather was very stormy, because he "must have a breath of air."

On one of these days he behaved in an unusual manner, was very jovial, mimicked some peculiarities of speech of a neighbor, sang a good deal, etc.

During this time the breath odor returned. For twenty-four hours before his death, which occurred on April 1st, he had severe pain and vomiting, jumping out of bed and crying out during the paroxysms. His breathing was very labored. Skin cool, natural in color. Great diminution in quantity of urine passed. Some incontinence. Spoke in a noisy way, addressing persons who had been dead some time, evidently believing them to be present, until one hour before his death, when he sank into coma.

Physical examination made during his stay in the hospital failed to give any evidence of visceral lesions.

BRAIN EXHAUSTION.[1]

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During the past ten years the question of the changes which take place in the physical structures concurrently with intellectual action has given me much serious thought, and until the last few months this question has been involved in such uncertainty that there was very little satisfaction in contemplating it. Various eminent authors have written on this subject under various names, such as nervous asthenia, nervous exhaustion, neurasthenia, nervous weakness, American nervousness, cerebral hyperæmia, etc., and while all these terms are appropriate, I prefer to follow Dr. J. Leonard Corning, and shall employ the simple term brain exhaustion.

According to a novel computation by a German histologist, who has been calculating the aggregate cell forces of the human brain, the cerebral mass of average size is composed of three hundred millions of nerve-cells, each being an independent body so far as its vital relations are concerned, and living a separate life individually, but subordinated to a higher purpose in relation to the function of the whole organ. In order to gain a lucid understanding of our subject, we must fix clearly in our minds the idea that one or more of these brain-cells is called upon to do work whenever there is any intellectual action; and we must also bear in mind that every cell, like every muscle, has a certain limit to its capacity for work. While we sometimes forget the fact, still we all know that the blood-stream is the repository of vital energy, and we must also admit that from this source each organ, with an elective faculty peculiar to itself, selects only such elemental combinations as it requires for the evolution of its own vital forces. Each vital organ of the body must necessarily use up, in the performance of its function, the equivalent of a certain amount of assimilated nourishment; and if we may, for the sake of argument, regard the whole muscular system of man as one vital organ, we may then say that in the case of the working-man—the day-laborer—this organ, meaning his muscular organization, uses up the equivalent of more nutriment than any other of his vital organs. But this demand for muscular nourishment does not take place in the brain-worker, whose muscular system is comparatively inactive. In his case it is rather the brain that takes from the blood the greatest amount of those nutritive elemental combinations suited to its need, and represented by a large amount of the food ingested. It has long been understood that in the performance of brain work there was some kind of molecular action going on within that organ, but the exact nature of it is the point that has been so perplexing, and the want of some rational theory has been the reason for so much vague speculation. Whether right or wrong, Dr. Corning, of New York, in his recent work, has set forth a very common-sense explanation of what really takes place. He regards the molecular action as one of contraction of the brain-cells, in a way similar to that of the contraction of the muscle-cells in muscular work. A given cell, or set of cells, may, if well and regularly supplied with nourishment, contract and expand to the least perceptible extent in the evolution of brain force, for several hours in succession, without any special damage; yet if the work is continued beyond the inherent strength of the nerve-cell, exhaustion must be experienced by the cell, just the same as when a given set of muscles is exercised beyond the limit of their endurance. Continued use of one set of muscles will soon determine an increased amount of blood supply, so that the waste may be repaired, and the same thing takes place when one set of cells is long exercised in the brain. Vigorous and continued mental exercise will soon call an increased supply of blood to the brain to repair the waste which is taking place there. If this increased supply of blood to the brain should be demanded by the overworked organ for any great length of time, the vessels themselves will not at once return to their normal size upon cessation of the work, but will at least temporarily remain enlarged, and thus it is that we have the cerebral hyperæmia which Dr. Hammond has written about, and which he was inclined to regard as the essential pathological condition of brain exhaustion. Prolonged intellectual work will noticeably elevate the cerebral temperature, and this elevated temperature is accompanied by a more or less hyperæmic condition of the vessels; if the hyperæmia be only of a few hours' duration, it is merely physiological, but when it remains for days together it becomes pathological. But voluntary thought is not the only thing that proves exhausting to the brain; indeed, a considerable degree of intellectual action is what makes the brain strong and vigorous; but it is the hurry and worry that seem to take away from the brain-cells their store of strength so rapidly. To understand how it is that hurry in intellectual work tires so much, let us go to physical work for an illustration. If a man walk a mile leisurely, he will only feel a healthy glow as the result of the moderately rapid expenditure of physical force; but let him run only half a mile at the top of his speed, and he will feel so fatigued that he can hardly speak or breathe, and still he has only covered half the distance, but in a shorter time. So, likewise, if a man engage at a moderate rate in mental labor for an hour or two, he will feel well and fresh and the better for it; but if he work for only half an hour at the highest intellectual pressure, he will find himself fagged out and exhausted. The very rapid contraction of the

[1] Read before the London, Ontario, Medical Association.

brain-cells is not their normal way of working, and they soon exhaust the elements which are stored up within themselves, and failing the supply from the blood-stream, which can only take place slowly, they are left on the verge of bankruptcy. Worry operates differently by reason of its continuousness; the contractions may not be rapid, unless as in the case of a man receiving some appalling news, but the contractions are continued at every intermission from other intellectual work. The rest, which in another man will follow the completion of his daily mental work, will not come to the man who is worried, for as soon as the brain is done with the daily work, the worry begins and allows no rest to the brain-cells.

If these brain-cells should be weakened or exhausted by too prolonged intellectual work, they become less capable of resisting the onset of worry, which they might more successfully do if strong and rested. We all know that when tired out mentally trivial things will worry us, which would be passed over almost without a thought when we are fresh and strong; that which seems to us of slight importance in the morning will grow to mammoth proportions of seriousness by evening time. If those tired out brain-cells come under the influence of worry, and are thus stimulated to further contractions, when they should be resting and receiving a store of nourishment for the morrow's work, it does not seem surprising that they are unfitted for their work when the morrow comes. Now, so long as the output of vital force by any single organ does not differ too greatly from that required by the remaining tissues of the body, all will be found to go well; but when one organ is called upon for too long a period to exercise its function, we shall observe two phenomena. In the first place, those elements of the blood required for the maintenance of the function of this particular organ will become more or less completely exhausted; and, in the second place, the organ will borrow those needed elements from any other organs that contain them. Relative to the first of these phenomena Dr. Maudsley says: "Poverty and vitiation of blood may certainly play a weighty part in producing mental disease, as they do in producing other nervous disorders. Lower the supply of blood to the brain below a certain level, and the power of thinking is abolished; the brain will then no more do mental work than a water-wheel will move the machinery of the mill when the water is lowered so as not to touch it." And so, likewise, if we impoverish the blood by abstracting its building elements, or if we vitiate it by the addition of noxious elements, we make it an unhealthy medium for the supply of that help which the brain requires to do healthy work. In reference to the second of these phenomena—the borrowing of needed elements from other organs—we may find some of the best illustrations of this kind of plundering in those individuals who are inordinate brain-workers. It happens not infrequently in such persons that the fatty, and also the muscular, tissues are reduced to a surprising degree, so much so, in fact, that the individual will exhibit a considerable amount of emaciation. He will observe his own poorly nourished condition, and will commonly fall into the error that forced physical exercise is what he requires, whereas his real want is physical as well as mental rest.

Only a few weeks ago I was talking with a young man in this city on the subject of recreation. Knowing that he was an earnest and hard-working student, I was somewhat curious to learn what he did in the way of physical exercise. He said: "Well, doctor, I don't suppose I am doing what is right; for although I take no physical exercise, I feel too tired when I reach home from the office in the evening to engage in anything of that kind." Now this young gentleman is a graduate in Arts of Toronto University, and he spends his time during the day in the work of a law office, and his evenings in preparing himself for the examinations of the Law Society; and he, in these ways, expends every day all the nervous energy which his food supplies, and if he were to take forced physical exercise to any considerable extent, he would injure rather than benefit himself. But there is another way in which some of this emaciation of brain-workers may be accounted for. I refer to the malassimilation incident upon deficient nervous supply to the stomach. When the brain is tired out, and a large meal is taken into the stomach, it is impossible that sufficient nervous influence shall be conducted to the stomach for the perfect digestion of the meal, and hence we commonly find that when this practice has become a habit, the patient will suffer from all that train of evils resulting upon indigestion. Many men and women are thus treating themselves for a tired stomach where the primary cause is an overwrought brain. To further illustrate the exhausting effect of purely intellectual action, I will mention a few typical cases.

A previously healthy and robust young man, who was teller in a bank in this city, and through whose hands a large amount of money passed daily, told me that while he simply attended to the work of the bank he could do it with a self-conscious feeling of ease and accuracy. He saw, however, an opportunity of improving his business relations by a knowledge of short-hand, and he accordingly set himself to work in earnest to learn it. After tea every evening he would spend three or four hours in close study upon this subject. All went well for a fortnight, but at the end of a month he began to suffer from headaches and a sense of mental confusion, and he lived in daily dread of making a mistake in his cash. In six weeks the misfortune which he feared overtook him, and his error cost him several months' salary. Easier work in another department of the bank, where there was less continuous mental strain, together with fewer hours' work at short-hand in the evening, served to restore him speedily to his former health and spirits.

One of the most eminent and deservedly popular ministers of the Presbyterian Church in Canada to-day works so hard with his brain, while delivering his regular weekly discourses to his congregation, that his flannels and linen are saturated with perspiration, and have regularly to be changed after leaving his desk; and he is not one of those men, either, who pound the book and saw the air with their hands. The result of this prodigal expenditure of nervous force is that every year his general health becomes so enfeebled that he is forced to take a long vacation, and every few years he has to take a transatlantic trip.

Ex-President Arthur, a few weeks before he left the White House, said to a friend: "I think I am an unusually strong man, yet after I have been receiving visitors for two hours I am as limp and as deficient of muscular strength as that rag. They strip me of all my nervous force."

In Mr. Dolby's book on "Dickens as a Lecturer," he confirms the opinion that Dickens brought on his death by overwork and excitement. He says that the reading of the murder scene in "Oliver Twist," by Dickens, would bring the reader's pulse up from 72 to 118, and that on these occasions he would have to be supported to his retiring-room and laid on a sofa for fully ten minutes before he could speak a rational or consecutive sentence.

Shelley, who was poorly while writing "The Cenci," said he believed that the mental labor connected with its production proved a fine antidote to the nervous sedatives which he was taking at the time, and that the mental excitement "kindled the pain in his side as sticks do a fire."

When Wordsworth was engaged in composing the "White Doe of Rylstone," he received a wound in his foot, and he observed that the continuation of the literary labor increased the irritation and pain of the wound; whereas by suspending his work he could relieve himself of these unpleasant symptoms, and absolute mental rest was finally requisite to his perfect cure.

Southey perpetrated industrial suicide by his incessant study and mental labor. A biographer says of him: "His

busy brain wore itself out, and the workman could but wander, without purpose and without power, among the books which he had gathered with patient love around the walls of his writing-room."

And we all know, if we will only stop to look at the question in the right light, that the lives of such men as the late Lord Lytton, Earl Beaconsfield, and Thomas Carlyle furnish ample evidence of intense mental and physical sufferings which were the direct outcome of mental over-work.

From what has already been said, it may be readily inferred that certain classes of society will be especially subject to brain exhaustion, and while no classification is strictly accurate, I think the majority of cases may be classed among one of the following: 1st, Persons engaged in science, art, or literature; 2d, those engaged in politics; 3d, those in commerce, exchange, and speculation; 4th, those who are too laborious among students and scholars; and 5th, mothers with small children and a large share of domestic care.

We shall now have to pass rapidly on to the clinical history, and we shall find that the chief symptoms of brain exhaustion may be classed, for the sake of convenience, into psychical and physical. Under the head of psychical we shall find restlessness during the day, and more or less wakefulness during the night. This restlessness is peculiar in itself, and if long continued we call the individual fidgety and fussy, as he will make a great bustle over nothing, or next to nothing, and besides this he is never satisfied with the work in hand. This restlessness is also accompanied by intense and excessive irritability; the patient will imagine himself imposed upon when such is not the case, and he will fancy himself slighted when nothing of the kind is intended; he will conjure up some fancied wrong, and attach the cause of it to the first one who comes in his way, just as often his friend as his casual acquaintance. He will also magnify the slightest oversight into a grave offence, and for the moment it will overpower all other considerations of the mind. "This extreme irritability is one of the most characteristic features of the disease, and is absolutely beyond the control of the patient; the paroxysms of anger may be extremely brief in their duration, or may continue for several hours. During their continuance the subject manifests a morose and sullen attitude toward all with whom he may be thrown in contact. Sometimes he is revengeful, and concocts extravagant and fantastic plots against those who are supposed to be inimical to him. At others he is lachrymose, and disposed to look upon himself as a martyr—as one misunderstood by his fellow-mortals."[1] The sleeplessness at night is accompanied by a series of unfriendly and harassing thoughts passing rapidly, and sometimes unconnectedly, through the mind, and is followed naturally enough by a state of drowsiness for half the next day; and when the sleep does come it is generally disturbed by horrible and wearisome dreams.

The faculty of registering impressions is often materially deranged; sometimes names of familiar places, persons, and objects are temporarily forgotten, and the utmost effort fails to recall them. The will often exhibits a marked impairment, and daily duties are performed in a cursory and indifferent manner, in spite of an earnest desire to do them well. Mental confusion, somewhat resembling that semi-consciousness preceding sleep in the healthy person, is frequently experienced. There is also a morbid curtailment of the power of mental concentration. I do not here refer to absent-mindedness, for there the mind is engrossed with some other subject; but rather a mental state in which the patient finds it impossible to devote himself continuously and vigorously to any given subject. This lack of mental concentration is particularly characteristic of brain exhaustion, and the medical observer will find this true in conversation with his patient.

[1] Brain Exhaustion, with some Preliminary Considerations upon the Physiology of Dreams. By J. Leonard Corning, M.D. New York: D. Appleton & Co. 1884.

Among the more prominent physical symptoms in brain exhaustion is pain in the region of the vertex and superciliary arches, and also at the back of the neck; and in different patients entirely different forms of mental occupation will excite the pain. In one man, reading for a few minutes will not only be followed by the pain, but also by a sense of exhaustion; in another, writing for a short time will produce these symptoms; and in still another, continued conversation on any question requiring much attention will be followed by like results. Photophobia is common in this class of patients, and reading by gas-light is especially painful to the eyes, so that colored and other glasses are often called into use. The sensibility to certain sounds is sometimes abnormally developed, so that the squeaking of a door, or the rumbling of a cart, or the sound of certain musical instruments may prove intolerable. The skin of the face bears a pallid and unhealthy appearance, and the eyes lack that lustre which belongs to the healthy and well-rested brain; altogether the expression of the countenance can only be described by the term aged.

Derangements of the function of the stomach play a prominent part in prolonging and aggravating brain exhaustion, and I am satisfied that in many cases the brain is primarily at fault where the blame has been laid upon the stomach. In order that a good meal, say at midday, may be properly digested, the stomach must have sufficient nervous force sent to it; but it often happens that the nervous system has already been overworked in the morning, and should have rest before taking up a new load; the man, however, hurries from his office or store to the restaurant, where he will either continue the business of the morning in his own mind, or lay out plans for the afternoon's work. In this way he will expect his brain to continue its work at a high pressure, and he will also impose upon it the additional burden of sending sufficient nervous influence to his stomach to digest a full meal, perhaps imperfectly masticated. A locomotive is caused to stop occasionally to take on fuel and water, but man is not as good as that to his own brain. Is it any wonder, then, that after a while the stomach, which is at the same moment both starved and overloaded, should rebel? And when it does rebel, we can easily see that the condition of the brain is made infinitely worse, for then the supply of nutriment to the brain is largely cut off. The cry of the stomach in its distress is likely to direct the attention of the patient, and sometimes that of the practitioner as well, to that organ, and the character and quantity of the food is then so regulated that the poorly nourished brain is still further impoverished; and the stomach itself is not relieved till the patient is sent away for a trip where he really escapes the mental work and worry of his daily duties at home.

The symptoms of indigestion are, in many respects, so similar to those of brain exhaustion, that anyone may be easily forgiven for confounding the two conditions, especially as those of exhaustion are so soon followed by those of indigestion.

There is almost always some cardiac disturbance, and this is sometimes one of the earliest symptoms to excite the apprehension of the patient. Emotional excitement, even if only slight, will cause the most distressing palpitation, and change of posture, as from sitting to standing, will greatly increase the number of pulsations. This tumultuous action of the heart often gives the patient much real concern, but the stethoscope reveals the absence of any organic lesion.

The kidneys are more or less affected, and the urine is sometimes scanty, and at other times greatly in excess of the normal quantity and limpid; the phosphates are generally found in abundance in the urine of exhausted brain-workers. We know that cerebral irritation may produce diabetes, and we know that emotional excitation and worry will produce a sudden and temporary polyuria; but, so far as I have been able to ascertain,

very little is known of the effect of brain exhaustion upon the kidneys.

While emaciation of the muscular structure is the common condition, it is by no means constant; the physical inactivity which an exhausted brain sometimes enforces upon the muscular system may prevent the oxidization of the fat-globules which have been previously stored away, and we thus have the apparently anomalous condition of a fat man with exhausted brain-cells. Those cases where very little emaciation has taken place are, I believe, the most difficult for satisfactory treatment; but in them, like all other cases, there is a perfect intolerance for exercise—anything like a long walk is regarded by the patient as a species of cruelty.

And now we come to the question of treatment, and I approach it with a certain amount of trepidation, because of our natural tendency to pay slight regard to what is simple, and to attach much importance to what is complex. Our veteran teacher in medicine, Dr. Austin Flint, said, in his address to the New York State Medical Association, a few months ago, that fame would attend that author who would write a work on the non-medicinal treatment of diseases. A few weeks afterward an eminent Canadian author said he believed that the erection and endowment of a thoroughly equipped hospital where medicines should never be used, unless an occasional anæsthetic, would be of the greatest possible benefit to mankind and to the science of medicine. I think, gentlemen, after we carefully consider it, that you will all agree that the spirit of these observations is especially applicable to the treatment of brain exhaustion.

There are three factors of primary importance to brain action, namely, first, the condition of the brain-cell; second, the condition of the cerebral blood-stream; third, the physiological relationship between the cell and the blood-stream. In order that the brain-cell shall perform its function properly, it is necessary that intracellular nutrition shall be physiological both in respect to quality and quantity of nutriment. After the cell has exercised its function for a certain length of time, the energy of its contraction gradually diminishes until there is more or less complete suspension of activity. Now, if the blood-stream were capable of effectually neutralizing the waste which takes place in the cell *during* its functional activity, we should have nervous expenditure on the one hand, with an equal nervous reimbursement on the other, and there would remain no necessity whatever for rest or sleep. As it is, however, during our waking hours waste outstrips supply, and it is only when the mental work, and even consciousness itself, has been temporarily suspended that the blood-stream can supply the deficit. I believe we have here the key to the scientific treatment of this affection. *Rest* by prolonged *sleep*, as recommended by Dr. J. Leonard Corning, is the main point to be observed, and along with it a generous supply of nourishment. Of course, rest also means cessation from mental and physical work, and relief from worry. Sleep means an increased period of unconsciousness daily, not induced by hypnotics. Nourishment means a liberal amount of good food which can be easily assimilated, such, for instance, as rich and carefully prepared soups and beaf-tea; and this food should be administered as often perhaps as four or five times daily. Above all, plenty of time must be allowed for recovery, and it is well to explain this to the patient at the outset. A condition which has been induced by years of overwork cannot be expected to disappear in a week or a month.

Two other facts should be taken into account in this connection. One is that some men's brains are capable of evolving mental force much more rapidly than others, and consequently waste takes place in these cases much more rapidly. The other fact is that different sets of cells are engaged by different subjects, and hence the rest which is experienced by the student who turns from one subject to another, as, *e.g.*, from mathematics to classics.

A CASE OF POISONING BY SULPHATE OF MORPHIA—RECOVERY.

By LLEWELLYN ELIOT, M.D.,

ALTHOUGH the record of cases of poisoning by opium and its alkaloids is very extensive, I have no apology for adding the report of one more. The treatment of such cases is always a subject of great and varied criticism; many pursuing a very gentle course, others, like myself, pushing to extreme measures immediately. No one is competent to judge the merits of a course of treatment unless he be associated in the case, for what may appear as an imperative measure to the attending physician would seem but a foolhardy procedure to one not so situated. As illustrations of this, note that in one case reported by Fothergill there was one grain (.067 grm.) of sulphate of atropia, administered hypodermatically, to antagonize twelve to seventeen grains (.8 to 1.143 grm.) of opium, with success; and again, where Dr. J. H. Clarke[1] administered gr. $\frac{1}{1000}$ (.000446 grm.) every half-hour to counteract thirty grains (2 grms.) of morphia; after the third injection the pupils dilated and general improvement began. In the case of Dr. Clarke the dose of atropia to antagonize one grain of morphia was gr. $\frac{1}{1500}$ (.0000446 grm.). This appears to be a ridiculously small dose; but, considering the favorable result, it was sufficiently large, notwithstanding the stomach had not been evacuated. To establish the lethal dose of sulphate of morphia would be a hard task. Death has followed the administration of gr. $\frac{1}{4}$ (.011 grm.), and babies of two years have taken with impunity doses of gr. $\frac{1}{18}$ (.0041 grm.), frequently repeated. Some weeks ago I was called, during the night, to attend a gentleman, seventy-four years of age, and within the space of three-quarters of an hour he had taken one grain (.067 grm.). Having reached this limit I did not deem it safe to give more, although there did not appear the least evidence of the action of the drug. I might add that, in this case, the patient had on several occasions obtained marked relief from doses of gr. $\frac{1}{8}$ (.008 grm.).

H——, male, white, aged thirty-four, of fine physique, at six o'clock on the evening of May 16, 1885, while under the influence of alcohol, took fifteen and a half grains (1.033 grm.) of sulphate of morphia with suicidal intent. He was seen in five minutes; his face was much flushed, conjunctivæ congested. He had been given ℥ij. (2.67 grms.) pulv. ipecac., which failed to act. The following solutions were made:

℞. Atropinæ sulphat ..... gr. ij. (.133 grm.)
Aquæ destillat..... ℥j. (4 c.c.)

M. Sig.—Ten minims hypodermatically, to be repeated in half an hour, if necessary.

℞. Apomorphinæ hydrochlorat.. gr. j. (.067 grm.)
Spt. vini rectif..... ℥ss. (2 c.c.)
Aquæ destillat ..... ℥jss. (6 c.c.)

M. Sig.—Ten minims hypodermatically.

The apomorphine injection (gr. $\frac{1}{150}$, .0055 grm.) was first administered, followed immediately by the atropine (gr. $\frac{1}{30}$, .022 grm.). This was ten minutes after taking the poison. He was fast sinking into a stupor, pupils contracted to a point, and breathing becoming stertorous. In ten minutes more he was profoundly insensible, not aroused by severe shaking and vigorous paddling; pupils enormously dilated; face, neck, and ears very much cyanosed; respiration labored, superficial, hissing, and stertorous, but ten in a minute; pulse very feeble, regular at one hundred and forty beats; jaws locked. He had failed to vomit. A large cork was inserted between the teeth, he was turned upon his side, his tongue drawn forward, and

[1] [illegible]

artificial respiration employed; death seemed imminent. A messenger was despatched for assistance and a battery. Respiration improved and face assumed a natural color under the application of the interrupted current—one pole placed over pit of stomach, the other at varying points over chest and neck. At a quarter to seven, ten minims (.67 c.c.) more of the atropine solution were inserted subcutaneously. Respiration increased to sixteen, and became full; pulse at wrist one hundred and forty, and feeble; heart-beat strong. He continued in this condition until half-past seven, when Dr. James E. Morgan arrived. With his assistance, and with much difficulty, I introduced the stomach-tube, and injected about a quart (1,024 c.c.) of water; this was thrown off in a few minutes. This procedure embarrassed his breathing very much; it again became shallow, abdominal, and superficial; pulse became intermittent; heart's action feeble; face cyanosed; death seemed imminent. Under the application of the battery and the hypodermatic injection of ten drops (.67 c.c.) of aquæ ammoniæ, diluted with one drachm (4 c.c.) of distilled water, he again rallied. During all this time the tongue and fauces were very dry and hard. At nine o'clock the stomach-tube was again introduced. After thoroughly washing out the stomach, a drachm (4 c.c.) of aromatic spirits of ammonia in two ounces (64 c.c) of water was injected. This was allowed to remain. At half-past nine he was removed to the Emergency Hospital, where the house staff—Drs. Wright, Roy, Taylor, Morgan, and Hoskins—rendered valuable assistance. At eleven o'clock one grain (.067 grm.) of caffeine citrate was inserted in the arm; this was followed in fifteen minutes by gr. $\frac{1}{100}$ (.00067 grm.) sulphate of atropine, as the effects of the former injections seemed to be wearing off. Battery again applied. Through the stomach-tube introduced gtt. xx. (1.333 c.c.) aqua ammonia in one ounce (32 c.c.) distilled water, without ill result. Pulse too intermittent to count, ranging from sixty to ninety-six per minute; respiration superficial, stertorous, and eighteen. At twelve a pint (512 c.c.) of strong infusion of coffee, with two grains (.133 grm.) caffeine citrate, was injected into the bowel; this was retained. At two A.M. he was with difficulty aroused; at three he took a few swallows of coffee; this was rejected. Was walked about for some time, when, at four, he was taken to his home, where he undressed himself and went to bed; sight not good, but he was quite sensible.

℞. Cerii oxalat,
Ingluvin..... ãã gr. xxx. (2 grms.)
M. Div. in pulv. no. vj. Sig.—One powder to be given if nausea or vomiting occur.

17th, 10 A.M.—Nervous; complains of soreness of body. Potassium bromide ʒ ss. (2 grms.) at night. Has not passed urine; mouth dry, pupils natural.

18th, 10.30 A.M.—Has not slept since he recovered from effects of morphine, nor has he any inclination to sleep.

℞. Sodii bromid..... ʒ ijss. (10 grms.)
Potass. bromid..... ʒ iv. (16 grms.)
Tinct. cannabis indicæ... ʒ ij. (8 c.c.)
Aquæ destillat., q. s. ad... ʒ iv. (128 c.c.)
M. Sig.—Dessertspoonful, in water, every four hours.

20th.—Much improved, no inconvenience about stomach. Has slept comfortably; put on full diet; point of injection of the apomorphine indurated, those of the ammonia injections same.

23d.—Doing well; poultice to indurations.

28th.—Discharged from treatment.

Remarks.—The points of interest in this case are many, the principal ones being the large amount of sulphate of atropine used in such a short time, but the continuance of the symptoms show it not to have been sufficiently large; the short time—ten minutes—required to produce the effects of the morphine, and the correspondingly short time for the atropine to manifest its effects. The amount of alcohol which he had ingested aided materially in assisting the toxic effects of the morphine, as it had produced congestion of the brain, which was intensified by the morphine. Whether the apomorphine was antagonized in its action by the atropine I do not know, but incline to the belief that it was. Von Boeck[1] writes, in cases where emetics fail to act, it is "because the excitability of the extremities of the sensory nerves in the mucous membrane of the stomach is so greatly reduced by the narcotic poison that no reflex movements can be excited." Again he writes: "Therefore, useful as emetics may be in themselves, we must not forget that, even under the most favorable circumstances, they may decidedly promote and aggravate the collapse which is imminent in consequence of the action of the poison." His statement respecting apomorphine is clear and positive, as will be seen from the following extract: "I once had an opportunity of observing a severe case of morphine-poisoning, in which apomorphine failed to induce vomiting in a patient who was lying in profound sopor, but the collapse shortly after the injection became far more decided than before." Had there been administered in the first instance two-thirds of a grain (.044 grm.) of the atropine sulphate in place of the one-third (.022 grm.), and this followed in half an hour, if necessary, by a sixth (.011 grm.), or even another third (.022 grm.), I firmly believe that the length of the narcotism would have been very much shorter; the pulse and respiration would have shown but little the effect of either poison. In the treatment of narcotic poisoning it is a question in my mind whether beating, thumping, and lashing are of any avail. They may be vigorously pursued, and are in every such case, but would it not be better to do away with such cruelty and at once proceed to the administration of proper antagonists. I assisted in a case of opium-poisoning in Baltimore City, some years ago, where the flesh was cut away with a black-snake wagon-whip while we waited for remedies. For hours the poor fellow was walked, trotted, pulled, and beaten from one end of the warehouse to the other. He recovered, notwithstanding the violence of the treatment. Thomas G. Morton, in a case reported, bled in a large quantity, after which eight ounces (256 c.c.) of defibrinated blood were thrown into the saphena vein on the right foot. The patient died, but, so far as I can remember, was benefited by the operation. This case occurred in the Pennsylvania Hospital some years ago, but I do not recall the journal in which it was reported. Dr. D. Tod Gilliam[2] reports a case of opium-poisoning in a female, sixty-four years of age, in which he practised transfusion of milk into the radial vein with apparent success. As a means of combating the exhaustion consequent upon violent and excessive physical treatment, this is an excellent measure. In the case referred to the patient died. With respect to the caffeine treatment of narcotic poisoning—within narrow limits this drug is antagonistic to morphia; still I should not be willing to sacrifice a patient to a fair trial of it. From its being readily decomposed by water, it is ineligible for hypodermatic use. Tanret[3] suggests as a stable preparation, dissolving caffeine in a solution of benzoate or salicylate of sodium. Its relative solubility is: in 100 parts of water, 160 parts of absolute alcohol, and 220 parts of ether.

To Prevent taking Cold.—Dr. Brown-Séquard says that a "cold" usually results from the reflex influence of cold air upon the sensitive nerves of the nucha. He proposes to overcome the peculiar sensitiveness of these nerves by blowing with a pair of bellows upon the neck, using first warm air, which is to be gradually cooled, until the patient can stand any sort of a draught (of air, not of liquid) without sneezing.

[1] Von Ziemssen. Cyclop. Pract. Med., vol. xxii., p. 65 et seq.
[2] The Medical Record, vol. xxvii., p. 695.
[3] London Medical Record, 1885, p. 45; translated from Gaz. Hebdom. de Med., January 2, 1885.

DEVIATIONS OF THE NASAL SEPTUM.

By S. O. VANDER POEL, JR., M.D.,

After the exhaustive paper read before the Fellows of the Academy last year, it would scarcely seem expedient to again open this subject, were it not that an operation suggested for the correction of this deformity had not received the attention from the profession it would seem to deserve.

The numerous methods of procedure that have been devised for the correction of deviations of the nasal septum, and the diversity of opinion that exists in the minds of surgeons, would seem to indicate that at present no generally accepted plan is adopted in the treatment of these cases.

In dealing with this deformity it will best suit our purpose to divide the subject into three heads: 1, Deviations of the cartilaginous septum, with deflections of the end of the nose—usually attributable to traumatism; 2, deviations of the bony septum, accompanied by the high-vaulted palatine arch, as was first pointed out by Duplay and subsequently elaborated by Jarvis; and 3, a combination of the first and second varieties, where the deformity exists in both the bony and cartilaginous structures. Under this head would also be included the so-called sigmoid deviations, where both nasal cavities are more or less obstructed by a crumpled condition of the septum.

I would invite your attention for a few moments, this evening, to the consideration of Roberts' operation, which is applicable principally to the first of these three divisions, namely, deviations of the cartilaginous septum with deflections of the nasal tip, as well as to many of the osseous deviations accompanied by cartilaginous displacements. In these the cartilage is the structure most at fault, and when it is corrected the bone will frequently be found not to offer sufficient obstruction to prevent good drainage and a free respiratory tract. Roberts thus describes his operation: "With a scalpel introduced through the obstructed nostril, I perforate the cartilaginous septum at its upper and back part, and make a long incision downward and forward; this permits me to push the whole cartilaginous septum to the left (assuming the obstruction to be in the left nostril), and overcome to a great extent the lateral deformity. To retain the parts in position I introduce a steel pin, one inch and a quarter long, in the right nostril, and pass it completely through the anterior and upper segment of the divided septum, near the columella. Having the movable portion transfixed, I carry the head of the pin to the left, and with it the anterior part of the nose, and retain it there by embedding the point deeply in the immovable cartilaginous septum and mucous membrane at the back part of the left naris. In other words, I incise the deformed cartilage and pin it in position very much as you would pin a flower in the button-hole of a coat."

The most important indication to meet in any of the operative methods for the correction of a deviated septum is the retention of the parts in their replaced position. The tendency for them to resume their faulty posture is so strong that considerable force is required to retain them; even after the lapse of some weeks, in cases which at first gave evidence of perfect restitution, the septum will gradually work its way back as soon as the retentive apparatus is removed.

Adams[2] and Jurasz[3] attempt to overcome this resiliency of the septum by crushing it with forceps, and then retaining it by a splint and hollow plugs. Those who have employed this plan are aware of the many annoyances and difficulties constantly met with—the clogging of the tubes with the secretions, or by granulations sprouting into their ends, thus rendering them impervious to air, the difficulty in replacing them after removal for cleansing, and, on the other hand, their frequent expulsion in the effort of coughing, as the inflammatory swelling subsides. These considerations have induced many operators to abandon the procedure and seek easier and more effectual methods.

Other prominent means employed for overcoming this condition are the ablative punch of Blandin[1] for removing a portion of the tissue, the stellate punch to overcome the resiliency, the galvano-cautery, and the snare.

The objections urged against the punch, where no effort is made to correct the position of the deformed septum, are, that although it permits of a somewhat freer respiratory tract through the fistulous opening, still, thorough drainage, so necessary to good nasal hygiene, is not obtained, the secretions being pent up in the nostril posterior to the obstruction, there to decompose and perpetuate the accompanying catarrh. In aggravated cases the cautery and écraseur would seem insufficient, for although by means of them the usually existing hypertrophies can be removed, permitting of freer respiration, still the septum remains out of position, and the danger of perforating it while cutting through the tissues is always to be thought of. The various forms of retentive apparatus, such as splints and trusses, aside from being unsightly and thus confining patients for a week or so, are in most instances very painful, and require to be frequently removed and readjusted.

These considerations led me to give Roberts' operation a somewhat extensive trial, and in properly selected cases, more especially those complicated with a deflection of the end of the nose, it has yielded very satisfactory results.

The operative procedure followed, in some eighteen cases treated, consisted in introducing a sharp-pointed bistoury into the nostril in which the convexity presents itself, and perforating the cartilage at its superior border, the point of the instrument being met in the opposite nasal cavity by the little finger of the operator; thus guarded, the knife is carried in a vertical direction to the floor of the nares, passing through the point of greatest convexity. We thus have the septum divided into two segments, an anterior and posterior, instead of a superior and inferior, as described by Roberts, the advantage being that the pin is given a better leverage in bending the tip of the nose into position, and it is not possible for it to slip through the incision, as it frequently does when the cut is horizontal. In making the incision it is well that the handle of the bistoury be slightly elevated, in order to bevel the edges of the cut surfaces, so that when the septum is pressed back into position the two segments will override, and being held there by means of the pin, unite in this new position.

In cases where there is simply a luxation of the inferior border of the septum as the result of traumatism, this incision would not seem necessary, and instead the Adams forceps may be employed to break the false attachment and press the cartilage back into position, the pin being used to retain it. When, however, the deviation is congenital, and is accompanied by the high-vaulted palatine arch, or the sigmoid deflection is present, in which both nostrils are more or less obstructed, it may be necessary to ablate some of the tissue with a punch before the pin is introduced. In these cases the difficulty seems to arise in a redundancy of septum, the high-vaulted palate not giving it sufficient space to develop vertically, but crowding it to one side. It then becomes necessary to remove the redundant portion.

The other modification that suggested itself during my first cases was the employment of a shield in the obstructed nostril, to prevent the pin from ulcerating through, and also to give a broader leverage. The necessity for it was suggested by finding, in several instances, some days subsequent to the operation, that the septum bulged

[1] Read before the Section on Laryngology and Rhinology of the New York Academy of Medicine, March 20, 1886.
[2] British Medical Journal, October 2, 1875.
[3] Berlin klin. Wochenschr., 1882, No. 4.

[1] Compendium de Chirurgie Pratique, t. iii., p. 33.

into the nostril both above and below the pin, owing to the fact that the cartilaginous septum, especially in its central portion, is exceedingly thin, its apparent thickness being due to the two layers of mucous membrane covering it upon either side. In order to overcome this tendency, I have had a small elliptical metallic shield constructed, with an eye attached to the centre of its flat surface, through which the pin passes. The septum is perforated by the pin through the anterior of the two segments made by the incision, at right angles to the axis of the nostrils, and the point made to pass through the eye on the shield, which is held in the convex nostril over the line of incision. The point of the pin is then carried backward until the bony septum is reached, when by crowding the cartilage a trifle beyond the median line the point is made to impinge against the lateral wall of the vomer on the side in which it entered—that is to say, the point enters and emerges in the same nostril. If, for instance, it be the right naris that is obstructed, the pin should be introduced through the left; it then pierces the eye on the shield and is carried straight back parallel to the axis of the floor of the nose, and made to rest in the mucous membrane on the left side of the bony septum—not necessarily passing into the left nasal cavity. The principle upon which it acts is that of a lever of the second order, the power being represented by the head of the pin, the weight by the convexity of the septum, and the fulcrum by the bony septum.

If it should be found, when the pin is in position, that the tip of the nose is deflected too far in the opposite direction, it may be corrected by grasping the pin by means of forceps within the nostrils, and bending the end of the nose until it is in proper relation to the face.

In selecting a pin, it is necessary to obtain one of not too high a temper, in order to avoid its breaking when bending the septum into position, an unfortunate accident which may lead to considerable difficulty in extracting it. The pin used is made of plated steel wire, about four inches in length, and with a temper which permits it to bend slightly; a perforated shot answers for a head, which, when the pin is in position, is pinched, and so fastened at the tip of the nose, the excess of wire being cut off. The head of the pin is then lodged in the fossa at the tip of the nose, in order that the apparatus may be entirely hidden from view, and also to prevent it from dropping out.

Immediately upon the subsidence of the inflammatory swelling, which is usually slight, respiration through the previously obstructed nostril is possible, thus securing good nasal drainage and respiration throughout the course of treatment, a factor which contributes much to the comfort of the patient, other forms of retentive apparatus so obstructing the nares that free respiration is not possible. The pin is permitted to remain *in situ* two weeks, in order to give the wound sufficient time to unite.

Occasionally it may be found necessary, when the desired result has not been entirely secured by the first pin, to introduce a second. This procedure is analogous to the second operation so frequently done in strabismus. In placing the second pin in position it is not necessary to again administer ether, as a thorough application of cocaine will produce sufficient anæsthesia. The length of time which this second pin is allowed to remain is governed to a great extent by the amount of deformity to be corrected; usually, a week is sufficient.

In the first operations undertaken the hemorrhage was so profuse as to occasion considerable embarrassment, not only obstructing the view of the parts, but interfering with respiration. This is particularly annoying in children, where the nares are too small to permit of the introduction of the finger, and where it is necessary to see the parts perfectly to properly adjust them. To arrest this hemorrhage various measures have been employed, but that which has proved most effectual is the use of hot water combined with pressure. Two probangs are held in boiling water, and then thrust, one into each nostril, being at the same time pressed firmly together with the divided septum between them. Four or five minutes of such pressure, with perhaps heating the sponges a second time, will suffice to control the bleeding.

In conclusion, it may be remarked that the operation has proved itself more successful in deviations of the cartilaginous septum, especially those connected with deflections of the nasal tip, than any other measure advocated; and that the pin, as a means of holding the parts in position, has shown itself superior to other forms of retentive apparatus, being worn with less discomfort, and permitting of freer respiration and better drainage.

Clinical Department.

TWO CASES OF THORACIC ANEURISM.

Dr. Hobart A. Hare, of Philadelphia, reports the two following cases: Annie D—— came under his observation complaining of palpitation and severe pain in the chest and left arm when lying down. The pain began about three months ago, and has been steadily increasing. There was no history of syphilis or other trouble, except rheumatism; her father had suffered from this, and she had had an attack of acute articular rheumatism every winter for six or seven years, but her mother, two brothers, and a sister are free from it. Two brothers died of hydrocephalus before she was born. She had evidently had some cardiac trouble for years, but was nevertheless well developed for her age. She menstruated at the age of fourteen, about which time she began to work at weaving, at which she is still engaged. There was no history of traumatism or scarlet fever. Inspection of the chest showed an egg-shaped protrusion in the suprasternal notch, very expansile and bulging at each systole of the heart. The dilatation extended well up into the innominate artery for over an inch from its point of origin. Pulsation was strongly marked in all the vessels of the neck. The apex beat of the heart was in the sixth intercostal space about an inch to the left of the nipple. There was no distinct thrill over the precordial space, but it was well marked in the suprasternal notch and over the dilated portion of the innominate artery. On auscultation over the swelling there was heard a rough and soft murmur accompanied by a bruit. Over the aortic orifice was heard a double murmur—a short, sharp and rough systolic, and a long, softer, and more blowing diastolic. These murmurs were very distinct over the sternal notch, the diastolic murmur becoming intensified as the ear was carried down the sternum, reaching its maximum at the ensiform cartilage. Over the pulmonary orifice both murmurs were heard, but were somewhat muffled. Both were transmitted posteriorly to the left, but did not depend on mitral disease, as they were heard more loudly over the right scapular region than the left. Both murmurs could be heard in the vessels of the neck, the diastolic feebly. There was the typical "water-hammer" pulse, twenty-seven to the quarter-minute. Abdominal pulsation could be seen, but was not marked. Percussion revealed marked dilatation of the heart, accompanied by great hypertrophy. No dysphagia, dyspnœa, nor loss of voice. There was a marked difference in the time and force of the pulse in the two radials, the right falling behind and being shown by the sphygmograph to be altered in character. The interesting points in this case were the age, the double aortic disease, the enormous cardiac hypertrophy, the escape of the mitral valves, and the absence of dropsy and of many of the other distressing symptoms usually present in such cases. The patient was but seventeen years of age, while of sixty-nine cases compiled by Garland the youngest was aged twenty. Dr. Hare believes that there was a general dilatation of the aorta extending into the innominate artery, added to which was the recent formation of a small fusiform aneur-

ism from which arose the later symptoms—the pain, for example.

The second case was in a man twenty-eight years old, single, of good hereditary history, and who had never had any sickness, except a mild attack of rheumatism in the hip, and a gonorrhœa some nine or ten years before; he had never had syphilis, nor did he drink to excess. Two and a half years before coming under observation he had fallen from a car, striking full on his chest and face, after which time he began to suffer from dyspnœa, even without exertion. About two years ago he noticed a slight palpitation of the heart, followed by a feeling of a ball rising in his throat. For two years he had felt a throbbing in his chest, and for a year had felt the same sensation all through his body. Three or four months ago he began to experience difficulty in swallowing, and this increased until, on admission to hospital, he could swallow only liquid or soft food, the obstruction seeming to be about on the level with the cricoid cartilage. The voice was altered, apparently from pressure on the larynx rather than on the recurrent laryngeal nerve. There had been no cough nor spitting of blood. About the end of December he began to suffer from pains in the chest and right arm, becoming more and more severe, so as at times to make him very violent and even delirious, requiring hypodermics of one-hundredth grain of hyoscine to quiet him, morphine seeming to increase the trouble. He had double vision almost constantly, and even in his rational moments had visions which he said his mind told him were false. The pupils were widely dilated, the right more than the left. The left responded normally to light, but the right answered slowly, contracting for a moment and then dilating widely. This eye was more prominent than the other, and faint pulsation could be seen in it. The right arm was wasted and flabby. A heaving pulsation, synchronous with systole, was felt in the upper part of the chest, and the upper portion of the sternum was eroded. There was a tumor here extending about one and a half inch upward, and there was a distinct thrill perceptible over the aneurism. The patient's condition became so grave that an operation was decided upon, and Dr. Ashhurst ligated the right common carotid artery on a line with the cricoid cartilage. The man rallied well, but had several violent attacks which were controlled by hyoscine. The next morning he was rational, and had a good pulse, the right being less full than the left. The following night, however, he died from asphyxia, the aneurism pressing more firmly than ever on the trachea. This case is interesting from the age of the patient, the effect of hyoscine on the delirium, and the survival of the patient after ligation of the common carotid, only to succumb to asphyxia from pressure. No autopsy could be obtained. This case is reported by Dr. Hare through the courtesy of Dr. Pepper.

The Microbe of Hereditary Syphilis.—Kassowitz and Hochsinger state that they have discovered a special micro-organism, differing from the rods of Lustgarten, in the tissues of children suffering from hereditary syphilis. This microbe was found in the liver, pancreas, and osseous tissues, as well as in the skin (in pemphigus). It occurred in the form of streptococci arranged in chains. These were found in masses in the smallest capillaries, but were never seen in the cells themselves, being arranged around them. They were found chiefly in those parts in which the inflammatory process was most active, and seldom in tissues in which this process had run its course.

A Scarcity of Subjects for Dissection.—The University of Dorpat has hitherto received its supply of material for dissection from the hospitals and prisons of St. Petersburg, but an order recently made reserves all these subjects for the students in the Military Medical Academy in that city, and the authorities at Dorpat are at a loss for material for their own students.

Progress of Medical Science.

The Muscular Conditions in Flat Foot.—In a recent lecture by Professor Humphrey, published in *The Lancet* for March 20, 1886, the speaker called attention to changes occurring in the muscles which add to the difficulty of effecting a cure of the deformity. The muscles on the tibial and flexor aspect of the foot become relaxed and enfeebled, so that they fail to exert their proper contractile power, and cease to afford their proper support and to effect the normal movements of flexion and incurvation. Hence, he said, the antagonistic muscles—the extensors and the peronei—not being duly stretched or extended, fall into a contracted and irritable condition, which in no small degree aggravates the deformity and the discomfort arising from it. And the condition is further increased, or it may in some cases be excited, by the demand made upon these muscles to steady and brace the tarsus when the foot is placed on the ground and the weight of the body is thrown over it. Their state is similar to that of the muscles on the outer side of the knee in cases of knock-knee, and of those occupying the concavities of the spine in cases of lateral curvature, and is analogous, he thinks, to that of the flexor muscles in cases of disease of the knee and other joints. This state is relieved by rest, especially if the rest is combined with extension by means of a well-applied splint, but it soon returns unless the treatment is continued for a sufficiently long period.

The Etiology of Lateral Curvature.—Dr. E. H. Bradford concludes, as a result of some experiments made upon the cadaver (*Boston Medical and Surgical Journal*, March 18, 1886), that the deformity known as lateral curvature is the result of several factors, the chief being: 1, Superincumbent weight; 2, faulty attitudes, due usually to muscular weakness; 3, a condition of the bone structure of the spine rendering it incapable of resisting the effect of weight, analogous to that known as rickets of adolescence. The effect of weight on the head and shoulders would be, if applied in a vertical direction, to bend the spinal column forward and backward, but in flexible spines the superincumbent weight rarely falls in a direct line, and a lateral curvature follows. This is at first a physiological process, but it subsequently becomes, by the alteration in the shapes of the bones under altered pressure, a pathological change. The extent of the curve and its situation will be determined by the attitude habitually taken by the individual, and perhaps also by a difference in the resisting power in different parts of the column. The injurious effect of superincumbent weight in curving the spine is increased by the obliquity of the pelvis or the inclination of the shoulders so frequently taken by persons of weak muscular systems in sitting sideways and leaning. The curve is usually in the dorsal region, with the right shoulder raised, as the majority of people are right-handed. The distortion is one of growing years, and is more common to girls than to boys for two reasons, namely, that at the age when lateral curvature is usually seen first, girls grow more rapidly than boys, and their muscular system is less well developed, from the customary habits of life of girls in society. The effect of superincumbent weight upon a yielding spine in adult life, after the vertebræ have ceased to grow, is to cause an increase in the antero-posterior curve of the back.

Piperonal.—This is an aldehyde, corresponding to piperonilic acid, obtained as a product in the oxidation of piperina. It occurs in the form of small, white, prismatic scales, possessing a strong odor resembling that of vanilla. A small quantity placed upon the tongue produces a sensation analogous to, but more persistent than, that caused by mint, and it is more irritating to the mucous surfaces than is the latter. It melts at about

125° F., and at a higher temperature volatilizes without leaving any residue. When ignited the flame and smoke resemble the appearance of burning camphor. It is insoluble in cold water, but in hot water it melts, and looks like drops of oil; it dissolves readily in alcohol and ether. Dr. Riccardo Frignani has made a number of experiments with this substance (*Giornale Internazionale delle Scienze Mediche*, No. 2, 1886), as a result of which he states that it possesses both antipyretic and antiseptic properties. The antipyretic action is not of the most active or energetic kind, yet is sufficient in many cases. It is best given in fifteen-grain doses, repeated every two hours for three or four times a day, but much larger and more frequent doses are well borne. The most noteworthy disagreeable effects are nausea, eructations, and dryness of the throat. Its antiseptic action, however, the author states, is much more marked, and, since it is innocuous to the system, even when given in doses of one-half to one drachm, he believes that it is deserving of a high rank among drugs of this class.

Pilocarpine in the Relief of Itching in Jaundice.—A correspondent of *The Lancet* says he has used successfully, for this troublesome symptom, the hypodermic injection of one-tenth of a grain of pilocarpine. It caused some increase of the itching at first, but relief soon followed, and lasted from twenty-four to thirty-six hours.

Coexistence of Erysipelas and Scarlatina.—The coexistence of two or three forms of virus in the same individual is a question which is beginning now, in view of the new doctrines of bacteriology, to be an object of special study. Since Grancher published his observations on the coexistence in the same subject of measles and scarlet fever, it has come to be acknowledged very generally that one of the eruptive fevers can become grafted upon, or superadded to, another. In confirmation of these observations, Vigot reports a case observed by him in which the erysipelatous and the scarlatinous virus—or, in bacteriological terminology, the microbe of scarlatina and that of erysipelas—exerted their specific action upon the same individual at the same time. The patient was a girl, eleven years of age. The first disease to develop was erysipelas, which followed a contused wound near the eyebrow. In two days there appeared redness and œdema of the skin, the eyelids on this side were swollen and closed, and the temperature was 101° F. This condition lasted three days, when the signs of scarlatina—the sore throat and eruption—appeared, and the temperature rose to 103°. The scarlet fever followed its usual course and terminated in recovery. The erysipelas made no further progress. The conclusion drawn from this case was that the influence of the two diseases, or the two forms of virus, one upon the other, is nil, although possibly the course of the erysipelas may have been rendered more benign.—*Giornale Internazionale delle Scienze Mediche*, No. 2, 1886.

The Value of Lateral Incisions in Preventing Rupture of the Perineum.—Credé and Colpe strongly advocate a more free and early use of this measure than is generally made. This recommendation they base on an extended experience at the Leipzig Maternity Hospital, where they found, in 1,000 primiparæ, that out of 741 cases where lateral incision was not judged necessary, there were 104 ruptures, or fourteen per cent.; while in 259 cases where incision was made, and these, be it remembered, cases in which there appeared to be a probability of rupture, there were only 29 ruptures, or 10.7 per cent.; and of these not one was fatal. As regards the risk of infection, the writers do not find it greater where incision is made than in other cases; and they do not find that the operation leads to much weakness or deformity of the vulva, certainly not to so much as is produced by spontaneous rupture.—*Birmingham Medical Review*, March, 1886.

Hot Baths in the Treatment of Syphilis.—Dr. P. K. Kadkin records, in the *Meditsinski Sbornik*, No. 39, vol. xxii., a number of cases of syphilis in which he observed the effect of hot baths upon the elimination of mercury through the kidneys. As a result of his observations, he makes the following deductions: 1. Under the influence of hot baths mercury may be found in the urine of those syphilitic patients who are taking it. How long a time may elapse after the last dose of the drug has been taken before it appears is not definitely determined, but it does not exceed two months. 2. The method of inunction, obviously, cannot be employed in conjunction with hot baths, since the mercury would be immediately washed away. 3. After subcutaneous injections of corrosive sublimate the drug appears more quickly in the urine than it does after inunctions. 4. If the theory of Voit as to the mode of elimination of the syphilitic virus be correct, then this combination of hypodermic injections of the bichloride together with the simultaneous use of hot baths would seem to be the most rational, as in this way the mercury is the more speedily removed from the organism.

Vapor of Cubebs in Membranous Croup.—Dr. R. Couetoux relates, in the *Bulletin Général de Thérapeutique* of March 30, 1886, a case in which he obtained excellent results from the use of cubebs. The child was living under miserable sanitary conditions, and had also the disadvantage of being cared for by ignorant and careless parents. Various remedies had been tried, but without any beneficial results, and the child was apparently moribund, breathing with great difficulty, and able to like scarcely any nourishment. Dr. Couetoux then ordered about six drachms of powdered cubebs to be put in a vessel over a fire, and to be vaporized. This filled the apartment with a very strong and somewhat irritating, but not altogether unpleasant, odor. The child seemed to improve under this treatment, and it was ordered to be continued. But the following evening it was found that the parents had let the fire go out, and the child was apparently again at death's door. Another attempt was made, and this time the orders were obeyed, and the little patient began at once to improve and went on to recovery. A sister of this child, who was later seized with the same trouble, was also speedily relieved by inhalations of the vaporized cubebs. While not claiming any infallible specific action for this drug, the writer thinks that the results obtained in these cases would warrant further trial of the remedy.

Dystrophy of the Thumb-joints.—At a recent meeting of the Medical Society of London Dr. R. Maguire showed a case of dystrophy of the thumb-joints, in which inflammation of the carpo-metacarpal joints of both thumbs came on after the removal of two ovarian tumors in November, 1885. The arthritis had continued unabated, the veins about the joint were swollen, and there was an increase of temperature; grating between the arthritic surfaces could be obtained. The thenar eminences were a little wasted, but there was no reaction of degeneration, only generally diminished reactions to both currents. Menstruation had ceased since the ovariotomy. Pain was the first symptom in the left thumb; the right followed later. The reflexes at the wrists were perhaps a little exaggerated. Absence of rheumatism and gout, and the relation in time to ovariotomy, and the appearance of the disease when the joints were comparatively quiet, suggested a causal relation between the ovariotomy and the arthritis. In was connected not with congestion, but rather with anæmia of the genital regions. All treatment had proved of little avail. Mr. William Adams did not think it could be placed among the neurotic alterations in joints. Dr. William Ord believed that the case was one in which reflected "uterine" irritations were at work; the ovaries had been removed, but it was not known what the state of the uterus was.—*The Lancet*, No. 8, 1886.

A New Local Anæsthetic.—A crystalline substance has been obtained from the bark of the pomegranate, which, when placed on the tongue or other mucous surfaces, seems to produce a local anæsthesia similar to that obtained by the use of cocaine.—*American Druggist.*

Hysterical Sputum.—In addition to the known quantitative and qualitative alterations in the secretions and excretions in hysteria, Wagner has observed a special form of sputum, which is usually hemorrhagic in character, and may give rise to a suspicion of tuberculosis, especially if the patient has a cough and is run down in general health. This sanguinolent sputum is, he says, one of the most prominent symptoms of hysteria, and is to be distinguished from that of tuberculosis, of bronchiectasis, and of cardiac trouble, by its permanence and its uniformity. In quantity it amounts to from five to twenty-five drachms in the twenty-four hours. It may be occasionally of a gray color, but is usually reddish, and a little paler than ordinary bloody sputum. When kept for a time in a glass, a sediment forms of very small grayish particles. The sputum does not coagulate, and when examined under the microscope is found to contain fewer red blood-corpuscles than would be supposed. It contains also white corpuscles in greater or less abundance, ordinary pavement epithelium, and various forms of micro-organisms, but never any morphological elements which seemed to come from the lungs. The author was in doubt as to the origin of this sputum, but thought probably the blood came from little hemorrhages by diapedesis in the mouth; the presence of pavement epithelium would indicate a desquamative condition of the mucous membrane.—*Rivista Internazionale di Medicina e Chirurgia.*

Hematoma of the Sterno-cleido-mastoid in the New born.—Dr. Otto Küstner writes in the *Centralblatt für Gynäkologie*, No. 9, 1886, giving his views of the etiology of this affection. He says that it is true that hematoma of the sterno-cleido-mastoid muscle is caused by a stretching of the muscle, but it is not true that this stretching is the result of direct traction upon the neck during efforts at extraction of the fœtus. Such direct traction, he maintains, is incapable of producing a rupture of the muscular fibres or small vessels. This accident can result only from torsion, with the head turned to the same side on which the rupture occurs. In order to show that this was the only way in which the muscle could be sufficiently stretched, the author took the body of a child and, laying bare the sterno-cleido-mastoid, inserted three pegs into it. He then made direct traction on the head, flexed and extended it, and moved it from side to side without causing any separation of the pegs. Rotation of the head to the opposite side did not move the pegs apart, but rotation to the same side separated them so widely that a third peg could be easily inserted between either of the others. He concluded from his experiments, and also from clinical observation, that this accident could readily occur in normal labors, and was no evidence that traction, either instrumental or manual, had been made during the delivery of the child; and furthermore, that it could be produced during delivery either by the head or the breech.

A Support for the Body During the Application of Dressings to, and about, the Pelvis.—It is always a difficult matter to support the body of the patient, especially if he is etherized, during the application of a bandage around the pelvis. Dr. Moritz Schustler describes, in the *Centralblatt für Chirurgie* for March 13, 1886, an apparatus, devised by Professor v. Dittel, which would seem to furnish an excellent support in such cases. It consists of two round steel bars, about the length of a man and three-fourths of an inch in diameter, joined at one extremity by a cross-piece eight inches long. The united extremities rest on the bed or table, under the patient's shoulders, while the free ends, together with the feet, are held by an assistant. The buttocks and legs of the patient are thus supported by the bars, and any desired bandage can be readily applied. The iron rods being smooth, can easily be withdrawn without disturbing the dressings.

The Treatment of Erysipelas by Zinc Paste.—At a recent meeting of the Medico-Chirurgical Society of Montreal, Dr. A. D. Blackader read a paper on the use of zinc paste in the treatment of erysipelas, especially in infants (*Canada Medical and Surgical Journal*, March, 1886). He reported several cases of the disease, two of which have been treated by the application of white zinc paint over all the erysipelateous surface, in the manner recommended by Mr. Barwell with white lead. The same advantages were claimed for the zinc as had been for the lead, without danger of absorption of any poison, which, in infants, was perhaps to be feared with the latter. These advantages were immediate relief to pain and restlessness, followed rapidly, as a rule, by subsidence of pyrexia and arrest of the disease. The fact that erysipelas was a constitutional, and not merely a local, disease was not overlooked; but it was contended that, if by these local measures we moderate and assuage the local inflammation, we at the same time control at least some of the factors in the systemic disorder. Special advantages were claimed for the zinc treatment in infants. The paste is easily applied, dries quickly, and forms a complete dressing by itself, which cannot be soiled by the secretions, nor easily rubbed off by the restlessness of the infant. If desired, some disinfectant may be added. Soap and warm water readily remove the zinc coating after the attack is over.

The Surgical Treatment of Chronic Eczema.—Dr. Max Bockhardt recommends the following drastic treatment in chronic eczema. The crusts having been removed, the whole affected surface is scarified with a double-edged lancet in two directions at right angles to each other. After the bleeding has been checked, the surface is rubbed with wadding or charpie, soaked in solution of potash, until the upper thick epidermic layer begins to loosen. Then the potash solution is washed off, and the surface covered with diachylon ointment or olive oil. After twenty-four hours the dressing is removed, and a water-compress applied. The appearance then resembles an ulcerated surface, and the part is dressed, once in three days, with pyrogallic ointment or solution of nitrate of silver. The cure is complete in fourteen days to four weeks. Relapses do not occur, and the elasticity and flexibility of the skin are not affected.—*London Medical Record*, April, 1886.

Pigmentation of the Conjunctiva in Addison's Disease.—Dr. Armin Huber, assistant in the Zürich clinic, records a case of Addison's disease in which the conjunctiva was the seat of pigmentation. The pigment was deposited in one minute patch on the scleral conjunctiva of the right eye, above the corneo-scleral junction, and on each side in numerous spots along the lower margin of the cornea. The patient was forty-nine years of age, and presented well-marked bronzing of the skin, besides suffering from gastric symptoms so frequently met with in Addison's disease. The writer remarks that he is only aware of one other observation of the conjunctiva being pigmented in this disease, namely, in a case described in Gerhardt's clinic.—*The Practitioner*, April, 1886.

The Nettle as a Hemostatic.—M. Rothe has employed the tincture of urtica dioria, or the common nettle, to arrest bleeding from cut surfaces. It is not of value in arterial hemorrhage, but answers all the purposes to which iron styptics are applicable, and is free from the inconveniences of these latter preparations.

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A NEW VIEW OF THE PATHOLOGY OF GOUT AND RHEUMATISM.

DR. P. W. LATHAM, Professor of Medicine at Cambridge, has recently delivered a series of lectures upon the pathology of rheumatism and gout, which are well worth the careful study of the physician. Professor Latham speaks from the standpoint of a physiological chemist, and it must be confessed that his chemical discussions are recondite and perhaps beyond the average reader.

Yet, after all, the basis of Dr. Latham's view of the pathology of gout, rheumatism, and perhaps of chorea and many neuralgias, is not obscure. It is simply the old enemy, uric acid, acting under various masks and irritating the nervous centres in various ways.

Dr. Latham believes that he has solved the problem of the origin of uric acid in the human body. In the human subject, glycocine conjugated with cholic acid is poured out as glycocholic acid, a constituent of the bile, into the intestine. After the bile has served its purpose in digestion, the glycocine as well as taurine are returned into the blood. These, together with the other amido bodies, leucine, and possibly tyrosine, the products of the digestion of albuminous food, reappear in the urine as urea; that is, the urine does not contain them, but its urea is proportionately increased. Now, these amido bodies, glycocine, leucine, etc., are probably carried by the portal vein straight to the liver, and from certain facts we are led to the view that among the numerous metabolic events which occur in the hepatic cells, the formation of urea from these bodies may be ranked as one. Suppose from some cause this metabolism of glycocine is interrupted, while taurine, leucine, etc., still undergo the normal changes with the production of urea, we should then have in the gland the two substances, glycocine and urea (or the immediate antecedent of urea), the conjugation of which by the gland (just as in the case of hippuric acid being formed from the conjugation of glycocine and benzoic acid) would produce hydantoic acid, which, dehydrated, would be converted into hydantoin.

Hydantoin is easily soluble, and so would pass on in the circulation to be combined elsewhere with two molecules of urea or with biuret, which is also soluble, to form ammonium urate.

Put in other language, Dr. Latham supposes that the glycocine which results from intestinal digestion and biliary secretion passes to the liver. It is there not metabolized into urea as it should be, but is conjugated with urea and converted into hydantoin; this passes on to the kidneys to be combined with other molecules of urea or biuret, forming urate of ammonium.

Defective metabolism of glycocine in the liver is therefore, according to Dr. Latham, at the root of the over-production of urates and uric acid.

This imperfect metabolism results from an inactive condition of the liver, due to overwork of its cells or deficient innervation. The uric acid circulating in the blood is generally eliminated by the kidneys, if these organs be sound, as is usually the case in young and middle-aged persons. If it is not eliminated, however, it may cause the various neuralgic and gouty symptoms, and generally by irritating a sensitive portion of the nervous system.

This is Dr. Latham's view of the pathology of gout.

Rheumatism is due also to the over-production primarily of glycocine, and then of uric and lactic acids; but in this disease, the glycocine originates in a different way, viz., through an excessive production in muscle. Through changes in vascular supply, due to the reflex or direct effects of cold, damp, etc., the muscular metabolism is modified, and glycocine and lactic acid are produced, the former passes on to the liver, spleen, and other glands, and ultimately becomes transformed into uric acid.

Having demonstrated his view of the pathology of gout and rheumatism, Dr. Latham lays down some very interesting practical rules which govern his treatment of these diseases. We cannot do better than present them in their entirety to our readers:

First, the true salicylic acid obtained from the vegetable kingdom must alone be employed. If you have to give large doses, avoid giving the artificial product obtained from carbolic acid, however much it may have been dialysed and purified. An impure acid will very quickly produce symptoms closely resembling delirium tremens.

Secondly, give the acid without any alkali or base. A very good form is to mix one hundred grains with fifteen of acacia powder and a little mucilage. Allow the mass to stand and harden, and then divide into thirty pills.

Thirdly, place the patient fully under the influence of the drug—that is, let him have sufficient to produce cerebral disturbance, that is, buzzing in the ears, or headache, or slight deafness; with the development of these symptoms, the temperature and the pain in the joints will begin to decline. To an adult I generally administer three doses of twenty grains (six pills), at intervals of an hour, and, if the head remain unaffected, a fourth dose at the end of another hour; and then repeat the twenty grains every four hours, until the physiological effect of the remedy shows itself. In the majority of cases, from eighty to one hundred grains are enough. In severe cases, one hundred and forty to one hundred and fifty may be required. Afterward, about eighty grains a day are sufficient; and, as the temperarure declines, smaller quantities will develop their physiological effects, sixty or even fifty grains being then sufficient to produce cerebral disturbance. It would appear that, as long as the rheumatic poison is circulating in the system, the physiologi-

cal effect—that is, the effect it produces in the healthy organism—does not show itself; acting as an antidote, the greater the amount of poison, the larger must be the dose of the remedy; but, as soon as the formation of the *materies morbi* is stopped, then the excess of the remedy acts as it would in the healthy organism, and its peculiar physiological effects are developed. It is a very striking illustration of the difference between the therapeutic effect of a remedy and its physiological action.

Fourthly, give the patient from forty to eighty grains daily for ten days after all pain and pyrexia have passed away.

Fifthly, let the patient's diet consist entirely of milk and farinaceous food for at least a week after the evening temperature has been normal. On the other hand, if the patient have meat and soup, you may look forward with fair probability to a relapse.

Sixthly, take care to maintain a daily and complete action of the bowels. Calomel is the best purgative; from two to five grains at night, followed in the morning, if necessary, with a saline draught. This is the most important adjuvant to the action of salicylic acid, and I will presently explain to you why this is the case.

Seventhly, let the patient be enveloped in a light blanket, and with no more bedclothes than are sufficient to keep him from feeling cold. The object of the treatment now is to cool the patient—not, as in former times, to sweat the poison out of him; and the cooler he is kept, the sooner will the temperature be lowered. In fever, increased heat increases the metabolism, just as in a cold-blooded animal.

THE RECENT MEETING AT ST. LOUIS.

The proceedings of the recent meeting of the American Medical Association reveal two facts which are worthy of special notice—one of omission and one of commission.

When the Code of the Association, its "palladium of honor," was assaulted in New York, there arose in its defence, in the Empire State, a central figure. When its ambiguous clauses needed a more definite interpretation than they had heretofore received, and the whole instrument trembled in its very foundation, this captain stepped into the breach and wrote with the hand of a master. In the planning and preparation for battles the strong arm of his counsel could always be traced, and in the thickest of the contest his bright plume could always be seen. He chased the mists of doubt away from his followers, and waged a vigorous and relentless warfare. His presence always lent inspiration, and his acknowledged wisdom and influence gave him the power of a general. For his loyalty and his labor he was rewarded with the highest professional honor within the bestowal of his *confrères*.

So recently has this faithful servant and ornament to the Association passed away that we can hear the rustle of the priestly robe around his bier, and yet—and yet *the hallowed memory of Austin Flint passed unnoticed*, save by the address of the President, whose official obligation demanded the recognition of the annual death list of his predecessors in office. For this body, then, his memory has been like a snowflake upon the sea, "a moment seen, then lost forever." Sad commentary on the life of a faithful and honored public servant.

When the Judicial Council re-opened the case of the Philadelphia County Medical Society it committed an essential error, one which has sacrificed its exalted position, and which will lend color to the statement that it has descended from the dignity of a high court of law to the low level of politics. It, being a body which makes its own rules of action, may have had the power exercised, but a decision having been made, written out, officially signed, and laid upon the table of either the President or Secretary—where by custom, if not by rule, it was entitled to take precedence of all other business—it should have remained the decision of the Council. If the evidence was incomplete the Council should not have rendered its decision. The fact that it handed down a decision must be accepted as evidence that the Council had heard the evidence, and had closed the case. From its decisions there is no appeal, and in this respect the Council is not unlike the Supreme Court of the United States. As well might this Court, after hearing the arguments in a case and handing down its decision, at once recall, rehear, and redecide the same, reversing its own decision, as for the Judicial Council to have pursued the illogical course it did. The plea in extenuation, that new evidence was offered, is invalid, and savors strongly of the methods of politics.

SOME EXPERIENCES IN THE TREATMENT OF DIPHTHERIA.

During six years Dr. P. Werner, of Narva, Russia, treated ninety cases of diphtheria. The death-rate ranged from sixty to seventy per cent. This high mortality, however, affected only the first seventy-three cases. Among the last seventeen only two died, and as these were moribund when Dr. Werner was called in, he thinks that he can say that practically he had no mortality in his last cases. This remarkable fall in the death-rate he attributes to a change of treatment. His treatment, as thus very wisely changed, consisted in giving corrosive sublimate internally, and rubbing ichthyol upon the swollen glands, together with the use of "milk and again milk," but no alcohol. He gave to a child one and a half year of age a mixture of one-fourth grain of sublimate in four ounces of water. This was administered every one-third or one-half hour, so that the child took the whole in twenty-four hours.

Dr. Paul Hesse has been using bromine in diphtheria, and thinks that, while it is no specific, yet in experienced hands it is a most useful agent, exceeding, in fact, all others. Hesse at first applied bromine locally every one to three hours, using the following solution:

℞. Bromin.,
Potas. bromid.....āā 0.5
Aquæ..... 200.00
M.

This solution he also dropped upon the sponge of an inhaler, and had it used in this way for five minutes every half hour. He finally gave up the local application and used only the inhalation, modifying the strength of the dose according to the severity of the case.

For the swelling of the glands of the neck, he used an "ice-cravat." Hesse's conclusions, based upon one hundred and fifty cases, are that bromine is the best agent for the local process in the throat. Early tracheotomy is the best thing against laryngeal diphtheria, and a stimulating treatment is the best thing for the general condition. These three things make up the treatment *par excellence* of diphtheria.

Dr. C. G. Rothe, of Alenburg, has for some time advocated the administration in diphtheria of cyanide of mercury, and he claims to have had under its use a mortality of from three to five per cent. only. Since April, 1885, Dr. Rothe has given the biniodide of mercury in place of the cyanide, using the following solution:

℞.	Hydrarg. biniodid.....	0.012
	Potas. iodid.....	0.20–30
	Aquæ dest.....	60.00
	Tr. aconit.....	1.00

M.

Of this, one teaspoonful was given hourly to children under three years of age, and more proportionally to older persons. Rothe claims that he treated forty cases in this way without a single death.

A very severe case of diphtheria was treated successfully by Dr. Richmond, of Greenwich (*Lancet*), by pencilling the throat with iodoform, and giving the same drug by inhalation. A study of the above contributions shows again how far apart the profession still is as regards the treatment of diphtheria, and how very much concerted effort in the study of its therapeutics is needed.

THE BACILLUS OF RHEUMATIC PERICARDITIS.

In June, 1885, Dr. Albert Wilson, of Leytonstone, Scotland, reported the discovery of a "micro-bacillus" in the exudation in a case of fatal pericarditis.

In the *Edinburgh Medical Journal* for April, 1886, Dr. Wilson reports a second case, and again describes the bacilli which were present.

The patient was a boy, twelve years of age, who had some rheumatic symptoms, culminating in a pericarditis from which he died. On autopsy the pericardial cavity was found filled with a sero-fibrinous effusion, and this, when examined under the microscope, showed short, non-nucleated bacilli, but no micrococci.

Dr. Wilson made some careful cultivation-experiments in flasks containing sterilized broth, and he found that the bacilli grew, developing nuclei at each end, and forming long threads of jointed bacilli.

Some interesting experiments were made to determine the relative power of salicylate of sodium and of quinine sulph. in checking the growth of this organism. It was found that while a two per cent. solution of quinine would entirely check its growth, it required a five per cent. solution of the salicylate.

This, Dr. Wilson thought, was in accordance with his experience, that while in rheumatism and rheumatic endocarditis the salicylates are most effectual, yet in pericarditis quinine did more good. This seems to us rather fanciful; but Dr. Wilson undoubtedly has seen and cultivated a bacillus which is to be found sometimes, if not always, in pericarditis. If it is the cause of the disease, and a two per cent. solution of quinine kills it, then it would seem as if the rational treatment of pericarditis is to wash out the pericardial cavity with the solution in question.

FOREIGN MEDICAL DELEGATES AND THE INTERNATIONAL MEDICAL CONGRESS.

Many, indeed, most of our foreign brethren, are in a state of mind as to what all the quarrel over the next International Congress means. And while in this condition of doubt and ignorance as to whether there is to be an International Medical Congress, or only a National Domestic Quarrel, they naturally do not care to plan for a trip here next year.

To these gentlemen we would say: We have had in this country certain disputes, mainly over the question whether the Congress organization should be controlled by the American Medical Association, a society of about three thousand members, or by the medical profession of sixty thousand men. In this dispute the American Medical Association has conquered, but by methods which have caused the resignation and withdrawal of the great majority of the American physicians best known abroad and at home. There will be an International Medical Congress, but, according to the present outlook, a Congress in which many of America's best physicians will be absent.

Still, we say to foreign delegates, You will meet a large number of able and hospitable gentlemen at the Congress, you will be made warmly welcome by all Americans, and you will hear no quarrelling while you are in the States. We know that many medical gentlemen in New York, Philadelphia, Boston, and other medical centres, debarred from receiving guests in an official capacity, will be glad to welcome all foreign visitors unofficially and pay them every hospitable attention.

THE ASSOCIATION AND THE CONGRESS.

The action of the American Medical Association in continuing the policy and organization of the Executive Committee of the International Medical Congress only fulfilled the general expectation. If the act had been done in a less arbitrary manner, without first excluding all persons likely to bring up any discussion or opposition, a general effort at co-operation might have been secured.

But the organization and management are definitely settled, and we have no desire now to hamper its future work. We do not think that hereafter the International Medical Congress will meet with any aggressive opposition or criticism. Its managers have chosen their course, and we shall be glad, for the sake of our country's reputation, to see them successful in it.

But how can it be denied that the medical profession of this country is now very imperfectly represented in the organization of the Congress? And how can fair-minded persons help feeling that it is a serious mistake for the men who now are connected with it to go before the world as representatives of the best of the medical profession of the United States.

A PERMANENT SPLIT IN THE AMERICAN MEDICAL ASSOCIATION.

Now that the American Medical Association has finished its session, and its members have dispersed to their homes, there must come to all a period of calm reflection. Such reflection can hardly fail to show that the Association has committed another serious error, and one from which it will not soon recover. We refer to the arbitrary refusal to admit the Philadelphia delegation. This delegation was the only one sent by the Philadelphia County Medical Society, it was duly accredited, and its rejection was a piece of injustice and folly so monumental as to make one wonder if the gods had not infused some mad frenzy into the minds of the Judicial Council. The immediate result of this act will be to alienate the profession of Philadelphia from the Association, and the sympathies of a very large majority of the profession not attached by political ties to the Association will go with them.

For it is again demonstrated that the American Medical Association has fallen into the hands of political managers whose unskilfulness and stupidity are so astounding that we feel inclined to commiserate more than condemn.

No doubt the American Medical Association believes that it can get along quite well enough without the co-operation of the leading physicians of Philadelphia, New York, Boston, and Baltimore, etc., but without them it can no longer call itself a national or representative body.

The American Medical Association will continue to live, and we trust will thrive, but it is permanently divided, and will, we fear, never again represent the whole American profession.

News of the Week.

MEDICAL DEPARTMENT, UNIVERSITY OF NEW YORK.—Dr. Wesley M. Carpenter, of this city, has been appointed Clinical Lecturer on the Practice of Medicine in the Medical Department of the New York University. This is an honor peculiarly well deserved.

DR. GEORGE H. ROHE'S name, as Chairman of the Section on State Medicine, was omitted accidentally in our report of the proceedings of the American Medical Association.

INTUBATION OF THE LARYNX.—Dr. O'Dwyer described his new process of intubation of the larynx at the New York Post-Graduate Medical School and Hospital on Friday, May 7th, before the students of the College and physicians of the city interested in this subject. Tubes of various shapes and calibre were shown, and the operation was demonstrated on the cadaver.

ANOTHER OF THE WOLF-BITTEN PATIENTS of Pasteur is dead of rabies, according to *Le Progrès Médical* of May 1st.

CHOLERA IN ITALY.—A considerable number of cases of cholera occur daily in various parts of Southern Italy. At Brindisi four or five new cases are reported daily.

STATISTICS OF M. PASTEUR'S HYDROPHOBIA PRACTICE.—At a recent meeting of the Academy of Sciences, Paris, M Pasteur announced that he had treated the following number of people from different countries for bites from mad dogs: France, 505; Algeria, 40; Russia, 75; England, 25; Italy, 24; Austro-Hungary, 13; Belgium, 10; North America, 9; Finland, 6; Germany, 5; Portugal, 5; Spain, 4; Greece, 3; Switzerland, 1; Brazil, 1. This makes a total of 726.

PASTEUR'S METHOD COMMENDED.—Dr. von Frisch, who was lately sent to Paris by a Vienna committee to inquire into Pasteur's system of inoculation against rabies, has given an account of his researches in a public meeting at the Town Hall. He unreservedly commended Pasteur's system, urging that it should at once be adopted by the medical profession in Austria. Giving some statistics on hydrophobia, he said that in Austria there had been 135 deaths from this cause in 1874, and 132 in 1875. In 1882 the mortality declined to 77, the lowest figure on record.

THE PICTORIAL SPIRIT OF THE AMERICAN MEDICAL ASSOCIATION.—One of the curious features of the last Association meeting was the way in which it was hippodromed by the daily press. The columns of the papers were filled with all kinds of gossip, biographical and personal notes, jocose comment, etc. To cap it all, there were issued each day some eight or ten pictures of those members supposed by the reporters to be leaders in medical science, or especially distinguished for personal loveliness. The list of the representative men of the Association pictorially presented is interesting. Naturally, St. Louis leads in number, not because she has the handsomest doctors, necessarily, but her geographical position at the time, no doubt, gave her an extra hold upon the artist reporters. Chicago follows close behind, and we are glad to note that Dr. Davis has the largest picture of all, being very near a three-quarters length. Philadelphia is represented by one L. D. Gross (?) and Dr. Atkinson. The classic features of the Association Secretary cannot be made unattractive even by a St. Louis woodcut. New York and Boston were, unhappily, not represented, but Jerseyville, Ill., and Bloomington of the same State have each an unusually handsome doctor. The great State of Texas, which produces annually millions of bales of cotton, or some other equally valuable product, had only one pictorial representative—an injustice which we trust will be properly commented upon by our fiery contemporary of Austin.

DR. JAMES S. MCKENZIE, of Baltimore, died on May 10th, aged sixty-seven.

AN ENGLISH CONTEMPORARY refers with some dismay to our figures showing the output of medical graduates in Chicago, and in some strange way credits us with speaking of this prolific production of doctors as "a service to the profession." We have not so regarded it. But contemporaneously with our announcing an annual output from Chicago of 285 regular and 215 irregular medical graduates, our esteemed contemporary, Dr. N. S. Davis, was congratulating Chicago upon its evidences of being a great medical centre. Hence, perhaps, some confusion.

A Testimonial to Professor von Troeltsch.—In recognition of the great labors for the advancement and development of the science of otology by that eminent surgeon, Professor von Troeltsch, his admirers in the profession have presented him with an address, accompanied by an album, containing the photographs with signatures of most of the eminent otologists of the present day. The address is a tribute to the energy and genius of the master, who, for more than a quarter of a century, has devoted himself to the scientific and practical development of otology. It testifies to his vast services in the study of the anatomy and pathology of the ear, and furthermore to our indebtedness to him for the introduction of many new methods of examination. His energy, directed toward the liberation of otology from the narrow bonds of specialism, and exerted for its equal recognition with the other sciences, by the state, as an object of instruction at the universities, is highly praised. The writings of von Troeltsch are ornaments of medical literature, distinguished by their clearness and descriptive power. The address concludes with the hope that the master may long be spared to his family, friends, and admirers, an adornment to the university, a noble example of scientific attainments. Among the many well-known names of otologists, of all countries, accompanying the address, are those of Sexton, Seely, Prout, A. H. Buck, and Orne Green, representing the profession in this country.

The Utility of Spaying.—We note with pain that our article upon the utility of spaying has been misunderstood by our intelligent contemporary *The Alienist and Neurologist*. We are credited with being serious champions of spaying until thirty-five per cent. of all womankind have had their ovaries removed. Our views with regard to unnecessary gynecological interference have always been so pronounced that we did not think it possible our article could be misunderstood. We fear that our St. Louis contemporary is not a "constant reader."

Homœopaths as Readers of Scientific Medical Works.—A prominent publisher of regular medical works has said that he sold more books, proportionately, to homœopaths than to regular physicians.

The Practice first established in medical journalism by The Medical Record, of printing a daily edition during the session of the American Medical Association, was adopted by our enterprising contemporary, *The Weekly Medical Review*, at St. Louis, last week.

The Medical Society of the State of Florida meets at Palatka on May 18th.

The Imperial University of Japan has been reorganized. One of its most important departments is the College of Medicine. This is presided over by Dr. Miyake, a physician of wide reputation and extensive learning. The main course of instruction is modelled after that in the German medical colleges; the foreign professors, of whom there are at present five, are also German. The course covers a period of four years, and the preparatory course three years more. There is also a course of lectures delivered in the vernacular, which is called the special course. The total number of students last year was nine hundred and seventy-two. The Medical School of Japan is eleven hundred years old. In its early days it was presided over by a superintendent and assistant, under whom there was one medical professor, one professor of acupuncture, one professor of massage, one professor of diseases of women, a teacher of materia medica, botanists, and a number of physicians. The whole course covered seven years.

The Sei I Kwai Medical Journal.—We are glad to learn that our esteemed Japanese contemporary is prospering, and is able to enlarge its valuable columns.

The Medical Department of the University of Pennsylvania.—Dr. E. T. Reichert has been elected Professor of Physiology, vice Dr. Harrison Allen, resigned. At the annual commencement, held May 1st, a class of one hundred and eighteen was graduated.

The American Laryngological Association meets in Philadelphia on May 27th, 28th, and 29th, under the presidency of Dr. Harrison Allen. A list of twenty-three papers, to be presented by as many members, is given in the programme; with a banquet on the 28th, and an excursion on the 29th.

American Medical Editors' Association.—The annual address before this Association was delivered by Dr. H. O. Walker, of Detroit. The officers elected for the next year are Drs. J. V. Shoemaker, of Philadelphia, President; Dudley S. Reynolds, of Louisville, Vice-President; William Porter, of St. Louis, Secretary. Ex-President Walker was empowered to appoint a committee to invite the editors of the Old World to attend the next meeting. The banquet given by the Medical Press and Library Association, at the St. Louis Club House, was an elegant affair. The toasts were numerous, the responses brilliant, and the attendance large.

A Maternity Hospital has been organized in Buffalo.

Another Endowed Medical College.—If we are correctly informed, the Medical Department of Eulane University of Louisiana (formerly the Medical Department of the University of Louisiana) is to be classed with the medical schools having a very substantial endowment. Aside from property valued at $80,500, the college gets its share of an annual income of over seventy-five thousand dollars (Report Commissioner of Education, 1884). Surely, with such resources, the New Orleans college ought to do better than simply require the old low standards for graduation, with no preliminary requirements whatever.

The Fifty-five Million Population of the United States have 89 regular medical colleges, with about 10,000 medical students; 8 of these medical colleges have each from 300 to 600 students, and 7 of these colleges have from 200 to 300 students.

The Missouri State Medical Association.—This Association held its annual meeting at St. Louis on May 3d. In the absence of Dr. Catlett, Drs. C. A. Todd and J. W. Jackson presided. A motion to have the Society meet at one place every year was lost. A number of scientific papers were read by title, and referred to the Committee on Publication. The Treasurer announced that the Society had a balance of $450 in the treasury. A resolution from the Woman's Temprance Union, re-

commending the teaching of the physiology with regard to tobacco and alcohol in the public schools, was not adopted. Dr. Griffiths, of the State Board of Health, read a communication setting forth the work of the Board, and calling attention to some points with reference to which it was of importance that the profession of the State should co-operate with the Board. The Association then elected the following officers for the ensuing year: J. W. Jackson, Kansas City, President; J.W. Moss, Columbia, First Vice-President; W. E. Fishel, St. Louis, Second Vice-President; C. L. Lamb, Hannibal, Third Vice-President; Linsley Brown, Hamilton, Fourth Vice-President; J. S. Gillette, Rich Hill, Fifth Vice-President; J. C. Mulhall, St. Louis, and E. Cave, Mexico, Recording Secretaries; R. F. Brookes, Carthage, Corresponding Secretary; J. H. Thompson, Jefferson City, Treasurer. The Society adjourned to meet next year at Macon City.

Boycotting a Professor.—The medical students of the University of Vermont, on May 10th, organized an open protest against their recently appointed Professor of Surgery. They refused to attend his opening lecture, and marched around town making a demonstration during the lecture-hour. The trustees elected Dr. Bingham to the chair made vacant by the death of Professor James L. Little. The students made a written protest against the appointment of Dr. Bingham, on the ground that he was not a man of sufficient experience, and that he had made serious mistakes in diagnoses and operations in clinics before the class. The trustees made an informa investigation, but did not alter their decision. The students thereupon voted to boycott the new professor. The students are doing a serious injustice to a gentleman of excellent surgical skill and reputation.

Typhus Fever in a Children's Asylum.—Five children from the Deborah Nursery, a Hebrew asylum of this city, and one from the branch at 95 East Broadway, are in Riverside Hospital with typhus fever. They caught it from Otto Schultz, who was hired by the nursery at Castle Garden a fortnight ago as porter. There are nearly one hundred children in each branch of the nursery, and more cases are expected.

The American Climatological Association held a very successful meeting during the past week in Philadelphia. Members were in attendance from New York, Baltimore, Michigan, Boston, Georgia, and other places. A resolution was adopted appointing a committee on the organization of a Congress of Physicians and Surgeons of the United States, this committee to confer with that of the American Surgical Association.

Female Medical Students in a Massachusetts Hospital.—It is reported from Boston that the surgeons and medical students in the operating room of the City Hospital were given a shock last week while a male patient was being treated for some genito-urinary disorder by the appearance of a bevy of female students from a local medical school, under the lead of one of their instructors. All took seats with the evident intention of viewing the operation. They were at once requested to withdraw, but refused to do so. The surgeon in charge then informed them that unless they withdrew he would not perform the operation, but this had no more effect than the previous request to withdraw. They still held their seats. Accordingly, operations were transferred to a private room, and they were left in the possession of the place, where they remained for some time. A fortnight ago a similar attempt was made by female students, with two of their instructors, to attend an operation here.

The Censorship of Members of the New York Academy of Medicine.—The New York correspondent of the *Journal of the American Medical Association* reiterates his statements that the New York Academy of Medicine has no machinery for expelling dishonorable members, and circulates the following story: "A Fellow of the Academy having done some action (which need not be mentioned here) believed to be worthy of censure, a member of the Council, a gentleman of refinement and great eminence in the profession, was asked to remonstrate with him in regard to the supposed offence; but when the latter attempted to do this, on more than one occasion, if the writer is correctly informed, he was coolly greeted with the polite advice to 'go to h—ll.' Now, what can the Academy do about it? In former times the course to be pursued would have been sufficiently plain, and there would have been no hesitation in taking suitable action." It would be interesting to know whether the correspondent is "correctly informed," he himself appearing to have some doubt. Certainly this is an unsavory and unauthenticated story. We hardly see how its relation can interest the readers of the *Journal* or benefit anybody.

The Illinois State Medical Society meets at Bloomington on the third Tuesday in May.

Recent Operations in Brain Surgery.—A few months ago a man was admitted into the Middlesex Hospital, under Dr. Cayley, suffering from coma, which had supervened upon a long-standing purulent discharge from the ear. There were no localizing symptoms. Mr Hulke trephined the skull in the lower part of the temporal fossa, and by means of a director explored the temporo-sphenoidal lobe, without result. The operation was unattended with ill results, but after the patient's death, a few days later, an abscess was found in the cerebellum. Quite recently a woman was under Dr. Cayley's care with similar history and symptoms, and intra-cranial suppuration was diagnosed. Mr. Hulke determined to explore the brain. In this instance he made an aperture in the cerebellar fossa of the occipital bone, and through a small incision in the dura mater he passed a director through the cerebellum in all directions, but without striking an abscess. Finding that the symptoms were unrelieved, he subsequently trephined the temporal fossa and opened an abscess in the temporo-sphenoidal lobe We believe these cases will be duly reported to one of the medical societies.

A very Broad Hint.—A physician in this city is said to have the following inscription on his bill-heads: "A patient's gratitude to his doctor is a part of his disease, and is most declared when the fever is highest, cools off during convalescence, and entirely disappears with the complete return of health. All bills due upon presentation. Office prescriptions and attendance strictly cash."

Reviews and Notices.

THE DISORDERS OF MENSTRUATION. A Practical Treatise by JOHN N. UPSHUR, M.D., Professor of Materia Medica and Therapeutics in the Medical College of Virginia, Richmond, Va. New York and London: G. P. Putnam's Sons. 1886.

THIS little book is modestly called a student's manual, and a very practical and useful instructor it is for students. But it is not the student alone who may derive benefit from reading it, for it contains many valuable hints which will be of service to no small number of practising physicians when worried by a perplexing case of this nature. The work is divided into ten chapters, treating severally of amenorrhœa, menorrhagia, dysmenorrhœa, the neuroses of menstruation, pelvic cellulitis, vesical irritation, etc. It is written in a pleasant style, and the histories of illustrative cases are introduced wherever necessary.

HAWES' PHYSICIAN'S RECORD. M. E. Hawes, East Weymouth, Mass.

THIS is a simple pocket memorandum for daily records. Each page is so arranged as to record for one month a patient's pulse, temperature, general condition, etc. It is compact and attractively arranged.

ESSENTIALS OF PHYSICS AND CHEMISTRY. By CONDICT W. CUTLER, M.D., Physician to New York Dispensary. New York: J. H. Vail & Co. 1886.

THIS small pocket manual has been prepared principally for examination reviews. Its merits are completeness and simplicity. It is one of the best works of the kind we have seen. The subject of organic chemistry, generally difficult for medical students, is plainly set forth.

DOGS IN HEALTH AND DISEASE. By JOHN SUTCLIFFE HURNDALL, R.C.V.S. Pp. 88. London: E. Gould & Son. 1886.

THIS seems to be a very complete, yet condensed, account of canine diseases. The author gets somewhat off the track in his "humble attempt to elucidate the great truths of homœopathy," and in his advice to buy remedies only of homœopathic druggists, etc. Twaddle similar to the foregoing occupies about one-fourth of the volume. The remainder seems to be fairly sensible.

A MANUAL OF ANIMAL VACCINATION. By DR. E. WARLOMONT, Member Royal Academy of Belgium, etc. Translated by Arthur J. Harries, M.D. 16mo, pp. 168. London: J. & A. Churchill. 1885.

THIS volume opens with some general observations on vaccination. The various methods of inoculation are discussed seriatim, and their relative advantages and disadvantages set forth. The author, while admitting the possibility of syphilitic inoculation, does not believe that any other disease is so transmitted. One valuable part is a bibliography of the chief works upon the subject.

UEBER ACETONURIE UND DIACETURIE. By Von DR. RUDOLF VON JAKSCH. Pp. 156. Mit sechs Holzschnitten. Berlin: Verlag von August Hirschwald. 1885.

THIS monograph by Jaksch furnishes a very complete and exhaustive description of acetone and diacetone, in all their chemical and pathological relations. It is quite an indispensable contribution for the student of the interesting and much mooted subject of acetonuria.

THE INSANE IN THE UNITED STATES AND CANADA. By D. HACK TUKE, M.D., LL.D. Pp. 265. London: H. K. Lewis. 1885.

NO English or foreign alienist has taken the intelligent interest in the care of the insane of the United States shown by Dr. Tuke, and we are certainly indebted greatly to his candid and unprejudiced criticisms. The present volume is a critical summary of the methods of caring for the insane in a large number of American and Canadian hospitals, and it contains, besides, a considerable collection of statistical matter with regard to the condition of the insane, and insane asylums. Dr. Tuke opens his work with a most appreciative and interesting chapter upon Dr. Benjamin Rush, whose writings and practice show him to have had some of the same spirit that actuated Pinel, Conolly, and the Superintendents of the York Retreat. Dr. Tuke is severe in his criticisms of certain Canadian institutions; he also recognizes the evil results which politics and legislative parsimony have brought about in the care of the American insane. The potent influence of Dr. Gray was not strong enough to prevent a strong condemnation of the Utica crib, of which he says he found fifty in active use in one asylum. Dr. Tuke's book will be found an extremely useful one for persons desiring a lucid and unbiassed account of the condition of our lunacy laws and of our insane, more especially in the North and East.

WEITERE UNTERSUCHUNGEN UEBER PTOMAINE. Von PROFESSOR L. BRIEGER. Pp. 83. Berlin: Verlag von August Hirschwald. 1885.

PROFESSOR BRIEGER'S monograph gives an interesting historical account of the ptomaines, and also describes his researches with bacteria. He shows that the growth of certain pathogenic micro-organisms is accompanied with the evolution of certain ptomaines.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. Seventeenth Annual Session. Held at Grand Island, May 26–28, 1885. Lincoln: State Journal Co. 1885.

THE report of the proceedings of the seventeenth annual meeting of this flourishing Society makes a handsome volume of upward of four hundred pages. The usual number of papers—some interesting, others not—were read, and the usual protest against the action of the New York State Medical Society upon the Code question (rather ancient history, by the way) was indulged in. The meeting was a decided success, and the papers, taken as a whole, reflect credit upon the physicians of Nebraska.

COCA, COCAINE, AND ITS SALTS. Their History, Medical and Economic Uses, and Medicinal Preparations. By WILLIAM MARTINDALE, F.C.S., late Examiner of the Pharmaceutical Society, and late Teacher of Pharmacy and Demonstrator of Materia Medica at University College; Joint Author of the "Extra Pharmacopœia." London: H. K. Lewis. 1886.

THIS is a little book of seventy pages printed in blue ink on green paper, a combination of colors which the author says is admirable for the sight, but which, perhaps because of its novelty, is not especially pleasing. The description given of coca and its alkaloid, and their uses in medicine, is admirable, and we can recommend the brochure as an excellent supplement to any of the standard works on materia medica written before the introduction of this most valuable drug into general use in medicine and surgery.

THIRD ANNUAL REPORT OF THE BUREAU OF STATISTICS OF LABOR OF THE STATE OF NEW YORK FOR THE YEAR 1885. By CHARLES F. PECK, Commissioner.

THIS is an exhaustive report on labor problems of the present. Separate chapters are devoted to strikes, boycotting, and arbitration. The scope of the Commissioner's work has included inquiries into the sanitary condition, etc., of factories, and that of the homes of the working classes. No essentially new information is adduced, but a salutary effect must follow this official examination of the subject. The officials of our New York City Health Board are taken severely to task for the filthy condition of certain parts of the city, but as long as this body is managed by politicians the chances for any improvement seem poor indeed.

Reports of Societies.

American Medical Association.

Thirty-seventh Annual Meeting, held in St. Louis, Mo., May 4, 5, 6, and 7, 1886.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

WEDNESDAY, MAY 5TH—SECOND DAY.

DR. H. O. MARCY, of Boston, exhibited on the screen a number of cuts in treating of

THE LESIONS OF THE PERINEUM AND THEIR REPAIR.

These consisted of frozen sections, among others that of a woman who hung herself in the eighth week of pregnancy; another who died during parturition. He showed the bladder and rectum full and empty; the dissection and repair in operations on the perenium; showed Emmet's operation, complimenting his method of dissection; cuts from Hart, Henly, and Savage, and showed cuts of his own manner of operating, which he had reported to this Section two years ago. He also showed his "safety-pin," made of heavy German-silver wire.

DR. GEHRUNG, of St. Louis, presented sutures of his own.

DR. S. C. GORDON, of Portland, Me., said that for eighteen months he had used nothing but

CATGUT SUTURES IN PERINEAL OPERATIONS,

with the exception of the complete rupture. He makes the crescentic denudation; never has any trouble, pain, or discomfort, as there are no stitches to remove.

DR. WATHEN, of Louisville, Ky., in speaking of Dr. Gehrung's sutures, said they had some benefits, but they were more than overcome by the presence of the bodies on each side. He thought it best to use the suture which caused the least pain and perfectly adapted the parts. In incomplete laceration of the perineum a failure is the exception to persons of experience. The operation described by Dr. Marcy has value superior to the operation of Emmet. He thought that Dr. Marcy's needles would cause some pain by their mere presence. The advantage of Dr. Marcy's operation is that we do not destroy any tissue. Destroy no tissue, get perfect adaptation and union, and no septic matter can get in. He destroyed no tissue in a complete or incomplete rupture. Two great improvements are the manner of denudation and the saving of tissue by Dr. Marcy.

DR. GILLESPIE, of Tennessee, thought the time of operation of importance; after three days' delay he has had unusually good results. He prefers Emmet's plan, with the silver sutures and the straight, round needles.

DR. MARCY in reply said there was no amount of inconvenience or suffering from the pins if they are placed parallel and do not compress the tissues. He spoke of and showed sutures made from the tail of the fox, squirrel, and the kangaroo.

DR. E. W. CUSHING, of Boston, showed a number of microscopical specimens on the screen in discussing

THE PATHOLOGY OF EROSIONS, SO CALLED, OF THE OS UTERI.

DR. A. C. MILLER, of Cleveland, O., discussed the paper, and was replied to by Dr. Cushing.

DR. W. W. POTTER, of Buffalo, N. Y., read a paper entitled

SOME OBSERVATIONS ON THE UTERINE SOUND, WITH ESPECIAL REFERENCE TO ITS USE IN GYNECOLOGICAL THERAPEUTICS.

It was but a few years ago when a Ferguson's speculum, caustic-holder, uterine dressing-forceps, and Simpson's sound were an ample outfit for the practice of gynecology. The sound has been used in almost every malady peculiar to the pelvic organs, and I am sure it is in the range of truth to assert that this instrument has done woman more harm than any other used in the management of her diseases. The young physician is prone to its improper use, and, sad to say, causes often irreparable damage to the genital tract or health of woman. Nor is this animadversion applicable exclusively and alone to the professional novitiate, for many whose experience should have taught them better are guilty of the same. I myself am not holier than thou, but take a full share of blame for past misuse. My experience has taught me in every instance, in those cases which seem to invite its use for diagnostic purposes, most earnestly to use it with the utmost caution, circumspection, and gentleness. I would most strenuously insist that this instrument should be applied to only as a *dernier ressort*, and in juncture with extreme doubt. Have we not repeatedly seen endometrium so sensitive as to spring into violent inflammation as a result of contact with the sound? Metritis, both peri- and para-salpingitis, ovaritis, pelvic cellulitis, et id omne, are among the results. What, pray, may all these lead to? Were it possible to group together in one table where woman has been caused to abort by the use of the sound, what would be the array? Those indescribable symptoms, remote and reflex in character, also sympathetic, which we call neuroses—hystero-neuroses if you please, that are difficult to locate but unbearable—neuralgias, headaches, backaches, etc., count up a picture of woe pitiable to think about. Mr. Lawson Tait has found that in his own practice, as experience increases, his use of the speculum and sound grows less and less. This comes from the increased *tactus eruditus*. He says, educate the fingertips. This were well, but few of us can reach the perfection of a Tait. However, the nearer we can come to attaining this, the better gynecologists we are and the less will we use the sound. The essayist said that the os uteri should always be patulous, and the endometrium free from disease before the sound is used.

When necessary, the delicate virgin-silver probe of Sims is better and safer than the Simpson sound. This should never be passed at the first interview. We should, if possible, avoid it until we are quite familiar with the topography and peculiarities of the sexual tract of our patient. We should wrap absorbent cotton about the instrument to serve as a cushion for the metal. He could not speak in too strong terms against the use of the sound to replace the retropoised uterus. He named this use of the instrument as barbarous practice, and recommended the intelligent and persistent use of manipulation and the genu-pectoral position. The sound has taught us some good things, chief among them being the better use of our fingers. He hoped that with the use of the better educated finger-tips the sound would grow less and less in demand and use, and we shall be rid of much of the opprobrium which the young and growing art, gynecology, is now compelled to suffer.

DR. GORDON, the president, in a neat speech complimented the paper very highly, and endorsed every word of it.

DR. GEORGE ENGELMAN, of St. Louis, arose to express his thanks to Dr. Potter for having expressed in words what the speaker had practised for years. He had quite a collection of sounds, but in the past three years had not used one of them. The finger is far more satisfactory and true. The sound is useless in the great majority of cases. We have used ergot, the applicator, and the sound to the great injury of women. We are progressing in gynecology by dispensing with these. He had even found it unnecessary to use the soft pliable sound wrapped with cotton. The finger must be used for diagnostic purposes far more frequently than it is. Injury from the sound is far greater than the benefit derived.

DR. C. R. REED, of Middleport, O., thought the pa-

per was too strong in its statements, as were also the statements of Dr. Engelman.

Dr. Eugene C. Gehrung, of St. Louis, agreed with the essayist, as far as the abuse of the instrument was concerned, that the sound should not be used for displacements. He had put himself on record two years ago in the *Archives of Gynecology*. He recommended manipulation. We all know that in certain fat persons manipulations cannot be made. The sound can be used if the gynecologist has the proper regard for life. The speculum is frequently so useless that one must pass his hand alongside of it to find what it is he sees.

Dr. A. C. Miller, of Cleveland, O., regarded this portion of the essay ridiculous. The man who has not the caution or the education to use the sound carefully should not use it at all. Who can take the measurement of the uterus, or differentiate between the uterine and cervical cavity, with the finger? The inflammation referred to by Dr. Potter was probably caused by septic matter carried in on the finger. If gonorrhœa or septic matter is in the vagina, it should be well cleaned out before the sound is passed.

Dr. E. S. McKee, of Cincinnati, read a paper, subject,

THE EARLY DIAGNOSIS OF PREGNANCY.

The author considered the opprobrium obstetrici our inability to make a prompt and positive diagnosis of early pregnancy. Reliable evidence is sadly deficient in the first months. This fact in mind, he turned his attention to the symptoms of the first trimestrium, particularly those of late discovery. First were considered those signs which might occur at the time of conception. A number were mentioned, but the only one thought to be of any value was the peculiarly voluptuous sensation and more general erethism experienced on fruitful intercourse. An enumeration of the symptoms of early pregnancy generally known was then made. What was true of the first of these, absence of menstruation, was true of them all, viz., there were numerous exceptions to any one of them, and the same condition might be produced by other causes. Hence very unreliable testimony.

Among the later signs was mentioned that of Jacquemier, the slate or purple color of the vagina. Anything which impedes the circulation may cause this appearance. Dr. Joseph Taber Johnson has made a good suggestion. He thinks the principle of the telephone could be used to hear, much earlier than usual, the feeble sounds of the fœtal circulation. Dr. S. C. Dumm thinks he can diagnose pregnancy as early as the fourth week by the odor of the vernix caseosa upon the examining finger. Dr. E. C. Gehrung was able to make the diagnosis by the fifth or sixth week by the sensation imparted on touching the ovum with the sound. This is rightly condemned as dangerous practice, while it may be simulated by a polypus or other foreign body in the uterine cavity, and in the early weeks the ovum is only attached to parts of the uterine walls, and the sound may glide by. Pinard and Didsbury have treated of a gingevitis which begins about the second month. Jorrisenne, basing his observations on the law formulated by Graves, that in hypertrophy of the heart the radial pulse remains the same, whatever the position of the body, maintained that instead of the usual variation of from 10 to 20 beats in the non-pregnant woman, the pulse of the impregnated remains the same. The essayist and others had investigated this symptom and found it quite unreliable. Dr. H. D. Fry thinks that a rise in temperature in the cervix to one degree or more above the temperature of the axilla is a strong presumptive evidence of impregnation, provided there is no local disease. The author had found this true, but had found the rise of temperature in the vagina to be of less value.

To Hegar, of Freiburg, we are indebted to the new sign of great promise which bears his name. This consists of an unusual resilience, compressibility, softness, bogginess, yielding, and thinning of the lower uterine segment, that is, the section immediately above the insertion of the ligamenta sacro-uterina. The shape assumed is that of a fan, balloon, or jug. The change is most apparent in the median line. According to Compes the examination should be made as follows: The thumb is introduced into the vagina until it reaches the cervix, and the index into the rectum until it reaches the ligamenta sacro-uterina; the other hand is placed over the abdomen immediately above the symphisis and pressed down toward the finger in the rectum. The rectal finger explores the cervix and the lower uterine segment in all its parts, and, lastly, the higher parts of the uterus. The examination is facilitated by pulling down the uterus with the volsella, and evacuating the bladder and rectum. The author thought this mode of examination thorough, yet repulsive to both patient and physician, as well as a difficult and hazardous procedure. He thought it quite possible in the majority of cases to make out all that is necessary with the finger in one of the culs-de-sac and the other hand externally. If this is not sufficient, it would be quite proper to make the examination as above described.

The bladder distended with urine and the uterus with menstrual blood may simulate Hegar's sign. These can be easily differentiated. Hyperplasia would show increased density. Subinvolution would increase the longitudinal as well as the transverse diameters. In marked retroversion a careful examination per rectum is often necessary to find the sign.

Dr. Reinl, formerly assistant to Hegar, says: "Among twenty-two cases, I missed this sign but twice, and found it earliest in the fifth week of pregnancy." Dr. Compes, present assistant to Hegar, has reported six cases. Dr. E. H. Grandin, of New York, reports eighteen cases, and says he can make the diagnosis prior to the eighth week by Hegar's sign alone. The author had a number of cases under observation, most of which had not yet had time to develop. One, a widow, acknowledged the opportunity, and believed herself pregnant. Repeated examination failed to find Hegar's sign, and she was assured that she was not pregnant. After thirteen weeks the menses returned, and were normal in amount and duration. The other was a young wife who, after a four months' absence from her husband, returned to him February 9th. She soon came under the author's care, and her case required a digital and specular examination two or three times per week. Three times in the sixth week Hegar's sign was made out. March 31st, forty-eight days after her return, she miscarried.

There remains to us, then, to again lament our inability, in many cases, to make a positive diagnosis of early pregnancy, to mourn the fallibility of many of the new and all of the old symptoms, to especially recommend the sign of Hegar, which until now has proven itself impregnable, and to plead for investigators in a field which should not be "barren or unfruitful."

Dr. Gustav Zinke, of Cincinnati, read a paper on

PUERPERAL FEVER AND THE EARLY EMPLOYMENT OF ANTISEPTIC VAGINAL INJECTIONS.

The essayist did not wish to bring before the Association puerperal fever in detail, but to consider the value and necessity of antiseptic or simply warm-water injections, as recommended for prophylactic purposes in normal cases of labor in private practice.

The doctor based his paper upon a case in his own practice, which runs, in brief, as follows:

Mrs. ———, twenty-six years of age, in the eighth month of pregnancy. She had been under the doctor's care for retroversio-uteri and old pelvic cellulitic deposits. The progress of gestation was normal until the end of the eighth (calendar) month, when she was delivered of a healthy child. The doctor, on being called, diagnosed threatened abortion, and gave codeia and chloral

hydrate—the former for the relief of pain, the latter to produce sleep. Delivery followed. The placenta came away spontaneously, and almost immediately after the cord was severed. The external genitalia were washed, the labor having been quite normal in course.

The case progressed nicely until the third day, when she had a chill, followed by a temperature of 106°, but scarcely any pain, and the lochia free and inoffensive. Two hours later she had another chill, and the temperature went up to 107.5°, and pain in the left inguinal region. Professor C. D. Palmer was called in consultation. It was feared that the high temperature was due to something in the uterine cavity, but this was not thought possible from the nature of the labor, and it was determined to await the action of quinia before washing out the uterine cavity. Carbolized warm-water injections and turpentine stupes were added. Temperature fell to 101°, then rose to 103°. Still slight tenderness in the hypogastric region and the lochia free from odor. Temperature reached 104.5°, when the uterine cavity was washed out with warm carbolized water, using the reflex uterine catheter. This was followed by some pain, but there was no decline in the temperature, neither was there a removal of anything suggestive of trouble in the uterine cavity. Later, under the use of tincture veratrum viridi and salicylate of soda with diet, the temperature fell.

Comparing the local manifestations with the range of temperature, the doctor became more and more convinced that the malady was not local in character. True, there were present physical signs of cellulitis, but they were not present at the beginning, indeed, this condition diminished, while the pulse and temperature continued high with distinct morning remission and evening exacerbation.

Was it typhoid or remittent fever? Diarrhœa, rose-spots, and stupor were absent. The husband then stated that about a month before her confinement she had complained of languor and chilliness. Was it, then, remittent? In all probability. My consultant did not concur with me. The seventeenth day after confinement the temperature was 99.5°, next day 101.4° and still rising. The next day, the doctor's orders not being followed, he retired from the case. She lingered along, part of the time under the care of a physician, but no record of the temperature being kept till the illness had reached two months in duration, when the patient recovered.

The questions which present themselves for consideration are:

1. Was this a case of puerperal septicæmia, remittent fever, or something else?

2. Could it have been avoided by the early use of antiseptic vaginal injections?

3. To what extent is the use of antiseptics, scientifically and practically, justifiable or necessary?

The essayist did not believe it to be septic, but if so, thought it did not enter through the parturient canal. Puerperal fever, he thought, should embrace those diseases only which occur during the puerperal state. He was satisfied that all cases of puerperal fever which find their inception in an external cause, through the obstetric channel, may, to some extent, be successfully mitigated or prevented by the early and frequent use of antiseptic vaginal injections. Scarlatina, measles, diphtheria, etc., find their way through other avenues, and often mislead the physician. Antiseptics in normal labor ought not to mean anything except ordinary cleanliness in every respect, the avoidance of frequent examinations and unnecessary aids, needless exposure in the support of the perineum, the tying of the cord, the delivery of the placenta, and the washing after labor.

Washing out the vagina immediately after normal labor he thought meddlesome midwifery, did no benefit, prevented nothing, and might do harm. In prolonged or instrumental delivery, if the hand has been introduced or if injuries have been sustained, vaginal injections are always, uterine injections rarely, indicated.

The doctor referred to a death after vaginal injections in normal labor in the practice of Dr. Cleveland, of Cincinnati, and to the writings of Drs. Lydston and Bartlett against the routine injection. He added further testimony by relating three cases which occurred in his own practice, in which ill effects were observed after vaginal injections most carefully performed. Out of nearly four hundred cases of labor attended by the essayist, the case reported was the only one which could be suspected of being puerperal fever.

THURSDAY, MAY 6TH—THIRD DAY.

DISCUSSION OF DR. ZINKE'S PAPER,

read day previous.

DR. CHARLES KNAPP, of Evansville, Ind., thought that from the action of quinia and the non-action of the intra-uterine injections the case was not of bacterial origin. He believed in antiseptic midwifery, because it was clean midwifery.

DR. SARGENT, of St. Louis, had very little use for intra-uterine injections.

DR. HUNTER, of Minneapolis, spoke

ADVERSELY TO INTRA-UTERINE INJECTIONS.

He had assisted in killing one woman by these injections, since which time he held great respect for the uterine cavity. He has had unfavorable results with 1 in 2,000 sublimate solution.

DR. C. R. REED, of Middleport, O., gave, in a few words, the history of cases which came under his observation recently.

DR. REAMY thought the especial point aimed at by the essayist was the objection to the routine vaginal injection. The speaker wished to enter his protest against the routine vaginal injection of even simple water or water and soap. He does not deny the germ theory of the origin of disease, and that physicians and nurses may carry the means of infection, but wished to be placed on record as opposed to the routine injection. If you have septicæmia, then employ your germicides. Are we to think the vagina a foul crater? In the vagina of the woman recently delivered we find, after slight lesions, granulations. The employment of vaginal injections of simple warm water has a tendency to arrest granulation and prepare the woman for disease. If a vaginal injection does any good, we must wash out every hour; it is mockery to wash out one, two, or three times a day. The attending physician, to have this done properly, must do it himself, which is impossible. The nurse may throw a stream into the uterine cavity, and the patient die from the shock. It is dangerous to make a routine practice of injecting the vagina even with water, not to say chemicals. He wished to be understood as not against the germ theory, and in favor of intra-uterine injections under proper conditions after septic symptoms.

DR. W. W. POTTER, of Buffalo, asked where Dr. Reamy drew the exact line of beginning of septicæmia; sometimes this line is plain, sometimes it is not. He believed in letting well enough alone. If he had a purely natural labor he did not inject, but if he had gone in there instrumentally or manually he used the injection, fearing trouble. For washing out the uterus he recommended Chamberlain's glass tube, and said we should go up higher to find a faulty condition of the vagina. Before long we will be cremating every woman who has borne a child—she is so foul.

DR. ZINKE said in reply that he had brought this subject before the Section to vindicate himself; we owe not all to our patients, but something to ourselves. He felt very indignant when people blamed him for being the cause of all the trouble.

DR. FRANKLIN H. MARTIN, of Chicago, read a paper on

ELECTROLYSIS IN GYNECOLOGY.

The author first spoke of the theory of action, then described what took place in the normal tissue and in the

pathological tissue, or in pathological tissue mixed with normal tissue? He mentioned the principal advocates of electrolysis, and enumerated the diseases in which it was beneficial, viz., varices, polypus, nævi, epilation, hydrocele, bronchocele, extra-uterine pregnancy, hernia, hemorrhoids, epithelioma, and uterine fibroid. He also related his experience with an extra-uterine fibroid. This trouble is reported cured by this means by numerous authors. He gave the particulars of the application of the remedy, spoke of the mixed galvanic and faradic method, and showed his manner of applying electrolysis.

Dr. Ely Vandewarker, of Syracuse, N. Y., complimented the paper, and gave brief expression of his experience. He reported a case of solid uterine outgrowth to which he applied electrolysis. The operation proved to be very painful; the patient groaned and writhed under the pain, though anæsthetized. After eight days he observed a rise in temperature, and an abscess followed. The tumor was reduced in size, but the woman was very ill and barely escaped death. Two other cases have submitted to an operation, but the results have been negative.

Dr. Robert Newman, of New York, took great interest in the subject. He recommended weak currents. Instead of twenty, thirty, or eighty cells, we should use two, three, four, five, or six cells. The object is absorption. The strong current does harm; the weak causes absorption. In gynecology electrolysis has a wide field. The one great thing is, we have a safe and sure remedy to save the woman suffering from extra-uterine pregnancy. Do not use needles, use electrodes. In cases of hardened tissues, electrolysis has done much good in my experience. In malignant growths and cancers it has done good, and been followed by failure in stricture of the urethra in females. In my hands it has never failed. I hope the gentlemen will not forget to use weak currents.

Dr. Hulbert, of St. Louis, said he was an electrical crank. He reported some remarkable cures. He said we should measure the dose, as in other remedies, and thought Dr. Vandewarker's failures due to not having measured his dose.

Dr. George Engelmann, of St. Louis, said Dr. Martin had only brought this subject before them in a scientific light. He only touched on the results to be attained. He was surprised at Dr. Vandewarker's and Dr. Newman's speaking so indefinitely of strong and weak currents. He had always insisted on using the galvanometer. Know your dose. Cases had been reported here where cures occurred only after forty-five sittings. If you will measure your electricity, you will cure your patient in five or six sittings of five minutes each. The kind of electricity used is quite as important as the number of cells. Give a sitting of five minutes, and a strength of forty, fifty, eighty, or one hundred milliampères, according to how much the patient can bear; it may cause slight pain at first, but should not after that. Avoid the peritoneum if possible, but if necessary pass it through. He uses one needle and a large plate, fourteen by sixteen inches. The cells are gradually added, until the galvanometer shows enough.

Dr. C. R. Reed, of Middleport, O., read a paper on

THE IMPERATIVE NECESSITY OF ABDOMINAL SECTION AS ILLUSTRATED BY AN UNUSUAL CASE OF OVARIOTOMY.

An ovariotomy to attract the attention of the profession at present must be unique and have some features of peculiar interest. The essayist reported a case showing the necessity of operation, and showing that the death of the patient would have been inevitable but for the abdominal section, which made the diagnosis at once clear and the treatment plain. The case suggested the following questions: 1. Was the ovarian cyst, with its attending adhesions to the descending colon, the cause of the obstruction of the bowels? 2. Would the exploring needle have made the diagnosis clear without abdominal section? 3. With the probability of the patient dying under the operation, would it have been better practice to have tapped with the trocar and deferred the removal of the tumor? 4. As has been shown by the large experience of Tait and others, that abdominal section and exploration is, under antiseptic treatment, attended with little or no mortality, is it not the imperative duty of physicians to open the abdomen in all cases of doubtful diagnosis, where general treatment has failed to relieve the symptoms? 5. In all cases of slight enlargement of the abdomen, attended with intestinal obstruction, as in this case, should the physician wait until symptoms of apparent dissolution occur before resorting to abdominal section, and should the operation be performed as a means of diagnosis only when the symptoms are urgent?

Dr. Crouse, of Iowa, reported a case which was not an ovarian tumor; he diagnosed unilocular ovarian cyst, operated and found encysted peritoneal dropsy, probably malignant in character.

Dr. Reed in reply said that he was called in consultation, did not see the woman three minutes before he operated, and asked the gentlemen to only put themselves in his place, and see if they would have done better.

Dr. W. H. Walthen, of Louisville, did not understand why the incision was enlarged from four to five inches; he thought four inches sufficiently long; it is necessary to make long incisions when a large, hard tumor is to be removed, or there are numerous adhesions. He failed to understand why the ligature was left to hang through into the lower angle of the uterus.

Dr. Van Emmon, of Kansas City, could not understand why—the woman being threatened with death, and having stercoraceous vomiting and enlarged abdomen—the case had not been diagnosed earlier; also, why he was not prepared in a laparotomy to make an ovariotomy, if found necessary. He did not understand why the woman, if not an opium-eater, was given half a grain of morphine sulphatis, hypodermatically, previous to anæsthesia; he did not know from the paper whether it was a mono- or a poly-cyst, in fact, whether or not it was an ovarian tumor at all.

Dr. Joseph Eastman, of Indianapolis, arose to take the part of the gentleman who had read the paper. It brings up the all-important question, What is the physician to do in such an emergency? Physicians in practice are not accustomed to going prepared for an ovariotomy. He did not agree with Dr. Walker that it was improper to leave the ligature hanging through the lower angle of the uterus. This was the way in which Dr. McDowell did in his first case.

Dr. Cushing, of Boston, supported the last speaker and the essayist. There is an old saying, "It is a good bridge which carries a man over." Dr. Reed's case recovered, and that is the main object in medicine. It was better to make the incision large enough than to tear the intestines in getting out the tumor. The gentleman had no trocar with him. Schroeder and Martin do not use the trocar. He thought it a worthless instrument, and only one more to keep clean.

Dr. F. T. Paine, of Galveston, Tex., gave a brief report of a remarkable case of congenital absence of the ostium vagina, and delivery by the anus. He was called in consultation by Dr. Sacks, of Galveston, and found a young married woman in labor with her first child; the most careful examination failed to find any trace of an ostium vagina or a cicatrix. The vagina was found to enter the rectum, and the menstrual flow had passed this way. The child was born per rectum. The patient had never known that she was not as other women, nor was her husband aware of it. They had been married a year, and had both enjoyed sexual intercourse.

Dr. W. P. King, of Sedalia, Mo, spoke on pelvic inflammation and accumulation; he spoke of the two classes of inflammation, septic and non-septic, and thought a fertile source of disease was the "hand grease." In

he physician's office this is put upon the finger or hand, nd the finger or hand passed into the vagina or uterus. The sound is dipped into it and passed into the uterus. The cotton-wrapped probe had better be put in the ubliimate solution. The proper point to open the abcess is in the lowest part, which is the vagina.

Dr. French, of Minneapolis, showed a simple device, n the shape of a retention catheter, made from a rubber ube and a pair of scissors. He had had an alarming emorrhage follow the use of a small knife. He objected o the insufflators in general use, because they drew in ome matter, which they held until next used, and then nrew in septic matter; he preferred the insufflator having valve like the ones used by the aurists.

Dr. Harvey, of Indianapolis, advised the use of the eroxide of hydrogen as an injection.

Dr. Potter, of Buffalo, thought the uterine sound the nost common cause of pelvic inflammation; prevention of accumulation was the treatment. He used no arterial edatives in inflammation. He believed, with Drs. King nd French, that the sooner and earlier you evacuate the better.

Dr. Haggard, of Nashville, Tenn., spoke on prophyactic treatment. The introduction of the sound not infrequently produces inflammation. If we are more guarded with its use we will have less inflammation. We use ntra-uterine medication too frequently.

Adjourned.

SECTION ON DISEASES OF CHILDREN.

Tuesday, May 4th—First Day.

Dr. W. D. Haggard, of Nashville, Chairman; W. B. Lawrence, of Batesville, Ark., Secretary.

Dr. J. M. Dunham, of Columbus, O., read a paper

ON DIPHTHERIA.

He believed it to be a purely asthenic disease with local manifestation in the throat.

In the discussion that followed, all supported the same view, except Dr. C. J. Lewis, of Chicago, who believes that the disease at first is purely local.

The Secretary read a paper sent by Dr. J. M. Toner, of Columbia, Tenn., on the

NON-IDENTITY OF MEMBRANOUS CROUP AND DIPHTHERIA.

Adjourned.

Wednesday, May 5th—Second Day.

Dr. Mary Harris Thompson, of Chicago, read a paper on

WHY DISEASES OF CHILDREN SHOULD BE MADE A STUDY BY THEMSELVES?

She said opium and alcohol should in all their forms be discarded as soon as safer remedies could be found, and she was confident it could be done if the subject was more thoroughly studied. The rules for physical diagnosis would not well apply to a child, because they were undeveloped, the child being small and fretful a correct examination could not be had. Adult remedies were not applicable to a child, even in reduced doses, and it was as important to save the life of a child as an adult.

The discussion was spirited, but the speakers were divided upon the necessity of using opium and alcohol as remedies. Some would not use either in any of their preparations, under any consideration, while a like number felt they could not practise intelligently without either drug in their preparations. Dr. Thompson, in closing, said the application of external heat would often answer the purpose of both drugs, which should be discontinued for moral reasons, if for no other.

THE FIFTH GERMAN CONGRESS FOR INTERNAL MEDICINE.

Held at Wiesbaden, April 14, 15, 16, and 17, 1886.

Professor Leyden, President, in the Chair.

Thursday, April 15th—Second Day.

The second session was called to order by Professor Jurgensen.

The subject selected for discussion was

DIABETES MELLITUS.

Its consideration was divided into two parts, the first of which was taken by Professor Stokvis, of Amsterdam. His paper was entitled

THE RELATION BETWEEN DIABETES MELLITUS WITH ALBUMINURIA AND NEPHRITIS.

While it is true, the speaker said, that diabetes is a well-established and often well-defined disease, in which certain parts of the central nervous system are more or less injured in their functions, all our knowledge of the nature of so complicated a disturbance of the organic functions of the body have so far been nothing more than theoretical speculation. Transitory glycosuria and permanent diabetes are vastly different, yet albuminuria may, and very often does, accompany both. Albuminuria complicating transitory glycosuria does not depend upon nephritis, but in diabetes the author had often seen albuminuria caused by true nephritis in its various forms, ending generally in atrophy and cirrhosis of the kidneys. Grape-sugar alone, or with other morbid products, is the cause of diabetic albuminuria and nephritis. The latter generally begins in Bowman's capsules and the glomeruli. Simple albuminuria does not make the case any worse; nephritis gives a more serious prognosis. Yet there are many cases on record in which the diabetic symptoms disappeared under the influence of nephritis, and the patients with cirrhotic kidneys lived for ten or fifteen years, remaining free from glycosuria. We observe, then, that the prognosis is not absolutely unfavorable when diabetes ends in renal disease, as the patient may live comparatively comfortable when he has exchanged his diabetic for a cirrhotic kidney. French authors maintain that cirrhosis of the liver, developing in the course of diabetes, may have a similarly benign influence for the time being. In managing such complications it is of first import to regulate and support the heart's action.

In

DIABETIC COMA

the author distinguished between the light and severe forms. The latter is the most frequent and sudden end of diabetes, unless acute phthisis develops, when the patient will die without showing any signs of coma diabeticum. He considered fatal diabetic coma to be a particular form of uræmia, caused by the accumulation of acetone and other morbid products in the circulation under the influence of complicating renal disease; or it might result from sudden and abundant production of acetone, etc., although renal disease were absent, coming on after unusual exertion—the fatigue of a long journey, an attack of indigestion, etc. In the lighter forms the treatment requires all our attention, and as to severe coma our measures must be prophylactic; we must try to prevent the attacks by careful supervision of our patients.

In the

TREATMENT OF DIABETES

the speaker followed Bouchardat and Cantani, prohibiting the carbo-hydrates absolutely, and he was pleased with the results so far obtained. He insists upon muscular exercise, by which alone the percentage of sugar can be greatly diminished, regulates all the other functions of the system, and counsels also moderation in eating and all other matters. Such general treatment is

particularly adapted to fat and gouty patients, when they show symptoms of diabetes.

PROFESSOR HOFFMANN, of Dorpat, had to deal with

THE VARIOUS FORMS OF DIABETES.

Although he did not deny the possibility of the existence of "Lancereaux's

DIABETES PANCREATICUS,"

he had not been able to satisfy himself by experiment or clinical observation that this form exists independent of morbid changes other than those in the pancreas. He recognized two forms of the disease, the first of which was

ACCIDENTAL DIABETES.

This was generally of cerebral or neurotic origin, after traumatic, toxic, or psychical influences, for instance. The course of this form is light and rapid, and in a number of cases the pancreas is often affected. It may get well or terminate fatally in the course of two or three years.

CONSTITUTIONAL DIABETES.

This is the second form, and its prototype is the diabetes occurring in fat, and sometimes gouty, people somewhat advanced in years. Here we have furunculosis, carbuncles, cataracts, comatose symptoms, and renal complications in the course of the disease. The disease runs a decidedly chronic course, and recoveries are rare.

While there may be grave and light forms in accidental diabetes, he had found the constitutional diabetic disorder almost always grave. This is important as to the prognosis of a given case.

In the

TREATMENT OF DIABETES

we must always remember that all the diabetic symptoms are caused by glycosuria, and that our main object must be to cure the former by removing the latter.

The author does not consider an absolute nitrogenous diet essential, nor even compatible with the welfare of the patient. The alkaline remedies, the opiates, active muscular exercise, or muscular massage where the patient is not able to take active exercise, and the observance of a good hygienic régime in general, are the means he relies upon in treating his diabetic patients. Salicylic acid he finds useful in recent and comparatively light cases; in the severe and chronic cases its use is fraught with danger on account of its depressing effect upon the cardiac organs.

PROFESSOR VON MEHRING, of Strassburg, who had worked in the laboratory on the subject of glycosuria and

THE GLYCOGENIC FUNCTION OF THE LIVER

for a number of years, has of late succeeded in producing glycosuria in dogs by injecting phloridzin into a vein. Phloridzin, a glucoside known for about twenty years, is obtained from the bark of the roots of pear and apple trees. He used one gramme to every thousand grammes of the weight of the animal. Glycosuria is at once produced, no matter what kind of food is given to the animal. The same experiments made upon dogs that had been fasting for two weeks and more had the same results; also upon dogs previously poisoned by phosphorus, and after extirpating the pancreas. He removed the liver from geese (dogs do not survive this atrocious procedure), introduced phloridzin, and produced diabetes. These experiments would go to prove that the process of sugar-production may go on in the system independent of the formation of glycogen in the liver; further, that in the severer forms of diabetes the albuminates are transformed into carbo-hydrates and sugar. He found, again, that in such cases the

SECRETION OF UREA IS NOT INCREASED,

as it has thus far been supposed, until symptoms of acetonuria have developed.

Diabetes has a more or less prolonged period of latency in the blood before sugar appears in the urine. Von Mehring agreed with Hoffmann that an absolute diet is unnecessary in the treatment of diabetes, and has invariably noticed considerable decrease, and even disappearance, of sugar from the urine after prolonged active and passive muscular exercise.

PROFESSOR FINKLER had made similar experiments, and has the records of thirteen cases of diabetes, in which he succeeded in reducing the sugar in the urine from four hundred grains to one hundred and fifty grains and less per day by

ACTIVE AND PASSIVE MUSCULAR EXERCISE,

allowing the patients to take small quantities of the hydrocarbons with their food. In some cases the sugar disappeared entirely. Massage properly applied for some time makes the patients perspire freely.

BINZ, of Bonn, believed that butyric acid is the product which is the main cause of diabetic coma.

NAUNYN, of Königsberg, placed himself on the side of Cantani, Bouchardat, and Stokvis as to the propriety of restricting the patient to an absolute diet, and had had the most satisfactory results with it.

FRIDAY, APRIL 16TH—THIRD DAY.

The subject for discussion at this session was the

THERAPEUTICS OF SYPHILIS.

PROFESSOR KAPOSI, of Vienna, said that his large experience had led him to look upon syphilis, in opposition to Bärensprung and other writers, as one of the most easily manageable and often curable of the infectious diseases. The better results obtained to-day are due to our improved methods of rational, energetic, and protracted treatment of syphilis by inunction with the officinal *ung. hydrarg.*, or by hypodermatic injections of the various preparations of hydrarg. He himself had a preference for the inunction method according to Sigmund's plan, and began treatment with that in almost all cases.

The speaker first considered the question of

THE LOCAL TREATMENT OF SYPHILIS.

"Have we," he said, "as yet found any method of promise in the local treatment of the initial lesion of syphilis in a prophylactic way? Can we prevent the infection of the system by excision or caustic destruction of the sacral morbi?"

For a number of years he had tried excision of chancres, destroyed them with caustics, had used hypodermatic injections of iodine and mercury into and around the infiltrated inguinal glands, but the results had been almost always negative with regard to the prevention of syphilis.

Belonging to the class of unicists who, by the way, are quite in the minority in Germany at the present day, he experienced no surprise at his disappointment in his attempts to abort syphilis.

The second point was that of the

GENERAL PREVENTIVE TREATMENT.

Kaposi looked upon general treatment, commenced as soon as induration of the chancre (scleroma) had developed, as impracticable. The outbreak of syphilis will be protracted and irregular, and the course of the disease rendered less favorable as a consequence of such attempts. Early tertiary symptoms have often developed when such treatment was followed. It is, therefore, both futile and injurious.

The various remedies used in treating syphilis we must consider as to their power to remove the specific lesions, and again to prevent their return. To arrive at a correct estimate we must have

STATISTICS;

but hospital statistics are of no value in this instance, the patients generally disappearing from under observa-

tion when the lesions have been removed; private statistics are not now attainable, and it would be greatly desirable that physicians should do some collective work in gathering the results of treatment of syphilis in private practice over a certain period of years. The relapse again into secondary or tertiary symptoms is important in judging the efficacy of remedies.

THE INUNCTION METHOD

with *ung. hydrarg.* the writer considered to be the most efficacious and reliable means of treating early syphilis, and he preferred the plain ointment to all other preparations, including Liebreich's lanolin ointment, of which he had not seen as good and ready absorption as of the old salve, even with the addition of olive-oil to the lanolin. Local lesions, such as obstinate ulcers, infiltrated glands, superficial gummata, require local treatment also, and he recommended a well-adherent mercurial plaster for such purposes.

MERCURIAL BATHS

containing corrosive sublimate he used a great deal in the late forms of syphilis, such as rupia, etc., and with excellent results.

As to hypodermic injections, he believed with Bockhardt that those mercurial preparations are best which remain longest in the circulation. Emulsions of calomel may be used, as well as various sublimate solutions, with good results; but aside from the pain and frequent local disturbance which they often cause, he was satisfied that their efficacy in preventing syphilitic relapses is no better than that of inunctions—indeed, not as good.

The internal administration of calomel, sublimate, or protiodide of mercury he did not practise, but believed it to be efficacious.

Of all methods, the speaker found the inunction cure the best for the early forms of syphilis. In the later lesions iodide of potassium should be our main reliance. Even long-continued inunction with mercury produces no bad effects upon the system, but we must take care that the patient be properly fed, clothed, gets his warm baths, pays strict attention to his mouth and digestive organs, etc. Salivation must never be permitted. When this treatment is used assiduously, and with circumspection, hydrargyrosis and mercurial coloration of skin and mucous membrane will not take place. The mercury is constantly being eliminated, both with the fæces and the urine, and this elimination goes on for several weeks after treatment has ceased.

The iodide of potassium or of sodium was his remedy for the

TERTIARY LESIONS;

he began with 7½ grains, four times a day, gradually increasing the dose up to 30 grains, rarely more.

He did not favor heroic doses of these drugs.

In speaking of compound remedies, he said he had had much experience with

LITTMANN'S DECOCTION OF HERBS,

and praised it highly in the late forms of syphilis, particularly in obstinate ulcerations of the integuments. He often combined the inunction even with moderate doses of Littmann's compound morning and evening.

As to the so-called after-cures in the treatment of syphilis, he had not noticed any curative effects by the use of sea-baths, sulphur-baths, strict hydropathic treatment, etc.

The length of time required for the treatment of the early lesions varies according to their multiplicity and severity and the individuality of the patient. Kaposi advised long and careful treatment for from three to six months, and to repeat the cure only when relapses occur, not in order to prevent such, though he did not condemn the occasional repetition of a light course of treatment for safety's sake.

PROFESSOR NEISSER, of Breslau, hoped to see some good collective work done soon in order to establish the facillary character as important for diagnostic and prophylactic purposes of syphilis. Lustgarten's bacillus demonstration was probably correct, and was certainly very important. Being a dualist in his views as to syphilitic infection, he was in favor of destroying the initial lesion by excision, the active or galvanic cautery, or caustic chemical. Of the latter he preferred concentrated carbolic acid, as its application is safe, and not followed by inflammatory induration which might lead to diagnostic errors. His and others' results thus far in preventing syphilis by destroying chancres had certainly been encouraging, and he hoped that this procedure would be more generally practised.

WHEN SHOULD TREATMENT BE BEGUN?

None of us, he said, can tell in a given case whether it will run a mild or severe course, whether tertiary symptoms will come soon or late, or at all, no matter what treatment is instituted. We are agreed that the poison enters, generally incubates, and then spreads from the point of entrance and the neighboring vessels and glands. Why, then, wait with general treatment? Rather use every hour, every opportunity, for the prevention of the outbreak of syphilis and the destruction of its virus by local and general treatment, and begin with them at once. He agreed with Fournier that as mercurial treatment is curative it may also be preventive, and he began with it as soon as he had satisfied himself of the fact of the presence of an infecting sore. He further believed in treatment being continued for from two to three and four years, with suitable intermissions, and without regard to the presence or absence of characteristic specific lesions after the first period of latency. A chronic disease requires chronic treatment. Continuous treatment with small doses and proper intermissions was also, he said, practised abroad, particularly in America, if his information was correct, and has been found practical and salutary. As to the action of mercury, he would like to say, also, that it is proportional to the length of time it requires to be eliminated. He agreed with Kaposi as to the necessity of topical treatment of secondary lesions.

Among the materials in use for hypodermic injections he had found emulsions of calomel to be convenient and efficacious, although they caused some pain.

As to the dose of iodide of potassium, he gave as much as five drachms *per die* when there are urgent indications. He ordered the iodide in aqueous solution, or in milk, and found the latter vehicle quite convenient. When iodine, given by the mouth, did not agree with the patient, he injected hypodermically the tincture of iodine, or iodine in ether.

DR. LEONARD WEBER, of New York, was called upon by the Chair to open the discussion. He said that he appreciated the compliment paid to America in the invitation extended to him, and he thanked the gentlemen present in the name of his American brethren for the courtesy extended to him. He thought it might be of interest to his hearers to learn what are the main principles of treatment in use in the United States. The Americans recognized the great necessity of a rational, energetic, and long-continued treatment of constitutional syphilis; they treated the early forms with bichloride or the protiodide of mercury by the mouth, or by inunction with the gray ointment, and the late forms of the disease with iodide of potassium or of soda. The majority did not wait for the full development of constitutional syphilis before instituting general treatment, but began with it as soon as the diagnosis appeared to be secured upon the basis of induration of the sore and infiltration of the neighboring glands.

The mercurial preparation which the speaker used more than any other was probably the protiodide of mercury. The method of giving it in small doses for one, two, or more years, with suitable intermissions, has been introduced and urged by Keyes more than anybody

else in America. Many American physicians prefer the corrosive sublimate given by the mouth for the above purpose. The iodide of potassium or of soda is being given in the early forms also of syphilis, in the periods of intermission in the course of treatment with *hydrarg.*, and with advantage. In the management of relapses it is quite in vogue to order the patient to take a combination of mercury and iodide of potassium in solution. Experience has shown that in a series of cases of recurrent syphilis, with obstinate cutaneous and mucous lesions, better and quicker results are obtained by the so-called

MIXED TREATMENT

than by giving either of the two remedies alone. A minority of physicians—among whom was the speaker—prefer to begin general treatment with the inunction cure, carried out according to Sigmund's method. In a paper on "Locomotor Ataxia and Syphilis," read before the New York Academy of Medicine in 1884, and published in its "Transactions," and also in the New York MEDICAL RECORD in December, 1884, he said that his results with the inunction cure in the treatment of early constitutional syphilis during the last ten years of his practice had been better and more lasting than those which he had had during the previous ten years with mercurial preparations given by the mouth.

Hypodermic injections of mercury were not popular in America, and were not as yet systematically used by many physicians.

The favorable influence of Littmann's decoction of herbs upon some of the ulcerous forms of syphilis is not unknown in America; but the compound was not used as much now as in former years, when it was introduced to American physicians by Drs. Gescheidt and Detmold.

In serious and alarming cases of the later forms of syphilis, the iodide of potassium was generally given in rapidly increasing doses, and by some as much as five drachms and more *per die*. Van Buren, he believed, has introduced this method of giving large doses of the iodide. Seguin had of late emphasized it, and advised still larger doses, recommending, at the same time, that they be given dissolved in alkaline mineral waters immediately before meals. They are borne better by the stomach, he says, in this way, and he denies bad constitutional effects of such doses. The speaker did not think that a very large number of American medical men were convinced as much as Seguin of the necessity or advisability of these heroic doses.

In conclusion, Dr. Weber wished to say a few words with regard to fluid. calx. stilling. and other vegetable compounds which are recommended on and off by enterprising manufacturers in America as curatives to take the place of mercury or potass. iodide. Whenever such compounds have showed themselves as efficacious in the treatment of syphilis, such efficacy has depended, in his opinion, upon their purgative powers, and not on any inherent specific properties. With this remark he did not wish to hurt the great reputation which good fluid extracts of well-known drugs had made for themselves these many years. As Professor Leyden informed him some time ago, these American fluid extracts are beginning to find favor in Europe, and they well deserved it.

PROFESSOR VON ZIEMSSEN, of Munich, believed in early and long-continued treatment; he was not in the habit of giving heroic doses of iodide of potassium, and did not quite agree with the first speaker as to comparative benignity and sometimes ready curability of syphilis.

DR. SCHUSTER, of Aachen, spoke of the importance of controlling the continued elimination of hydrarg. by examination of fæces and urine for the presence of hydrarg. His remarks had been published in medical journals before, and he showed specimens of mercury obtained from fæces of mercurialized patients.

PROFESSOR LEUBE, of Würzburg, also favored the early and persistent treatment of syphilis.

PROFESSOR EDLEFSEN, of Kiel, also began treatment without delay, preferring the inunction cure. He was greatly in favor of the mixed treatment in suitable cases, whenever the therapeutic results do not come promptly in following out the inunction method. He was satisfied that considerable harm could be done by giving very large doses of iodide of potassium indiscriminately.

PROFESSOR BÄUMLER, of Freiburg, believed firmly in general preventive treatment, to be instituted with mercury as soon as the diagnosis is established. Believing in the bacillary theory of syphilis, he said the sooner we begin with destroying as many of the bacilli as we can by topical and general treatment the better it will be for the patient's future welfare. He advised iodide of potassium up to two and a half drachms *per die* in urgent cases only. Attention to the proper nutrition of the patient is of great importance in a disease which is capable of producing so profound a bacteria as syphilis.

DR. SCHUMACHER, of Aachen, recommended that every patient that had syphilis should be put through a course of specific treatment again before contracting marriage, though he might apparently be free from all symptoms.

SATURDAY, APRIL 17TH—FOURTH DAY.

The afternoon session of April 16th, and the last session on the morning of April 17th were devoted to the reading of short communications, presentation of specimens, patients, and new instruments and apparatus, and to executive business. The arrangements for social intercourse, dinners, etc., were excellent, the scientific meetings were all well attended, the discussions animated but courteous, and never personally aggressive; the speakers were generally to the point and spoke fluently, even eloquently, and Professor Leyden discharged the office of the President in an admirable manner. The Executive Committee also—consisting of Professors Leube, Jürgensen, and Dr. Pfeiffer—deserve praise for the very satisfactory way in which they had made all arrangements. On April 17th, at noon, the Congress adjourned.

THE FIFTEENTH CONGRESS OF THE GERMAN SURGICAL SOCIETY.

Held in Berlin, April 7, 8, and 9, 1886.

PROFESSOR v. VOLKMANN, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THERE was a large attendance at the meetings of this Congress of Germany's best surgeons, and the profession at large was also well represented. The morning sessions were devoted to the presentation of cases, specimens, etc., and to the reading of short clinical communications, the regular papers, of which there were thirteen, being read in the afternoons. The latter did not contain any very startling discoveries, but were, nevertheless, full of interest and of considerable practical value.

DR. KRASKE, of Freiburg, read the first paper, on the

ETIOLOGY AND PATHOGENESIS OF ACUTE OSTEO-MYELITIS.

Rosenbach's microbe, "staphylococcus pyogenus aureus," held to be the specific cause of osteo-myelitis by some observers, can by itself and alone produce the disease in man. But other microbes, such as staphylococcus pyogenus albus, streptococcus, etc., may be of influence besides the "aureus." Such cases of mixed infection are particularly serious, and the demonstration of the various forms of micro-organisms is important as regards the prognosis of the disease. Finally, it is probable that every pyogenic microbe can occasionally excite acute osteo-myelitis. The specific microbe can enter through the skin, when inflammatory products are present in the integuments containing pyogenic staphylococci, through the lungs, and probably also through the alimentary canal.

But with the demonstration of the organized poison we have not yet arrived at an understanding of the real nature of the disease. As to the predisposing causes, it appears that an individual having had the disease once is more liable to be attacked again.

Professor Rosenbach, of Gottingen, then presented a communication on the

ETIOLOGY OF TRAUMATIC TETANUS IN MAN.

We have not yet, the author said, arrived at a satisfactory explanation of tetanus. There is no direct relationship between a wound and tetanus, although wounds containing foreign bodies, gangrenous wounds, and gunshot wounds of the thigh and leg, are liable to be followed by this accident. Dogs are refractory to inoculations with blood or pus taken from tetanic patients, but the same procedures yield positive results in rabbits, guineapigs, and mice, and the author found the specific microbe to have the bacillus form, and thought that it causes tetanus by the secretion of a strychnia and like poison.

Dr. Landerer, of Leipzig, followed with a paper on

TRANSFUSION AND INFUSION.

Direct transfusion of defibrinated blood, he said, has not yielded good results; somewhat better had been the success with the alkaline solutions of chloride of sodium recommended by Kronecker and Sander. But even this method was unsatisfactory, as the fluid introduced contained almost no nourishing material, and patients having lost about two-thirds of their blood (four and one-half per cent. of the weight of the body) generally died in spite of the infusion of the alkaline liquid.

The speaker took up transfusion of blood again, using defibrinated blood with four parts of an alkaline solution of chloride of sodium. With this solution he experimented successfully on animals first, and saved the life of one patient also. As much as 1,000 to 1,200 c.c. can be slowly introduced at one sitting without danger. Still better results are obtained by adding three per cent. of cane-sugar to the alkaline solution, which he did upon the suggestion of Professor Ludwig in Leipzig.

Professor Kocher, of Berne, read a paper on

EXTIRPATION OF THE THYROID GLAND,

in which he again drew attention to the fact, first brought forward by him three years ago, that extirpation of the entire thyroid gland in the adolescent will be followed by cachexia leading to idiocy, and he maintained that the operation should never be performed upon children and young persons.

Dr. König, of Hanover, presented a communication on

OPERATIONS FOR STONE IN THE BLADDER.

He advised the median perineal operation for small stones and small movable foreign bodies; sectio alba for large hard stones, encysted stones, large foreign bodies, and in cases in which a great number of stones are present. His success with "sectio alba" was anything but satisfactory, having lost four out of five cases. One of the fatal cases was that of a man seventy-five years old, from whose bladder were removed seventy stones, and thirty more were found post-mortem.

In the ensuing discussion, Bergmann, of Berlin, Roser, of Marburg, and Trendelenberg, of Bonn, were in favor of the high operation; Volkmann, König, and Schede of perineal section; and Ebermann, Schönborn, and Fürstenheim, of litholapaxy whenever practicable. Volkmann in particular recommended the "boutonnière," with which he had had most satisfactory results for many years.

It was the method practised by the empirics of former time, who relieved many sufferers, until the operation got into the hands of the scientific surgeons, who used the knife too freely and frequently lost their patients.

Bigelow's operation was highly spoken of, but it is not as frequently practised in Germany as it might be. The German surgeons are familiar with the splendid results obtained with Bigelow's method by Sir H. Thompson, but it appears the technique of that operation is found too difficult by the general surgeon here.

The last important paper was on the

TREATMENT OF LATERAL CURVATURE,

by Professor Landerer, of Leipzig. Lateral curvature, he said, is mainly produced by anomalous conditions of certain muscles of the spine. For the purpose of restoring those muscles to normal action, he has found massage more useful than gymnastics. The corset he has discarded altogether.

Dr. Volkmann agreed with the author of the paper as to the good influence of massage, but also employed the hot and cold douche applied to the back, and found the corset to be necessary for part of the day at least. Disturbed muscular action he thought was not the only cause of lateral curvature.

AMERICAN SURGICAL ASSOCIATION.

Seventh Annual Session, held at Washington, D. C., Apr. 28, 29, 30, and May 1, 1886.

[Continued from page 574.]

FRIDAY, APRIL 30TH—THIRD DAY—AFTERNOON SESSION.

The discussion of Dr. Keen's paper was taken up.

Dr. B. A. Watson said that this is a comparatively recent operation, and one with which we are not as yet perfectly familiar. We know very little as to the changes to which the cure is to be attributed. That nerve-stretching is advantageous in neuralgia and in certain cases of epilepsy and certain spasmodic convulsions had been demonstrated. Whether the relief is due to the gross changes in the nerve, to molecular changes, or to both, has not been thoroughly determined. In this particular case it would seem that elongation of the nerve possessed advantages over neurectomy. Neurotomy, even in the successful cases, gives but temporary relief. He could only commend the paper and the operation, and particularly the use of electricity for finding the nerve.

Dr. W. W. Keen thought that a large part of the effect of stretching is due to the gross mechanical disturbance of the nerve-trunk, interfering with nerve conduction, and a large element he thought was the physiological rest which is secured to the muscle. This at the same time aids in breaking up the vicious habit. The nutrition of the nerve is probably also affected.

Dr. C. H. Mastin, of Mobile, read a paper entitled

SUBCUTANEOUS DIVISION OF URETHRAL STRICTURE.

The history of the operation for external urethrotomy was first considered, and next was described the various methods which have been proposed for its performance. The objections to these were then gone into at length; the main objection to most of them is that they leave an open wound in the perineum to heal by granulation.

External urethrotomy is called for only under special circumstances. It has been laid down as a rule that where water can escape through a stricture the surgeon should always by patience be able to get an instrument through the stricture. The speaker thought there were exceptions to this rule.

The indications which render the operation necessary are:

1. The impossibility of passing a sound into the bladder through the urethral canal, where a firm organic structure blocks up the urethra, and dilatation or internal urethrotomy are not available.

2. In cases where a tight stricture has ruptured and an abscess has formed. Under such circumstances it is necessary to open the abscess, and it may be well to carry the incision farther and lay the stricture open.

3. Certain cases of old tight stricture complicated with urethral fistulæ through which the urine is passed in the act of urination. In almost all these cases, however, as soon as the lumen of the tube is restored, the fistulæ heal. The writer prefers internal urethrotomy in such cases.

4. A most important indication which may arise is rupture of the urethra by a blow, the effects of which are violent and severe.

5. Traumatic stricture, that is, where the stricture is the result of direct injury to the urethra. In these cases ordinary dilatation is inefficient and internal urethrotomy is often of little or no benefit.

6. A calculus impacted behind a stricture may be an indication for external section.

7. When extravasation of urine has occurred from sudden rupture of the urethra, and which is followed in a short time by extensive sloughing of the penis, scrotum, and groin.

8. The last indication is one in which Mr. Reginald Harrison recommends combined external and internal urethrotomy with the introduction of a large tube.

Having decided that external section is required, the question is which operation gives the best prospects of success and is most readily performed. The claims of the various operations proposed were then considered.

The author next described the operation which he had employed with entire satisfaction since 1868. The patient, being properly prepared, is put in the ordinary position for cystotomy. An anæsthetic is administered. A tube, open at both ends, is then passed down to the stricture. This protects the walls of the urethra, and puts on the stretch the face of the stricture. The tube is then filled with small whalebone probes, and one after another is tried with the hope that one will enter the stricture. This being accomplished the tube and probes are removed. The probe engaged in the stricture is then pushed forward and a Wheelhaus sound carried down to the stricture. An incision half an inch in length is then made in the anterior wall of the urethra, on the groove of the sound. The sound is withdrawn a short distance and the whalebone bougie sought for as it passes through the stricture and drawn out of the original wound. Over the probe a gorget is passed, having its blade upward. This is passed downward, cutting the stricture on its superior face. A catheter is then passed along the entire urethra into the bladder, and the urine evacuated. The stricture is then examined to determine whether or not any points of narrowing still remain. If there are, they are divided.

If, in the first instance, it is found impossible to pass the whalebone bougie, a staff with a deep groove is passed through the stricture and a small opening made. A whalebone bougie is then passed through the stricture and the operation is completed, as in the previous case. After operation a full-sized ordinary soft catheter is introduced to the prostatic portion of the urethra, but not into the bladder. The patient is put to bed on the left side, and directed to push the catheter into the bladder when the desire to urinate is felt, and to withdraw it beyond the neck of the bladder, but not through the stricture, after the urine has been passed. This is used only for the first twenty-four or thirty-six hours, to protect the wound from the contact of the urine. The speaker was opposed, on general principles, to allowing a catheter to remain in the bladder. At the end of the time mentioned the catheter is dispensed with. Immediately after the stricture has been incised and the calibre of the urethra restored, the external wound is closed with three fine pins, passing sufficiently deep to grasp the walls of the urethra. These are removed in from four to six days. In the course of eight or ten days the patient is able to return to his work. The maximum calibre of the urethra is restored by the use of graduated sounds.

The advantages of this operation are, the short time of confinement for the patient, the freedom from hemorrhage, the quick union by primary adhesion, and the small amount of cicatricial tissue left.

Dr. David Prince, of Jacksonville, Ill., said that he had seen enough cases to give him confidence in a particular method of treatment. About twelve years ago he became aware of the power of the negative pole of a battery to resolve neoplasms, and he had applied this principle with success to the treatment of stricture of the urethra. A catheter, connected with the negative pole of the battery, is passed down to the stricture, and the circuit completed by placing a sponge electrode, connected with the positive pole, over the sacrum, so that the distance between the two poles will be as short as possible. This treatment is frequently repeated, and in a number of cases he had found the result entirely satisfactory.

Dr. Dunott remarked that his experience in dealing with so-called impermeable or impassable stricture had not been small. He had been able to deal with them, even when there was great induration, almost without exception, by the ordinary internal urethrotomy operation. In fifty or sixty cases seen within the last twelve years he had been compelled in but one or two instances to perform external section. He thought the main reason that external urethrotomy is so frequently necessary is want of patience on the part of the surgeon. Almost without exception, where one drop of urine will pass through the urethra, he believed a guide could be gotten in, provided the surgeon had the patience to wait for it.

Dr. J. Ewing Mears offered an amendment to the by-laws, providing for the appointment of a committee of five, of which the President shall be chairman, to have charge of the preparation of the scientific work of each session. Laid over until the next meeting.

The President announced the following committee on the proposition looking to the formation of a Congress of American Physicians and Surgeons: Drs. C. H. Mastin, Charles T. Parkes, J. Ford Thompson, J. Ewing Mears, and N. Senn.

The officers elected were as follows:

President—Hunter McGuire, M.D., Richmond, Va.

Vice-Presidents—T. F. Prewitt, M.D., St. Louis, and J. W. Gouley, M.D., New York.

Secretary—J. R. Weist, M.D., Richmond, Ind.

Recorder—J. Ewing Mears, M.D., Philadelphia, Pa.

Treasurer—P. S. Conner, M.D., Cincinnati.

Council—Drs. Hunter McGuire, John S. Billings, L. McLane Tiffany, R. A. Kinloch, and Moses Quinn.

Honorary Members—Foreign, Sir William MacCormac; *American*, Professor Henry J. Bigelow.

Active Members Elected—Drs. H. H. Mudd, St. Louis, and Joseph Ransohoff, Cincinnati.

Time and place of next meeting, the second Wednesday of May, 1887, at Washington.

Adjourned.

The Microbe of Dysentery.—Drs. Condorelli-Mangeri and Aradas made a special study of an epidemic of dysentery occurring at Catane, and believe that they have discovered the specific microbe of this disease (*Rivista Internazionale di Medicina e Chirurgia*). The microorganism is a bacillus, and is found usually in long chains. It was constantly found in the dysenteric stools, and also in the air of the hospital wards in which the patients were received. The same bacillus was also discovered in the water of two wells from which the inhabitants of the village had drawn their supply. Experiments on animals also tended to confirm the belief that this microbe was the cause, or accompaniment, of dysentery.

Vaccination for Whooping-cough.—Dr. Entriken has vaccinated numbers of children suffering from pertussis, and claims by this means to have arrested the disease in almost every instance.—*Cincinnati Lancet and Clinic.*

MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND.

Eighty-eighth Annual Convention, held at Baltimore, Md., April 27, 28, 29, and 30, and May 1, 1886.

(Special to THE MEDICAL RECORD.)

(Concluded from p. 507.)

THURSDAY, APRIL 29TH—THIRD DAY.

THE Session was opened by the reading and adoption of the minutes of the previous day, after which the

REPORT OF THE SECTION ON OBSTETRICS AND GYNECOLOGY

was presented, the first paper being one from the Chairman of the Section, DR. B. BERNARD BROWNE, entitled

THE CURETTE, OR THE FINGER USED AS A CURETTE, AS A DIAGNOSTIC AND THERAPEUTIC AGENT IN GYNECOLOGY AND OBSTETRICS.

The following were the writer's conclusions: 1, The curette is an important diagnostic agent in all obscure affections of the uterus; 2, its use is less painful and less likely to set up cellulitis than the ordinary caustic and alterative applications; 3, it is more efficient than any other agent for the removal of intra-uterine growths; 4, after abortions its proper use will prevent hemorrhage and septicæmia; 5, after labor the antiseptic fingers or hand, used as a curette for the complete evacuation of the uterus, will lessen the dangers attending the puerperal woman, will prevent fetid lochial discharges, and hasten the period of involution.

DR. GEORGE M. MITTENBERGER then presented a communication on

PUERPERAL ECLAMPSIA.

He regarded this affection as not peculiar to the puerperal state, but as one occurring in other and widely separated conditions. Convulsions occur once in from three hundred and fifty to five hundred cases. The author did not believe that true eclampsia was always dependent upon renal affection, but held to the view of Seyfert, that albuminuria was in many cases the effect or the concomitant, and not the cause of the convulsions. In pregnancy, complicated with chronic Bright's disease, eclampsia was of rare occurrence. He believed that puerperal convulsions were due to changes in the medulla oblongata, the pathology of the disease consisting in increased or exaggerated excitability, irritability, or impressibility of this part, caused by continued and persistent irritation of the nerves of the genital apparatus. These are the peripheral causes; the central causes are intracranial congestion or anæmia, vitiated blood, and psychical influences, such as joy or grief. The cause being twofold, the treatment is the same. Of all sedatives to the nerve-centres, the writer regarded blood-letting as the most powerful and the most immediate in its effects. But it is, of course, only to be used in suitable cases. Veratrum, although inferior to blood-letting, acts in the same way as a vascular sedative. Chloroform is also of inestimable value, and is applicable to a greater range of cases. Chloral and morphine are also of great utility. The eccentric causes are also to be sought for and removed. Among prophylactic measures, chloral and the bromides, purgation when indicated, and absolute rest are recommended.

In the

DISCUSSION

which followed the reading of this paper, DR. P. C. WILLIAMS spoke strongly in favor of venesection, and he also advised the combination of jaborandi with the chloral.

DR. JOHN MORRIS also believed in the efficacy of blood-letting.

DR. LYNCH was a strong opponent of phlebotomy, and thought that veratrum viride would serve the same purpose.

DR. ARNOLD also opposed venesection, and thought potassium bromide was strongly indicated.

DR. ROBERT T. WILSON exhibited a

TEMPORARY CLAMP,

for use especially in ovariotomy, oöphorectomy, and Tait's operation.

DR. D. W. CATHELL reported a case of

LABOR COMPLICATED BY UTERINE FIBROIDS.

The Session was then adjourned.

FRIDAY, APRIL 30TH—FOURTH DAY.

The Session was opened by the reading, by the Chairman, DR. J. MORRIS, of the

REPORT OF THE COMMITTEE ON MEMOIRS.

Sketches were read of the lives of Drs. Richard McSherry, Edward De Loughery, Edward Schwartze, and Thomas Dougherty, members who had died during the year.

This was followed by the

REPORT OF THE SECTION ON MATERIA MEDICA AND THERAPEUTICS.

DR. RICHARD H. THOMAS, the Chairman, read a paper entitled

THE HOME TREATMENT OF ORDINARY PHTHISIS AS AFFECTED BY THE BACILLUS THEORY.

The author believed that isolation of phthisical patients was useless, for the infection is everywhere—in the dust of the street as well as in the patient's house. He thought the use of disinfectants about the sick-room was advisable, though great results could not be expected from this method. The endeavor to treat phthisis by specific antibacillary remedies, such as arsenic, had failed, but the plan of filling the room with antiseptic vapor, though somewhat difficult of execution in private practice, promised much better results. The hope of destroying the bacillus by this means, however, he regarded as vain. The speaker thought that phthisis was curable in certain cases, but no disease called for so much variety in treatment, and in none was routine, except that of fresh air, good food, and proper exercise, so out of place. As to the relation of the bacillus theory to the therapy of the disease, the author thought that the theory merely enforced what we knew before, and gave greater ground for hope in the ultimate success of our efforts. Its effect upon the profession had been to emphasize the necessity of prophylactic measures, of cleanliness, fresh air, and of hygienic treatment. The paper was discussed by Drs. Lynch, Grundy, and Morris. The next report was that of the

SECTION ON SANITARY SCIENCE.

The first paper, by DR. GEORGE H. ROHÉ, entitled

THE SANITARY RELATIONS OF FOOD,

was, in the absence of the author, read by title. DR. E. G. WATERS then read a paper on

SEWERAGE AND HOUSE DRAINAGE,

in which he drew a most alarming picture of the sanitary condition of Baltimore, with its subsoil saturated with leakage from the privy-vaults and cesspools, and compared the task of removing the filth and preventing its further accumulation to that of cleansing the Augean stables.

Adjourned.

SATURDAY, MAY 1ST—FIFTH DAY.

DR. O. J. COSKERY presented a communication entitled

THREE CASES OF [illegible],

which formed a part of the report of the Section of Surgery.

Dr. L. F. Morawetz then read a paper entitled

THE MIND IN STATU NASCENTE,

being the report of the Section on Psychology.

This was followed by a paper from the same Section, presented by Dr. John S. Conrad, and entitled

THE STUDY OF INSANITY.

The object of the communication was to show the necessity of including instruction on insanity and mental diseases in the curriculum of medical schools. The speaker said that the managers of public institutions in Maryland were obliged to import physicians from other States to treat the insane.

Dr. Whitfield Winsey read a paper on the

COMPARATIVE MORTALITY OF CONSUMPTION IN THE WHITE AND COLORED RACES,

in which he presented statistics showing the greater liability of the negro to suffer from pulmonary diseases, and urged that the members of this race be taught the necessity of attention to hygiene as a prophylactic measure.

The report of the committee upon the

SUPERVISION OF THE INTERESTS OF THE INSANE

in the State of Maryland was then presented by Dr. G. L. Taneyhill, secretary, in which it was stated that a bill had been drafted, which, after being revised by eminent legal authority, and adopted at a special meeting of the Faculty, had been passed by the Legislature. This bill, which is to go into effect on June 1st of the present year, provides for a

LUNACY COMMISSION

to have supervision over all institutions, public, corporate, and private, in which insane persons are detained. The board is to consist of the Attorney-General and four persons (two, at least, of whom must be physicians, and one of them experienced in the treatment of the insane) appointed by the Governor of the State. The commission is invested with all the functions and powers of law of coroners in the institutions under its control.

Dr. Philip C. Williams offered a series of resolutions complimenting the committee on its work, and thanking the able legal counsel for his valuable services, which had been rendered gratuitously.

Dr. Richard Gundry reported for the committee appointed to memorialize the Legislature on behalf of

A STATE INSTITUTION FOR THE EDUCATION OF IMBECILE AND FEEBLE-MINDED CHILDREN,

that a bill had been drafted, but had failed to pass the second branch of the Legislature. On motion the committee was continued, and Dr. S. J. Foot added to it.

The next report in order was that of the Section on Ophthalmology, Otology, and Laryngology, which was presented by Dr. John N. Mackenzie, the title of whose paper was

THE RELATION OF CERTAIN STATES OF THE ATMOSPHERE TO THE PREVALENCE OF CATARRHAL AFFECTIONS OF THE UPPER AIR-PASSAGES.

The atmospheric conditions were heat, cold, moisture, and air in motion. The author dwelt upon the influence of a changeable climate in the causation of nasal and laryngeal catarrh, and stated that there could be no doubt, in spite of some recently enunciated views to the contrary, that the prevalence of the latter depended in great measure upon the degree of the former. The effect of cold, he asserted, is frequently far from prejudicial, nasal inflammation often being mitigated or dispelled upon the appearance of frost. But excessive heat, on the other hand, may often usher in the catarrhal process, contrary to the popular impression. The association of moisture with heat or cold is especially productive of catarrhal affections of the nose and throat. The sudden passage from a cold or temperate condition to a hot and sultry state of the atmosphere is particularly irritating to the nasal mucous membrane. Under the head of "air of in motion" the author considered draughts, winds, and air-currents in general, as important agents in the determination of catarrhal affections, and concluded that in moist cold or moist warm air in motion are found the chief exciting causes combined. But it is not any one of these factors alone which is responsible for the prevalence of catarrhal affections so much as it is the change from one atmosphere to another.

Dr. Frank Donaldson, Jr., then presented a pneumatic cabinet, and made some remarks on

PNEUMATIC DIFFERENTIATION.

He said it was claimed for the apparatus that it improves nutrition and affects favorably the lesions in phthisical lungs. By it the patient secures the advantages of rarefied air on mountain-tops. He had not found that it tended to produce hemoptysis, but rather the reverse.

Dr. Claude Van Bibber presented a specimen of

MULTILOCULAR OVARIAN CYST.

After some miscellaneous business the

ELECTION OF OFFICERS

was held, with the following result:

President—Dr. G. W. Mittenberger.

Vice-Presidents—Drs. Thomas Opie and Richard Gundry.

Recording Secretary—Dr. G. Lane Taneyhill.

Assistant Secretary—Dr. Robert T. Wilson.

Corresponding Secretary—Dr. T. Barton Brune.

Reporting Secretary—Dr. Richard H. Thomas.

Treasurer—Dr. W. F. A. Kemp.

Executive Committee—Drs. P. C. Williams, John R. Quinan, H. P. C. Wilson, J. Edwin Michael, and James Carey Thomas.

In closing the Session, the President, Dr. Quinan, made some eloquent remarks. Referring to the subject of his annual address, he said the Faculty did not propose to throw any obtacles in the way of any persons or class of persons in the community, but only to resume the rights with which it had been invested by the Legislature in the control of medical practice in the State—for the good of both the profession and the public.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 6, 1886.

Abraham Jacobi, M.D., President, in the Chair.

DERMATOLOGY DEMONSTRATED WITH THE STEREOPTICON.

The demonstration was made by Dr. H. G. Piffard, chiefly from photographs of living subjects suffering from various skin diseases. Dr. Piffard had made use of this form of demonstration at his lectures at the University Medical College, and had found it to possess advantages over the presentation of photographs for inspection by the students, and even over the exhibition of patients, whom only the students seated near the arena had an opportunity to closely inspect. The diseases illustrated were epithelioma, lupus, eczema, alopecia, favus, generalized melanosis, sarcoma, "barbers' itch," the eruptions of syphilis, of local poisoning, leprosy, elephantiasis, etc.; sections of the nails, of the skin in health and disease, were also exhibited. Some of the photographs were taken by the author of patients while in his office; others were by different artists, and some were presented to him by specialists in this and other cities.

The following proposed amendment to Article VIII., Section 1, of the constitution was read by The Secretary:

The Academy may suspend or expel a Fellow for violation of its regulations, or the commission of any act which unfavorably affects the character of the medical profession or the interests of the Academy.

Adjourned.

SECTION IN PRACTICE OF MEDICINE.

ALFRED L. LOOMIS, M.D., LL.D., CHAIRMAN.

DR. ROBERT J. DEVLIN read a paper (see p. 545) on

DIABETIC COMA.

DR. H. N. HEINEMAN opened the discussion by saying that he would present certain questions which, although they might not always represent the views which he entertained, might be worthy of consideration.

In the larger number of cases diabetics die from visceral complications, and in many of the recorded cases of death ascribed to diabetic coma the autopsies had revealed conditions which rendered the diagnosis very doubtful. When albumen was found in the urine, as well as sugar, the question arose whether or not the coma present, and in which the patient dies, should be called diabetic coma. Again, how much albumen should be allowed in the urine, and still the case be called diabetic coma, could not be determined, except by the examination of a large number of cases.

With regard to *acetone*, it might be present without immediate danger from diabetic coma; he had seen it in cases of pulmonary phthisis, without any evidence of sugar in the urine.

Again, might not the respiratory symptoms ascribed to diabetic coma in some cases be due to fat embolism of the pulmonary vessels?

Diabetes beginning after fifty years of age was very much more favorable than when it began between twenty and thirty, and the duration of the case was very much less than in either of the above classes when it began in children. Coma, therefore, would be most naturally found in young persons, because it occurred most frequently in the severe cases.

The response to the perichloride test was valuable in determining the liability to the occurrence of diabetic coma, but coma did not necessarily follow in cases in which the urine yielded this reaction.

In most cases of diabetic coma the sudden reduction in the quantity of sugar in the urine and the development of symptoms of coma were associated. At the same time, we were in the dark with regard to the exact nature of the mode of death in these cases, as we were with reference to the causation of diabetes, and were in a position very much like that we occupied concerning uræmia. He regarded Dr. Devlin's paper as the most complete article on this subject which had yet appeared.

He would ask Dr. Devlin if it had been determined that the administration of the carbolic group had any marked effect in reducing the quantity of sugar in the urine? and the importance of the question existed in the fact that these drugs produced, of themselves, symptoms analogous to those present in diabetic coma.

DR. DEVLIN said that he had not directed his attention to the last question suggested by Dr. Heineman. He regarded it as an easy thing to get deceived with reference to the frequency of diabetic coma, if reliance was placed upon statistics obtained from the profession at large. With regard to the existence of fat embolism in certain cases, he thought so little was known about this condition that a safe estimate could not be made concerning its influence. With regard to *acetone*, he was not at all certain that its presence had any special significance.

DR. KINNICUTT said that he believed with Dr. Devlin that it was very difficult to accurately determine the percentage of deaths from diabetic coma in diabetes. Many cases of diabetic coma were undoubtedly unrecognized—a striking instance of this kind had come under his notice. A lady, apparently in good health, suddenly developed great restlessness, rapidly followed by drowsiness and coma, death ensuing in twelve hours from the appearance of the first symptoms. Only by an examination of the urine withdrawn from the bladder after death, and the discovery in it of a large amount of sugar, was the probable nature of the attack recognized. The presence of a small amount of albumen in diabetic urine, in the absence of previous symptoms of renal affection, he should not regard as a sufficient basis for regarding the existence of coma of uræmic rather than of diabetic origin. Although the clinical picture of these varieties of coma was quite different, as a rule, nevertheless, there were cases which permitted of a doubtful interpretation. In such cases, the presence or absence of increased arterial tension might be of service in a differentiation. In the vast majority of instances, the former condition obtained in uræmic coma, the reverse in the coma of diabetes. Dr. Kinnicutt was inclined to believe that many factors, acting in varying combinations and degrees of intensity in different cases, were concerned in the production of both diabetic and uræmic coma.

DR. HEINEMAN said he used the term *acetone* as standing for a group of products found in the urine. He agreed with Dr. Kinnicutt that the simple presence of albumen in the urine should not throw the case out of the class of diabetic coma, as the presence of albumen and hyaline casts from time to time did not at all signify that the kidneys were involved.

THE CHAIRMAN said that during the last three years he had had one case each year of diabetic coma, occurring in the hottest weather in July. Whether the temperature had anything to do with the development of the fatal condition or not, he was unable to say. It was a coincidence, at least, which to him was interesting, especially as he had seen only five cases of diabetic coma, and these occurred during the hottest weather in the month of July.

DR. DEVLIN said that he could recall only one reported case which seemed to have any relation to hot weather.

The Section then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 14, 1886.

JOHN C. PETERS, M.D., PRESIDENT, *pro tem.*

DR. G. C. FREEBORN presented, in behalf of a candidate, a specimen of *colloid carcinoma of the caput coli.*

DR. W. P. NORTHRUP presented, in behalf of a candidate, a specimen of *chronic localized endocarditis.*

DR. W. M. CARPENTER presented, in behalf of a candidate, a specimen of *renal calculus* weighing one hundred and forty grains.

REPORT OF THE COMMITTEE ON MICROSCOPY.

DR. G. C. FREEBORN, from the Committee on Microscopy, reported on the tumors removed from the abdominal wall by Dr. Sims, and presented at the stated meeting of the Society held March 10th. The growths had the gross appearance of little nodules of fat. On microscopical examination they were found to be surrounded by a fibrous capsule to about one-third of their extent. Two of them contained marked hemorrhage, and one contained quite a large mass of sarcomatous new-growth, and extending through the fatty portion were fibrous processes containing new vessels, and the whole was surrounded by sarcomatous tissue. Nerve-fibres were found in three of the nodules, and in one they were completely infiltrated with small round and spindle-shaped cells. The diagnosis was fibro-sarcoma, probably arising from the nerves.

Dr. H. Marion Sims presented a specimen which illustrated

A PECULIAR CONDITION FOUND AT AN OVARIOTOMY.

The woman was sixty-three years of age, who had enjoyed a fair degree of health until within the last five years, when she noticed an enlargement of the abdomen for which she consulted a surgeon, who tapped her and drew off quite a large quantity of fluid; she was also tapped twice afterward, and before Dr. Sims saw her. At the time when Dr. Sims first saw the patient she was anæmic and was losing flesh rapidly, and he decided to give her temporary relief by tapping the abdomen again and then endeavoring to improve her general condition. He drew off six quarts of a thick fluid, but she did not materially improve. The abdomen began to fill again, and he determined to operate at once, notwithstanding her enfeebled condition. As soon as he made the incision into the abdomen he reached what he took to be the sac of the tumor, and, finding it firmly adherent to the abdominal wall, he began to separate it. After separating it for about two inches he came to a sudden termination of this apparent wall of the sac, and, on closer inspection, he found that he had to deal with a broad band about four inches wide, which he continued to loosen from the abdominal wall, and finally pushed it up to one side, when he exposed the real sac. The tumor had very extensive adhesions, and was removed with a great deal of difficulty, also rather profuse hemorrhage, and was found to be a sloughing ovarian tumor.

The broad band was attached to the symphisis pubis and to the bladder, from which Dr. Sims dissected it. At its lower extremity it was quite thick, and as it extended upward it became thinner and thinner until it neared the umbilicus, where it was about as thin as ordinary blotting paper; throughout its whole extent it was not particularly vascular. He was unable to give an opinion concerning its exact nature, and at his request the specimen was referred to the Committee on Microscopy.

The Society then went into executive session.

Correspondence.

THE DRINKING-WATER OF NEW HAVEN, CONN.

To the Editor of The Medical Record.

Sir: In The Record of April 3d I notice an abstract of some criticisms on my investigations into the quality of the drinking-water of New Haven, Conn.

Your editorial affords the first information that Professor Smith, desirous of demonstrating his dexterity in the matter of water-analysis, is urging this superiority by an endeavor to impugn the accuracy of my figures; this aim has sadly marred and mystified his results.

Dr. Smith is, of course, fully aware of the vast difference between *grains per gallon* and *parts per million*; yet, that which is tabulated by me in *grains per gallon* I find placed side by side with his figures in *parts per million*, and *vice versa*; whether or no this change was necessary to produce the great discrepancy claimed by him is immaterial, but I do protest against such a twisting of figures.

Each one of the four analyses I made were carefully verified by a repetition of the work, and, apart from the slight difference which invariably occurs in such cases, the figures given in my report are sufficiently accurate for all practical purposes. I regret to be compelled to differ with Professor Smith, but it does seem to me that the results I arrived at from eight examinations should, to say the least, be as precise as those of the doctor, whose opinion seems to have been formed from a single analysis of the water.

It is an established fact that the quantitative relation between the total solids in the water in different portions of the same supply are subject to the greatest variation; this is also true of the other constituents, and is particularly so in such reservoirs as those from which New Haven obtains her water. Not only is this found in different portions of a pond from which the samples for analysis may be taken, but also in different depths. Dr. Cameron cites a case wherein the amount of solids at the surface were 29 grains to the gallon, and 47.4 grains at some depth; the quantity of chlorine in the first equalled 2.1 grains per gallon, and in the second water from the same source 1.7 grains per gallon. It does not follow, therefore, that because the water analyzed by Dr. Smith was obtained from the same reservoir, it must be of the identical quantitative composition (as far as solids and chlorine are concerned) as were the specimens sent to me.

I estimated the solids in each sample of water in a very careful manner; and when it is remembered that the weighing was done twice in each case, it will be easily seen that any inaccuracy which might have been committed in the first would certainly have been discovered at the second trial. I think, therefore, that the water analyzed by Professor Smith and that sent to me were not from identical localities, as he has claimed.

Less than a grain of chlorine to the gallon will not make itself apparent when we test the water qualitatively (this I always do before making any quantitative analysis). Now, the fact is, that each one of my samples became immediately turbid when the solution of argentic nitrate was added. This indicates an excess of chlorine, which the quantitative test demonstrated to amount to *seven grains to the gallon*. The rest of the examination shows this excess of very small moment, because the water contains no sewage contamination or animal excreta. Other and harmless sources of salt are certainly abundant in such close proximity to salt water as is the impounding reservoir from which New Haven is provided with water, yet Dr. Smith finds less chlorine here than can be found in any other place in Connecticut. This statement should be taken *cum grano salis*, and perhaps the addition of two or three grains would be nearer the mark.

I made the investigation with the object of determining whether or no the water in the reservoirs was at the time in proper sanitary condition. This being the main and all-important feature, it remains for us to see whether I reported correct results to Professor Lindsley. Dr. Smith does not mention this; he contents himself with his attempt to throw doubt upon the accuracy of my figures, knowing nothing of the specimens of water from which they were made, and calls the work of Professor Chittenden to his support, when, in fact, the latter gentleman personally informed me, in conversation a little while ago, that it had been several years since he had given any attention to the chemical condition of the New Haven water. What Professor Chittenden's analyses, made years ago, have to do with the sanitary condition of the water last summer, I do not clearly understand.

In short, this mathematical hair-splitting "has nothing to do with the case." I attached no importance whatever to the large excess of chlorine which I found. It did not arise from or accompany sewage or animal polluting substances of any kind, and, for all I *know* or *care*, may have been a normal constituent of the water, or may have had an entirely foreign origin (as imperfectly washed bottles in which the specimens were forwarded to me). I did not collect the water, nor was I furnished with any information as to how or by whom it was obtained. Of this I am certain, however—there were in each of the four samples *seven grains of chlorine to the gallon*.

I look upon the chemical examination of water for this purpose, unless accompanied with a thorough microscopical investigation, as of little importance. The determination of the solids is at best a "rough one, and

the solid matter does not exactly represent what was originally in solution," while there is a vast difference of opinion as to the proper temperature which should be employed in the operation; some chemists use as low a degree of heat as 140° C., while others are in the habit of heating to 180° C.; this, of course, would produce great diversity in the weight of the solids. There are many other factors which we might urge in explanation of the difference between the quantitative results of two observers, but I do not wish to consume valuable time.

The essential features of the investigation and the facts upon which I based my opinion of the water were: A small amount of *free ammonia* (less than that found by Professor Smith) and a considerable quantity of *albuminoid ammonia*. From a large experience with the sanitary analysis of water (extending over twelve years), I have found that this condition points to the *vegetable* nature of the organic impurities. In this case the microscope demonstrated that I was correct. This most important step in the analysis showed the particular vegetable matters with which the water was contaminated. I therefore stated, in my report to the secretary of the State Board of Health, that although it was a *usable* water, it was "by no means up to the local standard of purity," and might cause severe diarrhœa in summer; while, the connection between such water and malarial diseases being suspected, we could not sanction its employment without proper treatment.

Dr. Smith's analysis shows that the water which he examined was in exactly the same condition. It perhaps originally contained more organic matter than any of the samples sent to me; for if it was not examined in a fresh state, the confervoid growths, etc., which would form very rapidly in warm weather would feed upon the free ammonia, and thus diminish its quantity in a short time, besides other changes that may have taken place.

Professor Smith certainly does not wish to be understood as saying that water which contains *twice* the amount of *free ammonia*, *three times* the quantity of albuminoid ammonia that should be found in water of *ordinary* purity, besides overwhelming evidence afforded by the microscope of organic impurities, is a water which is beyond suspicion. Yours respectfully,

ARTHUR J. WOLFF, M.D.

HARTFORD, CONN., April 15, 1886.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE BARTLETT TRIAL—SCIENTISTS IN A CORNER—MISTAKES ABOUT CUCA—TEN THOUSAND PRESCRIPTIONS—HYDATID CYST OF RECTO-VESICAL POUCH—RHEUMATOID ARTHRITIS NOT A DISEASE—DEATH OF DR. EVORY KENNEDY.

LONDON, April 28, 1886.

MANY of the details of the "Bartlett" trial are probably already known to your readers through the reports which have doubtless appeared in the columns of the American newspapers, whose efficiency in reporting news is well known to me. It would therefore be telling a tale already told to rehearse the story of this famous trial. It has, however, some features of medical interest. One of these is, that it is the first case in which it has been suggested that a murder has been committed by the internal administration of liquid chloroform. In connection with this the old question has been raised of whether a sleeping person can be anæsthetized by the inhalation of chloroform vapor without awakening him. At one stage of the trial it was insinuated that the accused had done this to the prisoner, and then poured chloroform down his throat. An obvious difficulty in the way of the acceptance of this theory was that complete anæsthesia would annul reflex action and prevent deglutition. Every theory offered was, in fact, beset with difficulties, and the whole case so bristled with anomalous features that it is not much to be wondered at that the jury acquitted the widow.

A great deal was said, both in and out of court, about the extraordinary sexual, or rather non-sexual, relations of Mr. and Mrs. Bartlett. They had been married over ten years, but it was alleged that their union had been purely platonic, and that this arrangement had been made between them by the wish of Mr. Bartlett, who had imbibed peculiar notions not only on this, but on many other subjects. On one occasion, indeed, this arrangement had been departed from at the wish of Mrs. Bartlett, who was anxious to have a family, and a still born child was the result. This story excited much comment and was evidently disbelieved by the judge, who remarked on the finding of certain preventives in the pockets of the deceased. But probably many medical men could recall similar instances which have come under their observation. Dr. King Chambers records one in his work on "Indigestion," though the arrangement was not entered into *ab initio*.

Some of the scientific witnesses did not fare very well in court. The medical man who attended the deceased was very severely handled by the judge. A London physician, Dr. T. H. Green, who was called as a witness, had to confess that he was not aware that it had been believed that chloral hydrate could be converted into chloroform on being taken into the blood and meeting with the alkali of the latter fluid. As Liebreich's original theory has now been refuted by Hammersten, it would have been excusable to have said he did not believe in it, but a hospital physician of standing and a graduate of the much-vaunted London University should surely have known it, if only as a chemical question.

A dental surgeon who was examined was asked about cocaine, a drug which he had applied to the gums of the deceased. He acknowledged that he did not know whether cocaine was a vegetable or mineral drug, and on being asked by the judge whether it was not the active principle of the cocoa-nut, could give no answer. A dental surgeon may be excused from knowing all about cocaine, and a judge may be so still more; but what shall be said of a hospital surgeon who writes on the subject as an authority and simply "puts his foot in it." Such, at least, is the expression which should be justly applied to a writer who muddles up cocoa, the cocoa-nut, and coca, and appends to a description of cocoa the botanical characters of erythroxylon coca. Another writer abuses the *British Medical Journal* for adopting Sir Robert Christison's suggestion to term the plant cuca (instead of coca), and its active principle cucaine. Had the learned baronet's suggestion been generally adopted, I scarcely think the surgeon I am alluding to could have so deeply committed himself. He actually puts down theobromine as an active principle of the erythroxylon coca.

The *Chemist and Druggist* has been holding a symposium of prescriptions. With a view of ascertaining what drugs are prescribed most frequently, it has invited its readers to send prescriptions. Thirteen thousand prescriptions have been sent, and from these the editors have selected ten thousand and analyzed them. With a view of adding interest to the matter, they have offered a prize, for competition among their readers, for the one among them who shall guess most correctly the six drugs most frequently prescribed. The editorial analysis of the ten thousand prescriptions has revealed that the six medicines most frequently prescribed are: Sp. chloroformi, pot. bromid., vin. ipecac., sp. ammon. aromat., quininæ sulph., and sodæ bicarb. The order is that of frequency. The second six most frequently prescribed were found to be: Ammon. carb., liq. ammon. acet., glycerine, syr. aurantii, pot. bicarb., sp. æth. nit. Proprietary articles only amounted to a little over seven hundred out of ten thousand prescriptions. The six principally prescribed proprietary articles were found to be: Vaseline, chloro-

dyne, nepenthe, Fellows' syrup, Benger's liquor pepticus, liquor carbonis detergens. These collectively constituted nearly two-thirds of the proprietary articles dispensed.

At the last meeting of the Pathological Society, Mr. Hurry Fenwick showed a hydatid cyst of the recto-vesical pouch removed from the body of a man about fifty years of age. Only about fifty cases of hydatid tumor in this situation are on record. In this case a hydatid cyst was also found in the liver, and Mr. Fenwick said the most probable explanation of these cases was leakage from a hepatic cyst.

Mr. Arbuthnot Lane brought up again the subject of rheumatoid arthritis. After referring to a previous paper in which he had endeavored to show that Charcot's disease was modified rheumatoid arthritis, he now put forward the opinion that the latter affection is not a disease, but the result of traumatism. He had shown (in previous papers) that the transmission of pressure produced many important changes in the bones and joints. Rheumatoid arthritis was common in man, compared with the lower animals, because he often bore burdens whose weight was transmitted at great mechanical disadvantage, and his joints were more exposed to injury than in the lower animals. In animals which carried or dragged heavy burdens (*e.g.*, horses), pressure changes were often seen. This was less frequently the case with animals, portions of whose bodies are exposed to violent strain in pursuing their prey.

Evory Kennedy died last week in London. This once famous obstetrician retired from practice many years ago, and, living in a western suburb of London in comparative retirement, had almost lost touch with the present generation. To many London doctors, in fact, the announcement of his death will be the first intimation that he ever lived among them. Yet, perhaps no name was more familiar to the obstetricians of the last generation. Dr. Kennedy graduated at the University of Edinburgh as long ago as 1827, and was therefore an octogenarian at the time of his death. He was one of the early workers in the field of uterine auscultation, and discovered the funic, or, as he termed it, placental, souffle in 1830. In 1834 he published a treatise entitled "Obstetric Auscultation, or Means of Detecting Life or Death in the Fœtus before Birth." He also wrote on vesico-vaginal fistula fifty-three years ago, and on inflammatory affections of the uterus thirty-nine years ago. He was president of the King's and Queen's College of Physicians of Ireland in 1854–55. He had previously held the important post of master of the Rotunda Lying-in Hospital. In later years, when about to retire from practice in Dublin, he took a very active part in advocating some important alterations in the sanitary arrangements of the Rotunda.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 2 to May 8, 1886.

TILTON, HENRY A., Major and Surgeon. From Department of the East to Department of California. S. O. 106, A. G. O., May 6, 1886.

BROOKE, JOHN, Major and Surgeon. From Department of California to Department of the East. S. O. 106, A. G. O., May 6, 1886.

COMEGYS, EDWARD T., Captain and Assistant Surgeon. From Department of the Missouri to Department of the East. S. O. 106, A. G. O., May 6, 1886.

APPEL, AARON H., Captain and Assistant Surgeon. From Department of the East to Department of the Missouri. S. O. 106, A. G. O., May 6, 1886.

TOWN, FRANCIS L., Major and Surgeon. Granted leave of absence for eight months, with permission to go beyond sea, to take effect when his services can be spared by his Department Commander. S. O. 101, A. G. O., April 30, 1886.

WILSON, WILLIAM J., Captain and Assistant Surgeon. Died May 2, 1886, at Plattsburg Barracks, N. Y.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Shaw, Mon. Terr. S. O. 37, Department of Dakota, April 26, 1886.

POLHEMUS, A. S., First Lieutenant and Assistant Surgeon. Relieved from duty at Presidio, of San Francisco, Cal., and ordered for duty as Post Surgeon, Fort Halleck, Nev. S. O. 28, Department of California, April 26, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 8, 1886.

KITE, ISAAC, Assistant Surgeon. Ordered to Naval Hospital, Brooklyn.

SIMON, W. J., Passed Assistant Surgeon. Ordered for temporary duty to the Naval Academy, Annapolis.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Ordered for temporary duty to the Naval Academy, Annapolis.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 8, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
May 8, 1886.....	0	3	29	6	23	73	7	0
Deaths.								
May 8, 1886.....	0	1	10	6	3	32	1	0

THE LATE DR. AUSTIN FLINT.—At the meeting of the Medical Board of Charity Hospital, held May 1, 1886, the following preamble and resolutions were unanimously adopted, and it was voted that copies be sent to THE MEDICAL RECORD and *The New York Medical Journal* for publication :

Whereas, It has pleased God to remove from his field of labor our distinguished colleague, the late Professor Austin Flint, M.D., LL.D., whose lofty conception of the functions of a physician in his relation to his patients, and whose noble attributes as a man are enshrined in our memory ; and,

Whereas, His sudden death, when yet active and in the zenith of his fame as physician, teacher, and zealous worker in the field of scientific research, and who in death is remembered and ennobled by the record of his qualities and deeds as the acknowledged representative of all that is best in the study and practice of medical science and art ; therefore be it

Resolved, That the Board of Physicians and Surgeons of the New York Charity Hospital herewith express its deep sense of loss in common with the medical profession.

Resolved, That its members respectfully tender its sympathies to the family of the deceased.

Resolved, That these resolutions be entered upon the secretary's minutes, on a page designed for the purpose, and that a copy be sent to the family of the late Professor Flint, and to the Honorable Board of Commissioners of Public Charities and Correction.

THOMAS H. ALLEN,
CHARLES W. ALLEN, F. R. STURGIS,
Sec. Med. Board. *Committee.*

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Original Articles.

ANTIPYRINE.

By J. H. FRANKENBERG, M.D.

LATE HOUSE PHYSICIAN TO LUTHERAN HOSPITAL, ASSISTANT TO PROF. [illegible] SURGICAL DISPENSARY, NEW YORK.

ONE of the most recent contributions to our materia medica by synthetic chemistry is a derivative of chinoline, and has been very appropriately denominated antipyrine. It was discovered by Knorr, of Erlangen, and physiologically experimented with by by Filehne, of Berlin.

The drug has had a very wide field of trial, not only in Germany, and all over the European continent, but also throughout this country. A very large number of reports of cases are on record. They are almost unanimous in their verdict. Antipyrine is an antifebrile remedy which will cope with, and in our judgment surpass, any other antipyretic means that we possess at the present day. It is a drug which answers nearly all the purposes and requirements that could be desired of an antipyretic.

It is applicable to almost all cases with febrile movement; it acts with safety and certainty; it is a most powerful agent in this respect, and its effects can be graduated approximately, and prognosticated according to the amount administered. The reduction of the temperature is lasting, and accompanied by few or really no objectionable features.

It first made its appearance in June, 1884. It is a white crystalline powder, of a slightly yellowish tinge, readily soluble in alcohol and water; two parts of antipyrine will dissolve in one part of hot water, and very little of the salt will be deposited on cooling. It is slightly bitter in taste, and can readily be taken in solution disguised by a drop of the oil of peppermint or other aromatic, or it may be taken in wafers.

On taking fifteen grains in health, there is no effect shown except that the temperature may be reduced 0.3 or 0.4 of a degree, and a feeling of bodily warmth experienced. If thirty grains are taken, the temperature is reduced about one-half degree; the pulse-rate is not altered, although its character is slightly changed; the arterial tension is elevated, and the pulse-beat becomes more abrupt and sharp. The body becomes bedewed with a light perspiration at the end of thirty to forty-five minutes, and is followed by a feeling of apathy and languidness.

On taking forty-five grains, the same symptoms persist to a slightly more exaggerated degree. The feeling of *ennui* becomes more marked, although drowsiness does not usually prevail. The respiration is not at all affected, and the temperature may sink from 0.6 to 0.8 of a degree.

In poisonous doses, given to animals, Demme, of Berne, found that it acts on the nervous system by selection, at first producing general tetanic spasms, and finally death by cardiac paralysis.

The drug is eliminated through the skin and urine chiefly. It makes its appearance in the urine very soon after administration, and reaches its maximum in the course of one or two hours, and gradually disappears after twelve hours, which seems to indicate, as it happens, the length of time during which it exerts its physiological effects. Its presence in the urine is recognized by the dark-red color produced by the addition of a solution of the chloride of iron. It may also be detected by adding nitric acid to the urine, which turns the solution to an emerald-green color.

Now, passing to its effects in disease, we find that if thirty grains be given to a patient with febrile movement, in about twenty minutes the skin becomes somewhat reddened and moist, the superficial veins present a congested appearance, and a profuse perspiration is set up. In one case that was weighed, the loss of bodily weight amounted to over one and a quarter pound in the course of two hours after the first administration of thirty grains. Accompanying this derivation of the blood from the interior to the circumference there is a corresponding reduction of the internal temperature. In several cases we recall a discrepancy of over 2° F. between the rectal and axillary temperature.

The rapidity of the pulse is diminished during the administration of antipyrine, but comparatively less than the temperature. The ratio existing between the temperature and pulse before and after the exhibition of the drug is not the same. It has a more decided effect on reducing the temperature than on the pulse. The pulse-beat is more tense and less compressible. If given to a patient with a dicrotic pulse, the dicrotism, that is, the secondary wave, disappears entirely, or nearly so. This we have verified with the sphygmograph in a number of cases of typhoid fever.

The return of the temperature, just as its disappearance, is slow and gradual in most cases, covering from three to six hours. This slow accession to temperature in most patients accounts for the absence of chills or chilly sensations, which take place regularly before the recurrence of temperature when kairin has been administered.

As for its objectionable traits, we find that particularly enfeebled women and children will at times complain of nausea, and even vomiting will ensue. Marked somnolency has occurred after using the drug in a few instances.

To avoid the possibility of upsetting the stomach we have tried, as others, the hypodermatic use of the remedy. As it is so readily soluble in hot water, a very concentrated solution can be made. We have found these advantages in using the drug hypodermatically: It requires only one-half to one-third the amount of antipyrine; it avoids all gastric disturbances, and acts more rapidly and more certainly. We have used it repeatedly, and have not observed an abscess or severe inflammation follow. It does not seem to be irritating, as the patients do not particularly complain when the drug is injected. This mode of administration is not to be enjoined in either very delicate children or very much debilitated persons, as the reduction of temperature may be too sudden and too great, and symptoms of collapse may possibly supervene.

Last winter we made a series of experiments on the urine of a patient taking antipyrine, and found that the amount of nitrogen, which is an exponent of the amount of urea, was considerably diminished. And contrasting our results with those of Sassetzky, who made similar experiments on the urine of patients taking quinine, salicylic acid, and cold baths, we concluded that the elimination of nitrogen through the urine was most reduced when antipyrine was exhibited. This proves *à priori* that antipyrine has a greater influence upon reducing the chemico-vital changes than either of the other antipyretic measures.

The experiment consisted of giving the patient, who was in the third week of typhoid fever, daily, the same amount of milk and beef-tea. The experiment lasted seven consecutive days. On the first day the patient received seventy-five grains of antipyrine, on the fourth day ninety grains, and on the fifth and sixth days seventy-five grains daily; on the other days no antipyretic measures were adopted.

AMOUNT OF NITROGEN ELIMINATED AFTER USE OF ANTIPYRINE.

Day of trial	1	2	3	4	5	6	7
Amount of antipyrine	75 grs.	none.	none.	90 grs.	75 grs.	75 grs.	none.
Average temperature	101	103	102.5	100	101.5	101	102.9
Cubic centimetres nitrogen eliminated.	17.51	22.81	20.23	12.02	10.82	10.45	23.49

As the table shows, during those days on which antipyrine was administered a much less amount of nitrogen was eliminated from the body, an average of 6½ c.c. of nitrogen, which denotes a saving of nine ounces of muscle. The amount of nitrogen was determined by the use of the hypochloride of soda. These experiments correspond with those made by Müller (*Centralblatt für klin. Med.*, 1884, p. 36).

The drug has been employed, either by ourselves or fellow-colleagues who have accurately reported their results, in about one hundred cases. It has been exhibited in cases of typhoid fever, in acute lobar and bronchopneumonia, scarlatina, peritonitis, meningitis, puerperal fever, acute articular rheumatism, erysipelas, intermittent fever, acute and chronic phthisis, and in cases of insolation.

Among these patients some had very high temperatures, as high as 108.6°, but the average ranged between 102° and 105°. In all these cases the temperature was safely reduced at least two degrees, and in some six to seven degrees, on the average from four to five degrees. In the first score of cases that the drug was used, we tried the tolerance of the patient by beginning with fifteen grains, which we still continue to do in weak individuals. If the remedy agrees with the patient, then thirty grains are administered, and continued until ninety to one hundred and twenty grains have been consumed in the course of the day, if the temperature calls for it.

We have found in this drug, employed in this manner, a sure and most powerful means of reducing temperature, and we have succeeded in the great majority of cases so doing either to the normal standard, or nearly so, when on those days during which no antifebrile measures had been adopted the temperature oscillated between 103° and 105°.

The effect of the antipyrine varies largely with the severity of the illness. If the disease be one of moderate intensity, the time elapsing between the minimum and the maximum temperatures, after its administration, varies from three to six hours. In severe cases, with obstinate temperatures, we have found only a short intermission, or only a remission in the temperature.

As recommended by Filehne, the remedy was given in thirty-grain doses, repeated every hour, until three or four such doses had been taken. This plan was followed in quite a number of cases, more especially in cases of typhoid fever and pneumonia with temperatures over 104°; a complete or almost complete subsidence of fever was observed for ten to fifteen hours in many cases, and in individual instances for a much longer period of time. The first impression would be that this mode of dispensing the drug was highly advantageous, still the end justifies the means. In one case the temperature sunk from 103.5° to 96°, in two other cases of typhoid from 104° to 95°, and in one case of pneumonia from 103.5° to 95.6°. Notwithstanding these marked depreciations in temperature in a comparatively short time, no symptoms of collapse were manifested. The pulse remained good and the mind clear, and no great discomfort was experienced. In but one case of advanced phthisis do we recall the occurrence of cyanosis while the temperature was subsiding, and even here it was but transient; no other alarming symptoms were evinced.

The method of administering the drug, just detailed, we have found too bold even in hospital practice, where the patient is constantly under the eye of the physician or trained nurse; hence much less can such dosage be advocated in private practice.

It has consequently been our custom to make each individual case a study, and apportion the drug accordingly. In cases of typhoid fever or acute lobar pneumonia occurring in young healthy subjects, thirty grains were given, and the effects carefully observed. If the temperature was coming down rapidly, the drug was either withheld or only fifteen grains were given at the end of an hour. If, however, only a slight impression was made on the temperature, then thirty grains were again given, and the observation continued. Sometimes one dose would suffice, at other times seventy-five grains would have to be given in the course of three or four hours. In still other cases the same amount would be distributed over five or six hours. Though we have observed that when the doses were given at too long intervals a complete apyrexia would not occur, still an adequate reduction would take place to render the patient more comfortable.

From experience we know that some patients bear temperature much better than others, irrespective of the general physical conditions. Some patients with a temperature of 104° will feel quite at ease, the mind will be clear, and the patient will complain of no subjective symptoms; whereas in others a temperature of 102° will render the patient very restless, hot, and even delirious. This we have found very difficult to account for, and can only ascribe it to individual idiosyncrasies.

Now, in the first class of cases a complete apyrexia is hardly necessary, while in the second it is exceedingly desirable. Hence the administration of the drug as to dose and time must vary very much with the peculiarities of the case and the indications at hand.

If the temperature is readily amenable to the remedy, either smaller doses must be given, or at wider intervals. Or, if the patient be a child, or adult enfeebled by long continuance of disease, the same careful discretion must be exercised in its application.

To substantiate the rapidity with which it reduces temperature, and the duration of its effects, the following two charts will be appended. They are of two cases of acute lobar pneumonia, to each of whom one dose of thirty grains of antipyrine was experimentally administered.

Time.	Temp.	Pulse.	Resp.	Time.	Temp.	Pulse.	Resp.
8 A.M.	104.2	104	29	9 A.M.	104.7	122	32
9 A.M.	100.7	84	28	10 A.M.	100.3	98	30
10 A.M.	100.2	86	28	11 A.M.	98.9	92	28
11 A.M.	99.8	82	30	12 M.	98.2	88	28
12 M.	99.3	80	27	1 P.M.	98.8	90	28
1 P.M.	98.6	82	28	2 P.M.	99.3	92	30
2 P.M.	98.8	88	23	3 P.M.	100.2	94	28
3 P.M.	100.2	90	28	4 P.M.	101.8	70	30
4 P.M.	101.1	94	30	5 P.M.	102.6	98	30
6 P.M.	102.8	102	31	6 P.M.	103.5	106	32

It is manifest, after perusing these two charts, that even one dose of antipyrine will reduce the temperature to normal, or nearly so; but, as can be observed, its effect is not very lasting. The pulse-rate was correspondingly lowered with the temperature.

At 8 A.M., with a temperature of 104.2, and a pulse of 104, thirty grains of antipyrine were administered; in one hour the temperature had fallen 3½°, and the pulse had diminished in frequency in about the same ratio. By one o'clock in the afternoon the temperature was normal, that is, five hours after the drug had been given. The temperature then gradually rose, and by six o'clock was 102.4. In the other case, which, by the way, was a woman—the first a man—with a temperature of 104.7,

and a pulse of 110, the same dose was given hypodermatically. In one hour the temperature had sunk to 100, that is, 4.7°, and reached its lowest point at twelve, namely, three hours after its administration. The temperature now gradually and slowly rose to 103.5 by six o'clock.

These two cases illustrate the power the drug possesses even in single doses. They further show how much more rapidly the drug acts when given hypodermatically, though the second case was a female, and perhaps more susceptible to its action.

In our experience a tolerance of the drug has not been observed. In no case has a loss of response to the administration of the remedy been witnessed. But, on the other hand, it is worthy of notice, as has heretofore been mentioned, that some patients respond very markedly on getting the first dose, hence calling for some discretion at the outset of its use.

A most remarkable phenomenon occurs in some cases —the appearance of an eruption. We have noticed it in seven cases—six typhoids and one acute phthisis—three males and four females.

This eruption cannot be looked upon as a result of a prolonged use, or of too liberal employment of the drug, as it did not make its appearance in those cases that received the largest quantities. There seems to be a peculiar disposition at play, just as occurs much less frequently after the use of quinine, as we all know, in which instances the eruption manifests itself unexpectedly, irrespective of the amount used. Nor can we regard it as an expression of intoxication, or of a condition in which the system is, so to speak, saturated with the drug, as in the case of the bromides and iodides; but it can most readily be accounted for by regarding it as a reaction of the nervous system in certain particularly susceptible individuals. That it is not a manifestation of the toxic effects of the remedy is clearly demonstrated by the absence of disturbances of any of the viscera.

The eruption was seen in one case to whom five drachms had been given, in the course of two weeks, in fifteen-grain doses; in the other case, from one to three ounces had been administered in about the same period of time.

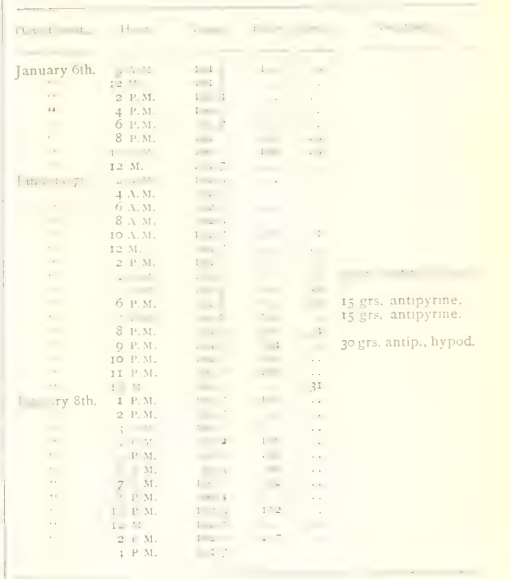
The eruption makes its appearance without any premonitory symptoms. There is no special rise of temperature, no chill, no vomiting, nor any mental disturbances. Furthermore, we have noticed it accidentally in two cases, in which the subjective sensations remained unaltered, and the eruption existed without the patient's knowledge. Sometimes, however, it is accompanied with an intense pruritus.

The eruption occurs principally on the extensor surfaces of the limbs, less on the flexor; it is also seen on the back, and, perhaps, somewhat less abundantly on the chest and abdomen. The neck is seldom covered with the eruption; the face showed in one case a few spots; the mucous membranes were always exempt. It consists of small, reddish, irregularly round spots, resembling, at least in those cases in which the eruption is decidedly pronounced, the eruption of measles. The spots are slightly raised above the surrounding surface, and are about the size of a lentil, or, perhaps, a trifle larger. They are confluent, and the patches formed, being separated by areas of sound skin, present the appearance of a rose marbling, as one writer describes it. On pressure the spots disappear, but leave a light-brown pigmentation.

The eruption disappeared in all cases after eight days, the color becoming more intense for five days, and then gradually fading, notwithstanding the persistence of the use of the drug. In two cases a slight desquamation of the skin took place. A number of writers on antipyrine have described the eruption as resembling that of urticaria. We have failed to have any such cases fall under our observation.

In discussing this comparatively new remedy we have thought that its great advantages as an antipyretic would be more clearly and firmly impressed on the minds of our readers if we should exemplify a few cases and illustrate by charts the effects of the drug in different diseases.

The following chart is of a case of acute lobar pneumonia, occurring in a merchant, aged twenty-eight, of good general physique. He was seen on the second day of his illness, with positive physical and rational signs of an acute lobar pneumonia.



On January 6th, at 9 A.M., the patient was seen for the first time. The temperature was 101½°, pulse 110 and of fair quality. Two grains of ammonium carbonate and one-half ounce of whiskey were ordered every three hours. On the 7th, at 10 A.M., his temperature had risen to 102½°, with pulse of 116, and still of about the same character. The same drugs were continued, without resorting to any antipyretic measures. In the afternoon of the same day his temperature had risen very rapidly to 106½°, the pneumonic process had made great strides, so that the whole of the lower and middle lobes of the right lung were completely consolidated.

It was not until this high degree of febrile movement was reached that recourse was had to antifebrile drugs. Thirty grains of antipyrine were administered hypodermatically. After the lapse of one hour the temperature had sunk over 4°, accompanied by no other discomfort than a moderately profuse perspiration over the whole of the body. At 6 P.M. the temperature began to rise again, and fifteen grains were exhibited by mouth. Notwithstanding the last dose, the temperature kept on rising, and another allowance of fifteen grains was given at 7 P.M., but this also was of no avail, and by nine o'clock the temperature had risen to 104½°. Now thirty grains were again administered hypodermatically, so that ninety grains had been consumed in the course of five hours. It was after receiving this last potion that a rapid lowering of the temperature took place. At 10 P.M. it was 102°, and an hour later 100.7°. During the subsequent four hours the temperature oscillated, and then sunk steadily until five o'clock the next morning, when it was 98½°; that is to say, the normal temperature was reached thirteen hours after the first dose, and eight hours after the last effectual dose had been disposed of.

The subsequent rise of temperature was at first slow,

and then more rapid, but no antipyrine was further required in this case.

The antipyrine had here not only removed the fever, but it had brought about an apyrexia of very considerable duration.

Resolution took place on the sixth day. In this case the temperature might have been more speedily reduced to the normal, had the second and third doses of antipyrine been larger, and had they sooner followed the first.

Hence we see that we were able to keep the temperature twelve hours below 102°, from 10 P.M. on the seventh until 10 A.M. on the eighth, and six hours below 100½°, from 4 A.M. until 10 A.M. on the same day. The pulse-rate corresponded very closely with the oscillations of the temperature, and was very slightly influenced by the antipyrine. The same may be said of the respirations.

The next chart is taken from a case of typhoid fever, occurring in a man aged thirty-seven. It was in the middle of the third week when the temperature reached its highest point.

Day of month.	Hour.	Temp.	Pulse.	Resp.	Treatment.
Sept. 6th.	10 A.M.	104.4	128	35	Sponge-bath.
"	12 M.	103.1	124	..	Sponge-bath.
"	2 P.M.	102.2	118	..	Sponge-bath.
"	4 P.M.	104.2	122	..	Sponge-bath.
"	8 P.M.	104.9	134	..	Sponge-bath.
"	10 P.M.	104	136	..	15 grs. quinine.
Sept. 7th.	2 A.M.	103.5	130	..	15 grs. quinine.
"	6 A.M.	102.8	124	..	
"	10 A.M.	103.1	124	..	
"	12 M.	105.2	140	36	
"	2 P.M.	105.8	132	31	
"	3 P.M.	105.8	134	32	30 grs. antipyrine.
"	4 P.M.	104.5	128	..	30 grs. antipyrine.
"	5 P.M.	101.7	120	..	15 grs. antipyrine.
"	6 P.M.	99.7	104	..	
"	7 P.M.	97.5	100	..	
"	8 P.M.	98.5	92	24	
"	9 P.M.	99.7	96	..	
"	10 P.M.	99.1	92	..	
"	11 P.M.	99.3	88	..	
"	12 M.	100.2	94	..	
Sept. 8th.	2 A.M.	100	104	..	
"	4 A.M.	99.5	108	..	
"	6 A.M.	100	116	..	
"	8 A.M.	101.5	120	..	
"	10 A.M.	102.8	124	..	
"	12 M.	105	140	..	
"	2 P.M.	105.8	140	..	
"	4 P.M.	105	144	..	
"	8 P.M.	105.8	146	36	
"	12 M.	104.7	136	..	
Sept. 9th.	4 A.M.	104	134	..	
"	6 A.M.	104.5	134	..	
"	8 A.M.	103.6	128	30	
"	9 A.M.	104	136	..	30 grs. antipyrine.
"	10 A.M.	102	118	..	30 grs. antipyrine.
"	11 A.M.	100.3	110	..	15 grs. antipyrine.
"	12 M.	97.7	102	..	
"	1 P.M.	97.5	98	..	
"	2 P.M.	97	96	22	
"	3 P.M.	97.5	92	..	
"	4 P.M.	98.7	92	..	
"	5 P.M.	101	104	..	
"	6 P.M.	102.2	120	..	
"	7 P.M.	102.6	120	..	
"	8 P.M.	102.8	116	..	
"	9 P.M.	103	120	..	
"	10 P.M.	103.1	120	..	
"	12 M.	103.8	128	..	
Sept. 10th.	2 A.M.	104.2	132	30	
"	6 A.M.	103.8	106	..	
"	10 A.M.	102.8	110	..	
"	12 M.	104.3	120	..	15 grs. antipyrine.
"	2 P.M.	103.6	124	..	15 grs. antipyrine.
"	4 P.M.	103.6	108	..	
"	6 P.M.	102.8	100	24	
"	8 P.M.	100	98	..	
"	10 P.M.	98.7	94	..	

On September 7th, at three o'clock in the afternoon, when the temperature was 105.8°, the first dose of thirty grains of antipyrine was given, after one hour thirty grains more were given, the temperature having sunk to 104.5° At five o'clock fifteen grains were further administered, the temperature at this hour having been reduced to 101.7°. The patient's body was bedewed with a profuse sweat, otherwise he was feeling quite comfortable. At six o'clock, three hours after the administration of the first dose, his temperature was 99.7°, having sunk over six degrees. It oscillated between this point and 100° until the following morning at eight o'clock.

With the exception of a very marked perspiration, which took place from 4.30 until 5.30, P.M., no secondary effects of the drug were observed. At the time of giving the first allowance of antipyrine the patient was mildly delirious; this delirium was entirely dissipated after the temperature had been reduced to 100°, and thereupon the patient sunk into a quiet sleep.

As will be observed by the above table, the temperature did not reach its former degree of elevation until the lapse of twenty-three hours. The pulse and respirations corresponded very closely with the elevations and depressions of the temperature.

At nine o'clock in the morning, September 9th, the patient again became delirious. Twice, thirty, and once, fifteen, grains of antipyrine were administered at hourly intervals, as on the previous occasion. The temperature at the time of giving the first dose was 104°; in one hour it had sunk to 102°, in two hours to 99.3°, and in five hours to 97°, that is, seven degrees in five hours. As before, there was a gradual disappearance of the delirium as the temperature reached the normal, and there occurred nothing further than a moderately abundant perspiration, lasting for about two hours, and a tendency to sleep, with an indifference as to what was transpiring about the patient. The pulse-rate had been reduced from 132° to 92° per minute, and the respiration rose and sunk with the temperature and pulse.

There occurred no dizziness, no buzzing in the ears, no vomiting, no chill, nor any other untoward or annoying symptom. The accession to temperature was much more rapid in the second than in the first trial, but unaccompanied by any chill or chilly sensations. The original temperature was again arrived at after the lapse of seventeen hours. On the following day a third trial was made, with smaller doses of antipyrine. At twelve o'clock, when the temperature was 104.3°, fifteen grains were given, and two hours later fifteen grains more added. The temperature gradually sunk until a complete apyrexia was established by ten o'clock in the evening, after fifteen hours. Thirty grains of antipyrine were required to reduce the temperature five and one-half degrees in ten hours. The time elapsing until the minimum point of temperature was reached was greater than in the previous trials, and furthermore, the temperature reached its former point of elevation by two o'clock of the same afternoon. This demonstrates that although smaller doses will bring about an entire emancipation from temperature, their effects are not sufficiently lasting.

By way of contrast we made use of sponge-baths and quinine in this case. On the first day, when it was deemed necessary to resort to antipyretic measures, it was found that a sponge-bath had to be given every two hours, for about twenty minutes, to keep the temperature below 105°, and even with this frequent reiteration of the bath, the temperature could not be brought lower than 102°. Half alcohol and half water, at a temperature of 70°, was used in sponging the patient.

The baths were abandoned because of the enervation and exhaustion which followed their repeated use. Quinine was now used in fifteen-grain doses, given every four hours. Two doses were exhibited, one at 10 P.M. and one at 2 A.M. Four hours after the first dose the temperature had sunk one half-degree, and four hours after the second it had been reduced seven-tenths of a degree more, that is, thirty grains of quinine had depressed the temperature 1.2° degree in eight hours. The temperature then rapidly rose beyond its former degree of elevation.

From 2 P.M., September 8th, until the following morning, at nine o'clock, no antipyrine was given, although in the natural course of events the temperature called for it.

The following table is from a case of scarlatina, with diphtheritic exudation on the tonsils and posterior wall of the pharynx.

Day of month.	Hour.	Temp.	Pulse.	Resp.	Treatment.
Feb. 12th.	8 P.M.	[illegible]	132	29	[illegible]
"	10 P.M.	[illegible]	...	..	[illegible]
"	12 M.	[illegible]	...	..	
Feb. 13th.	2 A.M.	102.6	130	..	
"	4 A.M.	102.2	...	..	
"	6 A.M.	[illegible]	...	..	
"	8 A.M.	[illegible]	...	..	
"	10 A.M.	[illegible]	...	..	
"	12 M.	104.7	[illegible]	..	
"	1 P.M.	104.4	...	..	
"	2 P.M.	104	[illegible]	..	
"	3 P.M.	[illegible]	...	..	
"	4 P.M.	[illegible]	[illegible]	[illegible]	[illegible]
"	5 P.M.	[illegible]	124	..	
"	6 P.M.	[illegible]	[illegible]	[illegible]	[illegible]
"	7 P.M.	[illegible]	[illegible]	..	
"	8 P.M.	[illegible]	110	..	
"	9 P.M.	99.1	[illegible]	..	
"	10 P.M.	98.8	[illegible]	..	
"	11 P.M.	98.8	...	..	
"	12 M.	98.2	...	..	
Feb. 14th.	1 A.M.	98.6	96	..	
"	2 A.M.	98.6	...	..	
"	3 A.M.	98.6	...	..	
"	4 A.M.	99.1	94	..	
"	5 A.M.	98.6	...	..	
"	6 A.M.	[illegible]	...	..	
"	7 A.M.	[illegible]	[illegible]	..	
"	8 A.M.	[illegible]	[illegible]	..	
"	9 A.M.	[illegible]	...	..	
"	10 A.M.	[illegible]	...	..	
"	11 A.M.	[illegible]	...	..	
"	12 M.	100.2	...	..	
"	1 P.M.	[illegible]	...	..	
"	2 P.M.	99.6	...	..	
"	3 P.M.	100.4	...	..	
"	4 P.M.	100.7	...	..	
"	6 P.M.	[illegible]	...	..	
"	8 P.M.	101.3	...	..	
"	10 P.M.	101.5	108	..	
"	12 M.	101.3	...	..	
Feb. 15th.	2 A.M.	101.3	...	..	
"	4 A.M.	[illegible]	...	..	
"	6 A.M.	[illegible]	...	..	
"	8 A.M.	101.8	...	..	
"	10 A.M.	102.6	[illegible]	..	
"	12 M.	102.9	...	..	
"	2 P.M.	[illegible]	...	..	
"	4 P.M.	[illegible]	128	..	15 grs. antipyrine.
"	6 P.M.	[illegible]	[illegible]	..	[illegible]
"	8 P.M.	102.8	[illegible]	..	
"	10 P.M.	101.6	122	..	
"	12 M.	100.4	112	..	
Feb. 16th.	2 A.M.	[illegible]	[illegible]	..	
"	4 A.M.	98.8	106	..	
"	6 A.M.	98.4	94	..	

It was in a girl, thirteen and one-half years of age, who up to the present time had enjoyed good health. She was seen on the third day of her illness, when the diagnosis was still undecided. She complained of general malaise and uneasiness, and some pain on swallowing. The conjunctivæ were congested, and there was a slight coryza, but no eruption. She had had on the same day a decidedly marked chill. At the time of paying her a visit, which was at eight o'clock in the evening of February 12th, the temperature was 104.5°, and pulse 132, rather small and feeble. Half an ounce of whiskey and five minims of the tincture of digitalis were ordered every three hours, and thirty grains of salicylic acid in two doses at hourly intervals. The temperature gradually sunk to 102.2° by the next morning at four o'clock, when it again rose, and oscillated between 104° and 104.5° until four o'clock in the afternoon of the 13th. Now fifteen grains of antipyrine were given, an hour later thirty grains more, and at six o'clock fifteen grains more were administered. At half-past five o'clock vomiting ensued, owing in all probability to the fact that the inhalation of slaked lime with carbolic acid was begun. The fever rapidly disappeared, and by twelve o'clock at night the temperature was 98.2°, so that a reduction of almost six degrees had taken place in the course of eight hours. The patient felt much easier, and expressed a desire for sleep. With the exception of the vomiting at 5.30, and a slight perspiration at seven o'clock, no disagreeable symptoms were manifested. The return of fever was very gradual indeed, the temperature ranged between 98.2° and 100.2° from twelve o'clock at midnight until the next noon. It did not rise to 103.5° until forty-eight hours had elapsed. There was no chill or occurrence of cyanosis while the remedy was exerting its influence. The pulse rose in frequency at first from 108 to 124, and then gradually sunk with the temperature. The character of the pulse changed from a rather feeble to a tolerably strong and full one, which fact may, however, have been not at all ascribable to the antipyrine, but to the whiskey and digitalis. We have been in the habit, in a routine way, unless contraindicated, to use these two drugs—whiskey and digitalis—in conjunction with the antipyrine; not that the heart-action demands them ordinarily, but we believe they facilitate the action of the drug, or rather corroborate its physiological effects, as they both will reduce the temperature to a greater or less extent.

The salicylic acid, which was used at the inception of the treatment, had to be abandoned, because the patient's stomach rebelled. Two more trials with antipyrine had to be made in this case, which are not recorded in the table, before convalescence was entered upon.

Day of month.	Hour.	Temp.	Pulse.	Resp.	Treatment.
July 21st.	[illegible]	[illegible]	[illegible]	[illegible]	In sponge-bath.
"	5 P.M.	103.4	[illegible]	36	30 grs. antip., hypod.
"	[illegible]	102.2	[illegible]	36	
"	6 P.M.	[illegible]	[illegible]	37	45 grs. antip., hypod.
"	6.30 P.M.	[illegible]	[illegible]	33	
"	7 P.M.	103.8	[illegible]	[illegible]	15 grs. antip., hypod.
"	7.30 P.M.	[illegible]	122		
"	8 P.M.	[illegible]	124	33	
"	8.30 P.M.	102.8	120	[illegible]	
"	9 P.M.	101.2	[illegible]	[illegible]	
"	9.30 P.M.	[illegible]	118	[illegible]	
"	10 P.M.	100.6	[illegible]	[illegible]	
"	11 P.M.	102	[illegible]	[illegible]	
"	12 M.	103.6	128	34	
July 22d.	1 A.M.	104.4	126	33	
"	2 A.M.	105.2	[illegible]	35	30 grs. antip., hypod.
"	[illegible]	105.6	[illegible]	35	30 grs. antip., hypod.
"	[illegible]	[illegible]	128	35	15 grs. antip., hypod.
"	5 A.M.	[illegible]	128	34	
"	6 A.M.	101.7	[illegible]	[illegible]	
"	[illegible]	101.5	[illegible]	[illegible]	
"	8 A.M.	100.2	[illegible]	29	
"	9 A.M.	99.3	104	[illegible]	
"	10 M.	100.4	[illegible]	29	
"	[illegible]	[illegible]	[illegible]	[illegible]	
"	[illegible]	100.5	[illegible]	[illegible]	
"	4 P.M.	100.3	[illegible]	[illegible]	
"	6 P.M.	99.6	[illegible]	28	
"	8 P.M.	99.0	[illegible]	[illegible]	
"	[illegible]	100.2	[illegible]	[illegible]	
"	[illegible]	100	[illegible]	28	
"	2 A.M.	99.6	[illegible]	24	
"	[illegible]	[illegible]	[illegible]	24	
"	[illegible]	98.8	[illegible]	[illegible]	
"	8 A.M.	[illegible]	84	[illegible]	
"	10 A.M.	[illegible]	86	[illegible]	
"	12 M.	98.7	[illegible]	24	

This chart is taken from a case of sunstroke. On July 21st, which was one of the hottest days last summer, the temperature being 101° F. in the shade, at three o'clock in the afternoon a call was received to see a man in the country. The patient was a mason by occupation, and had been working since early that morning under the sun's rays, and had consumed about three pints of beer. He had been unconscious for about two hours before he was seen. At four o'clock his temperature was 107.8°, pulse 134, and of very fair quality. His breathing was stertorous, and the face decidedly cyanosed. He was given at once four drachms of whiskey and ten grains of carbonate of ammonia hypodermatically. An ice cap was placed on his head and the body was sponged continuously for one hour with ice-water. The thermometer now recorded a temperature of 108.4°. The antipyrine, for which a messenger had been detailed, now arrived, and thirty grains of the drug were given hypodermatically at once. At the end of one hour the temperature was 107.5°, and forty-five grains of antipyrine were exhibited in the same manner as before.

In one hour's time the temperature was recorded as 103.8°, and fifteen grains more were given hypodermatically, and the temperature thereupon sunk to 100.6° by ten o'clock the same night. The pulse had been lowered in frequency to 112, but it had lost its forcible character, and five grains of carbonate of ammonia, five minims of the tincture of digitalis, and one drachm of whiskey were hourly administered. The temperature now steadily rose until 2 A.M., when it was 105.2°. Thirty grains of antipyrine were now administered hypodermatically. At the end of one hour, the temperature having risen to 105.6°, thirty grains were again exhibited in like manner. By four o'clock the next morning the temperature had been lowered to 103.7°, and fifteen grains of the drug were further ordered to be given. The temperature now slowly sunk to 99.3° by nine o'clock in the morning. The pulse-rate wavered with the temperature, and was at this hour of the day 104, but soft and compressible.

The patient gave the first signs of consciousness at nine o'clock in the evening, and at half-past ten he could easily be roused, and would answer incoherently when spoken to. The temperature oscillated the whole of the 22d between 99° and 102°. It was toward evening of the second day of the disease that his mind became clear, and he was able to give a lucid account of what had transpired on the previous day up to the time of the accident.

A mere glance at this case, with its accompanying chart, seems to us all that is necessary to dispel any sceptic ideas as to the efficacy of antipyrine, and to place it far beyond the reach of any other antipyretic means of the present day. The power evinced by the drug, even in this single case, is sufficient to call forth an unbounded welcome to its discovery, and stamp it as a landmark in the advance of modern medicine.

The next case is one of erysipelas, involving the face and scalp, in a lady, forty-three years of age, who had never before had a similar attack. It was idiopathic in origin, and was seen on the fourth day after its onset.

Day of month.	Hour.	Temp.	Pulse.	Resp.	Treatment.
August 28th	10 A.M.	103.4	108	30	
"	12 M.	104.7	124	..	
"	2 P.M.	105	128	31	30 grs. antipyrine.
"	3 P.M.	103.6	116	..	30 grs. antipyrine.
"	4 P.M.	102.4	108	..	15 grs. antipyrine.
"	5 P.M.	102	104	..	
"	6 P.M.	101.7	100	..	
"	7 P.M.	101.4	94	..	
"	8 P.M.	100.9	90	..	
"	9 P.M.	100.6	88	..	
"	10 P.M.	100	88	..	
"	11 P.M.	99.2	84	22	
"	12 M.	100.6	86	..	
August 29th	1 A.M.	100	96	..	
"	2 A.M.	99.5	94	..	
"	3 A.M.	100.3	94	24	
"	4 A.M.	100.4	96	..	
"	5 A.M.	100.5	102	..	
"	6 A.M.	102.4	110	..	
"	7 A.M.	103.8	114	..	
"	8 A.M.	104	122	..	
"	9 A.M.	104.3	128	..	

At 3 P.M., on August 28th, with a temperature of 105°, thirty grains of antipyrine were exhibited; in one hour thirty grains were again given; the temperature then recorded was 103.6°, and an hour later fifteen grains were once again administered, the temperature now being 102.4°. The fever now gradually disappeared, and at 11 P.M. was 99.2°, and it oscillated between this point and 101° during the subsequent five hours. It was in this case, and in this alone, on which we have used antipyrine, that chilly sensations were experienced just before the pyrexia was re-established. In this case it occurred at 4.30 A.M. of the 29th. The temperature had suddenly risen two degrees in one hour, and was preceded by chilly sensations for fifteen to twenty minutes, which were, however, readily amenable to a dose of chloroform and whiskey. The chilly sensations were never repeated in this case, although the drug was administered on several subsequent occasions. Notwithstanding the fact that the lowest point recorded by the thermometer was not normal, still it was practically so, and when we reflect how difficult it sometimes is to make even the slightest impression on the temperature in this affection, our estimation of the remedy as a universal antipyretic is, if anything, raised in our minds. The drug was used in other cases of an analogous character with similarly good results, and without the occurrence of either chills or chilly sensations.

The last chart is of a case of acute pulmonary phthisis, whose course ran with high temperature. On October 3d, at 9.30 A.M., the patient received thirty grains of antipyrine, when the temperature was 103.4°; an hour later fifteen grains more were administered, and then the temperature was recorded every half-hour. The chart shows that the temperature now gradually sunk until the minimum was reached at two o'clock in the afternoon. Five hours elapsed before the lowest temperature was recorded, and then slowly the temperature returned until it had mounted up to 103.5° by half-past six. The temperature curve forms a wave, of which the central point is equally distant from the two ends. Perspiration occurred in this case also, making its appearance an hour after the exhibition of the first dose, and was at its height a half hour, that is, when the second allowance was given. Appended is the chart belonging to this case.

Day of month.	Hour.	Temp.	Pulse.	Resp.	Treatment.
October 3d.	6 A.M.	103.4	102	31	
"	9.30 A.M.	103.4	98	31	30 grs. antipyrine.
"	10 A.M.	103.4	96	30	
"	10.30 A.M.	102.9	94	28	15 grs. antipyrine.
"	11 A.M.	101.3	80	30	
"	11.30 A.M.	100.6	82	29	
"	12 M.	100.6	80	28	
"	12.30 P.M.	99.3	78	31	
"	1 P.M.	98.9	78	29	
"	1.30 P.M.	98.7	74	31	
"	2 P.M.	98.5	74	26	
"	2.30 P.M.	98.9	82	22	
"	3 P.M.	99.1	96	28	
"	3.30 P.M.	100.5	90	24	
"	4 P.M.	100.4	96	31	
"	4.30 P.M.	101.1	96	33	
"	5 P.M.	102	100	30	
"	5.30 P.M.	102.9	104	32	
"	6 P.M.	103	108	34	
"	6.30 P.M.	103.5	108	34	

Numerous other charts might be adduced to attest the marvellous powers of this drug as an antipyretic, but in apprehension of making this article still more voluminous we must forego the desire of offering additional testimony. The drug has been largely employed in cases of chronic pulmonary phthisis, attended by high temperatures. It was in this affection that cyanosis occasionally followed from the use of the remedy; and in one case, occurring in the hands of a fellow-colleague, it resulted in a fatal issue—though in this case it is hardly impartial to ascribe dissolution entirely to the antipyrine, as the case was quite far advanced.

In numerous cases of intermittent fever has the drug been resorted to. It shortens the duration of the fever, but it neither prevents the occurrence of high temperature nor of a subsequent chill. More explicitly, if given immediately after a chill, even hypodermatically, it does not prevent the fever from coming on, but it unquestionably moderates it. If administered after the temperature has reached its ultimatum, it hastens its disappearance. In this affection it will never cope with quinine. The same may be said of it in acute articular rheumatism, that it will never vie with salicylic acid. In this latter affection it will reduce the temperature, and thereby relieve many of the concomitant annoying symptoms. In a few cases it seemed to have a beneficial influence upon the affected joints; they became less tender and inflamed, and allowed more freedom of motion.

We have used the drug in inflammations of the serous membrane, in pleurisy, peritonitis, and meningitis, and

have invariably found it capable of reducing the temperature. In one case of puerperal fever it was used with remarkably good results. The temperature ranged in this case between 102° and 106° before the drug was called into use. The fact must, however, not be forgotten, that with the use of the antipyrine more scrupulous measures were adopted in the ablutions of the cavity of the uterus.

The drug has now been tried eighteen months, and the collective results differ materially very little.

Our experience warrants us in coming to the following conclusions:

1. We possess in antipyrine an antipyretic which will reduce temperature most powerfully and rapidly.

2. It is in the great majority of cases perfectly safe; only in very much depreciated states and in delicate children must it be warily given and guarded by cardiac stimulants.

3. It lacks nearly all the disagreeable features which other antipyretic drugs possess. Perspiration occurs in a large proportion of cases, but does not seem to enervate the patients or render them uncomfortable. Pruritus occasionally coexists with the eruption. Vomiting now and then occurs.

4. It may readily be introduced into the system through various channels. Its taste is not particularly disagreeable, and may be easily disguised by some aromatic. Hypodermatically given it acts more decidedly and rapidly, and avoids the possibility of disturbing the stomach. It is unirritating. It may also be given per rectum.

5. It cannot cope with quinine as an antiperiodic or tonic, nor with salicylic acid in acute articular rheumatism.

6. It has practically no influence upon the pulse and respiration. If the pulse be dichrotic, the secondary wave entirely, or nearly, disappears. In other words, it raises the arterial tension.

In conclusion, we would say that very little doubt is entertained but synthetic chemistry will develop many new compounds which may prove of avail at the bedside as antipyretics; but it is our firm conviction that at the present day antipyrine, in sufficiently large doses, is the most powerful, the most certain, and the safest antifebrile drug that we have in our materia medica.

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FOUR CASES OF AMPUTATION AT THE HIP-JOINT.

By THEODORE A. McGRAW, M.D.,

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I WISH to put on record four cases of amputation at the hip-joint. All of them took place in Detroit—two at Harper and two at St. Mary's Hospital. In the many changes which have taken place at Harper Hospital, the original notes of the two cases occurring there have been lost, and I am obliged, unfortunately, to report them in part from memory.

CASE I.—Francis S——, aged forty-eight, entered Harper Hospital in March, 1872. He had been under treatment for over five years for a tumor of the right thigh, originating—as I judged from its history—in the soft parts, and gradually implicating the bone. Five times it had already been operated on by different surgeons, and five times it had recurred. On examination I found his whole thigh, from the junction of its upper and middle thirds, involved in a monstrous tumor. He was entirely disabled, and completely bed-ridden. Shortly after his admission into the hospital I amputated the limb at the hip-joint, although I designed, when I began the operation, to make only a high amputation of the thigh. Making large internal and external skin flaps, and cutting the muscles high up by a circular incision, I divided the bone below the trochanters. On examining the bone, after the bleeding vessels had been tied, I found the medulla to be thoroughly diseased, and I therefore proceeded at once to disarticulate and remove the upper fragment, thus changing the amputation into a disarticulation at the hip-joint. The stump healed kindly, and Mr. S—— left the hospital after a sojourn of not more than six weeks. The tumor, a mixed sarcoma, portions of which were myxomatous, contained both round and spindle cells. It had happened that the patient, when twelve years of age, had been injured by the caving in upon him of a bank of earth, and had suffered fracture of the necks of both femora. He had walked ever since with both feet widely everted. The upper fragment of the amputated femur is now in the museum of the Detroit College of Medicine, and shows still the marks of the old injury. On October 17, 1872, the patient returned to the hospital with a local recurrence in the stump. I thereupon cut the flaps entirely off close to the pelvis, leaving a large surface to heal by granulation. Before cicatrization was completed, however, there were evidences of the growth of another tumor in the granulating wound. At his urgent request I operated for the third time, cutting away in this operation some suspicious tissue under Poupart's ligament, and gouging out the acetabulum with a chisel. The operation was completed by the application to the surface of some strong sulphuric acid. He left the hospital on May 15, 1873. It is now nearly thirteen years since the last operation. A short time ago I wrote to his family physician, Dr. Johnson, of Minden, Mich., inquiring as to his fate and present condition. I received in reply the following letter, dated November 5, 1885:

"MY DEAR SIR: Your old patient, Francis S——, is hale and hearty. He has had no local return of the tumor, but there is a suspicious lobulated tumor of the arm (I forget which) of four years' standing, which I advised to let alone unless it should show alarming growth. His general health is good, and he may live yet ten or fifteen years. He does considerable labor in the line of gardening. He has, however, acquired the opium habit, on account of continued pain in the stump."

CASE II.—John S——, aged ten, was taken into Harper Hospital on May 12, 1877, to be treated for a severe burn which he had just received at the iron-works from molten iron. The burn involved the whole of the left thigh except a narrow strip of skin, extending from the crest of the ilium to the middle point of the thigh, and occupying about one-fifth of the circumference of the limb. There were also burns on the leg and abdomen. It was not thought when he entered that he would survive the immediate effects of the injury. He rallied from it, however, and lived five months, during which time every effort was made by transplanting and grafting skin to heal the defect. After five months of unavailing effort, amputation at the hip was determined on as the last resort.

On October 3, 1877, I operated in the presence of the class of the Detroit Medical College. Dr. H. O. Walker controlled the hemorrhage by means of a staff in the rectum, so held as to press on the common iliac artery, and very little blood was lost during the operation.

The only integument available for a flap was that left unburned on the outside of the limb. I accordingly dissected it up to a point just above the trochanter, and gained in this way one long, narrow flap. The femur was then easily disarticulated, and the remaining structures divided by one sweep of the knife. The child rallied well, and bid fair to recover. On the second day, however, he began to complain of stiffness of the jaws, and a tetanus developed, to which he finally succumbed on October 10th, just one week after the amputation. During all this time the wound, though not healed by first intention, looked healthy, and, after the third day, discharged laudable pus.

CASE III.—W. E. L——, of Utica, Mich., aged forty-four, had received during the war a shell-wound of the knee, and had ever since suffered from lameness and stiffness of the joint. In March, 1883, he received a

slight injury on the site of the old wound, and the knee became inflamed again. The consequent swelling never subsided, and the knee and thigh gained steadily in volume; and in March, 1884, his physician, Dr. A. Knight, sent him to St. Mary's Hospital for amputation. On examination I found an enormous tumor, involving nearly the whole thigh and ulcerated at the knee. The patient insisted upon having everything done which might offer hope, and although I had but slight hope of establishing a permanent cure, I proceeded, nevertheless, as a last resort, to amputate at the hip. The operation was performed before the class of the Detroit Medical College, on March 17th, in the following manner: From a point midway between the crest of the ilium and the trochanter, an incision was made to a point on the outer aspect of the thigh, at the junction of its upper and middle thirds. The knife was carried through this cut into the joint, and disarticulation effected, though with great difficulty, on account of the great depth of the joint. The long amputating knife was then made to transfix the thigh from the outer to the inner side, and cut a long anterior flap. A shorter posterior flap was next formed, and the arteries secured. Hemorrhage was controlled in this case by Dr. Boice, by pressure exerted over the arteries by means of a long piece of rubber tubing which was passed in a figure of eight around the thigh and body in such a manner as to cross both the femoral and gluteal arteries. At the moment when the flaps were cut, they were seized in the hand and compressed, thus adding direct digital pressure to that caused by the tubing. The loss of blood was very slight, and the patient rallied from the operation, and recovered with hardly a bad symptom. The tumor proved to be a large, white, round-celled sarcoma. While the tissues were filled with the deposit there were also separate masses, which, when dislodged, looked like great lumps of tallow. The bone, from one end to the other, was completely infiltrated with morbid cells, and its whole structure had become soft and friable. Mr. L—— left the hospital on June 10th, with his wound all but healed. He had begun, however, to cough slightly, although without fever or pain. After his return to Utica the cough became more constant and severe, and it became evident that a secondary deposit had taken place in his lungs. He died on August 10, 1884, nearly five months after the amputation.

Case IV.—William R——, a German, living at Firehaven, aged thirty-seven, entered St. Mary's Hospital on September 15, 1885, suffering from an osteo-sarcoma of the left femur. Eighteen years before he had first noticed a slight soreness of the left knee-joint, arising without apparent cause and unaccompanied by swelling. Ever since then he had experienced occasional pains in the joint, but had never been lame. On April 1, 1885, he noticed for the first time that the knee was swollen, and he dated from that time the beginning of a tumor which developed rapidly in the lower end of the femur. On examination I found a tumor, limited apparently to the lower half of the thigh. In reality, as was proved by subsequent dissection, the whole bone, from the head to the condyles, was involved in the growth, while the soft parts were infiltrated far beyond the apparent disease. The swelling was very sensitive to pressure, and measured twenty-four inches at its greatest circumference. He could bear no weight on the limb, and went on crutches.

In other respects his health seemed to be superb. He was the picture of vigorous manhood, and no symptom indicated trouble with any vital organ. As a matter of routine I directed the examination of his urine. It proved to be of normal quantity, specific gravity, and appearance, and contained no albumen. The microscopical examination was unfortunately neglected.

On September 23, 1885, I amputated at the hip-joint, using every antiseptic precaution, except the spray. The control of hemorrhage was intrusted in this case also to Dr. John Boice, and Dr. H. O. Walker assisted me in the operation, which was performed publicly before the college class.

In this case, as in the last, the rubber tubing was drawn tightly around his thigh and pelvis in a figure of eight. The patient, however, weighed about one hundred and sixty pounds, and was correspondingly difficult to handle. From this cause the rubber tube became displaced during some of the manipulations, and its use was abandoned. Hemorrhage was, however, thoroughly prevented, first of all, by digital pressure over the femoral vessels, and, in the second place, by the instantaneous seizure of the flaps by the hands of the assistant at the very moment when they were cut. His pulse at the close of the operation was even stronger than at the beginning. I operated after the following method:

An external cutaneous flap was first cut by an incision beginning a little below Poupart's ligament, and just inside of the anterior inferior iliac spine, extending in a curve to a point on the outer aspect of the thigh six inches below the summit of the trochanter, and thence to a point a little anterior to and above the gluteal fold. An internal flap of skin was cut to correspond. The muscles inserted into and around the trochanters were then divided and the joint exposed. During these procedures the bleeding vessels were tied as soon as divided. Disarticulation was now effected and the remaining structures divided by one sweep of the knife, the fingers of the assistant following the knife and seizing the cut vessels. The wound was closed with great care, the muscular ends being sewed together with catgut, a drainage-tube inserted into the acetabulum, and the flaps carefully adapted to the underlying structures. Antiseptic dressings were applied with great care, and the patient put to bed with every prospect of recovery. He did well after the operation in every respect but one. During two days his temperature did not rise above normal, but just before his death reached its maximum of 99½° Fahrenheit. On the evening of the 23d nine ounces of urine were drawn by catheter, but after that there was not a drop secreted. He complained of pain in the region of the kidneys, and hot fomentations were applied to relieve it. He died sixty hours after the operation, in full possession of his faculties, apparently of suppression of urine, although there was no uræmic coma.

A post-mortem examination revealed small contracted kidneys which did not seem to be unusually congested. I was gratified to find no trace whatever, in any organ, of a secondary sarcomatous deposit, which, had it existed, might have brought in question the propriety of the operation. As it was, I feel justified in declaring that the operation, if successful as an operation, would probably have added years to the man's life. The disease of the kidneys undoubtedly caused the fatal result, but I do not think that I should have refused to give the patient his one chance of life, by performing the operation, even though I had discovered the kidney trouble in time to consider it as a factor in the prognosis. The examination of the amputated member revealed the same complete involvement of the bone which had attracted my attention in the cases of S—— and L——. The tumor was carefully examined by Professor George Dufield, and proved to be a round-celled sarcoma.

Of these four cases two lived and two died. The two which survived were nearly at the last extremity when operated on—one of these survives to-day, and, I may say truthfully, has gained by the amputation many years of life. All four patients were in a condition which would have given a bad prognosis to any operative procedure, for three of them had been debilitated by long-standing disease, and the fourth was afflicted with the most insidious form of disease of the kidneys. It would not be fair, therefore, to accept such cases as in any way influencing the prognosis of an amputation at the hip in a comparatively healthy subject. This consideration has an especial bearing upon the question of disar-

ticulation at the hip for tumors of the thigh involving the femur.

When a sarcoma springs primarily from the medulla of the bone, or the inner wall of the compact substance, or from the cancellated tissue at either end, it will grow, like all tumors, fastest in the direction of the least resistance, which, in such a case, will be along the medullary canal. I think that I am warranted in saying that such a tumor will infect a bone to its very extremities long before the swelling caused by its growth has become very appreciable. A small sarcoma at the lower end of the femur, therefore, although confined apparently to the condyles, demands amputation at the hip. If an exception were to be made in favor of the giant-celled variety, the so-called myeloid tumor, or if against this dictum may be justly urged the difficulty of diagnosticating the true character of a bony tumor in its earlier stages, the proposition might be modified by confining its application to tumors of very rapid growth, or by providing for an explorative operation to precede that which should be radical. The practice of the profession in dealing with tumors arising in all other bones is to disarticulate at the proximal joint; that it is not so with the femur is shown clearly by the statistics of hip-joint amputations given by Max Schede, as quoted by Erichsen, in which one hundred and fifty-three cases are reported as performed on account of disease. It is evident that the rule of disarticulating at the hip for malignant sarcoma of the femur, if adhered to generally by the profession, would yield more than that number of cases in a single year. There must be some reason for the exceptional avoidance of this operation by surgeons. It may be that these cases are regarded by many as hopeless from the very beginning, and yet that reason for its avoidance could hardly be urged by those who, nevertheless, amputate in the continuity. My first case presented a most hopeless appearance, and the malignant nature of the disease is indicated by its recurrence in the arm after many years, and yet the patient has gained already by the operation thirteen years of life. The last case operated on, although involving the whole thigh-bone and a large part of the soft tissues of the thigh, failed, on post-mortem, to show a single nodule of secondary deposit.

As regards the dangers of the operation in comparatively healthy subjects, I think that it may be overrated by the profession.

The statistics are made up for the most part of cases operated upon in advanced stages of disease. Not one of my four patients can be said to have been in a condition favorable to an operation at the time of operation. Two out of the four nevertheless recovered. The danger from hemorrhage is not great except in very fat, heavy, and at the same time anæmic subjects. The bleeding from the femoral vessels can be readily controlled by a good assistant, who grasps them at the moment of division, and that from the posterior vessels is by no means so excessive as to endanger life before the surgeon can seize and ligate them. One point, however, in operating, I should insist on, namely, that disarticulation should be accomplished before any of the larger vessels are divided. The plan of procedure which I should prefer, with my present experience, would be as follows: The control of the femoral vessels should be intrusted to the unaided hands of a competent assistant, who would follow the knife and grasp them when cut. An external and large flap of integument should be made by an incision extending from Poupart's ligament, outside of the crural nerve, a sufficient distance downward and outward, and curving around the femur to a point a little above the trochanter behind. As the patient lies on his back with extended thigh, the flap should measure an equal distance from either edge (anterior and posterior) to the great trochanter. When this flap is dissected up so that it can be lifted clear of the great trochanter, an inner flap, also of integument, should be made by joining the incisions already made by another, which is carried around the inner aspect of the thigh; the muscles inserted in and around the trochanters are now freely divided, and disarticulation effected. One circular sweep of the knife completes the amputation, and the surgeon, leaving the care of the femorals to his assistant, immediately applies spring forceps to all other bleeding vessels and proceeds to tie them. Should the preliminary incisions be followed by much hemorrhage, the surgeon may tie the vessels injured before proceeding further, and thus make a nearly bloodless operation.

After my experience in this operation, I should certainly discard all abdominal tourniquets, rubber bands, and rectal staffs. It is my belief that the desire of surgeons to display their skill in performing this operation rapidly, and especially in making the flaps first and then disarticulating, is responsible for the great loss of blood which has made it a terror to operators. I can well understand how the necessity of performing a rapid disarticulation at the hip, while bleeding flaps were pouring out quantities of blood, should try the nerves of the most experienced operator. All this can be avoided by the simple expedient of disarticulating first and amputating afterward.

In conclusion, I will say that I hope in the future to learn of a more frequent performance of this operation for malignant tumors of the thigh in their early stages. The general rule applied to cancerous and sarcomatous tumors of other bones, of removing the whole affected bone, should be relentlessly applied to the femur also; and I feel confident that the statistics of the operation, if performed, not as a forlorn hope, but as a hopeful and early effort to save life, would soon cause it to rank among the favorite operations of practical surgeons.

ELEVEN CASES OF PHTHISIS TREATED BY INTRA-PULMONARY INJECTIONS OF CARBOLIZED IODINE.[1]

By JOHN BLAKE WHITE, M.D.,

PHYSICIAN [illegible] OF THE NEW [illegible]

In a treatise upon "Phthisis Pulmonalis," by J. Hughes Bennett, the author remarks: "I confidently look to the future as affording means for demonstrating the ratio and conditions under which the prognosis of phthisis may be determined. In the meantime, I can only express my conviction that its permanent arrestment and cure are, by judicious treatment and hygienic management, becoming every day more frequent and more widely extended."

Assuring remarks like these from a man of such recognized skill and experience cannot fail to encourage the profession at large to renewed efforts to check this greatest outlet of human life.

Physicians have tested, over and over again, the merits of sprays and of inhalations of vaporous solutions. Astringent fluids, as well as other fluids, have been injected down the larynx and into the bronchi for the cure of phthisis. Actual openings of the pulmonary cavities from without have been practised, and every effort made to cause them to cicatrize: but the results have been unpropitious. I feel confident, however, that some such plan of surgical treatment, with strict attention to the principles of antisepsis, as practised at the present time in cases of abdominal section, can be made quite as successful and warrantable a procedure in these cases.

The curability of phthisis, in its several stages, is becoming quite as established as the fact that the disease is, in this country, one of progressive mortality.

Post-mortem examinations frequently demonstrate that the disease has been checked, not only by medical skill, but sometimes by natural effort. The more we study the nature and progress of consumption, the more do we be-

[1] Read before the [illegible] Medical [illegible]

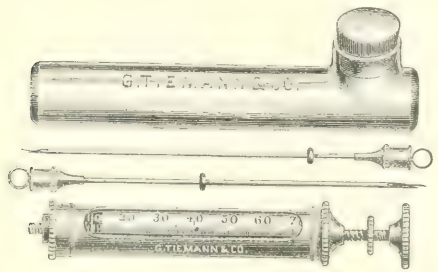
come convinced that local medication must enter largely into its successful treatment.

Actual injections into pulmonary cavities through the intercostal spaces have been practised within a very recent period, with some supposed benefit, and the procedure appeared to me so very rational a plan of treatment that I determined to make a judicious trial of it during my service at Charity Hospital, where a large number of cases were aggregated. The local application of remedies which possess and exert alterative influences seems to promise the most reliable means of ridding the system of the tubercular material, either by disappointing its development or by rendering it capable of absorption or excretion.

This process would, of course, be more or less active in proportion to the patient's physical condition, which would be maintained by an arrest of the local destructive conditions present in the lungs.

The successful treatment of phthisis would include every means, local and general, for checking the accumulation of the tubercular exudation and arresting ulcerative processes, for the system suffers, of course, in proportion to the extent and continuance of suppuration, if not from the actual absorption of the products of ulceration. We observe every day, in the wards of our large hospitals, many patients who, in consequence of a low state of vitality, manifest dangerous tendencies to suppurative disturbances after accidents. The injured tissues decay, and indolent ulcers appear which require lotions or ointments of a stimulating character to induce healing action. The walls of pulmonary cavities are similar to those of indolent ulcers on the external parts in the continuous molecular disintegration of contiguous tissue, and require, it seems reasonable to suppose, direct local treatment. Specialists in every branch of medicine appreciate the value of, and practise local medication in addition to, the general treatment of the patient.

In view of all these facts, I ventured to treat a few cases of phthisis by the careful introduction of a few minims of carbolized iodine into the pulmonary excavations, through the intercostal spaces, by means of a small syringe and needle which I had made for the purpose by George Tiemann & Co. The case consists of a graduated



metallic and glass syringe large enough to hold one drachm of fluid, a wide-necked reservoir for holding the solution to be used, and two needles, four inches in length, made of well-tempered steel, of the calibre of a small-sized aspirating needle.

At the extremity for the escape of the fluid are three or four apertures arranged circularly, which permit the injection to enter the pulmonary cavity in the form of spray. Along the shaft of the needle is arranged a movable guard of hard rubber, which is used to regulate the depth to which it is desired to insert the needle into the lung, in order to reach the cavity which is the subject of treatment.

The depth of the cavity and its location can be determined, by auscultation and percussion, with accuracy, which is a proceeding requiring due study and skill.

By this plan of treatment the most urgent symptoms were in all of the cases relieved so long as the treatment was continued. In two aggravated cases, though the symptoms which distressed the patients most were ameliorated and life apparently prolonged, they nevertheless succumbed to asthenia a few weeks after treatment was discontinued.

The distressing cough always present in these cases was markedly controlled, and the expectoration, which in some of the cases was excessive, was diminished materially by the injections. The patients' general health in some of the cases seemed to have decidedly improved. This was especially observed in Case II., where expectoration one week after the first injection was reduced from ten ounces to one ounce in twenty-four hours, and in Case XI. from sixteen ounces to two ounces in the same period.

The prognosis seemed so unfavorable in Case II., when I began service at the hospital in November, 1885, that I rather hesitated to subject him to the treatment. Nevertheless, he revived so much after the first and second injections, that when I last saw him, in January, 1886, two months after I instituted the treatment, he appeared in every respect much improved in health and strength.

This case seemed especially unpromising of good results from treatment, as he had a very large excavation in the right (upper portion) lung, and a small excavation enlarging in the left apex, and though in every respect seriously ill, nevertheless responded immediately to treatment in the most satisfactory manner.

A paroxysm of coughing followed the injections in almost all the cases, but in a few minutes ceased, and for two or three days after, the coughing was less frequent and the expectoration diminished. The night-sweats, which were quite profuse in some of the cases, seemed to be decidedly modified by the treatment. I had the pleasure and satisfaction of having had my diagnosis, in the first few cases, verified by Dr. James R. Leaming and my father, Dr. O. A. White, who visited the hospital with me on December 8, 1885, and on a subsequent occasion by Dr. J. L. Morrill, of this city.

In Case II., Dr. Leaming stated, after auscultation of the chest, that the cavity in the right lung had "hardened walls," which was not the condition prior to the intrajection of carbolized iodine, and affords a valuable instance of the benefit following this plan of treating phthisis. I am indebted to Dr. William Moore, House Physician, Charity Hospital, for a record of the cases treated and carefully taken notes of the progress of the patients under treatment.

Case I.—D——, male, aged forty-three. A large cavity at right apex, with flabby edges and loud, moist, gurgling rattles. Patient's general condition fair, though manifestly emaciated; appetite fair. Some dulness obtained over left apex.

First intrajection practised November 31, 1885, followed immediately by very little coughing. Tasted the iodine. Between forty-eight and seventy-two hours after the operation the coughing was less frequent and the expectoration diminished. The pain which he felt prior to the operation over the region of the cavity was also ameliorated. Four hours after first intrajection the temperature was 100.4°, ten hours after, 99.6°, and twenty hours after, normal.

Second injection, given December 5th, was followed by a severe paroxysm of coughing, which continued for about fifteen minutes, with frothy fibrinous expectoration. Complained of pain at the point of puncture for some hours after the operation. Cough and expectoration controlled.

Third injection performed December 8th, in the pres ence of Drs. Leaming and O. A. White. Coughing and expectoration of frothy fibrinous character followed immediately after the operation, but both ceased in a few minutes. The patient's general condition between the

second and third days after was much improved, and the temperature never exceeded 99.6°.

Case II.—S——, male, aged forty-seven. A large pulmonary excavation was discovered on examination at the upper portion of the right lung, extending down to third intercostal space. There was also dulness on percussion over the left apex, and a small cavity diagnosed in this region. The patient was weak and emaciated. Night-sweats profuse and exhausting. Loud, moist, gurgling rattles over upper portion of right lung heard anteriorly and posteriorly. Expectoration was quite abundant, and cough distressing and frequent.

First injection, given November 28th, was followed by very slight pain, and a short paroxysm of coughing, with a frothy fibrinous expectoration, which ceased in about ten or fifteen minutes. Almost immediately after the injection the patient tasted the iodine and carbolic acid.

Second injection was administered December 1st, after an attempt was made to aspirate the right cavity, with the hope of removing some of the large amount of the exudation which was present. Although a good-sized aspirating needle was introduced into the cavity, none of the pus was withdrawn, which was due, doubtless, to the very viscid and tenacious character of the fluid contents of the cavity.

About fifteen minims of the carbolized iodine were then introduced into the cavity. A violent paroxysm of coughing was occasioned, followed by frothy fibrinous expectoration. Between forty-eight and seventy-two hours after there was so much pain complained of, which he described as *burning* in character, that a morphine hypodermic was administered. This soon gave relief, after which the cough and expectoration were lessened, and the patient declared himself feeling generally much better. After the first intrajection there was a slight rise in temperature, within twenty four hours not more than .4° to .6° above normal, to which latter degree it gradually fell within a short period. The temperature was not materially affected after the second intrajection.

On December 8th the patient's general condition was quite satisfactory. Coughed less frequently. Expectoration reduced from ten ounces to one ounce in twenty-four hours, and the facial expression less pinched and anxious than it was prior to the commencement of the treatment. Upon auscultation the moist sounds were found decidedly modified, and the walls of the cavity gave every indication of a more dry or hardened condition, suggesting an attempt at cicatrization. I desired to repeat the treatment, but the patient's recollection of the pain following the last operation caused him to oppose any interference at present. I do not think there is any doubt but that the pain he experienced after the last intrajection was due more to the insertion of the large aspirating needle than the injection of the carbolized iodine. No such irritability occurred after the first injection, nor was the same amount of pain occasioned in any of the other cases treated with the same injection.

I had an opportunity of seeing this patient in the month of January, when his condition seemed so much improved that I could not but think that, had he permitted a continuance of the treatment, a positive cure might have resulted. I am, nevertheless, impressed with a conviction that his life has been most certainly prolonged by this treatment, due to the arrestment, or perhaps I should say modification, of the destructive process in the lung.

Case III.—M——, male, aged forty-nine. A large cavity under second intercostal space, left lung. Small cavity also at right apex. Patient's general condition fair. Cough and expectoration symptomatic. Night-sweats profuse and debilitating.

First intrajection, given November 28th, was followed by very little pain. Absolutely no paroxysm of coughing, and no expectoration resulted. Did not taste the injected fluid. Between forty-eight and seventy-two hours after, the symptomatic cough was less frequent, and the mucopurulent expectoration was diminished one-third. Six hours after the operation the temperature was 100.6°, and twelve hours after it was normal.

Second injection, given December 1st, was followed by slight pain and some cough, with moderate expectoration. Tasted the carbolic acid. Forty-eight to seventy-two hours after the operation the expectoration continued to be less in quantity and the cough harsher. The night-sweats entirely checked.

Third injection was given December 22d, and produced prolonged coughing, with frothy fibrinous expectoration, which continued for twelve hours. Tasted the injected fluid and complained of heat in the part of the lung injected. A regular rise of temperature for three successive afternoons was noted, varying from .5° to 1.5°, due, undoubtedly, to some special influence other than the treatment.

Case IV.—B——, female, aged twenty-two. When admitted to the hospital this patient was greatly emaciated. Both lungs excavated, though the left organ manifested a greater degree of decay. Night-sweats profuse. Cough and expectoration were urgent.

First injection, given December 8th, was followed by considerable pain and prolonged coughing. Patient was slightly hysterical for a short period. Forty-eight to seventy-two hours after operation no marked change in the cough or expectoration was observed. The taste of the injected fluid was still present. Twenty-four hours after the injection the temperature varied from 100° to 101.4° for subsequent four days.

It was not deemed advisable to repeat the pulmonary injections on account of the debility of the patient. She died January 8, 1886.

Case V.—H——, female, aged forty. Small cavity at right apex. Expectoration abundant. Night-sweats urgent. Patient's general condition fair.

First injection, given December 11th, produced little pain, no cough or expectoration; patient tasted fluid injected. Between forty-eight and seventy-two hours after, the patient declared she felt much better than before the operation, and her cough and usual expectoration decreased. Six hours after the temperature was 99.8, but gradually fell to normal within twelve hours.

Second injection administered December 22d. Felt some pain in posterior aspect of lung corresponding to point of injection anteriorly. Some cough followed, with slight fibrinous expectoration. Between forty-eight and seventy-two hours after, the pain in back of chest ceased, and she continued, in her own words, to "feel better." The temperature, about twenty-four hours after injection, was 98.5.°

Case VI.—C——, female, aged twenty-five; patient greatly emaciated; cavities found in both lungs—upper portions; expectoration not excessive, but always tinged with fibrine; complains of pain in both lungs. First injection administered December 11th. Was followed by slight pain; no paroxysmal coughing, but ordinary cough resulted in slightly blood-stained expectoration. Did not taste the injected fluid. Between forty-eight and seventy-two hours after, the pain in the lung disappeared. There was no variation in temperature other than a rise of from .4° to .6° every afternoon. As this patient became insane, the treatment was not continued, and on January 1, 1886, she was transferred to the city asylum. Symptoms of mania were apparent before the treatment was commenced.

Case VII.—D——, male, aged forty-eight. A large cavity was discovered in the upper part of right lung, and a small excavation at the apex of left lung. Excavating process was rapidly extending. Emaciation marked and rapid, with anorexia and profuse night-sweats. First injection administered December 12th, followed by no cough nor other result than taste of the injected fluid. Forty-eight hours after the operation his usual coughing was rendered less urgent. Expectoration

was not affected. There was no rise in temperature above 99° up to time of the second injection, December 18th, after which the expectoration was lessened, and the patient declared himself better. Third injection was given December 22d, and was followed by pain and prolonged coughing, with fibrinous expectoration, which ceased in due time, and the patient's condition was subsequently improved.

Case VIII.—S——, male, aged thirty-seven. A small cavity was found at right apex, and dulness on percussion over left apex. Emaciation not pronounced. Expectoration excessive. An injection was administered December 18th, which caused only a slight amount of coughing and clear expectoration. Forty-eight hours after, cough and expectoration slightly modified; complained of some pain at the point of injection on respiration. Temperature not above 98.5°.

Case IX.—S——, female, aged thirty-one. Both lungs excavated; the right more extensively. Patient very anæmic, and much exhausted from repeated pulmonary hemorrhages. Night-sweats profuse; cough distressing; expectoration abundant. Right lung injected December 15th. Trifling pain followed, with no paroxysmal cough and no expectoration. Had some pain posteriorly in chest, corresponding to anterior part of the lung injected. This pain ameliorated between forty-eight and seventy-two hours after the administration of the injection. Cough less urgent, but amount of expectoration about the same. Temperature not affected. Second injection was administered December 25th, and was followed by much pain and a hemorrhage. Patient manifested symptoms of shock, requiring stimulants. During subsequent three days the patient was semi-delirious and pulse continued feeble. On the fourth day mental integrity was restored, but patient seemed quite feeble. Temperature twenty-four hours after injection was 97.8°, and respirations were 40. On the fourth day the temperature was 98.8° and respirations 22. As I left the service January 1st, the treatment was not continued. This patient died January 25, 1886.

Case X.—G——, male, aged thirty-six. A very large cavity was made out at right apex, and one almost equally as large in upper part of left lung. Sweats profuse; cough and expectoration urgent.

First injection was administered December 15th, which was followed by some pain and slight coughing without expectoration. The paroxysm of cough did not continue long. Three days later the patient was much better. Expectoration and cough remained the same as before the operation. No noticeable change in temperature took place.

Second injection was given December 22d, after which a paroxysm of coughing ensued with some bloody expectoration. From the second day after, the expectoration was perceptibly diminished. There was no change in the temperature, and the patient continued better up to the termination of my service, January 1, 1886.

Case XI.—May 1, 1886, I was invited by Dr. Ira B. Read to see in consultation with him Mrs. K——, aged forty-five, married, who has been the subject of phthisis for several years. All of the symptoms of consumption were pronounced. Night-sweats profuse and debilitating. Cough urgent, and expectoration excessive, amounting to a pint in twenty-four hours, and wholly puriform and fetid in character. A large excavation, elongated, was distinctly made out, extending from the apex of left lung down to fifth intercostal space, at which point loud, gurgling rattles were heard. There was manifest flattening of the left chest. In the presence of Drs. Read and J. L. Morrill I introduced twenty minims of carbolized iodine into the upper part of the cavity through the second left intercostal space. The operation was followed by no paroxysm of cough, nor was there any expectoration, and no pain or irritation whatever was complained of. May 5th, the following was received from Dr. Read: "Our patient is doing well; she has coughed but very little, and raised but little; she has not sweated any for two nights; she feels very hopeful, and does not dread our visit next Saturday. I sincerely wish she may be permanently benefited. I will get a full history of her case for you," etc. I quote Dr. Read's own words, that the very satisfactory character of the report may not be attributed to my enthusiasm and confidence in the treatment. May 8th and 13th, cavity injected with thirty minims of carbolized iodine, and excited no cough nor pain. No expectoration followed the injection up to the time we left the house. The patient manifested (May 13th) decided improvement in her general health. Had no night-sweats since May 8th. Cough less frequent, and expectoration much modified in quantity and quality. Her appetite has greatly improved. Has fancied and eaten meat. Has been out to walk every good day, and felt less fatigue than before the treatment was instituted.

As to the ultimate benefit likely to result from this method of treating phthisis, little can be judged from the limited experience thus far adduced. I cannot but feel, however, that the treatment is an eminently rational one and promises good results, especially in a more favorable class of cases. I take great pleasure in reporting these cases, hoping that they will afford interest and encourage others to study and experiment in the same direction.

When the treatment was first instituted, in November, none of the patients treated during this month manifested as much effect from shock after the injections as in December.

This I attributed to the fact that there was a decided difference in the temperature of the fluid used, and suggested the advisability of always warming the fluid to be injected up to the degree of the body temperature. The patient should be fortified with a stimulant before proceeding, and I have thought that sometimes the operation might better be preceded by a hypodermic of one-eighth ($\frac{1}{8}$) of a grain of morphia, with a hundred and twentieth ($\frac{1}{120}$) of a grain of atropia. Should this be done, of course, anodynes should be omitted from the fluid injected.

I advise this plan in preference to including these remedies in the intra-pulmonary injections, as it lessens the probability of shock, although I have sometimes included them, and with good results.

Dr. Gougenheim, of Paris, reported in *The British Medical Journal* the result of intraparenchymatous injections of bichloride of mercury ($\frac{1}{2000}$, $\frac{1}{1000}$, and $\frac{1}{500}$) in thirty-three cases of phthisis. Immediate improvement was observed in twenty-one of the patients thus treated, and only ten out of the whole number died. No muscular, pleural, or pulmonary lesions were found, at the necropsies of those treated, which could be attributed to the injections. This bears out my own experience in these particulars. Dr. Beverley Robinson, of New York, also reported cases treated in this manner, with benefit, using injections of dilute Lugol's solution. His article upon this subject (The Medical Record, January 10, 1885), as well as that of Dr. Pepper (*American Journal of the Medical Sciences*, October, 1874), are most valuable contributions to the treatment of phthisis by this method.

To patients afflicted with this justly dreaded affection the intra-pulmonary treatment opens up new hope, and, I think, with good reason. The plan of treatment enables the physician no longer to stand with folded arms awaiting for his patient the inevitable end, but puts in his hands the means of prolonging, and sometimes of saving, life.

The following formula is the one which I have been using, and which seemed to occasion the least amount of irritability when injected:

℞. Atropia..... gr. $\frac{1}{3}$.
Morph. sulph..... gr. ii.
Tinct. iodine..... ʒ iij.
Acid. carbol. (pure)..... gtt. xx.
Glycerine..... ʒ iss.
Diluted alcohol, 20 to 30 per cent. ʒ iss.
M. Sig.—15 to 30 minims.

Clinical Department.

CASES IN OBSTETRIC PRACTICE—RESUSCITATION OF CHILD DELIVERED AFTER CORD HAD CEASED PULSATING—PECULIAR POSITION OF PLACENTA AS A CAUSE OF TEDIOUS LABOR.

Dr. William B. Lyman, of Wilson, Wis., sends the following instructive reports:

Case I.—Was called to attend Mrs. L——, in her third confinement, a distance of twelve miles from my office, and after a rapid drive arrived to find her in labor, having had pains for several hours. A digital examination revealed the os uteri fully dilated, the "bag of waters" yet unbroken, and a soft gelatinous mass presenting, together with a foot or hand, which I was then unable to determine. After several unsuccessful efforts to change the position of the child by bi-polar version, and concluding the presentation to be transverse from the condition already reported, together with the extreme lateral diameter of the uterus, I informed the father of the necessity for turning, and also that I could promise nothing as to the viability of the child when born, but thought it would probably be dead, anticipating in this prognosis the prolapsus of the funis, which occurred, and feeling that it would be impossible to deliver rapidly enough to save the child. After rupturing the membranes I found the cord extending about three or four inches external to the labia, and a hand and foot presenting, which proved to be the right hand of the child and the left foot, the head resting in the right iliac region. Owing to firm contraction of the uterus, I was unable to introduce my hand, for the purpose of podalic version, for some moments, but finally succeeded, and in the effort to deliver the child rapidly, by withdrawing it by the foot, the arm engaged with the head in the superior strait. At this time I felt the cord and found no pulsation, and it felt cold. I attracted the attention of the nurse to this fact, and remarked it was useless to hope for a living child. I then dislodged the arm from beside the head after several minutes of continued effort, and delivered. The cord was still pulseless, and there was no appearance of life in the child; but I wished to leave nothing undone, and so made efforts at resuscitation. After several minutes—possibly three—the first effort to gasp was seen, and breathing at intervals of fifteen or twenty seconds for several minutes. The child finally revived, and is now a bright little one of several months.

I regard this as a peculiar case from the fact of at least five minutes intervening from the time pulsation ceased in the cord to the time of nature's first effort to relieve the asphyxiated new-born, and think, after this experience, I will never lay a new-born babe aside until having used every effort at resuscitation, even though the case seems entirely hopeless.

Case II.—Called to see Mrs. D——; found her having slow but persistent dilating pains, os dilated about the size of a silver twenty-five cent piece, but thick and rigid, apparently not at full time. I gave anodynes, and in the morning left the patient comfortable. In a week I was called again, found patient had suffered same pains during pretty much the whole week. The os was dilated a little more than before, pains continued at regular intervals for twenty-four hours, during which time I remained with her. The os being still undilated, I observed that pains, although making the os rigid, failed to cause the bag of waters to make pressure against it and thus mechanically distend it. Pains were hard, and I concluded, although I had never read of similar cases, that the placental attachment was directly in the fundus of the uterus, and the membranes were too short to allow the "bag" to reach the os, especially as it became tense and fully distended with each pain.

Contrary to all teaching, I ruptured the membranes at this time, and the head descended, making pressure against the os, rapidly dilating it, and labor was normal from this time. After labor, found the opening in sac directly opposite placenta, showing my judgment to have been correct as to the location of placenta and probable cause of the tedious labor. What is the opinion of the profession as to this cause of tedious labor?

Progress of Medical Science.

Spasm with Spinal Motor Mechanisms.—In Dr. Sharkey's third Gulstonian lecture he considered the subject of spasm in connection with spinal motor mechanisms. He divided the subject into three parts, viz., 1, spasm produced by diseases of efferent spinal nerves; 2, spasm produced in a reflex manner by diseases of afferent nerves; 3, spasm produced by diseases of the ganglionic cells. Dr. Sharkey said that a large proportion of cases classed under 1 were not to be explained on the assumption that the diseased nerve caused excessive muscular contraction. The real fact was that the healthy muscles were those actively concerned, and produced contractures because the diseased muscles were passive, atrophied, and could not oppose them. Tetanus he regarded as perhaps an exception, but its pathology could scarcely be said to be known, and he had failed to make out any changes in the motor nerves. Even in regard to 2, Dr. Sharkey maintained that many cases are accepted as of reflex origin, which at any rate carry little conviction with them. Many cases occur where some sensory nerve is the seat of severe pain, or where a part is diseased which it is painful to move. A good example of the former class was furnished by facial muscular spasm accompanying facial neuralgia; and of the latter, rigidity in joint disease. But the most ordinary way of expressing pain was by some overaction of the facial muscles, and the ordinary way of preventing pain in joint disease was by keeping the joint still and opposing attempts at movement. Reflex spasm produced by disease of afferent nerves could therefore scarcely be dealt with apart from spasm produced by disease of ganglionic cells (3), for it was questionable how far stimuli applied to afferent nerves in chronic disease would produce muscular spasm if the centres were healthy. Reflex spasm no doubt did occur, but how frequently it did so, or how far the afferent or efferent nerves, or the nerve-centres, take the leading part in its production, were points which could scarcely be estimated. Dr. Sharkey supported Charcot's view, that various affections of joints may give rise to rigidity of muscles in a reflex way, and related a case in support of this opinion. He also gave an account of a case in which rhythmical contraction of the palmaris longus muscle occurred (ninety times a minute) after an injury and became permanent. Another case he brought forward was one of spasmodic movements of the jaw and of the floor of the mouth, due to injury.

The Relation of the Chorda Tympani to the Sense of Taste.—Dr. E. Schulte relates a case in which the chorda tympani nerve was divided in an operation on the left tympanic cavity. There followed immediately paralysis of taste in the anterior two-thirds of the left side of the tongue, and even after eight weeks there still remained complete absence of the perception of taste for sweet, sour, bitter, and salty substances. The temperature sense was intact, but the patient was unable to tell whether the hot or cold substance was a solid body or a fluid. The senses of touch and of pain perception were unaffected. From a study of this case the author came to the conclusion, as opposed to the opinion of Carl and Wolf, that the chorda tympani contained all the fibres of taste perception for the anterior two-thirds of the tongue.—*Centralblatt für klinische Medicin*, April 3, 1886.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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"INFLUENCE OF SEX IN DISEASE."[1]

IN bearing the burden of disease under which humanity groans, the members of one sex oftentimes think that they have more of it than the other. Mr. W. Rogers Williams, the Surgical Registrar to the Middlesex Hospital, gives us a view of how matters stand in England in this respect. He bases this upon an analysis made of hospital cases, which consisted of 32,509 males and 28,175 females, and the mortality returns derived from the Registrar-General's reports for twenty-five years, from 1848 to 1872, which includes the enormous number of 5,419,865 males and 5,082,281 females. With this vast mass of humanity to deal with, one can believe that conclusions might be arrived at which would command respect.

As a general thing women think they fall heir to more of the ills of the flesh than men. They will feel more cheerful, since misery likes company, when they learn that "men are more than twice as subject to carbuncles as women." Perhaps it is for this reason that as a popular standard of measurement for pain "the boil" has been taken, and we have the proverbial statement "as sore as a boil." It is doubtful if there has been a thorough realization of how appropriate to his sex was the disease from which Job suffered so much.

Our writer, contrary to what has been adduced by other less careful investigators of the subject, shows that men are more liable to small-pox, measles, scarlet fever, and febricula.

Typhoid fever attacks both sexes alike, but women die more frequently than men, while the reverse is true of typhus.

Diphtheria, whooping-cough, and influenza are decidedly more frequent in women than in men, while men in their turn suffer more from gout. In fact, gout is almost entirely a masculine disease. We are told that in the degenerate days of the Roman Empire this was not so, for women then rivalled the men in all kinds of intemperance. Women need to take warning, since gout is increasing among them.

Men are more liable to tetanus and hydrophobia—five times as liable as women—and also more liable to locomotor ataxy. Both have an equal tendency to epilepsy, while chorea, insanity, and hystero-epilepsy are more often feminine than masculine. One sees a growing tendency to credit men with some hysteria. The unfortunate name of this disease has prevented a proper understanding of its distribution among the sexes.

Briquet, in 1,000 cases, makes the proportion of 1 male to 29 females affected by it, while our author gives the ratio as 1 to 16.

The universal fear of cancer which haunts women is not without foundation, for they are twice as liable to these neoplasms as men, and are much more prone to growths which are benignant.

[1] The Influence of Sex in Disease. By W. Rogers Williams, F.R.C.S. Published by J. & A. Churchill. London, 1885.

A NEW ERA IN MICROSCOPICAL WORK.

UNDER this head Dr. Frank L. James, a St. Louis microscopist of high standing, describes (*St. Louis Medical and Surgical Journal*) the new optical glass discovered by Abbé and manufactured by Zeiss. Dr. Van Heurck, of Anvers, communicates to the *Journal de Micrographie* the results of his trials with the new lenses. He says:

"The objective is homogeneous immersion, of a foca distance of 3 mm., or about one-eighth inch English measurement. It is not arranged for cover-glass correction, as this is not necessary, that function being attained by means of the sliding tube of the body. It contains five lenses, and has a numerical aperture of 1.4, which is a trifle less than has been obtained in England and America (1.5); but so far as its optical qualities are concerned it is far superior to anything ever before made, the new glass permitting the absolute correction of all aberrations. The field is perfectly flat, the minutest object in the extreme edge of the field showing as sharply and clearly as though it were in the exact centre. With the vertical illuminator an amphipleura (silvered) is resolved into pearls—not merely in spots, but over the entire frustule, and with such clearness that these pearls can be counted. In the study of other diatoms I have found details which have hitherto escaped notice. As to the bacteria, details of structure are shown that have never before been seen—details that will without doubt serve to differentiate them by ocular means. Accompanying the objective are three eye-pieces, two for direct use and one for photography. They are also made of the new glass and by entirely new optical formulæ."

Dr. James does not appear to have used or seen these new objectives, but he is confident of their great utility. We should judge from descriptions so far given that the great advantage secured by the new lenses is through the eye-pieces, which enlarge the image without causing a loss in definition or illumination.

A NEW DIAGNOSTIC TEST FOR TYPHOID FEVER.

STATISTICS regarding the therapeutics of typhoid fever are almost always seriously vitiated by doubts as to diagnosis. This is more especially the case with the alleged abortions of typhoid. It is very desirable, therefore, to have some definite test of the presence or absence of the disease in its early stages. The temperature curve is known to be often far from typical, the roseola does not appear, if at all, until from seven to twelve days; there are, in fine, no pathognomonic symptoms in the earlier stage of the disease.

Several observers have recently tried to establish a

method of making the typhoid bacillus of Eberth a means of positive diagnosis. This bacillus is now quite generally conceded to be a constant accompaniment of the disease in question, and of no other.

Attempts to find this bacillus in the blood have not been very successful, although Neuhaus (*Berlin. klin. Wochen.*, 1886. No. 6) observed them in blood taken from incisions made near the roseola spots. M. Bouchard has also found the bacillus in the urine. Recently Philopowicz (*Wien. med. Blatt*, 1886, Nos. 6 and 7) (*L'Union Médicale*) has communicated the results of his personal experience in the examination of blood drawn from the spleen of typhoid patients. Having washed the skin with a solution of bichloride, 1 to 1,000, he inserted the needle of a hypodermic syringe, previously sterilized, between the ninth and tenth ribs, and withdrew some of the splenic blood and juice. In this he was able to recognize the bacilli of Eberth, and produced cultivations showing their specific character. All this was done in four patients, before the appearance of any roseola. There does not seem to be any great inherent difficulty in using this method of testing the nature of a suspected fever, provided, of course, that subsequent experience confirms the results of Philopowicz. Such a method cannot be made a routine one, but in hospitals it may be frequently used, and by it perhaps the much-disputed question as to whether typhoid fever is ever aborted can be settled.

In this connection we would call attention to the daring experiments of M. Payon (*L'Union Médicale*, No. 115, 1885), who inoculated pure and attenuated cultures of the typhoid bacillus upon himself and five other persons, without producing any definite symptoms of typhoid fever as it occurs in man.

THE IRRIGATION TREATMENT OF CATARRHAL JAUNDICE.

A RECENT number of one of the Berlin journals reports the revival of this method of treatment, originally proposed by Krull in 1877. He reported a series of eleven cases, and Loewenthal, who has lately reintroduced the plan, reports forty-one. The method is, in brief, the irrigation of the lower bowel by cold water once in twenty-four hours. It is claimed that the whole duration of the disease is shortened, that the gastro-hepatic symptoms speedily pass away, and that the headache soon ceases. The appetite very quickly becomes restored, and the patient is free from that peculiar lassitude so generally accompanying jaundice.

In the actual application of the method the following details are to be observed: For each injection one or two litres of water are to be used, with a temperature at first of about 12° C., and rising each day about 3° C. For children one single litre suffices. The average number of irrigations found necessary in the cases alluded to was four. In all an evacuation followed the first washing. In some diarrhœa ensued, but was checked by the subsequent washings at a higher temperature. By the third injection the passages generally have a yellow or brownish color. At the same time the yellow color fades from the skin and the bile-pigment leaves the urine.

The method has, at least, simplicity to recommend it, though it is hard to see just how it acts. As one of our exchanges suggests, the irrigation of the stomach (as suggested by Kussmaul and Senator for intestinal strangulation) with plain or medicated water would doubtless be of value. It would, at least, act directly on the inflamed mucous membrane of the stomach, which suffers in severe forms of the disease.

THE WORTHLESSNESS OF QUININE IN CONTINUED FEVER.

NOT often does a prophet and a poet arise among us able to denounce our errors with rugged, Baptistic vigor, and to set our faces again toward the sunlight of medical truth. Such a prophet, however, has spoken in the Moberly District Medical Society, of Missouri, and his words come to us through the happy agency of the Keytesville *Democratic Print*. Dr. George M. Dewey therein portrays "The Utter Worthlessness of Sulphate of Quinine in the Treatment of Typhoid Fever," and that "bastard malady, born on the banks of the Chickahominy, whose untimely end is near at hand."

We have spoken lightly, but wish, in all sincerity, that everyone could read Dr. Dewey's paper. It is not only logical, forcible, and sensible, but it is poetical and interesting—a rare combination from a doctor's pen. Dr. Dewey advances the view, first, that quinine is given too much:

"To-day sulphate of quinine is a therapeutic despot whose autocratic sway few have the courage to dispute. At some time, in some stage of every malady, most doctors fancy they find an indication, an excuse, for giving quinine. In high fever it will pull down; in low fever it will push up.

> "No pulse so high, no pulse so low,
> But down one's neck the stuff must go."

Taking up the special subject of typhoid fever, Dr. Dewey says, "I know of no disease in which quinine can do so little good and as much harm as typhoid fever." "I hear a great deal about tissue waste from high fever. I doubt not that this is the tendency of long-continued high temperature. But the fact is, that a gallon of sweet milk will prevent more 'tissue waste' than an ounce of quinine."

The undue weight laid upon the symptom of fever since the introduction of the clinical thermometer is referred to:

"Utter neglect of temperature is far better for the patient than half-drachm doses of quinine. The quinine-druggers raise a great howl about 'tissue waste.' The fact is, tissue waste and exhaustion come from impaired digestion, and not from temperature. That quinine does this, is beyond question."

Dr. Dewey is exceedingly severe upon Dr. Hutchinson, the learned author of the article on typhoid fever in Pepper's "System of Medicine," who even in mild cases of this disease recommends the use of two or three grains of quinine four times a day.

"Now," says Dr. Dewey, "here is a man, supposed to be the Polar Star to guide American practitioners over the doubtful sea of medicine, writes down in a book (who dares dispute what he sees written in a book?) directions for giving quinine every three or four hours to a patient

with typhoid fever, whom the veriest tyro knows needs nothing but good diet.

"The patient he describes is a good one to have. A good one to get up a reputation on—one who has no diarrhœa, no delirium, no tremors, temperature of 102.°

"A clear hundred per cent. of such cases ought to recover. Why would any thinking man give such a patient quinine? He says he was *accustomed* and in the *habit* of doing this way. This is at the bottom of such nonsensical practice.

"A doctor who contributes a hundred pages to a book to guide American practitioners ought to give some better reason than *custom* and *habit* for giving medicine.

"The doctors from the land of flowers and gunpowder tea give medicine for the same scientific reason this author does—from habit, custom, tradition. Dr. I. Hun Su, of Pekin, China, treats uncomplicated typhoid fever very successfully with the following prescription:

"℞ Three inches dried umbilical cord,
One dried snake-skin,
One fresh tom-cat's head.

"Mix. Boil in five pints of water for two hours and strain. Sig.—Tablespoonful every four hours.

"This prescription would be far less apt to disorder the stomach and nervous system than quinine, besides being tonic."

Dr. Dewey next pays his respects to typho-malarial fever so called. If his words are not gospel, they are very near to it, and we shall only do justice to them and to our readers by quoting in full:

"During the late war the Yankees invented a new disease that howls and cries aloud for quinine. This bastard was baptized and christened 'Typho-Malarial Fever;' though Dr. Woodward abandoned his bantling in disgust, every malarial maniac in the land is clamorous for its life.

"Throughout the land the asses bray
The horrors of malaria.

"I believe no one claims to have any typical pathological lesions of typho-malarial fever differing from typhoid fever.

"In our last State meeting, Dr. Van Emon gave the histories of fifteen post-mortems of deaths from the so-called typho-malarial fever. In every one the characteristic lesions of typhoid fever were found. If the prefix—the tail, the malarial end—of this disease could be amputated, quinine would get its quietus from a good many doctors who only prescribe it on account of this caudal appendage.

"Some men are very contentious about characteristic symptoms of typhoid fever. Pathology ought to settle it. If a patient has a continued fever, and any one symptom known to occur in what they call a typical case of typhoid fever is absent, this is a case of 'typho-malaria.' Should a case fail to have diarrhœa, or delirium, or tremors, or petechiæ, or tympanitis, or headache, or insomnia, or stupor, bronchitis, or hemorrhage, then it would be typho-malarial fever, and absolutely require quinine.

"Hybrid diseases exist only in the brain of fools. I believe no one claims to tell the sex in bacillas.

"Which is the Sire and which the Dam,
Seems quite beyond the ken of man.

"I am told by the believers in the hybrid theory that this fever often commences as a typho-malarial fever, and runs into or ends in typhoid fever. After malaria is killed by quinine typho lives on. Some men are bent on keeping this name alive to justify the treatment.

"Our forefathers fooled a long time with biliousness to justify calomel.

"Hepatic doctors now are seen no more,
The hunt for bile has long been given o'er,
Whoever would a reputation make,
Deserts the bile, the bugs to overtake.

"Whether one believes or disbelieves in typho-malarial fever is unimportant—quinine is a deleterious drug in either."

Dr. Dewey is the St. George of the dragon quinine. We are inclined to think that in time he will succeed as thoroughly as did the legendary hero.

We have long contended against the routine use of quinine, or in fact any antipyretics in the continued fevers, and we trust that the echoes of the voice from Missouri may rumble about the world, to the perpetual benefit of febrile humanity.

A FRENCH CRITIC ON MYOPIA.

M. Francesque Sarcey, the well-known French critic, has written a little work[1] which is well worth the perusal of physicians, by virtue of its charming style, and the freshness and force with which he describes the course and the dangers of myopia.

M. Sarcey's book is an autobiography of himself just so far as it relates to his eyes. He begins: "I was born near-sighted, dreadfully near-sighted. Many physicians," he continues, "assert that persons are never born near-sighted, but only become so." We believe that ophthalmologists teach that an hereditary predisposition to myopia is very common indeed, but that congenital myopia is very rare. "However," says M. Sarcey, "Science may think what she pleases, but I was born myopic."

The very day on which his infirmity was discovered is indelibly stamped on his memory, and his account of it is quite worth transcribing:

"One day, prompted by the spirit of mischief, I got hold of the big silver spectacles which my father always wore, and clapped them on.

"Fifty years have passed since then, but the sensation I experienced is keen and thrilling to this day. I gave a cry of astonishment and joy. Up to that moment I had seen the leafy dome above me only as a thick, green cloth, through which no ray of sunlight ever fell. Now, oh, wonder and delight! I saw that in this dome were many little brilliant chinks; that it was made of myriad separate and distinct leaves through whose interstices the sunshine sifted, imparting to their greenery a thousand tones of light and shade. But what amazed me most, what so enchanted me that I cannot speak of it to this day without emotion, was that I saw suddenly between

[1] 'Mind Your Eyes.' Good Advice from a Near-sighted Man to his Fellow-sufferers. Translated (with the author's permission) from the French of Francesque Sarcey, by Henry Dickson Bruns, M.D. New Orleans: New Orleans Medical Publishing Co. 1886.

the leaves, and far, far away beyond them little glimpses of the bright, blue sky. I clapped my hands in ecstasy, I was mad with astonishment and delight."

Very high myopia like Sarcey's is rare, but moderate degrees of myopia are very common; and myopia, as Sarcey states, is increasing and spreading through Europe like some epidemic disease. Among the ancients myopia appears to have been practically unknown. As evidence of this M. Sarcey refers to the ancient amphitheatres in which thirty thousand spectators sat and viewed the games without a glass. Perhaps, to be sure, the myopes of those days might have learned to stay at home. However, that myopia is increasing there can be no doubt. In fifteen years the proportion of undoubted myopes in the Polytechnic School of France has risen from thirty to fifty per cent., and eighty per cent. of the students have to wear glasses.

M. Sarcey urges his readers with profound emphasis to remember that myopia always has a tendency to increase unless numberless precautions are taken, and that all myopic eyes are weak eyes to be looked after carefully by their possessor. In his own case the result of over-use and misuse of his eyes, especially his attempts to get along without glasses, were that he lost the sight of one eye entirely through detachment of the retina, and that a cataract developed in the other.

The loss of the eye he attributes to the effects of studying when a boy in a badly lighted school-room, and he invokes all mothers to examine the school-rooms. "If they be not fairly flooded with light take your son home again. To leave him bent for ten years over dimly lighted books, is, if he has the least tendency to this trouble, almost certainly to lay up myopia for his manhood; if he be already myopic, it is to assure him a blind old age."

Sarcey's description of the development of his cataract and of its removal is vivid and dramatic. The operation was successful, and he now sees distant objects even better than before. The epilogue to his story is: "Remember that all extreme myopia ends almost infallibly in cataract, and that nearly all myopia may become extreme if the eyes are abused."

While Sarcey's views are somewhat tinctured by the bitterness of his personal experience, his warnings are wise and timely, and should be widely read.

Some Instructive Percentages.—Dr. John H. Rauch, in his last quarterly report to the Illinois State Board of Health, says that although a reduction in the percentage of graduates over matriculates has taken place in some medical schools, it has not in all. Last year the percentages of graduates to matriculates rose as high in individual cases as 52 for regular, 57.7 for homœopathic, and 58.3 for eclectic colleges—the averages of all schools being 33.3 for regular, 32.6 for homœopathic, and 33 9 for eclectic, and the minimum 10.5, 17.6, and 15, respectively.

An American Physician Honored.—At the recent meeting of the German Congress of Internal Medicine, Dr. L. Weber, of New York, was admitted to membership in that distinguished body. It is the first time that this honor has been bestowed upon an American physician.

News of the Week.

Bequest to the New York Academy of Medicine.—It is stated that the New York Academy of Medicine has received two bequests, one of $70,000 and one of $5,000.

Canadian Medical Association.—The Nineteenth Annual Meeting of the Canadian Medical Association will be held in the city of Quebec on Wednesday and Thursday, August 18th and 19th next.

A New Instrument for Measuring the Acuteness of Hearing.—M. d'Arsonval showed to the Biological Society an apparatus for measuring auditory acuteness, or an acoumeter. This apparatus differs from other similar instruments. It is simple, and it indicates directly the proportional intensity of sound. It is composed of a sound-producer, consisting of a small tuning-fork giving the normal *la* (870 vibrations), kept at work by an electro-magnet placed according to the disposition adopted by M. Mircadier. A single-element Leclanché's battery is sufficient to keep it in function. A telephone is placed in communication with the two ends of the thread forming the coil of the electro-magnet. The telephone is thus traversed by the extra interrupted current (*extra courant de rupture*) at each vibration of the tuning fork. The tension of this extra current is much greater than that of the battery, and causes the telephone to vibrate intensely in union with the tuning-fork. In order to lessen the intensity of the sound in the telephone, it is necessary to pass a current along a glass tube full of water, by plunging a metallic stem into the water. The length of the column of water traversed by the current is increased until the intensity of the sound is reduced to its minimum, and is scarcely perceptible. The strength of the extra current, and consequently the intensity of the sound, is in inverse proportion to the length of the graduator, which lessens the sound. The length of the column of water gives the degree of the auditory sense tested.

Schmidt's Jahrbücher.—Professor Winter, who has so long and successfully edited this most valuable publication, has retired, and his place is filled by Drs. P. Möbius and Dippe, of Leipsic. Both gentlemen are well known as most able and painstaking literary and scientific workers.

An Italian Surgical Congress has just been successfully held at Rome. Among the contributions was one by Professor Ceci, recounting the history of a successful splenectomy in which the spleen was one-fifteenth of the body weight.

The Usefulness of Spaying.—The London *Hospital Gazette*, quoting our editorial upon the above subject, adds: "It is possible that on first perusing the above our readers may not wholly grasp the spirit of the writer. For their enlightenment, however, we would desire to explain that our American *confrère* very successfully combines, on suitable occasions, the offices of satirist and ethical reformer."

The Kansas State Medical Society held its annual meeting, during the past week, at Atchison.

Officers of the International Medical Congress.—*President*—N. S. Davis, of Chicago.

Vice-Presidents—W. O. Baldwin, of Montgomery, Ala.; William Brodie, of Detroit; W. W. Dawson, of Cincinnati; E. M. Moore, of Rochester, N. Y.; T. G. Richardson, of New Orleans; L. A. Sayre, of New York; J. M. Toner, of Washington; J. A. Grant, of Ottawa, Canada; the President of the American Medical Association; the Surgeon-General United States Army; Surgeon-General United States Navy; Supervising General Marine Hospital Service.

Secretary-General—J. B. Hamilton, U. S. Marine Hospital Service.

Treasurer—E. S. F. Arnold, of New York.

Chairman Finance Committee—Frederick S. Dennis, of New York.

Presidents of Sections:

Medicine—A. B. Arnold, of Baltimore.

Surgery—William T. Briggs, of Nashville.

Military and Naval Surgery—H. H. Smith, of Philadelphia.

Obstetrics—Delaskie Miller, of Chicago.

Gynecology—James H. Harrison, of University of Virginia.

Anatomy—William H. Pancoast, of Philadelphia.

Physiology—J. H. Callender, of Nashville.

Pathology—A. B. Palmer, of Ann Arbor.

Diseases of Children—J. Lewis Smith, of New York.

Ophthalmology—E. Williams, of Cincinnati.

Otology—S. J. Jones, of Chicago.

Laryngology—W. H. Daly, of Pittsburg.

Dermatology and Syphilis—A. R. Robinson, of New York.

Hygiene—Joseph Jones, of New Orleans.

Collective Investigation, etc.—A. L. Guyon.

Nervous Diseases—John P. Gray, of Utica.

Dental and Oral Surgery—J. Taft, of Cincinnati.

New York is thus represented by Drs. J. Lewis Smith and A. R. Robinson; Philadelphia, by Drs. H. H. Smith and W. H. Pancoast; and Boston by no one.

Dr. Holmes Advises Doctors to Take a Vacation.—Instead of a vacation editorial, which would naturally be looked for by our readers with eager interest at about this time, we venture to substitute a little verse from Dr. Holmes' poem, "City and Country":

> Ye healers of men, for a moment decline
> Your feats in the rhubarb and ipecac line;
> While you shut up your turnpike, your neighbors can go
> The old roundabout road to the regions below.

The New York College of Physicians and Surgeons held its annual commencement on the evening of May 13th, when a class of ninety-seven was graduated. The Alumni Association prize of $500, for an essay showing original research, was awarded to Dr. William G. Thompson, for an essay on "The Application of Instantaneous Photography to the Study of Physiology and Therapeutics." The Joseph Mather Smith prize of $100, open to all Alumni, went to the same doctor for another essay. The Harsen prizes for clinical reports were distributed as follows: First, Charles W. Wolfertz; second, A. M. Fanning, Jr.; third, divided between H. Jarecky and J. L. Corish. The address to the graduates was delivered by General Horace Porter.

Reception to the Faculty of the Post-Graduate Medical School.—Professor William A. Hammond gave a reception to the Faculty of the Post-Graduate School and a few other gentlemen of the city, at his residence on Saturday last. It was numerously attended, and was a brilliant and enjoyable affair.

The Kansas City Medical Record has had a suit for $40,000 brought against it for publishing a certain editorial. Our contemporary is confident that he will pass over no such sum to the plaintiff.

The Extract of Belladonna.—According to Mr Wyndham Dunstan, the alcoholic extracts of belladonna root range in alkaloidal strength from 1.65 to 4.45. This is due mainly to the different ways in which the extract is obtained.

The One Hundred and Twentieth Annual Meeting of the Medical Society of New Jersey will be held at the Sea-Girt House, Spring Lake, on June 8th and 9th.

Oregon State Medical Society.—The Thirteenth Annual Meeting of the Oregon State Medical Society will be held at Portland, Tuesday, Wednesday, and Thursday, June 8, 9, and 10, 1886.

The Members of the Ohio State Board of Health have been appointed. They consist of Messrs. H. J. Sharp, T. C. Hooper, D. H. Beckwith, S. P. Wise, J. D. Jones, T. C. Miller, and W. H. Cretcher. There is one homœopath on the board. There are to be two meetings held annually. Five thousand dollars have been appropriated to meet its expenses.

Ontario Medical Association.—The sixth annual meeting of the Ontario Medical Association will be held in Toronto, June 2 and 3, 1886.

Maine Medical Association.—The thirty-fourth annual meeting will be held in Portland, Me., Tuesday, Wednesday, and Thursday, June 1, 2, and 3, 1886.

A Gift to the University Medical College.—The New York University Medical College has just received a gift of $100,000 for the construction and maintenance of a laboratory building, to be known as the Loomis Laboratory. The gentleman who has made the gift wishes that for the present his name should not be made public. Land adjoining the property of the college has already been purchased, and it is hoped that the new building will be ready for occupation next year.

Actinomycosis in the Human Subject.—An example of this interesting and rare disease is reported to have been met with at the Montreal General Hospital recently. The patient, a young female adult, was thought to have died of phthisis, but the investigations of the pathologist revealed the true nature of the malady. This case is of special interest, as few, if any, authenticated cases have been as yet recorded in America. It is down for consideration at the next meeting of the Medico-Chirurgical Society.

Replacement of Lost Eyes.—The replacement of a diseased eye by the healthy eye of an animal has now been done five times, with one success. In all the cases but this one (Bradford's) the cornea sloughed. In two cases, however firm vascular adhesions took place.

Dr. D. B. St. John Roosa has been elected a Corresponding Fellow of the Academy of Medical Sciences (*Real Academia de Ciencias Medicas, Fisicas y Naturales*) in Havana, and his work upon the Ear has received a full and complimentary notice in the Journal of the Academy.

M. Pasteur and Miss Morosini.—The Paris correspondent of *The Lancet* writes: "I have had an opportunity of revisiting M. Pasteur's laboratory in the Rue d'Ulm, under the following circumstances: A young lady, a daughter of Mr. Morosini, the well-known banker of New York, who was said to have been bitten by a mad dog, was brought to Paris to undergo M. Pasteur's anti-rabic treatment. The young lady was accompanied by her parents and by Dr. Bulkley, the celebrated dermatologist of New York, who asked me to introduce him to M. Pasteur. This I gladly consented to do, and on Monday morning, the 3d inst., the day after their arrival in Paris, the young lady was inoculated with the anti-rabic fluid. But before the operation was performed M. Pasteur, as is his wont, inquired particularly into the circumstances of the case. Dr. Bulkley furnished the necessary information and produced a certificate from a well-known veterinary surgeon testifying to the dog having been really affected with rabies. The young lady was bitten on April 14th, on the space between the root of the nose and the inner angle of the right eye, which was soon after freely cauterized with the nitrate of silver by Dr. Bulkley. Nineteen days had therefore elapsed between the accident and the inoculation. During my visit at the laboratory it struck me that the hydrophobia scare had not lessened, for the place was crowded with applicants from all parts of the world. M. Pasteur is as zealous as ever, and I learn that the Emperor of Brazil has conferred on the eminent biologist the Order of the Rose."

Fixing a Standard of Medical Education.—At the last quarterly meeting of the Illinois State Board of Health, April 15th and 16th, the following resolution was passed:

"*Whereas*, The continuous graduation of forty-five (45) per cent. of the total number of matriculates of a medical college—due allowance being made for the average annual loss—must be accepted as prima facie evidence that, practically, every candidate is graduated without regard to competency or qualification; therefore be it

"*Resolved*, That no medical college be recognized as in good standing within the meaning and intent of the Act to Regulate the Practice of Medicine in the State of Illinois, the aggregate graduates of which college amount to forty-five (45) per cent. of its aggregate matriculates during the period of five (5) years ending with any session subsequent to the session of 1885-86."

A Medical College Below the Mark.—The Illinois State Board of Health has recently resolved, "That in view of the apparently irregular manner in which diplomas have been conferred by the Beach Medical Institute of Indianapolis, this Board declines for the present to receive the diplomas of that institution as the basis for certificates authorizing practice in the State of Illinois."

The Nashville Academy of Medicine and Surgery is the title of a new medical society recently organized in Nashville, Tenn.

The Eastern Medical Journal has become a monthly, and adopts regular medicine, abandoning its previous somewhat indefinite "eclecticism." It is now under the editorial charge of Dr. C. E. Nelson, of this city.

Reports of Societies.

ILLINOIS STATE MEDICAL SOCIETY.

Held at Bloomington, Ill., May 18, 19, and 20, 1886.

The Annual Meeting of the Illinois State Medical Society convened at Washingtonian Hall, Bloomington, May 18, 1886, and was called to order by the President, Dr. William A. Byrd, of Quincy.

The meeting was opened with prayer by the Rev. A. W. Bennett, D.D., of Bloomington.

After brief addresses of welcome The President delivered his annual address, in which he emphasized the advantages of medical society organizations in bringing individual members to a better understanding of their social and scientific wants, and concluded by urging the adoption of a plan for more representative membership throughout the State. The more prompt publication of the proceedings was also recommended, and in that connection the suggestion was offered that some medical journal or organ for the Society be selected for the purpose.

Dr. J. L. White, of Bloomington, read a paper on some recent cases of

CEREBRO-SPINAL MENINGITIS

as the

REPORT ON PRACTICE OF MEDICINE.

These were typical in character, and formed the foundation for some remarks regarding the general character of the disease.

In reference to treatment, the writer of the paper used quinine, but for direct effect upon the membranes of the brain and spinal cord, he believed in ergot. It had been said that opium and alcohol were always contraindicated, but he had found in his cases that the amount of these remedies tolerated by the patient was astonishing, and he believed, as a rule, that in diseases where certain remedies were tolerated in immediately large doses, these remedies were indicated, as there was no disease in which the nerves of the eye and ear were so sensitive. The usual precautions should be taken as regards the behavior of nurses, attendants, the darkening of the room, etc.

Dr. Cullom, of Jacksonville, stated that in his locality, and with the belief that the disease was of germ origin, he had recently given internally the sulph. carbolate of sodium in sixteen-grain doses, every two hours, with apparent benefit.

Dr. Whitinger, of Matamora, had been through an epidemic of the disease, and his experience was very similar to that of the author of the paper. He thought he had good results by evacuating the bowels, steaming with the hot pack, and giving ergot and bromide of potassium.

Dr. Barnes, of Bloomington, had been through an epidemic and lost nearly every case, until he finally did nothing but give bromide of potassium, and his cases got well.

Drs. Walter Hay, of Chicago, Worrell, of Bloomington, C. M. Noble, Goodell, and others took part in the discussion.

Dr. Truesdale, of Rock Island, read

THE REPORT ON SURGERY.

He thought that as an antiseptic carbolic acid stood at the head of the list; further, it was an excellent local anæsthetic, and it was the most efficient capillary hæmostatic in the surgical world. Its most important place, however, was in

MYOFIBROMATA OF THE UTERUS.

He had treated a case of this kind, injecting about a drachm of a six per cent. solution by an aspirating needle right through the abdominal wall into the tumor, and repeated the same operation every few days. The patient improved in every respect, the tumor gradually decreasing in size. Several other similar cases were reported as being treated in a like manner and gradually improved in every respect. All the cases had done well, causing no bad after-effects. He next spoke of

THE TREATMENT OF CARBUNCLE

by the same remedy. He believed this malady to be a purely local disease in the true skin. In treating this affection he injects a hypodermatic syringeful of a six-per-cent. solution of carbolic acid into the centre of the tumor. The advantage of this strength of solution over one of nearly full strength is that it will never produce a slough, which the strong solution will certainly sometimes do.

Dr. Goodell had had several cases, and they were treated by nearly all remedies except the one suggested, and they had all died. Hereafter he would try the carbolic acid.

THE REPORT ON OBSTETRICS

was made by Dr. Ellen A. Ingersoll, of Canton, and consisted of several complicated labor cases.

Dr. Park, of Bloomington, commenced a paper by an interrogation as to

HOW LONG A FŒTUS COULD LIVE AFTER A RUPTURE OF THE MEMBRANES AND EXPULSION OF THE LIQUOR AMNII, AND COULD THE MEMBRANES BE REUNITED BY NATURE AFTER RUPTURE?

He then cited cases wherein there had been a discharge of liquor amnii or other fluid for some time previous to confinement. It was necessary, first, in answering the above interrogations to know whether there was rupture of all the membranes or only of the amnion, leaving the chorion intact. Next, it might be possible that the rupture was in the upper part of the membranes and only allowed of an overflow, as it were. He thought there must have been complete rupture and discharge in some of his cases, and therefore concluded as his belief that a child could live and flourish with complete rupture of membranes and discharge of the liquor amnii three months before delivery.

A paper was read by Dr. Catherine Miller, of Lincoln, who referred to

MENTHA PIPERITA AS A LOCAL ANÆSTHETIC.

She did not, however, wish to put it on a par with the popular local anæsthetic, cocaine. She uses it largely in burns, and reported cases in point. She had used it also in chilblains with equal success.

Dr. Tilley had used the remedy with great benefit in one-per-cent. proportion with vaseline in coryza.

THE REPORT ON DERMATOLOGY

was then read by Dr. Henry J. Reynolds, of Chicago.

In his remarks on

ACNE

he spoke of the procedure recently proposed by Dr. Shewell, of Brooklyn, for that disease, viz., the passing of sounds in the male urethra, and cited the cases more recently reported by Dr. Denslow, of St. Paul, of the beneficial result of this supplementary measure in the treatment of acne. For the deep or indurated form of this disease he always lances those papular indurations deeply, and invariably found pus at the bottom, with a tendency to burrow still deeper, rather than to come to the surface. He then, to prevent the wound from healing over on the surface, which it is otherwise sure to do, and leave the miniature subcutaneous abscess to go on as before and remain indefinitely, passes a probe dipped in carbolic acid to the bottom, and fills the whole incision from bottom to top with a small piece of absorbent cotton, and leaves it to granulate from the bottom, which it will never fail to do, leaving only an almost invisible scar. He referred to a suggestion made by Dr. Fox, of New York, as to the possible, if not probable, cure of leprosy if the proper moral effect could be brought to bear on these patients, stating that the moral effect was usually depressing in the extreme, banished as they usually are from society, and imprisoned for life, as it were, with only the promise of a most miserable existence and a lingering death. He alluded to the pigmentary syphilide, and to a case reported by Dr. R. W. Taylor, of New York, and one by himself, of this condition. He next referred to the treatment suggested by Dr. Bulkley for carbuncle without incising and poulticing, viz., ointment containing ergot and oxide of zinc locally, and sulphide of calcium and a saline laxative with iron internally. He also spoke of the treatment so highly recommended by Dr. Hibberd, of Richmond, Ind., of applying, with friction, every three hours, oleate of morphia. He then, in speaking of urticaria, said that Jassar claimed to have reduced the frequency and cut short the duration of violent attacks of this disease by giving twenty-four-grain doses of salicylate of sodium, repeated every two hours, until three doses had been taken.

Brief reference was then made to the use of

COCAINE IN DERMATOLOGICAL PRACTICE.

He had found it to be of some service to allay itching in certain cases of eczema and in pruritus, and in strong solution. He had used it to relieve the pain incidental to the removal of superfluous hair by electrolysis, but the remedy was not sufficiently absorbed by the skin, as a rule, to be very beneficial.

Dr. Tilley had used the actual cautery, with a very small wire passed down to the bottom of the acne pustule, which seemed to work admirably. He had always found pus in the bottom of these indurated lesions.

THE REPORT ON PHYSIOLOGY

was made by Dr. Wetmore, of Waterloo, on "Herditament."

It was discussed at some length by Dr. J. J. M. Augear, of Chicago.

Dr. Tilley, of Chicago, in his

REPORT ON OPHTHALMOLOGY AND OTOLOGY,

summarized the observations of Dr. H. Schick, in his study of the interchange of fluids in the eye of the rabbit, by the use of the hypodermatic injection of uranine solution, with special reference to the regeneration in the aqueous humor. In reviewing the work of Dr. Stgermann, of Petersburg, it appeared that without exception

THE HUMAN EYE AT BIRTH IS HIGHLY HYPERMETROPIC.

The average of the degree of hypermetropia during the first month gives a hypermetropia of 5, 37 D., and during the second month of life H. 3, 30 D. One practical point came out in the report, viz., that infants are very indifferent to the influence of atropia when applied to the conjunctiva. The report embraced an extensive reference to the works of D. W. Einthoven on the peculiar phenomenon of a simultaneous observation of two colors red and blue—on a dark background, on actual cautery in its application to the eye; precautions in cocaine, and the result of section of the chorda tympani in scraping out granulations in the ear.

(To be continued.)

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

Third Annual Session, held at the Hall of the College of Physicians, Philadelphia, Pa., May 10 and 11, 1886.

The meeting was called to order at 3 o'clock, P.M., by the President, WILLIAM PEPPER, M.D., LL.D., of Philadelphia.

The President opened the session with an address on "The Causes and Distribution of Consumption in Pennsylvania."

DR. A. L. LOOMIS, of New York, read a paper on

THE EFFECT OF HIGH ALTITUDE ON CARDIAC DISEASE.

in which he gave his experience in twenty-six cases, several of which were described.

In the summer of 1880, while at St. Regis Lake, in the Adirondacks, the author was requested to see a gentleman who had just arrived, and was thought to be dying. The patient, forty years of age, was found gasping for breath, cyanosed, with no apparent radial pulse, and bathed with profuse perspiration. Neither heart-sound could be heard. Under the hypodermatic use of digitalis, morphia, and brandy he improved. The following day it was learned that he had left New York apparently perfectly well. When he reached an elevation of one thousand feet the breathing became difficult, and as a higher altitude was reached the difficulty was increased, and was accompanied by cardiac palpitation and a sense of oppression in the epigastrium. When he reached St. Regis Lake, at an elevation of two thousand feet, he appeared to be dying. Physical examination showed well-marked dilatation of both ventricles, with a loud systolic murmur heard over the præcordia and transmitted a little to the left. At the end of three days he returned to New York. As he reached lower levels the difficulty of breathing diminished, and when he reached the level he could walk on it. The irregular heart action, however, continued, and the feet soon became œdematous, and he died six weeks later with general anasarca and heart insufficiency. No autopsy was made. The patient had never presented any evidence of cardiac disease prior to his trip to the mountains.

Mrs. S——, forty-three years of age, had mitral insufficiency for over ten years, but never exhibited any cardiac symptoms. She went to Colorado. When she reached an elevation of four thousand feet she was suddenly seized with extreme dyspnœa and pulmonary hemorrhage. There was palpitation of the heart and constriction of the chest. The following day she started on her return. As she reached a lower level she improved. Physical examination revealed extreme dilatation of both ventricles, complete cardiac diastolism, indistinct apex-beat, crepitation over the base of both lungs, with feeble or absent respiratory murmur. The patient died four weeks after her return. The autopsy showed both ventricles much dilated, old thickening and insufficiency of the mitral valve, some interstitial myocarditis and degeneration of the muscular fibre of the heart-walls. The right lung was the seat of pneumonia and old infarctions. All the other viscera were in a state of extreme venous congestion.

B——, aged forty-six, with aortic insufficiency, and moderate eccentric hypertrophy, visited the Catskill Mountains. After a walk was seized with great difficulty of breathing, cyanosis, and unconsciousness. The next day he was somewhat relieved. He returned to his home three days later; œdema of the feet supervened, albumen and casts were found in the urine, and the patient died three weeks later. At the autopsy both ventricles were dilated, the walls of the left side were hypertrophied, the aortic valves were thickened and contracted, the heart-walls were the seat of chronic interstitial myocarditis; the kidneys were cirrhotic and the lungs congested and œdematous.

The last case reported was that of Mrs. T——, aged fifty. She had always been well, with the exception of an attack of rheumatism ten years previously. Eighteen months before she had had an attack of cardiac palpitation, which was relieved by the use of digitalis; she went to St. Regis Lake, and soon complained of epigastric oppression, palpitation, dyspnœa, and great prostration. Both ventricles were found dilated with a soft systolic murmur at the base. There was no marked cyanosis or œdema, the urine was scanty, but contained neither sugar nor albumen. Under digitalis and stimulants she improved, but in a few days the symptoms returned, vomiting came on, the pulse became more rapid and feeble, attacks of syncope occurred, and she died three weeks after the onset of the unfavorable symptoms. No autopsy could be obtained.

Dr. Loomis then went on to say that in all the cases coming under his observation the ventricular dilatation was unquestionably the cause of the sudden development of distressing symptoms, and that the commencement of the fatal issue seemed to be directly due to the effects on the cardiac circulation of a change from a lower to a higher altitude.

The two important factors which lead to permanent cardiac insufficiency are, first, the condition of pulmonary distention consequent upon rarefaction of the atmosphere, and, second, the resultant condition of the circulating blood. In the first the terminations of the vagus are excited by the distention of the lungs; by the excitation of these afferent fibres, the cardiac walls and inhibitory ganglia of the medulla are paralyzed or weakened. The inhibitory control being lost, the diastolic intervals shorten and the rhythm is increased, but the amount of work accomplished is not proportionate to the visible cardiac energy. The change in the blood which acts as an important and ultimately the principal factor in producing the cardiac insufficiency is the deficiency in oxygen. The vaso-motor centre, influenced by the want of oxygen in the blood-supply, excites a general contraction of the arterioles of the body, filling the veins and affording a large heart-supply while the arterial pressure rapidly rises as the peripheral resistance is increased. Ordinarily the heart would relieve itself by excitation of the cardio- and vaso-inhibitory centres, but these centres are held in abeyance by the condition of the blood circulating in the medulla. This increase in the intracardial pressure cannot continue, and sooner or later the heart passes into a state of diastolic relaxation which is the primary step of a condition of ventricular dilatation. It is not improbable that the blood, heavily laden with carbon dioxide, also acts as a disturbing factor of the normal action of the heart through this same afferent mechanism.

If the explanation of the effects of high altitude upon the cardiac circulation be accepted, the risks which one with even slight cardiac insufficiency runs by passing from a lower to a higher altitude is certainly very great, and if the insufficiency is extensive, such changes become immediately dangerous. It must be remembered that cardiac insufficiency may exist in those who give no evidence of it.

DR. FRANK DONALDSON, of Baltimore, read a paper entitled,

A PRELIMINARY ACCOUNT IN REGARD TO CERTAIN CIRCULATORY AND RESPIRATORY CHANGES OBSERVED IN ANIMALS PLACED IN THE PNEUMATIC CABINET.

The experiments had been performed by Professor H. N. Martin, of the Johns Hopkins University, and the writer. The animals employed were rabbits which had been chloralized. It was found:

1. When the animal is breathing air from outside of the cabinet, rarefaction of air within the cabinet causes a marked fall of general arterial pressure, but has no

influence on the pulse-rate. The fall of pressure lasts only a short time (ten or twenty seconds), and is often followed by a temporary rise above the normal.

2. This fall of systemic arterial pressure depends on two factors: greater flow of blood to the skin when the air around the animal is rarefied, and greater accumulation of blood in the lungs when they are distended.

3. Of these two factors, accumulation of blood in the lungs is the more effective, for if the animal breathes air from the cabinet, and not from the outside, rarefaction of the air within the cabinet, in this case accompanied by no special expansion of the thorax, has but a trivial effect in lowering arterial pressure.

4. When the animal is breathing external air, rarefaction of the air within the cabinet usually has no effect upon the respiratory rate nor upon the extent of individual respiratory acts, unless the fall of blood-pressure be considerable. If it be considerable, symptoms of anæmia of the medulla oblongata show themselves. In some cases there is more forcible dyspnœic breathing, and in some dyspnœic convulsions similar to those which occur when an animal is bled to death and due to the same cause, viz., deficient blood flowing through the respiratory centre.

5. The rapid recovery of general arterial pressure while the animal is still in a rarefied atmosphere, but breathing external air, is probably due to excitation of the vasomotor centre, which, as is well known, is excited whenever the blood-supply is defective.

6. The brain enclosed in a rigid box, which is practically unaffected by variations in the atmospheric pressure, has its circulation more disturbed in the pneumatic cabinet than any other organ with the exception of the lungs.

7. Compression of the air within the cabinet while the lungs are in communication with the external air, causes a considerable transient rise of blood-pressure. This is probably mainly due to the forcing of the blood from the cutaneous vessels, but there has not yet been sufficient time to thoroughly investigate this point.

8. Compression of air within the cabinet while the lungs are in communication with the external air, slows the pulse as the arterial pressure rises. This is probably due to excitation of the cardio-inhibitory centre by increased intracranial blood-pressure. Further experiments are, however, necessary before this can be positively stated.

9. In certain cases, when the air within the cabinet is rarefied and the animal is breathing external air, the respiratory movements cease altogether for several seconds. As to the cause of this physiological apnœa, we are not yet ready to form an opinion. It may be due to extra accumulation of air in the alveoli of the lung, or to distention of the lungs exciting those fibres of the pneumogastric which tend to check inspiration.

EVENING SESSION.

DR. H. F. WILLIAMS, of New York, read a paper—

A CLINICAL REPORT OF CASES TREATED BY PNEUMATIC DIFFERENTIATION.

With the assistance of Mr. Ketchum, the inventor of the apparatus, a demonstration of the working of the pneumatic cabinet was given.

The speaker then reported forty-five cases in addition to those previously reported in which he had used the cabinet as a method of treatment. Sixteen cases were reported in detail.

DR. VINCENT Y. BOWDITCH, of Boston, read a paper entitled

TEN MONTHS' EXPERIENCE WITH PNEUMATIC DIFFERENTIATION.

The speaker endeavored to give the clinical results of the treatment in twenty-seven cases since June 30, 1885. Pulmonary phthisis, in its tubercular and non-tubercular forms; bronchitis, in its acute and chronic forms, with and without emphysema or asthma, and retraction of the lung from long-standing pleuritic effusions were the diseases which he had treated in the pneumatic cabinet. His experience was such that although he had been unable to accomplish thus far such brilliant results as some others had claimed, yet he felt convinced of the very marked beneficial effect of the cabinet in many cases where other means had failed to give relief, and of its curative power in one case of incipient tubercular trouble, and he looked forward with hope to what may be done in the future with this new method of treatment.

DR. I. H. PLATT, of Brooklyn, N. Y., read a paper on

THE PHYSICS AND PHYSIOLOGICAL ACTION OF PNEUMATIC DIFFERENTIATION.

The effect of reduced air-pressure upon the periphery of the body is to increase the expansion of the thorax in inspiration and to diminish its contraction in expiration, consequently to increase the amount of residual air. By the increased pressure in the lung it will tend to exsanguinate them, and to raise the arterial blood-pressure in the general circulation.

Two of the claims put forward by Dr. Williams and Mr. Ketchum he believed to be unfounded. The first is that the effect of removing a slight degree of pressure from the periphery of the body is radically different from that of increasing the pressure of the air entering the lungs; the former acting as a vis a fronte, the latter as a vis a tergo. One of the most elementary principles of physics teaches that suction is not a force operating from in front, but is merely the removing the pressure from one side of a body and allowing the undiminished pressure to act upon the other side. It makes no difference whether pressure is taken from the outside of the thorax, or added to the inside; in either case it is the unbalanced pressure which causes the increased expansion. The other proposition which he combated was that the spray or vapor used in conjunction with the differential process can be carried further into the air-passages, or more thoroughly condensed upon them, than a spray or vapor could be under normal conditions. They cannot be carried so far, for the reason that the residual air is increased, and consequently the inspired air, which carries the vapor or spray, cannot penetrate so far. It is claimed that the vapor of medicinal substances is condensed in the lungs during the differential process by the compression consequent upon the commencement of the expiratory act. This is impossible, first, because compression only acts to condense a saturated vapor, and the air-passages cannot be saturated with the vapor of a medicinal substance, and secondly, because no greater compression is produced at the commencement of the expiration under the influence of differential pressure than under other circumstances. Such compression as does occur is due to the resistance offered by friction of the bronchial tubes and by the narrow opening of the glottis, and it is impossible that these should be affected by the differential pressure.

I believe that such benefit as results from the use of the cabinet is due mainly to the reduction of congestion in the lungs by the air-pressure within them and by the increased expansion and movement of the lungs favoring their greater action and modifying their nutrition.

TUESDAY, MAY 11TH—SECOND DAY—MORNING SESSION.

The First Vice-President, DR. FRANK DONALDSON, of Baltimore, in the absence of the President, occupied the Chair.

The report of the Committee on Health Resorts was received and ordered published in the "Transactions."

The first paper was by Dr. Roland G. Curtin, of Philadelphia, Pa., on

ROCKY MOUNTAIN FEVER.

The speaker, in the first place, referred to a communication received from Dr. D. G. Dougan, of Denver, Col., bearing upon this subject. The experience of Dr. Dougan had led him to regard all cases of mountain fever as belonging to one or another of the well-known already classified varieties. The cases, however, present variations from the usual course of the fevers to which we would assign them. Some of the cases are ephemeral in character and difficult of classification. The fever especially designated by the name mountain fever presents many features of typhoid fever. The following were some of the reasons for believing these cases to be an irregular or mild type of typhoid fever. Such cases are usually seen at the season of the year when typhoid fever is most prevalent; they occur most commonly under conditions favorable to the development of typhoid fever; not infrequently cases will present some characteristic feature of typhoid, leaving no doubt as to the diagnosis; in the high altitudes where mountain fever is said to occur a large proportion of the cases of undoubted typhoid pursue a remarkably mild course.

In 1868, Dr Curtin had seen in Wyoming Territory four cases which had been diagnosed as mountain fever. At some point in the disease all these cases had diarrhœa, and in one it was continuous. One of the patients died suddenly at the end of three weeks, but no autopsy was made. In one case there was a doubtful eruption. One of the cases had epistaxis in the beginning of the illness. Tympanites was more or less marked in all cases. Dr. Curtin considered these cases to be typhoid or typho-malarial in character. Sometimes the cases belonged, in all probability, to the class termed simple continued fever. The diagnosis of mountain fever was doubtless in large part the result of incompetency on the part of the observers, and the use of the term is continued largely as a result of fashion.

HOW THE THERAPEUTIC VALUE OF OUR MINERAL WATERS MAY BE INCREASED.

was the title of a paper by Dr. C. C. Rice, of New York.

The following conclusions were advanced:

1. Physicians should make a careful analysis of our mineral springs.

2. The medicinal values of the waters should be tested by clinical investigation, and the conclusions published for the benefit of the profession.

3. If the waters are found to present marked merit, the physician should interest himself in developing the springs, improving the bath houses, etc.

4. Physicians in sending patients to the springs should be more careful to select the proper water and should send with the patient the diagnosis and history of the condition, for the benefit of the physician at the baths.

5. The patient, while at the bath, should be under a more rigid medical discipline.

6. The social life of our watering-places should be reorganized.

The following papers describing the climates of various places were then read: "The Climate of Mexico," by Dr. Didama, of Syracuse; "The Southern Adirondacks," by Edward T. Bruen, M.D., of Philadelphia; "The Climate of El Paso, Tex.," by Dr. E. W. Schauffler, of Kansas City; "Southern Pine Park," a new health resort in North Carolina, by Dr. A. N. Bell.

Afternoon Session.

The following officers were elected:

President—Dr. Frank Donaldson, Baltimore.

First Vice-President—Dr. V. Y. Bowditch, Boston.

Second Vice-President—Dr. Roland G. Curtin, Philadelphia.

Secretary and Treasurer—Dr. J. B. Walker, Philadelphia.

Additional Member of Council—Dr. F. C. Shattuck, Boston.

Elected to Membership—Dr. F. Donaldson, Jr., Baltimore; Dr. G. R. Butler, Brooklyn; Dr. W. Matthews, U.S.A., and Dr. J. H. Musser, Philadelphia.

The following memorial was presented by Dr. J. Ewing Mears, secretary of a special committee of the American Surgical Association appointed to consider the proposition with reference to the establishment of a Congress of American Physicians and Surgeons.

Washington, D. C., April 30, 1886.

To the President of the American Climatological Association:

In view of the fact that there are a number of special medical organizations now in existence in the United States, each having for its aim and attainment the advancement of the special department of medicine for which it was organized; and since the members of said special societies are of the representative men of the profession in America, many of whom are, at the same time, fellows or members of several of these special societies, which double membership, if it may be so expressed, necessitates them, if desirous of attending two or more of the meetings of these societies the same year, to make as many separate trips from home, and often with much loss of time to themselves and inconvenience to their patients. Therefore, it appears necessary that some arrangement should be made with the different societies as to a uniform time and place of holding their sessions, so that those members who wish to attend the meetings of more than one association may be enabled to do so without useless expenditure of money or unnecessary loss of time.

An extended correspondence, together with personal conferences with many of the most prominent of the fellows of this and other of the associations, has disclosed the fact that there is a decided and growing inclination to unite the various societies into a common whole, whereby it would become a general organization, representative of the various special departments of the profession in America.

The plan proposed, and which is offered for consideration, is to unite the following named associations into a Congress based upon the outlines which are now to be explained: American Surgical Association, American Ophthalmological Association, American Otological Association, American Neurological Association, American Laryngological Association, American Gynecological Association, American Dermatological Association, American Climatological Association, and American Clinical and Pathological Association. These associations to be united under the name and style of "The Congress of American Physicians and Surgeons."

The plan of organization hereby submitted, and subject to any alterations or amendments which may be deemed wise and proper, is that each society will preserve its own name, constitution, and by-laws, elect its own officers and fellows, hold its own sessions apart from the others at the time and place of meeting, publish its own transactions, and do all other acts of which, by virtue of its constitution and by-laws, it has the inherent right to do, thus preserving its own autonomy.

The Congress to be composed of these special societies when in convention, and its meetings to be held annually in the city of Washington, the most appropriate place for the assembling of such an organization. The constitution and by-laws of the Congress to be formed by a committee composed of a like number chosen from each separate society. The opening session of each annual meeting of the Congress to be devoted to such general business as may pertain to the interests of the association as a whole. The Congress to be presided over by a president, elected annually, and who shall deliver the opening address upon the first day of the session.

The manner of choosing the president to be as follows: By a nominating committee composed of one member elected from each special association, or otherwise, as may be determined upon by the special society itself, this committee nominating one or more candidates for the office of president, whose election is to be by ballot on the last day of the annual session, and in a convention of all the societies assembled. The presidents of the special societies to become, *ex-officio*, vice-presidents of the Congress. Membership in the Congress to be acquired only by virtue of fellowship in one or another of the special associations. Other officers of the Congress to be elected or appointed, as may hereafter be determined upon by the associations in convention.

These are the outlines of a union proposed for the consideration of the members of this Association, which, if it should meet their approval, can be submitted to the action of the societies which have been mentioned. It was suggested that the Chair appoint a committee of five to bring the subject before the next special association which meets this spring or coming summer, and which, in the event of a concurrence of opinion on the part of said society, shall act in concord with their committee appointed to confer with the other societies in the order of their meetings. This enlarged committee to report at a convention of all the societies, which shall be requested to hold their next annual meetings at the same dates in the month of June, 1888, in the city of Washington.

To avoid any confusion as to the time of next meeting, each society (this year) could adjourn to meet in June, 1888, leaving the date to be fixed by the enlarged committee after their work of conference had been finished, it then being only necessary to apprise the secretaries of the respective associations, who will give notice to the various fellows or members.

This proposition is the result of calm consideration, and has been approvingly indorsed by quite a number of the representative gentlemen of the profession, both in and out of this special association.

The plan proposed is simply to unite into one great body the already existing special societies, and it is proposed from the honest conviction that such a union will prove of inestimable benefit to them individually and collectively.

The special committee appointed by the American Surgical Association to consider the above memorial, reported that it viewed with great satisfaction the perfection of a plan through which the meeting of the associations above named in the city of Washington, at the same time of the year, may be accomplished, and the meeting of all the associations in general assemply on such days as may be determined, for the purpose of delivering addresses upon general subjects in medicine, such meetings to be held without any formal organization through which the associations meeting will sacrifice their autonomy.

To accomplish these purposes, the committee offers the following resolution:

Resolved, That a committee of five fellows of this association be appointed, which shall be authorized to confer with committees of other associations interested in the adoption of a plan of a convention as hereinbefore stated, and report upon the same at the next meeting for the action of the association.

The resolution was adopted, and the following committee was appointed in accordance therewith: C. H. Mastin, M.D., Mobile, Chairman; C. T. Parkes, M.D., Chicago; J. Ford Thompson, M.D., Washington; N. Senn, M.D., Milwaukee; J. Ewing Mears, M.D., Philadelphia, Secretary.

The proposition was approved, the committee to be announced later.

Dr. Henry B. Baker, of Lansing, Mich., read a paper

ON THE CAUSATION OF PNEUMONIA,

with a number of illustrative diagrams showing the relation of deaths from pneumonia to various meteorological conditions. The temperature curve was based on 154,400 observations. There were recorded 5,473 deaths from pneumonia in Michigan. Certain conditions are so uniformly associated with sickness from pneumonia is the night ozone; but it probably not the controlling factor. The amount of ozone is largely controlled by the temperature. Variations in atmospheric pressure, relative humidity, as well as absolute humidity, also seem to have a causal relation to pneumonia; but these conditions are under the influence of temperature. The investigations show that pneumonia is directly, or indirectly, caused by a comparatively low temperature. The work goes to prove, in a scientific manner, the truth of more or less widespread beliefs since the time of Hippocrates.

The mucous membrane of the bronchial tubes exposes a surface of fourteen hundred square feet. A large amount of water is taken out of the body by the lungs is very great. In Michigan the amount of vapor exhaled in excess of that inhaled is greater in January than in July. One reason is that less vapor enters the lungs with the air at a low temperature. As the air is warmed in the lungs its capacity for moisture is increased, and its demand for water is great. The fluid that passes into the air-cells contains the salts of the blood, some of which—as the chloride of sodium—do not readily pass off. An unusual accumulation of chloride of sodium occurs in the lungs. This probably favors the exudation into the lungs of albuminous constituents of the blood. Whether the ultimate fibrinous character of the exudate in the lungs is due to the blood-plaques or is a result of the oxidation of the albumen otherwise induced before or after exudation, it may be well to notice that the diagrams present a close relation between the curves of atmospheric ozone and pneumonia.

Dr. J. H. Musser, of Philadelphia, read a paper entitled

SUGGESTIONS REGARDING THE PREVENTION OF PHTHISIS IN MILL HANDS.

The speaker stated that it was rather to prevent that state of the system which often leads to phthisis that he desired to make some suggestions. The suggestions more particularly referred to factory laborers. He showed that states of ill-health were common in this class of artisans, and asserted that it was very largely due to an inadequate supply of food, which was improperly selected and prepared, and to carelessness in attention to digestion. This cause obtained more largely than bad hygienic surroundings, or than the occupation itself.

If this be true the remedy proposed was to have the plan of the Willimantic Cotton Company used by all mill proprietors. That company has proved, by experience and careful calculation, that it pays them in quality and quantity of work done to supply milk to their boys and bouillon to their women twice daily, and that the health of the operatives is promoted and their lives prolonged thereby. Dr. Musser trusted that the members of the Society could influence proprietors to adopt this plan and therefore close one of the avenues to disease and death.

Dr. C. L. Dana, of New York, read a paper entitled

A STATISTICAL INQUIRY REGARDING THE RELATION OF HIGH ALTITUDES TO NERVOUS DISEASES.

The speaker presented the results of inquiries made, at his request, of twelve physicians living in Colorado Springs, regarding the effects of high climates on the nervous system in health and disease. The majority thought that chorea in children was more frequent there than in lower altitudes; that the climate was bad for nervous women. The high altitudes do not necessarily injure epileptics, and in anæmic cases might cause improvement. Insomnia dependent upon anæmia and malnutrition was benefited and generally cured. The climate has no specific influence for good upon diseases of the spinal cord, and, if anything, the contrary. The speaker

was of the opinion that high altitudes had a tendency to excite lithæmia and arthritism, with consequent irritating effects upon the nerve-centres. The best effects of the climate were seen in anæmic insomnia, neurasthenia, and melancholia.

Dr. G. R. Butler, of Brooklyn, read a paper on "Mitral Stenosis," giving the histories of fourteen cases.

The President announced as the committee to confer with the committees of other special societies, with reference to the establishment of a "Congress of American Physicians and Surgeons": Dr. A. L. Loomis, New York; Dr. F. Donaldson, Baltimore; Dr. F. C. Shattuck, Boston; Dr. E. T. Bruen, Philadelphia; and Dr. W. W. Johnson, Washington.

It was resolved to appoint a committee of three, with Dr. C. C. Rice as chairman, to investigate the therapeutical properties of the different mineral springs.

After passing a vote of thanks to the College of Physicians for the use of their hall, the Society adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

SOCIETY MEETINGS—THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION—EXCISION OF THE KNEE-JOINT FOR UNUNITED PATELLAR FRACTURE—HISTOLOGICAL CHANGES IN HYDROPHOBIA—MEDICINE AND ART—CHANGES OF PROFESSION.

London, May 7, 1886.

With the approach of summer—and, at last, of genuine summer weather also—the medical societies are all making preparations for "shutting up," and by next month the last of the society meetings will have been held. The British Medical Association forms a notable exception, for its branch meetings continue to be held, and the great annual meeting will, as always, be held at the end of July. As Brighton is to be the place of meeting this year, a very large attendance may be expected, for Brighton is only an hour and a half by rail from London, and is so easy of access to, and so frequented by, Londoners that it is often called "London-on-Sea." The fact that Dr. Billings is to give an address will prove an undoubted attraction. Though not so well known by name as Dr. Flint, I am sure he will draw a good audience. I well remember the enthusiasm with which his address on "Medical Literature," at the International Medical Congress in London (1881), was received. At its conclusion the President of the Congress (Sir James Paget) rose, and after referring to the native wit and wisdom contained in Dr. Billings' address, said that it alone, without any other contribution, would have sufficed to render the Congress memorable. The applause with which Sir James Paget's remarks were received showed his audience to be in full agreement with them. I recall the scene vividly. Dr. Flint's name is widely known and esteemed on this side of the Atlantic, and his loss will no doubt be felt at the Brighton meeting, but I have no doubt that Dr. Billings will well fill the gap, and do much to make the meeting a success.

At the last meeting of the Clinical Society a brief discussion took place on the treatment of fractured patella. Mr. Lunn exhibited a patient who had twice sustained this injury to his left patella. The first fracture united. The second, which occurred six months after the first, would not do so. There was wide separation of the fragments, and the patient was miserable from the pain he suffered, and from the knee constantly giving way under him. After he had been in this condition sixteen years Mr. Lunn excised the knee-joint, and wired the femur and tibia together with silver wire. The operation was performed antiseptically, and six weeks afterward the limb was put up in plaster-of-Paris, and the patient allowed to get about on crutches. A useful limb was the result. The patient was forty-four years of age at the time of the operation, which age, remarked Mr. Lunn, was considered rather an advanced one at which to perform excision of the knee-joint. Mr. Timothy Holmes expressed approval of the treatment pursued by Mr. Lunn. Modern notions had been much modified as to age, he said, and he had himself excised the knee-joint in patients over forty, and had seen successful cases in older people. Professor Humphry, he believed, had performed the operation with success in one patient over sixty. Mr. Holmes said he considered wiring the patella a rash proceeding in recent cases of fracture, and some old cases did not yield good results after wiring, but would do well with excision. Mr. Gould remarked that wiring the patella gave the patient a movable knee instead of a stiff joint, as after excision, though he admitted that Mr. Lunn's patient possessed a useful limb, and that in some cases excision might be essential.

At the last meeting of the Pathological Society, Dr. Hale White showed a series of specimens taken from two men and a dog who had died of hydrophobia. From the histological study of these specimens, Dr. White concluded that the essential lesion was an acute inflammation in the floor of the fourth ventricle spreading upward to the brain and downward to the cord. There was some blurring of the secretory epithelium in the salivary glands, and a few leucocytes were seen among the gland elements. In one case the thyroid was atrophied. The pneumogastric and sympathetic nerves were examined, as was also every organ in the body, but no changes were found.

No medical artist has an exhibit at this year's Royal Academy exhibition, though there is a notable collection of medical portraits, busts, and statues by professional artists. Sir Henry Thompson has no work in the "Academy," though he exhibits a beautiful Italian landscape at the Grosvenor Gallery. Yet many of our profession possess no mean skill with the brush, pencil, or burin. As etchers, Mr. Seymour Haden and Dr. Evershed have attained considerable repute. The former is a surgeon (now retired), who some few years ago created some stir by his denunciation of the current insanitary methods of burial in solid wooden or leaden coffins. Numerous vigorous letters from his pen appeared in the *Times*, giving graphic descriptions of some graveyard explorations, and advocating the employment of perishable coffins. Dr. Evershed is a practising physician and is attached to one of the consumption hospitals. Many other names might be mentioned. Of art connoisseurs our profession has had, and still has, many within its ranks. Among these the late Dr. Billing was noteworthy for the valuable collection of gems and cameos he possessed. Turning to the sister art, the drama, more than one medical man has appeared on the stage. One distinguished ophthalmic surgeon in London, now enjoying a large and lucrative practice, had formerly, I believe, some idea of devoting himself entirely to the dramatic art.

The above are all instances of doctors who, while remaining in their own profession, yet have shown special skill or interest in another. Yet entire changes of profession have often occurred. The transition from medicine to science is most easy, and a large proportion of our eminent scientists have been brought up as medical men, and some have practised as such. As instances may be mentioned Professor Huxley, Sir Joseph Hooker, Dr. Bayley Balfour, Dr. Odling, Professor Crum Brown, Professor Martin Duncan, and Professor Sanderson. Literature furnishes many similar examples. The present editor of one of the most popular of our monthly magazines is a medical man. Divinity, too, has proved to many of our profession a more attractive study than medicine, and not a few doctors have ceased to be practitioners in order to become ministers of religion. Law has not attracted so many votaries; still, it has

lured some from clinical pursuits. At least one medical man has lived to be a judge, and an eminent queen's counsel now living was not only brought up to the medical profession, but actually practised it for twenty years, attaining some repute as an obstetrician. It is interesting to note that he has educated his son for his adopted, not for his original, profession. I have known an instance of a converse change. A young man who had been brought up as a solicitor tired of law and forsook it for medicine. I have also heard a lawyer express the wish that he had been a doctor. Many doctors in this country are tempted—on financial grounds—to wish the opposite. Law offers rewards such as medicine cannot, and is the pathway to honors denied to the sister profession.

OUR PARIS LETTER.

THE LABORS OF PASTEUR.

[PARIS, April 30, 1886.

THE universal interest now taken in the Pasteur treatment of hydrophobia induces me to lay before your readers a short account of the method adopted by that eminent biologist for the prevention of that appalling malady. The history of M. Pasteur's remarkable discovery is so well known that a repetition of his preliminary experiments on animals would be superfluous. I may, however, briefly relate that his first experiments in connection with hydrophobia were made in December, 1880. It will be remembered that he collected, by means of a camel's-hair brush, some mucus from the mouth of a child aged nine years which had died from hydrophobia in a hospital in Paris. The child had been bitten in the face by a dog in a village near Paris. It was ascertained beyond doubt that the dog was mad. The mucus was removed from the child four hours after death. Two rabbits were inoculated with it, and these animals died thirty-six hours afterward. Other rabbits were then inoculated from them, some with the saliva, others with the blood. The second series of rabbits died more rapidly after inoculation than the first, the third series more rapidly than the second, and so on through several successive series of animals. He then performed experiments with the view of ascertaining the period of incubation of rabies in animals of the same species; for instance, if a rabbit be, after trephining, inoculated under the dura mater with a fragment of the spinal cord removed from a mad dog, hydrophobia always appears after an incubation period which, on an average, covers fifteen days. This period of incubation is shortened by the transmission of rabies from one rabbit to another, so that after a series of twenty-five rabbits it is reduced to eight days, and after another series of twenty-five rabbits to seven days. The reduction of the period of incubation could not be further diminished by the transmission of the malady to another series of forty animals. M. Pasteur admits that the virulence of the contagium then attains its highest degree. In dogs, in which the period of incubation is fifteen or sixteen days when they are inoculated with the rabic virus recently taken from a stray dog, it would be reduced to ten or eight days when they are inoculated with virus prepared in the manner already described.

The following is a brief description of the mode of procedure adopted by M. Pasteur for inoculating animals: The rabbits, which are the animals most frequently employed, are chloroformed. A longitudinal incision of two centimetres is made through the integuments in the frontal region, then a portion of bone of six millimetres in diameter is removed with a trephine, and under the dura mater thus exposed is injected a drop of the infecting fluid by means of a Pravaz's syringe, the extremity of the nozzle of which is bent at right angles. The wound is washed several times with carbolic acid during the operation; it is united by sutures, and the animal is then removed to its box. Rabbits generally bear the operation well, and, with a few rare exceptions in which small abscesses are formed, no real complication has been observed. The clinical aspect presented by the inoculated animals corresponds with that termed dumb rabies ("rage muette"); in dogs the paralytic form of rabies is for the most part observed. The preparation of the attenuated virus is effected in the following manner: The animal which has died of rabies is fastened to a plank with the back upward. An incision is made through the skin along the spine, extending from the skull to the coccyx, and the dorsal muscles are detached. The spinal canal is opened from behind with a red-hot iron; the spinal marrow and the meninges are removed with a knife and pincers equally heated to redness, and then these organs are placed on a flat plate previously sterilized, in which they are divided, with scissors disinfected, into pieces of six centimetres, which are immediately fastened with a thread to the stopper of a bottle prepared for the purpose, in which it is suspended. These bottles are of the volume of two litres, at the bottom of which is laid some caustic potash about two centimetres deep to maintain the air in the bottles in a dry state. Besides the usual opening at the top of the bottles there is another lateral opening near the bottom, both of which are stopped with sterilized wadding. The bottles are then arranged in a well-ventilated room, the temperature of which is kept constantly at 20° Centigrade. The pieces of marrow commence to get dry in about three or four hours, and are completely so in four or five days.

The virulence of these pieces of marrow is nil after fourteen days; at the end of nine, eight, or seven days, one can produce rabies in rabbits by inoculation. At the sixth day the virulence gradually diminishes. The diminution of the virulence depends on the temperature, the lower the latter is the less the virulence diminishes. For inoculation, pieces of dried marrow a few millimetres long are emulsified in a quantity of fowl-broth sterilized four to six times greater. The inoculations are commenced with the weakest virus (that of fourteen days), and the subsequent inoculations are continued step by step to the stronger. The inoculations are finished with the strongest virus, which infects the rabbit from the sixth to the seventh day, and a dog from the eighth to the ninth day. In this manner M. Pasteur was able, in a long series of experiments, without a single negative result, to render animals insusceptible ("réfractaire") to rabies. As regards the length of the duration of the immunity, he is not yet in a position to decide. He has under his care fifty dogs that he considers insusceptible to hydrophobia, and now and then he infects some of them with recent rabic virus. In another species of experiments M. Pasteur occupied himself with the question as to whether the immunity is transmitted from one generation to another. The first experiments performed by him on guinea-pigs appeared to give positive results. If this should be confirmed, the importance of such a result in practice can hardly be overrated.

These experiments were begun in November, 1882, of which he made a report to the Academy of Sciences on October 26, 1885. A period of three years had therefore elapsed between that time and when this communication was made, without the slightest interruption in their course. No other virus had been used than that removed from rabbits which had died from hydrophobia after successive inoculations, so that M. Pasteur had always at his command perfectly pure virus, always, or very nearly, identical. This he considers to be the essential condition of his method. The cords of the rabbits inoculated are virulent throughout their entire length, and equally so. Encouraged by the results obtained by him in animals, M. Pasteur was induced to apply his method to the human subject, and, in his report to the Academy of Sciences above referred to, he stated that on July 6, 1885, he inoculated his first subject, Joseph Meister, an Alsacian youth, at his laboratory in the Rue d'Ulm. The boy had been bitten in fourteen different

places, on the hands, legs, and thighs. But before inoculating the boy, M. Pasteur consulted MM. Vulpian and Grancher, who considered the patient to be almost sure to die from hydrophobia. This first experiment, however, caused M. Pasteur great anxiety, as the dogs rendered refractory to hydrophobia by his method had not been bitten by a mad dog before attaining that condition; but he knew by previous experiments, that dogs which had already been bitten were easily made refractory to hydrophobia. The lad Meister was inoculated thirteen times in ten days, though, at present, M. Pasteur only makes ten inoculations, one every day. Each successive inoculation is made with a more virulent fluid than the preceding one. The last inoculations of Meister were made with a rabid virus taken from a mad dog, and rendered more virulent by being passed by inoculation from rabbit to rabbit. This virus produced hydrophobia in rabbits after seven days' incubation; and in a dog not inoculated for rabies after an incubation period of eight or ten days. As Joseph Meister is in perfect health, and it is nine months ago since he was bitten, and then inoculated, M. Pasteur concludes that he has escaped what appeared to be an imminent danger.

In my next I shall continue this report on M. Pasteur's inoculations.

STATE REGULATION OF THE PRACTICE OF MEDICINE IN NORTH CAROLINA.

To the Editor of The Medical Record.

SIR: In your issue of February 6, 1886, is an editorial on the above subject, in which you comment upon the wisdom, expediency, and justness of the Medical Act as passed by various States and Territories, the highest mead of praise being awarded to the State of North Carolina, as being the most crucial in its requirements of legal qualifications for the practice of the healing art. You, in the same issue, give, with a repressed smile of pitying ridicule, some of the erroneous answers of the young medical men applying for State grants to prosecute the profession of medical practice.

We have long and patiently waited for some able champion to arise in the cause of the much-abused, oppressed, and sneered-at young medical man, but none seem anxious to join the losing side. We, therefore, ask that you give us space for our exposition of the Medical Act as it now exists in this State.

The Medical Act of the General Assembly of North Carolina of 1884 and 1885 makes it a misdemeanor for anyone to practise medicine or surgery in the said State, except such an one as had a previously procured certificate from the State Medical Board, or a diploma from some reputable medical college, issued prior to January, 1880.

Now we claim that the above law, in its exclusive favors to a certain class, is highly unjust, not only robbing the younger members of the profession of advantages which they have purchased for themselves through days of arduous toil, but at the same time placing them in the very falsest light before the laity. The young medical men of North Carolina are as much in favor of stringent laws and examinations, in order to keep out incompetents, as the wildest and grayest enthusiast in the State; but they do object to the implication made in the law that their education alone is defective; that they alone require the eliminating influences of the act, while those who had the good fortune to graduate prior to 1880 are folded in the fostering arms of the law, shielded from every untoward circumstance, and permitted to practise medicine and surgery without let or hindrance from any source. "Yea, ye are the people, and wisdom will die with you."

Are the facilities for acquiring a medical education less now than in ante-bellum days, when two professors could exhaust, in the allotted time, the limited curriculum, and our gray-haired sages received from their Alma Maters the permit to go forth and heal? I trow not. Is it a fact that the mental endowments of those young men who have graduated since 1880 are of a lower grade than of those who graduated prior to that time? No one can so affirm. Then why this distinction without a difference? Why are we, graduates of the best schools in the country in the year 1880, forced to leave our practice in the hands of jealous and watchful rivals, to incur the expense of travel, the mortification of an examination, and probably the chagrin of defeat, while our more fortunate confrere, a graduate of 1879, enjoys all the immunities of the law and all the privileges of the profession without debarment from anyone? Why not pass an act either to *include all*, or else make the law refer only to the incoming members of the profession?

The answer to the query is easy. The instigators of the law worked wisely in their own interest. They accurately measured their ground and knew how far to go. They well knew that the graduates of the last five years were, as a rule, without money, position, or influence, and any law against their interest and privilege would meet but slight opposition. They knew, further, that a bill to include all the physicians practising in the State would not only include themselves, but would be so unpopular as never to become a law, the legislators not daring to vote for such a measure. They therefore drafted such a bill as would be sure to pass, and, at the same time, give them an advantage over that minority element in the profession—the selfish hate of whom is equalled only by the fear of their ultimate success.

In observant experience we willingly yield the ground to age, but as a class we are ready, under any and all circumstances, to measure with the older members in all that pertains to the technique of our common profession. We object to no law that is equal and fair for all men. We object to no examination, however stringent, which everyone wishing to practise in the State is required impartially to pass; but we do object, and shall forever object, to distinctions being made against us for no other than spiteful and arbitrary reasons.

When will those members going before cease to retard the progress of those coming up behind? Why, say they, we are erecting for you a higher standard of excellence, in order that you may become better informed and more skilful medical men. Thanks, you remind us of the innocent Wall Street babes pleading before their country's tribunal for the poor working-men. The examples you set we are willing to follow; but we do not aspire to the egotistic position of leaders.

It is highly probable that the younger members are not the only ones in the medical profession to whom it would be a benefit, both to themselves and the communities in which they live, to have their memories refreshed by an examination upon matters medical. The answers given by the applicants mentioned in your article of February 6th, are not more ridiculously *outre* than many errors of old and well-experienced men which have fallen under my own observation. I have heard a noted physician speak of the great sciatic nerve as being on the top of the thigh. I know a physician of many years of active practice examine a patient with the bi-aural stethoscope, placing one aural tube at the base of the scapula, and the other on the nipple, and applying his ear to the trumpet extremity, gravely assure the patient that his lungs were normal, since he could hear nothing with his instrument of precision to impeach their integrity. Another noted physician of this State—one officiously instrumental in having the offensive bill passed—was unable to state *even the number* of bones in the cranial vault or in the face, when requested to do so, as an expert witness in a famous murder trial, by the counsel for the State. Yet all these are wise and well prepared for their work, while the unfortunate who was so unlucky as to pass his degree subsequent to 1880 is subjected to annoyance, expense, and often chagrin, by this unjust and unequal legislation.

The crime of being young and inexperienced we will

not attempt to palliate or deny; but we do hope that our faults and inefficiencies may cease with our youth, and that we be not of that number who continue to be ignorant, selfish, and vindictive, in spite of experience and the mollifying influences of time. As young men we ask no favors. Treat us as the rest are treated, and for what remains we will take care of ourselves. Were the law universally inclusive, then would we with you join hands in its praise. NORTH CAROLINIAN.

THE CASE OF DR. FANCOURT BARNES.

TO THE EDITOR OF THE MEDICAL RECORD.

IN THE MEDICAL RECORD of April 24, 1886, in the column devoted to "News of the Week," it is stated, on the authority of the *Journal of the American Medical Association*, that the charge that Dr. Barnes stole my dictionary is an unjust one, because Dr. Barnes' book contains several thousand words more than mine. You also say you would be glad to see Dr. Barnes' name cleared.

I assert that this charge against Dr. Barnes is true. A careful comparison of the two books, made by myself and others, has shown that, with one or two exceptions, he has reprinted all my words and definitions, even to the errors, misprints, punctuation, etc. There is such careful copying of all these throughout a sequence of several thousand words as to show that the resemblance could not have been so consecutively exact had not Dr. Barnes' printer used my printed page as part of his copy. His book contains very few strictly *medical* terms not found in mine. The mass of his padding consists of chemical, botanical, and pharmaceutical terms to be found in all the general dictionaries. A prominent journal, in reviewing Barnes' book, said that his additions were "not particularly, or at all, scientific." In many cases, after giving certain of my words and definitions, he has repeated the same word, giving another combination of definitions, evidently taken from the common dictionaries. Here and there a word was accidentally misplaced, with regard to its alphabetical position, in my dictionary; it receives the same malposition in Barnes' book. I have in my possession overwhelming proof of all that I claim. I wrote to this effect to all the prominent British journals, but, with one exception, they refused to publish my communication.

My dictionary is an original work, exactly as claimed in its preface, and was the product of years of hard study. Had it been reprinted in England as "Cutter's Dictionary," I should not have even protested; to steal such a work in the manner this has been done, is to inflict a much greater injury than to reprint an essay or work of that nature. Respectfully,

G. R. CUTTER.

55 PELHAM AVENUE, BROOKLYN.
April 17, 1886.

THE CAUSE OF DIABETIC COMA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Having noticed your editorial in THE MEDICAL RECORD of April 17, 1886, "The Cause and Prevention of Diabetic Coma," I wish to call your attention to a theory advanced by Stadelmann on the same subject.

In the course of former investigations Stadelmann found that in those specimens of urine of patients with diabetes mellitus in which a large amount of ammonia was contained an abnormal (pathological) acid—in most cases oxybutyric acid—was regularly likewise present. In regard to excretion of ammonia it was observed that the quantity of the same was very variable. Exclusive meat diet exerts a constant effect on the quantity of ammonia in the urine. Meat diet is to be considered as acid-producing nutriment, and as such it withdraws ammonia from the system, and consequently the urine of diabetics, when they live on exclusive meat diet, contains larger quantities of ammonia than when they live on mixed diet. Stadelmann further proved that the reaction of the urine on chloride of iron told nothing as to the presence of the pathological acid contained therein. Moreover, he found the excretion of ammonia in general to be at the same time in proportion with the excretion of the pathological acid. The diabetic often excretes seven to nine times more ammonia than when in a normal condition. According to Stadelmann, the diabetic coma is to be regarded as an acid intoxication of the blood, which poisoning is caused when the human system is no longer capable of producing the amount of ammonia necessary for the neutralization of the acids they pathologically formed. Under such circumstances the fixed alkalies of the blood, to a large extent, are withdrawn from the same by neutralization; they then are not able any more to combine with the carbonic acid formed in the tissues, and a dangerous overcharge of the tissues with carbonic acid is the result. The picture of acid intoxication, as produced by Walter, by means of feeding rabbits with muriatic acid, shows, likewise, as essential symptoms, dyspnœa, accelerated breathing, and weakness of heart. Stadelmann, supposing that diabetic coma was caused by acid intoxication, had already, at some former occasion, recommended the administration of carbonate of sodium in case of coma; but he advises to give it *not* per os or per clysma, but by means of direct intravenous injection, thus to bring it directly into the blood. He found in experimenting on animals that as much as 140 to 160 grammes of carbonate of sodium can safely be injected. Further, Stadelmann recommends, as a preventive measure against the danger of diabetic coma, the abundant administration of alkalies, especially when exclusive meat diet is commenced. The sudden change to exclusive meat diet (acid nutrition) favors the appearance of diabetic coma. A. ROSE, M.D.

214 SECOND AVENUE.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 9 to May 15, 1886.

HUNTINGTON, DAVID L., Major and Surgeon. Ordered to proceed from this city to David's Island, New York Harbor, on public business connected with the reconstruction of the present hospital building at that depot, or the erection of a new one. On completion of this duty to rejoin his station. S. O. 109, A. G. O., May 10, 1886.

FINLEY, JAMES A., Captain and Assistant Surgeon. Ordered for duty at Fort Buford, D. T. S. O. 39, Department of Dakota, May 5, 1886.

BENHAM, R. B., Captain and Assistant Surgeon. Ordered to Department of the Platte. S. O. 109, A. G. O., May 10, 1886.

CHERBONNIER, A. V., Captain and Medical Storekeeper, U.S.A. Granted leave of absence for four months, with permission to apply for four months' extension. S. O. 109, A. G. O., May 10, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 15, 1886.

BRANSFORD, J. F., Surgeon. Invalided, home from Pacific Station.

WINSLOW, GEO. F., Surgeon. Ordered, June 1st, to the U. S. S. Atlanta.

HEFFINGER, A. C., Passed Assistant Surgeon. Detached from the Navy Yard, Portsmouth, N. H., and ordered to U. S. S. Atlanta, June 1st.

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Original Articles.

ENUCLEATION WITH TRANSPLANTATION AND REIMPLANTATION OF EYES.

By CHARLES H. MAY, M.D.,

INSTRUCTOR IN OPHTHALMOLOGY AND ASSISTANT IN [illegible] CLINIC [illegible] TO MEDICAL [illegible]

THIS operation being one of very recent date the literature of the subject is quite limited, and is embodied in Section I., History of the Operation. The remainder of these pages have been divided into Section II., Summary of Results Obtained, with a Study of the Changes taking place in the Transplanted Organ; Section III., Record of Cases; and Section IV., Peculiarities and Management of the Rabbit when kept for Experimental Purposes—this last section comprises the results of the writer's experience in this direction, and may prove useful to future experimenters.

I. HISTORY OF THE OPERATION.—The first mention of this operation is recorded in the *Revue Générale d'Ophthalmologie*, May 31, 1885. The following is a translated abstract: The operation was performed by Dr. Chibret, on May 4, 1885. The staphylomatous and buphthalmic eye of a girl of seventeen was removed, and the eye of a rabbit inserted into the conjunctival sac; sutures were passed from the patient's conjunctiva into the margin of the cornea above and below, and the transplanted organ thus kept in place. The eye was then bandaged. The operation was a failure, for on the fifteenth day the cornea, which had gradually been changing from hazy to an ulcerated condition, sloughed away, and the eyeball was destroyed. This failure the originator of this operation attributed to contact of threads with the cornea and the thinness of the rabbit's cornea. He claims to have had a rather sudden and complete return of sensibility of the transplanted cornea on the tenth day; the vascular and muscular union of the transplanted eyeball the operator found good.

Subsequently, in the same journal, under date of October 1, 1885, Dr. Chibret reviews the operation, and condemns further transplantations until reports shall have been furnished giving the results of the operation in animals.

Transplantation was next performed by M. Terrier, June 15, 1885; his report to the Société de Chirurgie of Paris, December 2, 1885, reviews the operation, and gives the results of this and a subsequent transplantation. In this (the second recorded case), sloughing of the cornea resulted on the third day.

The third case was one of M. Rohmer, June 22, 1885, and the cornea was destroyed on the seventh day.

The next transplantation was performed by Dr. H. W. Bradford, of Boston, and is reported in *The Boston Medical and Surgical Journal* of September 17, 1885. His method differed from previous ones in that the optic nerve was sutured to the stump of nerve remaining upon the globe of the rabbit's eye, considerable subconjunctival tissue was left, to which the muscles of the orbit were united, and the conjunctival sac sutured to the margin of conjunctiva left surrounding the rabbit's cornea. The observation ends on the eighteenth day after operation, and the following is the reported result: "Conformation and tension good; cornea improving (it had been hazy—C. H. M.), and has cleared peripherally so as to allow the iris to be distinctly seen; chemosis of the conjunctiva has disappeared, although the membrane remains congested; exposed sclerotic on outer side of eye practically covered by the conjunctiva; ocular movements in all directions good." This case is reported as a successful one.

The fifth and final reported case was performed by M. Terrier, October 19, 1885, and, although he adopted part of Dr. Bradford's plan, the operation was a failure.

Thus, of the five operations, four were failures—the cornea sloughing in each case. Even the successful Boston case is rendered doubtful by the fact that the report extends only over eighteen days, and in the following pages cases of operations by the writer are reported, where the cornea remained of good consistence, though hazy, for fifteen or sixteen days, and yet sloughed afterward when exposed to the atmosphere. A letter to Dr. Bradford asking for further developments in his case was not answered.

In four of these cases the rabbit's eye was employed; in one, a dog's eye—this was, however, one of the unsuccessful cases. Leaving out Dr. Bradford's case, the others are admitted failures; so that, at best, the success of the operation has not been established. By operating upon a large number of rabbits, the writer has been enabled to observe and record the following results.

II.—SUMMARY OF THE RESULTS OBTAINED, WITH A STUDY OF THE CHANGES TAKING PLACE IN THE TRANSPLANTED AND REIMPLANTED ORGAN.—The results of the series of twenty-four operations presented by the writer certainly justify repeated trials upon the eyes of man—at least the transplantation of the rabbit's globe into the human conjunctival sac, and succeeding in this, the transplantation of one human eye into the orbit of another. There are, however, moral objections to the disabling of one human being for the cosmetic improvement of another.

The operation must be placed among the perfectly feasible ones. Take Cases 24, 23, 21, 16, and 15, comprising one reimplantation and four transplantations. In these the bandage having been kept well in place throughout for twenty-one, twenty-one, twenty-eight, thirty-four, and thirty-six days respectively, the condition of the transplanted organ at the end of these periods was very favorable; the eyeball was of good conformity, the cornea hazy but clearing, and the tension good. Any one of these eyes, just as they are at time of writing, would be a great improvement upon many staphylomatous or atrophied eyeballs, or those the seat of dense white leucoma. Then, again, the artificial eye is a foreign body, and from time to time excites inflammation; it has to be renewed every two years, and is an item of expense, especially if an artistic match to the other eye is desired. In rabbits all colors of irides may be obtained (the writer has not yet met with a pale blue one), brown, black, gray, dark-blue—here would be a sufficient assortment of colors to choose from in order to match the human eye.

In size the rabbit's eye is smaller than the adult human globe; it varies from 18 to 23½ mm. in diameter. Were there any demand for rabbit's eyes, large sized animals could be bred for this purpose. [The writer is now attempting this, having for the doe an animal whose eyeball measures 23½ mm. transversely, and a buck of equal size for the purpose.]

The arrangement of muscles in the rabbit is identical with that of the human eye. The ophthalmoscopic appearances of the fundus of the rabbit are somewhat different from those in man—the arrangement of blood-vessels is the same.

One result of the series of operations it is very important to remember: *In no case was there any rise of temperature or any apparent interference with the general health, or the slightest implication of the sound eye.* Hence, even though the operation fails, no injury will have been done, for even in all the unfavorable cases a stump remained at least as good as that resulting after ordinary enucleation, while in most of these cases the stump afforded a better rest for an artificial eye than would have been obtained in an ordinary enucleation.

Method of operating.—The operations were done with strict antiseptic precautions. The instruments were washed and wiped with alcohol, and previous to use dipped into a saturated solution of boric acid. The eye was kept wet constantly with a solution of corrosive sublimate (1 to 10,000). Two rabbits of equal size being chosen, they were anæsthetized, and a spring speculum introduced beneath the lids of the eye to be removed to keep the lids apart. With forceps, the conjunctiva and Tenon's capsule over the insertion of the rectus superior were raised, cut into with the blunt straight scissors; with the blunt hook the muscle was caught, a thread passed through muscle and conjunctiva to secure both, and the insertion of the muscle divided. This was done with each of the recti muscles, and the intervening conjunctiva was cut at about an eighth of an inch from the corneal margin. A thread was then passed through the conjunctiva of the eyeball opposite the superior rectus, and knotted so as to give the relations of the eyeball after removal. The subconjunctival tissue around the eyeball having been severed and as much as possible having been left upon the eyeball, the latter was made to protrude and the optic nerve divided by blunt-pointed scissors curved on the flat, at about an eighth of an inch from its entrance. The enucleated eyeball was now placed in a saturated solution of boric acid and covered by cotton.

The eye of another rabbit was enucleated in a similar manner. After hemorrhage had ceased in the socket of the first rabbit, the optic nerve was sought for, caught with the forceps, and the smallest-size catgut suture, previously soaked in the sublimate solution and threaded upon a very delicate curved needle, passed through it at about an eighth of an inch from the extremity; the same needle was then passed through the stump of the nerve attached to the eyeball of the second rabbit, the two ends approximated by tightening the suture, the latter tied twice and cut off short. By means of the four threads attached to the recti muscles and conjunctiva, the conjunctival sac was drawn over the eyeball and then stitched to the margin of conjunctiva left surrounding the cornea of the transplanted organ; this was done by eight stitches of smallest-size iron-dyed silk; four of these stitches were passed through recti muscles and overlying conjunctiva on the one hand, and secured to the rim of pericorneal conjunctiva on the other; the remaining four passing in the intermuscular intervals and securing the two edges of conjunctiva only.

The eyeball having been thoroughly washed with solution of bichloride (1 to 10,000), the lids were sewed together by two silk sutures transfixing their edges, white vaseline smeared over them, and successive disks of borated cotton applied so as to form a firm and even compress. Over this a $\frac{5}{8}$ inch (four yards long) flannel bandage was applied, the turns alternating, some horizontal above supraorbital rims, some vertical passing between ears, over affected eye, and beneath the jaw; the unoperated eye was left uncovered. The whole was covered by a specially contrived chamois mask; the latter consisted of two lateral pieces of chamois, laced below the jaw, and in the median line of the upper surface of the skull, and provided with openings for the ears, for the unbandaged eye, the neck, and mouth, so that every part of the skull was enveloped with the exception of the parts mentioned; this chamois covering was tightened by lacing, and was sewed on the underlying bandage at several places so as to prevent slipping. The bandages were left on, when possible, a week, or longer, before removal; and such thorough antisepsis did the bichloride solution insure that suppuration under the bandage was the exception. The operations lasted about one hour; the transplanted eyes remained in the boric-acid solution from ten to twenty minutes (this time being necessary for enucleating the second eye, checking hemorrhage, and securing the nerve). The animal recovered rapidly from the effects of the ether.

Considerable difficulty often presented itself in catching up the divided optic nerve and in passing the suture. Hence the writer suggests the following special forceps and needle: The forceps consists of an ordinary fixation-forceps, the extremity of which is concave internally, and when closed presents a circle the circumference of which corresponds to that of the optic nerve, and provided with fine teeth; an eighth of an inch above the termination is an opening to admit the passage of the threaded needle. The latter is a very delicately rounded needle, curved almost at right angles, the point flattened from side to side, provided with a fine opening, and mounted upon a holder. The special forceps grasps the end of the nerve and holds it while the needle and catgut transfix it by passing through the opening near the extremity of the forceps.

Changes in the transplanted and reimplanted eyeballs.—The first seven cases were left unbandaged, and degeneration (sclerosis or sloughing) of the cornea was the invariable result. The next seven cases were bandaged, but the method was unequal to the task of preventing displacement or removal from the incessant attempts of the animal to get off the dressings; the result was that the cornea degenerated (sclerosis or sloughing) soon after the bandage was removed, though it had remained in good condition while the dressings were well in place. In the remaining ten cases, the bandage was displaced in Cases 17 and 18 and was removed, put on too tightly and had to be removed in Cases 19 and 20; here, again, the cases progressed favorably until the bandage became displaced and had to be removed. It might be asked why the bandages were not made to stay on sucessfully; a consideration of the shape of the skull in the rabbit will explain this—were the bandage applied too tightly, it would interfere with the movements of the jaw and also produce excoriations of the skin, if too loosely, the animal succeeded in getting it off; so that this obstacle to the success of the operation in eighteen out of the twenty-four cases was a considerable one; in six cases it was overcome by the aid of the chamois covering.

Throughout the experiments all unbandaged operated eyes were washed out thoroughly with the bichloride solution (1 to 10,000) twice a day, and this was also done when the dressings were removed prior to rebandaging.

In six cases (15, 16, 21, 22, 23, and 24) the bandage stayed in place throughout, and the result was very favorable and satisfactory.

This proves that protection of the cornea from atmospheric contact is essential; when this was maintained, success was the result. The influence of the atmosphere is easily explained—the *cornea remained insensitive throughout in all cases*, the ciliary nerve-supply having been cut off; foreign bodies in the atmosphere settling upon the cornea excite no sensation, and remaining, without being washed off by the tears and movements of the lids, produce inflammation and degeneration of the cornea. This was well illustrated in the cases in which no bandage was applied; in all of these cases, the portion of the cornea which was first to slough—in fact, the only portion which sloughed at all—was a central elliptical portion corresponding to the part most exposed.

Synopsis of the History and Results of Case

Rabbit number.	Vascular zone appears around cornea	Ocular movements demonstrated.	[illegible]	Cornea begins	[illegible]	[illegible]
1	5th day	5th day	Diminished 2d day.			
2	14th day	6th day.	[illegible]	16th day.		
3	8th day.	5th day.	[illegible]			No bandage applied.
4	8th day.	5th day.	[illegible]	No		
5	7th day	7th day.	[illegible]			
6	No [illegible]	10th day.	Diminished 2d day.	4th day.		
7	[illegible]	[illegible]	[illegible]	[illegible]		
8	8th day	3d day.	Diminished 2d day.	No sloughing.		Removed 2d day.
9	10th day	3d day.	[illegible] increased and was +.	No		[illegible]
10	9th day	[illegible]	[illegible]	No		Removed 5th day.
11	7th day, bandage first removed	16th day, b. f. r.	Diminished 16th day, b. f. r.	No		[illegible]
12	7th day, bandage first removed	7th day, b. f. r.	[illegible]	No		Removed 7th day.
13	9th day, bandage first removed	[illegible]	[illegible]	[illegible]	Stump.	[illegible] ved 9th day.
14	6th day	6th day.	[illegible]	[illegible]	[illegible]	[illegible] ved 4th day.
15	12th day, bandage first removed	12th day, b. f. r.	Re[illegible]	[illegible]	[illegible]	Kept [illegible]
16	7th day, bandage first removed.	7th day, b. f. r.	[illegible]	No	good, cornea hazy, 34 days.	Kept [illegible]
17	8th day, bandage first removed	8th day, b. f. r.	Diminished 8th day, b. f. r.	[illegible]	Small stump	[illegible]
18	10th day, bandage first removed.	[illegible]	Diminished 10th day, b. f. r.	15th day.	[illegible]	[illegible] ved 10th day.
19	10th day	[illegible]	Diminished 3d day, b. f. r.	10th day.	[illegible]	Removed.
20	10th day	10th day.	Diminished 6th day, b. f. r.	No sloughing.	[illegible]	Removed.
21	13th day, bandage first removed	14th day, b. f. r.	[illegible]	[illegible]	Size, conformity, and tension	Kept [illegible]
22	Did not appear [illegible]	4 [illegible]	[illegible]	No sloughing	[illegible]	Kept [illegible]
[illegible]	7th day, bandage first removed.	[illegible]	[illegible]	No	Size, conformity, and tension	[illegible]
23	Optic nerve not [illegible] day.	[illegible]	[illegible]	No	[illegible]	Kept on throughout.

Synopsis of Six Cases in which Bandage could be Kept on Throughout.

Rabbit number.	Vascular zone appears around cornea	Ocular movements demonstrated.	[illegible]	[illegible]	[illegible]
1	12th day, b. f. r.	[illegible]	[illegible]	[illegible]	
2	7th day, b. f. r.	7th day, b. f. r.	[illegible]	sloughing.	
3	14th day, b. f. r.	14th day, b. f. r.	Remains normal 28th day.	sloughing.	
4	[illegible]	4½ days, b. f. r.	[illegible]	[illegible]	
5	7th day, b. f. r.	[illegible]	[illegible]	No	
6	Optic nerve not [illegible] day, b. f. r.	7th [illegible]	Diminished 7th day, then became n[illegible] and remained so at 21st day.	No	

No [illegible]

By watching closely, the writer found that in sleeping the animals did not close the lids completely on the affected side, and the central elliptical portion corresponded to the space left between their margins. In other cases, in which the bandage had become displaced, the sloughy portion of the cornea corresponded to the exposed portion; in one case, in which the stitches holding the lids together had been rather loosely applied, a linear area of degeneration of the cornea showed where it had been exposed. Thus, the effect of atmospheric traumatism upon the insensitive cornea is clearly and indisputably established. The cornea must be protected until there is a return of sensibility. The parts supplied by direct branches from the fifth nerve, such as the nares, lids, and nasal mucous membrane, were not affected in any of the cases.

Under the microscope, the degenerated corneæ were found to be infiltrated with small, round, and polygonal, and larger fusiform cells, chiefly between the corneal fibres, and the latter were more opaque than normal; the epithelium of the surface was wanting in some places, and at others was markedly increased in numbers, causing a heaping up of cells.

The rapidity with which the ocular muscles attached themselves to the transplanted eyeball was wonderful; it occurred as early as the third day—in most cases by the seventh day, in a few only as late as the tenth day. This muscular connection was ascertained by dissection, and by associated movements transmitted from the other eye—a piece of carrot or some bright object was passed in varying directions in front of the sound eye, and the transplanted organ watched for associated motion; it was also ascertained (when the animal paid no attention to these objects) by moving the eyeball in varying directions with forceps, and noting the amount of resistance. Under the microscope the muscles showed very little fatty degeneration.

The connective-tissue union between the eyeball and surrounding capsule of conjunctiva was also effected quite rapidly; in one case (22) being considerable at the end of four and a half days, as found by dissection.

Vascularity of the rim of conjunctiva attached to the transplanted eyeball was demonstrated in one case of reimplantation on the fifth day, and in most cases on the eighth or tenth day; it would show itself by a red rim around some portion of the cornea, and between the eighth and tenth days, in most cases, blood-vessels could be traced with the naked eye, passing from the palpebral to the ocular conjunctiva and thence to the rim of conjunctiva of the transplanted organ.

The tension of the eyeball began to diminish as early as the sixth hour (allowing a slight diminution present in all cases after enucleation), in most cases on the second day, when no bandage was applied; when bandaged well, tension remained normal throughout.

In some of the unbandaged cases the conformity of the eyeball was retained, and the eyeball simply the seat of atrophy and hardening; but in most of these unprotected eyes the cornea sloughed, the contents of the eyeball escaped, and a small or medium-sized, non-sensitive, retractive stump remained. In the bandaged cases the conformity of the eyeball remained good.

The changes in the optic nerve presented the well-known Wallerian degeneration; even with lower power enlargement, the difference, as shown by Weigert's copper-hæmatoxylon staining, was well marked in all cases;

the central end of the nerve was found to terminate abruptly and to be the seat of degeneration. In all cases there was union of the sutured ends of the nerve, even in one case (22) examined four and one-half days after suturing; the intervening substance between the central part of the nerve and the eyeball consisted in early stages of granulation tissue (small round-cells with very little intercellular elements), in later stages of fusiform cells mingled with connective-tissue fibres, some fat-vesicles and blood-vessels; later still, the connective tissue became firmer, but no nervous elements passed between eyeball and nerve in any case examined; the retinæ were invariably degenerated. The point of junction, where the nerve had been sutured, presented usually a small bulbous enlargement so as to have a greater diameter than the nerve itself; the catgut suture had been absorbed in all cases.

III. Record of Cases.—*Case* 1.—Large black doe. Operated January 30th. Removed L. E. and inserted L. E. of Case 2. Eye somewhat bulging after operation, but lids can close. No bandage applied.

Six hours: Cornea slightly hazy. T. n.

Second day: Cornea very dull and hazy. Considerable pus adheres to eyeball and lids. T. —.

Third day: Cornea very hazy and sloughy. T. —.

Fourth day: Ulceration of cornea corresponding to an elliptical area in centre.

Sixth day: Ulceration deeper. T. — 2.

Seventh day: There is slight associated muscular action.

Eighth day: Some of contents of eyeball have escaped through perforation in ulcerated part of cornea; a scab now covers the perforation. There is a slight vascular zone around the margin of the cornea.

Eleventh day: The eyeball has gradually shrivelled. Globe is small and hard. Perforation in cornea has closed. Cornea densely opaque.

Post-mortem appearances: Globe of left eye much smaller than right, and is white and anæmic, excepting around margin of cornea. L. E. measures 16 x 15 mm.; R. E. measures 18 x 18 mm. Right optic nerve at junction with eyeball is 1½ mm. in diameter, that of left eye measures 3 mm. transversely at same point. Conformation of R. E. normal. Left eye small, cornea completely opaque and hard, globe shrivelled. There is good connective-tissue union between ocular conjunctiva and eyeball; muscles are firmly attached to eyeball rather farther back than in normal eye; blood-vessels can be seen to pass from palpebral conjunctiva to that surrounding the cornea; palpebral conjunctiva appears normal. At situation of suture of nerve catgut cannot be demonstrated; there is a mass of tissue forming an oval enlargement and uniting the globe to the nerve. Brain apparently normal.

The unoperated eye has remained normal throughout. Cornea of transplanted eye has been insensitive throughout. At no time has there been any elevation of temperature or other apparent interference with general health.

Case 2.—Medium-sized black buck, operated January 30th. Removed L. E. and inserted L. E. of Case 1. No bandage applied.

Six hours: Cornea very slightly hazy, and epithelium denuded from an elliptical area over centre.

Second day: Cornea more hazy. T. n. Very little inflammatory reaction in lids.

Third day: Cornea hazy. Parts beyond cannot be seen. T. —.

Sixth day: Cornea is now quite opaque, but shows no tendency to slough; the elliptical central portion is of a denser white color than rest of cornea. There is associated muscular action.

Ninth day: All stitches have come out. Eyeball moves extensively and cornea is in centre of palpebral fissure.

Twelfth day: Blood-vessels are seen to pass from palpebral conjunctiva to margin of cornea.

Fourteenth day: Eyeball has diminished in size and is now quite small.

Fifteenth day: Cornea, which until now was smooth, though densely opaque, now looks sloughy.

Sixteenth day: Cornea begins to slough, chiefly in central elliptical portion.

Seventeenth day: Cornea has sloughed away and contents of eyeball have escaped; lens was soft and white, vitreous like boiled starch.

Eighteenth day: Scab covers opening in cornea.

Twentieth day: Nothing but a small, retracted, reddened stump now remains.

Forty-first day: Condition the same. Cornea has remained insensitive throughout. No implication of sound eye at any time. There has been no elevation of temperature, nor apparent interference with the general health at any time.

Case 3.—Small white and gray doe. Operated February 2d. Removed R. E. and inserted R. E. of Case 4. Eye bulges very little after operation. No bandage applied.

Six hours: Cornea slightly hazy. T. n.

Second day: Cornea more hazy, especially in central elliptical portion. T. n.

Third day: Cornea almost milk-white in color. T. n.

Fourth day: Slight epithelial abrasion over central elliptical portion.

Fifth day: There is slight associated muscular action.

Sixth day: Central elliptical portion has become denser and whiter than the rest. Epithelium still denuded over this area. T. n.

Eighth day: Pericorneal conjunctival vascularity visible.

Twelfth day: T. — (slightly). Whole cornea densely opaque, but central elliptical portion still more so. Eyeball anæmic, but remains of good size.

Thirteenth day: T. — 1. Cornea has assumed a yellowish color. Lids are somewhat swollen, and considerable pus exudes, causing their agglutination.

Fifteenth day: Cornea looks sloughy, especially at central elliptical portion. T. — 2.

Sixteenth day: Contents of eyeball have escaped through perforation in sloughing cornea. Nothing now remains but a small suppurating stump.

Twentieth day: Small, retracted stump remains; this no longer suppurates and eyelids have closed over it.

Fifty-first day: Small, non-irritated stump remains. Cornea has remained insensitive. Other eye has remained normal. There has been no elevation of temperature, no apparent interference with general health at any time.

Case 4.—Small gray and white buck. Operated February 2d. Removed R. E. and inserted R. E. of Case 3. No bandage applied.

Up to twelfth day progress identical with that of Case 3; after this more favorable than 3.

Thirteenth day: T. n. Cornea densely opaque, especially at central elliptical portion. Blood-vessels can be seen to pass from palpebral conjunctiva to that surrounding margin of cornea.

Sixteenth day: T. — (slightly). Form of eyeball preserved, but eye is smaller than the other.

Thirtieth day: Condition the same. Post-mortem examination shows eyeball atrophied, cornea densely opaque, form of eyeball preserved, muscles firmly attached, conjunctival sac firmly attached, nerve-connection by connective-tissue good.

Case 5.—White (pink eye) buck. Operated February 12th. Removed R. E. and reinserted it. No bandage applied. Eye somewhat bulging after operation.

Six hours: Cornea slightly hazy. T. — (slightly).

Second day: Cornea more hazy.

Fourth day: Cornea decidedly hazy. T. — 1.

Fifth day: Cornea still hazy, but yellow reflex can be seen from anterior chamber. T. — 1.

Seventh day: Cornea is now so opaque that contents of anterior chamber cannot be seen. Red rim appears around corneal margin. T. — 2.

Associated muscular action is present.

Twelfth day: Cornea rather less hazy than at last note, and yellowish body in anterior chamber can again be seen. Tension has improved somewhat and is now — 1. A few stitches still attached to conjunctiva were removed.

Eighteenth day: Cornea rather less hazy than before. T. — 1.

Twenty-third day: Cornea about same. Red vascular zone around margin of cornea has become very marked.

Twenty-fifth day: Cornea decidedly less hazy than it was, and is smooth. T. n. Cornea has remained insensitive. Other eye has not been implicated at any time. No rise of temperature nor apparent interference with the general health at any time.

Post-mortem examination: Eyeball found markedly atrophied, muscles firmly attached, also conjunctival sac; good vascularity. On section eyeball found to be disorganized, but no pus. Nerve-suture effected by plug of connective tissue.

Case 6.—Large gray, brown, and white buck. Operated February 13th. Removed R. E. and inserted R. E. of another rabbit of equal size. No bandage applied. Eyeball slightly bulging after the operation.

Six hours: Cornea slightly hazy.

Second day: T. — (slightly). Cornea is hazy, especially at central elliptical portion.

Third day: Cornea still more hazy. T. — 1.

Fourth day: Cornea begins to look sloughy and bulging, and considerable pus exudes from between eyelids. T. — 2.

Seventh day: Less suppuration of lids, but T. still — 2, and cornea still looks sloughy, especially at central portion.

Tenth day: Slight associated muscular action.

Fourteenth day: Cornea is becoming perforated and iris shows.

Fifteenth day: Contents of eyeball are escaping.

Sixteenth day: Contents of eyeball have escaped; opening in cornea covered over by a scab.

Twentieth day: Nothing remains but a small retracted stump.

Thirty-ninth day: Condition the same. Cornea has been insensitive. Other eye, temperature, and apparent general health have remained normal throughout.

Post-mortem examination: Stump remains; good muscular, connective-tissue, and vascular union between transplanted eyeball and conjunctival sac. Sutured ends of nerve connected by plug of connective tissue.

Case 7.—Small black and white buck. Operated February 14. Removed R. E. and inserted R. E. of another rabbit of equal size. No bandage applied.

Six hours: Cornea slightly hazy at periphery. T. n.

Second day: T. — (slightly).

Third day: Entire cornea hazy. T. — 2. Pus (apparently) in anterior chamber. Slight suppuration from lids.

Fourth day: Cornea more hazy, so that contents of anterior chamber cannot be seen. Slight associated muscular action.

Sixth day: Eyeball has diminished in size since operation. Cornea quite opaque. Sclera white and bloodless.

Eighth day: Cornea quite opaque, central elliptical portion especially.

Tenth day: Cornea looks sloughy. Pericorneal vascularity appears.

Eleventh day: Cornea is covered by a deposit of white material, which, when scraped off and examined microscopically, is found to consist of corneal epithelium and of pus-cells.

Twelfth day: White deposit on cornea has increased.

Thirteenth day: Perforation of cornea, and some of contents of eyeball have escaped.

Fourteenth day: Eyeball is now a suppurating mass.

Twentieth day: Suppuration has gradually ceased. There is now merely a small retracted stump remaining.

Twenty-fifth day: Cornea has remained insensitive throughout. Other eyeball has not become implicated at any time. There has been no rise of temperature or apparent interference with health at any time.

Case 8.—Medium-sized black doe. Operated February 16th. R. E. removed and R. E. of Case 9 inserted. Bandaged, but no chamois covering applied.

Second day: Bandage has become displaced and pressing upon side of eye causes it to bulge. Bandage removed. T. — 1. Cornea hazy.

Third day: Slight associated muscular action.

Fifth day: Cornea more hazy, especially at central elliptical portion.

Eighth day: Eyeball has atrophied some. Cornea opaque. T. — 1. Pericorneal vascularity appears.

Tenth day: Cornea of an opaque yellowish-white color. T. + .

Fifteenth day: Eyeball has gradually diminished in size and is now quite small.

Post-mortem examination: Eyeball half its original size. Good connective-tissue union of nerve to eyeball and of eyeball to conjunctival sac; vascular and muscular connections good.

Cornea has remained insensitive. Other eye has remained normal. There has been no elevation of temperature, nor apparent interference with general health at any time.

Case 9.—Large black buck. Operated February 16th. Removed R. E. and inserted R. E. of Case 8. Applied bandage but no chamois covering.

Second day: Bandage has become displaced, and eyeball is exposed. Bandage removed. Cornea hazy. T. — 1.

Third day: T. — 1. Cornea densely hazy. Considerable suppuration from lids. Slight ocular movements.

Fifth day: Cornea quite opaque and looks roughened, especially at central elliptical portion.

Eighth day: Cornea rather less opaque, but periphery has assumed a yellowish tint.

Tenth day: Red line can be seen around cornea, consisting of blood-vessels which have passed over from conjunctival sac. Tension more nearly normal. Eyeball has become rather smaller than on insertion.

Twelfth day: Excessive vascularity of conjunctiva immediately around cornea. Ocular movements good. T. — (slightly). Cornea opaque and slightly yellow peripherally.

Sixteenth day: T. n. Cornea somewhat bulging. Cornea smooth and still opaque, but yellow color has disappeared.

Twenty-fifth day: T. + (slightly). Cornea opaque, but less than before. Considerable atrophy of eyeball.

Twenty-eighth day: Cornea has remained insensitive.

Post-mortem examination shows atrophy of eyeball, connective-tissue union of sutured nerve-ends, and of globe with sac; good vascular and muscular connections.

Other eye has remained normal throughout, and there has been no elevation of temperature nor apparent interference with general health at any time.

Case 10.—Large white and black buck. Operated February 19th. Removed R. E. and reinserted it at end of fifteen minutes. Crinoline bandage and chamois covering applied.

Fifth day: Bandage has become displaced so that it constricts base of ears and has made them very sore, and must be removed. Dressings only very little soiled from discharges; these are sweet. One suture still in lid was removed. Cornea only slightly hazy; iris can be distinctly seen. T. n. Ocular movements good. Vascular zone around margin of cornea is seen. Bandage left off on account of soreness.

Sixth day: Cornea decidedly more hazy, especially at central elliptical portion. T. — (slightly).

Eighth day: Cornea now densely hazy. T. — .

Tenth day: Cornea now quite opaque, especially in centre. T. — .

Fifteenth day: Central portion of cornea is beginning to clear up some.

Twenty-second day: T. — 1. Cornea still opaque, especially at centre. Cornea has remained insensitive. There has been no implication of the other eye. Temperature and apparent general health have remained normal.

Post-mortem examination: Eyeball atrophied, much smaller than on insertion; muscles firmly attached; globe firmly united to conjunctival sac, and blood-vessels can be seen passing between the two. Seat of suture of optic nerve presents a firm connective-tissue connecting mass.

Case 11.—Small reddish-brown buck. Operated February 26th. Removed R. E. and inserted R. E. of another rabbit of about the same size. Bandaged and chamois covering.

Sixth day: Bandage has remained in position until to-day, when it has become displaced, and corner of eye is exposed and covered by a crust of desiccated discharge.

Eighth day: Discharges have stained chamois covering.

Sixteenth day: Removed bandage. Chamois had become very much stained with discharges. Anterior portion of eyeball has been exposed, the lids having been covered only by a scab for last ten days. Eyelids very much swollen. One stitch still in place and was removed. Cornea is hazy, of a bluish-white color, which is denser anteriorly where exposure took place. T. — (slightly). A few stitches remained in conjunctiva and were removed. Ocular movements good. Red vascular rim is seen around margin of cornea. Washed out thoroughly with solution of mercuric bichloride (1 to 10,000) and rebandaged.

Twenty-sixth day: Eyeball has become atrophied, and is much smaller than it was on insertion. Cornea is densely opaque. Post-mortem examination shows lens opaque and swollen, vitreous consisting of an opaque, starchy mass; optic nerve united to eyeball by connective tissue; globe firmly united to sac by connective tissue; muscles well attached; vascularity good. Cornea has remained insensitive. Other eye, temperature, and apparent health have remained unaffected.

Case 12.—Large grayish-brown buck. Operated February 28th. Removed R. E., and reimplanted it after ten minutes. Bandaged and chamois covering applied.

Fourth day: Bandage has been displaced, and inner canthus is exposed. Discharge shows through chamois. Nictitating membrane of other eye looks red and swollen, probably from pressure of bandage, which appears rather tight. No elevation of temperature or apparent interference with general health.

Seventh day: The red and swollen condition of the nictitating membrane of the sound eye continuing, bandage was removed; it seems to have been on very tightly, for base of both ears present numerous excoriations from pressure. On removal of bandage eyelids are very much swollen. One stitch remained in lid, and was removed. Nictitating membrane red and swollen. Cornea decidedly hazy, and this is especially marked internally, corresponding to the exposed portion from displacement of the bandage on the fourth day. T. — (slightly). Red vascular margin surrounds cornea. Ocular movements good. Bandage cannot be reapplied on account of extensive excoriations.

Eighth day: Sound eye appears normal to-day, and nictitating membrane is no longer red and swollen, showing this to have been produced by pressure from bandage. Nictitating membrane of reimplanted eye is also normal. Cornea rather denser, especially in centre. T. — 1.

Thirteenth day: Cornea still more dense, and central elliptical portion very opaque. Swelling of eyelids has disappeared.

Sixteenth day: Vascularity of peripheral portion of cornea is very marked, and rapidly extending toward centre. T. n.

Twenty-fourth day: Entire cornea now looks red and fleshy, excepting central elliptical portion, which is of a dense, yellowish-white color. T. n. or +.

Fortieth day: Entire cornea now looks fleshy; it has remained insensitive. Eyeball is considerably atrophied. T. + 1. Other eye has not been implicated. There has been no elevation of temperature or apparent interference with the general health at any time.

Case 13.—Medium-sized reddish-gray buck. Operated March 12th. Removed R. E. and reinserted it after ten minutes. Bandaged and chamois covering.

Ninth day: Bandage has become displaced and is coming off. On removing it, dressings found discolored with discharges, which are sweet. Considerable mucopurulent discharge, mixed with hair, on compress. Lids very œdematous and still closed by stitches, these were removed. Considerable discharge between lids, upon removing which cornea found opaque, of a bluish-white color, and covered by considerable desiccated discharge, which under the microscope is found to consist of pus, fat-globules, and corneal epithelium. T. — (slightly). Conformation of eyeball good. Vascularity around cornea apparent. Ocular movements good. Bandage could not be reapplied on account of numerous excoriations.

Fifteenth day: Cornea looks sloughy, especially at central elliptical portion.

Twenty-first day: Cornea looks sloughy and slightly bulging, as though about to rupture. T. — 1.

Post-mortem examination: Entire disorganization of interior of eyeball. Conjunctival sac and optic nerve present firm connective-tissue union. Muscles firmly attached. Vascularity of reimplanted eyeball good. Cornea has remained insensitive. There has been no implication of the other eye, and no rise of temperature or apparent interference with general health at any time.

Case 14.—White doe (pink eye). Operated March 3d. Removed R. E. and reimplanted it. Chills or convulsions during anæsthesia. Bandaged and covered with flannel.

Fourth day: Has displaced bandage so that eye is partly exposed. Hence dressing removed. Moderate amount of discharge upon compress. Lids very much swollen; stitches were still in place and were removed. Cornea is decidedly hazy. Nictitating membrane seems to have sloughed away. T. — (slightly).

Sixth day: Stitches in conjunctiva were removed. The bandage had been left off. Ocular movements good. T. — 1. Cornea more opaque and iris cannot be seen through it. Pericorneal vascularity present.

Tenth day: A portion of the cornea corresponding to the central elliptical portion has become dry and yellow; peripheral portion has cleared up some, and yellowish reflex is seen from within. T. — 1. Cornea has remained insensitive.

Post-mortem examination: Eyeball slightly atrophied; on section found to be disorganized; no pus. Nerve firmly united by connective tissue, also globe to conjunctival sac. Muscles firmly attached and vascularity of globe good. The other eye has remained unimplicated throughout, and there has been no elevation of temperature, no apparent interference with general health at any time.

Case 15.—Small black buck, broken leg. Operated March 4th. Removed R. E. and reimplanted it. Bandaged and covered with chamois.

Twelfth day: Discharge has soaked through chamois covering. Bandage removed. Dressings soaked through; discharges sweet. All sutures have come away. Eyelids slightly swollen. Cornea slightly hazy, but iris can be seen distinctly. T. n. Good ocular movements.

Vascular zone around edges of cornea. Washed out with bichloride solution (1 to 10,000) and rebandaged.

Nineteenth day: Removed bandage. Slight discharge between lids. Cornea slightly hazy; iris can still be seen distinctly. T. n. Washed out and rebandged.

Twenty-sixth day: Condition of eyeball the same as when last noted. Cornea has cleared up a very little. Washed out and rebandaged.

Thirty-sixth day: Condition of eyeball still as favorable as at last account. Conformation good. T. n. Cornea still hazy, but smooth. Iris can still be seen. Pericorneal vascularity excessive. Ocular movements good. The other eye has remained unimplicated. There has been no elevation of temperature nor apparent interference with general health at any time. Cornea of reimplanted eyeball has remained insensitive.

Case 16.—Half-grown black buck. Operated March 6th. Removed R. E. and inserted R. E. of another rabbit of equal size and age. Bandage and chamois applied.

Seventh day: Has succeeded in removing bandage entirely. There has been a moderate amount of discharge. Stitches in eyelids have come away. Cornea is smooth, hazy, but iris can be seen distinctly. T. n. Ocular movements good. Vascularity of pericorneal conjunctiva is good. Washed out and rebandaged.

Twentieth day: Chamois has not yet become discolored excepting by some discharge which had formed a crust at the anterior portion of the flannel bandage. Cotton compress is soaked through and has been displaced downward; there is considerable muco-purulent discharge between lids. Eyeball of good conformation. T. n. Cornea smooth, but hazy, of a bluish-white color, clearer in centre than at periphery, which latter portion is so dense that iris can hardly be seen through it. Cornea is surrounded by a vascular zone, consisting of blood-vessels passing over from the conjunctival sac. Washed out and rebandaged.

Twenty-fourth day: Bandage removed. Condition same. Washed out and reapplied bandage.

Thirty-fourth day: Bandage having become soiled was removed. T. n. Eyeball of good conformation. Cornea smooth, hazy, but slightly less than at last note, so that iris can be indistinctly seen. Cornea has remained insensitive. Other eye has remained unimplicated and there has been no elevation of temperature nor apparent interference with general health at any time.

Case 17.—Large white doe (pink eye). Operated March 6th. Removed R. E. and inserted R. E. of another rabbit of large size (blue-black iris). Bandage and chamois applied.

Fifth day: Everything has progressed favorably to date, the bandage having remained in place and not become soiled. To-day small vesicle appears on the nictitating membrane of the sound eye. There is no elevation of temperature nor interference with health. Bandage seems to be rather tight.

Eighth day: Vesicle has disappeared from nictitating membrane of other (sound) eye, but it is still reddened, and eyeball bulges somewhat, so that it is apparent bandage is on too tightly. Bandage has become displaced and inner canthus is exposed. Bandage removed. Lid very much reddened and œdematous and held together by stitches; the latter were removed. Moderate amount of discharge between edges of lids, is sweet. Cornea is quite hazy and iris cannot be seen. There is the usual vascular zone around margin of cornea. Ocular movements good. Bandage was not reapplied on account of soreness of surrounding parts.

Tenth day: Redness has disappeared from both eyes. Cornea has become still more hazy, especially at central elliptical portion.

Thirteenth day: Central portion of cornea looks sloughy. T. — 1. Rabbit has had litter of eight young.

Eighteenth day: Cornea beginning to slough. Coloring matter of iris appears through cornea.

Twentieth day: Contents of eyeball have escaped. There now remains only a suppurating stump.

Twenty-fourth day: There is now merely a good-sized stump, non-suppurating, retracted into posterior portion of orbit.

Thirty-fourth day: Condition the same. Cornea has remained insensitive throughout, and other eye, temperature, and apparent general health have remained normal (excepting affection as a result of pressure of bandage, noted on fifth and eighth days).

Case 18.—Large black doe, pregnant. Operated March 5th. Removed R. E. and inserted R. E. of another doe, similar size and color. Bandage and chamois applied.

Tenth day: Bandage has become displaced and anterior canthus is exposed. Dressing has become soaked through, and there is considerable discharge (sweet) upon compress and between edges of lids. Stitches have worked out. Cornea is decidedly hazy, so that iris cannot be seen through, and its surface is rough. Ocular movements good. There is vascularity surrounding the cornea. T. — 1. Rabbit is in labor; bandage left off.

Fifteenth day: Cornea looks sloughy, especially central portion.

Sixteenth day: Contents of eyeball have escaped through perforation of cornea.

Twenty-fifth day: Nothing remains but a small non-suppurating stump at back part of orbit.

Thirty-fifth day: Stump still remains. There has been no sensibility of cornea at any time, the sound eye has not been implicated, and there has been no elevation of temperature or apparent interference with general health.

Case 19.—White (pink eye) buck. Operated March 7th. Removed R. E. and inserted R. E. of Case 20. Bandage and chamois applied.

Third day: Since operation animal has not eaten, and bandage, which is on too tightly so that he cannot open his jaws, was removed. Discharge moderate. Eyelids very much swollen. Stitches in lids were removed. Cornea quite opaque, of a bluish-white color, and iris cannot be seen. T. — 1. Bandage not reapplied on account of extensive excoriations.

Fifth day: Cornea more dense and looks softened, especially in centre.

Tenth day: Central portion of cornea looks sloughy. T. — 2. Pericorneal conjunctiva is vascular. Ocular movements good.

Sixteenth day: Condition the same. Cornea still insensitive. Other eye has remained normal, and there has been no rise in temperature nor apparent deviation in general health at any time.

Post-mortem examination: Eyeball is smaller than on insertion, soft, and on section found to be disorganized. There is firm connective-tissue union between eyeball and nerve, and globe and conjunctival sac. Muscles are firmly attached and vascularity of globe is fair.

Case 20.—White and black buck. Operated March 7th. Removed R. E. and inserted R. E. of Case 19. Bandage and chamois applied.

Sixth day: Bandage, pressing hard against base of ears, and having produced numerous raw surfaces, was removed. Very little discharge. The sutures closing lids were removed. Cornea hazy, but iris can be seen, and in anterior chamber is seen yellowish body, such as was seen in the other two cases in which pink eyes were employed. T. — 1. Bandage not reapplied.

Tenth day: Cornea smooth, but densely opaque. T. — 2. Vascularity around cornea. Ocular movements established. Considerable discharge.

Twenty-third day: There has been no change in the condition of the transplanted eye. It is small, cornea smooth and opaque. T. — 2.

Thirty-third day: Since last note cornea has perforated and some of contents of eyeball have escaped. There is now a fair-sized, non-suppurating stump remaining. Transplanted cornea has not been sensitive at any

time. Other eye, temperature, and general health have remained normal.

Case 21.—Reddish-brown doe. Operated March 12th. Removed R. E. and inserted R. E. of Case 22. Bandage and chamois applied.

Fourteenth day: Bandage well in place, and neither chamois nor flannel has become soiled. On removing dressings, small amount of discharge upon compress—perfectly sweet. Eyelids but little changed from normal. Conformation of eyeball good. Cornea only slightly hazy, and brown iris can be seen distinctly through it. T. n. Ocular movements good. Pericorneal vascularity present. Washed out and rebandaged.

Eighteenth day: Condition the same.

Twenty-eighth day: Eyeball still looks as favorable as at last note. Cornea slightly hazy, and iris can be seen distinctly. Cornea has remained insensitive. T. n. Other eye has remained unimplicated. There has been no rise of temperature nor apparent deviation from the general health at any time.

Case 22.—Black buck. Operated March 12th. Removed R. E. and inserted R. E. of 21. Bandage and chamois applied.

Four and one-half days: Bandage still on and in place. No soaking of dressing. Discharge moderate and sweet. Eyelids still closed by sutures; these were removed. Ocular movement present. T. n.

Post-mortem examination: Eyeball about same size as when inserted. Conformation good. Muscles attached. Sac united to globe by connective-tissue fibres. Nerve attached to globe by thin strip of tissue, which under microscope is found to consist chiefly of small round cells (granulation tissue).

Case 23.—Black buck. Removed R. E. and inserted R. E. of 24. Operated March 19th. Bandage and chamois applied.

Seventh day: Bandage fairly in place. Moderate amount of muco-purulent discharge. Lids moderately swollen. Conformation and tension of eyeball good. Pericorneal vascularity exists. Ocular movements good. Cornea is smooth, hazy in greater part of its extent, but translucent and iris can be seen distinctly. At upper and outer portion is a small area, more densely opaque and slightly yellowish. Washed out and rebandaged.

Eleventh day: Condition same as at last record, except that zone of denser and yellowish infiltration has extended very slightly. T. n. Washed out and rebandaged.

Twenty-first day: Cornea is still hazy, but evenly so, and denser infiltration at upper and outer part has disappeared. T. n. Cornea still insensitive. Iris can still be seen. Other eye has remained normal throughout. There has been no rise of temperature nor apparent interference with the general health at any time.

Case 24.—Black and white buck. Operated March 19th. Removed R. E. and inserted R. E. of 23. There was considerable hemorrhage, and after trying to find optic nerve and failing for some time, operation was completed as in other cases, except that optic nerve was not sutured. Bandage and chamois applied.

Seventh day: Chamois covering in place and not soiled. Considerable discharge, so that cotton and flannel have become soaked through; discharge is sweet. One of stitches in lids still remaining was removed. Lids swollen. Cornea bluish-white and hazy, and along line of junction of lids is a line of denser opacity. Iris cannot be seen through cornea. T. —1. Conformation of eyeball good. Ocular movements good. Washed out and rebandaged.

Eleventh day: Cornea densely hazy, but smooth. T. —. Pericorneal vascularity is seen. Washed out and rebandaged.

Twenty-first day: Cornea has cleared up slightly, but iris still invisible. T. n. Conformation of eyeball good. Cornea still insensitive. Other eye has remained unimpaired. There has been no rise of temperature or interference with the general health at any time.

IV. Peculiarities and Management of the Rabbit when kept for Experimental Purposes.—This seems almost too simple a subject to command any space in an essay, and yet, since nothing has yet been written on these points, they cannot fail to be of service to future experimenters.

Rabbits are undoubtedly the most convenient animals to experiment upon, when a large number are required and a certain size is requisite. They are less delicate than is commonly supposed—not one of the thirty-five rabbits made use of by the writer suffered from sickness or died from illness. The darker shades—brown, gray, and black, and admixtures of these with white—are stronger and more hardy than are the pure white (pink eye) ones; but even the latter cannot be said to be delicate.

They bear ether very well—only three out of thirty-five died from the anæsthetic, and these deaths occurred among the first cases, while none occurred among the last twenty-five. The crying-out suddenly during anæsthesia should be taken as a danger-signal, and serve as a warning to discontinue the ether, even though the cornea be still sensitive, for this sign was noticed in the three fatal cases, and in one in which the animal stopped breathing but was resuscitated by artificial respiration. About two ounces of ether serve for one hour's anæsthesia, and air must be allowed them from time to time just as in man. Some cases were kept under ether for three hours with no bad effects.

They are kept most readily in wire coops of three or four stories, partitioned so as to have a size each of 15 by 24 by 15 inches, or by making five or six stories a great many can be kept in a small space; each such compartment will hold one or two animals—male and female go best together, but should be separated after the latter has become pregnant and the abdomen begins to enlarge; two bucks also go well together, but during the first twenty-four hours they are apt to fight—until one has ascertained the sex of the other, and no longer attempts to mount him; two does usually fight for a day or two, but then go well together. The wooden floor of the compartments should be covered with hay, and this should be changed at least every second or third day, the coops swept out thoroughly, and kept dry at all times.

The fæces, occurring in small, oval, hard pieces, and having but little smell, and the urine being small in amount and odorless, the abodes are very easily kept clean; and if this is done, two or three dozen animals can be kept, as directed above, without creating anything more than a faint odor; this constitutes a very important advantage when laboratories are situated in private houses; and for a practising physician it is very convenient to have this room under the same roof as his office.

Another advantage over dogs and cats is that they make very little noise; they have a peculiar habit of stamping with their hind legs without any apparent purpose, but they usually sleep at night, and even by day this stamping does not make sufficient noise to be heard much outside of the room.

They are more docile than dogs and cats, and defend themselves usually with their claws only, though sometimes a vicious one will be met with, and several scars on the writer's hands testify to the fact that they do bite; very little local and no constitutional inconvenience resulted from the bite, however.

The bucks have an ugly habit of passing their urine and whirling at the same time, so as to throw the stream outside of the coop; this is probably a provision of cleanliness, but the experimenter will hardly appreciate it if they perform this manœuvre, as they sometimes do, when he attempts to catch them; though being alkaline, it is unirritating, yet disagreeable, even when it happens to get into the eye.

They are rather more expensive than dogs or cats, costing $1.50 to $2 a pair (in the city), but they breed so quickly that this expense is materially diminished in a short time; their food costs less than would that of

canines. To feed thirty-five dogs would require considerable outlay, but with rabbits the cost is very moderate.

The best diet for them consists of a piece of carrot about the size of a goose's egg, a leaf of cabbage, and a handful of oats, twice a day; the refuse salads and greens may also be utilized as their food. They should have as much water as they will drink once a day; this is contrary to opinions in some works on zoölogy, but they always are greedy for water and thrive on it; this is probably because the vegetables they get while caged are drier than those they gather in the fields, and furthermore are destitute of the dew which probably furnishes them naturally with moisture. When fed more than twice a day, their fæces may become soft, and then smell horribly; hence this restriction in the way of feeding should be practised.

When the female is pregnant and the abdomen has increased in size, she should be isolated—put in a coop in the darkest part of the room; a small box, large enough to put her young in, should be placed in the coop; this she converts into a nest by arranging hay and the fur plucked from her breast in a circular manner. The duration of pregnancy is about five weeks, the number of young from four to eight, and labor lasts usually two or three hours; the doe is very little affected by it. When the place is too well lighted, or she is prevented from building her nest, or the surroundings are not to her liking, she kills the young by stamping upon them; when she preserves them they suckle three or four weeks and then shift for themselves. Even before lactation ceases the doe is ready for the buck, and thus litters succeed each other very rapidly.

Rabbits should be handled by the ears; and when their death is desired, a sharp blow against the back, while thus suspended, dislocates the cervical vertebræ, and kills them at once or very soon.

They are not as stupid as is commonly supposed, and by patting and stroking them they can be made to keep quiet for a change of dressing, when it would be impossible to hold them by force. When two are together one helps the other in trying to remove the bandages; or, should the wound be an open one, one rabbit is frequently seen licking the other's wounds, as was the case in the transplanted eyes when no bandage was applied.

NOTE.—The writer wishes to acknowledge his indebtedness to his friend, Dr. C. F. Mason, U. S. Army, to Dr. G. W. Vedder, and to his students, Messrs. Victoria, Clinton, Kemp, Michaelis, and Bartlett, for valuable assistance rendered in the performance of the series of operations.

[illegible] EAST FIFTY-EIGHTH STREET.

NITROUS OXIDE AS AN ANÆSTHETIC.—M. Laffont, in a recent communication to the Paris Société de Biologie, stated that nitrous oxide is a most dangerous anæsthetic. He has since further prosecuted his experiments; and, at a subsequent meeting, confirmed his previous statements. He has found proof that nitrous oxide is not an anæsthetic, but an asphyxiating agent, as MM. Jolyet and Blanche have proved. When this agent is used by dentists to produce anæsthesia, hyperglycæmia and glycosuria result. M. Laffont has verified these phenomena by personal experience. He has also ascertained that in animals these results take place before anæsthesia, during the period of deep breathing.

THE CLINICAL HISTORY of King Alfonso, of Spain, has recently been published by his physician, Dr. Tomás Santero, of Moreno. He regarded the anxiety and excitement aroused by the dispute with Germany over the Caroline Islands as the remote cause of the final outbreak of miliary tuberculosis which led to the king's death.

THE BILL separating the Massachusetts State Board of Health from the State Board of Lunacy and Charity has become a law.

THE TREATMENT OF ACNE.

BY MAHLON HUTCHINSON, A.B., M.D.,

[illegible]

MY attention was first called definitely to the use of the cold urethral sound in the treatment of acne by a short note in the *Journal of Cutaneous and Venereal Diseases* for November, 1884, referring to the success of its use in the hands of Dr. Sherwell, of Brooklyn, L. I. Previous to that time it had frequently occurred to me that great benefit might be derived from its use, but not possessing the courage gained from experience, and knowing the astonishment and repugnance that each and every patient would manifest—at least that I believed they would manifest—I had never put my theory to the test. I then believed, and still believe, that in ninety per cent. of cases of acne of all forms the exciting cause lies in the genito-urinary organs. Acne may be said to almost invariably manifest itself at the age of puberty, and this happens in such a large and overwhelming majority of cases that it must be considered more than a mere coincidence. I shall not attempt to explain how an irritation of the genital organs, due probably to hyperæmia, is reflected and manifests itself solely by an inflammation of the cutaneous, sebaceous glands; but very few physicians have not met with numerous instances of similar effects from similar seemingly remote causes. How many of us have not seen in children cases of partial paralysis of the lower extremities due to a redundant and tight prepuce? And when the simple operation was performed, how astonished the parents at the rapid recovery. The explanation of these effects can well be left to our pathologists, and of that I shall say nothing; but upon its practical bearing on our every-day experience I cannot insist too strongly.

Previous to November, 1884, I had borne in mind this cause—hyperæmia of the genital organs—and had treated all my cases of acne, with few exceptions, with potass. brom. and tr. gelsemii, accompanied by local applications of sapo viridis and ung. sulph. My success was moderate; but so moderate that the result was always doubtful, and my prognosis necessarily very guarded.

At this time I happened to have under treatment three cases of acne: Mr. Edward K——, acne pustulosa, very severe form; Mr. C. H. B——, acne papulosa et pustulosa, milder type; and Miss M. C. D——, acne papulosa, manifested chiefly by papules, with a few small pustules on forehead.[1] (These cases are fully reported hereafter.) I proposed to Messrs. K—— and B—— this method of treatment, explained to them my reasons for using the sound, and, both being sensible young men, they made no objection, but asserted that they would "do anything to get well." My success was startling even to myself, and I looked for the best results. In one week the improvement was very noticeable, and in six weeks I might have dismissed them cured to all external appearances. I, however, kept them under treatment for some two months; have frequently heard from and seen them since, and there has been no relapse.

In these cases, and, in fact, I may say, in all cases of acne, there is actually nothing to direct your attention to the genital organs. These two young men, Messrs. K—— and B——, would not acknowledge that they were of passionate natures, were not troubled with nocturnal emissions, had no fear of spermatorrhœa, and denied having ever practised masturbation or even having indulged in sexual intercourse. My experience has been that those much-to-be-pitied creatures with their nocturnal emissions, and their highly developed spermatophobia, suffer but little, if any, from acneiform eruptions. And *le raison d'être* is the nocturnal emissions. Let those

[1] I may here remark, that the type of [illegible] is, as a rule, much less severe than in the [illegible] pustulosa is frequently met with [illegible] papulosa, while [illegible] is the prevailing type in females. [illegible]

cease, and let the hyperæmia and irritability of the genital organs persist, and we shall find developed a most promising case of acne papulosa et pustulosa.

During the past twelve months I have treated nineteen cases of acne in the male and seven in the female. Fifteen of my male patients and six of my female have recovered completely; the other five for various reasons not continuing the treatment long enough to form an opinion of its success or failure. Thirteen out of the fifteen males were treated by the cold sound exclusively, I may say, of all other means, although I invariably give a placebo. My plan has been for the first three weeks to give some laxative preparation, accompanied by local applications of sap. vir., benzoin, and ung. sulph. The improvement, except in the mildest cases, is scarcely, if at all, perceptible. At the end of three weeks I propose the cold sound, and, after carefully and plainly explaining its action to patients, I have never yet met with a refusal to permit its use. One to two weeks only are needed to prove to them that I am right, and in from one to two months their skin will be free from acne, but with numerous scars left to remind them of the past.

And now for the treatment of acne in the female. The cold urethral sound would of course be useless, and its analogue, the uterine sound, would also for numerous reasons be out of the question, even if there were a probability of benefit to be derived from its use. But our object is to reduce the supposed hyperæmia and allay irritation, and this can be otherwise accomplished. All of our recent works on gynecology recommend most highly the hot-water treatment in all forms of inflammation of the uterus and its appendages. The hot douche, it is asserted, constringes the blood-vessels, reduces the hyperæmia, and produces an absorption of the products of the inflammation. If acne in the female is due to a hyperæmia and irritability of the uterine system, why will not hot water, in the form of douches, in like manner relieve this hyperæmia, and, ergo, cure the acne? It will, and it does. At least such has been my experience, and although my cases have numbered only seven, still six out of those seven have been successes, and that percentage of recoveries is much larger than other methods of treatment can claim.

This method of treatment by means of hot vaginal douches I have never seen nor heard mention of, and I believe I may lay claim to the originality, if any, in its use. I am satisfied beyond a doubt that it will be as successful in the treatment of acne in the female as the use of the cold sound has been in the male. The rationale and method may be explained to the mothers of the young-girl patients, and no feelings of modesty shocked by mentioning such matters to the patients themselves. It is easy of application, and not only accomplishes the object we seek, but also cleanses the vaginal passage. It may not be a generally known fact, but upon inquiry any physician can satisfy himself of its truth, that young maidens seldom, if ever, syringe the vagina. The natural secretions and the last few drops of the menstrual discharge, of a consequence, collect in the passage, and, if not unhealthy, this habit, to say the least, is uncleanly.

The following are examples of the cases referred to above, and it would be but needless repetition to report the complete list.

Case I.—Edward K——, American, aged twenty, single, clerk, applied for treatment for acne on September 30, 1884. Face was greatly disfigured, and almost covered with large acne pustules and numerous cicatrices, the results of former pustules. Habits perfectly regular, digestion good, bowels normal. Patient was placed on potass. br., grs. xx., tr. gelsemii, gtt. v., t.i.d., with directions to wash face with sapo viridis twice a week.

October 30th.—The bromide has been increased to grs. xxx., t.i.d., but with little, if any, benefit. Passed No. 14 Am. cold sound, finding great irritability of the urethra, the pain being almost unbearable as the sound entered the bladder.

November 1st.—Passed sound again, producing somewhat less pain.

November 4th.—Passed sound, a slight improvement being now manifested in the appearance of the acne.

November 7th.—Passed sound.

November 10th.—Passed sound. Great improvement is now noticeable; no new pustules having formed, and the old ones drying up.

From November 10, 1884, to January 12, 1885, the cold sound was passed twice a week, the eruption completely disappearing on December 11th; and on January 12th Mr. K—— was dismissed, with the caution, however, to continue the use of the sound for a month or so longer once a week. On September 7, 1885, Mr. K—— called on me for some advice relative to other matters, and his face was then clear of blotch or pimple, and, according to his statement, had remained so since his last visit on January 12th. He was not then using the sound, and had not been for the past six months.

Case II.—C. H. B——, American, aged nineteen, single, printer, visited me first October 4, 1884. Patient had been afflicted with acne vulgaris for four years, the eruption being situated on face—forehead and cheeks; consists principally of papules, with a few moderately sized pustules. No bad habits, digestion good, bowels regular. Treatment: Determined to try in this case arsenic, and put patient upon liq. potass. arsenitis, gtt. v., t.i.d., with external applications of sapo viridis.

October 30th.—Fowler's solution has been gradually increased until now patient is taking gtt. x., t.i.d. Some improvement is noticeable, but the arsenic disagreeing with his stomach, it was discontinued. Passed No. 15 sound, finding a very sensitive urethra, especially the prostatic portion.

November 30th.—Sound has been passed every other day since last date. Improvement was manifest after the third passage, and to-day patient is dismissed with no papules nor pustules, and only a few red blotches, reminders of his past troubles. Cautioned to use the sound twice a week for two months.

March 2, 1885.—Patient called, stating that he had had no relapse, and the appearance of his face affirmed the truth of his statement.

Case III.—Miss M. C. D——, American, aged eighteen, student, applied for treatment for acne papulosa October 16, 1884. The eruption situated chiefly on forehead, with a few papules on cheeks. General health good, bowels slightly constipated. Menstrual function regular, but considerable pain during first day of flow. Treatment: Externally, sapo viridis twice a week; also face-wash of tincture of benzoin simp., ℥ ss., aqua, ℥ j. Internally, a laxative, consisting of magnes. sulph., ferri sulph., and acid. sulph.

November 15th.—Improvement can be seen from past month's treatment, but not very great. Explained to the young lady's mother my theory of the cause of the disease, and advised hot-water vaginal douches every other night.

December 1st.—Quite an improvement manifest, and but few papules left. Hot-water douches twice a week.

January 2, 1885.—Has not had the sign of a pimple for past week. Hot-water douches once a week.

January 30th.—Dismissed patient, but advised that the douches be continued indefinitely once a week.

Case IV.—Miss G. B——, American, aged twenty, was sent to me from Colorado for treatment for acne papulosa. She visited me first on September 4, 1885. Her eruption was very similar to that mentioned in Case III., and the treatment instituted was the same, with this exception, however, that the hot-water vaginal douches were used from the first. Miss B—— remained in Chicago two weeks, when she returned to her home. The improvement had by that time commenced, and I considered it unnecessary for her to remain here. She

continued to use the hot douches up to October 26th, when she wrote me that the eruption had about disappeared. On November 26th she again wrote, stating that she had had no acne for two weeks, having used the hot-water douches twice a week since last date.

January 14, 1886.—A letter received from Miss B. informs me that her improvement has remained constant, with no relapse.

Case V.—Benj. E. L——, American, aged twenty-[illegible], single, painter, applied on September 5, 1885, for treatment for one of the worst cases of acne pustulosa it had ever been my fortune to meet with. Where there were no pustules on his face there were large, deep scars, and the man's life was a burden to him. The pustules were in some instances so large that they constituted veritable boils, and gave rise to considerable pain. General health perfect. I put him upon potass. br. and gelsemium, with local treatment of sapo viridis and acid carbolic.

September 28th.—Very little improvement. Passed cold sound No. 14, Am., finding the urethra very sensitive, especially the prostatic portion.

October 5th.—Great improvement already manifest, the sound having been passed three times only.

November 3d.—Very much improved. No pustules remaining, and only some indurations from former pustules. The cold sound has been passed every third day during past month, and the passage now gives rise to no pain.

December 1st.—No pustules remaining. Three or four indurated nodules. Dismissed patient, but ordered the use of the sound once a week for two months.

January 11, 1886.—Patient calls to exhibit his face and show me how well it has kept.

In conclusion, I may state that in the mild forms of acne, acne punctata, etc., local medication, accompanied by the internal exhibition of arsenic br., is sometimes sufficient for a cure; but in the twenty-five cases above referred to I have excluded these mild types, of which I have had during the past year under treatment probably a dozen. As adjuvants to the cold sound and hot-water treatments I have used the following prescriptions, but have derived but little, if any, benefit from them when used alone:

℞. Tr. benzoin simp..... ℥ ss.
Aquæ..... ℥ j.
M. Sig.—Face-wash.

℞. Sap. viridis..... ℥ viij.
Aq. cologn..... ℥ iv.
Solve et filtra. Sig.—To be used as cleansing face-wash.

℞. Sulphur precip..... ℥ ij.
Ung. vaselin..... ℥ vij.
M. Sig.—Apply once a day.

The above is a useful ointment, more useful, however, in acne rosacea than in acne vulgaris.

As a laxative mixture the following:

℞. Ferri sulph..... gr. xv.
Acid. sulph. dil..... ♏ ijss.
Magnes. sulph..... ℥ ij.
Aquæ.....ad ℥ vj.
M. Sig.—Two drachms half an hour before breakfast in half a glass of water.

Arsenic given in the following form is sometimes quite efficacious:

℞. Sol. arsen. br. (Clemens)..... ♏ ij.
Aquæ.....ad ℥ iv.
M. Sig.—One drachm t.i.d., gradually increased to two drachms t.i.d.

[illegible] Opera House, Chicago, Ill.

THERAPEUTICS OF AMENORRHŒA.[1]

By H. L. BOLDT, M.D.,

[illegible]

When the invitation was extended to me by your chairman to read a paper on amenorrhœa before this Section I felt very much at loss as to what I should write, because the subject in consideration has been so often written upon by able authorities that there is really very little or nothing left for one to do. It can, therefore, hardly be expected that I should give new ideas, nor will it be possible to give the subject a full consideration in such a short paper. I will, therefore, only state the general management of such cases which has proved itself most successful in my hands.

It is not within the scope of this paper to consider the pathological conditions productive of amenorrhœa any further than becomes absolutely necessary in the consideration of the treatment, as a full paper on the subject would be out of place before this Section.

Amenorrhœa, then, from physiological causes, as pregnancy, nursing, etc., also the amenorrhœa dependent on non-development or imperfect development of the organs of generation, and those cases requiring surgical interference will not be considered by me. It is my object to consider this symptom, for such it only is, in that class of patients where the physiological process of menstruation had been fully established, and then through some cause has been partially or entirely suppressed, from reasons which are not physiological; and those cases where the age of puberty has arrived, the organs of generation present, the monthly period wanting, and this absent physiological symptom giving rise to morbid symptoms.

Predominant of the class of patients who present themselves to the practitioner are young women between the ages of sixteen and twenty years, who will tell us that they have menstruated a certain number of times quite regularly up to within four months or a year ago, that then menstruation either ceased entirely or became more and more scanty until complete suppression was present. A large proportion of this class have only had a slight show now and then. The symptomatology of this class of patients usually is: that they are suffering from headaches, a tired sensation in all their limbs, in fact a general languor, loss of appetite, constipation, cardiac palpitation on the least exertion, and some occasionally even without any physical exercise, etc.

On looking at them we find these girls pale and poorly nourished; their muscles are flabby, the mucous membrane of the lips and eyelids colorless. Physical examination frequently reveals the characteristic anæmic murmurs, heart-sounds feeble, but sometimes somewhat accentuated, when at the time of examination they are afflicted with the symptom of palpitation. In some cases the face and lower extremities are œdematous and the abdomen bloated.

These patients present, then, either a well-marked example of anæmia or chlorosis, and they are usually under the impression that it is only the absence of the monthly period which causes their condition, seldom entertaining the idea that the latter symptom is dependent on their general condition.

Now in this class of patients it becomes our duty not to give emmenagogues, for these I believe are very rarely to be given in amenorrhœa with the expectation of deriving any benefit, except in a form of cases as will hereafter be described, but to improve their general condition.

We find that the majority of these patients belong to one of two classes of society—the young ladies whose sole occupation is study or reading romance, with little or no healthy exercise; their diet consisting of dainties, they never can (?) eat a substantial and nourishing

[1] Read before the New York [illegible] Section on Materia Medica and Therapeutics, [illegible]

meal—they are the college students or the young ladies of society.

The second class, who have the same disorder, are the shop and factory girls, those whose occupation is also sedentary, and the food they eat inadequate to nourish the body. It may seem strange that I should separate these two classes of patients, who both present the same symptoms, dependent on the same cause, but it will be obvious to all that the patients of the latter class, who are compelled by circumstances to earn their maintenance with the needle or some similar sedentary occupation, cannot afford the same treatment which the other class can usually do, and which is generally put down in the books for patients suffering with amenorrhœa.

To effectually treat the first class of patients, they must at once be compelled to abandon their previous routine of living; they must have fresh air, exercise, and the proper food to bring about an equilibrium between mind and body. During the spring, summer, and autumn months a healthy, non-malarial country residence I consider most suitable for the majority of these cases. The exercise must positively be very guarded in the beginning; the body being in a state of starvation, the muscular structure is very flaccid, and immoderate exercise under such conditions is liable to bring about accidents to the pelvic organs which would be equally serious, if not more so, than the primary ailment. Hence I consider the much-lauded horseback exercise, which many authors recommend in their writings, frequently without giving the proper precautions, so that many whose experience has not taught them otherwise may be led to prescribe it indiscriminately, not only erroneous but dangerous in the commencement of the treatment, as is also the case with *long* walks. Any exercise, if not previously considered with the existing physical condition, and the amount to be taken told to the patient, may result in a flexion or a version of the uterus, with perhaps subsequent congestion or inflammation of this organ; besides, pathological conditions of the adnexa may result in addition.

The amount of exercise must be increased later to suit the condition of the patient. I consider a slow walk of from fifteen to twenty minutes' duration, several times daily, quite sufficient in the beginning.

A sponge-bath with salt water, night and morning, rubbing the skin briskly with a coarse towel, so as to establish the circulation more thoroughly, thereby bringing about tissue changes, has been universally recommended by me as an adjunct, with the exception of a few days before the expected menstrual flow, if this is known; never have I seen harm result from it. A few days before the expected flow, the patient should enjoy more rest, and a hot foot and sitz-bath is then used once daily. The clothing must be warm—flannel being worn next to the skin, and the foot-wear equal to the rest of the wearing-apparel.

The diet should consist mainly of milk, oat-meal, hens' eggs, and rare beef, given in small quantities but frequently repeated, according to the condition of the stomach—a glass of good Hungarian wine or Dublin stout, two or three times daily, with the meals. Among the vegetables, those containing iron in proportionately large quantity are selected, as beans, peas, lentils, etc. For the past two years Murdock's liquid food was used with benefit, if it could be retained on the stomach, but many patients are unable to take it because it produces such an effect, on account of the peculiar odor and taste. Bovinine is an artificial food which seems to take the place of the Murdock's food very well, and it does not possess the disagreeable properties; but as to its full utility I am not yet able to speak.

After each meal from a half to one hour's rest in the recumbent position should be enjoined.

For the torpidity of the bowels it is necessary to impress on each individual that a regular hour must be kept, whether or not a desire to go to stool is present; then a careful but complete massage of the abdomen twice daily, each kneading from fifteen to thirty minutes duration; for this purpose I have found Dr. Butler's electro-magnetic machine to answer admirably. In some cases where this treatment does not suffice, a pill containing ¼ gr. ex. nux vomica, ½ gr. aloïn, 2 gr. compound ex. colocynth, and half a grain of ex. belladonna, night and morning, has given much satisfaction.

The second class of patients in this variety take a walk early in the morning before going to work, also when through with their sedentary occupation in the evening. Gymnastic exercise for five minutes thrice daily, in the beginning, gradually increasing the amount to fifteen or twenty minutes three times per day. Instead of the expensive wine, they are ordered a glass of ale and porter, or beer, with their meals, which seems to increase the appetite in many cases. A small quantity of raw beef (two ounces), chopped fine and seasoned to suit the taste, is given three times daily, in addition to the other food, provided the stomach does not rebel against it—the beef containing more iron than any other variety of meat. Cake, pie, etc., is stopped entirely. At the time of the expected catamenia they stop the gymnastic exercise and their walks, and are kept in the recumbent position as much as possible during their free time. In other respects, the same treatment as for the first class is ordered.

We know from competent observers that iron is necessary to the formation of hæmoglobin and red blood-corpuscles, and that the diseases, anæmia and chlorosis, are dependent on changes in the blood. In each the proportion of red blood-corpuscles is diminished. We also know that the functional activity of iron takes place in the blood.

The interesting observations of Rabuteau and others, which show the change in the quantity of red blood-corpuscles under the influence of this remedy in these diseases, prove that it is absolutely necessary for this class of patients to get iron in some form. Yet it must be remembered that occasionally we meet with a patient who cannot take a certain preparation. Hence it is necessary when we meet with a case of this unusual idiosyncrasy, to search over the long list of preparations until the one is found which can be taken. The citrate of iron with quinia answers in the majority of cases, and has the advantage that the small quantity of quinia therein contained acts somewhat as an appetizer.

Iron is, consequently, *the* remedy which is invariably used in one or the other form. I will put myself down on the list with those, however, who insist that it should be used in small doses, the larger doses being apt to produce gastric disturbance by mechanical irritation. Frequently have I observed patients who did not improve, but on the contrary got worse, that is, they developed intestinal disturbance, while taking large doses, from twenty to thirty drops, of the muriate tincture of iron, and these same patients being ordered four to five drops of the same food, for as such we must consider it, when used with a view of abating the pathological condition present in these cachexias, rapidly improve. Of course, whatever gastro-intestinal disturbance is present must be first overcome by suitable means.

In phthisical patients, when amenorrhœa is present, which usually causes much alarm, it is well to impress upon them very strongly that the absence of menstruation need not cause the least disquiet, and by giving treatment directed to the pulmonary disorder, in addition to such general treatment as may be indicated and already spoken of before, we can occasionally succeed to re-establish the function for a longer or shorter time, and no doubt the patients often feel better for it.

In the amenorrhœa frequently present in plethoric patients, I find the dietetic treatment for the plethora, daily baths, plenty of methodical exercise, and the use of electricity, to be of the best service. The variety of electricity, whether faradic or galvanic, or whether the positive

or negative pole is used interiorly, is probably immaterial, although one case where faradism alone had been used unsuccessfully for two months was finally cured by the adjuvant of the constant current. The case was as follows: A lady, aged thirty, began to menstruate at sixteen years; married when twenty years of age; no children; she had always been regular up to twenty-four years of age, the flow lasting four days. About this age she began to get very fat, so that her weight increased from one hundred and forty pounds to two hundred and ten pounds within two years; the latter weight continued nearly the same up to the time when I saw her. She had a slight show regularly every four weeks, when presenting herself to me, but its duration was only from two hours to a half day, very light color, watery, as she called it. The absence of the regular menstruation produced several unpleasant symptoms.

Permanganate of potass was given in one-grain doses after meals during the interval, and one week prior to the expected flow the dose was increased to six grains daily, with a warm sitz-bath at bedtime. The treatment had the desired effect of producing a flow of two and a half days' duration. At the next period, the treatment produced no effect. Then faradism was used, beginning three days before the expected catamenia, the negative pole in the uterus, and the positive pole over the region of the uterus and ovaries (my abdominal electrode is four inches wide, by thirteen inches long, thereby the whole hypogastric and ovarian regions are taken in by one electrode); the current used was as strong as could possibly be borne by the patient, the sittings being twenty minutes in duration. No change was produced. The next month the same treatment was instituted with like result. On the next occasion the galvanic current was used, interiorly the anode and externally the cathode, with the satisfactory result of producing a flow three days in duration; and the following month the same treatment increased the menstrual discharge to four days' duration. For three months I was enabled to keep the patient under observation without further treatment than the general hygienic and dietetic which had been instituted from the beginning, after the potash treatment was found to fail, with the information that the flow had been regular and normal in quantity and quality, and that the former inconvenient symptoms had abated.

As a rule, however, the result is not so satisfactory in amenorrhœa occurring in this class of patients.

Another variety of patients are those who, during the menstrual flow, are affected by some sudden grief, joy, or domestic disaster—in short, some emotional disturbance causes the sudden cessation of the monthly period.

In this form, I think, the treatment is, as a rule, effectual, if the patient applies early and the proper advice is given and obeyed. It is that three days before the next expected epoch the patient keeps perfectly quiet—in bed, if possible—the application of hot-water bags to the lumbar and hypogastric regions, and a hot foot-bath with a small quantity of English mustard in the water, once or twice daily, the bath of from fifteen to twenty minutes' duration. The patient then goes to bed again, and is covered with warm blankets so as to produce perspiration. Emmenagogues may be used, but they are usually superfluous. Frequently the flow may be brought on again by this procedure during the same period, if the patient applies for aid at that time. It is, of course, necessary, if possible, to overcome the emotional cause. The same treatment also holds good if the catamenia is suddenly suppressed by exposure.

In a limited number of cases these means are ineffectual; then a course should be pursued, consisting of massage, warm general baths, etc., and one of the emmenagogues—preferably permanganate of potash.

Another variety of patients of whom I shall speak are those in whom the menses have become suppressed under the influence of sea-air, and I know of no more effectual remedy for this than the last-named emmenagogue, as I have already stated in my report on this remedy at the last meeting. The manner in which it is used was also spoken of at that time.

The last form of cases which come under consideration, are those of whom I spoke previously, as having arrived at the age of puberty, the patients strong and healthy in appearance, the organs of generation appreciably well developed, nothing present which would require surgical interference, and the very scanty or non-appearance of the flow causing a series of uncomfortable symptoms. For these patients electricity and massage, together with an occasional warm bath, have been generally successful.

Clinical Department.

SUBCUTANEOUS USE OF MORPHINE IN INFANTILE CONVULSIONS.

Dr. C. S. Scofield, of Boston, reports the case of a child eighteen months of age, previously healthy, whom he had been called to see on account of eclampsia. The child had been in convulsions for two hours and had been given emetics, hot baths, and mustard to the feet, without any benefit. The writer at once administered one-eighth grain of sulphate of morphine hypodermatically, which was repeated at the end of twenty minutes—no effect having been produced by the first dose. This was also followed by no improvement, and a third injection was administered twenty minutes later. This was effectual in controlling the convulsions, and by the expiration of an hour from the time of administration of the first dose the child was sleeping quietly. When seen the following morning the child had taken food as usual, and was apparently as well as ever.

ABSENCE OF ONE KIDNEY AND CARCINOMA OF THE OTHER IN A CHILD THREE MONTHS OLD.

Dr. J. W. Wood, of Port Richmond, S. I., writes that he was called to see a little girl three months old, suffering from diarrhœa. He prescribed paregoric and castor oil; the next day the child was much better, and he did not see her again for ten days. At that time he was again called and told that the little patient had not passed water for two days. The child was evidently in pain, alternately crying and dozing, the features were pinched, the pulse very rapid, but the temperature normal. The abdomen was greatly distended, the superficial veins were prominent and somewhat varicose. An attempt at catheterization was made, but was unsuccessful owing to the fact that the meatus urinarius was much higher up in the vagina than normal. Hot applications over the abbomen were ordered, but no urine was passed. The child failed gradually and died three days later, having had complete suppression of urine for five days. The autopsy was made twenty-four hours later by the writer and Dr. John Wilson. The abdominal swelling had subsided. Upon opening the abdomen about a gill of serum was found. The spleen was normal. The left kidney was absent. On the right side was found a large firm mass, binding down the intestines, which upon removal was seen to be an enlarged and cancerous kidney. Its length was five inches, its other diameters three inches. The ureter was enormously dilated, and was seven inches in length. The bladder was hypertrophied, contracted, and empty. Dr. Wood says that he has been able to find records of only fifty cases of single kidney, but in view of the fact that operations for the removal of a diseased kidney are becoming more frequent he would advise the catheterization of the ureters in every instance as a preliminary measure.

ESCAPE OF A BILIARY CALCULUS THROUGH THE ABDOMINAL WALL.

Dr. J. W. Kales, of Franklinville, N.Y., relates the following case: The patient was a woman about fifty years of age, married, and very fleshy. About three years ago an abscess formed in the right hypochondrium, which finally opened and dischaged a large amount of pus. A fistula was formed and small quantities of pus drained away, for a year or more, at which time the patient came under the writer's immediate charge. Various expedients were tried to cause the fistula to close. The external orifice of the fistula contracted; but no progress toward a permanent cure was made. After some delay the orifice was enlarged with a knife in order that the discharge might escape more readily. Pus continued to flow from the orifice for two or three months; but as all propositions of treatment were refused by the patient, nature was allowed to take her course. Finally, after a night of intense suffering a biliary calculus was discharged. The fistula immediately closed, and the patient, for the past six months, has enjoyed better health than for a number of years. The calculus was enveloped in a layer of inspissated bile, was ovoid, about three-fourths of an inch in length, one-half an inch in diameter, and weighed, after desiccation, forty-two grains. The calculus had evidently ulcerated its way out of the gall-bladder through the abdominal parietes.

URINARY CALCULUS SLOUGHED OUT THROUGH THE PERINEUM.

Dr. W. T. Cheatham, of Henderson, N. C., writes: "A negro man brought me a urinary calculus of phosphatic composition, weighing five hundred and twenty grains, about the size and shape of a pullet's egg, the small end terminating in a neck-like extension one-fourth of an inch in diameter, and one-half an inch long. He represented it as having fallen from his little step-son's privates while walking across the floor about two hours previously. I immediately repaired to his place of residence, where I found a boy of eight years standing by the fire, eating, and manifesting little concern about his condition. He was a typical subject of the calculous diathesis—emaciated, cachectic, dwarfish—his corporal development not exceeding that of an average healthy child of two years. An examination revealed the following condition: A portion of the perineum, the entire scrotum, and both testes had been completely swept away by the destructive inflammation and sloughing consequent upon the passage of the stone from the bladder to the outer world. The penis had suffered almost annihilation; its connections to the rami of the ossa pubis and ischia were nearly severed, being attached by a narrow strip of integument, the body of the organ for three-fourths of its length being absent, and the prostate gland with its urethral connections sharing a similar fate. The index finger was passed into the bladder through the opening made by the passage of the calculus. Its mucous coating was found thickened and morbidly sensitive, giving some pain while passing the finger over its surface in search of concretions, none of which were found to exist, nature having rid that organ of its only specimen. Under the influence of strict cleanliness of the parts and of a tonic internally, the wound healed well, a bougie being left *in situ* to prevent extravasation of the urine. The boy was seen some months later, and it was found that the external opening had closed from neglect to pass the bougie, resulting in urinary infiltration to the extent of complete anasarca. Pulse feeble and 160; respiration labored, with a preternatural disposition to sleep. The opening was restored, about an ounce of urine escaping. Numerous small punctures were made with the point of a lancet over the body, buttocks, and thighs, from which the infiltrated urine freely escaped, emitting an ammoniacal odor. A cathartic dose of bi-tartrate of potash was administered, and directions given to let me know the day following if he was living. No message was received. Eight days subsequently, while on a visit to a patient in the same neighborhood, learning that the child was living, I called to see him. No sloughing had taken place, only a few of the punctures presenting an unhealthy condition. Prescribed a tonic, and ordered that the small sores be kept clean with a carbolized wash. I never saw him again, but learn that he died the summer following of acute dysentery. His early history was obscured by the ignorance of his parents, but I am informed that he inherited the diathesis, his father having died of gravel. His mother and step-father thought his trouble commenced when he was eighteen months old, as he suffered pain at that time, and ever after had a difficulty in passing his urine until the passage of the stone. I am of opinion, from the peculiar formation and the composition of the calculus, that it originated in the prostatic portion of the urethra, and its growth by accretion forced its vesical extremity into the bladder before the sloughing process occurred, which led to its extrusion from the body."

Progress of Medical Science.

Varicosities of the Lingual Vein as a Prognostic Sign.—G. Cecil Dickson, writing in the *British Medical Journal* says, that under certain conditions, especially in elderly persons, the ranine and lingual veins become remarkably dilated and varicose; often they are much enlarged and present many bulgings, which extend in a racemose manner to the edge of the tongue. From observation he believes that this condition indicates important changes in the circulatory system. In two cases in which this condition was marked, both patients eventually had cerebral hemorrhages. The lingual vein, being a branch of the internal jugular, will indicate a state of the blood-current in this vein, and thus show the condition of the entire intracranial venous system. Distentions and varicosities of the lingual will thus become associated with passive congestion in the brain sinuses, and thus point out the diseases that are liable to occur when this condition is present.

Expulsion of a Tape-worm by the Mouth.—Dr. E. Martel reports in the *Gazette des Hôpitaux* the following rare case: A lady, eighty-six years of age, who had for two years been taking scraped raw beef, experienced a slight indigestion one day after taking a glass of milk followed by a little red wine. During the vomiting which ensued she felt something strange in her mouth which she easily pulled out but could not determine its nature, as she was nearly blind. It proved to be a tænia twenty-six inches long, two-fifths inch wide at one end, and one-twelfth inch at the other. Three days later the patient passed from the rectum a worm forty-seven inches long, and a third fragment, twenty-four inches long, was passed the same way the following day.

Boracic Acid in Diabetes Mellitus.—Mr. F. A. Monckton reports a case of a boy, aged fourteen, suffering from diabetes mellitus, with all the symptoms in an aggravated form, who was apparently cured by the use of boracic acid in seven-grain doses three times daily. At first there were no stringent dietary regulations, and even in the latter part of the treatment only sugar, potatoes, and oatmeal were forbidden. Bread was eaten at the meals in the ordinary way. He gradually gained in weight, his health improved, and the sugar disappeared from the urine.—*Therapeutic Gazette* Jan. 15, 1886.

The Therapeutics of Hydrophobia.—Mr. William Curran, writing in the *Medical Press and Circular* on this subject, gives a list of some two hundred preparations which have been advocated at different times as curative of rabies.

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A REVIEW OF SOME NEW REMEDIES.

AN occasional review of the numerous new remedies which are being poured upon the profession by industrious clinicians and enterprising pharmacists may not be without interest to our readers. A well-known European firm has recently sent out a description of some of these drugs, and, with some additions and more subtractions, it forms the basis of the following summary:

Absynthin is the bitter principle of *artemesia ab sinthium*. It is soluble in alcohol, but not in water. Given in doses of 0.1 to 0.25, twice daily, Roux has found it a good stomachic, improving the appetite and relieving constipation in persons who are chlorotic and in convalescents.

Sclerotinic acid, as prepared by Podwyssotsky, is a brownish powder obtained from secale cornutum. It keeps well, and in this respect is superior to ergot, whose therapeutic properties it represents. It is said to produce uterine contractions, and is a good hæmostatic. Bourneville has shown it to have no value in epilepsy. It may be given subcutaneously in doses of from 0.03 to 0.10.

Aseptol (formula, $C_6H_5OHSO_3OH$) is a 33½ per cent. solution of orthoxyphenolsulfate. It is recommended as a substitute for phenol and salicylic acid, whose antiseptic properties it possesses without being poisonous or irritating. It is soluble in water, alcohol, and glycerine. On account of its non-irritating properties it is said to be useful in ophthalmological practice. It is antiseptic in solutions of 0.1 per cent.

Boldin is a substance obtained from the leaves of *boldoa fragrans*, a non-deciduous plant growing in Bolivia and Chili. The alkaloid boldin is recommended to be used in cases of gall-stones and in bladder catarrh. It is also said to have hypnotic properties.

Hippurate of lime is a white salt, soluble in water, and is given in doses of 0.6. Poulet has recommended it in phosphaturia, and a number of writers have used it successfully in scrofula.

Cannabinon, dose 0.5 to 1.0 gm., and cannabin tannicum, dose the same, are preparations obtained from cannabis indica, and having an uncertain hypnotic power.

Cotoin verum ($C_{22}H_{18}O_6$) is a substance obtained from coto bark. The preparations of this bark have obtained considerable reputation in the treatment of diarrhœa, especially in marasmic states. Cotoin verum is soluble in alcohol and alkaline solutions, and is given in doses of 1.00 to adults and 0.05 to children.

Colchicein, from colchicin, the alkaloid of colchicum, has yet to be tried, we believe, in gout and rheumatism. The dose would be 0.001 to 0.002 gm.

Hazeline, from the bark of *hamamelis virginica*, is regarded as having some astringent and hæmostatic properties.

Helenin ($C_{12}H_{10}O$) is a kind of camphor, soluble in alcohol. It is strongly antiseptic, 1 part to 10,000 preventing decomposition of urine. Korab has used it in tuberculosis, malaria, and in diarrhœa. Valenzuela has used it in pertussis and bronchitis. Obiol has used it internally and externally in diphtheria. The dose is 0.01 to 0.03.

Osmiate of potassium ($K_2O_2 \cdot OsO_2 \cdot 2H_2O$) is recommended instead of osmic acid in neuralgia and epilepsy, and as a parenchymatous injection in goitres, lymphomata, and sarcomata. Internally it may be given in doses of 0.001 to 0.015 daily in the form of pills.

Naphthaline is a drug whose properties have been fully described in these columns. Its value in diarrhœa and in typhoid fever as a disinfectant of the intestinal tract is established. The drug is insoluble in water or alcohol, and is given in doses of 1 to 5 gms. daily.

Pyridin (C_5H_5N), a colorless, peculiar smelling drug, is used in the form of vapor for the relief of asthma. A teaspoonful may be poured in an open dish and allowed to stand in the room, and the patient breathes the vapor for twenty to thirty minutes.

Terpinhydrat and terebrine are substances just now much vaunted in the treatment of chronic bronchitis. Terpine is also used in chronic nephritis, in doses of 0.2 to 0.4 gm.

Salol is a compound obtained from phenol and salicylic acid, and it is claimed by Sahli to be superior to salicylic acid as an anti-rheumatic. It may be given in the same doses as salicylate of sodium, and although large amounts make the urine dark, the drug is said to have no toxic effect.

Hypnone and urethan are drugs which have been quite recently described in THE RECORD. Hypnone, dose ♏ iij. to vj., does not seem to be a very certain or agreeable medicine, but urethan, dose 1 gm., is recommended as a safe, fairly trustworthy, and not disagreeable hypnotic.

In the foregoing list we find that a number of alleged active principles have been obtained, and their use is recommended in place of the crude drug. So far as this can be safely done it means an advance in therapeutics, because it gives more accuracy and certainty to prescribing. Some of the other drugs may prove useful, but we find none which seem likely to create an epoch in therapeutics.

FURTHER PROGRESS IN BACTERIOTHERAPY.

SINCE Cantani published an account of his first experiment in bacteriotherapy about a year ago, reports have appeared in the journals from time to time of other attempts in the same direction, some of which seemed to be moderately successful, while others were apparent failures. The best of these, or at least the one related with the least apparent bias on one side or the other,

is that of Dr. Luigi de Blasi in the *Giornale Internazionale delle Scienze Mediche*, No. 3, 1886. Dr. de Blasi reports eight cases of well-developed pulmonary phthisis, treated during January and February of the present year, by inhalations of pure cultures of bacterium termo, unaided by arsenic, cod-liver oil, or any other form of internal medication. The inhalations were given by means of a steam atomizer, about six drachms (twenty-five cubic centimetres) of the culture-fluid being consumed at each inhalation during a period of five minutes. The results obtained in the eight cases may be summarized as follows:

In none of the cases did the inhalations, repeated twice a day and occupying five minutes each time, produce the slightest inconvenience. There was neither nausea, vomiting, nor cough.

In every instance the tubercle bacilli in the sputum were reduced in number, but in none of the cases did they wholly disappear. In one, however, after a gradual diminution, the bacilli suddenly reappeared in great numbers without any apparent cause.

In all the bacterium termo was increased in quantity during the continuance of the inhalations. The microorganism was found in small numbers in the sputum, however, in every case even before treatment was begun.

In six cases the cough became less troublesome, and the expectoration was decreased in amount, although it preserved its muco-purulent character.

An increase of weight was observed in two cases, two of the patients lost flesh steadily, and in the remaining four no change was observed in this respect.

The fever was not lessened in a single case. As to the objective symptoms, there was not only no improvement, but there was even a deterioration in nearly every instance.

Six of the patients stated that they felt stronger and better while taking the inhalations.

This can hardly be said to make a very favorable showing for bacteriotherapy, although it is not sufficiently discouraging to condemn the method as utterly worthless. The experiments were conducted during the least favorable season of the year, when even at Palermo the weather is changeable and trying to invalids. Furthermore, the trials were made purely to determine the absolute value of the bacterium termo as a destroyer of the tubercle bacillus, and other therapeutic measures, whose efficacy is undoubted, were ignored in order not to vitiate the experiments.

Dr. de Blasi found by researches in the laboratory that cod-liver oil, Fowler's solution, quinine, salicylic acid, antipyrine, and various other drugs used in phthisis did not destroy the vitality of the bacterium termo, which preserved its power of reproduction when these agents were added in varying proportions to the culture-fluid. These substances would therefore not be incompatible with the bacterium termo, but would rather better the chances of success by improving nutrition, and enabling the patient to hold every point that was gained through the agency of the inhalations.

Fanciful as this method may seem, we do not feel ready yet to chant its requiem, but still less are we prepared to welcome it as a potent remedy for phthisis until it can point to much better results than it has yet been able to do.

THE RELATION BETWEEN RHEUMATISM AND CHOREA.

Although less frequent mention is made of rheumatism among the etiological factors in the production of chorea now than in former years, there are still many, especially among the French and English writers, who regard it as of considerable causative moment.

In a recent monograph, reprinted from the *Berliner klinische Wochenschrift*, Dr. J. Prior attempts to prove that the relationship supposed to exist between these two affections is a purely imaginary one. After reviewing and comparing the mass of statistics collated by preceding writers, he adduces the results of a study of upward of one hundred cases observed by himself. In 94.5 per cent. of the cases of chorea there was neither history of previous rheumatic affection nor any signs of valvular trouble in the heart. Four of the patients gave evidences of old cardiac disease, and one had had pains in the right hand and fingers, possibly rheumatic, two weeks before the choreic symptoms were manifested. This author concludes, therefore, from his studies, that the coexistence of endocarditis and chorea is of too frequent occurrence to be regarded as anything more than a coincidence. Furthermore, chorea occurs with greater frequency before the fifteenth year of life, while rheumatism is less common at this period than later. Chorea also attacks girls by preference, and rheumatism, while by no means sparing females, is met with rather more often in males.

In seeking for the etiological factors in any given disease negative facts are often of even greater value than positive ones, and a few sets of figures showing the nonexistence of a certain supposed cause will offset a much larger number on the other side seemingly giving support to such a relationship. And this is the case, we believe, with regard to chorea, and it is more than probable that rheumatism is of little or no moment in the production of the disease. The evidence that embolism is a cause is equally insufficient, and we are forced to content ourselves, in the present state of our knowledge, in regarding chorea as one of the pure neuroses, dependent upon no ascertainable anatomical lesion.

DR. HOLMES IN ENGLAND.

It is a just source of gratification and pride to the American profession that Dr. Holmes should be received with so much warmth and hospitality during his present visit to England. Dr. Holmes, while more a man of letters than of medicine, has nevertheless always continued closely associated in work and sympathy with our profession, and has done perhaps more than any other to give an intellectual and literary status to us upon this side of the water. American medicine therefore takes to itself some of the honors that are being paid to her distinguished representative now in England.

The occasion is aptly seized by *The Lancet* to lament the decline in literary talent and culture, and in social standing, among doctors of the present day. Dr. Holmes will leave no successor, nor are there many even of the scholarly type which he represents. The rage to-day is for something practical, for skill in technique, and we are indifferent to the graces of scholarship or to an adornment of sound learning. We forget that, after all, "The

One Hoss Shay" will live longer than Virchow's "Geschwülste."

Yet perhaps our contemporary is a little pessimistic. We would be more positive if it unfortunately had not illustrated its point by the painfully inelegant English of "welcoming him *in our midst*." We live, however, in the belief that the rank and file of doctors are better now than they used to be, and if we have not a second Holmes, perhaps there may yet in coming years be raised up someone worthy to be ranked with him.

THE EXTINCTION OF GOITRE.

Dr. William Webb recently read a paper before the Midland Branch of the British Medical Association "Upon the Derbyshire Neck," in which he advances the opinion that enlargement of the thyroid gland is a disease which, under the modifying influences of an advancing civilization, will become extinct. Goitre is occasioned, he says, by increased function of the thyroid gland, which causes a true hypertrophy of it. Upon the theory that the natural function of the thyroid is to supplement an impeded respiration, such as would occur during sleep, during pregnancy, while carrying heavy burdens, or when suffering from any other mechanical restraint, he bases his interpretation of the occurrence of goitre in Derbyshire. The girl approaching womanhood works for her bread in the Derbyshire cotton mills, walking several miles over steep hills before six o'clock in the morning to her work, lives in a feculent atmosphere, works ten hours a day, and tramps back to her home at night. Goitre is common among those who are deprived of nourishing food and among those who intermarry. It is not confined to those who drink water of any special character.

In closing the paper the writer states that goitre is much less prevalent than it was thirty years ago, and yet the miners drink the same water. They get better wages, which means more nutritious food. The railway connects the goitrous districts with adjacent towns, so that the people travel more, see more, and intermarry much less than formerly. If the decrease of goitre continues in the same ratio as in the last generation, endemic goitre will soon disappear from Derbyshire.

A PROPOSED "PASTEUR INSTITUTE" IN NEW YORK CITY.

The project of establishing an institute in this city for the treatment of persons bitten by mad dogs seems to be seriously agitated. We learn that Dr. Valentine Mott has brought over from Paris a rabbit inoculated by Pasteur. This rabbit died on May 16th, and another one inoculated from it died on May 24th, and inoculations are to be continued *secundum artem*. The proposed "Pasteur Institute" is reported to be already organized, and an appeal to the public for $5,000 is to be made. It would be only just, both to the public and the medical profession, that some authentic information be furnished as to how well qualified the gentlemen composing this organization are to carry out their purpose. The technique, as is well known, is difficult, and involves a thorough knowledge of all Pasteur's views and methods of work, as well as no inconsiderable amount of time.

It was authoritatively stated a short time ago, that Pasteur was for the present unwilling to have any other institute established than that in Paris. Considering all this, and the fact that the prophylactic value of the method is still not demonstrated, it would be well for the organizers of the "Institute" to give some more definite assurances as to their capacities and purpose.

THE DISINFECTION OF RAGS.

The disinfection of rags is now claiming a great deal of public attention. The principal reason for this appears to be a difference of opinion between the rag importers and the health authorities as to what is necessary in the premises. The special committee of the Chamber of Commerce appointed to investigate the matter have been taking testimony *pro* and *con*, with the promise that some definite conclusions will eventually be reached. A similar inquiry is being carried on in Boston with a like end in view. The necessity for this is becoming more apparent as the present methods of rag disinfection are impartially scrutinized.

So far it is quite apparent that there has been manifested an inordinate zeal on the part of the health authorities to prove that superheated steam is the best, if not the only, disinfectant for the purposes named. Resolutions of sanitary conventions to this effect have been repeatedly published, and strenuous efforts have been made to create public opinion in its favor. Curiously enough most of this work has been done by a very few gentlemen, who have, all other things being equal, shown a great interest in guarding the public health. Without attempting to associate cause and effect, it has been shown that all these efforts have culminated in the employment of a patented process for applying the steam. It is unfortunate, to say the least, that such coincidences should be the basis of a charge of interested motives on the part of some of the parties concerned. This is to be deplored, as all such measures intended for the protection of the health of the people should be above suspicion. It is not, however, our purpose at present to discuss this part of the question. Scientifically we can view the present method of steam disinfection from the standpoint of its utility. In so doing it will be well to consider certain facts which are well established in the history of epidemics, and which have not been shaken by any evidence brought out in the investigations now being carried on.

Disinfection in the bale, as at present adopted, is of no use. It is impossible by merely thrusting a perforated screw into a bale to force steam equably and effectively into every portion of it.

This has been illustrated by a very interesting and conclusive experiment tried in Boston. The importers caused to be introduced into different portions of bales when originally packed for importation, self-registering thermometers. These bales were afterward subjected to the steam disinfection at the port of entry, which was Boston, and the results as shown on the thermometers were carefully noted, giving a range from 212° F., in one instance, down to 85° F., the average being 109° F.

Such a temperature, if it accomplished anything, would be in favor of propagating the disease-germs rather than

of destroying them. Yet, as we understand it, this is the method so strenuously advocated by the signers of resolutions, and so persistently enforced by the health authorities of New York, Boston, and Philadelphia.

It may be proper, in this connection, to consider the fact that no one has been able to produce an authenticated case of cholera coming from rags, a fortunate circumstance, in view of the inefficient method of disinfection.

Disinfection by any process to be thorough requires the unbaling of rags. Practically this is impossible at the port of entry. Aside from other considerations the cost would be too great. But it is recommended, and justly too, to admit rags from countries not affected with contagious diseases, and in cases of suspicion or doubt to disinfect the exterior of the bales before unloading, and that when the rags are unbaled at the mills they shall be properly disinfected under the supervision of the local health authorities.

This would make the local authorities responsible, and if a case of contagious disease broke out in a paper-making town, the responsibility would be fixed upon an officer on the spot, who could at once apply a remedy.

By the present system, it is almost impossible to fix the blame in case of the appearance of contagious diseases.

The health officers at the several ports of entry through which rags were coming to the mill would disown the responsibility.

Again, it is a curious fact that there is no case on record of a contagious disease being started in a paper-mill by foreign rags. On the other hand, there are numerous instances in which disease, such, for example, as small-pox, has been traced to domestic rags, which are not subject to any disinfection. If, however, disinfection were carried on in the proper towns, it would be much easier for the health boards to protect their towns against the entry of disease in this way.

These measures could not fail to prove satisfactory to all concerned, and be ample protection for the people in all cases of doubt. Superheated steam when proprerly used might accomplish this, but as at present employed it is utterly worthless.

Another Pathological Laboratory to be Built.—We learn that Dr. C. N. Hoagland, of Brooklyn, who is a member of the Board of Regents of the Long Island College Hospital, will soon begin the erection of a laboratory on Henry Street, directly opposite the hospital. It will be known as the Hoagland Laboratory of the Long Island College Hospital, and will be planned after the general style of the Carnegie Laboratory, on Twenty-sixth Street, in this city. In addition to its medical and scientific departments the laboratory will contain a library and a museum. The students of the Long Island College Hospital are to have free access to the new building.

Several Sewers in Detroit have been choked up all winter by the hulls of vessels lying up against them.

The Best Thing yet discovered for sea-sickness is port.

News of the Week.

The Ohio State Medical Society will hold its forty-first annual meeting at Akron, O., on June 2, 3, and 4, 1886.

Dr. Frank Donaldson, Jr., of Baltimore, was the author of the paper on the pneumatic cabinet before the Climatological Association, and not Dr. Donaldson, Sr., as stated.

Death of M. Legrand du Saulle.—Legal and mental medicine has sustained a severe loss in the death of M. Legrand du Saulle, physician to La Salpêtrière. His death occurred on May 6th, in the fifty-sixth year of his age. The deceased was author of a large number of works and monographs, and had just completed a systematic treatise on Legal Medicine and Toxicology.

Pasteur's Inoculations up to May 4th had reached the number of 950, with 6 deaths.

The Philadelphia County Medical Society and The American Medical Association.—At a special meeting of this Society, May 18th, the following resolutions were adopted by a *viva voce* vote:

"*Resolved*, That the Philadelphia County Medical Society has learned with surprise of the action of the American Medical Association at St. Louis in excluding the duly elected delegates from this Society.

Resolved, That, as the subject has been referred back to this Society for final action, the legality of said election is hereby reaffirmed, and that while it would be perfectly right for the delegates to vindicate the validity of their election by a resort to legal measures, yet, in the interest of peace, such action is not urged.

Resolved, That in excluding the delegates from this Society the Judicial Council have violated the plain rules of evidence and of justice.

Dr. William T. Corlett.—In a valuable article in The Medical Record of April 17th, on the "Bromide of Arsenic in Skin Disease," the author's name was given incorrectly as Corbett, instead of Corlett.

A Safe and Sure Hypnotic, according to Dr. K. Gunzberg, of Moscow, is chloral hydrate in doses of one gramme, given diluted per anum.

A King who Believes in Antiseptics.—The King of Servia, according to the journals, has issued the following: "Whereas it is irrefutably proved by science that the so-called antiseptic treatment of wounds yields more beneficial results than all other methods, we are pleased to order that henceforward the said antiseptic plan of treatment be solely employed in all the hospitals of our kingdom, and that corrosive sublimate and iodoform be used until our further disposition."

Queen Margarita, of Italy, has selected for her physician Signora Margarita Farne. This lady was one of the first Italian women who studied medicine, having commenced her course in 1870. She has practised in several hospitals in Turin and Milan.

Professor Bingham's Resignation.—An emergency meeting of the Trustees of the Vermont University was held May 20th. After a heated debate lasting six hours,

Dr. L. M. Bingham, the Professor of Surgery, for whose dismissal the students struck, offered his resignation, which was accepted.

THE COCAINE HABIT.—No drug with so short a history has gotten hold of so many victims as cocaine. We fear that the cocaine habit has a great and gloomy future before it. It is a habit more easily acquired and one which ruins body and mind even more quickly than does morphine. We make these comments *a propos* of a shocking case recently reported in a city in Central New York. A physician and his daughter were reported to have gone to a hotel and there have exhibited almost maniacal symptoms from the effects of cocaine. Both had been taking it in immense doses subcutaneously for some time.

AN ATTACK ON THE BUREAU OF ANIMAL INDUSTRY.—Representative Dr. John Swinburne, of New York, recently made a report attacking the Bureau of Animal Industry, his main point being apparently that said Bureau advocates the extinction of pleuro-pneumonia by slaughtering animals. If this is his only objection Representative Swinburne had much better keep quiet. If there is one thing upon which intelligent breeders and veterinarians are agreed it is that pleuro-pneumonia must be stamped out, and that it cannot be quarantined or inoculated out of existence.

THE NEW YORK MEDICAL MONTHLY is another candidate for journalistic favors, and comes to us in its first issue full of promise. It is edited by Dr. J. Leonard Corning, of this city, who will doubtless prove his fitness to conduct a journal. Among the promised contributors to it are many of the leading medical men of this town. The present issue contains practical articles by Drs. Otis, Agnew, Fox, and Schweig. We welcome it to our table.

THE LATEST SUMMARY OF PASTEUR'S WORK.—Up to April 14th, Pasteur had inoculated 688 persons, presumably bitten by mad dogs, with only one death. He had also inoculated 19 Russians bitten by a mad wolf. Of these nineteen, three have died from hydrophobia—about sixteen per cent. The usual per cent. of deaths from the bites of mad wolves is said to be about sixty-seven. Since April 14th, Pasteur has treated other Russians bitten by mad wolves and mad dogs. One of the former recently died from the effects of his wounds; one of the latter from hydrophobia, after having been submitted to treatment. This makes in all 720 cases treated, with a total of five deaths from rabies, despite treatment. Pasteur has found that the rabies resulting from wolf bites is the same as that of dogs, and only more dangerous, because the bites of wolves are more numerous and severe.

"THE OTHER SIDE OF COCAINE—THE BAD SIDE," was the subject of a paper presented by Dr. A. W. Calhoun, of this city, to the State Medical Association, in Augusta, last week. The doctor argues strongly against the use of cocaine in cataract operations by extraction. He stated that before he began the use of cocaine from ninety-five to ninety-seven per cent. of all cataract operations by extraction proved successful, and that in a large number in which cocaine had been used he had bad results. He has abandoned its use altogether in operations by extraction.—*Atlanta Medical and Surgical Journal.*

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, May 24, 1886.

DANIEL LEWIS, M.D., PRESIDENT, IN THE CHAIR.

DISEASE OF THE EAR IN CHILDHOOD.

DR. E. BENJAMIN RAMSDELL said that in preparing this paper he did so, not with the hope of offering anything new to the specialist, but to call attention of the profession, especially of the general practitioner, to the importance of early recognition and treatment of disease of the ear in childhood. The importance of disease of the ear was manifest from a brief review of the anatomical relations of that organ. The middle ear was by far the most frequently affected. Out of 383 cases of disease of the ear in children under fourteen years of age which had come under his observation at the Manhattan Eye and Ear Hospital, 346 were affections of the middle ear. Only one per cent. of the entire number were cases of disease of the internal ear and auditory nerve. In general we could divide disease of the middle ear into suppurative and non-suppurative cases. The diagnosis of suppuration of the middle ear could be made almost from the presence of a purulent discharge, for out of 227 cases of discharge from the ear, in only three was the source of the discharge situated in the external auditory canal.

Proceeding to clean out the ear, the physician would find perforation of the tympanum and a suppurative periostitis, the inflammation having crept up the Eustachian tube from a catarrh in the naso-pharynx.

The treatment should consist in cleansing the ear, the use of the hot douche, the use of a few drops of peroxide of hydrogen, dusting with iodoform or borax, solution of nitrate of silver or other astringent applications, inflation, treatment of the naso-pharyngeal catarrh. Dr. Ramsdell employed water of a temperature of 120° F. By the time it had passed through the syringe and reached the ear the temperature would have decreased to a degree to be comfortable to the patient. A fountain syringe, and not a glass or Davidson, should be employed. Dr. Dayton had had considerable experience with cleansing the ear with a few drops of a ten per cent. solution of peroxide of hydrogen, and believed it to be a very efficacious method. It was followed by the use of soft absorbent cotton. Dr. Ramsdell related the histories of a number of cases illustrating the efficacy of treatment, both in suppurative otitis media and in catarrhal inflammation, whether acute, subacute, or chronic. Cleanliness and not drugs was all important in the treatment of suppurative inflammations of the middle ear. A thick discharge in many instances would resist the syringe, and necessitate careful cleansing with the cotton-holder. Sometimes syringing of the ear might cause continued inflammation, some of the water being retained and acting as a poultice. Gentle inflation aided in cleansing the ear. First cleanse, then dry, and follow by the application of a healing, non-irritating powder in such a way that it would lay upon the surface in a thin film. Where there existed fine granulations or polypi to keep up the discharge indefinitely, it was necessary to effect their removal—the poylypi by the curette, and the granulations by astringents. In cases of acute catarrh of the ear the hot douche followed by gentle inflation was very beneficial. In the chronic and subacute forms it was very necessary to cleanse and make use of healing applications to the naso-pharynx, which was always the seat of catarrhal process. The glycerite of tannin, applied on the cotton-probe, was beneficial. The cases related were those of patients seen in private practice, and in nearly or quite all there had been healing of the drumhead, with relief to hearing.

Dr. D. B. St. John Roosa thought that this direct and simple statement of Dr. Ramsdell's practice in acute aural disease in children had not only received the respectful attention of the Society to-night, but that it would also receive the consideration of the profession as it might be presented to them through the press. He would that there were an Emmet or a Sims, or some one of the character and ability of Emmet and Sims, to impress the American people with the fact that diseases of the ear were almost as dangerous as diseases of the womb. The profession was lulled to sleep in the matter of diseases of the ear in childhood by the incontestable truth that a large percentage of the acute aural troubles in children got well in spite of the fact that they received either no treatment at all, or that which was utterly without intelligence. But there was a contingent—a fearful contingent—which went on to chronic suppuration, bad hearing, and, in some instances, to facial paralysis. There would be very little difference of opinion among those who had had experience in the treatment of these cases respecting the propriety of the treatment laid down by the author. The variations in the treatment would be insignificant. The principle of cleanliness and appropriate astringents and attention to the naso-pharynx would remain. There was a practice, formerly coming from the homœopathic schools, in which the treatment was largely by drugs internally administered. That practice had not the advantage, which was sometimes claimed for it, of being modern. It was as old as Hahnemann. He thought that the opinion expressed to-night that disease of the ear was chiefly local was strikingly true. And while every practitioner might watch the skin, the bowels, the ventilation, etc., yet most of the treatment would be local.

Dr. O. D. Pomeroy thought the speakers had been a little hard on the general practitioner. The ravages resulting from otitis in children were not always susceptible of being arrested. Statistics showed that many cases of deaf-mutism were due to scarlet fever, and all knew that otitis media occurring during this disease often destroyed the hearing in an extremely short time, and was not always susceptible of being arrested by treatment, especially after the period when the physician's attention had been called to it. Again, examination of the drum-cavity and drum-membrane in a child was a difficult thing, and it was nothing short of a fine art to treat certain cases of otitis in children as they should be treated. Dr. Pomeroy spoke of a method of gaining entrance to the middle ear and of establishing drainage by inserting a rubber tube on a probe; withdrawing the probe, the tube drew up into the canal. It was rarely necessary to open the mastoid in children, but when necessary it could be done by firm pressure with a knife. The danger to life in children from ear disease was much less than in adults in proportion to the severity of the disease. It was often impossible to recognize disease of the ear in young children. It was a good rule whenever a child complained of pain without apparent cause to examine the ear and see if the cause did not lie there.

The President asked whether there was not something which would take the place of iodoform in the treatment of disease of the ear. It was our duty, he thought, to make the treatment of disease as agreeable as possible. Iodoform was disagreeable to both the patient and his friends.

Dr. Simon Baruch had recently made it a rule in scarlet fever to pull the little patient's ears, and try to detect the first symptom of disease. He thought the reason why the general practitioner overlooked these cases was that the disease developed at a period when the child was better and the physician had either relaxed his efforts or ceased his visits.

Dr. David Webster, in answer to some questions by the President, said he used water for injection of a temperature comfortable to the hand, or as warm as the patient would bear it. He thought boracic acid was as good as iodoform, and it had not the disagreeable odor of the latter.

Dr. Joseph Andrews advised against iodoform in acute otitis, and also in chronic cases. It was irritating and insoluble, as was also tannic acid. Boracic acid was better.

Dr. Garrish spoke from the standpoint of the general practitioner. He thought it important to pay attention to the general condition, and as so many patients were scrofulous, to give constitutional treatment. Poultices did much to relieve pain, but it was also necessary often to employ tincture of opium in sweet oil. He advised also the application of leeches in the neighborhood of the ear.

Dr. Laurence Johnson said he was one of the general practitioners who a year or so ago heard the voice crying in the wilderness, had given heed thereto, and gone to the specialist to learn what he should do to help diminish the unfavorable statistics pertaining to ear disease. He was able to testify to the benefit to be derived from following such advice as had been given in the paper of the evening. He gave instructions to the nurses in a certain institution in which there were cases of suppurative ear trouble not of an acute character, to cleanse the ears with the warm-water douche. The nurses who had charge of the girls followed his instructions, and every patient showed improvement after the treatment. As to the boys, his advice was not followed, and they all remained in the condition they were. In the early stage of acute otitis media he employed douches, leeches, and allayed pain by two or three grains of morphine to a drachm of glycerine. He thought injury resulted from continuing the douche too long It should not be repeated as long as the boracic acid remained dry.

Dr. Leszynsky related some cases in which the patients complained of symptoms not at all referable to the ear, and in which the ear trouble was not suspected until after the discharge took place. Here the attending physician could not be blamed for not recognizing the ear disease early.

Dr. Messenger thought a good deal depended upon the constitutional treatment, especially the diet. If children were properly fed on proper food they would get well of almost any disease. He approved of the hot douche and of hot poultices. He regarded iodoform as worse than useless; in fact he did not believe it was good for anything in any disease except to stink, and he had never known its odor to be destroyed. Cocaine in the adult had lessened the pain in the ear, and had done good. Rubbing the skin, and keeping it clean seemed to renew the life of children.

Dr. Holcombe had been amazed at the success of the author in healing the drumhead after it had been opened by suppurative inflammation. He thought much harm resulted from too often syringing the ear in these attacks. The Politzer method was also capable of being dangerous. He exhibited a rubber tube consisting of two parts united by a glass tube, which he used for sucking out the purulent matter. The glass portion enabled one to see his danger before drawing the pus into the mouth. He then applied a weak solution of borax.

Dr. Ramsdell closed the discussion, and said he thought a thin film of iodoform blown upon the diseased surface of the ear resulted in benefit, and could not cause irritation or prevent exit of the discharge. As to the healing of drumheads, he had even seen them grow up, as it were, in chronic cases in which there was what was called the cicatricial drumhead.

The Society adjourned until the fourth Monday in September.

A Bill to regulate the practice of veterinary medicine and surgery has recently been defeated in the Ohio House of Representatives.

STATE SANITARY CONVENTION,

UNDER THE AUSPICES OF THE PENNSYLVANIA STATE BOARD OF HEALTH,

Held in McCauli's Opera House, Philadelphia, May 12, 13, and 14, 1886.

WEDNESDAY, MAY 12TH—FIRST DAY.

THE President, WILLIAM PEPPER, M.D., LL.D., opened the session and introduced Robert E. Pattison, Governor of Pennsylvania, who delivered an address calling attention to the importance of such conventions, and the necessity for education of the public as to the importance of sanitary measures.

DR. BENJAMIN LEE, Secretary, Pennsylvania State Board of Health, read a paper on

AN EPIDEMIC OF DIPHTHERIA TRACED TO ITS SOURCE.

The epidemic referred to occurred in Pittsburg in the fall of 1877, affecting that portion of the city known as the "south side." This portion of the town is built on a flat and on a hill rising rapidly behind it. In the lower portion the sewer had but little fall, and as a result became filled to a large extent with filth. The sewer extending up the hill acted as a ventilator, carrying the offensive gases to the houses on the elevated portion. Many of the houses were entirely without traps. Immediately preceding the outbreak there were several heavy showers, filling the sewers and causing the forcing of sewer-gas into the houses. The disease developed and was most marked in the houses connected with this sewer.

REV. G. D. STROUD thought that the sewer system should be done away with, and earth-closets and destruction of foul matters by fire.

Dr. Carl H. Horsh read a paper insisting upon the necessity of physical education.

DR. HENRY F. FORMAD, of Philadelphia, read a paper on

TESTS FOR ORGANIC IMPURITIES IN WATER.

The influence of the water upon the health of the community is one of the best indications of its purity. After referring to the difficulties and objections pertaining to chemical tests—these are only quantitative, and give no information as to the character of the organic matter—the presence of bacteria in water was then spoken of. The number of bacteria is an indication of the quantity of organic matter present. The test which he recommended was the use of culture substances, a few drops of water being added to the sterilized albumen, and the quantity of organic matter estimated by the rapidity of the development of the bacteria. In reply to a question, Dr. Formad stated that it was probable that injurious organic matters might be present without the presence of bacteria.

DR. F. S. WILSON, Lazaretto Physician, read a paper on

THE IMPORTATION OF FOREIGN RAGS.

This question calls for attention at this time. If we accept the germ theory of disease, old rags afford an excellent culture substance for these germs. In order to avoid danger from this source, he recommended that no rags be admitted without they had been thoroughly disinfected before shipment; or, what he thought better, the rags should be reduced to pulp before shipment.

DR. WM. TAYLOR, Health Commissioner of Boston, stated that in Boston no rags were admitted without being subjected to disinfection in the port of Boston, under the supervision of the Board of Health. The method found most satisfactory was that by superheated steam. This process is insisted upon even where a certificate of disinfection accompanies the cargo.

DR. A. N. BELL, of New York, considered rags the most dangerous of all articles of commerce. Up to recent times rags were considered so foul that it was not worth while to try to disinfect them. It has been asserted by those interested that rags never produced any diseases, and that the rags were cleaned before being shipped. The first process to which rags are subjected is that of cleaning, in which fifteen per cent. of the weight is lost. The ships may become the carriers of disease and may contaminate the cargo, so that rags which have been disinfected before shipment may again become infected. He advocated the use of superheated steam as a means of disinfection. Dr. Bell offered a resolution, which was adopted, that the Convention indorse the plan adopted by the Board of Health of Boston, and recommend its adoption by other ports.

Dr. D. W. Jeffries, of Chester, Pa., read a paper on

THE HEATING AND VENTILATION OF PUBLIC SCHOOL BUILDINGS.

Dr. Albert L. Gihon, Medical Director of the U. S. Navy, read a paper on

ECONOMIC SANITATION.

Dr. J. Lowry Sibbett, of Carlisle, Pa., read a paper on

NARCOTIC APPETITES.

DR. LAWRENCE WOLFF, of Philadelphia, delivered an address on

OUR DRUGS AND MEDICINES.

His examinations led him to believe that, as a rule, the drugs manufactured in this country were pure. The handling of drugs should be entirely restricted to physicians and druggists. As a rule, the accusations made against druggists were shown to be unfounded.

EVENING SESSION.

Hon. Erastus Brooks, of West New Brighton, N. Y., read the first annual address, on

THE OBLIGATION OF STATES AND CITIES

to preserve the health of the people.

THURSDAY, MAY 13TH—SECOND DAY—MORNING SESSION.

The first paper was by DR. FRANK WOODBURY, of Philadelphia, on

PHYSIC-TIPPLING AND MEDICINE-BIBBING.

He referred to the rapid increase in the consumption of such drugs as the bromides, chloral, opium, etc. It is said that of chloral hydrate one ton a day is consumed in England and America. He then spoke of the causes of this increase. A large portion of the death-rate among children was attributed to the abuse by the parents of medicines acting on the nerves. The injurious effects of patent medicines were considered. In conclusion, he recommended:

1. The examination of all proprietary medicines by a Government or State Commission of experts, who shall have the power to permit the sale of such as are harmless or especially likely to prove serviceable, and to prohibit the sale of all which are peculiarly liable to do injury, and those which are found to be worthless and frauds upon the public. Such a commission was appointed by the Japanese Government several years ago, and has been found to be of great service in that country.

2. The instruction of the public to properly estimate drugs, and to regard every unknown medical agent as dangerous and endowed with capacity for harm. Let them escape the caustic criticism of Molière upon those who pour medicine about which they know little into bodies about which they know less, in order to cure disease about which they know nothing at all.

Dr. Henry Hartshorne, of Philadelphia, read a paper on

CONTINUOUS PREVENTIVE DISINFECTION OF HOUSE-DRAINAGE.

He first referred to the experience in an epidemic of diphtheria and scarlet fever, in which large quantities of sulphate of iron and burning sulphur were used in the sewers. Following this there was an almost absolute cessation of the disease. It may be that, although such substances do not destroy the bacteria, they may neutralize the products of bacteria, which by many are supposed to be the cause of the results which are seen.

We need to destroy all filth in which these germs multiply, and to neutralize the products of their growth. This should not be done spasmodically but continuously. Recently an apparatus has been introduced by which this may be accomplished. It is connected with the bowl of the water-closet, and supplies a strong solution of chloride of zinc at the rate of twenty drops per minute. This prevents all decomposition. The chloride of zinc has no effect upon lead and iron. The speaker thought that if this system could be introduced throughout the city of Philadelphia epidemic diseases would almost entirely disappear.

The following papers were also read at the morning session: "The Relations which the Topography of Harrisburg, Pa., bear to its Drainage and Sewerage," by Dr. Hugh Hamilton, of Harrisburg; "Healthy Dwellings," by Dr. V. C. Vaughan, of Ann Arbor, Mich.; "The Majesty of the Law of Sanitation," by Rev. J. Andrews, of Chestnut Hill, Pa.; "Elevation of the Standard of Supplies," by Mr. H. Wharton Amerling, of Philadelphia.

Adjourned.

Afternoon Session.

Dr. C. W. Chancellor, of Baltimore, read a paper on

HEREDITY AND OTHER PECULIARITIES AFFECTING HEALTH AND LONGEVITY.

This was followed by a paper by Dr. H. C. Wood, of Philadelphia, entitled

HYGIENE OF OLD AGE.

Leaving out of consideration deaths from accidents, fevers, lightning-strokes, and other more or less preventable causes, the man who is so built that he is equally strong in all his parts lives out his appointed days. Excessive strength in one part is a veritable source of danger. The athlete perishes because his over-developed muscular system perpetually strains and finally wears out the heart or lung, which was originally constructed for a muscular apparatus of half the power of that which is artificially built up. The large proportion of mankind die early on account of some local weakness. Human age is not to be accounted by years. In some individuals the general tissues are older at fifty than in others at one hundred. Many of the cases of so-called neurasthenia and nerve exhaustion in men and women, with sudden or gradual breakdown at forty or fifty, apparently from overwork, are really cases of premature old age, and they are to be treated in precisely the same manner. A large proportion of early deaths are the result of some feeble organ being originally endowed with a longevity less than the rest of the organism.

The man who enjoys fair health at seventy-five has probably been built upon the principle of the famous "One-horse Shay," described by our inimitable Holmes, and he should be treated as a wise man would treat such a venerable instrument of progression. The principle involved in such cases is that of protection, and especially protection from strain of any feeble part. Exposure to inclement weather, especially to high winds, is injurious, by throwing a great strain upon the heart, and this may result in sudden death, or, if it does not, may lead to a fatal pneumonia. Emotional disturbance, as the sudden receipt of good news, may have a like result. Medicines that perturbate and measures that bring relief by inducing a violent local action are to be avoided; at the same time incipient disorders should, if possible, be arrested at once.

In regard to details, every old person should go over, with a wise counsellor, his whole method of living and personal habits. The first question is in regard to food. The lost teeth should be replaced by artificial ones to facilitate chewing; but even then the food should be soft, easily comminuted, and readily digested The food should not be of a stimulating character. Many old people are injured by too much nitrogenous food. Milk and breadstuffs cooked with milk should form a large part of the diet of the aged individual. Excessive quantities of food should be avoided. Many old people are more comfortable, enjoy better health, and probably live longer for the use of wine. The habitual use of wine in youth or in middle age, in vigorous health is, I think, a harm rather than a good. But when the powers of life are failing, when digestion is weak, and the whole system feeble, one or two glasses of generous wine at dinner aids digestion, and quiets for the time being nervous irritation. The danger of the formation of any evil habits when a man is past seventy is very slight, and no conscientious physician need hesitate in recommending the daily use of alcoholic beverages to his patient.

In many cases of death the final result is due to cold and the failure on the part of the body to keep itself warm. In the old, the heat-making functions are exceedingly low, and few old people are comfortable in a room the temperature of which is lower than 80°, and abundance of warm but light clothing should be provided. There is no ordinary garment which compares in heat-preserving power with the buckskin jacket, and every man beyond the age of seventy should provide himself with such a garment. At first it should be worn only out of doors, but later, it should form part of the habitual underclothing. If worn as an under-jacket, it should be perforated; when there is a tendency to abdominal weakness or to pendulous abdominal walls, a flannel bandage should be worn. The mechanical effects of an abdominal bandage in affording support to the abdominal organs and vessels are well known.

Dr. Laurence Turnbull, of Philadelphia, in discussing the paper, referred to some of the causes of death in the aged. Too much exercise was one of these. When an old person walking up an elevation, or against the wind, feels an oppression in his chest or a pain in his back, he should stop. Exposure to night air is bad for the aged, and often leads to bronchial catarrh and pneumonia; a night-cap should be worn in bed. Flannel underwear should also be worn; exposure to the sun should be avoided in summer.

He agreed with the author of the paper in all points, with the exception of his recommendation of wine. If a stimulant is required at all, it should consist of alcohol and water in a definite mixture, rather than of wine, and withdrawn when the patient is able to take a sufficient quantity of stimulating food. Old age is no protection to the temptations incident to our physical natures; rather does it weaken the resistance to these temptations, and more than one medical man can recall painful instances where a youth of probity and a middle age of honor has been darkened by an intemperate old age. Mr. Wickfield, in "David Copperfield," is by no means an unreal character in life.

Dr. Russel Thayer read a paper considering the relative advantages of "Forced Ventilation and Ventilation by Heat."

Colonel George E. Waring, Jr., of Newport, R. I., made some remarks on the "Drainage and Sewerage of Cities and Towns."

Dr. Charles K. Mills read a paper on

THE INFLUENCE OF OVERWORK IN THE PRODUCTION OF NERVOUS DISEASES AND INSANITY.

The forms of insanity which are more particularly attributable to overwork are paretic dementia, primary dementia, and confusional insanity. Numerous examples of breaking down and insanity following exciting and prolonged political contests were given.

Dr. P. D. Keyser, of Philadelphia, considered the subject of "Defective Vision in School Children."

Dr. William M. Welch, of Philadelphia, read a paper on

VACCINATION.

He considered bovine and freshly humanized virus of about equal value, while the former was not open to objections which had been made to the latter. Long humanized virus had a slower incubation and ran a more rapid course, although the durability of the protection is probably not so great; but the short incubation recommends the long humanized virus for use where vaccination was performed after exposure to small-pox.

Evening Session.

Dr. Charles Smart, Major and Surgeon, U.S.A., read an address on

WATER-SUPPLIES OF TOWNS AND CITIES.

Friday, May 14th.—Third Day.

Dr. John M. Keating, of Philadelphia, read a paper on

ARTIFICIAL FEEDING.

Examination of the census reports shows that the greatest number of deaths among infants occurs during the first year of life. The dreaded second summer does not exist. This fact suggests the necessity for an improvement in the diet of infants.

If mother's milk cannot be procured, cow's milk, properly prepared, is the next best. The proportion of casein must be diminished, while the proportion of sugar and cream and bone-forming matters must be increased.

As next in value the use of condensed milk was recommended, in the proportion of one part of milk to ten of water. To each half-pint of this mixture one ounce of cream should be added.

The following papers were also read: "The Water-supply of Philadelphia," by Dr. J. Cheston Morris, of Philadelphia; "Disposal of Human Excreta by Fire," by Dr. W. S. Ross, of Madisonville, Ky. (the speaker presented the model of an apparatus which he had devised for this purpose); "The Financial Aspect of Sanitation," by Dr. Alfred L. Carroll, of West New Brighton, N. Y.; "The Sanitary Significance of Sporadic Typhoid Fever," by Dr. Pemberton Dudley, of Philadelphia.

Dr. W. L. Zuill, of Philadelphia, then read a paper on

THE CARE OF ANIMALS IN THE PROPAGATION OF VACCINE.

He described in detail the method of caring for and operating on animals. The selection of the animal is a matter that requires careful consideration. He considered the ivory points, which should be double charged, as the best means of preserving the virus.

He had experimented with glycerine as a preservative for vaccine virus. The lymph is carefully collected, and to it is added an equal weight of glycerine. The mixture is then filtered. It has been found that this preserves its powers for *months*.

Dr. W. F. Hyer, being called upon, made some remarks with reference to the Mississippi State Board of Health.

The Convention then adjourned.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN SURGERY.

Stated Meeting, May 10, 1886.

Stephen Smith, M.D., Chairman.

THE RESULT OF OPERATIONS IN FORTY-ONE CASES OF ABDOMINAL SURGERY AT BELLEVUE HOSPITAL.

The Chairman remarked that some time since he read a paper before the Academy "On the Results of Operations in Bellevue Hospital at the Present Time Compared with the Pre-antiseptic Period." He did not verify his statement with statistics, as he at first intended to do, and could have done but for want of time. He had received many letters from physicians in different parts of the country, as had also the editor of The Record, inquiring if facts would sustain the statements made in the paper. The paper of Dr. Polk is an answer to those inquiries so far as relates to one branch of surgery at Bellevue. It should, indeed, be regarded as a sufficient answer to every doubt which anyone entertained as to the accuracy of the entire paper. For it may be truthfully said, that wherever abdominal and pelvic surgery can be successfully practised, other branches of surgery ought to be even more successfully practised by the same methods. Aside from the intrinsic interest, therefore, which attaches to the subject of the paper about to be read, it will prove doubly interesting by its complete vindication of the antiseptic process so carefully followed in perhaps the most unfavorable atmosphere in the city.

Dr. W. M. Polk said his paper was based upon the cases of peritoneal surgery which had occurred in Ward 23 of Bellevue Hospital during the last three years, more than one-half of the operations having been performed during the last twelve months. They represented all the abdominal surgery done in that ward since he had had charge of it, and about one-third of all done in Bellevue during that time. All the operations reported had been done by himself excepting two, which were performed by Professor Lawson Tait at Dr. Polk's request.

The author then read the histories of only such cases as appeared to offer special items of interest. The first was a double tumor of the uterus, one a fibro-cyst being as large as a child's head and requiring much time for its removal on account of close adhesions. The patient, however, made a good recovery.

The second was one of Tait's operation, and owing to constant efforts at vomiting the intestines were much exposed; carbolic-acid solution was employed as was usual at that date, February, 1883. An abcess developed at the site of the incision, and the patient died of general peritonitis. Dr. Polk thought that but for the defective execution of the operation, recovery would have taken place.

The third case was one of single cystic colloid tumor, with thick fluid, containing papilliform growths, in a woman aged sixty-seven, who died six days after the operation of purulent exhaustion. The age of the patient and the nature of the tumor were the unfavorable features in the case.

The fourth case was one of fibroid tumor of the uterus, which caused excessive pain. The patient was addicted to alcohol, and her condition was poor, but she recovered after a sharp attack of peritonitis.

The fifth was a large fibroma of the left ovary and a cystic tumor of the right ovary the size of the fœtal head. Both tumors were removed, and the patient made an excellent recovery.

The sixth was a fibroid tumor of the uterus, removed by abdominal section, the patient recovering without any untoward symptoms.

The seventh was one of pyo-salpinx with cystic ovaries; the patient had had a number of attacks of peritonitis, each apparently threatening her life. The tubes and

ovaries were quite adherent; the patient had rather a sharp attack of local peritonitis after the operation, but recovered.

The eighth case was a subperitoneal hematocele filling the entire pelvis. Owing to the prominence of the tumor, Dr. Polk made abdominal section with the hope of stitching the sac to the abdominal incision, but after emptying it and washing out with bichloride solution, 1 to 5,000, the sac had so shrunken that it was impossible to do this, consequently a drainage-tube was introduced down through the abdomen. The patient made an excellent recovery.

The ninth case illustrated what could be done in the way of extirpating the tubes and ovaries where there were very firm and extensive adhesions. The patient had two cystic ovaries and a hydro-salpinx upon the right side. She recovered from the operation without an untoward symptom.

The tenth was a case of chronic inflammation of the fallopian tubes, with adherent ovaries, and the uterus bound down posteriorly in the pelvis. He made the usual section, and attempted to ligate the tube on the left side, but the ligature cut through. Other ligatures did likewise, and he was compelled to lift the uterus out of the pelvis and ligate the uterine artery and left ovarian vessels, which left the uterus to be nourished by the vessels from the right side. The patient had a sharp attack of peritonitis, but recovered.

The next three cases were cases of vaginal hysterectomy for carcinoma. The first patient, operated upon three years ago, died of sepsis which undoubtedly entered the drainage-tube. In the other cases, instead of using a drainage-tube he stuffed the opening left by the operation with iodoformized gauze, and the patients recovered.

The last case which Dr. Polk reported was one of removal of a spleen from the pelvis. The patient came to his ward about two weeks ago, suffering a great deal of pelvic pain from what he took to be a distended fallopian tube closely adherent to the right side of the uterus. When he opened the abdominal cavity he found extensive adhesions covering the whole roof of the pelvis, involving the sigmoid flexure, the vermiform appendix being drawn toward the centre of the pelvic brim. A kidney-shaped mass lay in the pelvis, its curve corresponding closely with the curve of the pelvis, resting between the bladder and uterus, its lower point being in contact with the anterior face of the uterus, the uterus being crowded down and backward into the hollow of the sacrum. The mass was enveloped in peritoneal tissue. At first Dr. Polk thought it was a displaced kidney, but on enlarging his incision and feeling for the kidneys, these organs were found to be in their normal position. He then removed the mass, which Dr. T. Mitchell Prudden had since examined and found to be the spleen in a condition of chronic interstitial splenitis and peri-splenitis. The operation was performed five days ago, and the patient was doing well.

Dr. Polk said further that eight of the forty-one operations were performed in the amphitheatre of Bellevue Hospital, before the class of the University Medical College, and all made an excellent recovery. Three or four were done in the general body of the hospital, and they also did well. The remainder were done in a private room in the pavilions. Cases of diphtheria and other contagious diseases were sometimes brought into one of the pavilions in which a part of the operations were performed, but before doing the operation the rooms were thoroughly fumigated. These patients did well.

Of the patients who recovered six had peritonitis; but three had it to a degree to cause uneasiness. Union by first intention was secured in all the abdominal wounds but five; in four of these a small amount of pus formed along the sutures. In one primary union of the peritoneum was obtained, but most of the remainder of the cut surface healed by granulation. Twenty-two were cases of Tait's operation; twenty-one recovered, one died. The one died, the author thought, as the result of a faulty operation, and not as a result of the surroundings. Hegar's operation of oöphorectomy for a fibroid was done in two cases, both of which recovered. There were eight ovariotomies, seven of the patients recovering. Abdominal hysterectomy for fibroma was performed twice, both patients recovering; partial ablation of the uterus for a fibro-cyst in one case, with recovery. Vaginal hysterectomy for carcinoma three cases, with two recoveries. Subperitoneal hematocele two cases, and one death. Abdominal hernia one case, with recovery. The last operation was the one performed on Thursday last, and the patient was doing well.

These results, obtained in a general hospital like Bellevue, many of the operations having been performed before a large class, encouraged the author to believe that they could perform abdominal section in Bellevue Hospital with as good results as anywhere else.

Dr. Polk made some remarks with regard to blood coming in contact with the peritoneum, and said that formerly he, as well as other surgeons, regarded this accident with almost as great apprehension as when pus entered the peritoneal cavity. But experience had taught us that probably a great deal more mischief had resulted from the manipulations necessary for the complete removal of blood from the peritoneum than the blood would have caused had it been allowed to remain. At present he followed the example of Mr. Tait, and paid no attention to the mere oozing of blood after the detachment of adhesions; for this he simply put in a drainage-tube during some hours after the operation to guard against the blood rising in the peritoneal cavity.

Dr. Paul F. Mundé said the author was to be congratulated upon the remarkably good results which he had obtained in peritoneal surgery in Bellevue Hospitall It had been said some years ago that Bellevue Hospita. was a sort of pesthole, and the first successful ovariotomy performed there excited wonder. The results obtained by Dr. Polk and his colleagues showed plainly that such an alleged evil condition of things did not obtain at that hospital to-day. Unquestionably attention to antiseptic methods and absolute cleanliness, and also increased experince in abdominal surgery, explained why present results were so good. There was no reason, in his opinion, why Bellevue Hospital should not be as good a place to do laparotomy as any other place in the world, unless it were in a private hospital, or at the house of the patient, where there was freedom from all septic influences. He could not avoid the conviction, however, that there were times when public-hospital operations did not do so well, notwithstanding the precautions which might be taken to prevent septic infection. He had performed laparotomy thirty-one or thirty-two times at Mount Sinai Hospital, some of the cases being of the most serious nature, yet the patients recovered against his expectations. In some of the cases, however, the operation was comparatively simple, and was performed in a private room, yet the patients died of septicæmia. So far as was known, all possible precautions had been taken to prevent sepsis. While the results of peritoneal surgery had been comparatively good at Mount Sinai Hospital, the percentage of successes had not been quite so great as that obtained by Dr. Polk, notwithstanding the fact that the hospital was not so large a one as was Bellevue.

Dr. H. Griswold had performed abdominal section in four cases in private practice, in some the operation being done in tenement houses; three of the patients recovered, one died after some days of exhaustion.

Dr. Hoit, of Canandaigua, had been much interested in the paper. The excellent results obtained by Dr. Polk in gynecological operations at Bellevue Hospital recalled a paper read recently by Dr. Vander Veer, in which that surgeon gave the results of thirteen operations in the Albany hospital. The percentage of success was about the same, but Bellevue Hospital was a larger hos-

pital. Dr. Hoit thought the advantages afforded by a hospital in the way of increased assistance, instruments, etc., would more than compensate for the disadvantages of congregating patients in large numbers.

The Chairman asked Dr. Polk how the spleen in his last case came to be in the pelvis.

Dr. Polk said the history of the case threw no light on that subject. Dr. Prudden had told him that he had never seen a similar case.

Dr. H. J. Boldt had seen in German literature within a year the report of a case of displacement of the spleen below the umbilicus.

Dr. Mundé could not recall a similar case; he had one of displacement of the *enlarged* spleen downward.

Dr. Polk, in speaking of the details of his operations, said he never used the spray, but he used plenty of soap and water and a solution of bichloride of mercury, 1 to 2,000 or to 5,000. The instruments were all cleansed by one nurse, who was made responsible for them. The sponges were cleansed at his home, and were carried to the hospital by himself; he also cared for the sutures. No person besides himself was allowed to touch the sponges or sutures except the house-surgeon; no hands entered the abdominal cavity except those of the operator and house-surgeon, and Dr. Polk made himself responsible for the cleanliness of the house-surgeon's hands as well as of his own. The wound was subsequently covered with iodoformized gauze. This personal attention to details he thought accounted for the successful results which he had been able to report this evening.

On motion of Dr. De Garmo the author was requested to read his paper at a future meeting of the Academy.

Correspondence.

THE DISINFECTION OF RAGS AND "DR. SMITH'S" PETITION.

To the Editor of The Medical Record.

Sir: In view of the strictures recently published in the medical journals upon the course of numerous reputable physicians who have signed a paper declaring that disinfection of rags from foreign ports is a proper sanitary measure at present, a few words may be permitted by way of explanation and correction. In the first place, all who have read the paper in question will corroborate the statement that it in no way favors any *particular* plan for disinfection. The entire sum and substance of it all is that in view of the fact that cholera has thus early appeared in various places on the Mediterranean coast, this city is in greater danger of a visitation of the disease than it has been heretofore, and that no measures which can possibly be employed to prevent its introduction should be neglected.

Is there any "good-natured" physician, or otherwise, who would feel justified in refusing his indorsement of such a statement in view of all the facts as they exist to-day.

The safety of this community lies in the vigilance of the Health Officer of the Port, who is Dr. Smith. Is it desirable that he should continue to exercise the discretion vested in him by law according to his *own* judgment, or in accordance with the wishes of an interested faction of business men who have no responsibility to the public in this matter?

Grant, if you please, that Dr. Smith has recommended a process of disinfection which increases the cost of imported rags five dollars per ton. This is just a quarter of a cent per pound, and if importers find that tax too high and will cease importation entirely for the present, I believe the lives of our citizens would be far safer. London still prohibits the importation of all rags from Spain, and every medical or business man of New York will be clamoring for the same course here after the disease has once been allowed to slip through the quarantine establishment.

I am in no sense desirous of defending my own action in signing the petition, as I am convinced that the gravity of the situation justifies my course and that of all who have signed it. But there is danger that public sentiment, which is very often wrong, will be lulled into a state of mistaken security by the criticisms of Dr. Smith, and realize their error when it is too late to apply an efficient remedy. Very respectfully,

Daniel Lewis, M.D.

[There is no doubt that Dr. Lewis and the other gentlemen who signed the document did so in good faith, but still there was no guarantee against its use for the purpose of booming the present method of rag disinfection, which is perfectly worthless.—Ed.]

SNAKE VIRUS AND HYDROPHOBIA.

To the Editor of The Medical Record.

Sir: The claims of the physician in Spain who has lately announced his *discovery* that inoculation with the virus of certain snakes is a preservative against hydrophobia in men and animals brings to mind the venerable saying, in another dress, "Il n'y a de nouveau que ce qui est oublié." The physician in question claims to have made a vast number of observations on dogs that have been bitten by vipers, and has found that they are incompetent to take the disease when afterward bitten by hydrophobic dogs. He claims that his experiments have proved entirely successful. I do not know whether the announcement of this curious treatment is likely to be taken advantage of by our lay journals to revive the hydrophobia scare, or that it is a matter which is likely to give the medical fraternity much concern; but it may be of some interest, from a historical point of view, to refer to the fact that in the *Journal d'Economie Rurale*, 1805, will be found the announcement of the method of M. Gauchi, Mayor of Reorthe, for preserving animals, and particularly dogs, from hydrophobia, which consisted in having them bitten by a viper previously bitten by the animal which was rabid; because, as he reasoned, the poison of the viper does not neutralize the poison of the hydrophobia if applied after the bite of the dog. His experience had taught him that dogs which had been bitten by rabid animals did not become rabid if previously bitten by a viper and a swelling had been produced.

Yours faithfully,

Joseph A. Andrews, M.D.

May 21, 1886.

THE VALUE OF MUSCULAR EXERCISE IN TREATMENT OF DIABETES MELLITUS.

To the Editor of The Medical Record.

In the discussion on the subject of the treatment of diabetes which occurred in the New York Academy of Medicine, on March 18, 1886, I took occasion to emphasize the importance of active and passive exercise adapted to the requirements of each case. I remarked, that so convinced was I of the value of this therapeutical measure, that I had adopted the method of compensating my diabetic patients for taking the prescribed exercise by a definite allowance of white bread (for which they all crave), graded according to the amount of exercise taken.

This treatment, based upon the well-known recommendation (empirical at that time) of Bouchardat, has suffered unmerited neglect, if we are to judge from the absence of any allusion to it in the discussion referred to. Indeed, one of the speakers, whose clinical experience is large, and whose opinions are justly esteemed, expressed the regret that, aside from the dietetic treatment, there is nothing but empiricism in the therapeutics of diabetes. In reply to this asseveration I felt called

upon to say that the recognition of muscular exercise is an important element in the treatment of this malady as the logical outcome of well-established physiological facts, and therefore its application is strictly scientific.

Physiology teaches that the liver and muscles are the most active agents in absorbing sugar from the blood and converting it into glycogen, which in its turn is utilized for the maintenance of the body.

In diabetes the glycogenic function of the liver is either in abeyance or greatly impaired, while the muscles also fail in a great measure to perform their function of disposing of sugar. We resort to the restriction of the sugar supply by diminishing or withdrawing those articles of diet which physiology has taught are sugar-producing. We possess no remedy which increases the glycogenic function of the liver, but we are in a more favorable position regarding the muscles. By increasing their functional activity we can stimulate the sugar-converting function of the interfibrillar substance of the muscles, and then we may dispose of a large portion of the excess of sugar circulating in the blood.

Clinical experience is fortunately entirely in accord with this deduction from the teachings of physiology. This fact has again and again been exemplified. It is nothing new; but its true import is unfortunately but too often lost sight of in the eager search for anti-diabetic, dietetic, or medicinal specifics. The subject of exercise is often dismissed by directing the patient to exercise in the open air without fatiguing himself. The insufficiency of this injunction is within the experience of every practical physician. It is a well-known fact that diabetics are, as a rule, loath to muscular exertion; lassitude is a common symptom, and something more than the mere suggestion is required to enforce the necessity of exercise upon these patients. Being based upon strictly scientific data, *the prescription of exercise should be as precise and exacting as that of the diet*, if we would obtain the legitimate advantages.

Dr. William Richardson, in his book on diabetes, furnishes us with a personal experience which all practical physicians will at once appreciate. He describes graphically how he was himself overcome by weakness and indisposition to exertion when suffering from diabetes.

"He could not walk a hundred yards without great fatigue; he frequently fell." "I began to take exercise regularly two or three times a day; wet or fine, I took it." "Gradually I gained strength, so as to be able to walk five or six miles a day without fatigue." "The exercise should be regularly sustained day by day; even in wet weather it should not be intermitted; of course great care should be taken against wet feet; it should never be carried to real fatigue; a feeling that exercise has been taken is the most that should be felt. To carry into effect regular and sustained muscular exercise requires great moral courage and energy, the languor and feeling of weakness are so great; but if the exercise be only carried out patiently and perseveringly the task will become not only more and more easy, will soon no longer be a task, but positively a pleasure."

I take occasion to again call attention to this point, because its importance, which I endeavored to emphasize in the description at the Academy, has since that time been again brought forward in the discussion of the same subject by the Fifth German Congress for Internal Medicine (THE MEDICAL RECORD, May 15, 1886, p. 573). Professor Stokvis, of Amsterdam, said: "He insists on muscular exercise, by *which alone* the percentage of sugar can be greatly diminished."

Professor Hartman said: "Alkaline remedies, the opiates, *active muscular exercise*, or muscular massage where the patient is not able to take active exercise, and observance of a good hygienic *régime* in general are the means he relies upon."

Professor von Mehring "had invariably noticed *considerable decrease, and even disappearance*, of sugar from the urine after prolonged active and passive exercise."

Professor Finkler "has the records of thirteen cases of diabetes, in which he succeeded in reducing the sugar in the urine from four hundred grains to one hundred and fifty grains and less per day by active and passive exercise, allowing small quantities of hydrocarbons. In some cases the sugar disappeared entirely."

In the discussion of the subject in the New York Academy of Medicine, referred to above, the writer's earnest advocacy of muscular exercise in diabetes was met by the argument from the principal speaker that it is very dangerous to make those suffering from the severe forms of diabetes take much exercise, although in ordinary cases exercise in the open air within the limit of fatigue is important and necessary; and another gentleman expressed himself wholly in accord with this view, as he had seen coma in children develop shortly after admission to the hospital, due to the fatigue and excitement, and in London it had been observed after long railway journeys.

Fearing lest these opinions may deter many from resorting to a measure which is so full of promise to the diabetic, I desire to reiterate what I said on that occasion, viz., that all valuable therapeutic measures are potent for evil as well as for good, and that a judicious selection of cases will eliminate possible dangers. That the latter have been exaggerated would appear from Professor Stokvis' essay, who says that diabetic coma *might* result from sudden and abundant production of acetone, etc., coming on *after unusual exertion—the fatigue of a long journey*.

Again, by a singular coincidence which demonstrates the great value of THE RECORD to the practical physician, the same number gives us in the able essay of Dr. Devlin important evidence on this point. On p. 545 Dr. Devlin reviews the histories of many cases of diabetic coma by Foster, Schmitz, Frerichs, Jaenicke, Jaksch, Quincke, and others. He says: "Among the important lessons drawn from these the most obvious is, that in them *the history of previous fatigue or over-exertion rarely appears*" (p. 549).

Without entering fully into this subject, which I propose to elaborate at some future time, I would ask a careful consideration of the clinical facts which I have here hastily brought together in addition to my personal experience.

SIMON BARUCH, M.D.

43 EAST FIFTY-NINTH STREET.

A SIMPLE METHOD OF KEEPING THE HYPODERMIC SYRINGE IN ORDER.—Dr. D. Tod Gilliam, of Columbus, O., writes: "A simple and efficient method for keeping the hypodermic syringe in order is as follows: Draw out the piston-rod, immerse the syringe in water, then push the piston home, when the chamber of the syringe back of the piston-head will be found filled with water which entered at the orifice through which the rod plays. This will not leak out, will keep your syringe in prime order, ready for any emergency, and will save money as well as annoyance by enabling you to use a syringe that would otherwise be discarded. As the device is so simple, entails no trouble, and the syringe being once filled need not be looked after for weeks or months if need be, I I thought it worth mentioning."

SPLENECTOMY GROWING IN FAVOR.—At the last meeting of the Medical and Chirurgical Society, London, Mr. Knowsley Thornton read a paper in which he related the particulars of two cases in which he had performed splenectomy. One ended fatally from internal hemorrhage following the operation. In the other, complete recovery ensued, but the girl acquired an enormous appetite. It had been noted in animals that the running powers and appetite were increased after the performance of experimental splenectomy.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 16 to May 22, 1886.

ELBREY, F. W., Captain and Assistant Surgeon. Sick leave of absence still further extended one year on surgeon's certificate of disability. S. O. 115, A. G. O., May 17, 1886.

CASTER, WILLIAM F., Captain and Assistant Surgeon. Granted leave of absence for one month, to take effect about June 1st, with permission to apply for an extension of one month. S. O. 55, Department of Texas, May 11, 1886.

BANISTER, JOHN M., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon, Fort Canby, W. T. S. O. 75, Department of Colorado. May 8, 1886.

EWING, C. B., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Leavenworth, Kan., and ordered for duty as Post Surgeon, Fort Supply, Ind. T. S. O. 48, Department of Missouri, May 13, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 27, 1886.

LAW, H. L., Surgeon. Ordered to the U. S. R. S. Wabash.

HAWKE, J. A., Surgeon. Detached from U. S. R. S. Wabash, and wait orders to sea.

OGDEN, F. N., Assistant Surgeon. Detached from U. S. S. New Hampshire, and wait orders.

BAKER, J. W., Assistant Surgeon. Ordered for examination preliminary to promotion.

WOODRUFF, CHARLES E. Commissioned Assistant Surgeon in the Navy, May 17th.

HENRY, CHARLES P. Commissioned Assistant Surgeon in the Navy, May 18th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 22, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
May 22, 1886.....	2	4	35	5	31	67	2	0
Deaths.								
May 22, 1886.....	0	2	12	5	1	30	1	0

A PLEA FOR RATIONAL THERAPEUTICS.—Under this title Dr. S. C. Dumm writes in the *Columbus Medical Journal* against agnosticism in therapeutics. He thinks that, while some diseases may eventually disappear if left to take their own course, almost all can be shortened or favorably modified by appropriate medication. Much permanent injury might be avoided by timely treatment, he asserts, which it would be criminal to withhold. The point made by the writer is enforced by the citation of several illustrative cases. There is little doubt that as much harm is done by a neglect of suitable remedies as by over-drugging. In medicine, as in everything else, there is a happy mean, to preserve which is the secret of success.

DR. HUTTON, OF FERGUS FALLS, MINN., ON DIPHTHERIA.—Dr. T. J. Hutton sends us some interesting facts concerning "Specific Treatment for the First Stage of Diphtheria." His opinions have been published previously in THE RECORD. He has treated, during the past five years, nearly two hundred cases of the disease. He regards diphtheria as a specific, septic sore throat; the typical form, unmodified by treatment, has three stages, viz.: First, a septic sore throat; second, laryngeal stenosis or sepsis; third, death from suffocation or sepsis. It is caused in man and beast by "crowd-poison," and the majority of attacks originate *de novo*. A sore throat from any cause makes diphtheria more easily contracted. The poison, once conveyed there, may develop deadly outbreaks in the cleanest and best-ventilated houses. The ultimate cause of diphtheria is waste body-matter eliminated in the breath. This body-waste or crowd-poison may return to the throat in gaseous form. In the region where Dr. Hutton practises the air is very pure, and the hygienic surroundings exceptionally good. He claims that his plan of treatment is specific—"not specially favorable, a sense in which this word is sometimes used, but infallible." The only limitations are that the disease shall be uncomplicated, and that the patient shall have been previously healthy He claims to have controlled diphtheria, grafted on tonsillitis, in markedly scrofulous subjects. His plan of treatment is essentially as follows: Fresh air is to be obtained under all circumstances. If the weather is not too cold, he keeps patients out of doors. He has the body, especially the extremities, kept comfortably warm, and enjoins perfect quiet in the sick-room. In later stages hot-water bottles may be placed around the patient if necessary. At the very outset a careful and deliberate examination is made of the throat, and the pseudo-membranous spots are painted with a solution of nitrate of silver, containing twenty to forty grains to the drachm of water, applied on a small camel's-hair pencil. The painting operation is proceeded with slowly, care being taken that every affected spot is completely touched up. If gagging occur, it is well; it throws every chink and cranny of the throat into full view. The strength of the solution depends on the age of the patient, the severity of the case, and the condition at the time of the first visit. The number of applications may vary from one to thirty. The applications, if properly made, are painless, as they are made to necrotic tissue void of all feeling. It may be well to remember that applications made accidentally to sound parts give to such parts the appearance of pseudo-membrane. All patients old enough to do so are required to gargle with a saturated solution of chlorate of potash until the symptoms ameliorate. Where gargling is impossible, *e.g.*, with young children, the remedy is given internally. Where a case has already advanced to a stage of severity, iron and quinine are added to the potash. A laxative (preferably calomel and soda) is given at the outset. Concentrated nourishment and stimulants, if necessary, are essential. As a disinfectant, particularly in nasal cases, carbolic acid is used.

MALARIA AND SMALL-POX.—During an epidemic of small-pox in a town in Italy Dr. D'Ortensio observed that the course of the variola was modified by an intercurrent attack of malarial fever. A patient upon whom the variolous papules were well developed was seized with a typical malarial paroxysm. The eruption almost immediately disappeared, but upon the cure of the fever by quinine the papules again made their appearance, and the small-pox ran its regular course.

AID FOR PASTEUR.—The French Government has been asked by Pasteur for a subsidy of 2,000,000 francs for the establishment of a hospital, and for 50,000 francs a year to operate it. It is said that the authorities are in favor of giving him at least the latter grant. The Académie de Médecine has already voted a grant of 10,000 francs to his institute.

THE "SPOOL OF THE BREAST."—Dr. H. V. Hull writes, in the *Albany Medical Annals*, that he was consulted by an Irishwoman, who told him that her daughter was not well, and that she thought "the spool of the breast was fast to the spine." She explained that a girl in the old country had had similar symptoms, and was relieved by the application of a cupping-glass over the lower end of the breast-bone, by which process "the spool was loosened." The girl seen by Dr. Hull was suffering from indigestion. The writer subsequently learned from a friend versed in Gaelic that the word "speal" meant "sword," and therefore the "speal of the breast" meant the "sword of the breast," or the xyphoid cartilage.

THE USE OF ATROPINE FOR PURPOSES OF DIAGNOSIS.—Dr. Barraquer writes, in the *Boletin de la Clinica Oftalmologica*, in condemnation of the practice of employing atropine to dilate the pupil prior to examination with the ophthalmoscope, as he says much damage may be caused by its indiscriminate use.

THE TREATMENT OF ANEURISMS BY THE INTRODUCTION OF WIRE.—The comparative powerlessness of modern surgery to effect a permanent cure of considerable aneurisms as they occur within the body was markedly shown, says *The Medical Press*, at the last meeting of the Royal Medico-Chirurgical Society, when Dr. Cayley read a communication descriptive of a case of thoracic aneurism treated by the introduction of steel wire into the sac. The patient was a man, aged forty-eight, who entered the Middlesex Hospital June 5, 1885, a pulsating tumor having appeared in his neck five days previously, symptoms of thoracic aneurism having been present since November, 1884. Tufnell's treatment and large doses of potassium iodide were tried without result, and on June 24th Mr. Hulke introduced into the tumor, through a fine canula, forty feet of steel wire. Subsequently a second introduction of wire, thirty-four feet nine inches long, was performed by Mr. Pearce Gould, in an endeavor to arrest urgent symptoms, but death occurred soon after, during a paroxysm of dyspnœa. No constitutional disturbance followed either operation. The discussion which ensued on the conclusion of the paper was both instructive and interesting, and exhibited in marked contrast the different opinions as to the value of operative interference held by physicians and surgeons respectively. Dr. George Johnson's contention, however, that there is danger of local irritation, ulceration, and embolism, associated with the introduction of wire into aneurisms, was not borne out by the history of Dr. Cayley's case, although an instance was cited by Dr. Paul, from the records of the Madras Hospital, in which signs of inflammation were produced by the introduction of horse-hair. Mr. Barwell made a solid contribution to the discussion in the shape of a list of eight cases in which the mode of treatment in question had been adopted, all terminating fatally; but he contended that as yet the value of the proceeding could not be fully estimated. The most cheering view of the situation was taken by Messrs. Bryant and Holmes, who both succeeded in extracting crumbs of comfort from the seemingly hopeless accounts of successive failures; and Mr. Hulke, while condemning such methods as electrolysis and administration of ergot, also appeared to look forward with a certain amount of confidence to the future development of the plan of treatment by foreign substances in the aneurismal sac.

HEMORRHAGE FOLLOWING COITUS.—Dr. Lvoff reports in the *Russkaya Meditsina* a case of a newly married woman to whom he was called on account of a profuse hemorrhage occurring shortly after the first coitus. The hymen was ruptured, but this was not the source of the hemorrhage, as the blood was seen flowing in a steady stream from the mouth of the uterus. The writer believed the hemorrhage to have been due to active congestion of the uterus occasioned by the copulative act.

ERYTHEMA NODOSUM.—At a recent meeting of the Clinical Society, London, the somewhat well-known subject of erythema nodosum was brought to the fore by Dr. Stephen Mackenzie. Assisted by other workers, he has been able to collect particulars of no fewer than one hundred and eight cases. From an analysis of these he found that five females were attacked to every male, and that most cases occurred during the second or third decennial period of life, *i.e.*, during the age-period in which rheumatism is of most common occurrence. There were thirty-four cases (thirty-one per cent.) in which symptoms of rheumatism occurred, and twelve cases in which the patient had previously suffered from it. In twenty cases some definite cardiac lesion was made out. Dr. Mackenzie maintained that he was justified in concluding that erythema nodosum is frequently associated with definite rheumatic symptoms, also that heart disease (endocarditis) may arise during an attack of erythema nodosum, both in cases in which arthritis is present and in cases in which there is no affection of the joints, and that these conclusions justified the inference that erythema nodosum is frequently an expression of rheumatism, even when no other definitely rheumatic symptoms are present.

A NOVEL METHOD OF BLEEDING.—In a case of a woman suffering from very evident overloading of the vascular system, but whose friends objected strenuously to venesection, Dr. Coppinger resorted to aspiration of the jugular vein. The patient had been accustomed to receive hypodermic injections, and made no objection to the introduction of the needle of the aspirator. A sufficient quantity of blood was abstracted in this way, and the patient's urgent symptoms were relieved.

REGULAR POLYGLOTS.—Our esteemed contemporary, *The St. Louis Medical and Surgical Journal*, says that its editors read and translate, with fluency and correctness, French, German, Italian, Spanish, Norse (*sic*), Dutch, and Russian. Happy editors! We can but admire while we envy them. Norse was such a nice language.

QUINSY AS A RHEUMATISM.—At a recent meeting of the Chicago Medical Society, Dr. J. S. Knox read a paper in which he maintained that, in a large proportion of cases, quinsy is a rheumatic inflammation (*Medical and Surgical Reporter*). He was led to this conclusion from having observed the disease, in the vast majority of cases, in individuals of a decided rheumatic tendency; from the success of antirheumatic treatment, and from the similarity between the symptoms of quinsy and those of rheumatism.

THE UTILITY OF OPERATION IN CANCER OF THE BREAST.—Dr. D. Hayes Agnew says that it is very doubtful if, taking the general run of operations for mammary carcinoma, life is materially prolonged.

A RADICAL TREATMENT FOR MASTURBATION.—Dr. J. C. Pennington, of Andover, Mass., writes as follows: "I feel constrained to report a curious case of self-treatment which is worthy of the *Mikado*. The punishment was made to fit the crime in this wise: The patient, a boy of fifteen, being discouraged by his fruitless endeavors to free himself from the worst of all habits, deliberately selected the privy as the theatre of his operations, and, holding the offending organ by the prepuce with one hand, took aim with a small pistol, and shot it, with the other. The ball (22 calibre) entered on the dorsal surface; running beneath the skin it entered the glans behind the corona, emerged on its dorsal surface, and again penetrated the prepuce before making its final exit. At the sight of blood the boy's heroism evaporated, and he screamed for help. As usual the fair sex were most prompt in running to the rescue, and it was some time before a man arrived whom he could take into his confidence. Fortunately the urethra is not wounded, and a speedy recovery may be expected."

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Original Articles.

CHRONIC STENOSIS OF THE LARYNX TREATED BY A NEW METHOD, WITH REPORT OF A CASE.

By JOSEPH O'DWYER, M.D.,

NEW YORK.

CHRONIC stenosis of the larynx is one of the most unsatisfactory diseases that the physician is called upon to treat. Tracheotomy must be resorted to, sooner or later, to save the patient from a painful death, and, as a rule, in such cases the tracheal tube, with all its attendant discomforts and repulsiveness, has to be worn through life.

Various dilating instruments have been invented for this class of cases, notably by Morel-Mackenzie, Navratil, Whistler, and Schroetter. The metallic plugs or bougies devised by the latter have so far proved the most successful. To use them a tube in the trachea is necessary, but the method is slow, painful, and uncertain. These plugs are made of block tin, somewhat triangular in shape and about one inch and a half in length.

First tracheotomy is performed, then a plug of suitable size is passed through the glottis, and the lower end fastened in the fenestrum of the tracheal canula by means of a bolt, which takes the place of the inner tube. As the stricture is dilated the plug is removed by a string, which is left fastened to it, and a larger one inserted; of these dilators there are twenty-four sizes.

Before devising these short bougies Schroetter tried long vulcanite tubes, which protruded from the mouth and were held in position by the hand. But they could be kept in position only a short time, on account of the severe irritation and constant tendency to retching which they produced. He was therefore compelled to abandon their use.

Bosworth, after describing the different instruments just referred to, and the methods of using them, says:[1] "The treatment of laryngeal stenosis by means of any of the above-mentioned plans is necessarily tedious and protracted, involving, as a rule, a course extending over from twelve to eighteen months. Yet, when we consider the alternatives presented to the sufferer, of submitting, on the one hand, to this tedious process, and, on the other hand, to the terrible prospect of wearing a tracheal tube during life, it would seem that there should be no question as to the advisability of the treatment, provided that it offers any certainty as to the ultimate cure. Unfortunately, this cannot be assured. Schroetter has reported and exhibited a number of cases in which the gradual dilatation by his bougies has resulted apparently in a perfect and permanent cure. On the other hand, it should be stated that others have not usually attained the same uniform success in their efforts."

Although I have treated only a single case of chronic stenosis with my laryngeal tubes, I am fully convinced that they will prove infinitely superior to anything yet devised for the relief of this unfortunate class of sufferers.

In the use of these tubes tracheotomy is never indicated, and ether rarely. They are inserted through the mouth and rest solely in the larynx and trachea, the upper end being completely below the epiglottis. They facilitate rather than interfere with respiration, and permit the patient to swallow solids and semisolids, and, to a certain extent, fluids.

The tubes are two and a half inches long. A cross section presents an elliptical outline, with an antero-posterior diameter about twice that of the transverse. At the upper end of the tube is an expansion or shoulder called the head, which rests in the cavity of the larynx, and serves to prevent its slipping through into the trachea. The head has a posterior curve, to allow the epiglottis to take its normal position and to perform its functions. Immediately below the head is the neck of the tube, which has a very narrow transverse diameter and occupies the chink of the glottis. The rest of the tube, called the body, extends into the trachea, and has the shape of a double wedge to prevent its easy expulsion.

Mrs. Van A——, aged forty, contracted syphilis from a worthless husband twelve years ago, and since then the throat has seldom been free from ulceration. Two years ago the voice became husky, and she began to suffer from shortness of breath on exertion. These symptoms gradually increased, and for two months she was obliged to sleep either sitting in a chair or propped up in bed to almost a sitting position. She came under my care at the New York Foundling Asylum, December 5, 1885. Immediate tracheotomy had been advised a short time previously by one of our leading laryngologists.

She was losing flesh and strength. The voice was husky; and while the patient could breathe fairly well in a state of perfect rest, the least exertion induced severe dyspnœa, accompanied with stridor, and during sleep the respiration was very noisy. Frequent suffocative attacks occurred during sleep, and not only interfered with rest, but kept the patient in constant fear of choking to death. She had pain in the right side of the larynx, and constant soreness and distress in the chest from straining of the respiratory muscles.

Examination of the throat showed adhesion of the soft palate to the posterior wall of the pharynx on both sides. The larynx was examined by Dr. W. K. Simpson, Dr. P. A. Callan, and others. The epiglottis was somewhat thickened and deformed from cicatricial contraction, its posterior surface about the seat of the cushion projecting backward so as to exclude a view of the anterior commissure of the cords. From the base of the right arytenoid there arose a membranous band which encircled the entire left half of the larynx, leaving but a small aperture between the free border of the membrane and the right cord, a small part of the latter only being visible. The left cord was entirely covered. Arytenoids somewhat swollen; no ulceration.

December 5, 1885, at 3.30 P.M., in the presence of Dr. J. L. Smith, Dr. P. A. Callan, and Dr. Dillon Brown, after several trials and the use of much force I passed through the stricture my smallest adult tube, the larynx having been previously sprayed several times with four-per-cent. solution of cocaine. As soon as the immediate effects of the operation subsided the patient expressed herself as breathing better than before the insertion of the tube. She slept the following night, in the recumbent posture, for the first time in over two months, and complained of very little irritation from the tube.

December 6th.—Ate two boiled eggs and a piece of toast for breakfast, which she swallowed without much difficulty, but fluids produced more or less coughing.

December 7th.—Slept well; had some dyspnœa, which

[1] Bosworth, On Diseases of the Throat, p. [illegible]

immediately disappeared when the air was moistened with steam. At 11 P.M. complained of pain in the larynx, and thought she felt the tube change its position. It was therefore removed, having been in the larynx fifty-six hours.

The length of this tube is 2½ inches, transverse diameter of head $\frac{5}{8}$ inch, antero-posterior diameter of neck $\frac{10}{32}$ inch, and transverse diameter of neck $\frac{6}{32}$ inch. In consequence of having to modify the shape of the head of the next tube I was unable to operate again until December 11th. During the interval the patient's breathing was much improved, and she was entirely free from the suffocative attacks during sleep.

December 11th.—At 3.20 P.M. I tried to insert tube No. 2, but it required more force to push it through the stricture than I considered justifiable, and I therefore re-inserted No. 1.

At 2 P.M., December 12th (twenty-two and a half hours later), I removed it, and immediately inserted No. 2 without difficulty.

The antero-posterior diameter of the neck of this tube is $\frac{12}{32}$ inch, transverse diameter $\frac{7}{32}$ inch.

December 13th.—At 2 P.M. the tube was coughed out, twenty-four hours after its insertion. The calibre of this tube was considerably larger than that of No. 1, and allowed free respiration even with moderate exercise.

December 14th.—Tube No. 3 inserted at 7.45 P.M. It has the same dimensions as No. 2 except that the antero-posterior diameter of the neck is $\frac{1}{24}$ inch greater.

December 15th.—Tube caused pain and irritation, with hacking cough, which was relieved by an opiate. It was expelled at 10 A.M., having been retained fourteen and one-fourth hours. For the first time some tenacious mucus was found in the calibre of the tube.

As there was considerable irritation of the larynx it was allowed to rest until December 18th, when No. 3 was reinserted. It was coughed out the next morning, eleven and a half hours after its introduction. As this was the largest tube I had, it was reinserted daily until December 22d. The patient left the hospital December 23d to spend the holidays at home, and returned January 3, 1886. A careful examination of the larynx by Dr. Simpson and others showed no trace of the cicatricial membrane except a narrow band extending between the arytenoids anteriorly. The left cord, which was now distinctly visible, appeared broader than the right and its movements were somewhat restricted. Arytenoids still somewhat swollen; no sign of ulceration; voice good.

As there was ample breathing space in the chink of the glottis and no dyspnœa, further dilatation of the larynx was not considered necessary for the present. She was therefore requested to report for observation once a week and for about six weeks enjoyed excellent health, having gained considerable flesh and strength. But gradually the dyspnœa returned, and she was readmitted to the hospital, March 4, 1886, almost two and a half months from the time she was discharged.

Examination of the larynx showed no material change, there being still ample breathing space between the cords. Therefore the only possible explanation of the return of the dyspnœa was the existence of subglottic stricture, which had recurred. This condition was suspected in the beginning, from the fact that on inserting the tube the lower end after passing the rima was deflected sharply to the left, showing the presence of thickening on the right side, and the force required to overcome the resistance was out of all proportion to what could be offered by the membranous band above the cords. Tubes No. 1, 2, and 3, used on the previous occasion, were passed into the larynx in rapid sucession, and retained from twelve to forty-two hours at a time. On the fifteenth day after admission an additional size, No. 4, was introduced. The antero-posterior diameter of the neck of this tube was one-half inch, transverse diameter one-fourth inch, diameter of head three-fourths of an inch. This tube was worn during the night only until March 31st, when, the stricture being sufficiently dilated, she left the hospital, having been under treatment twenty-seven days.

I now introduce the tube once in two weeks and leave it in over night, and intend soon to increase the interval to a month, which I believe will be often enough to prevent a recurrence of the stricture.

To summarize: During the first period of treatment of eighteen days the tubes were inserted nine times, and retained in the larynx one hundred and seventy-three hours. During her second stay in the hospital of twenty-seven days they were introduced thirteen times, and retained two hundred and four hours.

The introduction and removal of the tubes was accomplished with the same instruments used in intubation of the larynx in children.

I wish to express my obligations to Dr. W. K. Simpson for valuable advice and assistance, and to Dr. Dillon Brown, the resident physician, for unremitting care and attention during the early part of the treatment of this case, which was necessarily attended with more or less anxiety.

Since writing the foregoing a patient was sent to me who has worn a cannula in the trachea for two years for supposed bilateral paralysis of the glottis openers. She was admitted to the New York Foundling Asylum for the purpose of removing the vocal cords, an operation which, as far as I am aware, has never been performed. If incurably paralyzed and lying in apposition these organs are worse than useless, and their removal would not only allow of the free ingress and egress of air, but also the ability to whisper distinctly. It proved to be almost complete occlusion of the larynx from adhesion or growing together of the cords, but whether paralysis preceded this condition or not remains to be seen. Under the influence of ether I enlarged the tracheal opening, broke up the adhesions, and inserted a tube in the larynx, which she is now wearing.

853 Lexington Avenue.

How the Founder of the Society of Friends Set a Dislocated Neck.—In an interesting and scholarly address by Dr. J. J. Levick, on the "Early Physicians of Philadelphia," he tells us how George Fox travelled through New Jersey and New England, keeping a faithful journal of all that occurred. "In 1672 he was passing through New Jersey, then but sparsely settled. He had spent the day with Richard Hartshorne, at Middletown Harbor (the ancestor, if I mistake not, of one of our present Board of Managers, and of three physicians of that name who have so well served this hospital), and next morning went on to Shrewsbury. 'While at Shrewsbury,' writes Fox, 'an accident befell which for the time was a great exercise to us. One John Jay, a Friend of Barbadoes, who came with us from Road Island, being to trie a horse got upon his back, and the horse fell a running and cast him down upon his head, and brake his neck as the people said. They that were near him took him up dead, and carried him a good way and laid him on a tree. I got to him as soon as I could, and feeling on him, concluded he was dead. As I stood by him pitying him and his family, I took hold of his hair, and his head turned anyway it was so limber. Whereupon throwing away my stick and my gloves, I took his head in both my hands, and setting my knees against the tree I raised his head and perceived there was nothing out or broken that way. Then I put one hand under his chin and the other behind his head, and raised his head two or three times with all my strength and brought it in. I soon perceived his neck began to grow stiff again, and then he began to rattle in his throat, and quickly after to breathe. The people were amazed, but I bid them have a good heart and be of good faith; to carry him in the house, give him something warm to drink, and put him to bed. After he had been in the house a while he began to speak, but did not know where he had been. The next day he was pretty well, and many hundreds of miles did he travel with us after this.'"

ON THE ADOPTION OF SOME GENERAL SYSTEM OF DISTRICTING THE NEW YORK STATE ASYLUMS.[1]

By FREDERICK PETERSON, M.D.,

[illegible]

WHEREVER an asylum for the insane is established it will be found that from all directions toward it both the acute and chronic insane of neighboring territory will gravitate. The regions nearest, which find the institution most accessible, are benefited most; and it has been mathematically demonstrated that several times as many insane come from a circle about the asylum having a radius of fifty miles as from the remoter portions one hundred and two hundred miles away.[2]

The people who have insane in charge, the county or city officers who apprehend them, the doctors who examine, the judges who approve the certificates—it is the duty of none of these to determine whether cases are recent or of long standing. They only decide that treatment and custody are required, and see that such cases are removed to the nearest institution for the insane. An asylum becomes, then, the centre of a district to which all the acute and chronic insane of that region will be sent, according to natural laws which no amount of effort can overcome.

Hence, in the older countries such institutions are placed in districts, and in the best attainable positions in such districts. England, France, and Germany are notably so districted. Their asylums receive both acute and chronic insane. The experiment of constructing separately managed institutions for the incurable has been tried abroad and proved undesirable.

Good systems of districting may be found in some of our own States. Pennsylvania is an excellent example, with its five districts and large mixed asylums in their railroad centres. It is contemplated to increase the capacity of each of these to 2,000 beds. This is a rational system. In time these institutions will not be sufficient for all of the insane of that State, and subsidiary districts must be established, while the healthy, quiet, harmless incurables can be given room in county asylums.

The more easily attainable an asylum, the more speedily can cases be put in its charge.

The sooner cases requiring hospital treatment are removed to an institution, the more quickly do they recover.

For the same reason of nearness can the visits of relatives be more frequent when required as a remedial measure, or when prompted by affection for many whom this dread disease may doom to life-long isolation from home and friends.

Though at times it has been found expedient to construct separate institutions for the chronic and acute insane, yet most alienists are agreed, at the present day, that it is not the best policy, and that the hospitals which receive all classes of diseased minds have a wider sphere of usefulness open to them.

The Willard Asylum for Chronic Insane was created by the Legislature at a time when the overcrowding of the insane into poor houses demanded immediate relief, and that it was the wisest action to perform at that time its subsequent history has shown. But the conditions under which its creation was required exist no more. The policy of the State in establishing another institution for chronic insane at Binghamton is to be deplored and condemned. The time has now come for devoting Willard and Binghamton to nobler purposes than their present legal position permits them to have, purposes for which they are already adapted. They should no longer be places for the custody and for the support merely of useless members of society, but they should be legally allowed to receive and treat the curable acute insane of their neighborhoods, whether public or private charges.

To more adequately show that the present system of separating the chronic and acute insane is unwise, and also unsuccessful, let me call attention to its failure in this State by means of the following facts:

THE CHRONIC INSANE IN SO-CALLED ASYLUMS FOR ACUTE INSANE.—From the annual reports of 1884 I find that the number of chronic cases admitted during the fiscal year into our State asylums for acute insane can be tabulated in this wise:

ASYLUMS.	ber admitte	admitted	in ad	P ch
Utica	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Poughkeepsie ..	[illegible]	90	[illegible]	68 08
Middletown	[illegible]	[illegible]	72	[illegible]

It will be seen from this table than an average of *nearly fifty-three per cent., or over one-half, of the admissions into our so-called asylums for acute insane are in reality chronic cases.*

This is the percentage of admissions alone, but the percentage of chronic insane present in any of these asylums, on any day in the year, is far higher than this. Happily, to illustrate this point, the Hudson River State Hospital can give us a statement which it has published for several years. It is a table showing the duration of insanity in the patients present on September 30, 1885.

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
From three to six months	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
From two to three years .	[illegible]	[illegible]
From three to five years .	[illegible]	[illegible]
From five to ten years	[illegible]	[illegible]
From ten to twenty years	[illegible]	[illegible]
Over twenty years....	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
Totals	[illegible]	[illegible]

We gather from this table that out of 389 patients present in this asylum for acute insane, on that day, 314 were chronic cases. Out of the remaining 73 cases, that had been insane under one year, how many were general paretics, how many paralytics, how many demented, how many curable?

This may be taken as an example of the condition of patients, in this respect, in the other asylums for acute insane.

Can we not conclude from this that any one of these four asylums for acute insane will accommodate all of the acute insane of the State?

The State has caused accommodations for 1,800 acute insane to be made, when there are altogether only 300 to 400 cases at any one time.

THE ACUTE INSANE IN SO-CALLED ASYLUMS FOR CHRONIC INSANE.—Now, if we turn our attention to the institutions for chronic insane, we are startled to find here, too, natural law asserting itself, in spite of the effort to overcome it.

The Willard and Binghamton asylums for chronic insane both receive acute insane as patients.

They really act as district asylums for both acute and chronic insane. The Binghamton asylum has not yet been long enough established to have a large number of acute cases put down in its annual reports; still, a few are acknowledged. But on turning to the accompanying table, showing the insane in the five counties immediately about, and having easiest access to the Willard Asylum, we observe that out of their 278 insane, according to the State Board of Charities' last report (1884), 6 only

[1] Read before the State Medical Society at Albany, February 4, [illegible].

[2] See Dr. Edward Jarvis' article on the subject in the American Journal of Insanity, Vol. XII.

were in institutions supposed to receive acute insane, the remaining 272 being inmates of Willard.

Counties.	In Willard.	In other State asylums.
Ontario	15	2
Seneca	50	1
Yates	43	..
Schuyler	31	..
Tompkins	53	3
Totals	272	6

Some of the 6, perhaps all, may be upon private charge. Referring to the annual reports of Willard, it will be seen that every year some acute insane are admitted. There were thirty or more cases of acute mania and melancholia received there in 1884.

We have nothing to say against this, but everything in its favor. This is as it should be. The Willard Asylum should receive all the acute insane of the region that would find it of most convenient access.

It is the injustice of the present policy, which requires that an acute case of insanity, a mile from Willard, should be carried to distant Utica or Buffalo, when here is an asylum, charming in its surroundings, excellent and successful in its management, concerning which an eminent gentleman once said: "We failed to discover even the shadow of a reason why a person becoming insane in the neighborhood of this beautiful asylum should be sent to Utica because he was considered curable."

Of the so-called Districting of the Institutions for Chronic Insane.—Some may be aware that the State has been districted for the chronic insane.

The Binghamton district consists of twenty-one counties, and the asylum is not located in the district at all.

The Willard district consists of eighteen counties, six of which are in the northern part of the State, as far as convenient from the asylum.

Seventeen counties are exempted from the Willard Asylum act by the State Board of Charities, because they have asylums for their own chronic insane.

Four have been exempted by special statutes.

To point out the absurdity of this system of districting, I may here state that the Willard Asylum now contains more than 860 patients belonging to the Binghamton district; and that the Binghamton Asylum has patients from seven counties of the Willard district, and from seven exempted counties. Hence this division can hardly be said to be happy.

However, other more important facts reveal the necessity for change in the policy of the State with regard to the distribution of the insane, which we will contemplate in the following paragraphs:

The Depopulation of the Binghamton Asylum Possible.—It is probable that the Binghamton Asylum may become a total loss to the State through depopulation, for reasons which will presently appear.

The establishment of this institution so far outside of the district whose insane are required to be sent to it is a source of great inconvenience, loss, and sorrow to the people of the eastern part of the State.

Patients sent there are generally separated forever from home and kindred—people too poor to spare the time or money for so long a journey. Relatives are thus cut off from seeing those dear to them. Many patients are appreciative of the isolation awaiting them in the distant institution. The visits of friends are often of great remedial value in the treatment of insanity. Even this curative measure is denied them.

The cost of transfer of patients from the almshouses along the Hudson River and from the Poughkeepsie Hospital is in itself a serious burden to tax-payers. This has been estimated to be from thirty to one hundred dollars per patient. A little more than the latter sum would pay a year's board at Willard.

The Binghamton Asylum is so difficult of access to the counties constituting its district, that if the institution had been constructed at Baltimore, Buffalo, or Washington, the cost and trouble of transportion of patients and the inconvenience of visitation would be less than now. The county superintendents choose the most feasible route for the journey with their charges, which is by way of Albany and Utica—nearly three times the distance across in a straight line!

Take a map of New York and draw a line along the northern boundary of Jefferson and Lewis, the eastern of Lewis, Oneida, Madison, Chenango, and Broome, and thus divide the State into two nearly equal geographical sections, the eastern and western halves.

The twenty-nine counties of the western half of the State had (1880) an aggregate population of 1,706,728; the thirty-one counties of the eastern half, 3,376,143, or very nearly twice that of the former.

The western half paid in 1884 a State tax of $1,052,599.04; the eastern half, $3,529,579.84, or more than three times the amount paid by the former.

The western half has at present, approximately, 5,370 insane, the eastern, 11,252, or more than twice as many as the former.

The western half has five of the State asylums, with 3,500 beds, the eastern but two, with 750 beds.

If it be objected that the Auburn Asylum for Insane Criminals is for the benefit of the whole State, then the Middletown institution must also be excepted as having been built for the homœopaths of the whole State. Deducting, then, 150 beds for the former, and 400 for the latter, we have this remarkable fact:

The eastern half of the State, having twice the population, paying three times the amount of State tax, supporting twice the number of insane, is given by the State one asylum, with 350 *beds, while the western half is furnished with four asylums, having* 3,350 *beds!*

It may not be amiss to state here, also, that New York City and Brooklyn, which together pay more than half of the whole State tax, which have contributed more than half of the cost of the seven insane asylums of the State, and have often been called upon for the same proportion toward the maintenance of indigent and pauper lunatics in these asylums, have provided their own asylums and have always supported their own insane.

It is such unjust apportionment that rouses public opinion. The same popular voice is against the tearing of the insane from friends and dooming them to hopeless separation.

It is because of these things that the counties along the Hudson River must ultimately construct their own asylums for chronic insane, thus correcting in a measure these abuses, and at the same time bringing each institution into immediate and valuable commercial relation with the county that creates and supports it. Albany, Westchester, Ulster, and Dutchess Counties, having nearly seven hundred chronic insane in the asylums of the western part of the State, are already agitating such projects. Unless other provision is made for this section, this will soon be carried into execution, and the same be accomplished eventually in every other remote county of the Binghamton district, as the popular outcry for justice grows louder and the burden of caring for the insane grows heavier in each.

Do not these facts point to the depopulation of the Binghamton Asylum? With almost every county of its district providing for its own chronic insane, whence will come its patients?

Another feature in this injudicious transfer of the insane from the eastern to the western half of the State is that the county superintendents of the poor are often so much influenced by the piteous appeals of relatives that they will not remove the chronic insane from the Hudson River State Hospital. When unable, by appeal or influence, to win the officials to their cause, the friends will often pay to the county the difference in cost of maintenance at the acute and chronic institutions. Thus,

while it is cruel to refuse the supplications of unhappy relatives to keep their insane near them, it is, under the present state of things, also wrong that chronic and incurable cases should be supported for years in this hospital, to the extent that they are forced to be. It leads to the painful overcrowding, so apparent in this institution.

THE REMEDY FOR THESE EVILS LIES IN A PROPER SYSTEM OF DISTRICTING THE ASYLUMS OF THE STATE.—The remedy for the present system, or rather lack of system, is to divide the State into districts, each of which shall have an asylum, for both acute and chronic insane, as near its railroad centre as possible.

The total number of insane in the State is now about 17,500. October 1, 1884, the number was approximately 16,622, as compiled by myself from various State reports and from figures furnished me by the Census Bureau at Washington.

SHOWING APPROXIMATELY THE NUMBER OF INSANE IN THE STATE OF NEW YORK [illegible]

Number.	[illegible]	[illegible]	[illegible]
1. [illegible]	[illegible]	229	[illegible]
2. Alleghany	58	[illegible]	[illegible]
3. [illegible]	[illegible]	[illegible]	[illegible]
4. [illegible]	[illegible]	[illegible]	[illegible]
5. [illegible]	[illegible]	224	[illegible]
7. Chautauqua	[illegible]	[illegible]	[illegible]
7. Chemung	[illegible]	[illegible]	[illegible]
8. Chenango	[illegible]	[illegible]	[illegible]
9. [illegible]	[illegible]	60	65
10. Columbia	[illegible]	[illegible]	[illegible]
11. Cortland	[illegible]	[illegible]	[illegible]
12. Delaware	[illegible]	[illegible]	[illegible]
13. Dutchess	[illegible]	305	[illegible]
14. Erie	[illegible]	[illegible]	[illegible]
15. [illegible]	[illegible]	[illegible]	[illegible]
16. Franklin	[illegible]	[illegible]	[illegible]
17. Fulton	[illegible]	[illegible]	[illegible]
18. Genesee	37	[illegible]	[illegible]
19. [illegible]	[illegible]	61	[illegible]
20. [illegible]	[illegible]	[illegible]	[illegible]
21. Herkimer	[illegible]	[illegible]	[illegible]
22. Jefferson	[illegible]	[illegible]	[illegible]
23. [illegible]	1,420	[illegible]	[illegible]
24. [illegible]	[illegible]	43	[illegible]
[illegible] Livingston	[illegible]	[illegible]	[illegible]
[illegible] Madison	[illegible]	87	[illegible]
27. Monroe	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	70	[illegible]	[illegible]
[illegible] New York	1,274	[illegible]	[illegible]
[illegible] [illegible]	108	67	[illegible]
31. [illegible]	336	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	108	[illegible]	[illegible]
[illegible] [illegible]	118	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
36. Oswego	[illegible]	[illegible]	[illegible]
37. Otsego	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
39. Queens	[illegible]	[illegible]	[illegible]
40. Rensselaer	361	[illegible]	[illegible]
41. Richmond	[illegible]	[illegible]	[illegible]
42. Rockland	[illegible]	[illegible]	[illegible]
[illegible] St. [illegible]	[illegible]	[illegible]	[illegible]
44. Saratoga	[illegible]	[illegible]	[illegible]
45. Schenectady	[illegible]	[illegible]	[illegible]
46. Schoharie	[illegible]	[illegible]	[illegible]
47. Schuyler	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
49. [illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
51. Sullivan	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
53. Tompkins	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
55. Warren	[illegible]	[illegible]	[illegible]
56. Washington	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
58. Westchester	[illegible]	[illegible]	[illegible]
59. Wyoming	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

The key to districting the State is to make use of asylums already constructed, to form each district of counties having easy access to the institution, to apportion as nearly equally as possible the population and the number of insane, and to permit each asylum to care for both acute and chronic insane.

The advantages of this policy are :

1. The ease with which friends and relatives may visit patients.

2. The speed with which recent cases can be put at once under treatment.

3. The reduction in cost of transportation and maintenance.

It has been demonstrated that as the number of patients in an institution increases (at least as far as 2,000) the *per capita* cost of maintenance steadily decreases.

It is clear that our asylums for acute insane are receiving $4 to $4.50 weekly for cases supposed to be recent, when, as hereinbefore shown, an average of fifty-three per cent. of their admissions alone are chronics.

It is equally clear that Willard, receiving $2.42 weekly *per capita*, treats thirty or more cases of acute insanity annually at that price.

It is probable that the average *per capita* weekly cost of all the insane in all of these asylums under the new system need not exceed $2.50.

Having proven that any *one* of the State asylums built for the acute insane can accommodate *all* of the acute insane of the State, it is evident that each is already sufficiently able to care for the acute insane of its own proposed district, sufficiently beautiful in its surroundings, sufficiently luxurious in its architecture. Consequently the additional buildings necessary on the grounds of each should be of the plainest, most economical, yet durable character, because they are to receive the chronic and incurable cases.

Separate buildings for the various classes of patients should be constructed; for the trusty laborers, simple and substantial; for the violent, destructive, and noisy, strong, and with many single rooms; for the epileptic, for the paralytic, for the filthy, roomy and well ventilated; for the quiet and idle, plain, frugal, and homely.

The districts proposed are as follows :

1. The Buffalo or Western.
2. The Willard or Middle.
3. The Binghamton or Southern.
4. The Utica or Northern.
5. The Hudson River or Eastern.
6. The Plattsburg or Northeastern.

New York and Kings Counties constitute districts in themselves, as they take complete charge of their own insane, and will, in all likelihood, continue to do so. They are, therefore, not included in this division. If, however, justice should ever be done them, and their institutions be converted into State asylums, New York would be a district in itself, and a great asylum might be erected somewhere on Long Island to receive not only all the Kings County insane, but those from the rest of the island. With a New York district and a Long Island district added to the above, the system would be complete.

The Auburn Asylum for Criminals and the Homœopathic Asylum at Middletown are, for obvious reasons, not given districts, both having been built as special hospitals to accommodate certain classes of the whole State. Were it possible or just to force some of the counties to send all their insane to a homœopathic institution, the Middletown Asylum might be given a district consisting of Sullivan, Ulster, Orange, Rockland, and Richmond Counties, which have easy access to it, without interfering particularly with this plan of districting.

The Buffalo District.—The district to be accommodated by the asylum at Buffalo consists of eight counties, Niagara, Orleans, Genesee, Erie, Wyoming, Chautauqua, Cattaraugus, and Alleghany, having, according to the census of 1880, a population of 530,856, and an approximate insane population of 1,579. As will be seen, Buffalo is particularly well adapted to the wants of an asylum. Railroad centres radiate from it into every part of its district. It is like the centre of a spider web,

This institution has now 350 beds. It should be gradually enlarged to a capacity of 2,000, as the district demands it. It may be objected that some of the counties already have asylums, like Erie with its 300 patients. But even Erie County has patients now at Willard. It had last year a total of 190 insane in other institutions than its own.

The Willard District.—The counties constituting the Willard district are eleven in number—Monroe, Wayne, Cayuga, Livingston, Ontario, Seneca, Yates, Schuyler, Tompkins, Steuben, and Chemung—having a total population of 575,810, and an approximate insane population of 1,867. This institution has 1,800 beds, and is therefore almost large enough to meet the requirements of the district. It will need a small building for acute insane. Had we our choice of situations, the asylum would not have been placed so far as it is from a railroad centre. Still, for the territory as laid out, it is not so badly located. It lies nearly midway between the natural travel centres of the district—viz., Geneva, Ithaca, and Watkins Glen.

Here, too, it may be objected that Wayne and Monroe counties have their own chronic asylums, and we add that they are already overfull, and must overflow into Willard. Both have patients in Willard now, and their number must increase.

The Binghamton District.—The counties to constitute this district are the nine—Onondaga, Cortland, Chenango, Tioga, Broome, Otsego, Schoharie, Delaware, and Sullivan—which will find Binghamton of easy access, because that city is a good railroad centre for this region. These counties had, in 1880, an aggregate population of 425,284, and now an approximate insane population of 1,295. The institution has at present, I believe, a capacity of 800 beds. With the exception of the Willard, the necessity for increased accommodation for insane is greater in every other district of the State at present than at Binghamton. In time this asylum must be slowly enlarged to meet the increasing wants of the district.

The Utica District.—Utica is a railroad centre, and an excellent situation for an asylum. The counties which will find it of easy access are nine—Jefferson, Lewis, Herkimer, Hamilton, Oswego, Oneida, Madison, Fulton, and Montgomery—having in 1880 a total population of 450,909, and an approximate insane population of 1,464. The Utica institution has 600 beds, but should also be increased in size as required, to accommodate all the insane of its proposed territory.

The Hudson River District.—This district has a different conformation from the others, owing to its lines of travel, which lie chiefly along the great river flowing down its median line. The natural centre of this district must be along this river—the Hudson River State Hospital at Poughkeepsie—half way between New York and Brooklyn on the one hand, and Albany and Troy on the other, having a population of 3,000,000 within two hours' travel. This district should consist of fourteen counties, viz.: Schenectady, Albany, Rensselaer, Greene, Columbia, Ulster, Dutchess, Orange, Putnam, Rockland, Westchester, Richmond, Queens, and Suffolk. They had in 1880 a total population of 962,933, and at present an approximate insane population of 3,408. This is, of course, as before stated, exclusive of New York and Brooklyn. The capacity of the Poughkeepsie institution is but 350 beds, and hence needs enlarging to accommodate 2,000 patients very soon. The name Hudson River is given to this district, because it will be remembered that it contains two asylums, that at Poughkeepsie and the homœopathic institution at Middletown in Orange County. I can see no objection to the enlargement of the latter to accommodate chronic and incurable insane, when the district demands more room than the Poughkeepsie State Hospital, with its quota of 2,000, can furnish.

The Plattsburg District.—This region sends its insane at present to the Utica and Poughkeepsie institutions, chiefly, and has as yet no State accommodation. Plattsburg is the natural railroad centre of this territory, as will be seen upon the map. The location of an asylum elsewhere (in St. Lawrence County, for instance, as has been contemplated) would only complicate matters and make the districting of the State in the future still more difficult of accomplishment than now. This portion of the State is not yet as populous as it will be. But its seven counties—St. Lawrence, Franklin, Clinton, Essex, Warren, Saratoga, and Washington—aggregated in 1880 a population of 332,005, and its present number of insane is about seven hundred and eighty-nine. So remote are they from any hospital for the insane, that these unfortunates are kept at home as long as possible before the tedious journey to Utica or Poughkeepsie is undertaken. They are then brought either as moribund or chronic cases. At least this is the experience at Poughkeepsie as regards the insane from the remoter counties of the Plattsburg district. This part of the State should be relieved by the Legislature within the next few years. It may be worthy of suggestion that the Clinton prison at Dannemora, near Plattsburg, hitherto run, as I understand, at an annual loss to the State—and of little use for its present purpose—might be transformed into an asylum for this district.[1]

KAIRINE AND ANTIPYRINE.[2]

By J. HENRY FRUITNIGHT, A.M., M.D.,

FELLOW OF THE NEW YORK ACADEMY OF MEDICINE, AND OF THE AMERICAN ACADEMY OF MEDICINE, ETC.

We are all aware of the close attention that has been devoted during the past decade, by the profession everywhere, to the subject of the reduction of high temperature. From the multiplied observations of these years it has been learned that an individual may tolerate an exceedingly high degree of temperature for a very brief period with comparative safety, and that the element of danger resides in the persistency of such high temperature. We all have most probably met with cases in which a very high temperature—possibly as high as 107° or 108° F.—existed for a very short time, and yet notwithstanding this high temperature the patient finally recovered. Had this high degree of fever, however, continued for a longer period of time irreparable disorganization of the blood must inevitably have occurred, resulting in a perversion of tissue metamorphosis which would terminate only with the death of the patient.

From these facts we are warranted in drawing the deduction that if we could procure an agent to hold in check the tendency to a high temperature in febrile diseases, one element of danger, viz., hyperpyrexia, could be held at bay, and to that extent a favorable issue of the case in hand might be prognosticated. It is not assumed that under these circumstances the remedy is to remove the cause or the specific *materies morbi* of the fever, and thus abort or cure the disease, but rather to reduce the pyrexia to a safer limit, the disease nevertheless running its usual course as regards duration. And this is exactly what is effected by some of the antipyretic methods and remedies recently employed. Your attention this evening will be called to two of the purely medicinal means used to effect this reduction of temperature—I refer to Kairine and Antipyrine. *A propos*, the title of this paper might in justice be written Antipyrine *versus* Kairine.

I shall allude but very briefly to the physical and chemical qualities of these drugs, dwelling especially upon their physiological action and therapeutical effects so far as known. Nor shall I weary you with detailed

[1] The paper was illustrated by six large maps of New York State, drawn by the author to represent the present state of things, and the method of districting he proposes.

[2] Read before the Northwestern Medical and Surgical Society of the City of New York, April 21, 1886. Specimens of the drugs described, in original packages, were exhibited to the Society for inspection.

clinical histories of cases, but preferably I will state, in general terms, the observations which I have made in different groups of cases and varieties of diseases, concluding with a summary of deductions derived therefrom.

Owing to the unwieldy complexity of the chemical appellations of both of these substances, names etymologically significant of their clinical effects and therapeutical applications have been coined for them. Thus kairine from the Greek adjective of the first and second declensions, *καιρίος-α-ον*, meaning appropriate, happening at the right time, etc., secondarily, mortal or fatal; and antipyrine from the Greek preposition *αντί*, against, and the Greek noun *πυρ*, fire, meaning against fire, and, secondarily, against heat or fever. Both words have sometimes been written without the final letter *e*, which is manifestly improper, because as the analogues of the alkaloids of belladonna, conium, nux vomica, opium, etc., which do possess the final vowel *e*, they should undoubtedly correspond with these latter in their orthography.

Both kairine and antipyrine are artificial productions, the results of researches in synthetic chemistry. It had been known for some length of time that when quinine is distilled with caustic potash a volatile nitrite base called chinoline (C_9H_7N) is obtained. Donath, who was the first to obtain the physiological action of this substance, demonstrated that in many of its effects it closely resembled quinine. Further experiments by proficient and renowned German chemists, particularly Fischer, of Munich, and Dr. Knorr, resulted in the discovery of kairine and antipyrine. From chinoline (C_9H_7N) kairine has been obtained by the processes of hydration, oxidation, and substitution—one or more atoms of hydrogen being replaced by one of the primary alcoholic radicals. In this manner two substances, known respectively as oxy-hydro-methyl chinoline ($C_9H_{10}NO,CH_3$) and oxy-hydro-ethyl chinoline ($C_9H_{10}NO,C_2H_5$), have been produced. The former has been distinguished as kairine *m*, and the latter as kairine *a* or *e*; but as the ethyl compound has latterly been more commonly used in practice, it is meant when the word kairine is used without such qualification.

From a hypothetical base closely allied to chinoline in its chemical properties and constitution, entitled quinizine, Dr. Knorr derived antipyrine, which is a dimethyl-oxy-quinizine ($C_{23}H_{12}M_4O_2$).

On page 493, vol. ii., of Ziemssen's "New Handbook of General Treatment," it is said: "It is interesting to note that most of the antipyretics belong chemically to the so-called aromatic group (derivatives of Benzol), a group which at the same time yields many of our best antiseptics. Thus carbolic acid, salicylic acid, benzoic acid, kairine, antipyrine, quinine, and the other alkaloids of cinchona are all of them members of this group. This fact tends to confirm a somewhat general belief that some, if not all, of our most efficient antipyretics owe this action to their antiseptic properties." As a logical conclusion to this reflection, I will venture to predict that in the future treatment of diseases of septic origin brilliant therapeutic triumphs will follow in the wake of the progressive development of this portion of the field of organic chemistry.

I will take up kairine first, merely because in its production and use it antedates antipyrine.

It was in the early part of the year 1882 that Filehne, of Germany, announced that a remedy had been found which would outrival quinine in its efficiency to reduce fever. The remedy was welcomed with much enthusiasm, and physicians hastened to verify or disprove the claims that had been raised for the new medicine. Kairine is a grayish-yellow, crystalline powder, easily soluble in water and alcohol, and of a bitter taste. It is true that the drug has the property of reducing a high temperature, and this it does very soon after its exhibition. My personal experience with the remedy is limited to its use in cases of typhoid fever. In the autumn of 1882 I made considerable use of kairine in about half a dozen cases of this disease. My experience with it in the last case of this series, however, led me to abandon it forever. I will detail my observations of the physiological effects of the medicine as revealed by its employment in these cases, and in the one last referred to in particular. I have given it in doses of only from grs. v. to grs. x., every three or four hours, watching its effects closely. It has, however, been advised by other observers to be given in much larger doses, and to be administered at one time. Its most marked physiological effect is its action upon the sudoriparous glands of the skin, and I therefore speak of it first. Kairine produces a most extraordinarily copious diaphoresis, which is accompanied by an excessive dilatation of the cutaneous vessels, and by an inhibition, or at least perversion, of their vaso-motor influences. This sweat, which is poured out under the influence of kairine, is cold and clammy.

At the same time its effect upon the heart and circulatory system is dangerously depressing, interfering with the tonicity of the cardiac muscle, and in consequence retarding the proper oxygenation of the blood, producing lividity and ultimately cyanosis of the general surface of the body, with threatening collapse of the patient. The rate of the pulse is reduced in frequency, as are also the respiratory movements, but in this reduction their arithmetical physiological ratio is not maintained. In other words, the respiratory movements are subjected to a more active reduction than is the rate of the pulse. This is a second element retarding the proper oxygenation of the blood.

Kairine, furthermore, has an injurious action upon the red blood-corpuscles, hindering them in their functions as oxygen carriers.

In my experience the remedy seems to obscure the lucidity of the intellect, possibly on account of changes in the cerebral circulation, and consequent malnutrition of the gray matter of the brain. The medicine is eliminated by the kidneys, imparting to the urine a dark-greenish hue. Frequently albumen may be detected in the urine after the administration of kairine. It very frequently produces nausea and vomiting, with headache and *tinnitus aurium*. It produced a dry, parched condition of the fauces in some of my cases. The effect of the medicine on the action of the bowels was negative. Its effects, when well marked, resemble those presented in cases of carbolic-acid poisoning.

Kairine, because of its easy solubility in water, has been administered hypodermatically, but with bad effects, for motor paralysis, with reduced sensibility, even to the point of complete anæsthesia, has sometimes followed this mode of administration of the drug. I have never given it to children, nor have I ever read or heard that it had been administered to them.

The literature relating to kairine is very meagre, consisting entirely of isolated observations scattered here and there through the various medical journals. In typhoid fever alone does it seem to have been used to any extent.

From its physiological effects we can safely affirm that it would be obviously injudicious, not to say dangerous, to administer it in pneumonia. The recorded observations, however, nearly all uniformly concur in condemning kairine as a dangerous and treacherous remedy. Thus kairine, by the strangely ironical aptness of its name, unwittingly given to it by its discoverer, was destined to be fatal or mortal not to the patient's fever alone, but to the patient himself as well.

In the summer of 1884 I had under my care two cases of acute phthisis in young girls, aged respectively sixteen and nineteen years. They were also examined by Dr. James R. Leaming, of this city, who concurred in my diagnosis. Furthermore, specimens of the sputa of both patients, which were microscopically examined by Dr. Welch, now of Johns Hopkins University, Baltimore, but then of Bellevue, revealed a large number of the tubercle bacillus of Koch. A brother of one of these patients,

who happened to be an excellently educated pharmacist was deeply interested in her welfare. This patient suffered extremely with daily evening exacerbations of fever, though everything was done to check them, but all without avail. I then recollected that I had read fragmentary but favorable reports concerning the efficacy of a new drug called antipyrine in reducing fever.

It also was first used by Filehne, in Germany, in the spring of 1884. It was in August of that year when I told the brother of my patient that I intended to resort to antipyrine in the treatment of his sister's fever, and requested him to procure some of the medicine for me. After many trials and much trouble he succeeded at last in obtaining from a wholesale drug-house, as a favor for me, about half a drachm of the drug, which was all that could be found in the whole city at that time. I administered it in five-grain doses every four hours, and succeeded in reducing the evening temperature about two or three degrees, but so soon as the supply of the medicine was exhausted the exacerbations returned as before.

At the meeting of this Society held in October, 1884, I reported my observations upon the effects of antipyrine in the case just cited. So far as I know these were the first *publicly* reported observations upon antipyrine in this city, and possibly in this country.

Antipyrine, which was first produced by Dr. Knorr, of Erlangen, occurs in the form of prismatic crystals of whitish color and of a somewhat bitter taste. It is very soluble in alcohol and water, but less so in ether. Its solutions are of neutral reaction. It is sometimes adulterated with quinine or sugar.

Like kairine, antipyrine has the property of reducing febrile movement. Its chief action, too, seems to be diaphoretic, though in my experience not to the extent observed when kairine has been taken. The augmented perspiration, unlike that excited by the ingestion of kairine, is warm and natural. This diaphoresis is also accompanied by a moderate dilatation of the cutaneous vessels.

It reduces the frequency of the pulse, but not the number of the respirations. Hence the process of oxygenation is not interfered with. The normal temperature will not be disturbed if the medicine be taken under such circumstances. When given to an individual free from fever there is a slight dilatation of the cutaneous vessels, which is proportionally increased if fever be present at the time of the administration of the remedy. When repeated doses have been given, the antipyretic effect will be manifested from four to eighteen hours thereafter, and this effect will persist so long as the administration of the medicine is continued, even lasting a considerable time after the final dose and actual suspension of the remedy. The frequency of the pulse is affected to a less extent than the temperature is. It very soon cleans and moistens the furred tongue of fever patients, and retains it so.

It is sometimes accompanied by a bright red, miliary eruption, which does not cause any inconvenience to the patient, and which occasionally disappears even during the continuance of the administration of the medicine. This eruption appeared in the case of acute phthisis, to whom I first gave the remedy.

I have never seen antipyrine produce the depressing effects which have been observed when kairine has been taken. It does not interfere with or affect digestion, very rarely disturbing the stomach, and having no bad after-effects. The cerebral functions remain unimpaired. The action of the bowels is unaffected by antipyrine. It is eliminated by the kidneys, having been found in the urine.

It can be administered either by the mouth or by the rectum with equally good results, and because of its easy solubility it is also adapted to hypodermatic use. For the same reasons it can readily be given to children.

Foreign authorities have recommended to give the remedy in one large dose at a specified time. I should hesitate a little to act upon this advice, for I have given it, as Dr. Leonard Weber of this city also has given it, in divided doses, ranging from grs. v. to grs. x., every three or four hours, continued over a prolonged period of time, with satisfactory and positive results.

I have used antipyrine very extensively since my first report, having prescribed it for both children and adults. I have given it particularly in those types of disease which have as a factor a tendency to a long-continued high temperature, as in acute pneumonia, typhoid fever, pelvic cellulitis, phthisis, etc., and without the occurrence of any unfavorable symptom or result. It has been given by some physicians in scarlet fever, acute rheumatism, pericarditis, and other febrile affections; but as I have relied on other remedies in cases of this character, I cannot speak from experience as to the action of the remedy in them.

In fevers of a malarial type and origin *quinine* is of course our main reliance; but during the paroxysm of fever of an intermttent or remittent, when the temperature was high, I have given antipyrine, with the result of reducing the temparature. In the interval I returned to the quinine and thus by this combination of therapeutic forces lessened the severity of the attack. I have given it thus to both children and adults who have been afflicted with these forms of fever.

In those diseases in which high temperature is not a dangerous or prominent feature, as in ordinary cases of diphtheria, cerebro-spinal meningitis, etc., I have never given it, nor do I think that it is needed in such cases. I may here incidentally remark that antipyrine has also been used as a hæmostatic in epistaxis. To hold in check the diaphoretic action of antipyrine, if it be too profuse, its administration may be guarded with atropine or belladonna.

Antipyrine excels all other means at present known for reducing the temperature of certain classes of febrile patients. It is a safe and prompt antipyretic, especially in pneumonia and typhoid fever. At the Fourth German Congress of Internal Medicine, held at Wiesbaden, April 8 to 11, 1885, a general discussion on antipyretics took place, and the general verdict of all the prominent speakers was exceedingly favorable to the action of antipyrine. Nevertheless, I should not countenance its use as that of a routine remedy. The *minutiæ* of its administration must be determined by the physician in charge for each individual case.

The general conclusions which can be deduced from these observations are as follows:

Firstly, kairine and antipyrine are both antipyretic, with marked diaphoretic action.

Secondly, kairine is not only an antipyretic, but a cardiac and nerve depressant as well, hence dangerous to use, and should therefore be discarded in practice.

Thirdly, antipyrine does not cure or eliminate the cause of the febrile movement, but moderates it in its intensity, thus modifying its phenomena and contributing to the recovery of the patient; and,

Fourthly, the diseases in which antipyrine is especially indicated are those which have been designated as self-limited, in which there is a tendency to the persistence of high temperature.

Salicylate of Soda and Salicin in Glycosuria.—Dr. O. V. Petersson reports in the *Upsala Läkareförenings Förhandlingar*, vol. xxi., No. 6, 1886, a case of diabetes mellitus speedily cured by the use of salicylate of soda in daily dose of from one to one and a half drachm, followed after a month by salicin in doses of two drachms pro die. In fifty-six days the daily quantity of urine fell from one hundred and fifty to fifty ounces, the specific gravity from 1.045 to 1.022, and the amount of sugar excreted from about seven ounces to zero. At the time of the report, four months had passed without any reappearance of sugar or increase in the amount of urine passed in the twenty-four hours.

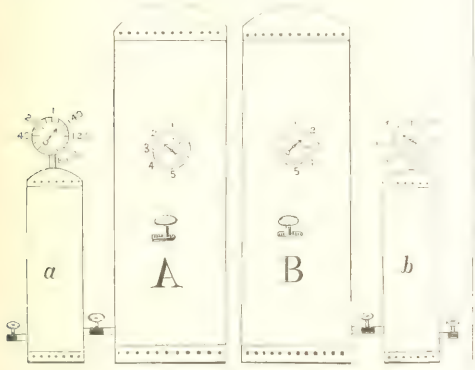
TREATMENT OF PHTHISIS BY DISPLACED AIR.

By W. C. SNEDEN, M.D.,

BROOKLYN, N. Y.

While this subject is attracting such wide-spread attention, I wish to contribute my mite toward alleviating the woes of my fellow-man.

In this short article I will endeavor to describe as briefly as possible an apparatus which will answer every purpose, which is not costly, and which can be owned by the operator, as it is not patented.



It consists essentially of two large air-receivers, for very moderate pressure, and two small air-receivers for very high pressure, such as are used for carrying compressed oxygen. A good air-pump is also needed—the "Novelty" being the best in my experience. One of the large receivers, *A*, is connected with the small receiver *a* by a tube with stop-cock. The large receiver *B* is connected with the small one *b* in a similar manner. Each of the receivers is furnished with a pressure-gauge.

If now the air is exhausted from *a* by means of the pump, we can diminish the pressure in *A* at will, by simply opening the stop-cock and allowing the air to flow from *A* into *a*. If we first force the air into *b*, at high pressure, we can increase the pressure in *B* by opening its stop-cock and allowing the air to flow from *b* into *B*.

By means of a flexible rubber tube leading from each of the large receivers, we can cause the patient to breathe the compressed air from *B* and expire it into the air of the room, or to breathe the same compressed air and expire it into the rarefied air in *A*, or to breathe the air of the room and expel it into either a denser or a rarer atmosphere in the receivers. The air at any of these densities can be easily medicated by vapor, spray, or any means ordinarily used.

The direction of the air-currents can be controlled by valves introduced into the mouth-pieces or into the tubes; or even by so simple an expedient as allowing the patient to alternately pinch the flexible tubes between his fingers and thumbs.

Pressure can at any time be increased or diminished in the small receivers by a few turns of the air-pump.

The cost of such an apparatus need not exceed two hundred dollars, and it can be constructed in any fair-sized town.

Catarrhal Headache.—Iodide of potassium is said to quickly relieve the dull headache so often accompanying an ordinary cold in the head. Two grains may be dissolved in a glassful of water, which is to be taken in little sips during half an hour. Dr. Davis recommends this simple remedy, and says he has hardly ever known it to fail.

Clinical Department.

A SHORT UMBILICAL CORD.

Dr. Charles P. Dolan, of Waterville, Minn., writes that he was called recently to attend an unmarried woman in confinement. He noticed as soon as the child was born that it was very weakly; it did not cry, but made a few feeble attempts to breathe. It was large and well developed, but was whiter than a new born infant usually is. On proceeding to cut the cord, the writer found that it was already divided; he immediately tied the end, but the child lived only an hour and a half. No great loss of blood was noticed during the progress of the labor. The cord was found to measure but twelve inches. It was reflected upon itself in two places, the adjacent surfaces being strongly adherent as though there had been an inflammatory process going on. The length of the cord, after the adhesions had been broken and the loops unfolded, was twenty inches.

CANCER OF THE MALE BREAST.

Dr. Sinclair Tousey, Jr., of Brooklyn, reports an operation for extirpation of cancer in the male breast, performed by Professor T. M. Markoe, at the New York Hospital. The patient was forty-five years of age, had always been strong and hearty, had never had venereal disease, and gave a negative family history. Twenty-five years ago a small tumor appeared under the left nipple, but it gave no pain, except when struck or pinched. Five years ago it began to increase in size, and shooting pains were felt in the breast. During the past year it had grown rapidly, and little pustules had formed and opened, discharging purulent matter. The tumor had attained the size of a small orange, was freely movable over the subjacent tissues, but was evidently malignant in its nature. It was rather flattened and biscuit-shaped, and there were numerous enlarged and indurated maxillary glands. Elliptical incisions were made, embracing the tumor, and it and the axillary glands and neighboring areolar tissue were removed. The wound was closed by catgut sutures, a single supporting stitch of silver wire being inserted to relieve tension. Upon examination of the tumor it was found to have invaded the entire mammary gland, which was considerably enlarged. The chief point of interest in the case was that it was one of cancer of the male mammary gland, an occurrence of some rarity. Of 102 cases of cancer of the breast recorded by Dr. S. W. Gross, only two were in the male subject, and very nearly the same proportion has been observed by other investigators.

The Foochow Medical Missionary Hospital.—We have received the fourteenth annual report of this institution for the year 1885. The hospital is under the care of Dr. H. T. Whitney, with three native assistants. Two of the native assistants rendered such valuable aid in the army during the trouble with the French, that they were promoted by General Tso Tsung Tang to the fifth and sixth degrees of military honors. The number of patients treated in the hospital was 604, with 334 cures, and in the dispensary 3,260, making a total of 3,864. The number of surgical operations performed, including 205 teeth extractions, was 425. The total expenses of the hospital, including wages and medical supplies, amounted to only $746.46. The religious work consisted in daily morning prayers in the hospital, and a short service on Thursday and Sunday afternoons. In the dispensary a regular preaching service is held previous to dispensing medicines. The report states that "at least five dispensary patients became interested in the truth during the year, and many more were led to see the superiority of Christianity over their own false religions."

Progress of Medical Science.

Calomel in the Treatment of Dropsy.—In the case of a patient suffering from dropsy, to whom, for other reasons, mercury in various forms had been given, Dr. E. Jendráfsik noticed marked diuresis and rapid disappearance of the anasarca after the administration of a few small doses of calomel. He was induced by this to try the drug in other similar cases, and met with great success. The calomel was given in doses of three grains, from three to five times a day, larger amounts being inadmissible on account of the action upon the bowels. The increase in the urinary secretion began about the second day and soon became excessive, subsiding again to the normal in from five to fourteen days. After the polyuria had once become established, a continuance of the calomel seemed to be productive of no good results. The amount of diuresis did not depend apparently upon the size of the dose of the calomel, but rather upon the extent and degree of the œdema. Experiments upon healthy individuals, as well as upon a patient with pleuritic effusion, were without result, thus proving, apparently, that the drug did not act as a renal irritant. The action upon the heart was also very slight, and, according to the author, purely secondary, and due to the favorable influence upon the circulation resulting from the reduction of the dropsical effusion. Dr. Jendráfsik thought that the diuresis was caused solely by the taking up of the fluids from the tissues by the blood. To prevent stomatitis the author ordered a mouth-wash of potassium chloride, or gave the drug internally in doses of twenty to twenty-five grains per diem. Several cases are related in which excellent results were obtained by the use of calomel.—*Deutsche Medicinal-Zeitung*, May 6, 1886.

Treatment of Lupus.—Professor Bertarelli, of Milan, recommends strongly resorcine in the treatment of lupus. Incorporated with vaseline (equal parts) and applied to the surface of the disease, it produces in a short time a healthy action, without provoking the slightest pain or irritation of the neighboring parts. The cicatrices are smooth, and of the color of the surrounding skin.—*Medical Press and Circular.*

An Unusual Source of Lead Poisoning.—A physician was called to see a child who had been treated unsuccessfully by a number of medical advisers for colic. He found an infant five weeks old, rather emaciated, whose skin was of a bluish color, continually crying, with feet and hands drawn together. The physician sought everywhere for the cause of the disease, finding none until he happened to notice the nurse's face, where he at once saw the explanation of the trouble. The nurse had a wonderfully pretty pink and white complexion, but the physician drew his finger across her face and found it covered with a greasy lead paint. The nurse confessed to having used cosmetics for a long time for her complexion. She was forbidden to do so, and the child recovered, with appropriate treatment, in a few days.—*St. Petersburger Medicinische Wochenschrift*, No. 8, 1886.

Rheumatismal Nodules.—At a meeting of the Hospitals Medical Society of Paris (*Annales Médico-Chirurgicales*, No. 3, 1886), M. Guyot presented a patient having a number of little nodosities in the subcutaneous cellular tissue and certain muscles which closely resembled gummy tumors. They had grown very rapidly until they were as large as hazel-nuts, at which size they remained stationary. In order to ascertain the nature of these little tumors, M. Guyot administered the iodides, but met with no result. He then tried salicylate of soda and had the satisfaction of seeing them rapidly disappear. M. Lallier said that such cases were not of great rarity. The tumors were to be distinguished from those of syphilitic origin by their rapid growth, the pain attending their evolution, and the ecchymotic tinge of the skin covering them.

A Case of Phonomimesis.—Dr. I. I. Pantyukoff reports, in the *Russkaya Meditsina* of March 16, 1886, a curious case observed by him in the military hospital at Kief some years ago. The patient was a young soldier who involuntarily reproduced with automatic exactness every sound which was made in his presence. His face wore a listless expression, the eyes were closed, and consciousness of his surroundings was apparently dulled, though not entirely extinguished. Words in foreign languages, snatches of songs, the sound of a violin or harmonica, all were echoed with accuracy by his voice; while stamping of the feet, clapping of the hands, and cracking of the knuckles were also imitated by the patient, even though he was lying on his back and the sounds were nearly drowned by other noises. It was wonderful, the writer states, with what exactness every kind of noise was reproduced by this human phonograph, and all sorts of sounds mixed up together were repeated each with its exact intonation and pitch. The patient was under the care of Dr. N. I. Shtcherbina, director of the psychological department of the hospital.

Bilateral Ranula Cured with Pilocarpine.—In a case of occlusion of both Wharton's ducts, which, distended and filled with saliva, formed two large pyriform tumors, one on either side of the frænum linguæ, Dr. G. Soffiantini conceived the idea of using pilocarpine in order to overcome the obstruction. He reasoned that the sudden and abundant increase in the secretion of saliva would so greatly increase the pressure that a passage would be forced through the ducts. A single hypodermatic injection of one-sixth grain of the hydrochlorate of pilocarpine resulted in the reduction of the tumors to one-half of their former size, and a second injection of a like amount cleared out the ducts completely and resulted in a cure.—*Lo Sperimentale*, April, 1886.

Compensatory Hypertrophy of the Kidney.—The following are the conclusions arrived at by Dr. Lorenz from a number of experiments upon animals (*Zeitschrift für klinische Medicin*, vol. x., Nos. 5 and 6): 1. Compensatory hypertrophy of the kidney consists chiefly in an increase in the cortical substance, although there is also a slight degree of hypertrophy of the medullary portion. 2. The enlargement of the cortical substance is due to: (*a*) Hypertrophy and hyperplasia of the glomeruli in growing animals, but simple hypertrophy in adult animals which have attained their full growth; (*b*) the convoluted tubules are enlarged throughout, the epithelial cells being especially increased in all their dimensions, and their calibre is widened. 3. The slight enlargement observed in the medullary substance is due only to a dilatation of the lumen of the straight tubules, no increase in size of the epithelial cells being noted. 4. The existence of hypertrophy of the connective tissue and of the capillaries could not be determined with certainty.

The "Dead-finger" Symptom in Bright's Disease.—This is a sensation similar to that experienced when the finger is immersed in snow, or exposed to a great degree of cold. The patients complain of formication, painful sensations, and cramps in the fingers, and sometimes the finger-tip becomes anæmic, white, and numb. This symptom is usually of very brief duration. In one patient it will last a few seconds only, but will reappear whenever the attempt is made to grasp any object; in another its duration will be for five or six minutes, and it will be noticed to recur at longer or shorter intervals, as one or two days or a week; finally, a third will recall its appearance on a single occasion only during the course of his disease, when it may last for a quarter of an hour. The symptom is localized now in one finger, now in another, the little finger being the one most frequently affected, the middle, the ring, the index finger, and the thumb coming next in the order of frequency. The phenomenon may appear at the beginning of Bright's disease or near its termination, but is of

greater diagnostic importance in the former case, since the other symptoms of the affection may at this time be insignificant or even absent. As to the pathogenesis of this sign Dr. Soyer believes that it is the first degree of local asphyxia of the extremities, and regards it as allied to symmetrical gangrene as sometimes observed. —*Giornale Internazionale delle Scienze Mediche*, No. 3, 1886.

Concealed Penis.—Dr. R. H. Bayler reports the following condition found in a child two weeks old: The root of the penis was attached firmly to the pubis, but the body of the organ could not be seen, being deeply buried under a continuation of the abdominal muscles and skin. The scrotum was not divided into two lateral halves by the raphé, but resembled a large bag. After examining the scrotum carefully the two testes were found, and between them the penis could be distinctly felt. The glans penis made its exit about the middle of the scrotum, between the testes. It had the usual appearance and was covered with the prepuce, and at the apex the meatus urinarius was seen. The child passed water freely during the examination.—*Virginia Medical Monthly.*

Treatment of Asphyxia of the New-born.—Dr. Wm. L. Reid, writing in the *Glasgow Medical Journal*, describes the various methods in vogue for the resuscitation of children born asphyxiated. They are nine in number. 1. Marshall Hall: The patient is turned face downward so as to press on the chest and cause expiration, then turned on the side so as to free the chest from pressure and produce inspiration by means of the elasticity of its walls. 2. Howard: The arms are extended, the wrists being brought together over the head, and the chest is thus expanded. The lower ribs are then alternately pressed on and relieved from pressure, so as to cause expiration and inspiration. 3. Sylvester: The arms are raised upward and forward for a few seconds, and then pressed firmly down against the sides of the chest. By means of their muscular attachments the ribs are raised and air sucked in, which is expelled again when the arms are brought down. 4. Pacini: The feet are fixed, and the operator, standing with the head against his own abdomen, seizes the arms at the axillæ and pulls the shoulders upward and forward, then allowing them to return to their former position. 5. Bain: The shoulders are raised by lifting the body a foot off the table by seizing its hands. They are then allowed to fall back again, thus causing alternate expansion and contraction of the thoracic cavity. 6. Schucking: Like Sylvester's, except that he carries the arms outward as well as upward. 7. Schuller: The operator puts his fingers under the edges of the ribs and pulls them up, afterward depressing them. 8. Schroeder: The body is supported by one hand placed under its back, allowing the head, shoulders, arms, and pelvis to fall backward, with the view of producing inspiration, expiration being caused by sharply bending the body forward so as to compress the chest and abdomen. 9. Schultz: The child is suspended a few inches from the floor by the two index-fingers placed in the axillæ from behind, the thumb lying loosely over the front of the thorax, and the other fingers spread also loosely over the thorax behind, the head being supported against the edges of the ulnar bones. Without delay, in this position, the child is swung sharply upward, until the operator's arms are extended horizontally; then the upward movement is continued more gently so as to bring the legs slowly past the perpendicular, and allow them to sink quietly against the front of the child's body. The weight of the latter is now supported by the thumbs in front of the thorax, and the chest pressed on all round by the fingers, and its arms laid against its sides. This compression through the diaphragm below, and the fingers all round, causes aspirated fluids to flow freely from the mouth and nose. After being retained in this position a few seconds, the body is swung smartly down again into its former position, taking care that now there is no compression of the chest, either before or behind, but simply a suspension of the child on the index-fingers. During this movement the contents of the abdomen fly away from the diaphragm, and, dragging it down, enlarge the chest from below. At the same time the arms are separated from the sides, and by their muscular attachments drag the ribs upward, and in this way air is sharply drawn into the lungs. These movements are continued every four or five seconds, but when a considerable quantity of fluid continues to come from the mouth and nose, the movement of expiration is to be prolonged.

Tertiary Syphilitic Arthritis.—M. Gangolphe has recently published a paper on osteo-arthritis occurring in tertiary syphilis, the conclusions at which he arrived being based upon the morbid changes found in five cases, two of these having been examined by the author himself; the remaining three are quoted from Lancereaux, Méricamp, and Schüller. The author is of the opinion that the existence of only one kind of tertiary joint-affection (the osseous form) is actually proved; but cases published by Gies, Schüller, and Virchow point to the supposition that there exists another variety of joint-affection, characterized especially by chondritis with star-shaped cicatrices and nipple-like projections, thus producing a change bearing some resemblance to the lobula ion seen in the liver when attacked by atrophic cirrhosis. The lesions in osteo-arthritis present different characters, according to the period at which they are examined. The affection begins by the formation of a gumma in or near the epiphysis, and, unless the growth remain encysted, it ends by perforating the cartilage. The synovial cavity then becomes filled with sero-purulent fluid. The morbid change extends more and more both in the bone and the cartilage, and the gaps thus resulting from loss of substance become lined by a smooth reddish new membrane. The ligaments remain intact. The synovial membrane is thickened, but without fungosities, and the absence of these, the adhesion of the remaining cartilage to the subjacent tissue, the absence of Koch's bacilli, and the microscopic appearances, serve to distinguish the syphilitic from tuberculous lesions. Further distinctions are the absence of any considerable sequestrum, and of patches of eburnation of whitish color which frequently accompany osseous tubercle. Recovery may take place under specific treatment, or even spontaneously, but deformities of the articular ends of the bones often occur; such deformities are clearly distinct from those due to rheumatic arthritis. From a clinical point of view, syphilitic osteo-arthritis is characterized by effusion of fluid variable in kind, and often small in quantity, by crackling of the joint, by the multiplicity of joints attacked, and by the relative indolence of the lesions. The joint indeed retains its normal functions to a degree that renders it difficult to suspect the extent of the disorder during life. In some cases there is more or less deformity of the articular extremities, and sometimes swelling of the diaphysis. Fibrous anchylosis may also result from osteo-arthritis. In consequence of the marked tendency to spontaneous recovery operative interference is very rarely indicated.—*London Medical Record*, April, 1886.

Vicarious Menstruation from the Ear.—Dr. Stephenoff relates the case of a girl, seventeen years of age, a pupil in the normal academy of Moscow, who suffered from various nervous symptoms at her first menstrual period. She became exceedingly irritable, being especially excited when she heard singing, and had paralysis of the lower extremities. The paralysis gradually disappeared, and the girl did not menstruate again, but at each returning period had vicarious hemorrhages, first from both ears, and then from the left one only. The bleeding lasted for one or two days, and was accompanied by palpitation and pain in the region of the heart. The patient was stout, but anæmic, had much headache and

palpitation of the heart, was subject to fainting spells, and there was hyperæsthesia over the lower part of the spinal column, and anæsthesia of the lower extremities. Examination of the ears revealed nothing abnormal. The hearing was normal, except that it was slightly weakened in the left ear just before and during the hemorrhage. As the drum-membrane was intact the bleeding must have come from the external auditory canal, although the writer was not able to assure himself of this fact.—*Centralblatt für Gynäkologie*, March 27, 1886.

Muscular Anomaly of the Arm.—At a recent meeting of the Section on Anatomy of the Irish Academy of Medicine, Dr. Heuston presented a communication on a curious combination of abnormal muscles in the upper arm (*Dublin Journal of Medical Science*, April, 1886). It consisted of two sets of muscular fibres, the lower of which passed from the latissimus dorsi across the first stage of the brachial artery, while the upper, taking origin from the cartilages of the sixth and seventh ribs, crossed the axilla and third stage of the axillary artery, to be attached with the former set of fibres into a broad triangular tendon, the external border of which passed over the biceps and pectoralis major to be attached into the deltoid, while from its inferior angle a tendon passed to the internal condyle of the humerus. Dr. Heuston considered the lower set of fibres to be an example of the Achselbogen, while he considered the upper fibres to be an example of the chondro-epitrochlearis, the tendon attached to the internal condyle being the proper tendon of those fibres.

The Rôle of the Nervous System in the Causation of Vitiligo.—Dr. A. H. Ohmann-Dumesnil, writing in the *St. Louis Medical and Surgical Journal* for March, 1886, asserts that the rôle of the nervous system in the causation of vitiligo is a very considerable one, and he says that this fact should contribute largely to an effort on the part of all who meet these cases to treat them, and not turn away the patients with the assurance that nothing can be done. He recapitulates the arguments in favor of this view as follows: 1. Analogous cases, where pigment disturbance is known to depend upon some functional or organic trouble of the nervous system; *e.g.*, blanching of the hair through mental emotion, and the loss of pigment in the anæsthetic spots of leprosy. 2. Where there is excess of pigment due to nervous influence, as in chloasma caused by nervous reflex action due to uterine and hepatic troubles. Both of these forms of disturbances of pigment are merely variations of a certain type, of which vitiligo is another variation, the three being types of loss, increase, and displacement of pigment. 3. The distribution of the disease is another very strong presumption in favor of its nervous origin in a considerable number of cases. Vitiligo is, as a rule, symmetrical, and quite often unilateral. 4. The concomitant nervous phenomena seem to corroborate the idea that vitiligo is often directly traceable to a neurotic origin, the majority of patients being subject to nervous affections or having a family history of neurotic troubles. 5. The effects of nervines have been quite marked in some cases. 6. The use of the galvanic current has been attended with success in treatment. 7. The nerve-alterations found in this disease are marked in some cases.

Puerperal Convulsions Without Albuminuria.—Dr. Vuccino reports the case of a woman of ordinary good health, except that she had occasional attacks of hysteria, who in the fourth month of pregnancy was seized with intense frontal hemicrania, recurring every day. When at the end of the sixth month, she was awakened one morning by a severe pain in the head, which was followed by a slight convulsive attack limited to the upper extremities. Later in the day the author found her in general convulsions, unconscious, and with bloody foam coming from her mouth. The pulse was small and hard, the urine was, and remained, free from albumin. After all other means had failed it was determined to induce labor, and this was accomplished by means of warm-water injections. A dead child was expelled from the uterus, and the convulsions ceased immediately. The woman remained perfectly well until the eighth month of her next pregnancy, when she was seized with convulsions even more severe than before. Chloral and chloroform were again tried without effect, and it was again found necessary to induce labor. The convulsive seizures did not reappear until the second month of the succeeding pregnancy, when they returned in slight degree, and ceased upon the occurrence of spontaneous abortion. The urine remained always normal.—*Journal de Médecine de Paris*, April 4, 1886.

Detection of Blood in the Urine.—M. A. Luchini proposes the following method for determining the presence of blood in the urine. One drop of acetic acid and forty-five minims of chloroform are added to two and one-half drachms of the suspected urine. The phial is to be well shaken and then set aside to stand for a time. If the urine contain blood the chloroform, which settles to the bottom, will have a reddish tint, the depth of which will vary according to the amount of blood present.—*Revista Médica de Sevilla*, March 31, 1886.

A Unique Case of Hernia.—Dr. R. H. P. Ellis reports in the *Maryland Medical Journal* of April 17, 1886, the case of a man who was seized with pain in the lower part of the abdomen after having lifted a moderate weight. He was found to have a small inguinal hernia, which was apparently reduced without much trouble. On the two following days the patient was very comfortable, but on the third day, having had no movement from the bowels, he took a dose of castor-oil, supplemented by an enema. This had no effect, and the following day symptoms of intestinal obstruction appeared. The hernia had apparently been entirely reduced, and no tumor could be felt at the abdominal ring. It was determined, however, to make an exploratory incision at this point, and, after a few touches of the scalpel, the search was rewarded by the finding of a small button-like portion or knuckle of intestine, firmly held within the abdominal ring. The operation was followed by a favorable modification of all the symptoms, but on the second day symptoms of general peritonitis supervened, and the patient died four days after the operation.

Rectal Exploration in Hip Disease.—Dr. Arnold Schnitz, writing in the *Centralblatt für Chirurgie*, of March 13, 1886, calls attention to the value of examination by the rectum in doubtful cases of morbus coxarius. He relates several cases in which he was enabled to clear up uncertain points in diagnosis, and to determine the seat of the disease. In one case of vertebral caries, in which coxitis was also suspected, rectal examination revealed the presence of an abscess on the opposite side of the cotyloid cavity. The author somewhat rashly concludes that he will always in future examine per rectum every case of hip-joint affection which he is called upon to treat.

Iodoform in Gout.—Professor Testa, assuming that iodoform fulfils all the desired conditions in the cure of gout, since it accelerates the processes of oxygenation, increases the secretion of urea, and diminishes the proportion of uric and oxalic acids, has employed it in several cases of this affection. The dose varied from one to four grains. This use of iodoform gave excellent results. The attacks of gout became less frequent, they were diminished in intensity, and their duration was shortened. The author says it is contra-indicated, or, at least, should be administered with great caution, when the gout is complicated with disease of the kidneys, for, as in such cases it is not completely eliminated from the system, it may give rise to untoward symptoms.—*Le Moniteur Therapeutique*, April 5, 1886.

The Etiology of Scarlatina.—At a meeting of the London Medical Society Dr. Hingston Fox read a paper with the object of proving that scarlatina and diphtheria resulted from absorption of a specific poison by a previously inflamed tonsil. According to this gentleman, the physiological rôle of the tonsils is to absorb the surplus saliva, and in doing this various poisons were apt to pass into the system.—*Medical Press and Circular*, April 7, 1886.

Hemic Changes after Extirpation of the Spleen.—At the last sitting of the Congress of Russian Physicians, Dr. Winogradoff read a paper on the above subject. He had operated on a dog which had previously lived in the yard on an irregular and sometimes insufficient diet. After extirpation of the spleen, which was performed six years ago, the animal was kept in the open air chained, on a good mixed diet and in a good kennel. Up to the present he has kept lively and in good spirits. Examination of the blood showed that in the first year after the splenotomy increase in the blood-serum was noted until the year 1885, when the quantity diminished, but it again returned to the normal. The red blood-corpuscles increased in the second and third years after the operation; lately they had diminished, however, and the microcytes were few in number. The specific gravity of the blood was 1.054, that of the serum 1.026. The quantity of hæmoglobin, which had already diminished at the end of the first year, varied a little during the later years, and had again sunk recently. It appeared noticeable that the production of hæmoglobin had diminished. At first the production was rather more active, but it always remained below the normal, and fell again latterly, from which the experimenter drew the conclusion that the compensatory activity of other organs gradually diminished, and that the dog would eventually die of gradually increasing deficiency of hæmoglobin, as, notwithstanding abundant food and fresh air, he was steadily losing weight. —*Medical Press and Circular*, March 31, 1886.

The Patellar Reflex in Locomotor Ataxia.—Hirt reports three cases of tabes dorsalis (with one autopsy) in which the patella tendon reflex was unaffected, and in one case it remained up to the time of death. Westphal has also, he says, reported two similar cases. In a fourth case Hirt noted the preservation of the knee-jerk on one side, while it had been absent for over eighteen months in the other leg. He believes that, even with extensive degeneration of the posterior columns of the cord, the part regarded by Westphal and others as the anatomical seat of the patellar reflex may remain intact.—*Aerztliches Vereinsblatt*, March, 1886.

External Urethrotomy in the Treatment of Retention from Enlarged Prostate.—In the *Centralblatt für Chirurgie*, Professor Braun, of Jena, advocates external urethrotomy for the relief of retention of urine due to prostatic disease associated with false passages, when it is found impossible to introduce a catheter by the usual way into the bladder. Forcible catheterism is an uncertain and dangerous method, and to capillary puncture and aspiration above the pubes it is objected that such treatment is troublesome to the patient and painful, that it has to be frequently repeated, that it does not allow necessary injections into the bladder in cases of strongly alkaline urine, and, finally, that it is not free from risk. The danger consists, not in direct injury to the peritoneum, but in the risk of inflammation of the connective tissue near the bladder from the penetration of decomposed urine into the punctured wound, and of extension of this inflammatory action to the peritoneum. The same objections apply to the method of puncture and retention of the cannula. External urethrotomy allows a constant and free discharge of urine through a retained catheter of full size, and also thorough and repeated cleansing of the bladder by injections, which would diminish or possibly dispel altogether the infective properties of the urine. Such treatment will also enable the surgeon, in the not uncommon case of a complication of prostatic hypertrophy with vesical calculus, to discover and remove the latter. In dealing with the objection to external urethrotomy as being too severe an operation in comparison with suprapubic puncture, Braun points out that the existence of false passages passing through the prostate into the cellular tissue between the bladder and rectum, or into the cavity of the bladder, may cause suppuration and pyæmia, and therefore indicates prompt and effectual treatment, favoring an uninterrupted flow of urine, and a ready discharge of any collection of pus.

Acute General Œdema.—Professor Da Costa had at his clinic recently a case of acute general œdema without kidney, heart, or blood affection. He considers this a case of what the old writers called inflammatory œdema, and to which he applies the term catarrhal œdema. The lesion is principally in the areolar tissue. He recovered in about a week, under an active diaphoretic treatment. At first ammonium acetate was given, afterward jaborandi.—*College and Clinical Record*, April 1, 1886.

Silicate-of-Sodium Jackets.—Dr. S. T. De La Mater, writing in the *New England Medical Monthly*, says that he has found sodium silicate a most excellent substitute for plaster-of-Paris in the treatment of lateral curvature of the spine and Pott's disease. In using it for the jacket in spinal disease, he first fits the undershirt snugly to the body, and over this places a thin layer of cotton wadding. He then rolls one layer of a plaster bandage around the body, and over all three or four thicknesses of cheese-cloth saturated in silicate of sodium. The chief advantage of this application is its lightness, the jacket so constructed not weighing more than six or eight ounces, and yet being sufficiently firm to give perfect support. Dr. De La Mater cautions his readers against potassium silicate, which is often substituted for the sodium. The latter is, when pure, of a light amber color, having the consistency of syrup, while potassium silicate is pale white.

Urethran.—Dr. A. S. Myrtle writes in the *British Medical Journal* that he has used urethran in over fifty cases, in the past four months, as a sedative and hypnotic, and his experience of its action encourages him to recommend the drug strongly, believing that, in certain cases, it will prove of great value. The cases in which he prescribed it were of the usual run of every-day practice, where a sedative or hypnotic was required: general restlessness, sleeplessness, neuralgia, catarrh, certain forms of skin-affections with great irritation, also rheumatism and gout. Many of his patients had some peculiarity of constitution which prevented the use of opiates of the usual type; and it is in this special class that the writer thinks urethran will prove of great value. One gentleman, who had suffered from insomnia for weeks, and who could not tolerate opium or chloral, took fifteen grains at bedtime with the most perfect result. He wrote: "The sleep caused was most pleasant and refreshing. I awoke without a headache, with appetite for breakfast, and what was equally agreeable, there was no interruption to any of my functions." Similar testimony was given by the majority of patients, who had taken full doses to produce sleep. In smaller doses its action is less marked, still it is decidedly calmative and agreeable, causing no unpleasant effect, such as nausea, flatulence, constipation, or headache. It does not affect the nerve-centres of circulation or respiration, but spends itself on the cerebrum. It possesses, therefore, Dr. Myrtle says, great advantages over the older and valuable sedatives, which have certain evil influences, especially in exceptional cases. Given in gout and rheumatism in full doses, alone or in combination, it has the great advantage over morphia of not interferring with the action of the bowels or kidneys; besides, it is not unpleasant to the taste.

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IS TETANUS AN INFECTIOUS DISEASE?

IT needs no argument to prove that a better knowledge of the cause and nature of tetanus is greatly to be desired, bearing as it does so directly upon the treatment of the disease. For, until we know what tetanus really is, all treatment must be purely empirical and symptomatic. There are a sufficient number of well-authenticated cures of the disease on record to prove that the affection is not necessarily fatal, and could we but discover what it is, and what is its cause, we should be in a far better position to apply our remedies intelligently and with a definite aim, and should doubtless be able to save many more of our patients.

The fact that, in a very large proportion of cases, tetanus follows the receipt of a wound, has led several observers in recent times to regard the affection as dependent upon the introduction of some virus from without. Roser was one of the first to advance this theory. The earliest experiments by inoculation of animals were without result, possibly because they were made with dogs, which are said by Rosenbach never to suffer from tetanus.

At the Fifteenth Annual Meeting of the German Surgical Society, held recently in Berlin, Rosenbach presented an interesting paper on this subject, in which he gave the results of a number of experiments performed on guinea-pigs and mice. A man was received into the Göttingen clinic suffering from tetanus, consequent upon gangrene of the feet, from which he died. The author took some small pieces of tissue from a portion of the foot not invaded by gangrene and inserted them under the skin of the thigh of two guinea-pigs. The animals soon exhibited marked tetanic symptoms. From these other guinea-pigs were inoculated in a series, one from the other, and then the virus was transferred to mice, all the animals dying eventually with unmistakable symptoms of tetanus. He was not able to obtain pure cultures of any single micro organism, but he succeeded in causing the disease by inoculations with a mixed culture carried to the fourth generation. By exposing the cultures to a certain temperature he was able to destroy all forms of microbes except two varieties of bacilli, and as these cultures were still capable of exciting tetanic symptoms he drew the conclusion that it was to the presence of one of these two forms that the disease was due.

Assuming that tetanus results from the introduction of a bacillus into a wound, the next question demanding solution would be from whence the micro-organism comes. As bearing on this point, the experiments of Nicolaier and Flügge are interesting. While engaged in a study of the micro-organisms found in garden soil, they discovered that a culture of a certain form of bacillus, when injected into the tissues of rabbits, guinea-pigs, and mice, was capable of causing symptoms identical with those of tetanus. Socin, of Basle, has also seen similar symptoms produced in mice by the introduction beneath the skin of a little earth taken from the garden.

There are numerous facts which seem to lend weight to the theory of the infectious nature of tetanus. One of the most striking of these is the case mentioned by Betoli, of three slaves who died of tetanus after eating the flesh of a bull which had perished from the same disease. Another is that the affection does not follow immediately upon the receipt of a wound, but that a certain period of incubation, varying from a few hours to two or three weeks, is present. This, it is true, might be equally applicable to the theory of a lesion starting from the peripheral nerves and travelling to the medulla, but such a lesion is not found on post-mortem examination.

The geographical distribution of the disease might also be brought forward as an argument in support of the view of a micro-organism residing in the soil. Tetanus is most prevalent in warm climates, although by no means confined to tropical countries, and it is sometimes very common in certain isolated communities, especially those living on islands and separated by natural barriers from the rest of the world. It is said to be very prevalent on the eastern end of Long Island, and if anyone succeeds in isolating Rosenbach's bacillus from the fish manure, which is so thickly spread over that unfortunate region, the theory of infection in tetanus will receive a strong impetus.

But there is another theory which can, perhaps, be made to fit in with these facts as easily as the one which we have just considered. We refer to the doctrine of leucomaines recently presented so ably before the Paris Academy of Medicine by M. Gautier. It might easily be conceived that a form of decomposition in the wound should result in the elaboration of certain animal alkaloids, producing symptoms similar to those caused by strychnine and some other alkaloids of vegetable origin. Doubtless M. Peter and his followers will not let pass such a favorable instance as this for the support of their views.

THE DIAGNOSIS OF DEATH BY DROWNING

IT is stated by many writers, and is the pretty general belief of those having but a moderate acquaintance with medico-legal literature, that it is impossible in many cases to determine whether, in the case of a body found in the water, death resulted from drowning or whether the body was immersed after life was extinct. The principal diagnostic points are the external appearance of the cadaver, the presence of water in the lungs and stomach, and of froth about the nostrils and mouth, and the condition of the blood.

M. Henri Bougier, in a recent thesis (*Gazette Médicale de Paris*, May 8, 1886), presents a review of the opinions of many of the authorities in regard to these

points, as well as the results of observations made by himself.

As to the external appearance of the body, he says there is nothing characteristic. Marks of violence may, of course, exist and yet prove nothing, since the individual might have received injuries, accidentally or at the hands of others, and afterward have fallen or been thrown into the water.

Water may enter the lungs of bodies immersed after death, but in this case it is found only in the bronchi of medium size, while in the drowned it is drawn into the smallest tubes. The presence of water in the stomach, he says, is a fairly conclusive evidence of death by drowning, although, we would add, its absence would not necessarily prove the reverse, but may indicate, as Tidy remarks, a rapid death by asphyxia before the sufferer had had time to swallow.

M. Bougier regards water in the middle ear as a sign of considerable importance, having found it in twenty-one out of twenty-seven cases of death by submersion.

The froth about the mouth and nose is never found, he says, in bodies which have been immersed after life was extinct. Its presence would, therefore, point to drowning as a cause of death, but it should be remembered that if the person have been rapidly asphyxiated there might be no froth present, assuming, as is commonly supposed, that it is produced by the sufferer's struggles for breath. And, again, it will not be found if the face have been long out of the water when the examination is made.

The fluidity of the blood is one of the most striking conditions found in those who have died from submersion. This is especially noticeable, the author remarks, when the periosteum is stripped off from the cranium. The blood will be seen to ooze out from the bone in minute drops, which rapidly increase in size and soon begin to trickle down the side of the head. This fluid condition of the blood may be found in those asphyxiated by deleterious gases, or poisoned by opium or certain other narcotics, and it might then be necessary to examine the blood chemically or by the spectroscope. In those immersed post-mortem, M. Bougier always found clots in the heart and great vessels, and even in dogs killed by illuminating gas and then immersed these clots were present. It is stated, however, on the authority of Professor Brouardel, that the blood remains fluid only in the case of a slow death, and consequently, if asphyxia have been rapidly produced, clots may be found in the heart even after drowning.

The conclusion to be drawn from the investigations of the author and of others would seem to be that, in certain cases, it might positively be asserted that death did occur from drowning, but that in other cases, especially if asphyxia have been rapidly produced, all certain signs might be absent, and the diagnosis could be made only after a most careful and discriminating study of all the evidence obtainable by external and internal examination of the cadaver.

A REMARKABLE RECORD.

Mr. Lawson Tait publishes a list of one hundred and thirty-nine consecutive ovariotomies performed in 1885, without a death. This success, says Mr. Tait, is the basis of a large number of lessons. One of these is that it has absolutely destroyed our fear of the peritoneum, and "has justified our opening that sacred sac very much as we open our pockets." After ovariotomy, "on the slightest indication of peritonitis, we give a purgative and the inflammation subsides."

"The absolute want of fear of the peritoneum," he adds, "which has grown out of our success as a matter of necessity, has brought about many other startling changes. We are now dignified by the name of the 'Birmingham School of Gynecology' and our views are treated with respect; but it is not many years since language of a totally different kind was levelled against my colleague, Dr. Savage, and myself, and many blows had to be received, and not a few were given back. But the incredulity which was so freely expressed in this country by people who would not come to see for themselves, was speedily overcome by the evidence of those who came in large numbers from America, and finally by a missionary tour which I undertook in the States, demonstrating on material freely supplied to me there, and to audiences neither stupid nor prejudiced, many of the most important facts which were capable of demonstration, according to Sir Spencer Wells, only in Birmingham, and were non-existent in London or elsewhere in Europe. This attitude of Sir Spencer Wells is apparently still maintained by him; for, in a recent address delivered here, he passed by all these facts without allusion to them, 'deaf as the adder which closeth her ear.'"

As may be seen, Mr. Tait neglects no opportunity of giving Sir Spencer Wells a rap.

Another change effected by the "Birmingham School" is the adoption of short incisions, Mr. Tait's incisions only averaging two inches.

Mr. Tait still adheres to dry, absorbent cotton-wool as a dressing, quite free from any germicide. His fear of germs has steadily diminished. In the treatment of the peduncle the intra-peritoneal method is always adopted, and the silk ligature is also uniformly employed, whereas Dr. Keith uses the cautery. In cleansing the peritoneal cavity sponges have been given up, and the cavity is irrigated with blood-warm water, neither boiled nor disinfected, but "full of germs and spores."

The conclusion which Mr. Tait enunciates with the greatest apparent satisfaction is, that "all the conclusions formulated by Sir Spencer Wells in 1878 have been reversed."

The grievance must be profound which leads so distinguished and skilful a sugeon as Mr. Tait to load his invaluable contributions to surgical art with evidence of personal ill-feeling. But it is in history that our eminent surgeons have been eminent fighters.

THE MAXWELL TRIAL.

The Maxwell trial, which was recently finished in St. Louis, has brought out some points of medical interest. Maxwell's defence was that he killed Preller accidentally while administering chloroform, and the chloroform was given in order to enable him to get a catheter through a stricture. Now, as surgeons never give anæsthetics when an attempt is to be made to pass a catheter, it follows that Maxwell, if he did as he said, was an utter ignoramus. This, we believe, he admitted. But, being

totally ignorant of surgery, he yet attempts to give an anæsthetic and perform an operation! The story is a very extraordinary one.

On the other hand, it is well known that it is not an easy matter to kill a person with chloroform against the person's will, and without leaving marks of violence. The most rational explanation, so far, is that Maxwell is not entirely sound in mind. If the defence had made this claim they might have made out a better case for their client.

AN EXPLANATION BY M. PETTIT.

We find in *L'Union Médicale* of May 11th, a correction by M. Pettit of his statement concerning foreign delegates to the Washington meeting, upon which we commented in these columns under date of April 24th. He writes that, in the desire to be brief, he failed to state clearly what were the promises made by Dr. Billings concerning the expenses of those proposing to visit this country in 1887. What this gentleman really did say, he now explains, was that the fatigue of the voyage would not be great, since it would be made in the summer during the pleasant time of the year. As to the expense of the trip, he thought it would not be as heavy as his hearers expected, as he hoped that the steamship companies would consent to a considerable reduction of the ordinary rates, and that his American confrères would extend to their visitors as cordial a hospitality and as hearty a welcome as had been given to the foreign guests in Copenhagen. He adds that though Dr. Billings was careful not to make a definite promise, but simply expressed his hopes of what would be done, he spoke with so much fervor that none of his auditors doubted that his hopes would be realized. He himself at first thought that Dr. Billings spoke officially for the profession in America, but such was not the case.

We are glad that M. Pettit has so generously corrected this error, which we are sure he committed in good faith, and into which he was doubtless led through his unfamiliarity with our language when spoken. For, while every one in this country is satisfied with Dr. Billings' explanation, our brethren in France might have supposed, as, indeed, apparently they did, that the consent of the Congress to meet in Washington was obtained through misrepresentation. The scriptural injunction to "be swift to hear, slow to speak" is an excellent rule, and one that might have been advantageously followed by some others, who are not so far away from us as M. Petit, in this matter of the International Congress.

A POSTHUMOUS TEST THE ONLY ONE FOR GREATNESS.

There was a time when a man of mark, whether in letters or politics, science or art, closed his eyes serenely on the world without a misgiving but that he had done all in his power to show that henceforth he had a mortgage on its fame to be transmitted to his heirs and assignees forever. But the nineteenth century changes all this. No man will be considered truly great until he has proved it, not only by his works, but by exhibiting his brain; the calvarium must be opened, and from its casket the organ of thought must be lifted by scientific fingers, peered at through investigating glasses, searched with microscopic lens, and then if it can be shown that the one undergoing the crucial test has the third frontal convolution very much developed, and the upper part reduplicated where ordinary brains present only a wavy appearance; if the right quadrate lobe is very complicated and divided into two parts by a furrow branching off from the occipital fissure, and that of these two parts the inferior has a number of stellate branches, and the occipital lobe is small, especially in the right side, and the whole appearance is "very fine, great, and diagrammatically regular;" if a brain can show all this its owner shall be coroneted with laurel, for such was Gambetta's brain. So says the Anthropological Society in Paris; and such a brain, irrespective of previous deeds, is necessary to admit one to Walhalla.

THE LAWS OF REPRODUCTION.

It is not our intention to interfere in the correspondence in our pages on the subject of the "Determination of Sexes." We desire, however, to point out that Mr. Albert C. Beale, who wrote recently an interesting letter on the subject, appears, unfortunately, to have based his arguments on entirely false premises, which of necessity destroy the value of his conclusions.

Our correspondent claims as a law the principle that "the ovum only is necessary to reproduction," and that "the spermatozoid is not always necessary to the life of the germ."

We believe that the first proposition, so far from being a law of nature, is in fact contrary to the teachings of our most advanced naturalists, and an error.

The example given in support of this principle, in the aphis, appears to show that Mr. Beale's knowledge on the subject is rather limited. It is true, as he states, that the female aphis can propagate a whole season without the presence of the male, but his explanation is very nude of the truth. He says, "their ova not only develop into adult insects," "but, what is more uncommon, become perfect females."

These assertions are wholly unsupported by any authority; in fact, every work on the subject states that it is only in the fall of the year, when this method of reproduction has ceased, that the "true females" and "perfect insect" appear. This abnormal process of reproduction has been studied out, and is well understood at the present day as being an example of what is known as the "alternation of generation;" there are numerous forms of life in which it takes place, where at one time of life development takes place by budding, at another time by eggs. In the aphides the reproduction from the virgin insect are merely buds (not ova), and are not fertilized, and do not need it.

As Huxley says, it may appear paradoxical to speak of one million of *aphides* being parts of one morphological individual, but to a naturalist acquainted with the remarkable and similar forms of reproduction it causes no shock. In the *hydrozoa* and *medusæ* we find equally remarkable acts of reproduction, and in some forms these buds lead a free life, and in others they remain attached. In the lower forms of life we can watch the process under the microscope and experience no surprise, but

when we see the same process extended to the higher forms of life, where it is abnormal, as Huxley says, it gives a shock. Surprise, however, may be diminished when we consider that *planarians* may be violently cut in pieces, and that in eleven days each piece will become a well-formed planarian.

The explanation of the reason why parthenogenesis has survived in the case of the aphides and some kindred forms appears to be that it enables them to come into existence immediately in countless numbers, and thus insuring existence when exposed to great vicissitudes in the struggle for existence; whereas, if limited to the slow process of ovulation, the species would become extinct.

We think we have shown that the special mode of reproduction claimed by Mr. Beale in the aphides is something abnormal, especially as in this case it merely lasts for a part of the season, at the end of which the usual sexual process is called in force to continue the species. It is, therefore, no law of nature; and as to his proposition that the male element is not essential, we may remind him that in all animals above the protozoa, including the sponges, male and female reproductive elements are to be distinguished. Even in the protozoa, where no true sexual generation occurs, something very similar takes place in what is called conjugation, where two individuals coalesce and become one body.

SOLUTION OF FALSE MEMBRANES.

For many years, lime-water was the only solvent recommended for use in dissolving false membranes. During the past few years, several new remedies have appeared, and some of them seem to have positive value. Perhaps the two most notable ones are trypsin and papayotin. With the value of the former the readers of The Record are familiar, as several articles upon the subject have appeared in our columns.

It must be premised, with all these solutions, that the conditions of artificial digestion of fibrine and the solution of fibrinous pseudo-membranes are not exactly the same. In one case, the substance to be acted upon possesses no vitality of its own. In the other, it is in contact with living tissue. But therapeutics result from clinical observation, and it has been found that both trypsin and papayotin solutions do cause a disappearance of fibrinous exudations.

One difficulty in regard to trypsin has been the preparation of a permanent solution. Repeated trials of various antiseptic agents have shown the preferable one to be chloroform (pure), in the strength of about one per cent. Of course, the objection to most antiseptics is that a strength necessary to keep the solution inhibits the action of the ferment. Chloroform has been found to be free from this objection, and seems to be the ideal agent. Another important fact has been demonstrated in regard to the temperature at which these solutions should be used. It is found that at a temperature of 130°, the action is speedier and more efficient.

In the *American Journal of Pharmacy*, November, 1885, Martin gives the results of his experiments with papayotin, a proteid derived from papaw juice (carica papaya). He found it soluble in distilled water, and precipitated by nitric acid. It differed from a native albumin, however, in not being thrown down by heat. The results of Martin's experiments in the artificial digestion of milk were convincing as to the actual digestive power of the new agent. He found that its action was much slower than that of trypsin, and that it did not result in a true peptone. Of course, this latter point is non-important so far as the solutions of false membranes is concerned.

Many physicians have made trial of trypsin in diphtheria, and the verdict is quite general in its favor. The use of papayotin has been by no means so general. First recommended, we believe, by Rossbach, it was afterward regarded by him as very uncertain, on account of the variability in preparations on the market. This objection has been removed by greater care by the manufacturers. Merck's preparation is now considered reliable. It is over five times as expensive, at present market rates, as trypsin.

With both the above-named solvents, an alkaline reaction favors activity. Of course, the mere removal of inflammation exudations is but a part of the problem. On the theory of the local nature of diphtheria, with subsequent constitutional infection, their removal is a matter of necessity. Treatment with reference to this end must be begun early. The use of these solutions seems to promise good results. They are, however, at the best, only adjuvants. The terrible depression of the disease must, from the outset, be counteracted.

News of the Week.

Pennsylvania State Medical Society.—We learn from our despatches that there is considerable excitement over the fact that the Philadelphia delegation to this society has not been allowed to register, and that the matter has been referred to the council. Up to the time of going to press no decision has been rendered.

Transplantation of the Tendon of a Dog to Man.—M. Peyrot, at the meeting of the Paris Société de Chirurgie, May 5th, reported a case in which retraction made it impossible to suture the divided ends of the medius. He removed a piece of tendon from a living dog and sewed it to the divided tendon. The result was successful functionally as well as anatomically.

Seventeenth Annual Report of the New York Physicians' Mutual Aid Association.—The benevolent work of this association continues to prosper. The permanent fund, which was already nearly eleven thousand dollars, received an increase of over one thousand dollars during the year. Disbursements were made to the families of ten physicians who died during the year. Money was also loaned to a sick member out of the permanent fund. The officers are working hard to increase the society's membership and widen its field of usefulness. In this they deserve a hearty co-operation from the profession.

The Lowest Temperature on Record.—Dr. C. W. Suckling reports in the *Lancet* the case of a woman dying from myxœdema, whose temperature the day before ranged from 66° F. to 76° F. The pulse was 36: respirations, 12.

The Woman's Medical College of the New York Infirmary held its annual commencement on May 29th, when a class of eight was graduated.

Dr. Dyce Duckworth took a trowel to the Queen and received knighthood in exchange. The trowel was the one used by the Queen in laying the corner-stone of the Royal College of Physicians and Surgeons.

Our Learned and Scholarly Contemporary, the *Medical and Surgical Reporter*, is a stalwart supporter of the Old Code. This is an excellent thing, and is another reason for admiring the sun-set covers of our neighbor. We believe, ourselves, in all that is moral in the Old Code, and especially in the section which says, "it is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them." Yet we observe, with sorrow, that there regularly appears in the daily papers an advertisement of a certain proprietary "water," which is "the famous specific for the cure of Bright's disease," and is endorsed by D. G. Brinton, M.D., of Philadelphia. We beg our erring contemporary to set a better example.

Pasteur Defends Himself.—In reply to my remark that the drift of opinion in America seemed to be that it is necessary to wait for proofs of protection in those already inoculated, he said with great energy: "Wait? I have no objection. *I* am waiting. But consider this: In October last I began systematically to inoculate human beings. Up to this moment (April 29th) we have inoculated 907 persons. How many deaths? One. One only (for the Russians cannot justly be counted), and when this one (the Pelletier child) came to me it was too late. Before I began to inoculate human beings, how many of those bitten by mad dogs in France died? Sixteen per cent. Since last October only one death in 907 cases! What more can you ask? Scientific men once doubted my having discovered a means of preventing cholera in chickens and charbon in sheep. When I announced my discovery at the International Medical Congress in London, Koch said, 'Pooh!' and Chauveau simply loaded me with sceptical objections. Do they do it now? Let the fact that 500,000 sheep are inoculated every year in France for peasants who fight to save a two-sous piece and yet must pay four sous per head for inoculation every spring, be the answer. The Germans are angry, especially Koch, because France has the merit of this new discovery of protection against rabies. They think because they conquered our country in 1870 that they can be our masters in this field, and therefore they spread broadcast their scepticism against me. They lack generosity. They are behaving like children."—*Cin. Lancet, Med. and Surg. Journ.*

Importing Foreign Surgical Talent.—Boston was obliged to experience the mortification last year of having a British gynecologist, Dr. Keith, called all the way from Scotland to give his advice. Now it may feel satisfaction in learning that a Berlin surgeon has been summoned to London to perform a thyroidectomy on a celebrated barrister there.

The Accouchement of a Turkish Princess.—Dr. J. A. S. Grant, of Cairo, Egypt, writes to the *Albany Medical Annals* that he was recently summoned to conduct the accouchement of a Turkish princess. The lady in question had heard of chloroform and wanted it given, hence the violation of the ancient custom. Dr. Grant gave her the chloroform when the pains came on. Between the pains the patient smoked cigarettes. Before the event was over her husband brought in a Turkish doctor, in order that he might learn how to give the anæsthetic. Everything went off well, and there is great probability that European methods will begin to prevail in the conduct of accouchements in the harem.

Lady Medicals and the Philadelphia County Medical Society.—The appearance of the names of several women practitioners on the list of propositions for membership in the Philadelphia County Medical Society indicates that the struggle which formed so prominent a feature in the Society two years ago is to be resumed. It will, perhaps, be impossible to predict the outcome of this second attack.

A Prurient Medical Journal on Religion.—A weekly Parisian journal, the *Journal de Médecine*, has been criticising "the Yankees." The journal in question supports a "feuilleton" made up of stories and poems so-called which are generally obscene and rarely witty, and which are published under the head of "Anecdotes Médicales," etc. Of late the *Journal* has regaled its subscribers with a translation of the *Pall Mall Gazette* exposures, which have formed a kind of under-current of sewage for several weeks. Naturally the *Journal* is astonished to read an article in The Medical Record entitled "The Doctor and Religion," and having translated it we are taken to task for bolstering up hypocrisy and advocating "a religion of the toilet." Our editorial was a plea for the qualities of reverence and faith, and what it had to do with the toilet is hard to see. At any rate we feel that we need not explain, and least of all justify, our remarks. We certainly do not ask our contemporary to be religious; indeed, if he will only be clean and decent it will be a great gain. At present his faith seems mostly pinned on prurient literature and medical doggerel. Our contemporary by and by may be fitted for religion; at present he needs education.

The Weekly Medical Review heads its department of "Notes and Items" with

> "A chiel's amang you takin' notes,
> And, faith, he'll prent 'em."

Our usually alert contemporary was nodding when it printed the above lines, and for the credit of the present geographical and future medical centre of the country we trust they will be corrected.

The Western Pennsylvania Medical College is the title of the new medical college which begins work in Pittsburg next October.

Consumption from the Milk of City Cows.—The Paris Council of Health has reported in favor of the expulsion of dairy cows from Paris. There are upward of five thousand of these animals in the capital, and they are claimed to be a prolific source of pulmonary consumption. It is even said that the milk of a great number of them was alive with the bacillus tuberculosis. Many of these animals have been subjected to in-and-in-breeeding, thus intensifying predisposition.

The Skin and Cancer Hospital.—The "Kirmess" held for the benefit of this charity last week netted between five and eight thousand dollars. The kirmess was held out of doors, and was very picturesque. There was a great deal of fashion, if not of beauty, in attendance.

Dr. R. W. Pease, a surgeon who was prominent in the medical department of the army during the war, died suddenly at Syracuse from heart disease on May 28th.

The Long Island College Hospital held its annual commencement on June 2d, and graduated forty-nine students.

The New Hampshire State Medical Society will hold its ninety-sixth annual meeting at Concord on June 15th.

The Pasteur Institute.—The Chamber of Deputies has voted 100,000 francs to the fund for the establishment of the Pasteur Institute.

The Nebraska State Medical Society held its eighteenth annual session at Lincoln, June 1, 2, and 3, 1886.

The Ninety-fifth Annual Meeting of the Connecticut Medical Society was held at New Haven on May 26 and 27, 1886, with the President, Dr. E. C. Kinney, in the chair. The opening address of the President was followed by the report of the Treasurer, Dr. E. P. Swasey, which showed a balance on hand of $501.02. The following officers were elected for the year ensuing: President, T. M. Hill, M.D., of Willimantic; Vice-President, Francis Bacon, M.D., of New Haven; Secretary, S. B. St. John, M.D., of Hartford; Treasurer, E. P. Swasey, M.D., of New Britain. The President's address was a history and study of "Diabetes Mellitus" from the time of the first discovery of sugar in the urine to the present time.

He arrived at the conclusion that the disease appeared to be on the increase, and that it was particularly affecting our profession. He urged that operations on diabetic patients were dangerous.

Dr. W. H. Carmalt related the case of a woman who had a cataract, on whom he did not dare to operate while she had diabetes mellitus, but when the symptoms had disappeared he did so. She never recovered from the shock, and there was no effort on the part of nature toward repair, and she finally died on the fourth day.

Dr. A. W. Nelson, of New London, related four cases of diabetes mellitus that he had had under his care. One case was that of a man who had both albumen and sugar in his urine, but was comfortable at present, under treatment by opium and arsenic.

Dr. A. T. Douglas thought if any operation was to be performed where there was diabetes mellitus, that it should be early in the disease.

A paper on the microscope in its relation to disease was presented by Dr. J. W. Wright.

Dr. J. G. Stanton had prepared a paper with the title "O Tempora! O Mores!" The points of his paper were that qualified physicians should demand from the Legislature laws protecting the people from the numerous quacks that infest this State and deceive the public with the assumed name of "doctor."

In accordance with a motion made by Dr. Carrington, that a committee of three be appointed by the chair to confer with the Homœopathic and Eclectic Societies in reference to the adoption of an act substantially like that recommended by the American Medical Association, Drs. Carrington, Wainwright, and White were appointed.

Dr. W. S. Munger read a paper on morbus Brightii, and Dr. S. D. Gilbert one on pneumonia.

These papers were interesting and practical, but advanced no new ideas.

Dr. F. E. Beckwith read a paper entitled "The Treatment of Laceration of the Cervix Uteri," and gave the history of twenty-six original cases of trachelorrhaphy. He thought that in all cases of parturition the woman should be examined in about six weeks after delivery, and if any eversion or erosion was found resulting from a laceration of the cervix uteri, that trachelorrhaphy should be performed.

Dr. P. H. Ingalls did not think an operation should be performed when there was any cellulitis.

Dr. F. H. Whittemore remarked that in many cases bad symptoms were not developed until several years after parturition.

Dr. Constantine J. MacGuire has been appointed Visiting Physician to St. Vincent's and Charity Hospitals, New York.

Resignation of Professor L. M. Bingham.—The Trustees of the University of Vermont unanimously adopted the following resolutions with reference to the recent trouble in Burlington:

"*Resolved*, That while this board of trustees recognizes the right of students in any of the departments of the University to ask their attention to any well-founded grievance, they regard the petition of the medical students to the medical faculty, which has been by that faculty laid before the trustees, in effect demanding the resignation of Dr. Bingham as professor of surgery, as so dictatorial and offensive in manner, and the conduct of the said students in refusing to attend lectures as being so like lawlessness and violence, that this board cannot properly consider the same.

"*Resolved*, That the trustees express their confidence in the capacity and qualifications of Professor Bingham for the duties of the chair of surgery in the medical department of this University."

In view of this vote of confidence on the part of the trustees Dr. Bingham tendered his resignation, which was accepted.

A President of the American Medical Association Advising a "Boycott."—The late President of the American Medical Association, Dr. Wm. Brodie, in his annual address, accused the *New York Medical Journal* and the *American Practitioner and News* with having antagonized the Association, and said that these journals had better change their editors "if they wished to retain the patronage of the members of the Association." This is nothing more nor less than a threatened "boycott," and it was warmly resented in a letter written by Dr. D. T. Smith to the *Weekly Medical Review*. Dr. Smith says: "I had cherished the pleasant delusion that the members of the American Medical Association, as indeed all progressive physicians everywhere, selected their professional journals with a view to the thoroughness, freshness, and high character of their

contents, and the literary excellence of their style, and not because they might be found trimming to every passing breeze of opinion. Notwithstanding the baselessness of the charge referred to, and the question that urgently suggests itself, as to the propriety and dignity of going out of the way to introduce personalities into an address from the exalted position of President of the American Medical Association, intended for the vast audience of American physicians, any disapproval of the *Practitioner and News* should have been left to be expressed through its columns. But when the great powers incident to the high office are utilized in suggesting a boycott on account of a respectful difference of opinion, I should feel that I had done less than my duty if I should fail to enter a respectful protest. In the present sad juncture of affairs there are quarters where suggestions or propositions of boycotting would not occasion surprise; but I feel doubly safe in saying that the membership of the American Medical Association cannot fail to regard a suggestion, from any source, for it to join in a boycotting enterprise as not respectful to its sense of honor, and inconsistent with the dignity of its high character, and not to be for one moment entertained." We cannot believe that Dr. Brodie meant all that his words implied, but his expression was certainly unwise and injudicious.

Reviews and Notices.

LOCAL ANÆSTHESIA IN GENERAL MEDICINE AND SURGERY. Being the Practical Application of the Author's Recent Discoveries. By J. LEONARD CORNING, M.D., formerly Resident Assistant Physician to the Hudson River State Hospital for the Insane; Member of the Medical Society of the County of New York; Fellow of the New York Academy of Medicine, etc. New York: D. Appleton & Co. 1886.

IN this brochure the author describes his method of producing local anæsthesia by means of hypodermic injections of cocaine combined with arrest of the circulation in the part, and demonstrates its applicability to many of the larger operations. A considerable portion of the monograph has already appeared, in papers, in THE MEDICAL RECORD and *The New York Medical Journal*. It is an interesting and instructive work. Numerous illustrations serve to elucidate the text.

VON ZIEMSSEN'S HANDBOOK OF GENERAL THERAPEUTICS. In seven volumes. Volume I.: Introduction; The Dietary of the Sick; The Koumiss Cure. Volume II.: Antipyretic and Antiphlogistic Methods of Treatment; Epidermic, Endermic, and Hypodermic Administration of Medicines. Volume III.: Respiratory Therapeutics. New York: Wm. Wood & Co. 1885.

THE great success achieved by the series of volumes known as Ziemssen's "Cyclopædia" has quite naturally led to the present undertaking. It aims to give a full account of the entire subject of general therapeutics. The text is supplied from the pens of the most eminent German authorities in the various departments of medical practice. A work of this magnitude (seven octavo volumes), dealing with so many subjects of universal interest to the profession, has not hitherto been essayed in any country. It is a matter of congratulation for English readers that the several treatises comprising the entire series are made accessible to them so soon after their appearance in the original. This is clearly an instance in which the publishers deserve unstinted praise for the quick appreciation of what would prove most acceptable to a large contingent of the entire profession.

Having said so much in a general way, it must suffice to indicate the special nature of this handbook by a cursory glance at the contents of the three volumes that are already before us.

In the first of the series Professor Bauer deals in a thorough and comprehensive manner with the highly important subject of dietetics. An excellent account is given of the general dietary of the sick, and this is supplemented by an adequate description of dietetic methods of treatment, such as grape, milk, and whey cures. In an appendix Dr. Stange discusses the various koumiss cures in all their practical bearings on diseased states.

The second volume begins with antipyretic methods of treatment, which are fully and ably explained by Professor Liebermeister. Dr. Jürgensen takes up the discussion of antiphlogistics, blood-letting, and transfusion, while to Eulenburg have been assigned the subjects of epidermic, endermic, and hypodermic medication. These three authors are well known to the profession of both hemispheres, and their articles are complete, reliable, and fully abreast of modern views concerning the subjects dealt with. It is deserving of notice, also, that the translation has been so well done that there are no unpleasant hitches in the reading of these monographs.

Volume III. largely exceeds in bulk the first two of the series, numbering no less than 768 pages, which are entirely devoted to the intricate subject of respiratory therapeutics. The author is Professor Oertel, of Munich, and as the translator, Dr. Yeo, has well expressed it, a conspicuous merit of the German savant's work lies in the fact that he endeavors to supply "a rational and scientific as well as an empirical basis for all the methods he recommends."

If the high standard of excellence achieved by the volumes hitherto issued is maintained, the eminent success of the "Handbook of General Therapeutics" is assured.

GUIDE TO THE EXAMINATION OF URINE, with Special Reference to the Diseases of the Urinary Apparatus. By K. B. HOFFMAN, Professor at the University of Graz, and R. ULTZMANN, Docent at the University of Vienna. Second Edition. Translated and Edited by F. FORCHHEIMER, M.D., Professor of Physiology at the Medical College of Ohio, Cincinnati. With Illustrations. Cincinnati: Woodruff, Cox & Co. 1886.

THIS is a very practical and useful little work, which everyone called upon to make urinary examinations will find of great service. The authors go most thoroughly into the subject, much more fully, indeed, than most writers of similar guides, but the mass of instruction contained in the book is made readily accessible by means of the excellent index compiled by the translator. The value of the American edition is enhanced by numerous fairly well executed illustrations.

CONTRIBUTIONS TO THE TOPOGRAPHICAL AND SECTIONAL ANATOMY OF THE FEMALE PELVIS. By D. BERRY HART, M.D., F.R.C.P.E., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh, etc. Edinburgh and London: W. & A. K. Johnston. 1885.

DR. BERRY HART deserves great credit for the industry with which he has devoted himself to the task of elucidating some of the obscure points connected with the normal and pathological relations of the female pelvis. The present work consists of twelve beautifully executed plates, drawn from frozen sections of well-formed cadavers. All those interested in the anatomy of the female human pelvis will welcome this collection of faithful representations of undistorted parts. The brief text accompanying the plates is explanatory rather than controversial, although a number of mooted points are brought up by Dr. Hart, and treated in a spirit of fair criticism.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 28, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

PREGNANCY COMPLICATED WITH UTERINE FIBROID—RETENTION OF URINE AND PYO-NEPHROSIS.

DR. C. C. LEE presented a specimen, removed from a married woman, thirty-seven years of age, who was admitted to his service in the Woman's Hospital on March 16th, with the following history: She had been married two years, had never borne children, but had had a miscarriage eight months previous to her admission, at about the second month of utero-gestation; the cause of the miscarriage was not known. When admitted she had been ill for two months, complaining chiefly of retention of urine, with great dysuria, œdema of the lower extremities, and slight shortness of breath. It was supposed by her physician that she had an ovarian tumor. On examination it was found that she was pregnant, and had the following peculiar condition of the bladder: this organ was drawn up under the abdominal walls above the umbilicus, and was enormously distended with urine. On passing the catheter, between eighty and ninety ounces of urine were withdrawn, and the tumor subsided. After this had been done it was very easy to recognize the presence of uterine fibroids. The pregnancy was estimated to be between the third and fourth month. The uterus was displaced backward into the cavity of the sacrum, and the retroversion was so fixed that all efforts to replace the uterus were ineffectual. The fibroids were three in number, and their outlines could be distinctly made out. It was quite evident that the retention of urine had been due to the rapidly increasing size of the fibroids, and that one of them had pushed the lower third of the bladder against the pubis in such a way as to partially close the exit for the urine. When the urine was examined it was found to be alkaline, with a specific gravity of 1,012, slightly purulent, quite albuminous, and after the lapse of a few days it exhibited hyaline casts. The diagnosis was pregnancy, complicated with fibromata, which had produced retention of urine by pressure on the lower part of the bladder, and probably secondary pyo-nephrosis. The cervix, however, had been crowded up so far that it was almost impossible to reach it, and was above the arch of the pubis, so that the question of the induction of premature labor was decided in the negative. The patient developed pneumonia on the tenth day after admission, and died with high temperature and the symptoms resulting from that disease. Whether the pneumonia was due to septicæmia or some casual reason was not easy to determine, and it was believed to be possible that the patient lost her life because premature labor was not induced. Miscarriage did not occur.

At the autopsy the lower and middle lobes of the right lung were found in a condition of partial resolution, with a large quantity of serum in the pleural cavity of that side. The heart was flabby, but not otherwise diseased. In the abdomen the three fibroids presented themselves with the bladder drawn up over them to a great extent, and the largest of the three had caught the lower portion of the bladder against the pubis; the fibromatous mass had also pressed the uterus into the cavity of the sacrum, thus giving an additional reason for the immovable retroversion. The uterus contained the fœtus, and presented no peculiarities. The ureters were dilated, slightly inflamed, and both kidneys had undergone extensive and rapid degeneration, so that only a small amount of kidney-tissue remained. The pyo-nephrosis was evidently of rapid development, and due to the retention of urine caused by pressure upon the lower portion of the bladder by the fibroids.

Dr. Lee thought it was probably an error that premature labor was not in some way produced, although the condition of the parts was such as to render it almost impossible.

HEGAR'S OPERATION.

Dr. Lee also presented the ovaries and tubes removed by Hegar's operation, for the relief of an intractable submucous uterine fibroid, sessile in character, and occupying the entire fundus of the organ. The patient was a young woman who, besides the loss of blood which the fibroid had caused, had suffered terrible pain, and had had two or three attacks of pelvic peritonitis. After due consideration it was decided to force the menopause by removal of the ovaries, and Dr. Lee was influenced somewhat in making this decision by the fact that he had already reported two cases where he had attempted to remove the fibroid by means of the serrated spoon, and with disastrous results, and also the fact that the patient had been ineffectually treated by injections of ergot. Dr. Lee found it exceedingly difficult in this case to remove the tubes and ovaries, on account of the very extensive adhesions. The patient, however, had done well, and was convalescent, the operation having been performed about ten days ago.

EXPLORATIVE LAPAROTOMY—DOUBLE PAPILLOMA OF THE OVARIES.

Dr. Lee, on Saturday last, had occasion to perform explorative laparotomy in a case which was supposed to be one of multiple uterine fibromata. The patient was twenty-seven years of age, single, and for two years had been suffering constant pelvic pain, which was increased with menstruation. A pelvic tumor had been recognized by two consulting physicians. At the first examination Dr. Lee concurred in this opinion, but on account of the severity of the pelvic pain he afterward concluded that it would be best to give the patient the advantage of the explorative incision. When he had opened the abdomen, he found that there had been a mistake in diagnosis by himself and the other physicians, and that there was a double ovarian tumor. The error in diagnosis was apparently due to the fact that the sac was of unusual thickness, and gave no distinct sense of fluctuation, but rather an elastic feel which resembled fluctuation, and was regarded as indicative of a soft fibromata. The peculiar feel was such that Dr. Lee thought it was altogether probable he would be likely to make the same mistake again. He exhibited the specimen for the purpose of enforcing the view that where the surgeon was in doubt in such cases, the explorative incision was the proper procedure to be adopted. He had not seen any fatal results from the operation, and it enabled the surgeon to be sure of the nature of the trouble within the abdomen. The uterus in this case was normal, but there was a double ovarian tumor of a true papillomatous character, the inner surface showing distinctly the papillomatous growth, and each cyst was filled with a thick and gelatinous fluid. At the present date, five days after the operation, the patient was doing well.

DR. BOLDT asked how long the retention of urine lasted in Dr. Lee's first case.

DR. LEE said that the retention was not at any time complete, but that it lasted for a month previous to admission, and the patient was in the hospital a month.

DR. BOLDT remarked that retention with retroversion was very likely to be accompanied by cystitis, and in the cases reported it had always been in such a degree as to be serious, the cystitis being primary and the condition of the kidney secondary, and all the cases had terminated fatally if the displacement could not be reduced.

DR. WALDSTEIN asked Dr. Lee if it was not possible that in his second case the menopause might not be established, as had been observed by Hegar himself, so that the result of the operation might be negative.

DR. LEE said it was quite possible that this might oc-

cur, but such a result was probably a rare exception and not the rule. Often, however, where the menopause does not occur, the flux of blood which the uterus receives is much lessened by the operation, provided such an amount of peritonitis is not produced as to obstruct the pelvic circulation.

Dr. Waldstein said that he simply put the question because the operation seemed to him to be a severe one for the patient who gave the symptoms of fibroid of the uterus. The condition of the ovaries seemed to be the result of the examination made at the laparotomy.

Dr. Lee said the condition of the ovaries was only recognized after the explorative incision had been made, but the fibroid was of such a character that it could not be removed by the more usual methods.

Dr. George F. Shrady presented a specimen which he had received from Dr. Hays, of North Carolina, who removed it at autopsy from the body of a white man of middle age who died of typhoid fever in Charleston Hospital in 1883. It was a part of the outer surface of the spleen removed from near the hilus, and consisted of either ossific or calcareous matter, and in order that its exact nature might be determined it was referred to the Committee on Microscopy. [The Committee reported subsequently that the substance was calcified connective tissue, resulting from chronic perisplenitis.]

FREE BODIES WITHIN THE SAC OF A HYDROCELE.

Dr. Waldstein presented a specimen which Dr. Lange had given him for examination. The case was one of varicocele occurring in a patient twenty-one years of age. After excising the same Dr. Lange found that there was a small hydrocele, which he incised and removed from the sac small free bodies which, on examination, proved to be of a fibrous character with calcification. Dr. Waldstein had examined the literature of the subject somewhat, and had found that Virchow had mentioned these bodies as originating in a pure orchitis proliferans, and that excrescences, fibrous in nature, generally from the albuginea, became calcified and were freed, and then were found loose in the sac. Sometimes they also originated from the hydatid of Morgagni, but such was not the origin of the specimens presented.

ANGIOMA CAVERNOSA.

Dr. Waldstein also presented a specimen removed from the outer side of the left leg of a girl five years of age. It was located very near the outer condyle; it was painful, and so impeded the action of the leg, and affected the flexion of the knee-joint that her gait was from the hip. The question arose whether or not the tumor could be removed. During the last two and a half years it had not perceptibly grown. Dr. H. B. Sands performed the operation, which was entirely successful. It could not be determined positively whether the tumor was connected with the articulation, or was within the skin, or was subcutaneous, or was adherent to the bone, or within the muscle. Dr. Waldstein was inclined to the opinion that it was situated within the muscle, and in this view he was sustained by Dr. Sands. On making an incision over the growth it was found that the skin and subcutaneous tissue were not involved. Dr. Sands then cut into the muscle and found within the belly of it a tumor which was enveloped by a fibrous capsule, and from which it could be easily enucleated, except at the lower extremity at the termination of the muscle, where it was so firmly attached that it was necessary to cut it away with the knife. The muscular tissue in the neighborhood of the growth had visibly degenerated, and on section through the tumor it was found that it contained some adipose tissue, but a great deal of blood. On microscopical examination it was found to be a specimen of angioma cavernosa; that is, containing a large number of newly formed and forming blood-vessels with caverna filled with blood.

Dr. Waldstein presented the specimen because of the locality in which it was found. It was an intra-muscular angioma cavernosa, and he had been unable to find any record of a similar case.

The President said that he had a specimen almost identical in history and location with the one presented by Dr. Waldstein, but which was removed from the vastus internus muscle. The patient came into his service, and it was noticed that there had been an incision made over the tumor. While he was operating a physician present remarked that there was a scar over the tumor when the operation was commenced, and he said that he saw the same patient under an operation, and the hæmorrhage was so frightful that the operator ceased at once and closed the wound. Dr. Wyeth operated by the aid of an Esmarch bandage, and no hæmorrhage whatever occurred.

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 20, 1886.

Abraham Jacobi, M.D., President, in the Chair.

Dr. C. R. Agnew read a report from the Board of Trustees, including a memorandum from the executors of the late Dr. Edward L. Beadle, stating that the Academy would, in a few days, come into possession of the five thousand dollars left it by the provisions of his will.

The President said this was the second bequest which the Academy had received within a short time, the other being the library of the late Dr. Austin Flint. The Academy was thankful for these gifts; they helped toward making it the centre of scientific labor of the profession at large, which it was destined to become. There were good reasons to believe that further donations would soon be received.

MEMORIAL REMARKS ON GASPAR GRISWOLD, M.D., M.R.C.S.

Dr. E. G. Janeway spoke of Dr. Griswold as an earnest, faithful, hopeful physician and student. He was a clear writer and a good speaker; he was able to present his thoughts in a manner to charm his audience, and as he had entered upon the labors of a medical teacher he gave promise of an exceptionably successful career.

THE DIAGNOSIS OF DISEASES OF THE HEART.

Dr. Janeway then read a paper on the above subject. It was not intended to be exhaustive; he wished simply to present certain exceptional points, in the diagnosis of cardiac disease, which had come under his observation. He would not speak of the sphygmograph.

First, with regard to the position of the heart. There were different causes for altered position of this organ which might cause difficulty in diagnosis, but the majority were sufficiently well known. There was one cause of which he would speak from clinical and cadaveric examination, namely, a lowered position of the heart and of the apex beat, owing to a long first portion of the arch of the aorta.

The pushing forward and upward of the heart in spinal curvature he had known in several instances to lead to a belief in the existence of an aneurism.

The nipple was often taken as a guide to the position of the apex of the heart in man. The examination of a large number of persons had led him to believe that this was an uncertain landmark; the intercostal spaces and the centre of the sternum were much more reliable points.

Inspection and palpation could often be relied upon to a considerable extent as affording points for diagnosis, but the writer had often been struck with the absence of perceptible cardiac impulse in hospital inmates, and also in persons in presumable good health. Sometimes, also, the cardiac impulse was not evident on palpation. This

could not be taken as indicating more than a slight lack of force in action.

Some physicians were inclined to attribute the cardiac thrill to a single condition, but Dr. Janeway thought the conditions under which it was present were variable. It was generally true that the thrill accompanying aortic and pulmonary obstruction was perceptible at the base of the heart over the respective arteries—that of the pulmonary on the left, of the aorta on the right of the sternum, but by this sign alone one would not be justified in making a diagnosis. It was true that the time of the thrill would help somewhat, but to exclude an aneurism would sometimes require a very careful examination. He had not infrequently been able to predict mitral stenosis simply by palpation over the heart, and find his prediction confirmed not only by further physical examination but by autopsy.

Mapping out the area of the heart was, as a rule, not difficult; but Dr. Janeway had been much struck by the devices which some physicians had thought it necessary to resort to to do this. A simple means would enable one to use the ordinary Cammann stethoscope, namely, let the patient hold the stethoscope to his chest-wall, which would leave the examiner's hands free for auscultatory percussion.

Students were apt to condemn a heart over which a murmur was heard, and to consider a heart normal over which no murmur was audible; he had also known of some expert examiners being misled in the same direction. They were most likely to pronounce a heart normal over which no murmur was heard. Before pronouncing a heart normal it was important not only to consider the nature of the heart-sounds, but also what effect the cause producing the murmur was having upon the heart. A difference of opinion was likely to arise, when a murmur existed over the cardiac area, as to its exact significance. There were other sources for murmurs heard over or near the heart which were of decided importance to the patient, so far as diagnosis was concerned, such as respiratory murmurs, etc.

To distinguish between the murmurs produced in the aorta and at the aortic valves was not always easy. Sometimes an aneurism, a projecting thrombus on the aortic valves, a chronic endarteritis would be found to produce either a systolic, a diastolic, or a presystolic murmur; or there might be a conjoint cause in the aorta and the valves for the murmur. The murmur of aortic regurgitation might be propagated to the apex, and if the leakage was free it might be mistaken for a presystolic, mitral, or a mitral regurgitant murmur.

With reference to mitral stenosis, in the majority of cases, when the valves were capable of vibrating, there existed a characteristic presystolic murmur, but from this decided indication of this form of disease there were divergences which might progress to that point where altogether, or at times, no typical murmur existed. The author further spoke of the difficulty which sometimes existed of diagnosticating tricuspid regurgitation, owing to the presence of a mitral systolic murmur or other conditions. The loudness or softness of murmurs was not, as was generally well known, an index of the amount or gravity of the disease inducing the murmur. A thrombus at the apex of the left ventricle, or in the left auricle, might exist without a murmur, and it might be of considerable size. So also a small, bead-like vegetation might be present on the auricular aspect of the mitral valve without a murmur. The presence of a tendinous cord in the left ventricle was not rare, and he related one case in which it was the only apparent cause of a murmur during the patient's life. The author also spoke of the significance of exceptional signs in certain cases, with pulsation of the liver, fatty degeneration of the heart, acute cardiac dilatation, ulcerative endocarditis, malignant growths, and syphilis.

Dr. E. D. Hudson, Jr., thought the profession would derive great benefit from Dr. Janeway's paper, especially as no one in this country had had a better opportunity for observing a large number of cases of cardiac disease, and of following them up by an autopsy. He would not attempt to take up all the different points brought out in the paper. With regard to the location of the apex, in health it was usually under the fifth or sixth interspace or intervening rib. If it were not found in this locality, the presumption was in favor of dilatation or hypertrophy. But an altered position of the heart might exist, which would be followed by a change in the line of conduction of a cardiac murmur if one existed. For instance, a student found a murmur conducted from the base downward in the usual line in which pulmonary regurgitant murmurs were conducted, and he made a diagnosis accordingly. Dr. Hudson called his attention to the fact that, judging from the relative number of cases of the two forms of murmur, the presumption would be altogether in favor of an aortic regurgitant, and on examination he found such to be the true nature of the case, the change in position bringing the line of conduction of the murmur in correspondence with that of pulmonary regurgitation.

In forming a conclusion as to the importance of mitral murmurs, both systolic and presystolic, Dr. Hudson thought it very important to consider the composite nature of the first sound of the heart. He recognized the fact that in many instances we could make an immediate and final diagnosis of a murmur at the apex, and determine at once whether it was a mitral regurgitant or a murmur due to mitral stenosis. But he had so often found a murmur which possessed all the characteristics of an organic murmur at the mitral valve, and at a subsequent examination found it absent, that he thought it wise if the physician postponed a final diagnosis to a future examination. At one time, owing to the influence of prominent teachers, he did not believe in the so-called presystolic murmur, but he had long since become converted to the fact of its existence. He was, however, very sceptical as to the frequency of the mitral presystolic murmur. Believing in the composite nature of the first sound of the heart, he was convinced that a great many murmurs simulated the true mitral systolic, and it would often be found that rest and measures for restoring the general health would cause their disappearance. He had come to regard as fallacious the teaching of so many authors that the transmission of the systolic mitral murmur took place through the solid structures around to the back; he thought it took place through the auriculo-ventricular opening and posterior wall of the auricle, and thence to the back.

Dr. H. N. Heineman regarded the paper as a valuable one, especially for reference in cases of cardiac disease presenting unusual symptoms and in which the diagnosis was difficult. It was important, before arriving at a diagnosis of any given case of supposed heart trouble, to take into consideration not any one sign alone, but all that might be present; we should consider the apex-beat, the size of the heart, the murmur, the impulse in the neck, the pulse, the clinical history. With regard to thrill, he had found, after observation of many cases, that it bore no relation at all to the intensity of the murmur.

Mitral stenosis was sometimes accompanied by a thrill, but this was not to be relied upon as a diagnostic sign. It might be associated with aortic stenosis, and in some cases be carried to the apex. In the latter event one would not be able to say whether it was connected with aortic stenosis or mitral insufficiency. Thrill was an uncertain element in diagnosis. If all the other elements pointed to a particular diagnosis thrill might help some. Given, a loud murmur at the aortic orifice and one at the mitral orifice, and you were satisfied that there was a lesion at both of these orifices, it would be impossible to say at the first examination whether two or three murmurs were present. Again, if there were three murmurs, two at the aortic orifice and one at the mitral, or the reverse, he maintained that it would be impossible at the

first examination to say what was the condition of the mitral orifice and what that of the aortic. Again, there might be a loud, prolonged mitral regurgitant murmur, and the examiner would be unable at the patient's first visit to say whether there was mitral insufficiency alone, or whether there was not also some degree of mitral stenosis.

Dr. A. L. Loomis had been greatly interested in the clinical and pathological experience which Dr. Janeway had related. He had given his experience upon certain points which one who studied cardiac diseases carefully would often find it difficult to decide upon. The author of the paper had first directed attention to cardiac displacement, and had spoken of a displacement due to an elongation of the aorta. Dr. Loomis once had occasion to examine a large number of healthy persons, and he came to the conclusion then that the region of the apex-beat varied in different persons more than was generally supposed. Displacement below the so-called normal point of apex-beat was most common. If now he should find the apex below its normal limit, there being the normal area of diffusion and intensity, etc., he would not for a moment suppose that it indicated cardiac disease.

The author had also called our attention to cases of feeble apex-beat in persons who had occupied the recumbent position for a considerable time. When Dr. Loomis had found this condition he had questioned in his mind whether there had not been some interference with cardiac nutrition. One who had studied cardiac diseases soon came to the conclusion that it was not the murmurs nor the changes in position of the heart which were of so much importance, but rather the integrity of the cardiac walls and of the cardiac rhythm. A mitral regurgitant murmur, for instance, might exist for years, and be a matter of little importance. But when in connection with this murmur, or any other cardiac murmur, there came a change in the walls of the heart permitting, under high blood-pressure, of a change in the cardiac rhythm, it was a matter of much significance.

With regard to thrill, that, connected with mitral obstruction, was familiar to all, for it was almost always present. But, as Dr. Janeway had said, it was by no means the only thrill. He had come to believe that the thrill heard over the base of the heart, or at the apex, was due as much to dilatation of the auricular cavity, on the one hand, or of the ventricular cavity, on the other, combined with a general condition of anæmia, as to valvular changes. And it was important to notice whether, if there were a distinct thrill and no cardiac murmurs, there was a trembling impulse, though it might be only slight.

The differential diagnosis between a presystolic mitral murmur and an aortic regurgitant was an old question. When he commenced to study cardiac diseases under Dr. Cammann, he was taught that a murmur at the apex preceding the first sound of the heart was an aortic regurgitant, due to blood running down on the posterior wall of the heart. Shortly afterward, however, he met with a case of presystolic murmur, and examined the patient many times. She died of pneumonia, and at the autopsy he found stenosis of the mitral valve, there being only a button-hole slit. Since that time he had never questioned the existence of a presystolic mitral murmur, nor had he had any doubt as to the anatomical conditions which produced it. Nor had he regarded it of specially serious import unless it were developed from an endocarditis. A large number of the murmurs were congenital. He had seen this illustrated in three members of the same family. Such patients suffered only after violent exercise or pulmonary congestion. He thought these murmurs could be distinguished by their characters.

As to pulsation of the liver, it was not infrequent in connection with cardiac hypertrophy, but Dr. Loomis had never seen expansive pulsation of the liver except when there was sufficient tricuspid insufficiency to produce a pulsation in the jugular vein.

Dr. Loomis dwelt upon the importance of not laying too much stress upon the presence of cardiac murmurs. He was convinced that they might be absent, or their presence be not recognized in a person who, after some sudden exertion or blood strain, got up cardiac dilatation, and then the murmurs might appear.

Dr. Loomis asked Dr. Janeway, who had referred to ulcerative endocarditis, whether he regarded it as an infectious or a non-infectious disease; whether primary or secondary?

Dr. Janeway replied that there were some cases of undoubted secondary ulcerative endocarditis. Others, so far as could be determined, were primary, there being no other lesion to which it could be traced. There were other cases in which we might be left in doubt as to whether the other lesions coexistent with the ulcerative endocarditis preceded it or were secondary to it.

The President asked whether a murmur was to be considered as always present in ulcerative endocarditis.

Dr. Janeway replied that it might not be present.

The President said he anticipated such would be the reply, for he was quite sure he had seen a case of ulcerative endocarditis in which there was no murmur. Perhaps it was because the vegetations were so near the base of the valve that they produced no vibration.

Dr. Janeway remarked that he had seen many vegetations in cases in which there was no murmur, and the absence of murmur was due to cardiac weakness. As to the diagnosis of mitral stenosis, it was sometimes difficult to distinguish between this condition and simply a prolonged first sound of the heart.

The Academy then adjourned.

Correspondence.

OUR PARIS LETTER.

MORE ABOUT PASTEUR'S METHODS.

Paris, May 21, 1886.

It has been objected that submitting the rabid spinal cords to the influence of dry air has the effect of gradually lessening their virulence, and finally entirely destroying it. M. Pasteur has ascertained by experiment that this is not the case. Experiments made on rabbits proved that the cords prepared in dry air were poorer in quantity of virus, but not in quality. He further ascertained that the rabid virus was composed of two distinct substances: one, living, capable of developing in the nervous system; another, deprived of vitality, but, if present in a sufficiently large proportion, capable of arresting the development of the former. Although a great deal has been already written concerning the manner in which M. Pasteur inoculates human subjects for hydrophobia, yet a short account of them here may be acceptable to your readers. Patients who come from all parts of the world, and who are generally of the lower classes, reside in small hotels and lodging-houses in the neighborhood of the École Normale, in the Rue d'Ulm, where M. Pasteur's laboratory is situated.

When the patients arrive at the laboratory for inoculation, they are received either by M. Pasteur or by one of his assistants, and their names and addresses are taken. A certificate from a veterinary surgeon or medical man is required, stating that the dog was mad. Their wounds are examined; if they have not been bitten on the face or hands, and their clothes be not lacerated by the animal's teeth, so that the virus has not passed into the wounds, they are sent away. In some cases, however, a certificate is not produced and the dog has been lost sight of; to these M. Pasteur gives the benefit of the doubt and inoculates them, his argument being that it is only humane to place these people beyond danger, especially as it is highly probable that the dog which inflicted the bite was mad. The inoculations are performed each day

from 11 A.M., and last about an hour or more, according to the number of cases, the average being from eighty to one hundred in that time. M. Pasteur calls in the patients one by one, according to the series previously arranged. Series No. 1 is that which has to be inoculated for the first time, No. 2 for the second, and so on. The accommodation for these inoculations is very limited—a waiting-room and an inoculating-room; the former is so small that a number of the patients are obliged to wait outside. Even the inoculating-room is crowded, not only with patients, but with a number of medical men and others who come to witness the proceedings.

At one end of the inoculating-room is a table on which are placed different glasses, covered with a piece of gutta-percha sheeting, which contain the different solutions of virus in sterilized broth. The inoculations are performed by Dr. Grancher, who has two assistants; one fills and hands him the syringe, the other helps the patient. When an entire series is assembled Dr. Grancher performs the inoculations one day in the right hypochondriac region, another in the left, and so on alternately. This precaution is observed to prevent irritation or inflammation consequent on the introduction of the virus. To avoid the trouble of undressing the patients lift their shirts from over the side, thus exposing the part to be inoculated. The inoculator seizes the skin, lifts it up, plunges the needle of the syringe deeply into the areolar tissue, and presses the piston down to the end. The dose for adults is a Pravay's syringeful (about a cubic centimetre) of the virulent mixture; for children the syringe about half or three fourths full, according to their age. The first inoculation is made with virus that has been kept in broth for fourteen days, the second inoculation with virus of thirteen days, and so on, until at the end of ten days a virus of five days' attenuation is used. This completes the ten inoculations which are supposed to be sufficient to preserve the patient from hydrophobia; that is to say, that which is caused by the bite of a dog.

In cases of bites by rabid wolves M. Pasteur repeats the series of ten inoculations three times over. In a room close to the inoculating-room, a surgeon (M. Terrillon) dresses the wounds resulting from the bites. When the wounds are of so serious a nature that the sufferers are obliged to be treated at a hospital or in their own lodgings, M. Pasteur, or one of his assistants, goes to make the inoculations. The rabbits intended as subjects for the inoculations are kept in wire cages, some to be inoculated, others which have already been operated upon; of these three or four die daily. The mode of death in the rabbit is quite different from that of man—they die of paralysis, without a struggle; in some very rare instances, however, they die of symptoms resembling those observed in the human being. Two dead rabbits are taken daily to the laboratory. The spinal marrow is taken out and cut into pieces about four inches long; one end is attached to a piece of fine wire, the other end of the wire being fixed to a stopper, and placed in a glass bottle prepared for the purpose. The preparation of the bottle consists in heating it to about 150° C., cotton wool being placed in the mouth and at another opening at the bottom of the bottle. A thick layer of caustic potash is placed at the bottom of the bottle. A few hours after the piece of spinal marrow has been fixed in the bottle it acquires a glazed appearance, as if it had been varnished. A small fragment of this is put in sterilized broth and kept there for fourteen days; this then serves for the first inoculation, as mentioned above.

The operation of inoculating the rabbits is done in the following manner, which I here describe even at the risk of repeating what may have been before given. A healthy rabbit is placed on a board lying on its abdomen; its hind legs are fastened to two lateral pegs, and the same is done to the forepaws. The hair is cut off its head to the extent of about half-a-crown. Chloroform is administered to the animal until it becomes quite insensible. A clean incision is then made lengthwise with a sharp bistoury previously dipped in a solution of carbolic acid. The lips of the wound are kept apart by an eye dilator, any blood is mopped up with fine blotting-paper also dipped in a solution of carbolic acid, and a revolving trephine is placed perpendicularly on the bone; in a few turns a small disk of bone, of about the size of a threepenny piece, is cut through, and extracted with a curved needle, also disinfected. The dura mater is thus exposed. A fine Pravay needle is then inserted under the membrane, and two or three drops of a strong solution of the virus are injected. The dilator is removed, the skin sewed up, the ligatures which fasten the legs are removed, and the rabbit is replaced in his cage. On the seventh day the rabbit begins to feel the effects of the inoculation, and dies invariably on the tenth day. Two rabbits are thus inoculated every day, and two die every day, so that a supply of virus is kept up for inoculating rabbits and patients. The inoculations in the human subject are sometimes followed by a slight œdematous redness, but no evil results have as yet been noticed.

Whatever may be thought of M. Pasteur's anti-rabic inoculations, I shall conclude this letter with his last report to the Academies of Sciences and of Medicine. "The number of persons inoculated for hydrophobia was, on April 4th last (the date of the report), 950. Of this number 912 were bitten by mad dogs, and 33 by wolves, the latter being all Russians. The patients of the first category, with the exception of the little girl Pelletier, who, it will be remembered, died after a few inoculations, are all doing well. More than half of that number have passed the dangerous period. Since I began these inoculations I have learned that the mortality caused by the bite of rabid wolves was very considerable. Very frequently this mortality is 100 per cent., and the duration of the incubation is always very short, being sometimes only thirteen or fifteen days. Very frequently also this duration does not exceed eighteen to twenty days. the bite of the dog being rarely of such short duration. Six deaths have occurred among those who have been inoculated, without including the little girl referred to above. The six cases were Russians, five of whom were men bitten by wolves, and the other a woman bitten by a mad dog, all of whom died of hydrophobia, and in whom also the wounds were of a very grave nature. These statistics present a great deception to hostile persons, such, for instance, as the anti-vaccinators. This is my profound conviction, and I believe that there can be no possible doubt regarding the method, as the persons adverse to it cannot contest the results which I have indicated, any more than the experiments which repose on the *ensemble* of these results."

There is no doubt that there is, and will for some time be, a good deal of scepticism as to the efficacy of this new method; in the meantime M. Pasteur, who is looked upon as one of the greatest benefactors of the age, is being loaded with honors, and money is flowing in from all parts of the globe for the establishment of the Pasteur Institute. The last list of the subscriptions, which has just appeared in the *Journal Officiel*, shows a total of 711,813 francs. I may here mention that among the latest donors was Mr. Morosini, of New York, who, you are aware, brought his daughter over to Paris to undergo M. Pasteur's treatment for the bite of a mad dog. He subscribed $1,000 toward the institute, as M. Pasteur accepts no fees, and he presented Dr. Grancher, M. Pasteur's inoculator, with a handsome piece of silver plate. Miss Morosini is, I am glad to say, doing well, and has suffered no inconvenience from the inoculations.

THE INJURIOUSNESS OF NATURAL GAS AS A FUEL.

SIR: I have noticed several articles in the newspapers, and a short one in THE MEDICAL RECORD for April 3d, relating to the "Injuriousness of Natural Gas as a Fuel,"

especially as irritating the respiratory organs. I live in a portion of country entirely supplied with natural gas. Everybody burns it. The houses are lit with it. Within a radius of one mile I can count two hundred oil-wells, all producing large quantities of gas. We consider ourselves quite free from respiratory and pulmonary diseases. It is the prevailing opinion among the laity here that gas is of considerable therapeutic value in lung troubles. At all events, there is no evidence that gas, diluted with air, is injurious to the lungs. I have conversed with a number of physicians in Bradford and other parts of McKeon County, and all, as far as my investigations are concerned, agree in considering natural gas non-injurious to the lungs. If pneumonia recently occurred in a town in this State, near Pittsburg, about the time natural gas was introduced as fuel, it was a coincident, and no fault of the gas. I have burned it, and live in a country where the air is, to a certain extent, impregnated with it, and have, for nearly ten years, and know whereof I speak.

Yours very truly,
H. A. CANFIELD, M.D.

GILMOR, PA., April 7, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 23 to May 29, 1886.

SMITH, ANDREW K., Lieutenant-Colonel and Surgeon, WOODHULL, ALFRED A., Major and Surgeon, and KIMBALL, JAS. P., Captain and Assistant Surgeon. Detailed as board to assemble at U. S. Military Academy, West Point, N. Y., on June 1, 1886, to examine into the physical qualifications of members of the graduating class and the candidates for admission to the Academy. S. O. 119, May 21, 1886.

HARTSUFF, ALBERT, Major and Surgeon. Detailed as member of a board appointed to meet at U. S. Military Academy, West Point, N. Y., on June 1 and August 25, 1886, to examine into the physical qualifications of members of the graduating class and the candidates for admission to the Academy. S. O. 121, A. G. O., May 25, 1886.

Par. 7, S. O. 120, A. G. O., May 24th, revokes so much of par. 12, S. O. 119, A. G. O., May 21st, as details Surgeon Alfred A. Woodhull as member of medical examining board to meet at West Point, N. Y., June 1, 1886.

WINNE, C. K., Captain and Assistant Surgeon. Granted leave of absence for twenty days on surgeon's certificate of disability. S. O. 34, Department of California, May 17, 1886.

KILBOURNE, HENRY S., Captain and Assistant Surgeon. Assigned to duty at Vancouver Barracks, Washington Ter. S. O. 80, Department of Columbia, May 15, 1886.

APPEL, A. H., Captain and Assistant Surgeon. Ordered for duty at Fort Reno, Indian Ter. S. O. 52, Department of Missouri, May 24, 1886.

BENHAM, R. B., Captain and Assistant Surgeon. Ordered for temporary duty at Fort Omaha, Neb. S. O. 56, Department of the Platte, May 24, 1886.

JOHNSON, R. W., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Adams, R. I. S. O. 45, Division of the Atlantic, May 25, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending May 29, 1886.

DICKSON, S. H., Passed Assistant Surgeon. Detached from the Naval Academy and to the Constellation.

SIMON, W. J., Surgeon. Detached from the Naval Academy and to the Constellation.

KIDDER, B. H., Surgeon. Detached from the Powhatan and to the Tennessee.

RHOADES, A. C., Surgeon. Detached from the Tennessee, proceed home and wait orders.

CERDEIRO, F. J. B., Assistant Surgeon. Detached from the Powhatan, proceed home and wait orders.

CLARK, J. H., Surgeon. Ordered for examination preliminary to promotion.

HUGG, JOSEPH, Surgeon. Detached from the Minnesota and granted sick leave.

BEAUMONT, H. N., Surgeon. Ordered to the Receiving Ship Minnesota.

LAW, H. L., Surgeon. Detached from the Wabash and granted sick leave.

HENRY, CHAS. P., Assistant Surgeon. Ordered to the Receiving Ship New Hampshire.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 29, 1886 :

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
May 29, 1886.....	4	8	33	2	53	83	1	0
Deaths.								
May 29, 1886.....	0	3	7	2	6	38	1	0

THE HAPPY MEDIUM IN MEDICATION.—Dr. S. C. Dumm, of Columbus, says : "In THE MEDICAL RECORD of May 15, 1886, there occurs this sentence, said to be from the lips of the late lamented Austin Flint, 'that fame would attend that author who would write a work on the non-medicinal treatment of diseases.' Also that a Canadian author said he believed 'that the erection and endowment of a thoroughly equipped hospital where medicinal treatment should never be used, unless an occasional anæsthetic, would be of the greatest possible benefit to mankind and to the science of medicine.' The regular medical profession are, we are sorry to say, as prone to run to extremes now as formerly. There was a time when the great Rush bled for all kinds of disease, the weak and the strong, without regard to effects, and thus brought discredit on a no doubt efficient remedy in many diseases. The prejudice engendered by this indiscriminate use of a powerful method of treating inflammatory diseases has not been removed, and the practitioner who would venture his reputation on an occasional case where needed, should he be so unfortunate as to lose his case, would not soon recover from the influence. The preparations of mercury, by the way, the most useful of remedies, was brought into discredit in the same way. The profession ran headlong into an excessive use of this most potent remedy, and had it not been for its wonderful efficiency in syphilitic diseases it would have been consigned to the same grave as that of bleeding. There is too much of a tendency to ignore drug treatment, hence homœopathy and tomfoolery flourishes, and it will do so as long as men run to extremes in that way. Why is it, we ask in all candor, if diseases will get well without medicines, that when the sugar doctor finds that he can't get through with his remedies he resorts to those of the regular practitioner? The only benefit we can see that could be derived from a hospital in which medicines are withheld, is that a line could be drawn between those cases which need medi-

cines and those who would probably get well in time without them. But, while this process of experimentation was going on it would be a curse to those who imperatively needed medicines. There is no use for physicians to try to ignore the use and need of drugs when every day they prescribe and see their great benefit, and we assert here, with due respect for our great men, that they will not practise what they preach, and we don't believe that in a sober second thought they would recommend the disuse of drugs. We don't believe in the indiscriminate use of drugs, but we do believe that there is a great midground on which physicians should stand, withholding where not needed and prescribing where needed. If physicians to prescribe drugs as well as hygienic measures are not needed, then why not do away with the title of M.D., and let the hygienists run the thing?"

The Pure and the Impure.—Dr. Walter F. Morgan, of Leavenworth, Kan., writes: "For the past three years I have been a constant reader of your journal, and have admired its tone upon the Code question and its method of treating the moral aspect of medical subjects. I have often told my medical friends that it was—all things considered—the best medical journal I ever had the good fortune to see, and this was said in all sincerity. Either The Record must retrograde, or *I* must retrograde, to prevent our being companions to the end of life's journey. With these views, perhaps, you will not be surprised that I ask the privilege of protesting against some things in the article upon 'Gonorrhœa' in your issue of the 8th ult., and I would do so in the name of your own scathing editorials, which have often consumed sexual filth in the fires of pure reason, common sense, and the highest physiological knowledge. Every healthy, honest man may admit, with Ben Franklin, that 'the sexual passion is hard to control.' So much the more does it seem to be his duty and honor to see that he *does* control it, and it is plainly the highest duty of the physician to preach the truth to those who have not yet learned this lesson, viz., that no man, under any circumstances, or form of treatment, can escape punishment, be it more or less, who uses his sexual organs for any but their legitimate purpose—the procreation of his kind. For, as Emerson says, 'A man may boast that he has learned how to evade nature's laws, but the brag is on his lips—the conditions are in his soul.' Hence, is it not evident that when a physician takes pains to speak of his gonorrhœal patient as his 'friend,' and of the wretched woman as bestowing her '*favors*' on several of his patients, and of his delightful, euthanasic methods of prompt relief, it is only the song of the siren, leading his deluded victims on to their destruction? The doctrine taught by some respected specialists, viz., that a 'moderate use of the sexual organs is essential to health,' has ruined many young men and will ruin many more, and women too—in accordance with the law of supply and demand. The true principle of evolution shows that so far as men apply those scientific and rational rules of generation to themselves which they do to domestic animals, the parent is able to beget offspring somewhat better than himself, and hence the gradual improvement of the race and more frequent realization of the great desideratum, 'A sound mind in a sound body.' It seems to me that when a physician forgets that his chiefest and highest functions are to prevent disease and to teach the beautiful and beneficent laws of nature, he then also forgets the best interests of both himself and his profession, even though he cures his patient, as he is bound to do, by the most skilful methods at his command."

Wiring the Patella.—Dr. Robert T. Morris, of this city, writes: "In The Medical Record of July 18, 1885, was published a description of the operation of wiring the patella, and three cases were described in detail. One of the patients, Mr. G. G——, was shown to have had a poor result because of the stiffness of the knee, which persisted in spite of treatment. Last week the patient came to my office to say that he could easily bend his knee to a right angle, and that his only discomfort was due to the presence of the wires beneath the skin, which prevented him from kneeling, and which made him cautious about striking the knee against any solid body. I could feel the two little knobs of wire beneath the skin, and shall ask the patient to let me remove them later. Two years and a half have elapsed since the operation, and the patient says that his knee remained quite stiff until four or five months ago, when it rapidly began to 'limber.' At present flexion to a right angle can be made without pain. Treatment had not been employed since the date of my former report. There is evidently bony union between the fragments."

Dr. Dawson on Infant Food.—Dr. B. F. Dawson, of this city, writes: "In the report of the discussion of Dr. F. A. Burrall's paper, in transactions of the Academy of Medicine, published in The Medical Record, pages 509–510, I am quoted as saying a little less than I actually did, and in consequence my remarks, as printed, somewhat misrepresent my opinions as expressed at the meeting. The second paragraph of my remarks should read as follows: 'Cow's milk was all that was necessary, with something added to prevent the coagulation of the casein into hard, large lumps, as barley or oatmeal water; if anything more was to be added it should not be water, but fat—for example, cream, or when there was more or less constipation a piece of pure fresh butter as large as the kernel of a hazel-nut at each meal. He said that if an infant could only be looked upon as an animal, whose mother, in order to provide for herself, must leave it alone without food for more or less time, all those who had to do with the rearing of children would get along much better than they did.'"

The Santa Lucia Asylum for the Blind.—We have received the report of this institution, which is not only an asylum for the blind, but also a hospital for the treatment of diseases of the eyes. The director is Dr. Santiago de los Albitos, of Madrid. The number of patients treated in the institution during the year 1885 was 1,616, and there were 198 operations performed.

Dr. Edouard Fournier, editor of the *Revue Médicale*, of Paris, has recently died. He was physician to the Institute for Deaf-Mutes, and was well known as a specialist in the treatment of diseases of the larynx. He was one of the strongest and most able opponents of the bacteriological school, and loved to be styled a follower of traditional medicine.

Spanish Society of Laryngology, Otology, and Rhinology.—An association has recently been formed in Barcelona, having for its object the promotion of studies and original work in the branches of medicine mentioned in its title. The first annual meeting will be held in Barcelona from the 24th to the 29th of May. The committee on organization consists of Drs. Luis Suñé, Pedro Verdós, and Agustin Basols, of Barcelona; Rafael Ariza, of Madrid, and Ramon de la Sota, of Seville. There will be both foreign and Spanish members, each enjoying equal privileges. The initiation fee is placed at 15 pesetas ($3), and the annual dues at $2, or 10 pesetas.

A Case of Hermaphrodism is reported by Dr. Sahn in *Hygiea* for March, 1886. The individual had been brought up as a girl, and when first seen, at the age of twenty-three years, by the author, was dressed as a woman, and was so regarded by the family. The patient sought advice because of amenorrhœa, and an examination of the genital organs showed complete hypospadias. The penis was small, and the testes were situated one on each side of this organ. The breasts were undeveloped, the voice was that of a man, and there was a sufficiently strong beard to require daily shaving.

Some Fallacies in Regard to Diet.—1. That there is any nutriment in beef-tea made from extracts. There is none whatever. 2. That gelatine is nutritious. It will not keep a cat alive. Beef-tea and gelatine, however, possess a certain reparative power, we know not what. 3. That an egg is equal to a pound of meat, and that every sick person can eat them. Many, especially those of nervous or bilious temperament, cannot eat them; and to such, eggs are injurious. 4. That because milk is an important article of food, it must be forced upon a patient. Food that a person cannot endure will not cure. 5. That arrow-root is nutritious. It is simply starch and water, useful as a restorative, quickly prepared. 6. That cheese is injurious in all cases. It is, as a rule, contra-indicated, being usually indigestible; but it is concentrated nutriment, and a waste-repairer, and often craved. 7. That the cravings of a patient are whims, and should be denied. The stomach often needs, craves for, and digests articles not laid down in any dietary. Such are, for example, fruit, pickles, jams, cake, ham, or bacon, with fat, cheese, butter, and milk. 8. That an inflexible diet may be marked out, which shall apply to every case. Choice of a given list of articles allowable in a given case must be decided by the opinion of the stomach. The stomach is right, and theory wrong, and the judgment admits no appeal. A diet which would keep a healthy man healthy might kill a sick man; and a diet sufficient to sustain a sick man would not keep a well man alive. Increased quantity of food, especially of liquids, does not mean increased nutriment; rather decrease, since the digestion is overtaxed and weakened. Strive to give the food in as concentrated a form as possible. Consult the patient's stomach in preference to his cravings; and if the stomach rejects a certain article, do not force it.—*Technics.*

A Self-performed Laparotomy.—Dr. B. Raniero, in a letter to the *Raccoglitose Medico* for April 10, 1886, reports the case of a woman, twenty-five years of age, who was pregnant, and desired to conceal the fact. Not being able to rid herself of the child, in a fit of desperation she seized a bread-knife and made a deep incision, five inches long, on the right side of the abdomen, and extracted through the opening thus made a full-term fœtus. The child was dead, the knife having severed its head from the body. The woman bound up the abdomen with a cloth, and then walked two miles to the village of Viterbo, remaining there five hours, and returning again to her home, which she reached seven hours after the infliction of the wound. The pain then became so severe that she fainted, and upon returning to consciousness vomiting occurred. The wound was opened and the greater part of the small intestines were protruded. Medical aid was then sought for the first time; the intestines were returned, the wound closed by sutures, and the patient recovered without any untoward symptoms.

A Literary Effort.—A Cincinnati physician returned a death certificate to the authorities, giving the cause of death as follows: "She dide with Liver dease & New Monei."

A Cause of Inebriety in Switzerland.—In a recent discussion at the Geneva Medical Society, Dr. Lombard stated that one of the most potent causes of inebriety in Switzerland was the scarcity of milk. There was no dearth of cows, but so much condensed milk, not to speak of other lacteal preparations, was made and exported, that fresh milk was a rare and costly article. Its place was largely taken by alcoholic fluids. Even children were given bread soaked in brandy.

Abdominal Dulness Varying with Position.—In an article in *La Riforma Medica*, Nos. 76, 77, and 78, 1886, Professor G. B. Queirolo writes that he was led to make a diagnosis of ascites, and to tap the abdomen, by reason of the presence of dulness or percussion, the level of which varied according to the position of the patient. He found no fluid present. In pursuing his researches further in order to discover a cause for his error, he found that this sign is normally present in healthy persons, though, perhaps, not to so marked a degree as in the case of intra-abdominal effusions. It also differs from the dulness caused by fluid within the peritoneal cavity, in that it varies from day to day, being now greater in extent and again less. This physiological dulness, as he terms it, is caused, he thinks, by the gravitation of the fluid contents of the small intestines to the lowest point in the abdominal cavity.

The Treatment of Singultus.—Dr. Robert B. Wilson, of 529 Lexington Avenue, writes: "I wish to say one word in regard to the treatment of that simple but sometimes very obstinate complaint, singultus. I have tried a remedy which works wonders, at least in simple cases, though I have never had the opportunity of trying it on cases of several days' standing. The remedy, also, is so simple that I suppose it is not new, yet I have never seen it recommended for the complaint, although it is very probable that it has been. It consists simply in giving the patient a good pinch or two of 'catarrh snuff' to produce immoderate sneezing. I have seen the happiest results from it in hiccough of as much as two days' persistence. A simple 'catarrh snuff' for the purpose may be made by mixing one part of powdered veratrum album with about four parts of pulverized licorice-root. Of course it may fail in very stubborn cases, but it never has thus far with me."

Contagion of Tuberculosis.—At a recent meeting of the Société Médicale des Hôpitaux, M. Vallien read a report on the contagious properties of tuberculosis. The Society sent a list of questions to 10,000 medical men, and received 173 answers. Those who answered were classified as follows: 57 believed in contagion, 57 disbelieved in it, 7 gave doubtful replies, and 2 were incomprehensible. Of 439 cases forwarded, 213 suppported the hypothesis of contagion, and 226 were against the theory. The 213 cases favorable to the theory were as follows: 107 were husbands and wives, 71 near relations, 18 the offspring of phthisical parents, and 16 were distant relations. In one instance the disease was said to have been transmitted from a master to his dog. Heredity is an important factor in the propagation of tubercle. Tuberculosis is, the report states, more frequently inherited from the mother than from the father. Inherited tuberculosis is manifested sooner than when contracted from proximity with the contagious principle. It is difficult to ascertain what is the exact proportion of cases due to contagion. It is roughly estimated to be one in ten among the well-fed classes; among the poor classes it is much greater. Data are at hand which indicate that phthisis has been imported into isolated localities and islands by inhabitants from neighboring countries where the disease existed.

Writers' Cramp and Fracture of the Clavicle.—"At a recent meeting of the London Clinical Society a unique case was described by Mr. Arthur Barker. The patient was a boy, aged twelve, in whom fracture of the clavicle had occurred before birth, and had remained ununited. A false joint formed, and there was free movement and no inconvenience till about three years ago, when the patient began to suffer from pain down the right arm, and a sense of weight in it. Symptoms resembling those of 'writers' cramp' then came on. In August last Mr. Barker resected (antiseptically) the false joint, wired the cut surfaces together, and put up the shoulder and arm in a plaster-of-Paris jacket. The wound healed in a fortnight without any suppuration. In another fortnight the corset was removed, the scar being sound, and the bone firmly united with callus. Shortly after, he was given some writing to do, and the former symptoms were found to have disappeared."

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Original Articles.

THE IMMEDIATE CLOSURE AND RAPID CURE OF FISTULA-IN-ANO.[1]

By STEPHEN SMITH, M.D.,

THE possibility of a prompt cure of fistula-in-ano is a great advance in the treatment of this hitherto troublesome affection. Every surgeon must have met with cases which resisted the old method, and failed altogether to heal. And even when those having a large abscess cavity finally healed after free incision, there was often a deep cicatrix, which was a source of constant irritation from the tendency to the accumulation of filth in the deep sulcus. Occasionally there was a certain troublesome defect in the action of the sphincter, which remained as a permanent disability. In these latter days of rapid improvement in the methods of operations, it has naturally occurred to many surgeons that fistula-in-ano might be treated successfully by the immediate closure of the wound, provided the track and abscess cavity were properly prepared, and then sutures were employed so as thoroughly to approximate the surfaces. It has been performed successfully in this country by Drs. Emmet, Weir, Lange, and Chamberlain, of this city, by Dr. Jenks, of Chicago, and by several surgeons abroad. In most instances these surgeons have operated without any previous knowledge of the work of other operators. The simplicity and the success of the operation warrant the effort to give it greater prominence than it has yet received.

Attempts have been made, heretofore, to cure fistula-in-ano by incision of the track, followed by the dissection of the lining membrane, but with indifferent success. It is only when the surfaces are quite firmly brought together and maintained in apposition, that union takes place with any greater certainty and rapidity than by the former method. My attention was first directed to this method of operating on the appearance of the first edition of Dr. Emmet's work, in 1879. I was impressed, while reading that work, with the explanations of the method of closing a lacerated perineum involving the sphincter ani, and with the accompanying illustrations. I had at that time under observation a case of fistula-in-ano, which had been laid open freely six months before, but had failed of union. The line of incision was slightly to the left of the median line, but the depth of the wound and its large granulating surfaces reminded me of some of the conditions of a lacerated perineum of long standing.

The suggestion that this wound, involving the sphincter, was amenable to a somewhat similar method of treatment was very natural. The result proved the truth of the suggestion. It was not difficult to dissect away the granulating surface, and to accurately close the wound with sutures not unlike those used for the lacerated perineum. Union promptly occurred. Since that time I have operated on a number of cases of fistula, including every variety of form, and nearly every condition of patient, with a degree of success which commends the procedure to my confidence.

The principles which should be borne in mind in the operation are: 1, complete removal of the lining membrane of the fistula and of the abscess cavity which may exist; 2, accurate and permanent adjustment of the opposing surfaces; 3, thorough antiseptic treatment of the wound.

The details of the operation are simple, but they must vary somewhat according to the peculiarities of each case. After considerable experience, I have adopted the following general plan: The patient is prepared for the operation by taking an ounce of castor-oil for two succeeding days before the operation, omitting the last day, on which he takes an opiate at bedtime. The diet should be milk. It is intended to keep the bowels quiet for four to six days after the operation. The patient being anæsthetized, the parts about the anus are thoroughly washed with soap and water, then carefully shaved, and finally irrigated with bichloride solution. This douche is also thrown into the rectum and the index-finger is introduced and swept around the folds of the rectum, in order that the mucous membrane may be relieved of any matters lodged in that region. A clean sponge, wrung out of the bichloride solution and having a string attached, is next introduced into the rectum to prevent any matter from the bowel escaping and soiling the wound. The patient is placed on the back or side on which the fistula opens. If the fistulous passage is direct it is incised in the usual manner. If there is an abscess cavity this is opened to the full extent, in order to give free access to the lining membrane. The lining membrane, or so-called pyongenic membrane, is then carefully dissected away, throughout both the cavity and the fistula. The rapid and permanent healing of the wound depends largely upon the thoroughness with which this tissue is removed. It is generally very dense, and can only be completely dissected off with a sharp scalpel or scissors cutting well at the point. In some of my early operations I resorted to the curette, and endeavored to destroy the membrane sufficiently to secure union, but the operations were unsatisfactory till I removed it with the knife or scissors. When it is completely removed, the ragged, or thin and purple, margins of the wound are cut away so as to have clean and healthy surfaces for apposition and union. There is in some cases considerable hemorrhage from small arteries, which must all be ligated before the wound is closed. The first step in the closing of the fistula and abscess is to secure perfect apposition of the margins of the wound within the rectum. To effect this object an assistant should introduce an index-finger well into the rectum, and then, bending it as a hook, extrude the bowel, which is readily effected. The whole track of the fistula is thus brought into view, and the surgeon has full control of the wound. To obtain prompt union it is necessary to evert the edges of the mucous membrane, and bring the deeper cut surfaces into contact. The success of the operation depends upon securing complete and firm closure of that portion of the fistula which involves the mucous membrane. The first sutures, therefore, should be so applied as to bring the deep surfaces together and evert the margins of the mucous membrane. To effect this object I take a large-sized carbolized silk ligature, or catgut prepared with chromic acid, and attach a needle having a slightly curved point to each end. These materials are preferred because they will not yield as does the ordinary catgut, and allow the margins to separate before union takes place. One needle is now passed just above the highest point of the incision, and from a fourth to half an inch from the margins of the wound,

[1] Read at a meeting of the Section on Surgery, Academy of Medicine.

and the thread is drawn through to its centre. The needles are then passed in opposite directions at intervals of about half an inch, in the same manner as the saddler takes his double stitch when two pieces of leather are held in a vice and united. If the fistula is simple and there is no abscess cavity, the stitches are continued to the external extremity of the incision, making a continuous suture on each side of the wound. They are now tightened sufficiently to bring the two surfaces into apposition and slightly evert the margins of the mucous membrane, but without any strain. The ends of the ligature are then given to an assistant, who by moderate traction draws the entire fistulous track outside. The margins of the wound are now nicely adjusted with a continuous suture commencing at the upper extremity of the wound. At the external extremity of the wound a drainage-tube is inserted. When the margins of the wound are closed the ends of the suture are tied. The operation is completed by passing two or three large carbolized silk ligatures entirely under the fistula, and tying them over an iodoform gauze pad rolled firmly and laid along the wound. The object of these last ligatures is to bring the deep portion of the fistula in suitable apposition. During the operation irrigation with the bichloride solution is continued, and idioform gauze is applied as an external dressing. The sponge is finally withdrawn from the rectum, and a suppository of opium inserted. The diet should be milk, and opium should be continued daily for from four to six days to keep the bowels quiet. The patient should remain in bed, and at first should remain recumbent, with the limb straight. In some cases I have applied a binder about the hips to prevent movements, where the patients were inclined to be restless.

If there is a large abscess cavity and, as often occurs, irregular, as in the horse-shoe fistula, I have always entered the cavity at the external opening, then laid it open freely throughout its entire extent, and finally have opened the internal fistulous passage at the point where the cavity communicated with the interior of the bowel. Such an abscess presents a large, irregular, deep cavity, having an opening into the bowel sometimes on the side opposite the point where the cavity opens externally. These cases require much care, for the cavity to be closed is enormous, but they may be perfectly healed by one operation, if great pains are taken to dissect out all the false membrane, and to adjust the sutures so as to bring the surfaces into apposition. The internal fistulous track is closed by the same suture as the simple fistula. The abscess cavity may be closed by one of two methods: 1. The same double, continuous saddler's suture may be employed, but it should be taken farther from the external margin of the wound, in order to bring as much strain as possible on the deep parts of the wound. Upon the inside, along the margin of the anus, it is well to enter the suture close to the border of the mucous membrane. This suture is continued to the external extremity of the wound. The continuous suture is then applied to the wound, and the same dressings applied. It sometimes happens that, even in the horse-shoe fistula, when the suture is finished, two or three sutures, either large thread or wire, inclosing the entire cavity, may be passed completely around it, thus aiding in approximating the deep surfaces. 2. The second method is by interrupted sutures passed the same as the suture in the lacerated perineum, that is, completely around the cavity. This suture is more difficult to employ than the former, but it is more successful. With this suture I have found no difficulty in closing at one operation an old rectal abscess of large size, which had no communication with the rectum.

In simple fistula having no cavity between the external and internal opening, I have found it possible to save incision of the sphincter by incising the sinus to the sphincter, dissecting away the false membrane up to the internal opening, and then by means of the double suture to bring the raw surfaces together. The suture is to be applied within the anus, the parts being partially extruded by the finger of an assistant hooked within the anus. The same result has been obtained by Dr. Emmet, and I believe by others. In two cases the internal opening was more than two inches above the anus, one indeed being three inches. In both cases the sinus was incised to its fullest extent, and the same form of suture employed with the best results. In my first operations I employed the single-valve speculum, but I found it by no means as useful as the finger of an assistant. When the internal opening is high up, with strong loops of ligature thread inserted into the margins of the wound at the anus, the whole track can be readily drawn down within reach of the operator.

The conclusion which I have reached from my own experience is that fistula-in-ano and old rectal abscess cavities, whether communicating with the bowel or not, can be cured by removal of the lining membrane and the application of a proper suture, in a period varying from eight to fourteen days.

I may add that I have found deep fissures of the anus readily cured by excision of the track with its cicatricial lining, and accurate closure with carbolized silk ligature, the parts being first carefully shaved and cleansed with bichloride solution, and the wound dressed with iodoform gauze.

THE FUTURE INFLUENCE OF SURGERY UPON OBSTETRICAL ART.[1]

By CHARLES CARROLL LEE, M.D.,

SURGEON NEW YORK STATE WOMAN'S HOSPITAL, ETC.

To those of us who practise obstetrics and gynecology —to those, even, who feel but a languid or a theoretical interest in these branches of medicine—nothing is more impressive than the rapid inroads of surgery into a domain heretofore deemed strictly medical.

Is this just or natural? Is it true, as has lately been said by a famous Scotch surgeon—himself among the most illustrious exponents of abdominal surgery now living—that "the restless surgery of to-day will let nothing alone; it has no patience, . . . and would attack all and sundry in some way or other, till one almost begins to think that individual responsibility has become old-fashioned and gone out of date?"

A most distinguished fellow of this Academy, whose counsel has been equally sought in this hall and in many anxious consultations in our practice, is known to deprecate this tendency of the day, and to feel it a mistake that gynecology should invoke the frequent aid of the knife, or obstetrics of the surgeon's scalpel.

I have thought it might be profitable, then, to invite your attention to this notable current of medical thought; and, for a few brief moments, to ask your consideration of so important a subject as the future influence of surgery and surgical resources upon obstetrics.

In the past it must be evident that obstetrics was practised as an art from the earliest ages. Although at first its methods were rude and uncouth, it kept pace with advancing civilization; and the history of every nation of Europe and of the East teems with evidence of this fact.

Thus, while Herodotus records the rough usages that surrounded the parturient woman among the Scythians and the nomadic tribes that were the forerunners of the Persian Empire, Egypt, which was then the fountain whence the arts and civilization overflowed the ancient world, possessed a cultivated medical body familiar with ordinary obstetrical measures, and even with the speculum and other supposed inventions of modern gynecology.

From Egypt the knowledge of medicine in general, and of obstetrics, passed to Greece and Rome; and

[1] Read before the New York Academy of Medicine, June , 1886.

Hippocrates, who was a contemporary of Herodotus, left in his "Aphorisms" many obstetrical suggestions which, for better or worse, profoundly influenced this branch of practice for more than a thousand years.

At this early date, and for centuries later, obstetrics and surgery were practised in common, but by degrees the former gradually passed into the hands of women.

In most serious complications, however, the surgeon was still consulted; and his functions extended from the performance of cephalic version to that of the Cæsarean section, which, in spite of many recent denials, was certainly known to the ancients; and, at least as a post-mortem expedient, was occasionally attempted.

As time passed, and as pure surgery extended its sphere in other directions, obstetrics became gradually a distinct specialty; its practice was again resumed by men all over Europe; and, during the last century, what had been a slowly maturing art was raised to the dignity of science, chiefly through the labors of Levret in France, and of Smellie and William Hunter in Great Britain.

The reproach and contumely that had hitherto attached to the "man midwife" was now rapidly swept away; and the purely obstetric practitioner occupied as honorable a position as any of his competitors.

Nevertheless, in cases of extreme or seemingly insuperable difficulty the surgeon's aid was still sought as a last resort; and before considering what may be the future outcome of this influence, it will be well to review briefly what has already been accomplished.

I begin with the Cæsarean section, to which reference has already been made.

The early accounts of this heroic measure are confused and no doubt unreliable, resting as they do only upon common tradition and the assertion of such writers as Pliny, whose veracity is never above suspicion.

The first unquestioned case of Cæsarean section was that of Trautmann, of Wittenberg, who operated in April, 1610, and whose patient lived nearly four weeks; although fifty years before this Ambroise Paré (1509–1590) and his pupil, Jacques Guillemeau (1550–1612), had described it—the latter specifying five fatal cases as the basis of his condemnation.

Dr. Harris, of Philadelphia, who is not only the greatest medical statistician this country has produced, but *par excellence* our authority upon this subject, believes it was accomplished more than a hundred years before Trautmann's case, by Jakob Nufer, of Siegenhausen, in Germany, who operated successfully in "or about 1500."

The indications for its performance may briefly be said to be excessive pelvic contraction, and insuperable obstruction by cancerous degeneration of the cervix or encroachment upon the lower pelvis by solid tumors.

If the mother be moribund, or just dead, and the child be known to be living, it may become advisable to effect in this manner the rapid extraction of the child.

The risk entailed may be inferred from the fact that in this country the general mortality of Cæsarean section has been sixty per cent., and in Great Britain eighty-one per cent. (Harris).

In fatal cases the causes of death are, first and chiefly, *delay*, with the shock and exhaustion entailed by it; second, peritonitis; third, septicæmia; fourth and very rarely, hemorrhage.

The customary method of operating comprises these four stages as tabulated by Lusk: "1, the incision through the abdominal wall; 2, the incision through the anterior wall of the uterus, and the extraction of the fœtus; 3, the removal of the placenta, the arrest of hemorrhage, and the cleansing of the peritoneal cavity; 4, the closure and dressing of the abdominal wound." All this is done with as complete antiseptic environment as possible, and with the usual assistants and appliances necessary in well-conducted laparotomies. Carbolized Chinese silk sutures, in preference to catgut or silver wire, should be used to close the uterine wound. If the placenta be found attached under this line of incision, which occurs about once in three cases (Stoltz), it must be quickly separated, or pushed aside, or cut through, so as to get rapidly at the child. Spiegelberg ("Handbuch der Geburtshülfe") met with this accident three times, and was finally compelled to cut his way through the placenta to save necessary time. Its risk is the immensely increased hemorrhage to which it gives rise; but as the extraction of the child is the only means of checking this, any process which facilitates that most rapidly is justifiable.

The uterus may also be pressed out through the abdominal wound, which renders manipulation easier and aids in preventing the escape of fluid into the peritoneal cavity.

Should the hemorrhage cease upon extracting the child, it will be best to wait a few moments for firm contractions before removing the placenta.

If this should not yield readily to gentle traction, the fingers should be passed into the cavity and the placental attachments separated.

As soon as the placenta and membranes can thus be extracted, and the remaining clots removed, the uterus contracts, or should be stimulated to do so, a drainage-tube passed down through the cervix and vagina, and the cut edges of the womb sutured with wire or carbolized silk.

The uterus is now replaced; the peritoneal cavity carefully and minutely cleansed; and the abdomen closed as after ovariotomy. If oozing from the uterine incision continues after it is sutured, a separate abdominal drainage-tube must be used. The after-treatment is as for other laparotomies.

Four modifications of this Cæsarean operation have lately been proposed, all of them originating in Germany.

1. Frank, of Cologne (*Centralbl. für Gynäkol.*, December 10, 1881), proposed a plan intended to secure perfect drainage, and to make the operation partly extra-peritoneal.

Thus the uterine incision is made low down anteriorly, and around the bottom of this the round ligaments of the womb are drawn together and secured with carbolized silk sutures, thus shutting off the incision from the peritoneal cavity; and from this blind pouch drainage is secured through the vagina.

In performing this operation, which is done antiseptically, the whole uterus is turned out of the abdominal wound before incising it. When it is emptied, a large drainage-tube is passed from the uterine cavity out through the vagina, and the uterine opening is closed above it with catgut; then the round ligaments are united in front, and a small drainage-tube carried from this pouch or pocket down through the vagina. After the tubes are in position the ligaments are sewed together, and the abdominal wound is closed in the usual way.

In one (fatal) case where this was done the peritoneal cavity was found at the autopsy to be quite free from blood or other fluids.

2. In the *Archiv für Gynäkologie*, bd. xix., 1882, Dr. Kehrer, of Heidelberg, proposed a plan, which Harris[1] says is not new (Dr. Wallace Johnson having suggested it one hundred years ago), of opening the uterus *transversely* in its lower third anteriorly, partly to avoid the placenta, which is rarely, if ever, implanted at this point, and partly to prevent the gaping of the uterine wound. The extraction is effected as usual; and in closing the wound he uses two sets of sutures—a deep and a superficial row. All antiseptic precautions are observed.

This he has twice done, once successfully; and, in the one fatal case, the uterine wound was found adherent wherever he had covered it with peritoneum.

3. Sänger, of Leipsic, proposed in 1881 (*Archiv für Gynäkol.*, bd. xix., tt. 3, 1882) another modification, which, as far as I can learn, has been performed eight

[1] As [illegible]

times in Germany, with the result of saving six women and eight children. When the abdomen is opened as usual, two strong loops of suture are passed through the edges of the wound at the upper end. Then the membranes are ruptured per vaginam, the uterus is pushed out through the abdominal wound and held vertically, while a carbolized rubber sheeting is adjusted around the cervix to prevent fluid from entering the abdominal cavity. The suture loops are now drawn tight, the uterus is opened longitudinally in front and its contents rapidly removed, while an elastic ligature (of tubing) is tightened around the cervix and the broad ligaments are temporarily clamped. Hemorrhage along the line of the wound is arrested by compression forceps. As the uterus contracts, a drainage-tube is passed from its cavity through the vagina, the peritoneum is dissected back from the cut edges, and a wedge-shaped strip of uterine tissue is pared off the edges of the incision. The free edges of the peritoneum are now turned in, and the uterine wound closed by deep sutures which include the peritoneal and muscular coats, but not the endometrium. Superficial stitches of catgut are added, so as to secure a perfect welt. The abdominal wound is dressed as usual.

Professor Leopold, of Dresden, has done this seven times; five times with, and twice without, the strip being sliced from the uterine edges; and at the Copenhagen International Congress he said that in future he would omit this as unnecessary.

In this country three fatal cases, I believe by Jewett, Garrigues, and Drysdale of Philadelphia, have been reported—all apparently because of the delay in resorting to it.

4. Cohnstein, of Heidelberg, has proposed (*Centralbl. für Gynäkol.*, bd. xix., tt. 3, S. 397, 1882) a plan which, so far as I know, has never been practised. This is to turn the uterus out of the abdomen, and to open it longitudinally behind instead of in front, and effect drainage through a tube perforating Douglas' pouch. The advantages claimed for this are that more efficient drainage is thus secured than is possible from an anterior opening; that the edges of the uterine wound are steadied by its weight and position; that the greater thickness of the posterior wall will help to prevent gaping of the wound, etc.

But, in spite of all this and much more, the practical difficulty of managing the incision, and the liability of finding the placental attachment there as well as in front, have so far deterred operative surgeons from attempting it; nor is it likely ever to win favor.

In all cases of Cæsarean section, Harris ("International Enclycopædia of Surgery," vi., 770) thinks the most fatal mistake is *delay*, and the chief desideratum for the future is more perfect knowledge of pelvic deformity among practitioners who attend the poor in large cities; if this were recognized early in the case, and an experienced consultant called in, many lives now lost could be saved. To lessen the mortality from this cause, certain substitutes for Cæsarean section have been proposed, of which the chief are:

I. The Porro or Porro-Müller operation, with Veit's modification.

II. Laparo-elytrotomy by Thomas' method.

I. The first of these was devised by Professor Edoardo Porro, of the Maternity Hospital of Milan, formerly of Pavia, who in May, 1876, operated successfully on a rachitic primipara, aged twenty-five. He termed the process "utero-ovarian amputation, as completive of Cæsarean section;" and its special object was the diminution of former mortality "by converting the internal uterine wound, with its tendency to gape and discharge septic matters into the abdominal cavity, into one dressed and discharging *without* the peritoneal cavity" (Harris, loc. cit., p. 770).

Dr. H. R. Storer had done the same thing in 1869, but without premeditation, during an ovariotomy, when the tumor proved an uterine fibro-cyst associated with pregnancy.

And the *idea* had long before been expressed by Cavallini, of Florence, in 1768; by Michaelis, of Marburg, in 1809; by Dr. Blundell, of London, in 1828; and by Fogliata, a veterinary surgeon of Pisa, in 1874.

Whether Porro knew of the earlier suggestions is doubtful; of Fogliata's he was ignorant.

All his predecessors had recommended the *entire* ablation of the womb; he excised it at the cervix, and drew the stump into the abdominal wound.

His method, then, is precisely that of the modern antiseptic Cæsarean section, *plus* hysterectomy at the cervix with external treatment of the pedicle.

After the uterus had been incised and evacuated, it was drawn out of the abdomen and held vertically while the wire loop of Cintrat's constrictor was tightened around the cervix, opposite the internal os, and the uterus cut away above it. The abdominal cavity was then cleansed, and a drainage-tube carried through the abdominal wound, through Douglas' pouch, and out of the vagina. The external wound was closed with silver wire, the stump fixed in its lower angle and rubbed with perchloride of iron. Antiseptic dressings were applied; the wire loop was removed in five days, the woman was well in forty, and the child was saved.

Several modifications of this proceeding have been offered; two only demand notice here.

a. The first, by Professor Müller, of Bern, after eight operations had been done by Porro's method, consisted in turning the pregnant womb out of the abdomen *before* opening it and evacuating its contents. This was to avert the danger of hemorrhage, and the escape of its possibly putrid contents into the peritoneal cavity. Otherwise it is the same as Porro's.

b. The second, by Professor G. Veit, of Bonn, consists in ligating the stump and dropping it back into the peritoneal cavity, or treating it by the *intra-peritoneal* method. This ligation has been done with silk and with silver wire, and with and without peritoneal covering.

Neither of these modifications has been followed by sufficient success to justify the hope that it will supplant the original operation of Porro.

Up to this time Veit's has shown a general mortality of nearly seventy-one and one-half per cent.

Müller's has been entirely unsuccessful in Italy, but less so elsewhere.

Dr. Harris (op. cit., p. 773) says that up to March, 1885, there had been 42 operations by the Müller modification, with 21 mothers and 31 children saved; by the original Porro method 109 operations, saving 46 mothers and 85 children.

These statistics may, of course, soon be modified.

II. Of the second substitute for Cæsarean section, laparo-elytrotomy, it would seem that little need be said in this Academy, which witnessed and welcomed its chief public exposition by its distinguished author. If he had done nothing else in the specialty which he has illuminated with his talent, this alone would entitle him to our lasting gratitude; for such ingenuity, boldness, sound anatomical knowledge, and far-reaching intelligence have rarely been combined in any surgical proposal.

The special object and merit of this proposition are the extra-peritoneal extraction of the child above the pelvic brim, without wounding either the uterus or the peritoneum; and, consequently, without risking the mortality which has hitherto followed those lesions.

As seems curiously true of many other notable discoveries, this had all been discovered before; but neither Ritgen, who first attempted it sixty-five years ago; nor the younger Baudelocque, who, two years later, proposed the same expedient, and actually operated in two cases, which were afterward forgotten; nor Sir Charles Bell, who, thirty years since, theoretically advised the same procedure, can jeopardize the just claim of Thomas to originality. For, while their efforts were either incom-

plete or soon forgotten by even the few who [illegible] gained, Dr. Thomas, who was unaware of their labors, had the energy to push his new discovery to a practical conclusion, and to bring it before the profession so forcibly that it has permanently taken its place in obstetric literature.

Needless to describe it in detail to you at this late day, for you are all as familiar with it as I am; and, since the classical essay of Garrigues upon this subject in 1878, it has been incorporated into all recent treatises upon operative midwifery. As to its results, I need only add that Skene and Jewett in Brooklyn, Gillette and Thomas himself in this city, Hinds and Edes in England, have all had successful cases; and, although the number is as yet too small for any final deduction, the proportionate success is for greater than that of either Porro's operation or Cæsarean section.

Has surgery rendered aught of assistance in extra uterine pregnancy? Some of its greatest triumphs have been won in this field, and each year brings gratifying evidence of improvement in the methods and technique of such operations.

In the early months—before the fifth month—of ectopic gestation, electricity, which was first employed by Allen, of Philadelphia, and popularized chiefly by the writings of Thomas and Garrigues, is preferred in this country to the use of the knife.

After that period incision, or excision, should be attempted, either by elytrotomy, laparo-cystotomy, or laparo-cystectomy.

1. In puerperal elytrotomy the upper segment of the vagina is incised so as to reach and remove a fœtus in the lower pelvis. This is generally enclosed within the layers of the broad ligament, and has originally been a tubal pregnancy. The operation is rather difficult and fraught with much risk, especially if an attempt be made to tear away the placenta, when profuse hemorrhage ensues.

It has been done in this country, with varying success, by Dr. John King, of South Carolina, in 1816; by Hayes Agnew and A. H. Smith, of Philadelphia; by Thomas, of New York, and by Dr. Mathiesen, of Ontario, Canada. Thomas advises that the vagina be divided by the galvano-caustic knife, to avoid the danger of hemorrhage.

It is rarely applicable in practice.

2. Puerperal laparo-cystotomy is the process of opening the abdomen and the enveloping cyst for the purpose of extracting the enclosed fœtus. This may be done either to remove a *living* fœtus, or after the fœtus is known to be dead; and the operations are respectively called *primary* and *secondary*.

The procedure is not of modern date, Harris quoting one by Christopher Bain, a German, in 1540; and by Paul Calvo, of France, in 1714. Both of these were *secondary* operations.

Professor R. Werth, of Kiel, tabulated, in 1884, 17 primary operations, with 2 recoveries and 15 deaths.

These two were at the eighth month of gestation, and were done by Jessop, of Leeds, in 1875, and by A. Martin, of Berlin, in 1881. A full report of the details of these remarkable cases will be found in Dr. Harris' erudite article in the "International Encyclopædia of Surgery," vol. vi., p. 783.

The cause of the great mortality in most of these cases was the location of the placenta and the difficulty of dealing with it.

Even an explorative incision, as recommended by Tait, is full of risk, as we may cut into the placenta or fail to find its location until we are compelled to remove the fœtus.

Any one of the three main forms of ectopic gestation—the abdominal, ovarian, or fallopian—may give rise to this indication.

3. Laparo-cystectomy is practically the same as the foregoing, except that the enveloping cyst is removed with the fœtus.

If this can be done at all, it is easier and safer than the preceding measure; because here the placenta is encapsulated with the fœtus, and, in the complete ablation of the sac or cyst, the risk of placental hemorrhage is avoided.

Of *lacerations* of the *cervix* and of the *perineum*, and of their immediate repair, so much has been written that I shall make only the most passing reference to this subject.

I have never been so fortunate as to succeed in closing a lacerated cervix at the time of labor, though I have made a number of efforts in that direction; nor have I known of more than one surgeon who claims to have accomplished this. But, with our constantly improving appliances and resources, that this *will* be accomplished in the early future I firmly believe.

With *lacerations* of the *perineum*, however extensive they be, and whether complete or incomplete, the case is very different. Here the advantages of immediate closure are so immense in saving the unfortunate patient from the discomforts of prolapse, and the greater misery of *procidentia of the womb*, that the obstetrician is derelict in his duty who fails to avert this by immediately repairing the perineal tear if the latter be at all extensive.

Were this systematically done, it is no exaggeration to say that hundreds of young mothers who lead invalid and useless lives at home, or who fill the gynecologist's consulting rooms, would be restored at once to their family duties. So imperative does this duty seem to me that I would as soon think of leaving the placenta undelivered in the uterus as a deeply torn perineum unrepaired.

Much more might be said upon so suggestive a theme, but the proper limits of this paper have already been passed.

Suffice it, then, to say, in conclusion, that if the application of surgical resources to obstetrics in the ten or twenty years just past has been so beneficent, saving, as it has surely saved, the lives of hundreds of women and children who, but for such aid, would long since have been in their graves, we have no cause to fear that the future will be less productive of good. The hand upon the dial of time never moves backward. And so firm is the foothold obstetric surgery has now obtained that one need be no optimist to believe its future outcome will be more brilliant than any of its past achievements.

THE DIAGNOSIS OF ASTIGMATISM WITH THE OPHTHALMOSCOPE.

BY FRANCIS VALK, M.D.,

[illegible]

THE diagnosis and determination of astigmatism with the ophthalmoscope, by the direct method, is not only exceedingly interesting, but somewhat difficult, unless we estimate each meridian of the two principal ones separately, then it should become almost as easy as the diagnosis of simple hypermetropia or myopia, when we have simply an elongation or shortening of the optic axis, except in those few cases in which the refractive power of the dioptric system may be either too strong or too weak.

But if one has mastered the use of the ophthalmoscope in the simple errors of refraction the same rules will hold good in the diagnosis of the curvature of the cornea, which causes astigmatism, only we must now select the two principal meridians of the eye, finding them at right angles to each other. This will give us the direction of the axis of the correcting cylindric glass, and then we can estimate the amount of error of refraction in each meridian, in the same way that we would test the eye for simple hyperopia or myopia.

In determining the simple errors of refraction we take as our standard of comparison the minute vessels of the disk or retina, or, better still, the delicate tapetum formed

by the choroidal epithelium, and then, in hypermetropia, use the strongest convex glass behind the aperture of the ophthalmoscope with which this tapetum can still be distinctly seen, this will give the amount of hypermetropia, while in myopia we would select the weakest concave glass that will render the blurred tapetum distinct, and this glass will give us the amount of myopia.

Now, in astigmatism, we cannot use this delicate test, so we select the edges of the optic nerve entrance, which, passing in a circle, will give us short lines running in any direction, or the minute delicate vessels that you will find in different parts of the retina or on and around the optic disk, while the most delicate test is that of the brilliant white line running along the centre of each artery of the retina. If we take any of these points for observation, and can decide which will focus upon the retina of the observer's eye, these vessels or lines will give us the direction of the meridian of greatest ametropia, provided in all cases that the accommodation of the observer is in a state of complete relaxation.

We will precede the study of the errors of refraction caused by astigmatism by the supposition that very few are able to have such complete control over their accommodation that they can at all times completely relax it, so that the observer's eye when estimating refraction shall be in a state of complete rest. Now this defect will make but slight difference in estimating myopia, as the observer's eye cannot accommodate for convergent rays, but in hypermetropia it must be taken into consideration, although the practical results should be the same. For instance, very few persons that are accustomed to use the ophthalmoscope can so control the accommodation that they can examine the fundus of a hypermetropic eye of + 1 or 2 D. and find the details blurred and indistinct. But making our diagnosis from the fact that we can still see these details clearly, by placing a convex glass behind the aperture, and the strongest convex represents the amount of total hypermetropia, so we must calculate the amount of astigmatism present, if hypermetropic, only using the individual vessels as our guide.

I shall not quote the writings of our many standard authors, as it has seemed to me that nearly all of them dismiss this most important subject, and one that is so necessary to the ophthalmologist, with very few words; even our most illustrious master on refraction, Donders, says almost nothing, while Dr. E. G. Loring, in his excellent work, lately issued, on ophthalmoscopy, devotes hardly five pages to this subject, though his explanations are unquestionably the best and clearest that it has been my pleasure to read.

If we could so control the accommodation that, when using the ophthalmoscope, one eye would be in a state of complete rest, as when under the influence of a strong solution of atropine, then I can understand and appreciate the teaching upon this subject; but if we consider that with a large majority of those who use the ophthalmoscope the accommodation is particularly active when examining a hypermetropic eye, we must then study and calculate the errors of astigmatism in a somewhat different manner.

In teaching the determination of astigmatism we must only consider those rays of light that are reflected by the retina of the observed eye, after proper illumination with the ophthalmoscope. In doing so we must estimate separately the refraction of the two principal meridians at right angles to each other, the direction in which the rays of light of each meridian leave the cornea, and the direction that they will have when they strike the retina of the observer's eye, after they have passed through the dioptric media of both eyes.

This has been beautifully shown by my friend and assistant Dr. W. H. Fox, at our clinics, and at his lectures at the Post-Graduate Medical College. We have used small disks of cardboard to represent the refractive apparatus of the observed and the observer's eye, while small threads of different colors, placed in different planes, represent the rays of light in the two principal meridians.

By this method, if we take the rays of light from any luminous spot in the retina passing through the dioptric media of the observed eye and then through that of the observer, their directions and focal points will be the same as parallel rays of light passing through a spherical and a cylindrical lens combined, so that we will find beyond the refractive media of the observer's eye the two principal focal points, with the focal interval of Sturm between them, that in hypermetropic astigmatism the retina of the observer's eye lies at the anterior focal point, and that in myopic astigmatism the retina of the observer's eye lies at the posterior focal point. Also in compound astigmatism the retina is in front of the anterior focal point in hypermetropia, and is behind the posterior focal point in myopia, while in mixed astigmatism the retina lies between the anterior and posterior focal points.

Now, in all these cases, but particularly that of simple astigmatism, which I shall take as a standard, we will find that the image, as formed upon the retina of the observer's eye, is elongated in the meridian of greatest ametropia, consequently all vessels or lines that pass in the direction of this meridian will be clearly seen, *provided the accommodation is at rest*, because the rays that define the edges of these vessels will pass outward through the emmetropic meridian, and will leave the eye as parallel; while all the rays that pass outward in the meridian of ametropia, when they strike the retina of the observer's eye, will simply overlap, so forming a clear, elongated image, but in hypermetropic astigmatism the student will *almost invariably use his accommodation*, and now he will see the vessels in the emmetrophic meridian, as the rays will focus upon his retina at the *posterior focal point*, exactly at right angles to the vessels parallel to the meridian of ametropia.

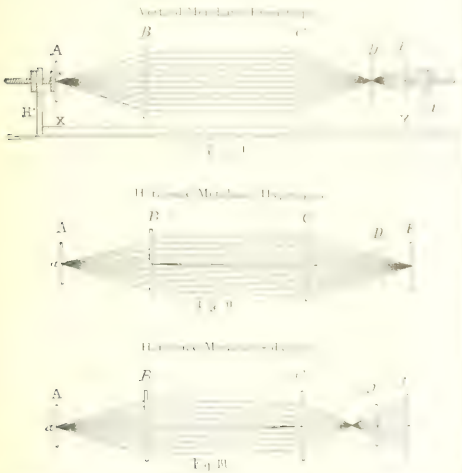
By looking at the drawings you will see in Fig. 1 the stand represented, with one set of cardboards and threads in position, showing the direction of rays of light in the vertical meridian, while in Figs. 2 and 3 the cardboards and threads only are represented, but are so made that they can be easily attached to the stand by a slot, and then tightened up by the nuts on the screws at the ends. These figures are reduced about one-sixth the actual size, and this method can be used to illustrate all the varieties of refraction and astigmatism.

Explanation: In Fig. 1, let X, Y, represent the stand, with two uprights, H and I, on each end, through which the screws pass, with a small movable nut on each screw, by which the threads are tightened after the cardboards are in position, then the cardboard at A will represent the retina of the observed eye, and *a* the luminous point, B the refractive apparatus, while C will represent the refractive apparatus of the observer's eye, D the position of the retina, and E the position of the posterior focal point in simple hypermetropic astigmatism. By placing these cardboards in the stand, with the rays of the two principal meridians shown by different colored threads, they can be turned to any meridians in the arc of a circle, though in the drawings they are only shown in the vertical and horizontal; then if you combine Figs. 1 and 2, or Figs. 1 and 3, you will see that in no case can the rays from the luminous point *a* form a point upon the retina of the observed eye, but must be elongated in the direction of curvature different from that of emmetropia.

In Fig. 3, representing the horizontal meridian of an astigmatic eye whose refraction is myopic, we find the rays of light in this meridian or plane to pass outward convergent; consequently, they will cross before they strike the retina of the observer's eye at D, and then form an elongated image; as the rays passing outward in the other principal meridian will be parallel, as shown in Fig. 1, they will exactly focus upon the retina at D, and as these rays in this meridian form the boundary lines of the vessels in the opposite meridian, then in this case the vessels

that pass horizontally will be clearly seen; that being the meridian of greatest ametropia, the axis of the correcting cylindric glass must be placed at right angles to it, or, in other words, at right angles to the vessels that are distinct.

If we now study the direction of the rays passing from a hypermetropic eye, under the same conditions, we shall find that they also form an elongated image upon the observer's retina, in the same meridian of ametropia, but now the image is formed by the rays in the horizontal meridian, reaching the retina at D before they have come to a focus, as shown in Fig. 2, while the rays passing in the vertical plane, Fig. 1, are parallel, and exactly focus upon the retina of the observer's eye.



Diagrams of [illegible] and the [illegible] simple hypermetropic [illegible]

Now, if the observer is able to keep his accommodation *completely relaxed*, this proposition is correct, and he can only see the vessels that pass in the horizontal direction; but as so few of us, particularly those who are learning to estimate refraction, can keep the accommodation at rest when divergent rays pass in the eyes, hence, using the accommodation we will focus all the rays upon the retina, and all the vessels are now clear. If we then place a convex glass behind the aperture of the ophthalmoscope, which takes the place of and relieves the accommodation, we now change the rays of light as if they came from an eye with simple myopic astigmatism, as the convex glass will focus the divergent rays in the horizontal meridian upon the retina, at the same time will bend the parallel rays in the vertical meridian, and they will then focus before they reach the retina of the observer's eye, so that the position of the retina is now changed to the posterior focal point, and the vertical vessels can be seen, most distinct, exactly at right angles to the vessels seen with the accommodation relaxed, consequently the axis of the correcting cylindric glass must be placed *parallel* to the vessels, most distinctly seen in hypermetropic astigmatism when the accommodation or a convex glass is used, and the strongest convex glass, with which these vessels are clear, will represent the amount of ametropia.

These same rules will apply in compound astigmatism, but we must first correct the general refraction in myopia by the weakest concave glass that will make the vessels in any one meridian distinct, and in hypermetropia by the strongest convex glass that will first blur the vessels in any meridian.

We can illustrate these rules by the following cases: In simple myopic astigmatism the vertical vessels are distinctly seen through the aperture of the ophthalmoscope, then with -2 D all the vessels are clearly seen, as the accommodation will correct the divergence of the parallel rays caused by the concave glass, hence the correcting cylindric glass would be -2 D.c, axis 180°, or horizontal.

In simple hypermetropic astigmatism, all the vessels can be seen in every meridian, but if we place a convex glass behind the aperture, as $+2$ D, the vertical vessels can still be distinctly seen, while all the horizontal vessels are blurred, we now find that the correcting cylindric glass will be $+2$ D.c, axis 90°, or vertical, the axis now being parallel to the vessels most distinctly seen.

Let us now take a case of compound myopic astigmatism. All the vessels will appear blurred, and the weakest concave glass that will make the vessels in any meridian clear, say -2 D, will show these vertical vessels; then we have general myopia of -2 D, and the axis of astigmatic glass must be at *right angles* to the vessels; then we will measure the amount of astigmatism by the weakest glass that will make all the vessels clear, as -4 D, and the difference between these two glasses will give the amount of astigmatism. Thus, the proper glass to correct this case would be -2 D.s $\bigcirc -2$ D.c, axis 180°, or horizontal.

But in a case of compound hypermetropic astigmatism all the vessels can be clearly seen, as the accommodation will be active, and now the strongest convex glass that will first blur the vessels in any meridian, as with $+2$ D the vessels in the horizontal meridian begin to blur, this glass will represent the amount of general hypermetropia, and now the axis of the astigmatic glass must be *parallel* with the vessels that are *still* distinctly seen, then the strongest convex glass that these vessels in the vertical meridian can be seen with, as $+4$ D less the amount of general hypermetropia, will represent the astigmatism. So the correcting glass would be $+2$ D.s $\bigcirc +2$ D.c, axis 90° or vertical.

In mixed astigmatism with the vertical meridian myopic and the horizontal meridian hypermetropic, you will see the disk elongated in the direction of the myopia, or vertically. All the vessels and lines running vertically are distinct, unless all the accommodation is relaxed, when the vessels and all the details of the fundus will be indistinct. But this condition is difficult to accomplish, and so using the accommodation we can see the vertical vessels clearly; then the strongest convex glass through which they can be seen, as $+2$ D, will represent the amount of hypermetropic astigmatism; now place the axis of the correcting glass parallel to these vessels, and we have $+2$ D.c, axis vertical. The hypermetropic astigmatism being in the horizontal meridian. Let us now place the weakest concave glass, behind the aperture, that will render all the details of the fundus clear, as -2 D, and we have the amount of myopia; placing the axis of the cylindric glass at right angles to the vessels first clearly seen, then the correcting concave cylindric glass will be -2 D.c, axis 180°, or horizontal, with the myopic astigmatism in the vertical meridian. So this case of mixed astigmatism will be corrected by $+2$ D.c, axis 90° $\bigcirc -2$ D.c, axis 180°.

I wish the student to remember that these calculations are only made in this way because most physicians who use the ophthalmoscope are unable to control the action of the accommodation; while if we do have perfect control at all times, then we can only see the vessels distinctly that are parallel to the meridian of greatest ametropia, and consequently the axis of the correcting cylindric glass must be at right angles to that meridian.

I have been led to these conclusions from actual experience in the examination of a large number of cases of astigmatism, without the use of atropine, and have confirmed the diagnosis afterward with atropine and the trial by glasses. Again, so little is written on this interesting subject, while I could give so many examples from my records, while on service at the Manhattan Eye and Ear Hospital, that have been studied and the diagnosis made

by this method; at the same time, I know from personal experience that it was very difficult to so master my own accommodation as to obtain the results given in our text-books. Nor can I speak too highly of the ability to make a correct diagnosis of all the errors of astigmatism, as in many cases it will enable us to decide if it is necessary to continue the examination under the use of atropia, as well as showing the cause of the apparent amblyopia.

I would therefore conclude:

That the direction of the axis of the correcting cylindric glass in myopic astigmatism is at *right angles* to the vessels that are most distinctly seen without a glass.

That the direction of the axis of the correcting cylindric glass in hypermetropic astigmatism is *parallel* to the vessels that are most distinctly seen with a glass.

That the same rules are applicable in compound astigmatism, only we must correct the general error of refraction first, and then the astigmatism.

Lastly, that these rules are presented, from the fact, as I believe, that the largest number of those who use the ophthalmoscope cannot control their accommodation at all times, when divergent rays of light enter the observer's eye.

Progress of Medical Science.

Nerve Terminations in the Pepsin Glands of the Stomach.—Fragments of the stomach, taken from a fasting dog, and treated by bichromate of ammonia in five per cent. solution, show the parietal cells containing, besides the nucleus, from one to five homogeneous granules stained of a yellow color. Langley has described these as pepsinogenous bodies, but Navalishin (*Archives Slaves de Biologie*, No. 1, 1886) regards them as the terminal organs of the nerve-fibres. In a section of the mucous membrane treated by bichromate of ammonia and then by chloride of gold, he has seen a filament passing from a nerve-branch enter the capsule of the gland, penetrate a parietal cell, and terminate in one of these granules in its interior.

How the Mussel Opens its Shell.—Dr. J. Pawlow has been studying the action of the adductor muscles of the valves of the fresh-water mussel (*Anodonta cygnea*), and has obtained results of considerable interest in the physiology of muscles and nerves. The following are the conclusions of his paper: The two adductor muscles receive each two sets of nerve-filaments, one motor and regulating the contraction or shortening of the muscle, the other antagonistic to the first. The latter might be denominated arrestors, since their action is to suspend the contraction of the muscle and induce relaxation in it. These two sets of nerves have, in respect to the adductor muscle, a rôle analogous to that of the vaso-constrictors and vaso-dilators in respect to the muscular coat of the arteries in the higher animals.—*Revue des Sciences Médicales*, April 15, 1886.

Atrophy of the Superior Maxilla.—Dr. Dubreuil reports the case of a man, thirty-three years of age, who had begun to lose his teeth about a year previously. There was no pain, and the teeth simply became loose and fell out during mastication or were removed by the fingers. None of the teeth was carious. The molars began to fall out first, and at the end of six months there was not a single tooth in the upper jaw, but throughout there had not been the slightest pain. After the disappearance of the teeth the alveolar border became thinned, ulcers were formed, then hemorrhages followed from the nostrils, and from time to time little pieces of bone, with mucous membrane attached, were removed from the nasal fossæ. There were flying pains at this time in the lower extremities, most marked at night. At the time of the patient's admission to hospital the vault of the palate was of a triangular shape, presenting a cicatricial appearance at the sides, and a fistula communicated on the left side with the nasal fossa. On the right side a small ulceration existed at a point from which a little spiculum of bone had been removed. The patient died with symptoms of cardiac affection. At the autopsy were found ulcerative endocarditis, passive congestions, and general anasarca. The brain was small, the frontal lobes especially appearing to be but little developed. The meninges of the cord, particularly the dura mater, were thickened posteriorly. The medullary lesion was situated in the sinus formed by the separation of the posterior cornua. The sclerosis was diffuse, and was especially marked at the extremity of the right posterior cornu, where the abundant connective-tissue fibres had destroyed the nervous filaments. The changes appeared to be more marked toward the cervical region and to decrease and finally disappear in the dorsal portion of the cord. The bulb, the superior maxillary ganglia, and the nerves themselves could not be examined. The lesion in the bone was simply that of necrosis. Whether there was any relation between the cord lesion and the atrophy, M. Dubreuil was not prepared to affirm.—*Revue des Sciences Médicales*, April 15, 1886.

Pulmonary Œdema.—In 1878 Welch advanced a theory, founded upon certain experiments, of pulmonary œdema according to which the condition was due to left cardiac insufficiency; the right ventricle continuing to contract with force, a stasis of the blood within the lungs occurred. Sahli has recently repeated these experiments and performed others, from a study of the results of which he draws the following conclusions (*Archiv für Exper. Path. und Pharmak.*, No. 6, vol. 19): 1. Pulmonary œdema is never produced in the manner described by Welch. 2. In the majority of cases the affection is not due to stasis of the blood, but is similar to nephritic or cachectic œdema. 3. In sufferers from heart-disease there arises sometimes, though rarely, an œdema from blood stasis due to regurgitation from the left ventricle. 4. Phlebotomy is a therapeutic measure, as efficacious as it is rational, in the treatment of œdema from blood stasis, and it would probably be of equal value in other forms of pulmonary œdema. 5. The operation of transfusion of blood is contraindicated in œdema of the lungs or when circulatory troubles threaten.

A Modified Pirogoff's Operation.—At the recent congress of Russian practitioners, Professor Tauber described and demonstrated on the dead subject an operation for removal of the foot, which he believes has several advantages over Pirogoff's amputation. Standing on the outer side of the limb, he commences an incision at the insertion of the tendo Achillis, and carries it forward just below the external malleolus to the dorsum of the foot, and then vertically downward on the inner side in front of the heel. When the middle line of the sole is reached, the incision is carried along it backward and prolonged upward to the starting-point at the insertion of the tendo Achillis, a flap having thus been cut consisting of the inner side and half the sole of the heel. The joint is then opened, the external ligaments being first divided and then the internal. The astragalus is seized with the bone forceps and removed, and the anterior part of the foot cut off by Chopart's line, nothing being left but the os calcis, the soft coverings of which on the inner aspect are untouched. The os calcis is seized with the bone forceps and turned so that the articular surface is toward the operator. The forceps are now taken by an assistant, who holds them tightly; the operator then saws the bone longitudinally in two; the outer half, which is free, is removed, the inner half remaining attached to the flap. The ends of the tibia and fibula are then sawn off just above the malleoli. The cut surfaces of these will be found to correspond almost exactly with that of the os calcis, which is not brought into apposition with them. The advantages claimed for this operation are: 1. The posterior tibial artery itself is untouched, only its

branches being divided. 2. The insertion of the tendo Achillis, as well as its bursa, are not injured. 3. The surfaces of the os calcis and of the leg bones correspond very nearly to one another.—*The Lancet.*

Some Curious Dislocations.—Mr. H. Addison writes in *The Lancet* of April 3, 1886, that he was witness of an accident, happening opposite his house, which resulted in a curious dislocation of the third cuneiform bone. A man was endeavoring to mount a barebacked horse, which was standing close to the curbstone. He threw his right leg over the animal, which started forward with a bound, dislodging him backward. As the horse passed from under him, he came down upon the edge of the curbstone with his left foot flexed and abducted. The sole was also somewhat everted. The patient, a man of about thirty-five years, of pale and relaxed fibre, showed upon examination a dislocation of the external cuneiform bone. The luxation was somewhat peculiar; the entire bone, being displaced upward, lay upon the inner edge and dorsum of the os cuboides. About half the dorsal surface of the cuboid bone was covered by the plantar surface of the cuneiform. The displaced bone could be very distinctly seen through the stretched skin of the dorsum of the foot, as if a cube had been placed under it. The patient suffered very little pain, and the bone could be easily reduced by mere pressure upon the dorsal surface, with only the slightest possible extension of the toes. When the foot was flexed by the will of the patient the luxation recurred. The member was placed in an appropriate splint, with a graduated pad over the displaced bone. The man was then removed to his home, some miles away. He thus passed from Mr. Addison's care, and nothing further was heard from him. Dr. H. A. Hallett reports in the *British Medical Journal* of May 8, 1886, the case of a laborer who came to him saying that he had fallen off a tree, and that a branch he had been lopping had fallen on and hurt his wrist. On examination a conical protrusion was found on the back of the right hand, which proved to be the carpal end of the metacarpal bone of the middle finger, entirely dislocated. The deformity was soon reduced by traction and manipulation; but, on the slightest movement of the hand, the bone became again partially dislocated, and kept rising up as soon as replaced, being only kept in position by pressure. The hand was extended on a splint, and a pad and bandage applied.

Genital Manifestations of Malaria.—M. Girard has observed in Turkey, Italy, and America various affections of the genital organs which he believed to be of malarial origin. He based his diagnosis of malaria in these cases not only on the enlarged spleen, intermittent febrile paroxysms, cachectic hue of the skin, etc., but also upon the results of a microscopical examination of the blood. He describes, as dependent upon paludal infection, orchialgia, neuralgic orchitis, epididymitis, and urethritis. He has observed, also, an ordinary gonorrhœal orchitis in which the symptoms were paroxysmal in character, the pain being intermittent, and specific urethritis, in which the discharge was intermittent and coincided in time with well-marked malarial paroxysms of fever, etc., disappearing as these attacks passed off.—*La Crónica Médica*, May 5, 1886.

Treatment of Catarrhal Icterus by Enemata.—Lowenthal states that he has seen remarkable success follow the use of rectal injections in the treatment of catarrhal jaundice. The following is the method as practised by Professor Meyer, of Vienna. The first day from two to four pints of water at a temperature of from 53° to 55° F. are injected; the second day the same quantity is employed, but the temperature is raised to 58° or 60° F.; on the third day water at 65° F. is used, and on the fourth day the temperature is raised still further, to 75° F. Usually this is sufficient to effect a cure, but if not, the injections are continued, the water being warmed a few degrees more each day. For children the quantity of fluid should not exceed a pint and a half, but in the case of adults from three to four pints may be used. The dejections are at first of a clay color, but by the third day they become yellow. The epigastric pain and feeling of weight over the hepatic region are relieved usually by the first injection, and the appetite quickly returns, and the icterus fades. The writer states that he has seen this mode of treatment employed in over forty cases, always with success.—*Gazzetta Medica di Roma*, May 1, 1886.

A Large Biliary Calculus.—The following case is related by Dr. Roeser in the *Gazette de Gynécologie* for May, 1886: "The patient was a woman, sixty-five years of age, somewhat obese, but of fair general health. She had previously had one or two attacks of hepatic colic, the last one of which was rather severe and accompanied by vomiting and slight jaundice. Some three weeks later she noticed, while at stool, that some hard body obstructed the passage, preventing defecation. This was removed by the finger introduced into the rectum, and was found on examination to be a biliary calculus. It had a flattened ovoid shape, and measured an inch and a half in its longest diameter and one inch in its shortest. On being broken its central portion was found to consist of a granular friable matter, dark in color, and somewhat resembling snuff. This suggested dried blood, but examination showed it to be composed of bile pigments and earthy carbonates, no trace of blood being found on microscopical or spectroscopical examination.

A Classical Remedy for Hiccough.—Dr. A. G. Gibson calls attention to the old Hippocratic aphorism, "Sneezing occurring after hiccough removes the hiccough," and suggests, in cases of hiccough, the production of sneezing by tickling the nostrils, and he tells us that he has in this way been very successful in the arresting of this disagreeable affection. Hiccough, as well as sneezing, is one of the specially modified respiratory movements, and it is quite in accordance with what we know of the transference of nervous action that the spasmodic contractions of the diaphragm should cease on the induction of the explosive expirations which constitute the acts of sneezing. There is one point, however, which deserves special mention. It is not necessary that the stimulus applied to the nose be followed by sneezing. The application of a gentle irritant to the nasal mucous membrane may be quite enough to put a stop to the hiccough, by diverting the nervous energy into other channels, although it may not be of sufficient power to induce sneezing.—*The Lancet and Clinic.*

Headache in School Children.—Professor N. J. Bystroff has examined 7,478 boys and girls, in the St. Petersburg schools, during the last five years, and found headache in 868; that is, in 11.6 per cent. He states that the percentage of headache increases almost in a direct progression with the age of the children, as well as with the number of hours occupied by them for mental labor; thus, while headache occurred in only five per cent. of the children aged eight, it attacked from twenty-eight to forty per cent. of the pupils aged from fourteen to eighteen. The author argues that an essential cause of obstinate headache in school children is the excessive mental strain enforced by the present educational programme, which leaves out of consideration the peculiarities of the child's nature and the elementary principles of scientific hygiene. The overstrain brings about an increased irritability of the brain, and consecutive disturbances in the cerebral circulation. Professor Bystroff emphatically insists on the imperative necessity for permanently admitting medical men to conferences of school-boards. Of palliative measures he mentions methodical gymnastics, mild aperients in well-nourished children, steel in the anæmic, bromides, inhalation of oxygen, and, in severe cases, a temporary discontinuance of all studies.—*British Medical Journal*, May 15, 1886.

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OPPOSITION TO THEORIES OF MICROBIAL INFECTION.

AT the meeting of the Alabama State Medical Association, held in Anniston on the sixteenth of last month, Dr. B. J. Baldwin reported twenty-five successive extractions of cataract without a failure. In the course of his remarks on these cases he said that he had used no disinfectants, and did not consider them necessary outside of hospital walls. He also said that he had been very much interested, and rather amused, at the scrupulous disinfection of the eyelids and eyeballs, and the hysterical anxiety to have even both eyes deluged in solutions of bichloride of mercury and boracic acid preceding every operation. He did not wish to be understood as denying that disinfection might often do good in the poisoned wards of old hospitals, but he did assert that anything more than cleanliness, in the extraction of cataract, outside of the hospital, was unnecessary and sometimes even harmful.

Then speaking of antisepsis in general, he continued: "I do not believe, furthermore, that there exists in all space a deadly venom ready and anxious to leap into every wound, to hasten the part on to destruction. There is bread that hath no leaven, and air as well without germs. Many of my friends may think this unpardonable heterodoxy, and my German confrères will no doubt stand aghast, but I am confident that they will sooner or later come to the conclusion that the world is not so soaked in bacteria as they at present imagine. It is difficult to conceive that an all-wise and ever-merciful Maker would have so filled His universe with these infinitesimal death-worms, and that fresh air and sunshine are simply the danger-house from which they may be signalled when an opportunity to attack a wound arises. Cleanliness embraces all of the virtues of disinfection, and it is the sole element of its success."

These are certainly pretty strong words, but judging from the indications we see about us we may expect now to hear declarations of this sort from many different quarters. The opponents of bacteriological theories are beginning to assert themselves with much more vehemence than they dared to use a short time ago, and, gaining courage as they proceed, they will give the advocates of the new doctrines a task in defending their theories. We are not sorry to see the signs of the approaching tsruggle, for, true or false, the microbial theories have, we think, been too readily accepted by the mass of the profession upon the authority of a few learned investigators. All the arguments pro and con have not yet been set forth as clearly as they might be; and an animated discussion will do good in establishing the truth or falsity of these latest theories of disease. But the conservatives must remember that talk is not always argument. The bacteriologists allege facts and experimental research as the basis upon which their theories rest, and their opponents must bring forward equally strong facts if they wish to gain the approval of the profession for their cause.

A QUESTION OF DIGESTION.

THE doctor is, perhaps, the very last individual to whom a student of social topics turns for advice. Yet he might, at times, learn something even from this source, of which Descartes, at least, has spoken in terms of more than respect.

Modern philosophy has taught us that man, in his fœtal growth, gives us a minute but faithful image of the slow development of animal forms. We learn evolution from embryology. So, also, it has been shown that man, in his post-natal growth and life, is a perfect prototype of the social body. In the development of a united nation one sees the same differentiation of function, the same classes of vital phenomena, and, in a measure, the same disorders as in the individual. It is the old illustration of macrocosm and microcosm, which Goethe understood long before it was elaborated by Herbert Spencer.

It is, we think, sufficiently demonstrated, then, that the doctor who studies the cause of disease in man may suggest something, and that with much confidence, as regards the troubles of man in the mass.

There is to the medical mind little doubt that the United States is now suffering from a condition of indigestion, which has culminated in attacks of *embarras gastrique*. The trouble until lately was a mild one, characterized more by flatulence and anarchical belching than by a serious disturbance of nutrition.

But it appears that we are getting beyond mere flatulence. A man cannot prosper on a steady diet of soleleather and cellulose, neither can the United States quite assimilate a decennial dose of a million and a half of foreigners, mostly of the non-disinfected class.

Smiling philosophers, like Henry Ward Beecher, tell us that this is the land of the free, and that our institutions are strong and noble and sufficient; and so let the foreigner come, whoever he be.

But to the medical philosopher this is not good sense. When a man of magnificent constitution has been steadily gorging himself until he is all blotches and biliousness, we do not say that—the stomach being originally sound, and the constitution naturally substantial—a continuance of the same diet is perfectly safe. Pathology teaches that constitutions do not work up to bad diets, but bad diets gradually undermine the constitution.

And the question now is, whether the United States has a stomach that can manage all the lower classes of Europe.

Our politicians think that it has, because they can manage better newly made voters; our corporations have thought so, because these new voters furnished cheap

labor, but the doctor, with his dietary experiences, feels much doubt. As regards immigrants he would advise a restricted diet, and as regards the anarchical immigrated, perhaps a free purge.

A NEW METHOD OF TREATING WHOOPING-COUGH.

THE parasitic origin of whooping-cough has been asserted and denied by various observers ever since 1867, when Poulet first described what he believed were the specific organisms of the disease. The *a priori* probability that there is a parasite at the bottom of the trouble has led to continued reinvestigations, ending, we are told by Dr. Wm. H. Barlow, in the successful researches of Professor Moncorvo, of Rio Janeiro, in 1883. This gentleman claims to find in the laryngeal and bronchial secretions minute micro-organisms (micrococci), which increase in number with the progress of the disease, and disappear when the patient is cured. No further evidence that these micrococci are pathogenetic is cited by Dr. Barlow, but their discovery was sufficient to induce Moncorvo to institute an anti-parasitic treatment, which he has found very successful, and which Dr. Barlow has adopted with equally good results. Moncorvo reports seventy cases and Barlow fifty thus treated. In Barlow's cases all recovered, and the average duration of the disease was five and one-half weeks. The ordinary duration is generally put down as from eight to ten weeks.

The treatment consists in the application with a brush, every two hours, of a one- or two-per-cent. solution of resorcine. The applications are made to the pharynx and its supra-glottic portion, as well as to the opening of the glottis.

Dr. Barlow gives the following conclusions: "1. That whooping-cough is to be classed among the diseases which are caused by the irritation excited by the presence of parasites. 2. That it is due to the presence of micrococci, which proliferate in large numbers upon the lining membrane of the larynx and pharynx, and which infiltrate the epithelial cells, which seem to be the preferential seat of their growth and increase. 3. That resorcine, in a solution of the strength of one or two per cent., applied directly to the mucous surfaces concerned, has been found, in all cases in which it has been employed and the results watched, to rapidly reduce the number of chinks, to reduce their intensity, and finally to lead to the cure of the disease." This last word "cure" is a bold one, but if the first and second propositions are held to be proven, then there can be little doubt that it is properly used. For if there are no other diseases *cured*, yet certainly those which are due to the irritation of a parasite are cured when that parasite is destroyed.

"Lastly, the mode of application by means of a brush or swab is not the only mode in which it may be made; perhaps by some of the recently used instruments for applying medicated spray to the interior of the larynx and the adjacent parts of the throat (as that recently described by Dr. Miller, of Windsor, and by Dr. Hodgkinson) it may be applied yet more effectually than by the methods adopted by Professor Moncorvo and myself. And, again, it is not finally proven that resorcine is the best application that may be found. Perhaps in its near congener, orcine, we may have a still better agent for this purpose, for we find in a note by J. J. Andeer, in the *Gazetta Medica Italiana-Lombarda* [illegible], that "Orcine possesses almost all the physical properties of resorcine; but while the latter is caustic in large doses, orcine is never more than astringent and antiseptic."

The treatment, as will be seen, though announced as a new one, is in reality only carrying out more systematically the suggestions of previous physicians. Thus, as Dr. Barlow says: "Tordeus has used the benzoate of soda, Keuster, inhalations of thymol; Huebner, salicylate of soda; Hildebrandt, inhalations of petroleum vapor, etc. Resorcine was selected by Moncorvo because of its innocuousness."

The specific treatment of whooping-cough has always run in two lines, viz., toward antispasmodics like the bromides and belladonna, and toward germicides like carbolic acid and resorcine. That we shall be able as a rule to apply germicides so thoroughly as to be specifically effective remains to be seen. It is certain that in antispasmodics and sedatives the best results have so far been obtained, and belladonna and the bromides still hold their place.

A NEW MICROORGANISM OF PHTHISIS.

Two French observers, MM. Duguet and Héricourt, claim to have discovered that the very common fungus, so often seen on the bodies of the phthisical, causing pityriasis versicolor, may itself be a cause of phthisis.

In some cases of acute phthisis the tissues were found to contain no bacilli, but there were observed the mycelia identical with or allied to those of the *microsporon furfur* (the fungus of pityriasis). Similar mycelial threads were also found in the expectoration mixed with the bacilli. When the microsporon furfur is cultivated and injected into guinea-pigs and rabbits, these animals become, without exception, tuberculous, and the same result is obtained by insufflation into the trachea of the crusts of pityriasis. Moreover, the cultures of microsporon furfur, of tubercle produced from the fungus, and those from tubercles of man are precisely the same in character. Cultivations can be made in slightly alkalinized bouillon or in milk, when it becomes possible to distinguish an aërobic and an anaërobic element. The former floats at the surface, and at a temperature of from 30° to 38° C. forms a thick membrane composed of bacilli. The latter is found at the bottom of the cultivation-tube as a mass of granulations and mycelium. The polymorphic character of the tubercle bacillus is thus, says *The Lancet*, manifest, and the opinion of Spina receives support as to the variety of the forms of microbes in tuberculosis.

It seems more probable, however, that the observations of Duguet and Héricourt were not carefully made.

MILITARY DRILL IN THE SCHOOLS.

AN interesting discussion upon the above subject has been awakened by Dr. Charles F. Withington, who read a paper upon it at the recent meeting of the Suffolk District Medical Society. Dr. Withington criticises the drill and intimates that it is an imperfect form of physical exercise, and one which sometimes causes lateral curvature.

His objections as summed up were :

"1. The anatomical objection, based upon the fact of the obliquity of the superincumbent weight with reference to the spinal axis.

"2. The physiological objection, based on the production of a *tension* of the muscles, rather than of that constant alternation of activity and repose which best conduces to their nutrition.

"3. What may be called the philosophical objection, based on a lack of adaptation in design for the end to which the system has become converted."

In the discussion upon his paper a large number of teachers, and military and medical men took part.

All the teachers, with one exception, and all the military authorities favored the drill, not only for its value as a physical exercise, but for its moral effect.

On the other hand, Professor Dudley A. Sargent said that as an exercise it is "thoroughly bad," and sometimes causes asymmetry and lateral curvature. Dr. Bradford, while not recommending it as a perfect exercise, had not seen lateral curvature due to it.

The facts as gathered from the discussion appear to be that the military drill is a very good, though not perfect, means of physical exercise; to say it is "thoroughly bad," or even unsafe, is evidently absurd, provided the drill be carried on with light arms, and ordinary supervision of individuals be exercised. To make up for its deficiency as a gymnastic exercise we have its disciplinary and moral effects, concerning which opinion is unanimous.

On the whole, we should say, continue the military drill in our schools, using arms adapted to the strength of the children, and bearing in mind the occasional bad effects on the development of the trunk and arm muscles.

CHRONIC DIPHTHERIA.

Although diphtheria is usually ranked among the infectious diseases, it is often impossible in individual cases to trace its occurrence to any specific cause, and this is one of the arguments sometimes brought forward by the advocates of "auto-intoxication" against the theories of infection and of the parasitic origin of infectious maladies.

At a recent meeting of the Epidemiological Society of London (*British Medical Journal*, March 6, 1886) Dr. D. Astley Gresswell offered an explanation, which may possibly be a correct one, of these occurrences. He drew attention to the fact that many persons for years after an attack of diphtheria suffer from sore throat, liable to exacerbations, and said that in several instances he could give no satisfactory explanation for an outbreak of diphtheria, unless he admitted the possibility that persons suffering in this way retained diphtheritic infectiveness. He detailed six outbreaks in which the above explanation seemed to him to be the only reasonable one that offered itself. In one instance about thirty or more persons had been taken with, and five of them had died of, diphtheria contracted directly or indirectly from a girl who had suffered from the chronic condition referred to. He also detailed the history of sustained prevalence of diphtheria in a farm-house from March, 1881, to July, 1885 (the latter being the date of his inquiry into the prevalence at the farm-house), and in this a like explanation seemed to be the only one open. Dr. Gresswell dwelt upon the evident bearings which diphtheria in chronic and recrudescent phases had upon sustained prevalence of the disease in a community, and cited analogous instances, such as syphilis, ague, glanders, scarlet fever, and typhoid fever, as tending to support his theory. He suggested that recrudescence of disease, dependent upon a parasitic organism, might prove to be interpretable as due to such rejuvenescence of the parasitic organism as was known to occur among the cryptogamia.

In all the instances in which these cases had been found, the surrounding conditions were such as would be unhesitatingly pronounced unwholesome; and the speaker suggested that persons living under these conditions, instead of entering upon a straightforward recovery, lapsed, so to say, into a chronic condition, the diphtheritic virus leading a smouldering life in the tonsils for weeks and months, and at times (especially when the person had been exposed to wet and cold) entering upon a renewed vitality.

If this explanation be the true one, it only furnishes additional force to the evident necessity of attending to the sanitary conditions of our dwellings, and furthermore, of not dismissing a patient after diphtheria until the chronic tonsillar trouble sometimes remaining is definitely cured.

THE REVIVAL OF A FOLLY.

It is as true of fashion as of history that it repeats itself. It is not so many years ago that every argument of reason and of ridicule was brought to bear against those silly women who thought that by reducing their poor waists to a span they were making themselves more shapely. They finally did abandon the habit of tight-lacing, and doubtless some clever and well-meaning, but evidently rather weak-minded, physicians really thought that they themselves had, by voice or pen, aided in bringing about this happy change. But they had nothing to do with it; fashion did it. And now, we regret to say, fashion seems to have repented, and to be bent on undoing one of her few good works. One can almost see the women's waists grow smaller, and their hideous deformity grow greater, from day to day. And yet the orthopædists are dumb.

If we thought it were any use to sermonize we might detail anew all the evil consequences to health surely following upon such cruel distortion of the body. But it would be a thankless and a fruitless task. Women will have their own way, and no amount of reasoning can tear them from their allegiance to their dressmakers. One might as well try to convince the Chinese that they do wrong in distorting the feet of their female infants, as to turn a fashionable woman from any folly when fashion dictates it. We therefore refrain from argument or reproach, and merely perform the sorrowful duty, imposed upon us as a chronicler of events, of recording the fact that tight-lacing is once more coming into vogue. We can but pray that the epidemic may be short-lived, and that our weak sisters may speedily be delivered from their dire affliction.

DEATH OF ANOTHER OF PASTEUR'S PATIENTS.

THE cable brings the news of another death from rabies of a patient who had been inoculated by Pasteur. The victim was a Roumanian who had been bitten by a mad dog on May 11th, and who was put under treatment on May 25th, fourteen days later. He had been under treatment for eleven days when, on June 5th, he began to show evidences of rabies, and died with the symptoms well marked on June 7th.

It is difficult to see how this case can be explained; and the most that Pasteur can claim now is that after inoculation the ratio of deaths is lessened, as he would claim, from 16 to 0.2 per hundred. Less indulgent critics, who believe that the deaths from wolf rabies should also be counted, would place the ratio at 0.7 per cent., for Pasteur has now actually inoculated about one thousand persons, of whom seven have died. It is very true that 0.7 per cent. is a low mortality rate, but it has unfortunately yet to be determined how many of the inoculated were really bitten by mad dogs.

It is not in the least probable that the Roumanian whose death occurred while under treatment was really inoculated with the disease, although that view will no doubt be suggested. We think that it must be conceded that Pasteur's inoculations are at least harmless.

"THE DANGERS OF KISSING."

THE custom of kissing has been condemned by the wise and frowned upon by the religious, but has managed to thrive despite it all, and is still love's great artillery and best ally. Why tactile sensations from a limited labial surface have been found so very agreeable, and why they should have contributed so much to the poetry and pairing off of the human race are questions quite worthy of full discussion. Kissing, we are told, began with the birds, and reaches its most perfect evolution in man. It has a long history, therefore, and may well be considered a permanent feature in human society—solacing grief, increasing joys, promoting wedding engagements, and furnishing a permanent source of inspiration for the artist.

But an enemy to the kiss has appeared in Washington, D. C., in the person of Dr. Samuel S. Adams, who devotes seven columns of the *Journal of the American Medical Association* to exposing the "dangers of kissing." Everything has its dark side; and so, no doubt, has kissing, especially in Washington, where Dr. Adams lives and where one-half the population is African. If Dr. Adams has painted its dangers in somewhat lurid colors, it may have been thought quite necessary in order to put any check upon so popular a social custom.

The objections to kissing set forth by Dr. Adams are twofold—moral and physical. Kissing, he thinks, has become too common. Among women and between children and adults it has degenerated into an insincere, unmeaning, and commonplace salutation, when it should be reserved only as an index of affectionate feeling. But the weight of the doctor's argument is expended in showing the possible evils which come from the promiscuous kissing of babies and children by adults. Syphilis, tuberculosis, diphtheria, infectious fevers, herpes, eczema, stomatitis, cancrum oris, mechanical distortions of the mouth, injury of the eyes, rupture of the tympanum—all are possible on actual results of kissing. A veritable instance is cited, in which the drum of the ear was ruptured by a kiss applied to the external auricular appendage! A kiss of such a suction force reminds one of Benedict's, which had "such a clamorous smack that, at the parting, all the church did echo."

The bad moral influence exercised upon girls and boys who, when approaching puberty, are fondled and overkissed is very truthfully and forcibly depicted by Dr. Adams. It cannot be denied that the promiscous kissing of children by strangers, or those comparatively so, is an extremely pernicious practice. This, we believe, is being realized by parents, and few nurses are sent out without directions not to allow the infant to be kissed. In the general gloomy view of kissing taken by Dr. Adams it is not necessary to share. Although we may not realize as he does the wide-spread and endemic character of the kissing habit in Washington, we can only trust it will prove a safe place for the International Congress. It would be a painful sight, indeed, to see the American Medical Association's honored guests going home disfigured with labial herpes and ulcerative stomatitis.

News of the Week.

THE PEDIATRIC SOCIETY OF NEW YORK.—At the annual meeting of this Society, June 4th, Dr. George F. Shrady was elected President.

A CASE OF HYDROPHOBIA CURED BY SWEATING is reported to have occurred at Odessa (*Lancet*, May 26th). The patient was a boy who had been bitten by a mad dog several days before the symptoms developed.

VIRCHOW'S JUBILEE.—Professor Virchow recently completed the thirtieth year of his occupancy of the chair of Pathological Anatomy at Berlin.

THE FUNCTION OF THE THYROID GLAND.—So much has been said about the importance of this gland that the following related by Dr. J. Pohlman in the *Western Medical Press* is of interest: "From three dogs, ordinary curs, picked up in the streets of Buffalo, I removed the entire thyroid glands on April 15th, 19th, and 22d, respectively, and all three not only survived the operation, but did well and have been improving in flesh right along up to date (May 23d), when they were used for other experiments."

Dr. J. P. Bramwell, Surgeon to the Perth Infirmary, also reports in the *British Medical Journal* of May 29th, the case of a young man whose enlarged thyroid he removed one year ago. The patient up to date has shown no signs of physical or mental deterioration.

AT THE ANNUAL MEETING OF THE FLORIDA STATE MEDICAL ASSOCIATION, May 18, 1886, the following officers were elected for the ensuing year: J. W. Porter, of Key West, President; A. W. Knight, of Jacksonville, Secretary; J. D. Fernandez, of Jacksonville, Treasurer. We note from the *Florida Medical and Surgical Journal* that the Society is prospering, and the profession in the State becoming better organized. Much credit for this is due to the *Journal*.

Phthisis and Pityriasis.—MM. Duguet and Héricourt, who made a communication to the Academy of Medicine concerning the identity of the microsporon of pityriasis vesicolor with the bacillus of tuberculosis (see *Journal*, May 14th), have written to say that further researches obliged them to withdraw the theories and opinions formulated in that communication.

Typhoid Fever in the United States.—About twenty-five thousand deaths from typhoid fever occur in this country annually, and this represents fully one hundred and fifty thousand cases of the disease. The hundred and twenty-five thousand persons who recover, lose six weeks out of their lives, and carry perhaps some vestiges of the fever's influence for years.

Dr. Henry Howard on Louis Riel.—Dr. Howard closes an account of his observations made upon Riel when confined in a lunatic asylum in 1876, as follows: "What I have written of poor Louis D. Riel I have not written for politicians nor for nationalists. I have simply written for the sake of imparting knowledge to the physical scientist or natural philosopher. I admitted Riel simply to protect him from his enemies, and for the same reason I recommended his discharge. I suspect his friends knew these facts, and that was why I was not brought to give evidence on his trial; because, if I were asked, 'Did he know right from wrong?' I would have been obliged to answer 'Yes.' From his own statement on his trial, he was pleased to think I did not consider him *insane*. But I did consider him an abnormal man, a man with a teratological defect in his psycho-physical organization; and if he was guilty of the crime of which he was accused, and I believed he was, he was guilty because he was like all other criminals—not an intellectual man, but a fool, one of the millions of the immoral, criminal fools that I have already written of."

The Strikes.—The present phenomena of the strikes are ingeniously shown by the *Boston Medical and Surgical Journal* to resemble the imitative diseases known as myriachet, "the jumpers," etc. The blind obedience and automatic unreasoning imitation shown in many of the strikes certainly suggests that they have in them the elements of a neurotic epidemic.

Compound Oxygen.—The *Journal of Chemistry* publishes again the well-known analysis of "compound oxygen." It is a solution of nitrate of ammonia, a solution which, taken internally or inhaled, can no more yield oxygen than so much cold water. This nostrum, comments the *Boston Medical and Surgical Journal*, which has so long imposed upon a credulous and easily duped public, owes its success largely to the conspicuous place it has held in the advertising columns of eminently respectable journals. That newspapers devoted to religion (or at least to some religious sect) should find it for their interest to make the management of their advertising columns a matter of business only, is not surprising; religious journals cause us surprise only when they rule out "medical" advertisements altogether from their columns.

An Effort to Secure the Endowment with the sum of $250,000 of the New York Homœopathic Medical College is commented upon by the *N. Y. Medical Times* as follows: "This institution does not represent medical science and art, but rather Hahnemann and Homœopathy. Is it not rather late in the nineteenth century, Messrs. Trustees of the New York Homœopathic Medical College, to appeal to liberal and intelligent men for aid to endow and dedicate to science an institution of learning devoted to the promulgation of one idea, and that idea embodying a fragment of the truths of therapeutics?"

Why Negroes have White Teeth.—Science occasionally illuminates the dark spots of our ignorance with such effulgence as to completely overpower one. As a case in point, we note the announcement in the *Florida Medical Journal*, that Southern dentists have discovered that the peculiar whiteness of the negro's teeth is due to the excess of white blood-corpuscles.

Opinions of the Action of the American Medical Association.—There is a very general consensus of opinion regarding the last meeting of the Association, and it is expressed well by the *New Orleans Medical and Surgical Journal*, which says: "We believe that the action of the Association in regard to the action of the Judicial Council on the admission of the delegates of the Philadelphia County Medical Society was unwise and, at this particular juncture, well calculated to alienate many of the most esteemed of our Eastern confrères. . . . We believe that the policy of the Association in regard to the organization of the International Congress has added but little to the prospect of a very successful meeting at Washington. In our opinion, conciliatory efforts should have been made to re-enlist the interest of our distinguished brethren who were at one time connected with the Congress."

The Nebraska State Medical Society held its annual meeting at Lincoln June 1st, 2d, and 3d.

The Michigan State Medical Society held its twenty-first annual session at Jackson, beginning June 9th.

Professor R. T. Edes has resigned the Chair of Clinical Medicine in the Medical School.

How to take the Temperature quickly.—This may be done, according to Dr. Fitaloff, by warming the thermometer till the mercury stands at 106° or over, then placing it quickly in the axilla, where it need remain only one or two minutes.

Photographing the Retina of the Living Human Eye.—Mr. W. T. Jackman, of Coggeshall, Eng., has (*Photographic News*) made some fairly successful photographs of the human retina.

Hunting for a Wet-nurse.—It is not *de rigeur* for the Queen of Spain to nurse her infant son, consequently her physician has had to hunt up a wet-nurse. So far he has had to interview and examine twenty-seven applicants for the honorable position of suckling a king.

Yellow-fever Inoculations.—Dr. H. M. Lane, of Carthage, Mo., while on a visit to Rio Janeiro was inoculated by Dr. Freire with the attenuated yellow-fever virus. Dr. Lane thinks it protected from the disease. We learn that some of the culture-fluid employed by Dr. Freire has been placed in the hands of the bacteriologists of Johns Hopkins University.

The "Middleton Goldsmith" Lecture of the New York Pathological Society.—A series of lectures on the "Pathology of the Peripheral Neuroses" is to be delivered next season.

Regulation of Veterinary Medicine in New York.—The passage by the last Legislature of the bill to regulate veterinary practice makes New York the first State to undertake this work. The law compels the registration of veterinarians at the county clerk's office, and makes it incumbent on those registering to have a diploma.

An Outside View of Us.—While we have pleasure in offering our congratulations on the measure of success attained by the American Medical Association during the last thirty-seven years, we cannot but regret the fact that such success is far short of what might have been expected from the grand army of surgeons and physicians in the United States. During the last few years those whom we are accustomed to look up to as the leaders of the profession on this continent are but poorly represented at its meetings, and the tendency appears to be to diminish their numbers year by year. When we consider the status of that greatest medical organization in the world, the British Medical Association, and see how immeasurably superior it is to the American Society in every respect, we are utterly unable to evince any great enthusiasm over the results of the St. Louis meeting. Why does the American medical profession allow this condition of things? Its Association seems to have fallen into wrong hands. Who is responsible for this?—*Canadian Practitioner*.

The Faculty of Medicine of the University of Vienna has had a steady increase in the number of its medical students since 1878, until in 1885–86 the number was 2,673.

Inoculation for Yellow Fever.—In a letter recently received from Dr. Domingo Freire, of Rio de Janeiro, by Dr. Joseph Holt, President of the Louisiana State Board of Health, the following statement is made, presenting a summary of the results claimed for his inoculation for yellow fever: "I have performed over seven thousand inoculations with full success. The immunity was almost absolute, notwithstanding the intensity of the epidemic this year. More than three thousand persons who were not inoculated died of yellow fever, while among the seven thousand inoculated, inhabiting the same infected localities, subject to the same morbid conditions, but seven or eight individuals whose disease was diagnosed as yellow fever died. My confrères here have the careless habit of not giving notice of the fact until after the interment of the individuals, and, consequently, accuse me of being unsuccessful. You therefore see that in spite of all this bad will my doctrine comes out victorious once more by the test of the year when the epidemic characterizes itself by energetic intensity of infection and contagion."

Discovery of the Active Principles of Cod-liver Oil—Morrhuol.—Dr. Lafarge, of Paris, has separated from cod-liver oil a substance containing all the active ingredients of the oil except the fat. This substance he calls morrhuol. It contains twelve times as much iodine, bromine, and phosphorus as the original oil, but these elements exist in a state of combination difficult to destroy. The quantity of morrhuol obtainable varies, according to the quality of the oil, from one and one-half to six per cent. When cod-liver oil is deprived of the morrhuol, it no longer possesses the properties which make it so valuable, and acts simply as a fatty substance. In order to cover the disagreeable taste of the morrhuol, it is best given in capsules containing five grains of the extract, corresponding to a drachm and a half of the crude oil. Two of these capsules a day in young children, or four daily in older children, have, Dr. Lafarge says, proved of great service in his hands. It also relieves the cough of phthisis.

Reviews and Notices.

Recherches sur le Microbe du Choléra Asiatique. Par le Dr. E. van Ermengem. Paris: G. Carré. 1885.

Die Cholera. Von Max von Pettenkofer. Berlin: S. Schottlaender. 1885.

Cholera; Its Origin, History, Causation, Symptoms, Lesions, Prevention, and Treatment. By Alfred Stillé, M.D., LL.D. Philadelphia: Lea Brothers & Co. 1885.

A Treatise on Epidemic Cholera and Allied Diseases. By A. B. Palmer, M.D., LL.D., Professor of Pathology, Practice of Medicine, and Clinical Medicine in the College of Medicine and Surgery in the University of Michigan. Ann Arbor, Mich.: Register Publishing House. 1885.

Cholera; Its Cause and Prevention. By Ezra A. Bartlett, M.D. Albany: H. H. Bender. 1885.

Cholera; Its Nature, Symptoms, History, Cause, and Prevention. One of the Somerville Course of Lectures. By J. B. McConnell, M.D. Montreal: Robert Miller, Son & Co. 1885.

From a nosological point of view the year 1885 may be aptly termed a "cholera year"—in foreign lands because they actually had this scourge, and in our own country because we were expected to have it. It is possible to conceive a tinge of disappointment arising in the breasts of those among us who, confident of their ability to successfully cope with the dreaded pestilence, found no opportunity to demonstrate their power. But, barring such exceptional beings, there was even in the ranks of the profession only satisfaction and congratulation that the dreaded visitor did not put in his expected appearance. According to a familiar adage, we were certainly forearmed, if easily accessible knowledge concerning cholera may be regarded as an equivalent of being forewarned.

The list of publications heading this notice embraces but a few of the legion of cholera books that have appeared in the year just passed. Nevertheless it is typical of much that has been recently written concerning a disease of which we know so little and which we still have reason to fear so much.

Dr. van Ermengem's now well-known researches are embodied in a work of three hundred and seventy-four pages, supplied with twelve plates containing twenty-four beautifully executed microphotographs. The volume contains chiefly the results of independent investigations carried on by its industrious author for many months. No more trustworthy or substantial corroboration of Koch's doctrine concerning the parasitic origin of cholera has yet been published. It may indeed be regarded as a complete monograph on the subject of the comma-

bacillus. The mechanical execution of this valuable and interesting work is such as to make us feel jealous of our transatlantic confrères. Certainly no American publisher would care to put a book on the market in such costly garments.

Pettenkofer's brochure of sixty-three pages contains a half-scientific, half-popular exposé of his peculiar views on the essential nature of cholera. He does not accept Koch's doctrine, and still struggles to maintain his older theories on the importance of subsoil water. He does this in face of the array of old and new facts, which show clearly enough that his position is not and never has been tenable.

Dr. Stillé's practical little treatise will prove very acceptable to the profession of our country. Within the compass of 162 pages the author has succeeded in giving a very fair representation of the present status of our actual knowledge concerning cholera. He declines to accept Koch's doctrine as proven, but is unable to give any more satisfactory explanation of the etiology of the disease than is contained in the German savant's theory. He very properly insists on the necessity of quarantine, "not in the literal but in the official sense of the word." The treatment he advocates is the simple one that experience has demonstrated to be alone admissible, all violent measures and special plans or methods being regarded by him as useless, if not barbarous. For a concise treatise on cholera, which does not pretend to supplant more complete works, we can heartily recommend this book from the facile pen of an unusually gifted author.

"A Treatise on Epidemic Cholera and Allied Diseases," by Dr. A. B. Palmer, is an incomplete and, in places, quite inaccurate compilation of the many different views held with regard to cholera, its nature, methods of propagation, prevention, and cure. There is little to make it acceptable to either student or practitioner, who will naturally much prefer Stillé's treatise.

The two little volumes last on the list have no distinctive features of their own. They may possibly be read with profit by the laity, but for physicians they are so fragmentary in the conveyance of their information that they must be classed with the ephemeral literature of the day.

The Surgical Diseases of Children. By Edmund Owen, M.B., F.R.C.S., Surgeon to the Hospital for Sick Children, Great Ormond Street, London; Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital; Member of the Board of Examiners at the Royal College of Surgeons. 12mo, 585 pages. With Four Chromo-lithographic Plates and Eighty-five Engravings. Philadelphia: Lea Brothers & Co. 1886.

This book is one of a series of clinical manuals intended for the use of practitioners and students of medicine. All of the surgical affections of childhood are taken up in turn and treated of briefly, but in a satisfactory manner. The work is by no means a complete treatise, and is not intended to be one, but is rather a concise handbook of the subject under consideration. The author wastes no time nor space in referring to theories or in the discussion of various modes of treatment. But we think, if the book were intended for American readers, that its value would have been considerably enhanced by a brief notice, at least, of methods employed by American surgeons, which we may be pardoned for believing are oftentimes superior to those of our transatlantic brethren. For this reason we cannot unhesitatingly recommend the manual as a trustworthy guide for the student or the young practitioner just starting out with but little practical, and a rather confused theoretical, knowledge. For everything except treatment, however, the book is an excellent one, and its perusal, we venture to say, will be beneficial to many a man whose remembrance of his student days has grown dim with time. And, if used in conjunction with other works, it will be of great utility to students as well. The book is very clearly printed, and the use of heavy type serves to emphasize the important points and to enable the reader to find what he wants without any loss of time. The illustrations are very well executed and judiciously inserted, so that they really illustrate the text, a purpose which wood-cuts and other engravings in medical works do not always serve.

Transactions of the American Gynecological Association. Volume X. For the year 1885. 8vo, pp. 354. New York: D. Appleton & Co. 1886.

Few volumes of "Transactions" are filled with more attractive and practical material than are those of the American Gynecological Association. The leading gynecologists of the country are its contributors, and the articles furnished by them are always worthy of permanent record. In other words, the papers which appear mark the progress of the science from year to year, as noted by those who stand on the mountain and have a wide outlook. This volume is fully up to its predecessors, which is speaking for it in high praise.

Lectures on Clinical Otology. By Henry C. Houghton. Pp. 260. Boston: Otis Clapp & Son. 1885.

The Diagnosis and Treatment of Diseases of the Ear. By Oren D. Pomeroy. Pp. 413. New York: D. Appleton & Co. 1886.

These two books represent widely different views on the subject of which they treat, especially in respect to therapeutics, the former presenting the subject from the homœopathists' point of view, the latter from the conventional standpoint.

Dr. Houghton's experiences are mostly in the use of drugs, as indicated by homœopathic provings in the treatment of ear disease, as based on symptomatology rather than on pathology. A large portion of the book, seventy pages, is given up to an appendix, ten pages of which are devoted to a list of abbreviations, and sixty pages to a repertory of drugs classified according to their physiological action. Anyone having an interest in this method of selecting remedies, may here find a most extensive and curious collection, evidently made with painstaking care, worthy of a plan promising more practical results than can be hoped to be derived from such rubbish. The more practical features of the book are derived from current otological literature, and altogether there is an amusing combination of heroic and infinitesimal methods as a result of the author's dual inspiration.

Dr. Pomeroy deals with the subject from the light derived from the obverse side of the shield, so to speak, his book echoing the views of the more gladiatorial pioneers in otology.

The scope of this book is not limited to any portion of the field of otology, and the author is most industrious in the citation of opinions. It would, perhaps, have been more fair had the source of many of the views brought forward been given, but on the other hand, accredited citations might have been omitted without giving offence. A perusal of this book is liable to leave quite a different impression than is given by the former—that the author is rather prone to regard the ear, when diseased, as an organ that should be coerced back to its normal state by energetic means—and those who would know the methods that have been thus tried, or perhaps it should be said adopted, for this purpose, will be gratified by the author's treatment of the subject.

Dr. Houghton's literary style is good, while Dr. Pomeroy is lacking in ease; the book of the former is a credit to the publisher, the make-up of the other is not so good, the illustrations being especially bad—for example, the picture of the "normal" drumhead, as shown on page 42, is probably the worst of its kind that ever found its way into a book.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 3, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE CORRESPONDING SECRETARY acknowledged the receipt of a donation of bound volumes to the library from Dr. Pliny Earle, of Northampton, Mass., who was one of the founders of the Academy, and who read before it the first paper.

THE PRESIDENT announced that he had received a communication from Julius Althaus, of London, England, a Corresponding Fellow, from whom, as he hoped, the Academy would have the pleasure of hearing a paper in October next.

The President introduced Dr. Samuel C. Busey, of Washington, and invited him to take a seat upon the platform. Ex-President Fordyce Barker also was invited to take a seat upon the platform.

DR. C. C. LEE then read a paper [see p. 670], entitled

THE FUTURE INFLUENCE OF SURGERY AND SURGICAL RESOURCES UPON OBSTETRICS.

The discussion was opened by DR. W. M. POLK, who said that he would not attempt to speak on the operations which Dr. Lee had described so graphically, and which were a sufficient answer to the question implied in the title of his paper. When he began to teach it was in the department of general medicine, therapeutics, and materia medica. But in the course of time he began to teach obstetrics, and he went from one department into the other with the feeling that much the larger part of obstetrics was in the domain of medicine. His education, doubtless, had had much to do with that sort of feeling, for it had been largely influenced by the most accomplished teachings of Professor Fordyce Barker, and he was free to confess that when he stuck to the doctrines inculcated by that eminent teacher he had rarely gone wrong. However, he saw, after a while, that there were certain surgical bearings, which, if neglected, would soon push the practitioner to the wall, and stick him to the wall, and that fact led him to look into the history of the entire question, from which he had been brought to the conclusion that the most successful obstetricians had been those who united as thoroughly as possible the qualifications of the accomplished physician and the skilful surgeon. He had also been led to think that the tendency of the obstetric surgeon was perhaps to do a little more with his knife than his cases demanded. For example, immediate repair of laceration of *the cervix* during parturition, he believed, might better be left to nature aided by cleanliness, rather than at once to resort to operative interference.

But, surgically speaking, obstetricians had been obliged to fight their way against the opposition of those who were imbued with the idea of the mere physician, on the one hand, and upon the other hand, the active opposition of those who were engaged in general surgical work. But, as evidence that finally an enviable position had been attained, he had only to point to the results which had been secured in abdominal surgery. He had no doubt whatever that those who were engaged in abdominal surgery would soon settle the question of Cæsarean section successfully; that the day would come, and was not far away, when craniotomy could be eliminated from obstetric operations; and when that could be done, and successful Cæsarean section could be substituted for it, they would be in a position to say that the greatest work ever accomplished in surgery belonged to obstetricians.

DR. J. H. FRUITNIGHT regarded immediate repair of a lacerated perineum as one of the greatest advances which had been made in obstetric surgery, notwithstanding the fact that nature frequently does the repairing satisfactorily. If craniotomy could be relegated to the past, and Cæsarean section become the substitute, it would be one of the greatest triumphs which obstetrics could achieve.

DR. FORDYCE BARKER thanked Dr. Polk for his kind and complimentary remarks, and said that he was willing to accept the position of one belonging to the class known as midwives, in the sense that he was not a surgeon. Very soon after he began to practise in New York he found that he had in the surgical field such competitors as Marion Sims and others, and, having a natural dislike to procedures belonging to this class of cases, he believed that he exhibited some sagacity by referring the operations belonging to surgical obstetrics to his colleagues, and in giving his attention to those which belong purely to obstetric art. The progress in obstetric surgery had been so rapid that he had been unable to keep fully apace with its advance, and constitutionally he was not inclined to accept new propositions because they were new, and, on the other hand, was not inclined to deny their truth because they were new; yet he would express his opinion on one point in the paper, the whole of which he was unavoidably deprived of the pleasure of hearing, and that was with regard to *primary operations for lacerations of the perineum with parturition*. He recalled the statement of an eminent member of the profession, who once said that "any physician who did not close by the immediate operation a laceration of the perineum neglected to do his duty." At the time it struck him as rather a strong proposition to make, and also rather doubtful, but he did not antagonize the view, and thought that he would wait for its proof, and he had been waiting ever since. Perhaps he might be biased by one fact—the utterance of which might seem a little pugnacious, but he challenged contradiction—and it was that in no case in his own private practice had even the secondary operation been performed by any of our surgical gynecologists; in no case had it been required. He did not mean to say that he had never met with laceration of the perineum, for he had had these cases, but he had watched them closely, and in every case the secondary operation had not been performed by anyone. In his hospital practice such cases may have occurred, but not in his private practice. He was willing to go still further and say that in no case of his had the primary operation been performed until last winter; last winter he had one in which he thought that the primary operation was necessary, and it was performed. Although the greatest care was taken of the patient, union did not take place. The case was one of *justo minor* contraction of the pelvis, in which he delivered a living child, weighing eleven pounds, with Simpson's modification of Tarnier's forceps, and extensive laceration was produced.

Between the first of February and the first of May he had seen, in consultation, forty cases, which presented a peculiar train of symptoms. Previous to the sixth day after confinement there were no symptoms, and then they exploded violently, with extremely rapid pulse, temperature of 104° to 106° F., etc. These violent symptoms, in all the cases except one, disappeared within three days. Only one patient died. Of the forty, five had had the primary operation performed; in only one did union take place. He had repeatedly watched the result of the primary operation after it had been performed by others, and in two cases he had seen profuse hemorrhage in consequence of the shock and exhaustion. In other cases he had been informed that the operation was successful.

Dr. Barker then referred to special cases. One in which, with the first labor, extensive rupture of the perineum occurred, and union occurred spontaneously. In the second labor, a very extensive laceration took place up to the sphincter. In that case he called Dr. Lusk in consultation, who was an advocate of the primary operation, but thought it unadvisable to operate in that case,

and the patient, Dr. Barker thought, had very good union. Another similar case was narrated briefly.

Dr. Barker, therefore, would say that he had seen very many cases in which complete union had taken place, sufficient for all practical purposes, the laceration never having interfered with the position of the uterus or the comfort of the patient; and now, for the first time, he would say that he thought there were many cases in which the circumstances and conditions were such that it would be wise to perform the primary operation, with the hope that union would take place without exhausting the patient; but that in every case the question must be decided by a careful analysis of all the symptoms and conditions. As a general rule, however, he would say that it was safer to avoid the operation, trusting to absolute cleanliness, watchfully seeking for the healthy performance of all the general functions to effect a cure, and in the large majority of cases recovery will take place without the operation.

With reference to the title of the paper, there was no doubt that the future influence of surgery and surgical resources upon obstetrics would be very great; but it seemed to him that the real influence was that which gynecological and obstetric surgery had produced upon general surgery. Dr. Barker then referred to the remarkable paper on "Laparotomy for Penetrating Wounds of the Abdomen," read before the Academy by the late J. Marion Sims, and to the remarks made in reply by the late James R. Wood. Professor Wood's argument was that gynecological surgeons had opportunity to prepare their patients for this class of operations, whereas the general surgeon was called upon to operate under entirely different circumstances, with the patient suffering from, or just emerging from, severe shock, etc. In the majority of cases this was, perhaps, true, and in general the better the condition of the patient, the more likely was the operation to be successful. But the argument did not hold in all respects; there was another side to that view. It was a general principle, well established, that where a source of irritation which was rapidly destroying the patient could be removed by an operation, it was an argument in favor of performing it under circumstances as unfavorable as any which the general surgeon had to meet. This principle was announced by Sir Spencer Wells, and until then the existence of peritonitis or pus in the abdomen, due to the existing tumor requiring operation, was regarded as a contra-indication; but guided by it, such conditions were to be regarded as indications for the performance of the operation. The application of this principle was illustrated by a case in the practice of the late Washington L. Atlee, and Sir Spencer, who was present, said, that "although it is not a favorable case, it is the duty of the operator to perform the operation." Dr. Barker thought that not a single person present at the operation expected that the patient would recover, but she did make a good and prompt recovery as soon as the source of irritation was removed.

Dr. Malcolm McLean spoke in favor of the primary operation for lacerated perineum, always using a soft suture like silk. He had not seen it do any harm, and in these days, at least, it gave moral support in a case of non-union.

Dr. H. J. Boldt entered his protest against the primary operation for laceration of the cervix during parturition, unless there was some urgent indication, like profuse hemorrhage, evidently due to the injury.

Dr. Polk, in reply to a question asked by Dr. Barker, said that his views regarding the primary operation for lacerated perineum coincided with Dr. McLean's, although there were many cases where the shock of the operation would be such as to make it unjustifiable to subject the patient to it. His rule had been to introduce a suture in most cases, and he always used the silk suture; indeed, he had abandoned the use of wire in all operations, whether primary or secondary.

Dr. Lee, in closing the discussion, said that it was his custom to perform the primary operation for lacerated perineum, using silk suture and perhaps two or three catgut sutures. He had not seen shock increased by the operation. Although he had seen cases in which he thought it inadvisable to do any operation, he thought that, in the great majority, the primary operation, if done properly, quickly, gently, and while the patient was under an anæsthetic, would not produce shock, nor would it increase the chances of the occurrence of septicæmia. So far, his cases had done well, but he had seen a great number of disastrous results which came from neglect to perform this simple operation.

The President announced that the following

AMENDMENT TO THE CONSTITUTION

had been adopted:

"The Academy may suspend or expel a Fellow for violation of its regulations, or the commission of any act which unfavorably affects the character of the medical profession or the interests of the Academy."

The Academy then adjourned.

PENNSYLVANIA STATE MEDICAL SOCIETY.

Thirty-Seventh Annual Meeting, held in Williamsport, June 2, 3, and 4, 1886.

WEDNESDAY, JUNE 2D—FIRST DAY.

The Society was called to order by the President, Dr. E. A. Wood, of Pittsburg.

Dr. Helsby made the address of welcome, and as Chairman of the Committee on Credentials reported

A PROTEST AGAINST THE ADMISSION OF THE PHILADELPHIA DELEGATES.

The protest was signed by Drs. King and Taylor, who had made the minority report of the delegation to St. Louis. The protest had been referred to the Judicial Council, and following precedent rather than parliamentary usage, the delegates had been denied registration. Several motions referring to the matter were ruled out, and the president announced that the Judicial Council would report at 2 P.M.

Dr. Theophilus Parvin, President of the American Medical Association, was observed in the auditorium, and was invited to the stage.

Dr. Parrish offered a resolution

REAFFIRMING ADHERENCE TO THE CODE,

which was adopted.

Dr. H. H. Smith presented the

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION,

and Dr. Mills presented a minority report, in which, referring to the exclusion of the Philadelphia delegation, he mentioned

THE NOTABLE ABSENCE OF DELEGATES FROM THE EAST AND NEW ENGLAND.

He said that meetings of the American Medical Association were never fairly representative; when held in one section

AFFAIRS WERE CONTROLLED BY A SECTIONAL VOTE.

At the St. Louis meeting the members generally did not understand the question, and every attempt to bring the matter before the meeting, so that they might do so, was shut out in a manner that was scarcely courteous. Both the majority and minority reports, of Drs. Smith and Mills, were accepted.

Dr. Edward Jackson, of Philadelphia, read a paper on the

RELATION OF EYE-STRAIN TO HEADACHE,

mentioning the frequency of such connection. Few persons have not felt it. The tendency of business and

amusement is to tax the eyes more heavily. He recited the history of cases showing how excessive accommodative effort is necessitated by the presence of hypermetropic astigmatism and other errors of refraction, and how the resulting headache is often relieved by correcting-glasses, duboisia, rest, etc. Eye-strain is not a sole cause, however, but one of several factors. It is an important one, because it can often be removed, and its removal gives relief. He mentioned other causes of eye-strain besides errors of refraction, as insufficiency of the recti, citing instances where the failure had even been with the upper and lower muscles.

The Chairman ruled that the

PHILADELPHIA DELEGATES OF LAST YEAR SHOULD HOLD OVER

until the status of those of this year should be settled, which on appeal from the decision of the chair was affirmed. Dr. Dulles offered a resolution that the sense of the Society was that

DELEGATES SHOULD NOT BE DENIED REGISTRATION NOR RIGHTS PENDING JUDICIAL INVESTIGATION BY THE COUNCIL.

It was laid on the table amid much excitement, but was called up in the afternoon session and passed almost unanimously, on its abstract merits—it being then too late to affect the present question.

Dr. Tyson, of Philadelphia, gave the report of the Committee on

COLLECTIVE INVESTIGATION.

The subject chosen had been Rheumatism. Ninety-one replies had been received. Little of importance had been elicited. The Committee was continued for another year.

CONTROLLING MEDICAL LICENSES.

Dr. Jackson, from the Committee on Education, reported a bill for presentation to the Legislature, to create a commission to control licence to practise medicine, the members to be nominated to the Governor by the medical profession, and to have no connection with colleges.

Dr. H. C. Wood eloquently supported this effort to obtain some control of medical education. Much discussion ensued, but a motion to indefinitely postpone was lost by an overwhelming majority, and the report was accepted, and referred to a committee of five to bring the bill before the Legislature.

Dr. J. M. Anders, of Philadelphia, opened the afternoon session with a paper on

HYGIENE AND STATE MEDICINE,

comprehending the subjects of Isolation, Disinfection, Pure Drinking-water, and the formation of a Health Bureau, all as means of preventing contagion and infection. He commended the bill for the creation of a Health Bureau, now before Congress.

Dr. Dulles, of Philadelphia, read a paper on

SOME RECENT ANNOUNCEMENTS OF PASTEUR ON HYDROPHOBIA.

Pasteur has claimed to have inoculated 950 cases, with 7 deaths, but hundreds of these cases announced as cures were bitten by dogs which were not mad.

Dr. Pancoast remarked that should some of these patients develop hydrophobia it would be

INTERESTING TO KNOW WHETHER IT ORIGINATED IN A BITE OR IN THE INOCULATION.

Dr. Mills doubted if we had many, or even *any*, authenticated cases of true hydrophobia in recent years. He had examined five cases, and made post-mortems in alleged cases, which proved to be other diseases, such as tetanus, epilepsy, etc. Dr. Mills considers the certificates which Pasteur requires, that the patient was bitten by a *mad* dog, worthless. He has found some thirty diseases which may be mistaken for hydrophobia.

AN ADDRESS ON LARYNGOSCOPY

was made by Dr. Charles E. Sajous, of Philadelphia. He said the laryngoscope is not often enough used by the general practitioner; without it he gropes in the dark. The necessary instruments are not numerous or expensive. By proper examination the practitioner can discriminate between laryngeal phthisis and syphilitic ulceration in a moment, and cure the latter promptly by the treatment which would be injurious in the former. In laryngeal phthisis feeding by the tube is often valuable, and cocaine is an important adjunct. Cocaine is not so valuable in hay fever as claimed. Dr. Sajous has only succeeded with it in forty per cent. of his cases. An overdose of cocaine can easily be given by spray; he had one patient who was threatened with asphyxia for six hours after using it. In some forms of catarrhal headache Dr. Sajous had found insufflation of morphia, grain one-eighth, on each side, and carried as high as possible in the nasal cavity, to give good results. In hypertrophic rhinitis, chromic acid fused on a probe had been effective.

Dr. Solomon Solis-Cohen read a paper on

COMPRESSED AIR IN THE TREATMENT OF PULMONARY CONSUMPTION.

which he characterized as an old treatment, recently exploited under the name of "Pneumatic Differentiation," which, he said, dilated occluded alveoli, furnished a larger volume of air, increased the ventilation of the lungs, and exercised beneficial pressure on congested vessels. All this on the simple mechanical principle of greater pressure within than without.

Thursday, June 3d—Second Day.

The Judicial Council reported the

PROTEST AGAINST PHILADELPHIA DELEGATE NOT SUSTAINED.

The announcement was

RECEIVED WITH A ROUND OF APPLAUSE.

Dr. Carpenter, of Schuylkill, read an address on

MENTAL DISORDERS.

He said only twenty per cent. of insane patients sent to asylums recovered; that more could be cured by proper care. Enumerating causes of insanity he laid stress on our fast American life, the sensationalism of the press leading to insanity and crime, early addiction to tobacco and alcohol, the strain of political excitement, speculation, etc. The Society resolved to urge county societies to appoint committees to visit asylums to investigate the condition of insane patients, and see that they received proper treatment and had good sanitary environment.

Dr. Murdock, of Pittsburg, read a paper on the

RELATIVE VALUE OF MANIPULATION IN THE REDUCTION OF HIP-JOINT LUXATION,

in which he indicated his preference for other methods. He mentioned a number of cases in which good surgeons had failed to reduce this dislocation by manipulation, and had succeeded by extension with the heel in the perineum.

Dr. Packard read a paper on

SOME FURTHER CONSIDERATIONS ON TRACHEOTOMY.

He thought that tracheotomy will never become a "medical operation." It is often a difficult undertaking, requiring surgical skill. He sometimes omits anæsthetics when the child is already in a state of asphyxia. Chloroform is sometimes preferable to ether, and free incision is advisable. He prefers the high operation, and to have the thyroid isthmus drawn down by a blunt hook; he does not fix the trachea by a tenaculum, but if one be

used that having a double hook is preferable, as it admits incision between the prongs. A dilator or dressing-forceps should be used if time permits, so that the character of the excretion may be noted, and this should be swabbed out both above and below by clean, new sponges, held in bent forceps, and the sponges should then be destroyed. It is well to piece out the tapes with an elastic loop.

The simplest tubes are the best, and he prefers the single tube if cared for by a skilled attendant. Especially after the first few days the tube should be considered but a temporary expedient, and on the fourth or fifth day he tries the experiment of removing it. Topical medication should be commenced as soon as the first sleep passes off. Steam spray is valuable, and pulverized borax, alum, Condy's fluid, permanganate of potash, Labarraque's solution, etc., may be used. His experience with nitrate of silver has not been favorable; lime-water vapor is often overdone. A moist atmosphere at 70° or 75° is preferable to the exhausting higher temperatures. Tonics and suitable foods are important. After a few days he uses a tube with the back cut away, which permits more air-space in the trachea. The doctor then described "Intubation," but could find nothing in the method to recommend it.

Dr. H. L. Orth, of Dauphin County, read a paper on

THE TREATMENT OF INTRA PERITONEAL HÆMATOCELE

by incision and drainage, with an illustrative case, which recovered, after incision from above, with drainage and antiseptic dressing.

Dr. A. G. Heyl, of Philadelphia, read a paper on

THE APPLICATION OF MOIST HEAT IN THE TREATMENT OF PURULENT OPHTHALMIA,

stating that this disease is a frequent cause of blindness, that it is important for the general practitioner to understand and treat it skilfully. It is caused by a micro-organism; he described the gonococcus of Neisser and the method of its propagation. The cylindrical epithelium of the palpebral conjunctiva is the culture-ground of the gonococcus; hence the utility of nitrate of silver applied to that part. He had found the application of very hot water, applied like a poultice on absorbent cotton, and renewed every quarter of a minute for five minutes, three times a day, very useful.

Dr. Randall thought a weak solution of bichloride of mercury was unsurpassed, and had been found unirritating.

Dr. Jackson confirmed these views.

Dr. A. S. Roberts, of Philadelphia, read a paper on

FLAT-FOOT, WITH DESCRIPTION OF THE MECHANISM OF A NEW PLANTAR SPRING FOR ITS RELIEF.

The elastic plantar spring was made of tempered steel, with a fan-shaped flange, elevated on the inner side of the foot, to maintain the perpendicular as well as the horizontal concavity of the arch of the foot. He sometimes combines the ordinary ankle support and other appliances with the spring.

A resolution was adopted to urge the treasurers of county societies to aid with the "sinews of war" the Washington Committee in preparing a worthy entertainment for the International Congress.

THE OFFICERS ELECTED FOR THE YEAR

are: Dr. R. Davis, of Wilkesbarre, President; Drs. Allport, Kirlin, McKibbon, and Lohman, Vice-Presidents; Dr. Benjamin Lee, Treasurer, and Dr. W. B. Atkinson was re-elected Permanent Secretary.

Dr. J. V. Shoemaker read the

ADDRESS IN MEDICINE,

covering a wide field, of which space permits mention only of the duty of the profession toward the amelioration of the sanitary environment of working females (factory employees and others), their food, etc., closing with a tribute to the genius and memory of Austin Flint.

MISCELLANEOUS PAPERS.

Dr. Traill Green contributed another paper on "Hydrophobia," and Dr. Enfield one on "The Mineral Waters of Bedford County."

Dr. W. F. Waugh, of Philadelphia, read a paper on

SOME RARE PSYCHIC SEQUENCES OF TYPHOID FEVER,

noting Pasteur's theory that the immunity conferred by an attack of zymotic disease is due to destruction of the principles which are capable of sustaining the life of that disease-germ. An objection to this is that persons are supposed to be as well after this destruction of their tissues as before it. Dr. Waugh calls this in question, especially in severe cases of typhoid fever. He believes that it is unusual for such attacks to leave the victims as well as previously. The main object of the paper was to call attention to the occurrence, sometimes, of radical change in the disposition or moral status of the individual, falling short of actual insanity. He detailed two cases; one where a lady developed a passion for purchasing, giving away the articles or throwing them down a well. There were no symptoms of insanity, but a remarkable degree of acumen. These cases, and others, were the result of long-continued attacks of typhoid, with persistent high temperature. The deductions made were to use antipyretics, and to prevent the patient returning to work too soon after such attacks.

The Society visited the Williamsport Hospital, and in the evening listened to a practical address of the retiring President, Dr. Wood, to whose ability and decision the harmony of what promised to be a stormy session was largely due.

The programme for the third day consisted of an "Address in Obstetrics," by Dr. R. Leonard, of Carbon; "Additional Causes of Subinvolution of Uterus," by Dr. T. V. Crandall, Philadelphia; "Puerperal Convulsions," by Dr. W. H. Parcels, of Mifflin; and "The Antagonistic Drugs to be Employed in Typhoid Fever," by Dr. A. Enfield, of Bedford; and at 10 A.M. an excursion to Watkins Glenn closed the session.

The next annual meeting will be held at Bedford, Pa., on the last Wednesday of June, 1887.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

Eighth Annual Meeting, held in the Hall of the College of Physicians, Philadelphia, May 27, 28, and 29, 1886.

THURSDAY, MAY 27TH—FIRST DAY—MORNING SESSION.

The meeting was called to order at ten o'clock by the President, Dr. Harrison Allen, of Philadelphia.

After the calling of the roll the President delivered the annual address.

Following the presidential address a letter from the Secretary of the Philadelphia College of Physicians, tendering to the Association the use of the hall and the hospitalities of the College, was read.

Dr. Harrison Allen, of Philadelphia, read the first paper, entitled

TWO INSTANCES OF ADENOID DISEASE OF THE ROOF OF THE PHARYNX WHICH EXHIBITED UNUSUAL FEATURES.

The following cases were related as presenting certain points of interest.

Case I.—A. B——, aged five, much emaciated, without appetite, suffering with frequent attacks of indigestion, was sent to me in the latter part of January, 1884. Examination showed the roof of the mouth to be elevated, but the slightest attempt to depress the tongue was fol-

lowed by gagging. The nostrils were filled with a mucoid discharge, and a small quantity of a similar character was seen in the fauces after gagging. During the day the respiration was not exceedingly difficult, but at night it was greatly impeded. Almost directly after the child fell to sleep respiration became labored. After three or four inhalations breathing would cease, when it would open its mouth and make strenuous efforts to inspire. The child would then awaken and a forced inspiration ensue. It would then quickly fall to sleep and the same phenomena would recur, and in this manner the entire night would be passed. To these were occasionally added fits of crying and emesis. During an attack of whooping-cough the symptoms became much exaggerated, and were associated with irregular action of the heart.

Hypertrophy of the adenoid tissue of the pharynx, with unusual reflex phenomena, was diagnosed. On January 29th, with the patient under ether, the operation for the removal of this tissue was performed. An attempt was made to break down the tissue with the finger, but the presence of the latter arrested respiration. Efforts were then made to rasp the growth away with an instrument passed through the nose, but in a short time the patient showed symptoms of depression, and the operation was suspended. The pharynx was next seared with the hot wire. During the succeeding five weeks applications of iodine and glycerine were made, but there was no evident improvement in the breathing at night. The patient was again etherized and the pharynx shown to be empty. Suspecting that the tonsils might be the cause of the difficulty a portion of each one was excised. Still no improvement followed. A third attempt to detect the cause of the difficulty was made, and it was determined positively that the nostrils were patulous. A careful examination showed that during sleep the tongue fell backward, and that this was the essential condition. We then directed that when these attacks came on, the boy should be held with the face downward. The moment this position was assumed the child passed into a profound slumber. It was then so arranged that during the entire night the patient should be watched, so that the tongue should not have an opportunity of falling back. The boy prefers to lie upon his side, but when the attack comes on he turns on his face without awakening. He is now a strong and healthy boy.

Case II.—A girl, aged six. The irritability of the pharynx was excessive. The patient had been twice operated on by other surgeons, and it was inferred that an attempt had been made to remove morbid tissue. The patient was etherized with great care, and the entire nasal pharynx found to be much smaller than normal, and its roof was highly arched in form. The posterior slope of the roof was the seat of an adenoid growth. This was removed.

The patient was improved and two weeks later she was again etherized, and it was ascertained that all the nodules had been removed, but that the membrane at the roof of the mouth was exceedingly thick and tended to obstruct the passage of air. This was subjected to cauterization in several places. No further efforts were made to reduce the size of the membrane by operation, and the patient was treated as a case of perverted nutrition of the osseous system. Iodine and glycerine were applied locally. Under this treatment gradual improvement in the nasal respiration took place, and at the present time the child appears to be perfectly recovered.

Dr. Franklin H. Hooper, of Boston, described the following case of a little girl, eight years of age, of a neurotic temperament and very precocious. Nasal respiration had been obstructed, and articulation had been defective since the age of three years; hearing was also impaired. A large quantity of adenoid tissue was demonstrated. The removal of this was followed by great improvement in breathing and articulation. The breathing did not improve at once, but the use of the Politzer bag resulted in marked improvement. This had been previously tried without effect. From this time she began to grow nervous. Eight days after the restoration of hearing she complained that she could not keep still. In a short time symptoms of chorea developed, and gradually increased in intensity. The speech became affected, and for over a month she was unable to speak. The chorea assumed an exceedingly severe form. She was unable to sleep. Various remedies were tried without benefit. Finally urethran was suggested. The use of this drug was followed by quiet sleep. Since this time the child has continued to improve, and the chorea has now entirely disappeared.

Dr. Harrison Allen, of Philadelphia, remarked that Dr. Hooper's case was an evidence of the way in which the adenoid growths might affect the entire system. His case was noteworthy in view of the fact that the phenomena appeared after the removal of the growth.

Dr. J. Solis-Cohen then presented to the Society a paper by Professor Rafael de la Sota y Llano, M.D., of Seville, Spain, which on invitation was read.

Lupus of the Throat.

In illustration of the difficulty of diagnosis the writer related the following: In 1884 I was consulted by a physician on account of an affection of the throat. The patient was much emaciated, reduced in strength, and with a clay-colored complexion. He was sixty years of age. The trouble with the throat had commenced one year previously. He was unable to take anything but milk and broths. The tongue was covered with psoriatic scales. The pharynx was lumpy and of a wine-red color. The right tonsil was the seat of an ulceration extending from the pyriform fossa below to the middle of the uvula, and involving half that structure. Its borders were red and swollen, its surface lumpy and irregular, and of a hard and elastic consistence. Some pain was produced by palpation, but no bleeding. There was no trouble while talking, or on coughing. Liquids were swallowed without difficulty. Breathing was accomplished with perfect freedom. The submaxillary glands were swollen. The patient had suffered from rheumatism, but no history of syphilis could be obtained. Taking into consideration the history of the case and the age of the patient, I considered it an ulcerated epithelioma. This was concurred in by the patient's physician. Nevertheless, mistrusting the testimony obtained, antisyphilitic medication with mercurials was tried. This occasioned such bad results that it was necessary to suspend it. He was then placed upon the use of iron and bitter tonics, and such diet as he could take. The specific treatment was subsequently resumed, but the local lesion assumed such a bad aspect that it became necessary to give up the treatment. From the fact that the ulceration was unattended by pain I began to have some doubts as to its epitheliomatous nature. I next prescribed sodium arsenite in ascending doses, with a gargle of resorcin, and the use of iodoform on the ulcerated surface after the latter was washed with a solution of borax. For a month the ulceration continued to extend, and when I had lost all hope it stopped its progress and became covered with healthy granulations. Cicatrization went on and was complete in three months. The scar is irregular, elevated and depressed, hard and soft, the posterior portion being adherent to the pharyngeal wall. The lingual psoriasis continued. Restoration to health has taken place. It is now eighteen months since the ulcer healed. With this result I concluded that the case was one of lupus.

My experience with this and other cases of lupus of the throat has led me to conclude that the disease may make its appearance at any period of life. I have seen it more frequently in adults than in children, and more frequently in men than in women. I have been unable to obtain any information in regard to inheritance. I have not found that hard drinkers or smokers were more liable to suffer, nor have I found that great exertion of the voice, or exposure to irritating substances, the ap-

plication of the cautery, or other agents, had any influence in its production.

I have never had an opportunity of observing the initial manifestations; but I have been able to detect the involvement of sound tissues later in the disease. Sometimes the mucous membrane assumes a purple color, and swells up and becomes granulated. Then one or two nodules may develop and may attain the size of a pea. Sometimes they become prominent without any alteration in the appearance of the mucous membrane. They may remain superficial, or they may attack the mucous tissue, and also the submucous tissue. Their form is rounded and their surface is smooth. These nodules are distinguished by their rosy red color from leprous tumors. Unlike carcinoma, the tumors are usually quite distinct. On pressure they present an elastic resistance. This is greater than the hardness of inflammation, but less than that of epithelioma. The parts on which the tumor develops become rigid, and the natural movement is diminished or lost, contrary to carcinoma, which usually produces sharp lancinating pain, and to leprosy, which is generally accompanied with anæsthesia; there is in lupus no alteration of the sensitiveness of the part. After a shorter or longer period the tubercle softens and becomes ulcerated. The ulceration assumes two forms. In some cases the tumor becomes excavated to a considerable depth, while in others it is more superficial. These ulcers do not bleed on pressure. The cure is difficult and attended with the formation of scars. In some cases these ulcers develop in a slow way, while in others they start with astonishing rapidity. They may develop within a few days, or they may remain quiescent for months or years, and then take on destructive action. The healing of the ulcer is followed by the formation of irregular scars, raised in some places, depressed in others; red in the former, white in the latter. Adhesions to different parts take place. Cicatrization takes place slowly, and is easily destroyed. Infiltration always remains.

All agree that the cure of lupus of the throat is more difficult than the same process in the skin. In the cases which I have seen the same treatment which I have employed in external lupus I have found of service in lupus of the throat. I do not despise internal treatment, but use such remedies as are indicated by the general condition of the patient. This has an important influence upon the result of topical treatment. If the lupus is not ulcerated I apply caustic substances. Until a few months ago I used tincture of iodine. I have, however, found good effects from the use of lactic acid. I have used it in cases of lupus of the cheek and gums, and also of the larynx. I have met with no inconvenience from its use, except the pain, which varies in different cases. If the lupus is ulcerated, I sometimes use the lactic acid; more frequently I employ a wash of borax and cover the ulcer with powder of iodoform. I always prescribe a gargle of a one per cent. solution of resorcin. Patients thus treated have always recovered after a greater or less time. In some cases the cure has probably been realized in the natural course of the disease, rather than as a result of the therapeutic measures.

Professor Joseph Leidy, of Philadelphia, on the invitation of the Council, made some remarks on

INTERESTING POINTS CONNECTED WITH THE LARYNX.

The first point to which I shall refer is the aperture of the larynx. This aperture, which communicates with the pharynx, is a large, oblique opening, bounded above by the summit of the epiglottis and laterally by the aryteno-epiglottidean folds. The lower portion is formed by the notch of the arytenoid cartilages. Laterally on each side two eminences are quite prominent in the fresh larynx, an upper pair and a lower pair. The lower pair is produced by the carniculæ of the larynx which terminate the summits of the arytenoid cartilages. The text-books state that immediately above these there is another pair of cartilages. These are the cartilages of Wrisberg. I have rarely found these cartilages decidedly developed in the white subject. Where a prominence exists in the white subject, it is caused by a group of glands. Often in these a little cartilage may be found. In the negro the cartilages of Wrisberg are conspicuously developed. This point has also been referred to by European observers.

The next point refers to the vocal cords, as they are usually designated. While physiologically it is correct to speak of the vocal cords, yet anatomically it is not correct to speak of vocal cords. These bands are usually spoken of as the inferior thyro-arytenoid ligaments. There is another ligament extending between the thyroid and cricoid cartilage in front, and extending back to the base of the arytenoid cartilages. This is described as the middle crico-thyroid ligament. It is connected with the upper border of the vocal membranes. This connnection is very important. If the cricoid cartilage is broken or crushed, it must influence the action of the so-called vocal cords.

The vocal cords are influenced altogether by the muscles attached to the arytenoid cartilages. These are supplied by the inferior laryngeal nerve. Another muscle which may influence the movements of the vocal membranes is the crico-thyroid. This is supplied by a separate nerve, the superior laryngeal. Why this muscle should be supplied by a different nerve has not been satisfactorily explained. The muscles which operate the arytenoid cartilage are the posterior crico-arytenoid, the lateral crico-arytenoid, and the arytenoid muscle. These muscles are sufficient to produce all the movements of the vocal membranes. Other muscles, that is to say, the aryteno-epiglottidean and the thyro-epiglottidean muscles, have been described, but in my experience the development of these muscles is exceedingly uncertain.

A vote of thanks was tendered Professor Leidy for his communication.

Dr. J. Solis-Cohen, of Philadelphia, said that in regard to the cuneiform cartilages he had noticed that these were best developed in those who had the best control over their voice. The connection of the crico-thyroid membrane with the vocal cords was very interesting. There were two supposed paralyses of the larynx which presented exactly the same picture. One is the paralysis of the thyro-arytenoid muscle, giving the Indian-bow paralysis of the Germans. The other is paralysis of the crico-thyroid muscle, giving exactly the same appearance. The way to distinguish these paralyses is by placing the finger on the crico-thyroid membrane. If the membrane vibrates when the patient speaks, the crico-thyroid muscle is not paralyzed. In phonation the thyroid cartilage is fixed, and when the attempt to sound high notes is made the cricoid cartilage is drawn up by this muscle. The posterior crico-thyroid muscle, from its attachment, not only separates the vocal bands, but when they are made tense by other muscles its action is to increase their tension.

Dr. Joseph Leidy said he had never been able to see that the crico-thyroid muscle was related to the other muscles in the production of sound. He was glad to hear the explanation which had been given, which appeared to be a satisfactory one.

Dr. J. N. Mackenzie, of Baltimore, exhibited an instrument for fracturing the nasal septum.

Dr. Carl Seiler, of Philadelphia, exhibited an apparatus to be used in making sections of frozen heads.

Dr. C. E. Sajous, of Philadelphia, presented a galvano-cautery handle in which the wires were attached in the middle of the instrument, and both the wires and the electrodes were secured without the use of screws. The connections within the handle were made of copper, and heavier than usual, in order to diminish the resistance.

Dr. J. H. Hartman, of Baltimore, exhibited a form of

écraseur with extremities of different shapes, which could be used for various purposes.

The President announced the following as the Nominating Committee: Dr. T. R. French, of Brooklyn, Dr. F. I. Knight, of Boston, and Dr. G. W. Major, of Montreal.

Adjourned.

Afternoon Session.

The first paper, by Dr. F. H. Hooper, of Boston, was entitled

Concerning the Positions of Paralyzed Vocal Bands.

The paper was in part based on experimental work done in the Physiological Laboratory of the Harvard Medical School, and in part theoretical. Specimens and drawings illustrating certain points were shown. The reader stated that it was his purpose to inquire into certain influences which might combine to determine the positions of paralyzed vocal bands, and to ask whether we are always justified in assuming that a given position of immobile vocal band was indicative of the arrested function of this or that muscle of the intrinsic laryngeal groups. The speaker thought that a vocal band might assume different positions in cases of complete paralysis of the recurrent nerve, and he passed in review certain anatomical factors and physical causes which he thought might contribute toward producing the position which might happen to be present when seen reflected in the laryngeal mirror.

Dr. Hooper concluded by saying that in his judgment the larynx is such a complicated organ anatomically, it is subject to such changes at different stages of life, its shape is so different in different individuals, its nerve-supply is so great, the arrangement of its muscles so liable to anomalies, that, as surely as one attempts to formulate theories on the positions alone of paralyzed vocal bands—positions which may be controlled by intrinsic muscles of the larynx that are not paralyzed, as well as by those that are—just so surely will one be led unconsciously into erroneous mental inferences.

The next paper was by Dr. J. Solis-Cohen, of Philadelphia, and related

The Further History of a Case of Paralysis of the Posterior Crico-Arytenoid Muscles,

presented at the first meeting of the Association in 1879, with a report of the autopsy and the exhibition of a specimen. The history of the case was briefly given as follows:

A man, aged forty-eight, was brought to me with a history that for two years he had suffered from occasional spasm of the larynx, so that, on at least two occasions, he had fallen unconscious in the street. When a boy he had suppurative inflammation of the left ear, and ever since then the introduction of the finger into the ear would produce spasm of the glottis. On examination with the mirror, I found what we then considered to be the picture of paralysis of the left posterior crico-arytenoid muscle. The examination produced spasm on the other side. The patient was directed to carry with him nitrite of amyl, to be used when the attacks came on. This he did for a while with good results. He subsequently returned with the statement that the day before he had had a severe spasm from tickling in the ear. While illustrating this he had a violent attack in the office, requiring the use of chloroform to relieve it. The next day tracheotomy was performed. No other lesion could be found at that time. The spasms were still produced by irritation of the ear. Five or six weeks later he began to have paralysis of the right vocal band. The picture then became extreme, and after this time I never saw the larynx in any other position. The man gradually became blind, and developed other symptoms of locomotor ataxia. During the four years preceding his death I did not see him, but during this time he continued to wear the tube. He was able to speak well without occluding the tube.

At the autopsy all the parts that could be available in the examination were removed and submitted to Dr. William Osler for examination. No abnormal appearance was discovered in the brain. The optic nerve was small, grayish-white, and atrophied. Many microscopical sections were made of various parts. The left recurrent nerve seemed natural, although it will be remembered that the left cord was the first affected. The right recurrent showed a distinct line of demarcation between the healthy and the unhealthy fibres. Instead of the right muscle being atrophied, it was the left muscl which had undergone wasting.

Dr. Frank Donaldson, Jr., of Baltimore, read a paper on

The Functions of the Recurrent Laryngeal Nerve, from an Experimental Study in Johns Hopkins University.

The speaker first referred to the fact that all the muscles, with the exception of the crico-thyroid, are supplied by the recurrent laryngeal nerve. The nerve, therefore, contains fibres controlling both phonation and respiration, acting both upon the abductor and upon the adductor muscles. He then referred to the experiments performed by Dr. Hooper, of Boston, the results of which had been presented at the last meeting of the Association. Dr. Hooper had found that the constrictors cease to act when consciousness was suspended by the action of ether, and that abduction with dilatation of glottis was obtained by stimulating the recurrent laryngeal nerve when consciousness was suspended. Dr. Donaldson's experiments were made to test the correctness of these results. In five experiments under states of deep narcosis, slight narcosis, and almost complete consciousness, he invariably got adduction of the vocal bands under the application of stimuli with the induction coil at ten. In one case in which consciousness had been suspended under slight stimulation abduction was produced, while under strong stimulation adduction was obtained. It was then found that abduction was always produced when weak currents were employed, but adduction was obtained when stronger stimuli were used. He therefore concluded that the constrictors did not cease to act during profound narcosis or in suspension of consciousness from any cause, and that abduction is not always obtained when consciousness is suspended; it is with weak currents that abduction is produced, but as the stimulation is increased adduction takes place.

Dr. F. I. Knight, of Boston, said that even if a certain unanimity of opinion is reached, we shall have to adapt these results to the case of man by clinical and pathological observation.

In regard to abductor paralysis he thought that the whole question should be decided upon the position of the vocal process, without any reference to the cord. If the vocal process is found in the median line, it is fair to assume that for some reason the function of the abductor muscle has been abolished. A good deal of difficulty has been experienced by observers in determining when the vocal process is in the median line. To him the crucial test is by phonation. If you get a vertical glottis on phonation, without any movement on suspected cord, you have a sure case.

Dr. S. Solis-Cohen, of Philadelphia, said that it was important to distinguish between the automatic (respiration), the reflex (cough), and the psychic (phonation) functions of the larynx. A well-known physiological law is that the resistance which a nerve offers to the transmission of nervous force is inversely as the use made of the muscle which it innervates. No muscle is used more than the abductors of the larynx. The resistance of their nerves would, *a priori*, then, be supposed to be the least, and Dr. Donaldson's experiments show that they respond to a weak stimulus.

Dr. F. I. Knight, of Boston, read a paper entitled

LARYNGEAL VERTIGO.

The writer had been able to find fourteen published cases of laryngeal vertigo. To these he added two coming under his own observation.

The following points were obtained from a study of the reported cases: All the cases with the exception of one have been in males. The average at which the attack has occurred has been forty-seven and a half years. The cough which induced the attack was slight in six cases, spasmodic in two, and severe in three. Momentary loss of consciousness occurred in fourteen cases. One case fell, but declared that he had not lost consciousness. Dizziness is mentioned in eleven cases. In four cases there seems to have been decided evidence of laryngeal spasm; in one this was doubtful. In four cases there was marked congestion of the head and face. In two the patients were pale. Convulsive movements of the limbs occurred in three cases; in one the movements affected the face and head, and in another the face. In these cases there was no biting of the tongue, no frothing of the mouth, and no involuntary micturition. The speaker objected to the term laryngeal vertigo. There probably is no real vertigo in these cases in the sense of the vertigo seen in aural vertigo. There is simply giddiness or lightness of the head. These cases cannot be considered to be instances of *petit mal*.

The cause of the attacks is disturbance of the cerebral circulation, perhaps due to the compression of the large blood vessels of the chest and perhaps the heart. Even without this, the effect of rapid breathing is well known. This causes marked cerebral disturbance.

A paper by Dr. Frank Donaldson, of Baltimore, on

A CASE OF CONGENITAL DEFECT OF THE EPIGLOTTIS, ILLUSTRATING A FUNCTION IN DIGESTION,

was read by title.

Dr. D. Bryson Delavan, of New York, read a paper on

BUCCAL TUBERCULOSIS.

He had seen six cases of this affection. In the reports of twenty-four cases of tuberculosis of the tongue, in all but one the subjects were males. In twelve cases the lesion was anterior, in seven upon the side, and in one at the base of the tongue. In four the situation was not stated. The disease was primary in nine cases, secondary in seven cases. In the remaining cases it was not stated whether the disease was primary or secondary. The longest duration of a case of primary tuberculosis was two and a half years, the shortest ten weeks. The age of the oldest person affected was seventy years, and of the youngest not under twelve.

Six cases coming under the speaker's observation were given in detail. A point of interest in the first case was that this is the first case on record in which removal of the tongue has been followed by an apparent cure of tubercle. Sufficient time has not elapsed to speak positively as to the ultimate result. The operation was done in the latter part of December, 1885.

Dr. E. L. Shurley, of Detroit, thought that in these cases of so-called primary tuberculosis mistakes of diagnosis are sometimes made. He was not sure that the bacillus can be regarded as an absolute evidence that the disease is tubercle; in one case considered to be a case of tubercle of the larynx, and in which the tubercle bacillus was found, the patient recovered and is still living, five or six years later.

Dr. J. O. Roe, of Rochester, reported two cases of primary tubercle of the pharynx. The first case was that of a lady thirty-five years of age. Six months before coming under observation she suffered great pain in the throat. A well-marked lesion was found above the border of the epiglottis and at the base of the tongue. This improved under local treatment. Subsequently the ulceration returned, the patient ran down in health and died. The larynx was entirely free from ulceration. The second case was a gentleman forty-five years of age, who had tuberculous ulceration of the pillars of the fauces. Later ulceration of the larynx developed. Under the persistent application of iodide of amyl, continued for some time, the patient recovered and is still well, weighing two hundred and twenty-five pounds.

Adjourned.

Friday, May 28th—Second Day—Morning Session.

At ten o'clock the Executive Session was held, and the following business was transacted.

The following officers were elected:

President—Dr. E. Fletcher Ingals, Chicago.

First Vice-President—Dr. E. Carroll Morgan, Washington.

Second Vice-President—Dr. J. N. Mackenzie, Baltimore.

Secretary and Treasurer—Dr. D. Bryson Delavan, New York.

Additional Member of the Council—Dr. F. H. Hooper, Boston.

The following active members were elected: Benjamin F. Westbrook, of Brooklyn; Frank Donaldson, Jr., of Baltimore; Alexander W. MacCoy, of Philadelphia, and J. C. Mulhall, of St. Louis.

Professor Ramon de la Sota y Lastra, of Seville, Spain, was elected a corresponding fellow.

A proposition was presented with reference to the formation of a congress of American physicians and surgeons. The proposition was approved and the following committee, taken from the ex-presidents of the Society, was appointed to confer with committees from other societies: Dr. J. Solis-Cohen, Philadelphia; Dr. G. M. Lefferts, New York; Dr. F. I. Knight, Boston; Dr. F. M. Bosworth, New York, and Dr. E. L. Shurley, of Detroit.

It was decided to hold the next meeting in New York, the time to be determined by the Council.

The first paper was by Dr. E. L. Shurley of Detroit, giving observations

ON THE USE OF SOME OF THE NEWER REMEDIES IN DISEASES OF THE UPPER AIR-PASSAGES.

The speaker took up in detail some of the numerous new remedies, and gave the result of his experience in their use.

Dr. William H. Daly, of Pittsburg, read a paper on

THE SIMPLEST AND MOST EFFICIENT TREATMENT OF DIPHTHERIA.

The speaker stated that his object was to describe the calomel treatment.

The credit of practising and recommending this treatment in modern times belongs to Dr. William C. Ritter, of Pittsburg. Of the different forms of mercury, calomel is the best. The drug is to be given in doses of from two to five grains every one, two, or three hours. It may be given dry and washed down with a little ice-water, or it may be given in water. This is to be continued until the stools become frequent and contain in them gelatinous masses of a bright-green color, resembling chopped spinach. Then the interval is to be lengthened and the drug continued so as to keep up this condition of catharsis, the patient having two or three stools each day. It is better to lengthen the interval than to diminish the dose. In this way there is less liability to induce ptyalism. Very little depression follows these large and frequently repeated doses. Ptyalism does not often occur. Under this treatment the membrane exfoliates and reforms, if at all, with less readiness; the fever diminishes. The diet is to be of a light, nutritious character. The speaker had found it the most efficient of any treatment which he had employed, and was the simplest to use. The cardinal rule in the treatment is to give the calomel

until the condition of catharsis described has been produced. Under this method a greater number of cases will be saved than under any other proposed method.

Dr. E. L. Shurley, of Detroit, admitted that the internal administration of calomel is one of the most efficient remedies for croupous inflammation, but in regard to its efficiency in the treatment of diphtheria he did not agree.

Dr. Donaldson, of Baltimore, had seen the calomel treatment frequently tried, but without success.

Dr. Beverley Robinson, of New York, said that there was scarcely a remedy which had not at some time been recommended as a specific for diphtheria. Calomel has been thoroughly used, and finally given up because it did not accomplish what was proposed. He was convinced that epidemics of diphtheria, as of other infectious diseases, differ very much in virulency, and a remedy which is successful in one epidemic will entirely fail in another.

Dr. F. H. Bosworth, of New York, said that mercury possesses a specific value in the treatment of diphtheria. Diphtheria is a blood-poison which often kills by its toxic effect, but in a greater majority of cases it kills by leading to the development of croup. The affection of the larynx is not diphtheria, but a sequent disease. While mercury has no effect upon diphtheria, it has a specific effect in arresting the disease in the larynx called croup.

Dr. William H. Daly said that he did not recommend calomel as a specific. He simply stated that he had had a greater proportion of successes under this plan of treatment than under any other which he had tried.

Dr. E. Carroll Morgan, of Washington, read a paper on

THE QUESTION OF HEMORRHAGE AFTER UVULOTOMY,

with the description of an instrument for its arrest, and described the following case: A man, aged twenty-eight, whose uvula had been excised five days previously by another operator, came to him with the statement that the bleeding came on four hours after the operation, and had continued at intervals since then, a large quantity of blood having been lost. Various means had been tried to stop the bleeding without success. The parts were governed with a coagulum of the persulphate of iron. This was removed and the parts cleansed. The bleeding points were then seen. The uvula had evidently been greatly hypertrophied. The scissors had been used in the operation. There was no evidence of the hemorrhagic diathesis in this patient or in any member of the family. The parts being cleaned, the stump was seized with dressing-forceps and the hemorrhage was controlled. The galvano-cautery was applied and the bleeding stopped. In nine hours it recurred. The cautery was again used, and the stump dusted with the persulphate of iron. The following morning a copious hemorrhage took place, not less than a drachm a minute, by actual measurement, being lost. A careful examination was then made to detect any other source of hemorrhage, but none could be found. Chromic acid was then used and the hemorrhage stopped. At three o'clock the same day copious bleeding recommenced. Galvano-cautery again employed. There was not room for the application of a ligature. Torsion was tried without success. A small clamp used in retaining shirt-sleeves in position was then taken, the spring weakened, the teeth filed down, and was then applied. A string was attached to this and brought out of the mouth. This checked the bleeding and was allowed to remain for several hours. It was then removed and the bleeding did not recur. A search of the literature of the subject failed to show any instance in which such a procedure had been before adopted. In this case he thought that this device had saved the patient's life.

A careful study of the subject had enabled him to find seventeen other cases in which the hemorrhage after this operation had been profuse. Death has never resulted directly from the hemorrhage after uvulotomy. Where the bleeding is persistent, it is always arterial in character.

The speaker, in conclusion, said that a fatal hemorrhage had never followed uvulotomy. A persistent, alarming hemorrhage is only encountered in the rarest instances. A moderate bleeding, stopping spontaneously or by the use of the mildest applications, occasionally happens. A loss of a few drops of blood at the time of operating, followed by a slight oozing, is a common occurrence.

The most reliable surgical measures for controlling uvular hemorrhage are ligature, compression by a clamp or forceps, and the use of the actual cautery. The most reliable styptics are, in the order named, solid nitrate of silver, persulphate of iron, gallic acid, tannic acid, alum, the local use of ice, and vinegar. The most reliable systemic remedies are opium, acetate of lead, sulphuric acid, and ergot. To the paper was appended an exhaustive bibliography. The speaker recommended that in operating the object should be to restore the uvula as nearly as possible to its normal size, and that the entire uvula should not be removed.

Afternoon Session.

Dr. Thomas R. French, of Brooklyn, read a paper on

THE LARYNGEAL IMAGE AS SEEN IN PHOTOGRAPHS TAKEN DURING THE PRODUCTION OF TONES IN THE SINGING VOICE.

The speaker had made numerous investigations on this subject, and his observations failed to confirm the statements of most authorities in regard to the position of the vocal cords during the production of different notes. Different individuals evidently use different mechanisms in the production of different tones. The general result of his investigations seemed to indicate that in the production of low notes the vocal cords are separated to a greater extent posteriorly than anteriorly. In the production of the middle tones the vocal cords are parallel, and in the production of high notes the opening is widest in front.

The paper was illustrated by numerous photographs thrown upon the screen. The following papers were then read by title: "Clinical Notes on Prolapse of the Laryngeal Ventricles," by George W. Major, of Montreal; "Three Cases of Thyrotomy, Recovery in each Case with Good Voice," by Dr. Clinton Wagner, of New York; "Alarming Hemorrhage after Tonsillar Excision, arrested by Torsion of the Artery," by the same author.

Dr. William C. Jarvis, of New York, described

A NOVEL PROCEDURE FOR THE REMOVAL OF SUBGLOTTIC LARYNGEAL GROWTHS.

J. C——, aged thirty-five, consulted me on March 22, 1883, for the relief of a difficulty of speech and of breathing. The trouble with the voice was noticed two years before; the difficulty in speech appeared one year before coming under observation. The laryngoscope showed a mass of papillomatous tissue occupying the cavity of the larynx. The vocal cords and ventricular bands were not involved. The attempt was made to seize them during phonation with the Mackenzie forceps. Only a few pieces were removed. The écraseur was then tried, but it was found impossible to use this instrument on account of the wire being seized by the spasmodic contraction of the vocal bands and displaced. Chromic-acid applications were now tried, but although the growth was touched, it was found impossible to limit the application to the diseased structures. The patient disappeared, and did not return for a year. His condition was much worse, and the difficulty of breathing greatly increased.

I then determined to try the following plan, and if this

failed, to remove the growth through an opening in the windpipe. Forceps similar to the Mackenzie instrument, but heavier, was secured. Through the tips of the blades holes were drilled, and through these was passed a piece of No. oo piano wire, which was conducted through a second opening at the angle of the blades and out to the handles, where it terminated in a loop, into which the extremity of the index-finger could be placed. When the blades were separated this wire formed a cross-bar uniting their extremities. When the blades were closed the loop of wire could be drawn up by the finger. The operation was performed without an anæsthetic. The tongue was depressed, and with the aid of the mirror the forceps were introduced into the cavity of the larynx. The mirror was then removed, and the forceps carried down to the glottis, through which the tip of the instrument was forced with considerable trouble on account of the spasm. The instrument was carried into the trachea sufficiently far to be sure that it was below the attachment of the growth. The blades were then separated, and pressing against the anterior wall of the larynx, the instrument was gradually raised until the wire was caught. The blades were then closed and clamped, the loop of wire drawn in, and the forceps removed, bringing with it a growth. The laryngoscope showed a second growth, which was removed in the same way. Breathing was at once rendered easy, and the speech became natural. The patient said that the presence of the forceps caused no pain. This is the only case on record of the removal of a subglottic tumor without anæsthetization, and without an opening into the larynx.

Dr. T. Amory de Blois, of Boston, read a paper on

CASES OF LARYNGEAL ŒDEMA.

The author gave brief details of fourteen cases of laryngeal œdema coming under his observation. All of these cases recovered; six under the use of astringents and eight after scarification.

Dr. Frank Donaldson, of Baltimore, suggested that in these cases intubation of the larynx after the O'Dwyer method might be applicable.

A paper by Dr. Charles H. Knight, of New York, describing a case of perichondritis of the larynx, was read by title.

Dr. Edgar Holden, M.D., of Newark, described

A CASE OF GUMMATOUS DISEASE OF THE LARYNX, WITH SPONTANEOUS REOPENING OF THE LARYNX AFTER THYROID LARYNGOTOMY.

L. D——, aged thirty-five, presented himself May 20, 1885, with dyspnœa and aphonia. Examination showed a cicatrix on the epiglottis, and the left side of the larynx presented a rounded mass of dull appearance. He denied syphilitic infection. After a careful consideration of the case the probabilities were thought to favor syphilis, and he was given iodide of potassium in large doses. There was improvement for a short time, but he soon became intolerant to the drug. Thyroid laryngotomy was considered necessary and was performed. The tumor was removed with the écraseur; no ulceration was visible. Tracheotomy was then performed, and the upper incision closed with sutures. The patient did well, and the tube was removed on the tenth day. The external wound healed. He insisted on returning to his home, where the surroundings were very unfavorable, and his health deteriorated. On the fortieth day after the healing of the wound the laryngeal incision was torn open by a severe cough. He refused to return to the hospital. Examination of the larynx showed no disease. Under the surroundings it was impossible to get the wound to heal. His health continued to run down, and six months and fourteen days after the operation the patient died of exhaustion. The patient had lived five months with an opening in the larynx.

Dr. U. G. Hitchcock, of New York, read a paper on

GUMMATOUS INFILTRATION OF THE BASE OF THE TONGUE,

giving the details of four cases coming under his observation. In none of these cases was the fibrous septum the exclusive seat of the disease, and in three cases the deposit did not approach this structure. In these cases the degree of dysphagia was in direct proportion to the proximity of the deposit to the base of the tongue.

Adjourned.

Saturday, May 29th—Third Day—Morning Session

A paper on a case of hysterical sneezing, apparently cured by applications to the nasal passages of the continuous battery current, by Dr. S. Solis-Cohen, of Philadelphia, was read by title.

Dr. John N. Mackenzie, of Baltimore, read a paper entitled

A CONTRIBUTION TO THE PATHOLOGY AND TREATMENT OF THE RESPIRATORY VASO-MOTOR NEUROSES.

These probably depend upon some form of sympathetic or vaso-motor irritation. In the production of such conditions two elements enter—a depraved state of the nerve-centres, and an abnormal excitability of certain portions of the naso-bronchial tract.

After a *résumé* of the pathological questions involved the subject of treatment was taken up.

In the treatment of hay fever the chief indications are to remove any existing local respiratory disease, to so alter the nutrition of the nerve-centres that they may not respond so easily to irritation, and to carefully search for pathological conditions and adopt appropriate treatment for their removal when found.

These chronic neuroses require long treatment. The peculiarity of the sympathetic is with the patient all the time, by night and by day, and at any moment may give evidence of its presence by a paroxysm. Any treatment which is practised simply during the attack or immediately before is simply palliative. In reference to the use of cocaine, he had found that it increased the irritability of these structures, and its application to the erectile tissue may ultimately weaken the cell-walls. He, however, did not question the excellent virtues of this remedy in certain acute affections. In hay fever he had failed to find improvement after its use. For a short time amelioration was produced, but in the course of an hour the symptoms recurred. His custom is to treat hay fever as any other chronic disease of the nervous system. He insisted upon a prolonged tonic course of treatment during the intervals. This may at first fail, but if persisted in, the time will come when, if there is no incurable lesion, the paroxysms will diminish in severity and frequency. The great mistake is made in the suspension of the treatment upon the termination of the attack. Among the remedies for the constitutional management of this class of cases he recommended phosphide of zinc, quinine, and nux vomica. These may be given in combination in the following proportions:

℞. Zinci phosphide ..... gr. $\frac{1}{16}$.
Quiniæ sulphat ..... gr. ij.
Ext. nucis vomicæ ..... gr. $\frac{1}{4}$.
Sig.—To be taken before meals.

After meals he directs that from three to five drops of liquor arsenici et hydrargyri iodidi be taken in a wineglassful of water. A similar line of treatment had been employed for several years by the speaker, in simple inflammatory conditions of the nose and throat, with good results. He had also employed bromide of potassium with advantage. A constant current of from ten to fifteen cells, with one pole over the nape of the neck and the other over the region of the superior cervical ganglia or in the nasal passage, had in a few cases been beneficial. In one case improvement followed the obliteration of vessels on the posterior wall of the pharynx.

In regard to topical applications to the existing nasal conditions, these accomplish one result only. They close one door to irritation of the nerve-centres. In many cases this is of itself sufficient. There are other cases in which such a course will fail. In these neuroses we cannot expect to thoroughly eradicate the disease until the sympathetic nerve irritation is overcome.

Dr. William H. Daly, of Pittsburg, said that the iodide of sodium has given him better results than any other single remedy. In all cases of this kind the upper air-passages should be carefully examined, and upon the slightest suspicion of local disease the condition should be remedied.

Dr. E. Carroll Morgan, of Washington, remarked that in considering these cases of hay fever he had been struck with the apparent immunity from this affection experienced by those suffering with anosmia.

He asked the experience of the Fellows in regard to the efficacy of the galvano-cautery treatment as a preventive or a cure for hay fever.

Dr. C. E. Sajous, of Philadelphia, stated that in the early part of his experience with the galvano-cautery he had a number of favorable cases. Last year he met with a number of unsatisfactory cases. What it depended on he did not know. Although all the cases were benefited, absolute relief followed in less than forty-five per cent. Some of the cases treated two years ago, and which escaped the attack the following year, had a recurrence last year. Some of the cases have entirely escaped. One case treated in 1881 with glacial acetic acid has had no recurrence.

Dr. Carl Seiler, of Philadelphia, thought the failures of the treatment of hay fever might be explained by the suggestion thrown out in the paper read, that the Schneiderian membrane is not the only source of irritation of the vaso-motor nerves. The source of irritation may be situated in the pharynx or in the larynx. If the case does not yield to treatment of the nasal membrane we should look further.

Dr. Samuel Johnston, of Baltimore, read a paper entitled

A CASE OF NASO-PHARYNGEAL GROWTH.

A child was brought to him on account of difficulty in breathing through one nostril. Examination showed that there was a tumor filling up the posterior part of the right nostril. After a short preliminary treatment the attempt was made to remove the growth with the écraseur. A spray of a four per cent. solution of cocaine was employed. A cord was first passed through the nostril and brought out of the mouth, so that, if necessary, the nostril could be plugged without delay. The wire of the écraseur was applied without difficulty. When the growth had been cut through about two-thirds, the shaft of the instrument broke, leaving the wire and about three-fourths of an inch of the instrument attached to the growth. An attempt was made to apply a second écraseur, but this failed. After trying to remove the portion of instrument broken off, it was decided to wait a short time and allow the growth to slough off. Four days later the attempt to apply an écraseur was again made, and succeeded without difficulty. The tumor measured one inch and a half in diameter, and was fibroid in character.

Dr. C. C. Rice, of New York, read a paper on the question

WHAT CASES OF NASAL CATARRH REQUIRE SURGICAL TREATMENT?

Almost every nasal chamber will exhibit irregularities and abnormalities of some kind. The introduction of more improved methods of determining the locality of inflammation has led to a more frequent resort to surgical measures. With the galvano-cautery almost any effect from a slight stimulation to destruction of tissue can be obtained. Those who condemn this instrument should state what use of it they object to. Not every case of anterior hypertrophy should be operated upon. The erectile tissue in this situation serves a valuable physiological function in swelling up and excluding irritating particles from the lungs. In determining whether or not an operation is required, the sensations of the patient should be taken into consideration with the results of the examination. If, after the use of a four per cent. solution of cocaine, sufficient hypertrophy to interfere with breathing is still apparent it should be removed.

Dr. F. H. Bosworth, of New York, thought that the so-called erectile tissue is not a true erectile tissue. There is no physiological function observed by its swelling up.

He also states that all persons will present abnormalities of the nose. He thought it a mistake to suppose that we have morbid conditions in every nose. The healthy nasal cavities present a typical appearance.

Dr. J. N. Mackenzie, of Baltimore, said that the microscope shows that the erectile tissue of the nose corresponds with the erectile tissue in other portions of the body. He believed that these bodies serve the physiological purpose of excluding irritating bodies from the lower respiratory tract. Experiments with horses driven through a cloud of dust have shown that while the anterior portion of the nose was filled with dust none passed into the larynx.

The President remarked that in man the nasal chambers are exceedingly degenerate. There is no animal in which the nose is so small in comparison with the rest of the face as in man. It is well known that structures which are passing through a process of degeneration are exceedingly variable. So it is with the human nasal chambers.

Remembering this fact, we come to another of great interest, that all animals with short faces, as the rabbit and cat, have on the nasal septum erectile bodies. He held that the object of these bodies was obstructive, and that by swelling up they protected the portions behind. If that is the case I do not see why we cannot claim that erectile tissue exists in man. It is my opinion that erectile tissue does exist, and is protective and obstructive.

The following papers were read by title: "Inflammation of the Antrum," by Dr. Beverley Robinson, of New York; "Additional Notes on a Case of Erysipelas of the Larynx," by William Porter, M.D., of St. Louis.

A vote of thanks was tendered the Philadelphia College of Physicians, the Union League Club, the University Club, and the managers of the Pennsylvania Hospital for courtesies extended.

The Association then adjourned.

The Rhythm of Fever.—Dr. P. D. Carpenter, of Pittsford, writes: "In your comments on the 'Rhythm of Fever,' in The Medical Record of March 20th, you say: 'Our correspondent forgets that in a chill both the temperature of the body and the heat-production are increased, though heat excretion is temporarily lessened.' In the latter part of the paper that I sent you, there was a quotation from an editorial in The Record, which says: 'There may be a fever, viz., its essential symptom, elevated temperature, when the actual heat-production is less than normal, provided heat-dissipation is also at the same time less.' In a chill the heat-dissipation is certainly lessened, and if heat-production were not also lessened, it seems to me that the accumulation of heat would be so great as to be incompatible with life, as perhaps may occur in fatal cases of 'congestive chill.' I think your objection loses its force when placed by the side of the quotation I have made from you."

Antipyrin in Phthisis.—Dr. Hoedmaker, of Davos Platz, has made numerous observations of the effect of antipyrin on patients with phthisis, and comes to the conclusion that they are more comfortable without it, although it certainly reduces the fever. He states that he has found salicylic acid, especially when combined with arsenic, of the greatest utility in the disease.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

SYPHILITIC PACHYMENINGITIS AND PERIPHERAL NEURITIS —DISTILLED WATER AS A SOLVENT OF RENAL CALCULI — THE ALBUMENS OF THE URINE — DIPLOMAS IN SANITARY SCIENCE — HOSPITAL ACCOMMODATION FOR JEWISH PATIENTS.

London, May 24, 1886.

At the last meeting of the Pathological Society, Dr. Hale White showed some specimens of peripheral neuritis and syphilitic meningitis which presented some features of interest. They were taken from a woman, fifty-two years of age, who had been a hard drinker in addition to suffering from syphilis. For some months she had had occasional right-sided attacks of convulsions. When admitted into Guy's Hospital the patient seemed partly demented. The right arm was wasted, rigid, and contracted, and the right leg similarly affected, though in a less degree. A few days after admission the patient was attacked with right-sided epileptic seizures. In the course of seven hours no fewer than sixty-three attacks occurred. The face was affected and the patient was unconscious. The temperature rose to 103°, and the patient died eighteen hours after the last fit. Post-mortem, syphilitic ostitis of the back part of the frontal bone on the left side was found, and, adjoining this, characteristically syphilitic pachymeningitis, composed partly of fibrous tissue and partly of gumma. The digital nerves showed the changes described by recent workers as occurring in peripheral neuritis. The fibrous sheath round the nerve was thickened and sent in septa between the nerve-fibres. The latter were much degenerated, and in many no axis cylinder was to be found, all that could be seen being the granular material into which the white substance of Schwann had become converted.

At a recent meeting of the Clinical Society Mr. Pick, of St. George's Hospital, related a case which showed in a very striking manner the benefit to be obtained in some cases of renal calculus by the "distilled-water treatment." The patient was a man, aged forty-five, who, when first seen by Mr. Pick, was suffering from renal colic. From the symptoms and signs Mr. Pick was able to diagnose atrophy or absence of the opposite kidney, and the former condition was found at the autopsy. The patient was ordered to drink half a gallon of distilled water daily. After a week of this regimen he was suddenly seized with an intense desire to micturate, and passed nearly a gallon of urine in a very short time, and with it three small calculi. His symptoms were at once relieved, and in a week or two he expressed himself as feeling well. He remained so for a year, and then, after two attacks of renal colic, had suppression of urine, and died in six days. Although the ultimate issue was a fatal one, the marked and lasting (for a year) relief following the copious imbibition of distilled water was, to say the least, very noteworthy, and should encourage further trials of that mode of treatment.

At the last meeting of the Harveian Society a paper on "The Albumens of the Urine" was read by Dr. Robert Maguire. Some novel ideas were put forward. Hitherto serum-albumin has been regarded not only as the most important, but also as the most frequent form of albumin occurring in the urine. Dr. Maguire, however, has found globulin to occur far more frequently than has been thought. He has found it frequently in albuminous urine, both alone and together with serum-albumin. When the two occur together he thinks the amount of the globulin is always in inverse proportion to the gravity of the case. In grave cases but little globulin is detected, the albumen consisting almost entirely of serum-albumin. On the other hand, in the so called "physiological albuminuria" he finds only globulin. Dr. Maguire's explanation of the occurrence of one or the other of these forms of albumen is the following: Viewing albuminuria as due either to circulatory disturbance or to renal textural change, he suggests that where the nutrition of the glomerular epithelium is merely impaired, but no structural change has taken place, the more diffusible globulin passes; where actual structural change in the epithelium has occurred, the serum-albumin can no longer be kept in, and passes into the urine. The globulin is to be detected either by saturating the urine with magnesium sulphate in the cold, or by diluting the urine with a large quantity of water. In either case the globulin is thrown down. The latter test can be applied on a small scale by pouring a few drops of urine into a test-tube full of distilled water. After filtration the filtrate can be tested with nitric acid for serum-albumin in the usual way.

For several years past diplomas and certificates in sanitary science have been issued by the universities and other examining bodies. By a strange anomaly, however, their holders have been unable to register them. This injustice is to be remedied in the Medical Bill now before Parliament.

The London Hospital is at present, I believe, the only hospital which provides special accommodation for Jewish patients. The Metropolitan Free Hospital is about to follow suit. In their new building one-fourth of the total number of beds is to be set apart for Jewish patients.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from May 30 to June 5, 1886.

BAXTER, J. H., Colonel and Chief Medical Purveyor. Ordered to proceed to New York City on public business, and on the completion thereof to return to his station. S. O. 128, A. G. O., June 3, 1886.

PAGE, CHARLES, Lieutenant Colonel and Surgeon. Granted leave of absence for one month, with permission to apply for ten days' extension. S. O. 55, Department of Missouri, June 1, 1886.

GARDNER, E. F., Captain and Assistant Surgeon. Ordered for duty at Madison Barracks, N. Y. S. O. 49, Division of the Atlantic, June 1, 1886.

ADAIR, G. W., Captain and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared. S. O. 128, A. G. O., June 3, 1886.

ROBERTSON, R. L., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Snelling, Minn., and ordered to Fort Keogh, M. T. S. O. 45, Department of Dakota, May 24, 1886.

PHILLIPS, JOHN L., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Keogh, M. T., and ordered to Fort Sisseton, D. T. S. O. 45, Department of Dakota, May 24, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending June 5, 1886.

SMITH, HOWARD, Surgeon. Detached from the Nipsic and placed on waiting orders.

"IT'S GERMAN, YOU KNOW."—

"We [illegible]
That is German, so German, you know!

"[illegible]
We take out the spleen and resect the lung,
We save at the spigot and leak at the bung,
[illegible]

Northwestern Lancet.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

THE TREATMENT OF DIPHTHERIA.

BY S. HENRY DESSAU, M.D.,

The treatment of diphtheria has been [illegible] the most practical portion of the subject for consideration, while at the same time much that can be said under this head will have reference besides to the etiology and pathology of the disease. Diphtheria is a disease that is so familiar to all, that the consideration of any method or means of combating it must prove, I take it, full of interest. While it is my object to call attention to some points in the treatment of diphtheria that have been of material assistance to me in managing this uncertain affection, I shall not pretend to offer anything that I can claim as strictly original.

Perhaps the first question that may engage our minds is, Shall diphtheria be treated as a local or constitutional affection? Ever since the announcement to the medical world, by Oertel and others, that the disease depended upon certain germs for its causation, medical opinion has been somewhat divided upon the question. Unfortunately, however, bacteriology has not as yet been able to satisfy us altogether upon the matter, from the fact, as stated by Loefler, of Berlin, and other eminent authorities on the subject, that up to the present time the disease has not uniformly been successfully communicated to the lower animals. An immense obstacle has thus been placed in the way of further progress toward the solution of the question.

It has now been definitely settled, I believe, that the causation of diphtheria depends upon two varieties of germs, a *bacillus* and a *coccus*, but which of the two is the more important factor is left undetermined, simply on account of their imperfect communicability to the lower animals. This fact also leaves us in the dark as to whether these germs act upon the tissues involved in diphtheria locally or through the vascular system, so that Oertel has concluded it is first a local disease, and secondarily affects the general system.

But may we not seek in another direction for light upon the subject? The clinical history of disease in many instances, to my mind, furnishes valuable points in directing our thoughts in regard to treatment, and this, together with comparisons derived from analogy in other diseases, is certainly of great advantage. If we refer to erysipelas, for instance, to illustrate my meaning, we will find many features of that disease that may be compared with diphtheria. Here we know that it is a constitutional, self-limited affection, with a local manifestation that is likewise produced by a specific germ. I refer, of course, to idiopathic erysipelas. Then why may we not draw a like inference in regard to diphtheria?

In the early period of my practice I was in the habit of using both local and constitutional treatment in diphtheria, but experience has satisfied me that, with the exception of where the disease involved the larynx or nasal cavities, constitutional treatment was all that was required. In fact, the natural tendency of the disease being to cause a lowering and depression of the vital forces, the efforts to employ local applications in young children were found all the more harmful on account of oftentimes the most obstinate resistance on the part of the child. The result was, more exhaustion on the part of the physical forces, and more disgust and resistance on the part of the little patient when the time came for making the next application. Certain it is, in my experience, that my cases have done far better since I abandoned local applications.

I am fully aware of the argument that, after all, the remedies in most general use, such as the muriated tincture of iron, for instance, when used as a constitutional remedy, will also act topically on the mucous membranes of the pharynx, as it bathes them in the process of being swallowed. I grant this point, even at the risk of weakening my position as to the nature of the poison; but if this local application will suffice, it is an immense advantage gained for the little patient in his chances to resist the affection.

It has been stated by Oertel, as before mentioned, that the virus of diphtheria, having a predilection for the mucous membranes of the tonsils and pharynx, and the cavities of the nose and larynx in a milder degree, is first localized there as a point of infection, and, after producing its peculiar effects upon those parts, in the form of exudation, is thence absorbed into the system. Scientifically this may be admitted as a tenable theory, but, as I have before remarked, it should, notwithstanding, have little weight with us in directing our treatment against the disease, as we do not yet know how soon this secondary affection occurs. I have seen high fever, severe pain, and other clinical symptoms occur in diphtheria before the exudation was fully developed, and certainly I cannot believe that these were due to the slight amount of local inflammation present. For a long while my practice in the treatment of diphtheria was to administer the familiar combination of muriated tincture of iron and chlorate of potassium in solution only. But the elevated temperature at the onset of the disease was such a marked symptom, to my mind, that it occurred to me that an antipyretic that would not weaken the heart, while it would reduce the amount of blood-pressure, especially in localized parts, would possibly be of great assistance to the action of the iron and chlorate of potassium. Following out this idea I soon adopted the practice of administering tincture of aconite, in doses of a drop, or a fraction thereof, according to the patient's age, giving it every fifteen minutes for the first hour, and thereafter hourly. This, I found, tended speedily to reduce the temperature, so that in from twenty-four to forty-eight hours there was little or no fever present. Since this method of reducing the temperature was adopted I have had no occasion to regret it. On the contrary, with one exception, where the disease, though only involving the tonsils and soft palate, assumed a malignant character on the second day of its course, and destroyed the patient on the fourth day, the success with my cases has been uniform. Independently of the effect to limit the duration of the disease, and consequently the extent of the exudation, I believe many advantages are gained to the patient, in the way of promotion of comfort, as well as the relief of certain disagreeable features of the disease, as the vomiting, in the reduction of temperature. This is a point of great importance, in my estimation, in the management of diphtheria. The vomiting, for instance, in cases where the exudate has only involved the pharynx, not only adds to the exhaustion already exist-

[1] Read before the North western Medical and Surgical [illegible]

ing, but makes the condition of affairs doubly worse by not permitting either food or medicine to be retained, where the frequent administration of both is all-important.

It may be thought that aconite would have a tendency to further weaken the heart, already made liable to this unfortunate feature by the diphtheritic poison. The exact physiological action of aconite being still *sub judice*, this may or may not be. But in the dose that I have given, as my practice in the administration of this drug, I have seen no such effects as a weakening of the heart's action. On the contrary, I have every reason to believe that it strengthens the already enfeebled heart-action, as is shown by a reduction of the temperature and pulse. And through its action upon the vaso-motor nerves it certainly reduces blood-pressure.

Since the introduction of antipyrin a more reliable remedy for reducing high temperatures has perhaps been found, and will no doubt afford immense satisfaction to those disposed to follow this method of treatment in diphtheria.

In seeking for an explanation of the beneficial action, according to my experience, of antipyretics in diphtheria, with especial reference to those that do not too much weaken the heart's action, perhaps the best that can at present be offered is the fact, as demonstrated by Hamilton, of Edinburgh ("Pract.," vol. xxiv., p. 87), that exudations whether upon mucous or serous surfaces, or whether due to local mechanical obstruction in the capillaries, or certain changes in the condition of the blood, are the result of *suddenly increased blood-pressure*. The effect of antipyretics, like aconite and antipyrin, for example, when given in proper doses, is to lessen or modify this tension in the blood-vessels, either in a limited area or in the circulation at large, without at all weakening the heart's action. In diphtheria the blood, moreover, contains more albuminoids than normal, owing to the disorganizing influence upon it of the germ-poison, and the tension of the vascular system is increased suddenly, and perhaps maintained in this state for a prolonged period, through the irritant action of the altered condition of the blood, or the effect of the virus itself, as the case may be. There may also be mechanical obstruction in the capillaries of the tissues of the pharynx, due, it may be allowed, as stated by Oertel, to the ingress of germs occluding their lumen. The exudate already formed may thus be limited in its tendency to spread, or its appearance in other parts, as the larynx for example, prevented, by controlling or keeping within safe limits this sudden rise of blood-pressure. I might mention here in this connection that Hamilton, above quoted, regards croupous and fibrous exudation as due to the same local pathological mechanism, viz., suddenly increased blood-pressure, being manifestations of a difference in degree only, of the same. This is entirely independent of the view that the two manifestations may depend upon opposite and distinct *general* causes, and be recognized as distinct diseases. This view is corroborated by Wood and Formad, who, in their report on "Investigations of Diphtheria," say, that "any tracheitis of sufficient intensity," and it may be presumed from whatever cause, "is accompanied with exudation."

When I have the opportunity of seeing a case of diphtheria involving the pharynx or nasal cavities, in the onset of the attack, I am in the habit of administering a dose of calomel, say from three to five grains, according to the age of the patient, combined with from five to ten grains of bicarbonate of soda. This is given as the beginning of the treatment, for the purpose of clearing out the intestinal tract and inducing an increased action of the hepatic function. The importance of the latter will be mentioned further on. Besides tending to quiet the nervous system by relieving the intestines of any irritant substances that may be present, I believe the effect of the calomel and soda is often shown to aid in reducing temperature. The first dose, if effectual in emptying the bowels, is not repeated.

In common with the practice of most physicians at the present day, I use the tincture of the chloride of iron in combination with chlorate of potassium. The formula I prescribe is two drachms of the former to four ounces of a saturated solution of the latter, of which from one to two teaspoonfuls, according to age, are ordered to be given every hour. I do not regard this remedy as having any antiseptic virtue in the treatment of diphtheria, but as the tendency of the germ-poison is to cause a dissolution of the blood, I believe the iron in the form of tincture of the chloride aids in maintaining the normal condition of the hæmatoïdin of the red blood-corpuscles, while the chlorate of potassium, in moderate doses, exerts a similar action, and at the same time, in conjunction with the tincture of iron, induces a diuretic action which may, to a certain extent, aid in eliminating the poison, or the results of its action on the blood, through the kidneys. Besides this, it is barely possible that the combination exerts a beneficial action upon the stomach by preventing abnormal fermentation of its contents, and thus enables that viscus to perform its functions in a physiological manner.

This last-mentioned action of the iron and potassium is, in my opinion, not to be slightingly regarded, as we well know that the outcome of the action of the poison of diphtheria upon the blood is to cause depression and prostration of the vital forces, and whatever method can tend toward the maintenance of nutrition is of the highest importance.

Corrosive sublimate, in doses of one-fiftieth to a hundredth of a grain, repeated every hour, has been used by me in several well-marked cases of diphtheria with gratifying results. It was administered from the onset of the attack, where the pharynx and posterior pharynx were the seat of exudation, and, with the exception of aconite, was the only remedy used during the course of the disease. I am not inclined to regard the action of corrosive sublimate when used as an internal remedy as of an antiseptic character. Rutherford, in his investigations of so-called cholagogues, states that in small doses corrosive sublimate is a powerful hepatic stimulant in the dog, and supposes that it has a similar action upon man. Brunton, quoting Brieger, has lately shown that one of the important functions of the liver is its power to destroy ptomaines, or the alkaloid poisons produced in the ordinary process of digestion. Now, through the stimulant action of corrosive sublimate upon the liver, it is reasonable to infer that that organ may be made to assist largely in the elimination of the diphtheritic virus through its destructive action upon the same. This was what was referred to when mention was made of the use of calomel and soda, though, perhaps, in this respect the latter is the more important of the two.

Benzoate of soda and salicylate of soda, both of which have been recommended in the treatment of diphtheria, and in various cases used by me, have, according to Rutherford, a marked cholagogue action, though in a less degree than corrosive sublimate. Scarcely a less important matter than the consideration of drugs is attention to the general surroundings and diet in the treatment of diphtheria. I need hardly mention that good ventilation is of prime necessity. The temperature of the room should be kept at from 60° to 70° F., and the air rendered moist with a steaming kettle in the room. If possible a sunny exposure should be selected. Under every consideration the patient should be kept in bed until convalescence is fully established. The importance of this point will be recognized when we remember the extreme liability to collapse during the course of the disease, and to sudden attacks of syncope after all traces of exudation have disappeared.

As before mentioned, the natural tendency of the disease being to cause prostration of the nerve-forces, I order alcoholic stimulants, in the form of sherry wine or old whiskey or brandy, to be given at frequent intervals, from the beginning of the management of the case.

These may be given in milk in the form of a punch. The proportions I generally order are a tablespoonful of the whiskey or brandy to a tumblerful of milk; and of this a tablespoonful to a half-wineglassful may be given every two hours.

Milk and beef-extract should form the only articles of diet, the former being given in small and frequently repeated quantities, the latter not quite so often. In severe cases, where there is any disturbance of digestion, the milk is preferred in the pancreatized form; and the beef as sarcopeptones, according to the method of Leube. This insures their easy and speedy assimilation, and is worthy of important consideration.

In older children, where the pharynx is painful upon swallowing, I have found cracked ice held in the mouth near the pharynx, and allowed slowly to melt, prove very grateful. It is likely also to assist in reducing the local inflammation. Where the lymphatic glands of the neck become enlarged, applications of a weak tincture of iodine are used. So far I have made no mention of the use of local treatment, because I have ceased to use it except where the nasal cavities or the larynx are involved; and here it is not used for the purpose of destroying the poison in order to prevent its further infection of the general system, but merely in the first instances for purposes of cleanliness, to prevent, if possible, secondary septic absorption, as the nasal cavities furnish an unusual prone source in this respect. Where the larynx is involved, of course the idea is to get rid of the mechanical obstruction to respiration as soon as possible.

The application I prefer to use in the nasal cavities is a weak solution of biborate of soda, or common borax with boracic acid, to which a small quantity of glycerine is added. A more elegant combination, which also contains a small proportion of carbolic acid, is that known as Dobell's solution. This is usually applied in the form of a spray, from a Delano hand-atomizer, to the anterior nares, but an injection from a small nasal syringe may be in some cases preferable, and more effectively used according to the intelligence of the attendant. It should be used faithfully at least every two hours, and much oftener if the severity of the case requires it.

Where the larynx becomes involved, I have on one occasion met with most gratifying success in the use of the vapor of slacked lime constantly inhaled. The patient had erected over him a tent, from a blanket attached to the head-board of the bed and held up about its centre with a barrel-hoop. A bucket of lime, which was slowly slacked from time to time by pouring water gently over it, was kept on a stool by the side of the bed, and below its level under the blanket. This was used for forty-eight hours, together with hourly spraying of the pharynx, under at times considerable opposition from the patient, with lime-water to which a few drops of liquor potassa was added; trypsin has recently been favorably recommended for a like purpose, but I have had no experience with it.

Tracheotomy, of course, should be held as a *dernier ressort*. I have never had occasion to perform it.

And now, in conclusion, it might be said by some, as it has been said by Henoch, "in my experience all remedies hitherto recommended, and I believe I have tried almost all, with the exception of sulphur preparations, are entirely useless in severe cases of the disease, and these alone should be considered, since the milder ones recover spontaneously." In answer to such, I would say that my own experience has been more fortunate, for while I do not deny having lost cases of diphtheria, yet I have had some that were almost despaired of recover. Moreover, I deny that it is in the power of any physician to say in the early stage of a well-marked case of pharyngeal diphtheria, that it is a mild one and will recover spontaneously. I do not think that we are called upon to treat any disease more insidious in its progress than diphtheria, and cases that may appear to be mild when first seen are liable to end in the death of the patient. I well remember my own experience in such a case, having been previously recommended by a friend who stands eminent in the medical profession to abstain from all active interference in a mild case of the disease, as I would be able to convince myself of its spontaneous recovery and hence the uselessness of treatment. In the next case of the kind I saw, where the exudation was limited to the tonsils and the febrile movement not very strong, I followed the advice, and, much to my regret, the case went from bad to worse—the nasal cavities and post-pharynx became involved, and death followed from exhaustion. I regard every case of diphtheria I meet with, where the constitutional symptoms are marked, as of a serious character, or likely to become so, and treat it accordingly. As we well know, it is those cases which are so mild as to cause little or no anxiety that are so frequently attended with involvement of the larynx, and this danger should always be kept in view.

Neither do I entirely reject the view as expressed by Sir John Rose Cormack, in his article on diphtheria in Quain's "Dictionary of Medicine," that it is a disease that runs its own course and cannot be limited. But as in the treatment of other self-limited diseases, as typhoid fever for example, certain indications may be met that will sustain the vital forces and modify the intensity of the poison, so that *the tendency to death may be averted*. If I have succeeded in drawing your attention to any points in this short paper that may aid in accomplishing these two results, I shall feel that my labor has not been in vain.

THE PARALYSIS OF POTT'S DISEASE, AND ITS BEHAVIOR UNDER PROTECTIVE TREATMENT.

BY HENRY LING TAYLOR, M.D.,

AND

ROBERT W. LOVETT, M.D.

THE pathological condition of the spinal cord and its membranes in the paralysis so often accompanying Pott's disease of the spine has been so well described by Charcot, Michaud, Courjon, Echeverria, and others, that we can arrive at a fair idea of the lesion occurring in the spinal nervous system. We are, however, by no means so well informed of its predisposing causes, its clinical history, and its behavior under treatment.

It has been shown by these writers that the paralysis is very rarely caused by direct pressure of bone, as it is uncommon for even the very marked deformities to narrow the spinal canal to any great extent. Moreover, paralysis sometimes occurs before there is any deformity, it often recovers while the deformity gets worse, and many cases with extreme deformity are never paralyzed at all. Autopsy shows that in cases of paralysis the process ordinarily begins as an external pachymeningitis. The caries of the vertebræ, by contiguity or by irritation, causes this meningitis, and there is a deposit of inflammatory material in the dura, a consequent thickening of that membrane, and compression of the cord by this thickened dura at the point of irritation. The compression probably at once starts a myelitis, and it is this myelitis that is the cause of the paralysis. As the seat of the caries is in the bodies of the vertebræ, the meningitis is ordinarily anterior, and the myelitis is most severe in that part of the cord, especially at first, but it varies in extent from a mere infiltration to a complete disintegration of the cord. It may be more or less unilateral, it may extend up or down the cord, but pressure-myelitis causes the paralysis, which will vary with the extent and seat of the lesion. Ascending and descending secondary degenerations follow in time when it is of any considerable extent. If the myelitis recovers, it leaves a certain amount of sclerosis of the cord at the seat of the disease.

This, again, may be very slight, or the cord may be reduced to a fraction of its former size, and yet serve well enough to transmit healthy nervous impulses.

But meningitis is not the only cause of compression-myelitis in this disease, although it is the common one. There may be a direct strangulation of the cord by the vertebral arches, obliterating the canal; an abscess from carious bone may be a source of pressure within the canal; a caseous deposit from the vertebræ and a loose piece of bone have been found as sources of pressure. From the autopsies it seems probable that pressure from any source at once sets up a mild myelitis.

The clinical picture is what we should expect: a paralysis of motion, mild or severe, followed, if the case gets worse, by a paralysis of sensation, which is said by Courjon never to become complete. The motor paralysis varies from mere muscular weakness to complete loss of power. It begins as a sense of fatigue, a dragging of the feet; then there is inability to hold oneself erect. Unless the disease is in the lumbar region, the reflexes are exaggerated, and muscular spasms often start from the least irritation; they frequently appear spontaneous. The muscles are flaccid and the legs are powerless. With the secondary degenerations in the cord rigidity sets in; first the legs are rigid in the extended position, then flexion accompanies the permanent contracture. The bladder and rectum are paralyzed toward the end of all very bad cases, and whenever the lumbar enlargement is involved; in milder cases they escape. It is hard to explain why the arms are paralyzed in certain cases of dorsal caries, for an ascending secondary degeneration of the cord should give rise to no symptoms, and we have to assume an extended myelitis or meningitis. Of the sensory paralysis below the lesion there is less to be said: it is apt to begin as paræsthesia; anæsthesia afterward comes on to a greater or less extent, and when this occurs it means a pretty extended transverse myelitis.

Many cases of Pott's disease, especially in children, are bedridden, or at least non-ambulatory, without being paralyzed. When the disease runs its course unchecked, asthenia is often profound, and although there may be no trace of paralysis, the patient frequently has no desire or strength to walk or even to sit up. Another cause which sometimes keeps patients off their feet, independently of paralysis, is psoas contraction of a severe grade, especially if bilateral. Still another reason is a preponderating mental impression of inability to walk or stand. We remember a little girl whose disease was severe and active, where it was desirable that she should be kept off her feet for a time. This was much facilitated by an idea of the child's that she could not walk, which had been encouraged and probably suggested by her nurse, and the little thing was so impressed with the notion that she never made the attempt for months, although there was no trace of paralysis and she crept with facility. Here, as through the whole range of disease, we see function determined by the grade of consciousness of power, as well as limited by the degree of integrity of structure. Many cases persist in walking when paralyzed to a degree which ought to preclude it, and which would ordinarily do so, while others are bedridden with little or no paralysis, or remain so after the paralysis has totally disappeared, having recovered without being conscious of restoration. This accounts for the suddenness of invasion, and particularly of recovery, in some of these paralyzed cases.

We pass to the study and analysis of 59 cases of compression-paraplegia occurring in 445 cases of Pott's disease treated or observed by Dr. C. Fayette Taylor in private practice. In each of these 59 cases the paralysis was present at some stage of the disease. In 31 of the cases it had developed before the patients applied for treatment, while in 19 cases it came on while the patient was being treated, and in 9 cases it is impossible to say from the notes whether it appeared before or during treatment. With a very few exceptions the patients had had no mechanical treatment previous to applying.

Twenty-eight of the cases were males and thirty-one were females.

The age of the patients showed little of interest. The oldest was fifty years and the youngest two; 13 were adults and 15 were under three years of age. The location of the disease was as follows: of 59 cases, 1 was cervical, 7 cervico-dorsal, 37 dorsal, 7 dorso-lumbar, 4 lumbar, and 3 unclassified. The liability of the three regions (cervical, dorsal, and lumbar) to caries is about 1 : 5 : 3.[1] It will be seen from this that paralysis is more likely to follow caries of the dorsal vertebræ than disease of the other regions.

The character of the deformity was a most interesting point. It was classed as large in 20, medium in 10, and very small in 17; 12 were unclassed. With regard to shape, in 26 the outline of the deformity was rounded and very gradual, while in 16 it was markedly angular, 10 were classed as progressive, where the deformity became somewhat worse in spite of treatment. These 59 cases were by no means worse, so far as deformity goes, than any fifty-nine cases taken at random would have been. They were average cases; there was no one with any unusual amount of deformity, and its amount and character gave in advance no clew as to the likelihood of the occurrence of paralysis. To account for this seeming independence of the paralysis, we can only assume that the seat of the caries and its relation to the meninges is a more potent factor than the amount or character of the deformity.

A girl, twelve years of age, was admitted to Roosevelt Hospital, in 1872, completely paralyzed in the legs, which were rigid and beginning to flex on the pelvis. Ankle-clonus and increased patellar reflex were present; sensation was good, but had been impaired a month previous. No deformity was to be seen in the back, and the diagnosis of hysterical paralysis was made. The trouble had been coming on for six months, and no cause could be assigned for it. After six months of rest in bed, tonics, and electrical stimulation, she rather suddenly became able to stand and walk, and about this time a rounded projection was noticed in the dorsal region of the spinal column, and the diagnosis of Pott's disease was made. The deformity increased for a month or two, but under mechanical treatment, at a public institution, a cure was effected, and there has never been any return of the paralysis. Here, then, was a case of paraplegia occurring before deformity appeared, and of recovery from the paralysis while the deformity grew worse.

The paralysis occurred on the average about two years after the beginning of the disease. It came on immediately after a fall in 4 cases,[2] in 8 cases it appeared within one year, in 16 cases within two years, in 4 cases within three years, in 3 cases within four years, and 1 each in five, nine, eleven, fifteen, and twenty-eight years; 19 cases could not be classified. Its beginning was almost always gradual; it began oftenest on one side and was usually first noticed as a dragging of one foot, the other foot became involved in a few days, and the course went on as above described. In the majority of cases an unusual amount of pain in the chest and abdomen, even for Pott's disease, preceded the paralysis by some weeks, but did not ordinarily persist after the paralysis began.

It always began as a motor paralysis, and in a certain number of cases an incomplete sensory paralysis came on afterward. The latter is noted as having been present only fifteen times, but the number is undoubtedly too small on account of the impossibility of getting an accurate amount of past attacks. In some cases there was a complete paralysis of motion, with rigidity of the limbs,

[1] Location, Age, and Sex in Pott's Disease of the Spine. H. L. Taylor, Medical Record, Vol. xxx., No. 7, August 15, 1886.

[2] These traumatic cases are included in our study to draw attention to the great value of efficient protective treatment in severe spinal injuries, where the outlook is ordinarily so gloomy. Of the four, three developed Pott's disease—one of these recovered from the paralysis, and the two others were improving when last heard from; one case did not develop Pott's disease, but was completely cured of his paralysis by spinal support.

while sensation was perfectly good, and in other cases a sensory paralysis followed very closely on an incomplete motor paralysis. In 32 cases the paralysis of motion was complete, in 13 it was incomplete, while in 14 the notes were indefinite.

The duration of the paralysis in the cases which could be watched was never over three years, except in 1 case where the paralysis persisted after the lapse of six years somewhat improved. In 2 cases it lasted three years; in 5 cases it lasted two years; in 7 cases it lasted one year; in 4 cases it lasted from six to twelve months; in 8 cases it lasted six months; in 9 cases it lasted from two to four months; in 23 cases the duration was not known.

The average duration of all these cases was a little less than one year, and when the paralysis came on under treatment the average duration was only seven months. The disappearance of the paralysis was gradual—the sensory part recovered first, then the motor, and last of all the tendon reflexes became normal. In three or four cases the recovery followed in a few days or weeks on the evacuation of an abscess, and in 1 case the recovery was sudden and occurred during an attack of measles, after the paralysis had lasted two years. A recurrence of the paralysis was not uncommon, having occurred in 6 cases—4 patients had two attacks, and 2 others had three. The intervals between these recurrences varied from a few weeks to some years.

The tendency of the paralysis seems to be surprisingly strong toward recovery. Of the 59 cases analyzed, 39 are known to have wholly recovered; 3 recovered in part, 5 died of intercurrent affections, and the termination is unknown in 12 cases. That is to say, in the whole number of cases where the termination is known, eighty-three per cent. recovered wholly from the paralysis, and this percentage is undoubtedly too low; for, of the cases which died, 2 were recovering and 2 others were probably over their paralysis when they died, although they cannot be so counted. Of the deaths, 2 were due to pneumonia, 1 to acute phthisis, one to the opium habit, and 1 to acute cerebral meningitis. The termination is unknown in so many cases because they only came for consultation, or disappeared from observation after a little while, or were discharged for neglect. The bladder and rectum are noted as having been paralyzed in 8 cases, and here the per cent. of recoveries fell to fifty-seven where the result was known. The arms were affected in 3 cases—and of these, 1 wholly recovered and the other 2 partly. Muscular rigidity is noted in 5 cases, of which 2 wholly recovered, but it was undoubtedly present in many others. The latter symptoms mean much damage to the cord, and the wonder is that any recover from them. *Where the paralysis came on while the patient was under treatment* (19 cases), *the percentage of recoveries was one hundred in the* 17 *cases whose termination was known.* Of the 2 cases where the termination was doubtful, 1 was recovering power quite fast at the end of six months, and the other was still paralyzed when two years had gone by. Neither has been heard from since.

The treatment in all cases was directed to the spinal caries, and was protective, viz.: the application of the Taylor spinal apparatus, and chin-piece when necessary. Great stress was laid on thorough and adequate mechanical support entirely under the surgeon's control, and modified by him to suit the varying indications. The protection was only considered satisfactory when, with a firm and even impression of the pad-plates, the patient's acute symptoms subsided in a few days or weeks, his health and strength improved, and the progress of the deformity was substantially arrested without discomfort from the apparatus. The patient was put to bed and not encouraged to walk until there was a pretty complete return of power. There was no medicinal treatment directed to the paralysis.

It seems justifiable to assume from the statistics that in the course of a few months the paralysis will disappear without any other than the protective treatment for Pott's disease joined to rest in bed during the time of disability. Moreover, when paralysis occurs while the spine is being efficiently supported, our study shows that its duration is shortened, its type is milder, complications are fewer, and complete recovery from it is almost certain. Lastly, its rare occurrence during adequate mechanical treatment is to be noted. In these statistics it occurred only 19 times in 445 cases. Gibney[1] reported 62 cases in 295 cases of Pott's disease at the Hospital for the Ruptured and Crippled, of which perhaps a third were paralyzed before coming to the hospital. The French treatises deal with the disease as seen in hospital wrecks, and afford us no information as to its course or the frequency of its occurrence.

It seems, then, to be an affection of rare occurrence in Pott's disease under efficient protective treatment. It occurs without regard to the amount or character of the deformity, and is usually preceded by much pain; on the average it lasts a little less than a year. Its prognosis is extremely favorable in mild cases, or in severe ones if they can be treated early. If the bladder and rectum are involved, or muscular rigidity of long standing is present, the prognosis is not so good; but even then it is far from being bad. The treatment is efficient mechanical support to the spine and rest in bed. Under these circumstances it becomes a complication of spinal caries of no very serious import.

NOTE.—In order to make this paper as complete as possible we quote the following from a letter from Dr. C. Fayette Taylor, in Meran, Austria:

"You have chosen a good subject for your article, but it is probable that I could supply from memory the final results in some cases which failed to be recorded in the books. Cases that came paralyzed—long-standing cases, I mean—and cases that discontinued treatment after insufficient time and opportunity, ought not to be considered as having any bearing on the general results of paralysis under treatment by protection; for by protection is necessarily meant adequate protection, as to efficiency, time of beginning, continuing, and terminating it. Considered in this light, I am not aware that there was ever a case under my treatment, to whom protection was given at any time before the cessation of the destructive process, whether paralyzed at the time it came under observation or after, which did not entirely and permanently recover. In that connection some strange things have happened, leading me to believe that paralysis occurring during the course of disintegration of vertebræ is always in the first instance in consequence of the pressure of fluid, but that fluid-pressure does not produce permanent injury to the cord, merely suspending its function—that is to say, sufficient fluid-pressure to produce disintegration of the cord is not reached because the surrounding soft tissues give way first and the fluid escapes into the adjacent parts, thus diminishing the pressure on the cord. Hence the frequent occurrence of the appearance of a lumbar or psoas abscess and the recovery from the paralysis at the same time. More commonly, however, the retarded disintegration and diminished formation of fluid consequent on protecting the carious vertebræ allows the fluid to be absorbed and so lessens the pressure, when the cord resumes its function and the paralysis ceases. Permanent paralysis in consequence of Pott's disease, the evidence of my experience goes to show, is nearly always the result of bone-pressure from narrowing of the spinal canal—not often from exostoses, as is frequently claimed. The kyphosis results of course from destruction of several vertebral bodies. Even in the latter case, when the cord is bent at a sharp angle in a narrowed canal, there is good reason to believe that in some the cavity enlarges in time so as to give the cord more room, and its function becomes wholly or partly restored. This probability is forcibly illustrated in several cases of traumatism, where the paralysis occurred immediately.

[1] Journal of Nervous and Mental Diseases, April, 1878.

"D—— fell out of a third-story window and was taken up totally paralyzed in his lower extremities. I saw him nine months later. At this time his lumbar spine presented every appearance of an ordinary case of Pott's disease, several vertebræ being affected and the lumbar portion bulging outward in the ordinary way after loss of substance in the bodies. But there had lately been a gain of some motion in the lower extremities, which I attributed to enlargement of the spinal canal consequent on the softening of the bodies. He was walking about in a month and recovered rapidly and entirely under protection. The peasant here—mentioned in a previous letter—is another apparently precisely similar example, and seems likely to have a similar result. He was run over last July, and taken up paralyzed in his lower extremities. I saw him a month ago, and already there was slight power in one leg, though disintegration was evidently going forward in the bodies of the vertebræ, as indicated by the rational symptoms and the appearance of the projection in the back. If, as seems probable, there was dislocation or fracture by the injury in these cases, causing pressure on the spinal cord, we can only account for even the slightest improvement in its function by supposing a diminution of the pressure."

CYCLIC ALBUMINURIA.

By D. F. KINNIER, M.D.,

RANDOLPH, MASS.,

[illegible]

Cyclic albuminuria implies albuminuria in persons who appear to be otherwise healthy, local disease being probably present, but to an extent insufficient to produce any other symptom. This form of albuminuria is also spoken of as "albuminuria of adolescents," "intermittent albuminuria," and "physiological albuminuria."

It is very important that cyclic albuminuria should be carefully distinguished from the ordinary form of albuminuria due to morbid changes in the kidney, as the result of these two conditions is quite different, and hence, should a trace of albumen be found in the urine, it does not necessarily indicate serious renal disease.

Dr. C. von Noorden, of Giessen, classes physiological albuminuria into three groups: In the first group he finds albuminuria to be present in persons between the ages of puberty and twenty years, and especially in those of a feeble constitution, and rarely has he found this condition to be present in individuals above or below these years. In the cases which he examined he detected the albumen either while making clinical statistical researches, or during some slight ailment.

He finds the albumen to vary at different periods of the day. The urine is rarely albuminous the entire day. In these cases he found the conditions to be characteristic of physiological albuminuria, and quite distinct from the conditions present in any of the forms of nephritis. The urine is of a pale, clear color; the specific gravity varying from a high to a low, especially a high, specific gravity. The albumen generally coagulates on boiling. Globulin compounds and casts are rarely present, but when casts are present they are of the hyaline variety. Dr. Noorden finds the albumen to be most abundant about noon-time. In these cases of physiological albuminuria no renal disease has been noticed. Dr. von Noorden believes this form of albuminuria to be due to blood alterations, probably caused by slight renal disease rather than by changes in the tubuli uriniferi, as suggested by Leube.

In Dr. von Noorden's second class of physiological albuminuria there is present mucin, together with albumen; in this, as in the first class, albuminuria is most marked before noon. The mucin is supposed to be derived either from the lower urinary tract or from the kidney. In these cases the amount of albumen varies in proportion to the bodily exercise. Dr. Noorden believes this class represents mild vesical catarrh.

The third class, according to Dr. Noorden, is suggestive of slight catarrhal inflammation of the kidney, but not sufficient to cause renal disease.

In this class the albuminuria may continue the whole day and then disappear, or may be present about noontime and early in the evening, and disappear by bedtime. This class is noted for the absence of mucin, and the presence in the urine of casts, principally hyaline, with an occasional epithelial cast; now and then red blood-corpuscles are present.

Physiological albuminuria may exist when local disease is present, provided the latter is incapable of producing any other symptom. Within the past few years I have noticed several cases of this form of albuminuria. My attention was first directed to this condition while a student at Guy's Hospital, London, by reading an article in the hospital reports by Dr. Moxon, on "Albuminuria of Adolescents." Since then I have made careful examinations of various specimens of urine of persons whom I supposed to be healthy, and have noticed at certain periods during the day changes taking place in the urine, or diurnal alterations in the condition of the urine.

It may seem strange, but still it is none the less true, for us to find, on examining a specimen of this kind of urine, it to contain a large quantity of albumen, while an examination of another specimen of the urine a few hours later fails to detect albumen; and this condition may continue day after day.

Dr. Pavy has noticed that what is observed one day is repeated with more or less exactness the following day. Such have been the conditions observed in my cases.

He considers these cases have a cyclic character belonging to them, and he has applied the term "cyclic albuminuria" to this form of albuminuria. I have examined the urines of both adults and children from early in the morning till late at night, and I have noticed that in the majority of cases the urine was free from albumen from 5 A.M. till 8 or 9 A.M., after which time traces of albumen were detected in the urine, and gradually reached its maximum about the middle of the afternoon.

A peculiarity of this form of albuminuria is that after reaching its maximum, it gradually declines, disappearing by bedtime as a rule. In some of the cases which I have examined, I have observed albumen in the urine as late as 10 P.M., but this is the exception rather than the rule; in the majority of cases the albumen disappeared from the urine by bedtime (10 P.M).

The amount of albumen present varies considerably, on one day being quite large, the following day the amount being smaller.

The time of day at which the albumen appears in the urine is quite regular; in some cases I have observed albumen to be present in the urine at 10 A.M. and 11 A.M., and on the following day the albumen appeared in the urine of the same cases between 10.30 and 12 M.

In all the cases which I examined I could find no evidence of Bright's disease.

The health of my patients was unimpaired, notwithstanding the fact that the presence of albumen was noted in the urine for months. A microscopical examination of the urine revealed nothing of importance with the exception of crystals of oxalate of lime.

In one or two cases the character of the pulse was very like that of Bright's disease, but the pulse as a rule was quite soft. Whether or not this form of albuminuria is to be regarded as an early stage of Bright's disease is a point yet to be decided.

My own cases presented no evidence which would lead me to suppose that anything serious should follow as a result of this form of albuminuria. No causal relation, according to present opinion, exists between this form of albuminuria and Bright's disease. In some cases the interval between the complete disappearance of the albumen from the urine until its return a second time,

varied from one to three months, and a careful examination of the urine in those cases where this form of albuminuria appeared for a second or third time, gave no evidence of the presence of Bright's disease, and on no occasion did I find casts of any description present in the urine. The form of albumen present in the urine in these cases is supposed to be serum and alkali-albumen.

The following cases best illustrate this form of albuminuria:

A. B——, aged twenty-four years, medical student, came to me January, 1886, suspecting something wrong with his kidneys. The next few days following the one he called on me, I asked him to carefully examine his urine after rising in the morning and while fasting, till bedtime.

He says he examined his urine carefully with nitric acid and heat, and other recognized albumen tests, all of which he says produced a decided milkiness of the urine, denoting albumen, which increased on standing, and at the end of twelve hours left a deposit of about one-twelfth per cent. albumen.

The urine was acid, specific gravity 1.022, no casts or sugar; a few crystals of oxalate of lime were seen upon microscopical examination of the urine. He came to me January 28th, and I examined a specimen of his urine, which was passed on arising and while fasting. I found no albumen. About noon of the same day, and at 5 P.M., I examined specimens of his urine, and I found albumen present each time, but most abundant at 5 P.M.

Examination of a specimen of urine at bedtime of the same day showed only the faintest trace of albumen.

Several days later I asked him to examine his urine early in the morning and through the day. He reports albumen present at 11 A.M., 5 P.M., absent at 10 P.M. The amount of albumen present he says was much less than on former occasions. The following morning I advised him to examine his urine before breakfast, and then to breakfast chiefly of eggs and fish, and note the difference, if any, in the condition of the urine.

As a result of the examination before breakfast, he reports albumen to be absent from the urine; examination of urine two hours after breakfast, or 10 A.M., shows the presence of albumen in small quantities; examination later in the day shows larger quantities of albumen to be present; albumen absent at bedtime, 11 P.M.

The urine passed on arising in the morning of January 30th contained no albumen, reaction acid, specific gravity 1.028; at 11.30 A.M. albumen present, acid reaction, specific gravity 1.023; at 5 P.M. the specific gravity was greater than at any other examination, albumen present in slightly larger quantity than at 11.30 A.M. At bedtime specific gravity 1.020, which was less than on any previous examination during the day; a trace of albumen present in the urine.

Examination of the urine for a few days later gave the same result apparently as observed on January 30th. Microscopical examination of the urine revealed nothing of importance, no casts, no sugar.

This patient had been informed that he had disease of the kidneys.

After he had been under my care for a few weeks I informed him the trouble was not what he supposed (Bright's disease), but the form of albuminuria now under consideration. A few days ago I saw this patient for the first time in several weeks; he said he had examined his urine carefully the past few days and found the albumen very decidedly diminished, and I informed him that I thought the trouble would eventually disappear.

Mr. J. T——, a healthy-looking young man aged twenty-three, came to me complaining of lumbar pain, and thinking his kidneys might be affected, brought a specimen of his urine to me, stating that he would like it examined carefully so as to relieve his mind of any doubt as to the nature of the disease if there were any present.

Examination showed albumen present, which caused him great anxiety. Thinking that the case was one of the class now under consideration, I desired him to bring me specimens of his urine passed at different periods of the twenty-four hours for examination.

Daily examination of the urine was made for several days. Examination of the urine passed on rising in the morning and while fasting showed albumen to be absent. The albumen sometimes appeared in the urine as early as 9 A.M., and again not until noon-time.

The quantity of albumen, though small in the morning, gradually increased through the day, reaching its maximum between 3 P.M. to 7 P.M., then gradually declining, the albumen either disappearing entirely from the urine or only a trace being detected in the urine at bed-time.

In this case there was no evidence of Bright's disease, heart normal, pulse soft and not characteristic of renal disease. Such was the condition of the patient when seen by me in the fall of 1884.

A few weeks ago Mr. J. T—— visited me and I examined his urine for several days, and found the urine still to contain albumen, but in a much less quantity than when he first came to me in 1884.

The albumen appeared at regular periods of the twenty-four hours on this as on previous occasions. The last examination, made but a few days ago, showed the amount of albumen to be very much diminished, and I gave as my opinion that the albumen would probably disappear from the urine.

I have to-day, April 24th, examined a specimen of his urine passed on arising, which contained no albumen; that passed later in the day contained albumen in varying quantities; that passed at bedtime contained no albumen. The urine passed between 5 P.M. and 7 P.M. contained the largest amount of albumen, but much less than on former occasions.

Mr. J. McC—— consulted me in the winter of 1885. He was a druggist and had learned how to test his urine for albumen. He said he was subject to albuminuria, but said he could detect albumen in his urine at certain periods of the day only.

He states that he cannot detect albumen in his urine on arising in the morning, but that he finds albumen by noon-time, which gradually increases through the early afternoon and evening, and gradually disappears by bedtime.

He says on some occasions he finds only a very small trace of albumen present in the urine, and at other times fails to detect any albumen.

I have made repeated examinations of his urine, and on the whole I find his statements to be quite correct. I last saw him in March of the present year, at which time I examined his urine carefully and found albumen present in so small quantities that I informed him the albumen had almost entirely disappeared from the urine.

Dr. Pavy believes that albumen may persist in the urine without giving rise to grave conditions, and says he has met with cases which bear out his opinion. The subject is worthy of careful inquiry.

THE PARISIAN MODE OF OPERATING FOR CATARACT.—De Wecker first washes out the palpebral aperture by a fine jet of solution of bichloride of mercury, 1 in 2,500, then makes his section with the thinnest possible knife, by means of puncture and counter-puncture. This done, he does not perform iridectomy, nor does he lacerate the capsule in the usual way, but bites a large piece out of its centre with a fine cystotome forceps. After pressing out the lens with the back of a curette, he injects a solution of eserine into the anterior chamber by means of a delicate drum-syringe, and one sees an immediate contraction of the iris to a pin's point, and a circular pupil. The eye is again carefully washed by a stream of bichloride, and then covered with a dressing of eserine, glycerine, and bichloride, which is changed daily. De Wecker assures me he has not had a suppuration this year.—*Cor. Cincinnati Lancet and Clinic.*

SOME SUGGESTIONS AS TO THE CARE OF THE INSANE PRIOR TO THEIR ADMISSION TO AN ASYLUM.

By HENRY A. HUTCHINSON, M.D.,

MEDICAL SUPERINTENDENT OF THE WESTERN PENNSYLVANIA HOSPITAL FOR THE INSANE.

THE care of the insane previous to their removal to an asylum is a responsibility demanding the wisest judgment and thought of those whose duty it is to be thus engaged.

In some of its forms no disease is more amenable to treatment in its acute or early stages, and no fact than this is more widely recognized by alienists and more earnestly advocated.

As the superintendent of one of our large State hospitals for the insane, I have had ample opportunity to observe the methods often employed in caring for this afflicted class, and from these observations I am inclined to believe the reason a larger percentage of cures is not obtained in hospitals consists in the ofttimes indifferent treatment patients receive before their admission.

In many families there exists a prejudice in committing patients to a hospital, and to commit one of their afflicted members to an institution of this character is regarded as a disgrace both to the family and to the patient.

A short time since a patient was brought to this hospital, and the mother, upon giving me the history of her daughter's case, remarked: "I have prayed Heaven to spare me this greatest of all afflictions, the disgrace of having a child a lunatic and confined in an asylum."

As a result of this prejudice many insane are treated at home by their friends, the objectionable lunatic asylum, with its every facility for the care of just such cases remaining an insurmountable barrier to the patient's rapidly departing chances of recovery.

When these endeavors have signally failed to restore the patient to reason, and the unfortunate being has become incurable and broken down in bodily health, he is taken to the hospital, and the friends accompanying him entreat the asylum physician to care for him kindly, and are surprised if an unfavorable prognosis be given. Many who have no friends to care for them, or in whom the insanity is of a dangerous type and unsafe to be cared for at home, are arrested and placed in jail, their period of residence varying sometimes but a few days, or extending for several weeks, until the court decides as to their insanity, and they are then committed to an asylum.

It is at this very time, upon the first manifestation of the disease, that the court should at once direct their admission to a hospital, as their residence in jail, where no means exist for their proper treatment, and, as is often the case, where they are provided with the barest necessaries of life, is the time when judicious medical treatment and the care and comfort of a well-appointed institution would effect their restoration to reason.

Female patients have frequently complained to me of the disregard of the proprieties of life during their imprisonment in jail prior to their removal to an asylum. No jail should be conducted without a matron, whose duty should be to care for the female inmates.

Of forty-five patients committed to this hospital by order of the court, of the thirteen counties comprising this asylum district, sixteen were committed directly from jails, and of this number but three recovered, though a large proportion were acute cases.

A no less important factor in the care of the insane is the time and manner of their removal thereto. The larger number of patients when admitted to our hospitals are in poor bodily health, and there can be no doubt the condition of many is made worse by the fatigue and exposure incident to the journey. In acute cases the exhaustion following is often fatal. In this hospital fifty-nine deaths occurred during the past year, eight died whose period of residence was but twelve days, and two were in a dying condition at the time of their admission, and died within seventy-two hours after.

One of these patients, suffering from acute melancholia, was in a state of collapse when admitted; the other, who had typhoid fever, was beyond the aid of all human skill when brought to the door.

Female patients should always be accompanied by some female friend or relative in whom the patient has confidence, and to whom she can make known her wants and necessities. The total disregard of these proprieties, as shown so frequently in female patients brought to asylums in the custody of men, and who are perhaps strangers, is often attended with great mental excitement, prolonging the insanity, and operating largely against possible recovery.

All superintendents will agree with me, I think, in regard to the difficulty in obtaining a history of patients admitted to their hospitals; so often the friends hesitate or dislike to state the particulars and etiology of the patient's trouble, thereby embarrassing the physician in his future treatment of the case, and also acting as a hinderance to the patient's recovery.

The hesitancy on the part of friends, however, seems universal, as the records of this institution prove.

In preparing this paper I have referred only to what appears to me to be the more prominent defects in the present methods of providing for this class of humanity, but I feel assured, that "until the present laws controlling the admission of patients are amended, making provision for the overcoming of these evils, the mortality in the State hospitals will be necessarily large, and the number of cures materially lessened."

HÆMATOMA AURIS.

THREE CASES TREATED BY THE CONJOINED USE OF MASSAGE, GALVANISM, AND LEECHING.

SERVICE OF CHARLES H. NICHOLS, M.D., LL.D.,

MEDICAL SUPERINTENDENT OF [illegible] ASYLUM.

(Reported by SANGER BROWN, M.D., First Assistant Physician.)

CASE I.—Puerperal mania in a lady, aged thirty, commencing quite suddenly about ten days after her first confinement. First appearance of tumor was noticed in left ear about three months later, and about three days after a change of the manifestations from a comparatively mild to a very active type. Galvanism was used once, and massage from four to six times, daily for three weeks. Two days after the tumor was noticed in the left ear, one was observed to be making its appearance in the right, and this, too, was treated in the same way. Both tumors continued to enlarge slowly for about five days, and then remained stationary for about the same, or perhaps a somewhat longer period, when they began slowly to subside.

In the left ear the tumor, when largest, was about the size of a medium-sized almond; in the right it was about two-thirds that size.

The patient was discharged, recovered, after having been in the asylum eleven months and sixteen days, and at that time only a very slight trace of deformity could be detected in the left ear, and none in the right.

CASE II.—A very active type of acute mania in a highly refined and cultivated single lady, aged thirty-two. Hæmatoma appeared in both ears about six weeks after her admission, and about ten weeks after the appearance of mental derangement. In this case the hæmatomæ were not immediately preceded, accompanied, or followed by any noticeable change in the insane manifestations, the patient having been very actively excited throughout.

The same treatment was employed as in Case I., but the tumors increased in size much more rapidly; and, unfortunately, by means of some apparent defect in the battery used, on the fifth day of the treatment the galvanic current was applied with such strength as to thoroughly blister both ears. This accident prevented further interference for several days, but meanwhile the growth of the tumors appeared to have been

arrested. Leeches were next applied daily for four days, and about ℥ ij. of blood taken on each occasion; and at the end of this time galvanism and massage were increased, and continued two months. Massage alone was practised somewhat irregularly for a month later.

In this case the tumors, when largest, involved nearly the whole upper three-quarters of the auricles, and were about a half-inch in thickness.

The patient was discharged, recovered, seven months and nine days after her admission, with no more deformity than a slight thickening of the ears without obliteration of the normal lines.

Case III.—Puerperal mania in a young married lady, twenty years of age, confined with her first child.

Hæmatoma appeared in the left ear in the fourth month of her disease, which until five days prior to the appearance of the tumor had been characterized by noisy incoherence and a tendency to destructiveness and violence; but at this time she became very silent and stupid, the features indicated almost complete mental stagnation, and the secretions of the mouth and nose were utterly neglected.

The same treatment was instituted as in Case I., with the addition of leeching every alternate day for the first eight days. No increase in the size of the tumor could be noticed after the first week, and it had perceptibly begun to diminish before the end of the third week.

This patient is still under treatment, having been admitted upward of six months ago, and in her case there is nothing that could properly be called deformity.

In none of these cases could it be fairly supposed that the hæmatomæ were the result of traumatism.

A great deal of time and attention is necessary on the part of the physician in order to apply the above treatment thoroughly, but it is to be hoped that someone in a position to do so will apply it to a greater number of cases than I have done and report the results.

In those very active cases, where the tumor reaches the size of a hen's egg within forty-eight hours after its first appearance, it may well be doubted if much can be done to arrest its development or relieve the deformity.

Clinical Department.

VERTIGO, AND ITS TREATMENT BY BLISTERS.

Dr. Charles E. Willard, of Catskill, N. Y., writes: "Having had under my professional care during the past winter an unusually large number of cases of stomachal vertigo, I feel constrained to place upon record some of them, as they differed somewhat in their most prominent symptoms from those usually recorded as classical. I hope that that which caused me much vexation of spirit will prove of service to some other members of the profession who, like myself, have been driven to the wall by these often stubborn and intractable symptoms.

"To be brief, then, I will begin at once with some of the symptoms as witnessed in Mr. J——, aged forty-two. The first attack occurred while upon a ladder. The sensation, as he graphically described it to me, being as though an earthquake was about taking place, the house and the ladder moving as though on the waves of the ocean, rolling and pitching, but always with the roof ahead, and never turning sideways; a sensation of fear, and a peculiar sick or faint feeling at the pit of the stomach; the knees also appearing to lose all their strength; during all this time he was conscious there was no earthquake, or that the house was anything but standing firmly. His arms were not affected by the general weakness, and by holding himself closely to the ladder he avoided falling; and in a short time, the symptoms passing off in a measure, he was enabled to safely descend the ladder. There were no further developments that day; but the next morning, upon awakening and turning upon his left side in the bed, he immediately had a return of the dizziness, only this time the bed seemed to go pitching around the room, always the foot of the bed first (ahead), as though it were floating rapidly upon a huge wave of water, never turning over or upon its side, but always remaining level. After resting for a while upon the back the symptoms in a measure subsided, but upon again turning upon the left side there was a reappearance of all the symptoms just described, with the addition, this time, of a shower as of black soot falling before the eyes. All subsided again in a short time by turning upon the back, and after taking a short nap he carefully turned upon the right side and was enabled to get up, slowly dress himself, and eat a light breakfast. During the next ten days these symptoms occurred at irregular and uncertain intervals, accompanied by headache of a peculiarly distressing character, completely preventing any kind of labor, either physical or mental; there was some slight hesitancy in the speech; great mental depression, as though upon the border of some impending evil; during this time walking was very uncertain; upon making any effort to turn to the left he was likely to fall, or stagger off of the sidewalk into the street. Whenever it was necessary to turn a corner to the left, it was necessary to walk to the end of the curb, make a slow and complete circle to the right the whole width of the sidewalk, and then go ahead again.

"In another case, Mrs. W——, the symptoms followed an attack of erysipelas, and for two days and nights there was frightful headache, the patient remarking as though her head was in a vice, the pressure being upon each temple. During these forty-eight hours there was constant nausea, with frequent vomiting and retching, nothing but froth and mucus coming from the stomach, as there was no food taken during this time, the pain meanwhile being most severe upon the right side of the head. The patient was confined to the bed ten or twelve days. The dizziness was so great that she could not sit up, even in the bed, without producing faintness and vomiting. During all this time there was a constant roaring in the head as of a waterfall, a ringing in the ears, more especially the right, together with pain, and before each eye a large wheel, revolving rapidly, with broad spokes with deep notches between, the wheels apparently approaching each other and then receding constantly. Upon looking up she could read the print in a newspaper, but upon looking down everything was a blot and dizziness.

"This case, unlike that of Mr. J——, had a recurrence of the dizziness upon looking or turning to the right, even lasting some days after she was able to be moved from the bed. There was a constant and severe pain at the back of the neck, more especially upon the right side, together with a fulness and throbbing which could be seen and felt; the pain extended down the whole length of the spine, and alternated with the dizziness. When the head was most dizzy the pain in the back was less severe, and *vice versa*.

"In another case, that of Mrs. H——, the dizziness was always accompanied with a dull, aching pain in the left lung. The pain did not interfere with the breathing, and upon auscultation the lung was found to be free from disease of any kind. The pain in the lung always disappeared with the dizziness. In this case the patient was often awakened suddenly in the night, the dizziness and pain already present, when the bed, room, and furniture would apparently be pitching about in the greatest confusion. These distressing symptoms would last from one-half to one hour and then subside, leaving a peculiar feeling in the head not to be described, with soreness and pain, as though from some severe side pressure. This also would wear off in the course of twenty-four or forty-eight hours, sometimes, but not always, followed by vomiting. During the continuance of the symptoms no food could be taken or retained by the stomach.

"In another case, that of a gentleman, Mr. H——, aged

fifty-five, the attack would occur so suddenly that on several occasions he fell upon the floor, and was unable to arise for some time. I might go on and mention a number of other cases, each having some peculiarity of its own in common with the general symptoms, but I have already exceeded the original limit of this paper.

"Now for the treatment. After trying the various remedies recommended in the text-books, and not deriving the results I desired, I applied *blisters* to the *neck*, and in some cases, when the pain in the back was severe, all the way down the spine. The result of the blistering was very satisfactory, improvement beginning almost immediately, and my patients are to-day attending to their ordinary duties. Of course I did not neglect but continued general treatment. I think that the use of blisters in these cases cannot be too highly recommended, even though we cannot explain their *modus operandi*. In the treatment of these cases I used a *blister* which does not contain cantharides, and therefore is free from the exceedingly unpleasant complication of strangury. These blisters, or 'issue plasters,' as they are called, have proved very satisfactory in my hands, not once producing an unpleasant symptom—they blister quickly, without pain of any consequence, and by returning them to the blistered surface an issue can be kept up for any desirable length of time—and, as I remarked above, without the slightest fear of strangury occurring as a complication. I greatly fear that with the general practitioner the beneficial effects of judicious blistering, in these and other similar cases, is oftentimes lost sight of in dread of the unpleasant symptoms produced by cantharides."

THE ETIOLOGY OF HÆMATOMA NEONATORUM.

Dr. John Parmenter, of Buffalo, writes: "The synopsis of Dr. Küstner's views upon the etiology of hæmatoma in the new-born, published in The Medical Record (May 15th), induces me to mention a case occurring in my own practice, some eighteen months ago, which seems to support this theory. The child was of average size, and was born three hours after the beginning of regular pains. The labor was very easy, requiring no external aid of any kind. Almost immediately after birth a tumor developed over the sterno-cleido-mastoid muscle, and soon reached such proportions as to occasion severe dyspnœa. This condition lasted for about one week; after which time absorption began, causing the disappearance of the tumor in about three weeks. The child died some months later of entero-colitis. The total absence of any force in the delivery of this child leads me to regard Dr. Küstner's torsion theory as a very probable one."

SUDDEN DEATH FOLLOWING EXCISION OF THE UVULA.

Dr. W. W. Tompkins, of Charleston, W. Va., reports the case of a negro, thirty years of age, who asked his advice on account of a constant tickling in the throat and slight difficulty in breathing. Examination showed the uvula greatly elongated and projecting down below the base of the tongue. Its removal was advised, but the patient said he was afraid of an operation, and accordingly a gargle was prescribed; later in the day, however, the patient sent for Dr. Tompkins, and requested him to cut off the uvula. A small portion was accordingly removed, and the patient expressed himself as feeling better. In a few minutes the man's room-mate ran into the doctor's office and said the patient had dropped dead. There had been but little hemorrhage, and the operation had seemed to relieve the symptoms. But the patient had, on the occasion of his first visit, said that he had heart disease, although, as he was wet and dirty, having worked at ditching all night, no physical examination was made. Dr. Tompkins had thought of giving ether, as the patient was so nervous and fearful, but congratulated himself afterward on not having done so. Death was evidently due to cardiac disease, the immediate cause probably being the excitement caused by the operation. The patient's father had dropped dead under somewhat similar circumstances three years before.

A NEW METHOD FOR THE REMOVAL OF INTRAMURAL UTERINE TUMORS.

Dr. O. Stroinski, of Chicago, writes: "After severe losses in removing intramural uterine tumors through the abdominal or vaginal walls, I decided either to abandon entirely any attempts of extirpation of these tumors, or to find a method that would give a reasonable show of favorable results. Lately I have found that continued intra-uterine injections with diluted subsulphate or sesquichloride of iron produce a discharge of mucous membrane, as well as of muscular stratum, and that, combined with the effect of contractions always evoked by these injections, causes the intramural tumors to be forced into the uterine cavity, where they may easily be seized and extracted. I will give the minute details of these proceedings at another time, and will now merely formulate the conclusions which I have arrived at after a careful study and a good deal of experience: 1, Extirpation of intramural uterine tumors through the abdominal or vaginal walls is as unnecessary as it is dangerous; while, 2, there are certain procedures which always transform the intramural into an intra-uterine tumor which can be easily extirpated; 3, these procedures only should be made use of in the removal of intramural tumors, being entirely harmless, and never endangering the life of the patient nor maiming the sexual organs; 4, even the largest myoma might be easily removed by this operation; 5, only tumors situated on the surface of the uterus are excluded from this procedure. I have operated on cases in which large doses of ergot had been taken for a long time without the slightest effect, and in one case in which the tumor had existed before marriage and a child had been born without the tumor losing its size or changing its position. I will furthermore say, that I have operated in private as well as hospital practice, so that there cannot be any doubt of the reality of the facts."

COCAINE IN SEA-SICKNESS.

Dr. Charles F. Mason, Acting Assistant Surgeon, U.S.A., writes: "In a recent trip from New York to Norfolk by sea, I had an opportunity of observing, both in myself and others, the remarkable curative effects of cocaine in sea-sickness. The cases treated, four in number, were all adults, two being physicians. The symptoms in all were extreme nausea and great depression; no vomiting. Cocaine hydrochlorate, in doses of twelve minims of a four-per-cent. aqueous solution, afforded almost complete relief in from fifteen to thirty minutes, so that the three patients who were below were enabled to dress and come on deck. After a second half-grain dose (two hours' interval) the relief was complete and permanent."

A CASE OF TEMPORARY AMNESIA.

Dr. George White, of Chicago, writes: "Apropos of the case of temporary cerebral 'absence' of the stenographer in the late Chicago, Rock Island & Pacific Railroad train robbery and murder of the express messenger, I have to report a somewhat similar case. It may be of some psychologic interest. On April 12, 1886, I was hastily summoned to 1515 West Monroe Street, this city. There I saw a boy, ten years of age, apparently laboring under acute mania or aggravated hysteria. The case was characterized by delusions and hallucinations; incoherent speech; laughing and crying at regular intervals;

submissiveness and violent attempts to injure others alternating; pupils dilated; no elevation of temperature; motions at irregular times inco-ordinate; passage of urine free; bowels regular. No depressions or injury of any kind about the head could be found. There were no injuries received at any time, so far as I could learn; no falls; in fact, the evidence as to injury was negative in every way. Pressure along the spine elicited no tender points, but bilateral pressure at the third lumbar vertebra caused the knee-joints to yield. Prepuce abnormally long and adherent entirely around the corona glandis, and attempts to minutely examine the malformation were met by violent resistance. He never had any trouble with the urinary organs, and the parents had never noticed this peculiarity till I called their attention to it. He had always enjoyed good health hitherto, and the present trouble seemed instantaneous in development. No nervous history in family aside from slight hysteric attacks in mother and chorea in an aunt on the mother's side of the family. The father claimed invariable good health; rest of family in good health. I ordered chloral hydrate and bromide of potassium, and the next day was surprised to find my patient much better. On the third day he was entirely well—the pupils were normal; there was no response to lumbar pressure, and the mind was perfectly clear. Again seeking for the origin of this peculiar set of phenomena, I learned that as the boy was returning from school, at noon, a dog jumped at him, but did not bite. The scare was followed by unconsciousness in five or ten minutes after reaching home. His memory was blank as to the events of the afternoon and night of that day. Up to the present time he is as healthy and mentally as bright as the rest of the children."

HYDROGEN PEROXIDE IN DIPHTHERIA.

Dr. William B. Clarke, of Indianopolis, writes that he has seen such wonderful results follow the use of hydrogen peroxide in diphtheria that it would be hard to induce him to use any other local remedy in that disease. After its application to the false membrane, the corroding effect is so great that the mouth and nose are filled with the froth. The membrane is quickly dissolved and easily expelled.

LACK OF DEVELOPMENT IN A FEMALE SEVENTY-SEVEN YEARS OF AGE.

Dr. F. O. Manning, of this city sends us the following case: He was called to see an old woman aged seventy-seven, but on his arrival found her dead. The woman was the size of a child aged eleven, though her face was that of an aged person. She had been failing in health for the past three or four years, but had retained her faculties until within the past two years, when she had become demented. During the past few months her skin and its appendages had become extremely sensitive, and any attempt on the part of her relatives to cut her nails excited a violent fit of screaming. Her height was four feet three inches. The hair was dark brown, and only very slightly tinged with gray, and had, before being cut, reached nearly to the floor. There was no hair on the pubes or in the axillæ, and there were no breasts nor even any sign of a nipple. On opening the abdomen, the spleen was found to be small and presented a granular appearance. The kidneys were situated a little higher than normal, and were very small, being no larger than would be those of a child aged eleven. They presented all the appearances of a long-standing nephritis, and the bladder was also the seat of a chronic inflammation. The uterus was very small, hardly larger than an infant's. The ovaries were in a very rudimentary state, and wholly undeveloped. The vagina was occluded at its lower portion, but was patent at its upper part near the uterus. The woman had never menstruated. The other organs were not examined, owing to the strenuous objections of the relatives.

Progress of Medical Science.

A Peculiar Fracture of the Malleolus.—Dr. Léon Le Fort describes, in the *Bulletin Général de Thérapeutique* of March 15, 1886, the following case: A young man, aged eighteen, slipped and wrenched his left foot severely. When seen the following morning there was a swelling over the external malleolus, extending somewhat over the anterior surface of the tibio-tarsal articulation. The same region was the seat of a faint ecchymosis, but there was no discoloration of the outer border of the foot below the malleolus, as is ordinarily the case in fracture of this process. There was no tenderness on pressure, except on the anterior edge of the malleolus and at the tibio-fibular joint. Adduction of the foot was the only movement which caused any pain. The writer at first supposed that there was a sprain at this articulation, and ordered massage for its relief, but finding that the patient was still unable to bear his weight on the injured foot, he proceeded to make a more careful examination. This showed him that there was a fracture of the malleolus, a small fragment being torn off from the surface of this process by the action of the inferior tibio-fibular ligament put violently on the stretch. The sliver of bone torn away was from the anterior border of the malleolus. Two other exactly similar cases afterward came under his observation. The sole treatment consisted in the application of moist compresses and in rest.

Rupture of the Bladder.—Dr. A. Pousson, of Paris, has written a paper on the pathogeny of two little-known varieties of rupture of the bladder, and on the means of preventing such forms of this lesion. An endeavor is made to prove that, in addition to cases of traumatic rupture and cases of spontaneous rupture—the walls of the bladder in this latter class being invariably diseased—there are, firstly, instances in which the healthy viscus distended by urine bursts under the influence of contractions of the abdominal wall during some violent voluntary or involuntary movement; and, secondly, cases in which the bladder, having undergone a morbid change, increasing rather than diminishing the resistance of its walls, may rupture through its own contractions. A bladder with hypertrophied walls may, it is argued, be ruptured by the action of its intrinsic muscles in retention through urethral stricture, and also through vigorous and irregular spasmodic contraction of these muscles, excited by the contact of fluid injected, even in small quantity, into the vesical cavity. Four recent cases are reported by the author, in which the hypertrophied and irritable bladder was ruptured during the injection of fluid, as a preliminary, in three of the instances, to lithotomy, and, in the fourth, to simple cystotomy. Dr. Pousson proposes the following classification of ruptures of the bladder, which will, he thinks, include every possible form, and remove all uncertainty on the etiological interpretation of any given case. He would divide these injuries into ruptures of the healthy bladder, and those of the diseased bladder (pathological ruptures). Under the former are included traumatic ruptures by direct and by indirect causes, and ruptures by effort. The latter, or pathological class, include ruptures by perforation, and ruptures by muscular contraction of the vesical walls. The following practical teaching is derived by the author from these considerations. In the majority of cases of rupture of the bladder by the contraction of the abdominal muscles, the injury is produced during the administration of an anæsthetic. It is advisable, therefore, before giving chloroform or ether to empty the bladder. In most instances hitherto recorded of this kind of vesical rupture, the patient was suffering from very tight stricture of the urethra. In such cases it will be advisable to remove the urine by puncture. It is held that in future a prudent surgeon, before giving an anæsthetic to any patient on whom it is proposed to perform, for example,

external urethrotomy for organic stricture or rupture of the urethra, ought always (if the bladder be much distended) to perform hypogastric puncture in order to avoid any risk of rupture of this viscus by contraction of the abdominal muscles. The demonstration of the possibility of rupture of the bladder by the action of its intrinsic muscles indicates the dangers of practising forcible injections for the purpose of re-establishing the capacity and tolerance of small and irritable bladders. It is especially in cases requiring lithotrity and suprapubic lithotomy that vesical hypertrophy and irritability are most liable to be met with. The administration of chloroform in large doses is the sole means, Dr. Poussin states, of abolishing the contractions of a bladder, whether healthy or diseased, excited by the injection of fluid.—*Revue de Chirurgie.*

Compound Fracture of the Patella, with Wound of the Knee joint.—The following case, occurring in the service of Mr. Mayo Robson, at the Leeds Infirmary, is reported in *The Lancet* of May 8, 1886: J. P——, aged thirty-five, a coachman, was kicked by a horse on the right knee on December 2, 1885, and admitted two hours afterward, when there was found to be a wound of one and a half inch over the front of the right patella, which was the seat of a starred fracture; a probe passed freely into the knee-joint. It was syringed well with perchloride solution (1 in 2,000) and dressed antiseptically, no drainage-tube being employed; the limb was fixed on a back-splint. Temperature normal throughout. Dressed for the first time on December 12th, ten days after the accident, when the wound was healed. Made an out-patient December 29th, plaster-of-Paris having been applied from the calf to the middle of the thigh, this being left on, to steady the limb, for three weeks. In March, 1886, he was quite well and able to perform his duties perfectly, the injured knee-joint moving as freely as the uninjured one.

A Bloodless Birth.—Under this title, Dr. G. W. Crider reports, in the *Cincinnati Lancet and Clinic* of May 15, 1886, the case of a woman, nineteen years of age, pregnant with her second child. The bag of waters broke early in the day, but labor did not come on for some time after. It then proceeded regularly, but after the expulsion of the child no hemorrhage appeared. The cord was only about one-third of the usual size, and was nearly bloodless. In about fifteen minutes after the birth of the child pains came on, and in about twenty minutes the placenta was expelled, with very little assistance. Judging from the stain on the linen, there was not to exceed more than a half-ounce of blood. About twenty-four hours after the birth of the child she began to have a discharge of blood, and not more than women usually have at their menstrual periods; it continued two days, then began to decrease, and in six days all discharge ceased, and she felt abundantly able to get up and go to work. The child was living and healthy.

Progressive Muscular Atrophy Beginning with the Lower Extremities.—Charcot and Marie describe a particular form of progressive muscular atrophy, which begins by affecting the feet and legs without any change in the hands and arms until after the lapse of some years. In this special form there is a relative integrity of the muscles of the root of the limbs, or at least they retain their normal condition longer than those of the extremities. The muscles of the trunk, shoulders, and face remain intact. In the muscles becoming atrophic there are fibrillary contractions, and there are vasomotor troubles in the segments of the limbs affected. There are no noteworthy tendinous contractions of the joints whose muscles are atrophied. The sensibility is usually unaltered, but cramps are frequent. There is reaction of degeneration in the atrophic muscles. The affection commonly begins in youth, often among brothers and sisters, and is sometimes hereditary.—*Revue de Médecine*, No. 2, 1886.

Puerperal Fever and Antisepsis.—M. Herrgott, of Nancy, in a communication to the Paris Academy of Medicine, mentions the cases of two women who had been confined in the same ward. In spite of the employment of the most rigorous antiseptic measures, one, who was greatly depressed physically and morally, was attacked by puerperal fever and succumbed in three days; while the other, who had a very severe labor, entirely escaped the infection. From these facts he deduces the suggestion that, however valuable and true the doctrine of microbes may be in the generality of cases, it is not capable of explaining all the facts of infection. "Too absolute, too general rules lead observers to neglect an essential element in diseases—the patient."—*The Lancet*, May 8, 1886.

Topical Applications of Bacterium Termo in Lupus.—Dr. J.V. Bellaserra writes in the *Revista de Ciencias Médicas* of May 10, 1886, that he has made some essays in bacteriotherapy for the cure of lupus vulgaris. He first made a number of linear scarifications over the diseased surface, and then applied a layer of absorbent cotton dipped in broth containing a pure culture of bacterium termo. This was covered with a piece of gutta-percha tissue, the whole being held in place by adhesive plaster. The application was renewed every twenty-four hours, the scarifications being made, however, only every second day. The patient was still under treatment, and the experiment had not been continued long enough to obtain any definite results.

Tender Points in Chorea.—Marie draws attention to the fact that in the true chorea of Sydenham tender points have been described over the spine, the thorax, and the abdomen. In addition to these, however, he has noted a number of cases in which there was tenderness over the ovary also, and that this is present on the same side as that on which choreic movements first appeared.—*Edinburgh Medical Journal*, April, 1886.

Fracture of the Coracoid Process of the Scapula.—Dr. L. E. Borcheim reports the following case in the *Atlanta Medical and Surgical Journal* for May, 1886: A man, aged sixty-six, while walking the street was struck full on the right shoulder by a runaway horse, being lifted bodily and violently thrown against an iron column. He complained of severe pain and said his arm was broken. Manipulation about the coracoid process was exquisitely painful, and some crepitation was made out, but there was very little displacement, owing to the strong ligamentous fibres which are inserted into, and distributed over, this process. The treatment consisted in relaxing the pectoralis minor, coraco-brachialis, and biceps, which was accomplished by placing the arm in a large triangular sling, flexing the forearm on the arm, and keeping it close to the chest by a turn of a roller bandage.

Salol.—This is a new preparation, possessing antipyretic and antiseptic properties, discovered recently by Professor von Nencki. It is a combination of salicylic acid and carbolic acid, a salicylate of phenol. It is a white powder, rather greasy to the touch, of a faint, aromatic odor, and almost tasteless on account of its insolubility in water. It is, however, soluble in alcohol. Professor von Nencki has experimented on animals with salol, and finds that the entire quantity is excreted in the urine under the form of urate of salicyl and sulphophenol, there being thus a simple decomposition of the salt in the organism without any modification of its constituents. It was found that it was the pancreatic fluid which effected this decomposition, as the salol was immediately broken up into its constituent parts when mixed with chopped-up pancreas. This fact of decomposition occurring in the duodenum rather than in the stomach would account for the absence of nausea and other disagreeable gastric symptoms. This experimenter

also found that a dose of one drachm *per diem* was well borne by man. At a meeting of the Medico-pharmaceutical Society of Berne (*La Semaine Médicale*, April 14, 1886), M. Sahli related his experience with the new drug, and said that he had taken as much as two drachms in a day without experiencing any disagreeable effects, although some of his patients had noticed a very slight ringing in the ears after large doses. He was in the habit of giving it in doses of one and a half to two drachms in the course of the twenty four hours, and never had any serious complaint from his patients. It colors the urine almost black, just as carbolic acid does—indeed, it contains no less than thirty-eight per cent. of carbolic acid. M. Sahli had tried salol in all forms of rheumatism, and had always found it to act at least as well as salicylic acid, and he thought the fever was reduced even more rapidly, possibly by reason of the phenol which it contained in such large proportion. One case of chronic urticaria which had resisted every kind of treatment was quickly relieved by salol, as were also several cases of obstinate suborbital neuralgia. This drug is also, the speaker asserted, a powerful antipyretic. It is given for this purpose in the same doses as for rheumatism—thirty grains three or four times a day. In one case of phthisis he saw a sudden fall of 7°, from 103.5° to 96.5° F., with no unpleasant symptoms following, after a single dose of thirty grains; he does not, however, advise the unrestricted use of salol, or of any other antipyretic, in phthisis. The antiseptic properties of salol are well marked, and it possesses the advantage, with iodoform, of not being soluble in water, and hence of not being readily washed away with the secretions. The speaker had used it with good results in ozæna and otorrhœa, and thinks that the powder suspended in water might be used with advantage as an injection in gonorrhœa. By reason of its antiseptic properties, also, it is indicated in intestinal catarrhs, in typhoid fever, cholera, etc., and the speaker thought it might be given with advantage in diabetes, in which both salicylic acid and phenic acid were often prescribed. He urged his hearers to make trial of salol, and assured them that the results obtained would prove most satisfactory. It possessed the great advantage over salicylic acid in being tasteless, and in not causing nausea or other unpleasant effects. Other speakers at this meeting confirmed the statements of M. Sahli concerning the value of salol, and all united in recommending more extensive trials of the drug in rheumatism, fevers, and septic diseases. It was spoken of very highly also as a dentifrice in order to prevent caries of the teeth.

Four Methods in which Articular Cartilage may be Destroyed.—At a recent meeting of the Medical Society of Victoria (*Australian Medical Journal*, March 15, 1886) Professor Allen presented a series of specimens illustrating some of the modes in which the cartilage may be destroyed in disease of the articulations. 1. The head of the femur from a case of osteitis. The nutritive relations between the articular lamella of bone and the cartilage were arrested, and the latter was separating in large flakes. In the acetabulum the cartilage had disappeared, the bony floor of the cavity was necrosed throughout its entire thickness, and was breaking up into fragments. There was extensive suppuration in and around the joint, but the pus had not yet made its way into the obturator internus, the periosteum over the pelvic surface of the floor of the acetabulum not being perforated. Such a process of stripping of cartilage almost *en masse* is rarely seen. 2. The medio-tarsal joints denuded of cartilage by intra-articular suppuration, originating apparently in suppurative periosteitis of the calcaneum and cuboid. In this form the cartilage first becomes swollen, soft, and succulent, and of an opaque grayish color; then the surface becomes filamentous by the unequal process of softening, and gradually the whole thickness of the cartilage, or of portions of it, may be removed, the changes in the subjacent bone being relatively insignificant. 3. The much slower process seen in many cases of chronic synovitis was exemplified by specimens of protracted disease of the knee and ankle. Here the synovial membrane becomes hyperæmic and swollen, densely infiltrated with leucocytes, and at last is practically composed of granulation tissue which may or may not secrete pus. The more rapid the disease and the greater the hyperæmia, the more abundant will suppuration be; but in chronic cases, with scarcely any hyperæmia and a minimum of swelling, fringes of moderately vascular granulation tissue may form without suppuration. It is in these very chronic cases that the changes in the cartilage are best seen. In the ankle exhibited, little, gray, fleshy processes were slowly growing from the edge of the synovial membrane over the cartilage, which itself was as yet little altered. But with the continued growth of these highly cellular processes the cartilage beneath becomes eroded, literally eaten away, the destructive action being patchy or general, according to the distribution of the cellular ingrowths from the synovial membrane. In relatively acute cases the process is modified by the free formation of pus, and in very acute cases there is no time for the development of the cellular ingrowths. 4. This variety of destructive change in the cartilages was illustrated by various joints of the tarsus from a case of chronic osteitis. The cartilages become pale pink, either uniformly or in patches, and are gradually replaced by granulation tissue growing slowly from the medullary substance in the Haversian canals of the subjacent bone. As the process of replacement progresses, the surface of the cartilage becomes more distinctly vascular and soft, so that the finger-nail readily indents it, and the granulation tissue may even form slightly elevated ruddy patches in the midst of the pinkish less altered cartilage around. These four varieties of destructive change in cartilage are comparatively seldom seen in pure forms in the post mortem room; in cases which run to amputation or to a fatal issue acute inflammations have often alternated with the more chronic processes, and synovial, periosteal, and endosteal lesions have accumulated themselves upon one another. The speaker exhibited a foot, as an instance in point, in which the medio-tarsal joint was utterly disorganized by suppuration; the periosteum around the os calcis was thickened and softened, readily peeling from the subjacent bone, and at parts separated from it by abundant pus; the ankle showed the slow growth of cellular processes over the cartilage, apart from suppuration, while the anterior tarsal and tarso-metatarsal joints exemplified in different degrees the development of granulation tissue from beneath the cartilages. The processes thus described are quite distinct from the gradual erosion of cartilage which occurs apart from inflammation, especially in advanced age; and they are also distinct from the changes included under the title of chronic rheumatoid arthritis. It must be remembered, however, that the eburnation of the articular surfaces and the growth of osteophytes, so characteristic of rheumatoid arthritis, may be variously complicated by the various inflammatory processes described above, and, if the early stages of eburnation could be observed, it is probable that the slow development of a granulation tissue from the subjacent bone, and its slow conversion *pari passu* into ivory bone, would be the true pathological change, modified by imperfect ossification of the granulation tissue on the one hand, and by intercurrent attacks of synovitis on the other. The close anatomical relations between cartilage, synovial membrane, periosteum, and medullary osseous tissue are now well understood; the gradual transition of articular cartilages at their edges into the connective tissue of the synovial membranes suffices to explain some of the differences which are so often seen between the lesions at the margins and those toward the centres of articular surfaces, while the varying degree of coaptation, pressure, and attrition of the articular surfaces may explain other differences.

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LITERARY RECREATION FOR MEDICAL MEN.

THE recent publication in England, by men of note, of lists of the best hundred books for general reading, has excited general interest. This interest has been shared by all who have any acquaintance whatever with literary matters. Certainly, all possessors of or aspirants for literary taste must look upon this publication with commendation. In these days a purely literary publication from the pen of a medical man is no rarity. The subject, therefore, intimately concerns our own profession. As might be expected, the variety of books named in the published lists is very great. The latter have all been compiled by men of a distinctively literary reputation. On these topics as well as on all others, a man's judgment is largely determined by his occupation. A physician has very little time in his student days to dwell upon mere literary style. He is after facts. The wide extent of ground which must be covered, as a matter of routine, is so great that he is effectually debarred from systematic outside reading.

Unless a taste for literature is acquired before commencing medical study, the chances are that it will never furnish a means of enjoyment in leisure moments. These are few and far between. With most men the struggle for a competence, with its attendant mental and physical exhaustion, forbids much literary recreation. When in later years a competence is assured, and some of the more onerous professional duties can be laid aside, the chances are that the long slumber of literary taste will not be shaken off.

Those physicians who suffer least from this form of mental inactivity are those whose taste or occupation lead them to contribute to their own professional literature. At the present time, writers in any professional field have a critical audience to please. It may be disputed whether or not the ranks of the medical profession contain relatively more literary men than they did fifty years ago. But they do contain more men relatively who can appreciate a true literary style. Particularly is this the case in regard to the terseness of any article. He alone receives consideration and makes a lasting impression who clothes his ideas in brief, yet vigorous language. The reading of long articles is left to the few. Prosiness and prolixity in writing on professional topics have received their death-blow. Brevity is the soul of influence as well as of wit.

One thing is noticeable in those whose occupation may not be a literary one, but who yet find recreation in literature. It is that this recreation comes more from the thorough perusal of one author than from the desultory perusal of many. A well-thumbed Shakespeare may speak far more eloquently of its possessor's literary activity than shelves of rich editions. As we con the pages of the older novelists and dramatists, we perceive a most wonderful insight into the relations between mind and matter. Perhaps writers in these latter days have never equalled their predecessors in this respect. Who does not find in Shakespeare that faculty of insight which may find its highest expression in solving the mysteries of obscure bodily disease? Or who cannot see portrayed in some of Dickens' doctors the foibles, somewhat exaggerated perhaps, of his professional neighbor? If he be frank enough he may see reflected some of his own.

The physician is the last for whom a list of best books may be made out. The scientific aspect of medical work is now many-sided. The paths it suggests lead off in many directions. Each one can be followed with both pleasure and profit. But even these are hardly recreation enough for the physician. That comes only when he can step out of his professional environment. For the time being he must cease to be a physician.

There can be literary work and there can be literary recreation. The two are distinct. Consideration of medical questions of scientific import necessitates the former. The latter comes from outside the domain of professional work. In the former one deals entirely with hard facts. Reason is the motive power, the working force. In the latter, imagination, "the world's sweet inn from care and wearisome toil," comes into play. It conduces to a well-rounded mental growth. Then literary work proper is resumed with renewed zeal. We are borne along with the zeal coming from the power of new ideas, our mental processes are more vigorous and more logical. We feel that our recreation has benefited us. We realize that "the best man is he who most tries to perfect himself, and the happiest man is he who most feels that he is perfecting himself."

THE FURTHER EMPLOYMENT OF BACTERIO-THERAPY.

WE have already called attention to the novel method of treating pulmonary tuberculosis proposed by Professor Cantani, of Naples, viz., the inhalation of fluids containing the *bacterium termo*. Further trials of this have been made by Dr. Brehmer at his hospital at Görbersdorf (*Allgemeine Med. Centr.-Zeitung*, 1886, No. 28), and recently again by Dr. Laaser, of Breslau (Ibid., No. 34). Dr. Laaser states that among seven patients whom he treated by the new method two were improved and one was cured. The first case in which there was improvement was that of a young peasant woman, who was treated also by lavage and antipyrin. Some of the improvement was ascribed to these latter measures. The second patient was in the third stage of phthisis and bedridden. After the inhalations she was able to get up and go about, her temperature fell, and her bodily strength increased. She then had an attack of localized pleurisy, and as the inhalations caused vomiting they were discon-

tinued. The third and "cured" case was that of a young laborer, who, when admitted to the hospital, was found to have a large cavity in the right lung. His evening temperature was 39.5° C., and the expectoration was copious and fetid. Inhalations of turpentine and carbolic acid lessened the odor, but did not relieve the fever, and the patient's strength continued to fail. Tubercle bacilli being found in the sputa, he was placed upon daily bacterial inhalations. The odor of the sputa soon disappeared, as also did the bacilli, the patient's condition steadily improved, and in four weeks he was discharged cured!

THE PROPHYLACTIC VALUE OF CHOLERA INOCULATION.

We referred in these columns, under date of October 3, 1885, to the statistics of Ferrán's preventive inoculation during the cholera epidemic in Spain last summer. The figures there given were of the results of cholerization, as the author of the method terms it, in seven small towns only. We have just received a pamphlet embracing the statistics of twenty-one additional places. The reports are for the most part prepared in the same careful manner as were the others, being written by the local physicians, and certified to as correct by the alcalde and other municipal officers and the parish priest, the statements being furthermore sworn to before a notary. We must, therefore, accept the figures as correct, and free from any suspicion of fraud or of having been twisted to bolster up Ferrán.

Four of the towns were not visited by the cholera at all, and of these we shall speak later. In two others the statistics are not complete, the compilers having omitted to give the population in one instance, and the number of individuals inoculated in the other. There remain fifteen communities concerning which the information given is satisfactory, and from which we can draw some conclusions as to the utility of the method. The total population of these fifteen towns amounts to 92,510, of which number 8,238 were inoculated by Ferrán or his assistants, leaving 84,272 unprotected by cholerization. Of the non-inoculated 6,014 (or 7.13 per cent.) were attacked by the disease, and of this number 2,467 (or 41.02 per cent.) died. Of the inoculated 123 (or 1.49 per cent.) were attacked, and of these but 25 (or 20.33 per cent.) died. Putting together the two sets of statistics collected from twenty-two towns, with an aggregate population of 134,151, we find that of the non-inoculated 7.199 per cent. were attacked by the cholera, while of the inoculated only 1.204 per cent. suffered. The mortality of the disease was, of the non-inoculated 43.31 per cent., and of the inoculated 28.17 per cent. of those attacked.

Several instances of apparent protection by inoculation are mentioned which are rather striking, though not necessarily conclusive. In Adzaneta the family of the municipal secretary, Sr. Plá y Plá, was composed of five individuals, four of whom submitted to cholerization. These four passed through the epidemic without suffering from any symptoms of the disease, while the one who was not inoculated was stricken down by cholera and died. In Alcalá de Chisvert there were four physicians at the outbreak of the pest, and naturally they were exposed to constant danger in the discharge of their duties. Three of these, who had been inoculated, passed safely through the epidemic, while the fourth, who had not been inoculated, died. In four families in the same town one member of each, and that the only one not inoculated, died of cholera, while the others, who had submitted to the operation, escaped. Several precisely similar cases are related as occurring in other places.

It has been said by many that the inoculation by means of the virus prepared by Ferrán, if it had any effect at all, would expose those operated upon to even greater danger. But this assertion would seem to be disproved by the facts presented in these reports. There were four towns in which no cholera appeared during the summer, although, in anticipation of an attack, inoculations to the number of 5,504 were made. If the inoculation were likely to cause cholera in the individual operated upon, it would hardly be possible for so great a number to escape. From one of these towns, La Roda, seventeen individuals went into an infected district. Nine of these had been inoculated, and eight had not. None of the nine suffered during their exposure, but six of the eight non-inoculated persons were seized with cholera and two died.

In most of the reports it is stated that no symptoms other than those commonly following inoculation were caused by the operation, and in only four cases out of the many thousands did abscesses at the point of insertion of the virus occur. It would thus seem to be proven by these statistics that the inoculations are harmless, or at least no more dangerous than hypodermic injections of some inert fluid. And in view of this fact, the results are such as to offer encouragement for further trials. The cable reports that the Spanish Government has granted permission to Ferrán to continue his inoculations this summer, should apparent necessity for them arise, and we may therefore expect even more extensive experiments to be made, if cholera revisits the country. We sincerely hope the scourge will not return, but should it do so, we shall be interested in studying the results obtained by the method, and shall hope to present them in due time to our readers.

THE NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.

We have just received the Seventeenth Annual Report of the Physicians' Mutual Aid Association, whose benefits and work we have heretofore often commended to the profession of New York City and Brooklyn. We invite especial attention to the fact that the Trustees have completed arrangements for extending its operation to the entire State, which cannot fail to largely increase its usefulness. Any member of the regular profession under fifty years of age and in good health is eligible to membership. Its life-insurance feature is valuable, but no less so is the benevolent part of the work, whereby a sick member, or the family of a deceased member, may be assisted from the interest of the permanent fund, which has now increased to nearly $14,000. The latest donation to this fund was from Mrs. Austin Flint, amounting to $450. The cost of becoming a member is $3, including the first assessment, and we believe the present

management will not be disappointed in hoping for the co-operation of the entire medical fraternity of the State. Its past history furnishes every guarantee of successful administration in the future.

Application for membership may be made to the Secretary, Dr. W. Y. Alexander, Station M, New York City, or to any of the following gentlemen who have already been appointed Medical Examiners: Dr. F. H. Potter, of Buffalo; Dr. H. Flood, Elmira; Dr. S. Ely, Newburg; Dr. W. S. Ely, Rochester; Dr. W. W. Hewlett, Babylon; Dr. C. M. Wilson, Gouverneur; and Dr. W. E. Ford, of Utica.

THE DELICACY OF THE SENSE OF SMELL.

The sense of smell is probably the leading sensorial endowment in most insects, and it does for them what sight and hearing do for man. Its potency in helping along intelligence is very great, since we know that, mentally, insects stand at the head of the invertebrate, as man stands at the head of the vertebrate, world. The sense of smell is probably acute in some fishes, as, for example, the shark; this is the most active, if not the most intelligent, of fishes, and it has an olfactory mucous membrane which, if spread out, would cover some twelve square feet. The sense falls in value in the amphibia, reptiles, and birds, but rises again in the mammalia, though not in proportion to intelligence. Its extreme acuteness in the dog, the most intelligent of animals short of quadrumana, is well known. In man the sense of smell is subordinate, and even rudimentary. Olfaction adds to man's enjoyment, preserves him from some dangers, but does not very much extend his knowledge of his environment.

Yet, despite the comparative insignificance of this sense in man, its delicacy is most marvellous, and by it we can appreciate more minute subdivisions of matter or the impact of more infinitesimal molecular vibrations than by any other of the avenues to the brain.

Professor Valentin has made some interesting and striking experiments in proof of this. He found that a current of air containing $\frac{1}{300000}$ milligramme of bromine, or $\frac{1}{500000}$ milligramme of sulphuretted hydrogen, or $\frac{1}{2000000}$ milligramme of oil of roses, could be perceived by the sense of smell. He also determined that the amount of odoriferous air which must pass over the olfactory membrane in order to excite the sense of smell was from fifty to one hundred cubic centimetres (one-tenth to one-fifth of a pint). He calculated, therefore, that the actual amount of bromine necessary to excite a sense of smell was $\frac{1}{6000}$ milligramme, of sulphuretted hydrogen $\frac{1}{10000}$ milligramme, of oil of roses $\frac{1}{40000}$ milligramme (about $\frac{1}{12000}$ of a grain).

Two recent experimenters, E. Fischer and F. Pentzoldt, of Erlangen, have found two other substances which far exceed the foregoing in their capacity for affecting the olfactory nerves. These were mercaptan (sulphuretted alcohol) and chlorphenol. They found that in air containing $\frac{1}{2500000000}$ milligramme to the cubic centimetre of chlorphenol, and $\frac{1}{2500000000000}$ milligramme of mercaptan, these substances could be appreciated, and it was estimated that only $\frac{1}{48000000}$ milligramme of chlorphenol, and $\frac{1}{480000000000}$ milligramme of mercaptan, is necessary to excite a sensation of smell. There exists, therefore, a substance which is so small a subdivision as $\frac{1}{2760000000000}$ grain, or not quite one-three-billionth of a grain is capable of calling out a nerve impulse. This subdivision of matter is quite beyond comprehension, yet the nose alone can appreciate it. The smallest subdivision appreciable by the eye through the spectroscope is $\frac{1}{140000}$ milligramme of sodium, which is a two hundred and fifty times coarser division of matter than the minimum of odor-exciting mercaptan.

On account of the extraordinary power of mercaptan it is proposed to put it to some practical use in testing currents of air, ventilation, etc.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

We have already alluded to the plan started in practical form, by a Southern physician, of creating a Congress of American Physicians and Surgeons.

This is to be composed of the nine national associations already in existence, viz.: The Surgical, Ophthalmological, Otological, Neurological, Laryngological, Gynecological, Dermatological, Climatological, Clinical, and Pathological. The plan provides that these societies shall meet in Washington at the same time, elect a president, and have some common sessions with addresses. Each society is to preserve its own name, constitution, and by-laws, hold separate meetings, and in every way preserve its own autonomy.

The advantages of such a meeting and mingling of different societies are at once apparent. Many physicians hold membership in two of the national associations, and to them it would be a convenience. Many would feel an interest and receive benefit from attending other meetings and coming in contact with professional brethren having a different special but a common general aim.

Aside from this, a congress of the nine different special associations would bring together a body of men which would do honor to American medicine. Most, if not all, of these societies have special requirements for membership, and it is quite safe to say that they include the best men, East, West, and South, in all the different departments of medicine.

The congress will not be entirely a meeting of specialists, since such associations as the Clinical, the Surgical, and the Climatological may include general practitioners.

But, despite the attractiveness of the idea of a congress, there are some drawbacks, and it will require a great deal of assiduous work to bring it into actual existence.

Some of the associations do not care to meet in Washington, which is not a medical centre, and where a congress of postmasters would receive much more social and official attention than one of medical men—each of whom controls but a single vote.

The question of finding a time and place agreeable to all is a serious one. Yet it should not prove insuperable, and some of our associations might concede a little for a common good.

TUBERCULOSIS IN CHILDREN AND THE QUESTION OF CONGENITAL TUBERCULOSIS.

It is generally asserted that chronic tuberculosis is a disease which is rare in early years but progressively increases in frequency. M. Jules Simon, in his "Conferences Therapeutiques et Cliniques sur les Maladies des Enfants," states that tuberculosis is rare in the first year of life; from the age of one to three it affects by preference the abdominal cavity, while from the age of three to ten one finds it oftenest in the cranial cavity; after the latter age pulmonary tuberculosis predominates, increasing in frequency with years, and attaining its maximum between the ages of twenty and thirty, or, as more recent writers have it, increasing in relative frequency even up to the later years of life.

With regard to tuberculosis in infants, and especially the question of congenital tuberculosis, Dr. W. Schwer, of Kiel, has recently (*Allgemeine Med. Central-Zeitung*, 1886, No. 6) contributed some interesting facts. Schwer's work is an inaugural dissertation, and is based on a study of the autopsies made upon infants at the pathological institute of the Kiel University. His statistics include 123 autopsies on tuberculous children made between the years 1879 and 1883, and are a continuation of Simmonds' statistics which covered the years 1873–1879. The following table shows the ages at which tuberculosis began to be observed:

Age.	[illegible]	[illegible]	[illegible]
Still-born	[illegible]	[illegible]	[illegible]
Under four weeks	[illegible]	[illegible]	[illegible]
Between 5 and 9 weeks	[illegible]	[illegible]	[illegible]
Between 3 and 5 months	[illegible]	[illegible]	[illegible]

Basing his opinion on the fact that no tuberculosis was found post-mortem in children under nine weeks of age, Dr. Schwer concludes that tuberculosis is never a congenital or connate disease.

The table continued is as follows:

Age.	[illegible]	[illegible]	[illegible]
6 to 12 months	[illegible]	[illegible]	[illegible]
2 years	[illegible]	[illegible]	[illegible]
3 years	[illegible]	[illegible]	[illegible]
4 years	[illegible]	[illegible]	[illegible]
5 years	[illegible]	[illegible]	[illegible]
6 to 10 years	[illegible]	[illegible]	[illegible]
11 to 15 years	[illegible]	[illegible]	[illegible]

From these figures the author concludes that tuberculosis is very prevalent in the first years of life and then gradually diminishes up to the time of puberty. Against this there will be very little dissent, but Dr. Schwer's view that tuberculosis is never congenital is not borne out either by his own statistics or those of others. It is only probable, and not certain, that the infants who died of tuberculosis at the age of nine weeks were not born with the disease. However this may be, a year ago Johne (*Fortschritte der Medicin*) reported a case of undoubted fœtal tuberculosis, and Dr. Haupt, of Soden, affirms that veterinarians have often observed fœtal tuberculosis in animals.

As to the distribution of the tuberculosis in children, Schwer analyzes 123 cases. In these there was observed tuberculosis of the liver, 104 times; lungs, 103 times; intestines, 63 times; meninges, 53 times; thyroid, 12 times; striped muscles, twice.

We cannot but think that tuberculosis exists more frequently among the children of the lower classes of Europe than among those of America. On this point, however, there are unfortunately no very trustworthy statistics, so far as we are aware.

The report of the New York City Board of Health, for the year 1875, gives the following:

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

This makes a mortality of 761 from tubercular disease in a total mortality under the age of one year of 8,540, which gives a per cent. of about eight. Schwer's per cent. of tuberculosis among 160 children dying between the age of six and twelve months was 17.5.

MAD KINGS.

The late King Louis II., of Bavaria, was of a mad family. If accounts are correct, his father was of unsound mind, and his brother is known to be an imbecile.

Dr. Ball, in his "Leçons sur les Maladies Mentales," describes a form of insanity that very well fits the case of King Louis. There is, he says, a kind of maniacal excitation and disordered action of all the faculties, without any clear derangement of intelligence. Ideas are quickly flowing and exaggerated, but there is no incoherence. The patients often show a remarkable development of certain intellectual powers, especially in poetic or artistic directions. Their minds are filled with speculations and new projects, and the moral sense is greatly weakened or perverted. Dr. Ireland finds another royal illustration of this psychosis in Mohammed Toghlak, Sultan of India, in the fourteenth century; and, as we will show later, it has plainly affected one of the czars of Russia, and very likely members of other royal families.

The German writers have given to this form of insanity the name of paranoia, and this was the diagnosis made by the late king's physicians.

In earlier times there were many royal families in whom mental disease and decay showed itself. Indeed, there is scarcely a family, whose members ruled despotically for many years, in which some taint did not develop. The gradual extinction of many of these families, through the degenerative taints which have developed, has been well shown by Dr. Jacoby and Dr. Ireland. Uncontrolled exercise of power, the free opportunity for the indulgence of every appetite and caprice, seem surely to bring on disease either in the individual himself or his descendants. In modern times monarchs have to regulate their conduct and restrain their passions more than formerly, and in consequence royalty is a much more healthful occupation than it used to be.

In the Claudian-Julian family, beginning with Julius Cæsar himself and ending with Nero, we have an almost unbroken line of neuroses. Cæsar himself was epileptic, but probably the disease developed late in life, from exposure and excesses, and did not much affect his health.

Augustus, his grand-nephew, had, it is believed, writer's cramp; Julia, his daughter, seems to have been little better than a nymphomaniac. She had an imbecile son. Tiberius was a man naturally heartless, cruel, and licentious. In his later years he seems to have lost all moral sense, and illustrated the most shameless sensuality and cruelty. Caligula, reputed great-grandson of Augustus, was epileptic as a boy, badly formed and weak-minded as a man. He stuttered, was insomnic, and apparently had hallucinations. Claudius was also weak-minded, timid, and credulous, with unsteady gait, weak knees, shaking head, and dribbling lips.

In Russia, the present House of Romanoff has shown plain evidence of the development of mental weakness and defects. The sister of Peter the Great was a brilliant woman, but his two brothers were weak-minded and had physical defects. Peter himself, though a man of genius, bore traces of the family neurosis. He had, at times, convulsions, and was, when young, the victim of a morbid antipathy to the water. Peter's daughter, Elizabeth, was a dissolute and hard-drinking woman. His grandson was weak-minded, coarse, and extremely licentious. The Emperor Paul, who succeeded Catherine II., was, according to Dr. Ireland, unquestionably deranged. His whims and fits of unreason were much more coarse and brutal in their tendency than those of King Louis, but they suggest the same malady implanted on a man of less refined nature and duller sensibilities. Paul was treated finally in much the same way as King Louis, only, as the former refused to abdicate, he was summarily strangled. The House of Romanoff has improved in the last three generations, as the result, doubtless, of the constant infusion of Teutonic blood.

A study of the royal families of France and of England would bring to light some interesting neuroses, but we have said enough to illustrate our subject.

THE DEATH OF PROFESSOR GUDDEN.

After all, the saddest thing in connection with the late King of Bavaria was the death of his physician, Professor Gudden. The last mad act of a selfish and useless life was to end the career of this distinguished and useful man. King Louis will be given a place in history because he was by chance a king. Professor Gudden's name will live because he contributed to science a new method of research, which has made an epoch in our knowledge of the structure of the body. The "atrophy-method" of Gudden is one now familiar to all students of medicine; it has helped immensely in elucidating the difficult problems of brain anatomy.

Professor Gudden died in the discharge of his duty, while struggling to prevent a madman from committing suicide. To his scientific honors he has added the crown of martyrdom; and so, with all the more care should his name be remembered and his memory cherished.

One Dr. Villavicencio [illegible] to go to New Orleans and start an institute for inoculating against yellow fever. To this the Louisiana State Board of Health object, and announce that if Dr. Villavicencio land with his microbes he will be disinfected and sent back.

News of the Week.

The Statue of Hunter.—On the 29th ult. a statue of John Hunter, "the father of scientific surgery," was unveiled in the new Museum at Oxford by Her Royal Highness Princess Christiar, in the presence of a large assemby of spectators. The statue is one of five statues, representing heroes of science, presented to the university by Her Majesty the Queen. It represents the great *savant*, with a remarkably keen and searching countenance, standing with the legs crossed and supporting himself on a pillar or post.

Auscultation of the Eyeball.—M. Gené has recently described to the Biological Society of Paris a new method of estimating the tension of the eyeball. This consists in auscultating the organ by means of M. d'Arsonval's telephone. The instrument is applied to the globe, and a sound, such as that of the interrupter of a faradisation instrument, made to pass; the differences of degree and intensity of the sound as perceived by the observer afford a valuable and accurate means of diagnosis. M. Gené's experiments being as yet somewhat incomplete, he hopes at some future time to lay the subject before the Society in greater detail.

Preventive Inoculation in Yellow Fever—A French Commission Appointed.—The subject of inoculation for yellow fever, as practised by Dr. Domingos Freire, of Rio de Janeiro, was brought under the notice of the Société de Biologie of Paris at a recent meeting. M. Rebourgeon communicated the results obtained by himself and Dr. Freire in December, 1885, and January and February, 1886. The weather during these months in Brazil was intensely hot, and yellow fever prevailed severely. Of 3,051 subjects inoculated at Rio, not one had died, whereas in the same districts and houses 278 non-vaccinated had succumbed to the disease. M. Rebourgeon said that the number of the inoculated had now reached 6,000, and not one of them had been attacked with the fever; and, what was more remarkable severe cases inoculated in the second stage of the disease had all recovered. In reply to M. Brown-Séquard, M Rebourgeon said that but few foreigners were inoculated, but yellow fever is at the present time creating great ravages among the Brazilians and mulattoes; the negroes even are being largely attacked, which is a rare occurrence, and the area of the disease was extending inland from the littoral. He explained that some specimens of virus sent two years ago to M. Cornil, and found by him to be worthless, had not been sent by Dr. Freire, but by opponents to his method. He had often inoculated himself, and was so convinced of the efficacy of the attenuated virus that he had frequently offered to undergo inoculation with the yellow fever itself. He presented a specimen of the vaccine to the Society for examination. In reply to M. Maurel, he said that he had met with yellow fever at an altitude of more than seven hundred metres; and had seen many cases among emancipated negroes, although less than among mulattoes, who were attacked in about the same proportion as the whites. M. Maurel attributed the former immunity of negroes to their vegetable diet, but since emancipation negroes

had largely adopted the customs of the whites, and consumed more animal food. A commission to study the method of inoculation was appointed, consisting of MM. Brown-Séquard, Cornil, Duval, Bourquelot, and Maurel.

The Report of the Albumin Test Committee of the London Clinical Society was recently made. In it the committee briefly reviewed the various modes of urinary testing for albumin in common use, and compared in turn Dr. Oliver's test-papers, Dr. Johnson's picric acid method, the potassio-mercuric iodide and acid, Dr. Pavy's pellets, the acid brine method, picric acid and brine, the acetic acid, and the nitric acid methods. The portability and delicacy of reaction of Dr. Oliver's papers were strong recommendations, but, apart from the question of easy carriage and compactness, the committee considered that nitric acid was most reliable and delicate. All the methods were said, however, to be respectively useful for the determination of the various proteids that might be contained in urine.

The Treatment of Stricture by Electrolysis.—In consequence of a paper read upon this subject before the Royal Medical and Surgical Society recently, by Dr. Stevenson and Mr. B. Clark, much discussion has arisen, and a large number of English surgeons are testing it. A special department for this treatment has been made at St. Peter's Hospital for Urinary Diseases.

A New Method of Treating Thoracic Aneurism.—Under this title Dr. Richard Barwell describes a method which he has recently employed. It consists in puncturing the sac with a hollow ivory needle, and passing through this and into the sac about ten feet of fine steel wire. This latter is connected with a galvanic battery (positive pole), and a current of nine or ten milliampères is passed through it for an hour. In the case in which this method was tried a considerable degree of firm coagulation was obtained, but the aneurism had a second sac and the patient was nearly moribund before the operation. He died a week later.

The Extent of Cholera in Italy may be gathered from the following: From May 18th to June 2d there occurred in Venice 221 cases, 110 deaths; in Bari, 59 cases, 23 deaths; in Ostuni, 13 cases, 4 deaths; in Brindisi, 5 cases, 2 deaths; in Oria, 9 cases, 5 deaths. The epidemic is growing at Venice, and about twenty cases a day are reported; the general tendency of the epidemic seems to be to progress toward the Austrian frontier.

Philadelphia County Medical Society and Female Physicians.—The Philadelphia County Medical Society, at its regular monthly meeting, June 2d, balloted for twenty-five candidates for membership, and elected them all except Dr. Clara Marshall, a professor in the Women's Medical College, who failed to secure the necessary two-thirds vote. Dr. Marshall's name had been proposed several times before, and the vote has always been against her. It was decided to push the prosecution of illegal practitioners, and money was contributed for that purpose. Three bogus doctors have already been sentenced to imprisonment, and fourteen more are under indictment.

Death of Dr. Horace P. Farnham.—After a long and painful illness Dr. Horace Putnam Farnham, of this city, died on June 9th. He was born in Salem, Mass., in 1822, was graduated from Harvard University in 1843, and immediately afterward began the study of law in the office of Rufus Choate. He then went through the course of the Dana Law School of Harvard, and was admitted to the bar, but never practised. He had a fondness for medicine, and after studying for some time he entered the Jefferson Medical College, of Philadelphia, from which he was graduated in 1860. In 1861 he began to practise in this city, and has lived here ever since, always having a large and lucrative practice. Dr. Farnham was a member of many of our local medical societies.

Dr. Oliver Wendell Holmes is to receive the honorary degree of LL.D. from the University of Cambridge.

Aneurism of the Hepatic Artery.—Dr. R. Caton has reported a case of this kind to the London Clinical Society, being the eleventh case on record. The patient, a man of forty, suffered mainly from symptoms of obstructive jaundice, but he had great pain and finally vomited blood.

"The Pictures of So-called Cigarette Makers that are displayed in the windows of cigar stores in this city insult hundreds of girls who make an honest living by rolling cigarettes in the factories. They are certainly a disgrace to the men who exhibit them."—*N. Y. Sun.* "Our contemporary, the *Sun*, is making war upon the indecent photographs and lithographs so plentifully exhibited in the windows of cigar stores. Its criticisms are just and proper. These pictures are becoming more and more immodest. They are not a legitimate advertisement, for it cannot be shown that they increase the sale of cigars and cigarettes; and they offend the public sense of decency."—*N. Y. Times.* The Record was the first to call attention to the point made by the *Sun*; and so far as the Richmond firm then referred to is concerned, no criticism can now be made. They have removed the photographs first exhibited. Unfortunately they left an example.

A New Society for the Prevention and Treatment of Venereal Diseases.—The New York Society for the Prevention of Contagious Diseases has been recently incorporated, with Dr. Herman Loewenthal as President, Dr. John Alsdorf, Secretary, and John J. Bowes, Treasurer. It will establish an infirmary for the reception and gratuitous medical and surgical treatment of sufferers from these diseases, either inherited or transmitted. Incidentally the Society will oppose all measures having for their object the State regulation of vice, and by establishing sanitary surveillance without legalization do away with any excuse for such regulation. The Society's Board of Directors includes well-known physicians, lawyers, merchants, and manufacturers, among whom are Professors T. Gaillard Thomas and Alfred L. Loomis, Coroner Levy, Judge Donohue, Frederick Hollender, Vice-President Charles L. Rickerson, of the Catskill Steamboat Company; Colonel Benjamin A. Willis, and Dr. James O'Reilly, who is to be Superintendent of the proposed infirmary.

LANOLIN AN OLD REMEDY.—It appears that lanolin is not entitled to take rank among the most recent additions to the materia medica, inasmuch as Culpeper, the venerable "student in Physick," described it in his work published in 1650. This has been lately pointed out by a correspondent of the *Chemist and Druggist*, who gives the following extract: "The Way to make Œsipus — Take wool cut off from the neck ribs, and under the pits of the forelegs of a sheep not washed, but well wearied, wash it well in warm water so long till it have left all its fatness in the water, then press it out and lay it by, let that fat and foul water be poured from on high out of one vessel into another a long time till it be froathy, then let the froath settle, and take off the fat that swims at the top, then pour the water to and fro again, till neither more fat nor froath appears, then wash the froath with the fat in clear water till it be cleansed from the dross and will not bite your tongue if you touch it with it; then keep in a thick earthen clean pot in a cold place." —*Canadian Pharmaceutical Journal.*

EXPERIMENTS WITH THE VIRUS OF RABIES.—On March 6th a man in Brooklyn was bitten by a dog; on May 14th he died, with all the symptoms of hydrophobia. Portions of the brain and cord were sent to Dr. Sternberg, at Johns Hopkins University, and this gentleman on May 17th inoculated three rabbits with the tissue by Pasteur's method. On June 2d one of the rabbits showed symptoms of the hydrophobia of rabbits described by Pasteur; on June 5th the second rabbit showed similar symptoms. Some of the same brain and cord from the Brooklyn victim was taken by Dr. E. C. Spitzka, and rabbits were also inoculated by him. So far as we can learn from published reports, the rabbits showed symptoms like those of rabies, but Dr. Spitzka believes that such symptoms of themselves prove nothing, since he caused the same by inoculating rabbits with inert material and setting up meningitis.

THE MEDICO-LEGAL SOCIETY OF CHICAGO is the title of a new medical organization which starts off prosperously with a membership of over one hundred. The Society has this peculiarity, that while its objects are primarily the study of medical jurisprudence, it also intends to afford mutual protection against blackmail suits. If any member of this Society is blackmailed, the Executive Committee of the Society will investigate the case, and if the member is innocent, defend him at the expense of the Society till justice is secured. This also applies, of course, to any so called malpractice suits if the member is innocent.

THE VERMONT STATE MEDICAL SOCIETY holds its next semi-annual meeting at Burlington, June 24th and 25th. Dr. D. G. Kemp is President; Dr. J. S. Richmond, Secretary.

BEQUESTS TO HOSPITALS.—Mrs. Silas E. Burroughs, of New Haven, has given $5,000 to the New Haven Hospital to endow a free bed, which will be used more particularly for consumptive patients. The late Christian J. Hoffman bequeaths, upon the death of his wife, $5,000 to the Philadelphia Presbyterian Hospital, with $25,000 more in case the grandson die without lawful issue.

Reviews and Notices.

MONTHLY NURSING. By A. WORCESTER, A.M., M.D., Fellow of the Massachusetts Medical Society. 16mo, pp. 250. Boston: D. W. Mason. 1886.

THIS is a manual to be placed in the hands of anyone aspiring to care for a lying-in patient. Its substance has been given in a series of lectures to the nurses at the Boston Lying-in Hospital. The book is full of sound common-sense and confines itself strictly to its subject. Its brief, terse style is just the ideal one for a manual.

VENEREAL DISEASES. By BERKELEY HILL, M.D., and ARTHUR COOPER, M.D. 12mo, pp. 132. Philadelphia: P. Blakiston, Son & Co. 1886.

THIS is a student's manual by two well known London authors, who have written a more pretentious work on "Syphilis and Local Contagious Disorders." The present is the fourth edition of the manual, conformed in arrangement to the larger work. There is nothing particularly new set forth in the manual, which, however, is clearly written. The authors are dualists. They do not accept as clearly proven the causative relation of the gonococcus (Neisser) to specific urethritis.

FIRST ANNUAL REPORT OF THE MAINE STATE BOARD OF HEALTH, for 1885. Compiled by A. G. YOUNG, M.D., Augusta, Me., Secretary.

THIS is a most creditable account of the hygienic progress of the State. Reports are given from nearly every section, relative to epidemics, peculiarities of disease, etc. We congratulate the Board on the results of its work.

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY OF MONTREAL, 1883–85.

THIS is a neatly arranged and compact volume of nearly two hundred pages. It consists of the minutes of the Society's meetings during the years named.

LECTURES ON SYPHILIS. By G. FRANK LYDSTON, M.D., Lecturer on Genito-urinary Diseases, Chicago College of Physicians and Surgeons; Professor of Surgery in Chicago Dental College. 16mo, pp. 184. Chicago: A. M. Wood & Co. 1885.

THE title of this book sufficiently indicates the auspices under which its subject-matter was first made public. The whole subject is clearly set forth in accordance with the present views on the subject. In explaining pathological phenomena, the views of Otis are closely followed. Like all treatises built up from hospital and dispensary observation, it contains many practical points. While each subject is handled in a very instructive manner, the chapters on treatment deserve special mention. They cover all the ground, are elaborate in detail without useless verbiage, and show plainly that the author has a thorough practical acquaintance with the management of syphilis and its various complications, as well as of the needs of the student and practitioner of medicine.

PERIPHERAL ATROPHY OF THE OPTIC NERVE.—It is stated in the *Boston Medical and Surgical Journal* that Fuchs has concluded, from an examination of more than sixty specimens, of all ages, that in the human adult there is, as a rule, an atrophy of certain optic nerve-fibres. The fibres which are thus subject to a physiological atrophy are situated: First, immediately beneath the pial sheath of the nerve; second, about the central vessels which are accompanied, as is well known, by a continuation of the pial sheath. The degeneration is a species of gray atrophy, and is found, as a rule, after the thirtieth year. The functional consequence of this atrophy would, theoretically, be an enlargement of the blind spot.

Reports of Societies.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, April 2, 1886.

A. Brayton Ball, M.D., President *pro tem.*

Dr. Samuel Sexton reported a case of

COMPLETE FACIAL PARALYSIS OCCURRING DURING AN ACUTE CATARRHAL INFLAMMATION OF THE MIDDLE EAR.

The patient, Mr. McA——, a semi-public, forty years of age, never had robust health, but always subject to head catarrh, and of late years to neuralgia from the irritation of defective teeth. His present trouble began in November last, when the amalgam plug in the lower right second bicuspid tooth became loose, and was replaced by a dentist after the pulp and nerve had been removed from the tooth, leaving it in a diseased and sensitive condition. At this time the patient was run down, and the pressure of his work in assisting at the service of the Roman Catholic Church was very fatiguing. On Christmas morning last he got up feeling badly from an exacerbation of head catarrh, and during the church service, in which heavy vestments are worn, he perspired freely, and the right side of his neck and head, which were uncovered, were exposed to a draught of cold air from an open window. This was followed by subacute aural catarrh and severe neuralgic pains starting in the right mastoid, extending to the neck below, and spreading up over the temporal region. There was a heavy feeling in the ears, with tinnitus and deafness, which were believed to have been increased by the quinine administered. On the second day complete facial paralysis of the right side occurred. The pain in the right mastoid was so severe as to mask other symptoms, and to confine him to bed for three weeks. For several weeks after getting up the paralysis was treated with the faradic and galvanic currents, and the ear was blistered.

I first saw the patient on March 18, 1886, three months after the trouble began; he was pale, weak, and very nervous. He could speak, close the right eye, and control food during mastication better than at first, but still very considerable paralysis of all the muscles of expression remained. From the first there has been considerable swelling on the jaw over the region of the dead tooth, and the entire right cheek is more easily flushed than the left, the skin being hyperæsthetic and sensitive to the touch, especially in shaving. The drumheads now show but little of the effects of the recent catarrhal inflammation. The posterior segment of the right is clouded from previous nutritive changes, and the left has a manometric cicatrix in the posterior segment, a result of perforative inflammation in childhood. His hearing is almost normal in the right ear, but in the left a loud voice only is heard.

The anomalies of audition are particularly interesting, owing, it is believed, to the paralysis of the tensor tympani, stapedius, and tensor palati muscles, which derive their motor nerves from the facial, since it is through these muscles that tension of the transmitting mechanism of the ear is maintained. Since the paralysis came on, his own voice is unnatural to himself; it echoes in the right ear. Sounds emitted from the movement of heavy trucks, coal rattled in a sheet-iron vessel, the larger pipes of the organ and the like, or the voice when low in pitch, give rise to a second impression of sound which is perceived in another key altogether, and resembles the rattle of the cords of a snare-drum. This sensation is also caused by gently rubbing the head about the ear. This supplementary phenomenon, known as acusis duplicata, or double hearing, is due to cognizance being taken of vibratory movements of the drumhead itself, which occur independently of the rest of the transmitting mechanism, *i.e.*, without causing excursive movements in the chain of ossicles. The rattling of the drumhead, in fact, is heard as would be any membrane loosely stretched across the external auditory canal and made to vibrate. Autophonous phenomena are experienced in the left ear, due to the loss of tension from cicatricial transformation. Although low voice is well heard in the right ear for the most part, yet are interruptions frequent enough to cause great confusion.

In reviewing the history of this case it would seem that the nerves affected by the dental irritation were in an exhausted state favorable to neuritis, and that the facial nerve, which runs in the inner wall of the tympanum, sweeping over the round window before descending in the aqueductus Fallopii, was specially liable to become affected through extension of the inflammation of the middle ear present. It is difficult to say whether the exposure to the draught of cold air or the middle-ear disturbance, first gave rise to the nervous trouble; in other words, we cannot tell whether it was an ascending or descending neuritis. It seems probable, however, that but for the presence of the dead tooth the patient might have escaped the facial paralysis, since catarrhal inflammation of the middle ear is not liable to extend itself to the facial nerve; even the much-exposed *chorda-tympani* nerve seems seldom to be affected. There was in this case no alteration in sensation of the tongue.

We are not left in doubt as to the peripheral origin of the paralysis in this case, since the temporo-facial branch supplying the occipito-frontalis muscle was involved, and its fibres are believed to have a central origin remote from the other roots of the *portis dura*.

The value of pain in the mastoid as a symptom in differential diagnosis is well shown here. Intense and prolonged pain was experienced, due to the neuritis alone, in all probability, and hence the operation of trephining the mastoid for the relief of inflammation of the antrum or cellules would have been inadvisable.

On extraction the tooth giving rise to the irritation of the inferior dental nerve was found to have its pulp cavity carelessly filled with amalgam, and the canal of its root was loosely packed with cotton-wool down to within a quarter of an inch of the apex. The canal has an unhealthy look, and the alveolus was in a state of inflammation.

The patient has been treated by electricity, but not thoroughly, and blisters have been applied about the ear.

TWO TRACHEOTOMIES OF THE SAME DAY IN ONE FAMILY —WATER POURED INTO TRACHEAL WOUND TO ASSIST EXPECTORATION.

Dr. George F. Shrady referred to two cases of tracheotomy, which he had recently performed on the same day upon two sisters, aged respectively two and four years. He was called to them the day previous to the operations. They were both affected with diphtheria. In the younger the disease was in the fauces and extended downward, and in the older it was confined to the larynx and trachea. Both developed symptoms of suffocation rapidly.

The temperature in the younger child was 102° F., and in the older 101° F. The operations were performed without mishap—first upon the younger sister, and in a few hours after upon the older one. The younger although temporarily relieved of the difficulty of breathing, died of secondary croup twelve hours afterward. The older child recovered, discharging through the tube on the fifth day a bifurcated fibrinous cast. In neither of the cases was any chlorate of potash or iron administered, the treatment consisting in the freest possible stimulation by milk punch. The latter, he remarked, was his main-stay in desperate cases. This opinion was shared by Dr. Ripley, who kindly saw these cases in consultation, and assisted at the operations.

There was one item in the after-treatment to which he wished to call attention.

There was, as is usual, a great deal of expectoration through the tube, which was assisted by the inhalation of steam. But the most prompt benefit was derived from pouring lime-water by the teaspoonful directly into the trachea through the wound. This was done at the suggestion of Dr. Ripley, who had frequently used it in his practice with occasional good result.

Dr. Shrady had never seen this method tried before and was struck by its good effects in dislodging tough mucus and shreds of membrane.

Dr. Ball said he was unable to see how the lime-water could be of any special service, as it was expectorated so quickly, and thought that plain water would be equally as good.

Dr. Shrady said that so far as the mechanical effect was concerned, water would answer the same purpose. The possible advantage of the lime-water was that in case any was retained it might have the effect of loosening the phlegm or of possibly helping the separation of membrane.

Dr. Ball also referred to the temperature in Dr. Shrady's cases, and then said that the reason why he asked whether fever was noticed at the outset of the diphtheria of the larynx, no exudation being in the pharynx, was on account of a case at Bellevue Hospital, in which tracheotomy was performed, but the child died of extension of the exudation into the smaller bronchial tubes. Two or three days afterward a child in the same building—not in the same ward—was taken with what appeared to be a simple cold, attended by little or no fever; but in the course of forty-eight hours laryngeal stenosis developed, with scarcely any febrile disturbance, and they were inclined to regard the disease as catarrhal in character. The difficulty in breathing, however, increased rapidly, and tracheotomy became necessary. When the operation was performed there was slight fever, but it subsided entirely, and the tracheotomy gave the child complete relief from the distressing symptoms. The child seemed to get well. It remained without fever for ten days; but it was impossible to remove the tube on account of the difficulty of breathing which at once ensued. No membrane was expectorated during the next ten or twelve days, and they reached the conclusion that they had performed tracheotomy in a case of catarrhal croup. At about this time the child became feverish, and died within forty-eight hours. At the autopsy membrane was found commencing in the larynx and extending down to the small divisions of the bronchi.

The theory was that there had been diphtheritic croup in the larynx, which remained stationary after the tracheotomy for ten or twelve days, and then lighted up and extended into the smaller bronchial tubes. Dr. Jacobi had called attention to the fact that in catarrhal croup, when stenosis depended upon swelling of the mucous membrane, without false membrane, there is almost invariably more or less fever; but that in diphtheritic croup, when there was no false membrane in the pharynx, the case was very often unattended by fever; and that the absence or low grade of fever, combined with laryngeal stenosis, made it almost certain that new false membrane was present. The point was, that while fever attended laryngeal and tracheal diphtheria, cases died in which fever was *absent*.

The Value of Lateral Incisions of the vulva, for the purpose of preventing rupture of the perineum, is not generally conceded, but is apparently brought out by the recent investigations of Crede and Colpe. Out of 1,000 primiparæ in the Leipzig Maternity Hospital, incisions were not thought necessary in 741 cases, but nevertheless ruptures occurred in 104 of these favorable cases, that is, in fourteen per cent.; in the remaining 259 cases rupture seemed inevitable and the lateral incisions were made, with the result that the perineum was torn in 29 cases, or about eleven per cent.

NEW YORK ACADEMY OF MEDICINE.

SECTION OF PRACTICE OF MEDICINE.

A. L. Loomis, M.D., Chairman.

TRACHEOTOMY IN CROUP.

Dr. Alexander Hadden said he presented the paper as a continuation of one published in The Medical Record in 1880. He gave the histories of twelve cases in which he performed tracheotomy. The treatment, aside from the operation, consisted usually of an application of persulphate of iron and glycerine to the mucous membrane of the trachea at the place of incision, of slacked lime in the room, in some instances the use of a weak solution of bromine. In the diphtheritic cases the treatment was stimulating from the first.

Tracheotomy was followed in the first case with expectoration of membrane, relief to breathing, and the patient recovered. In the second case death took place eighteen hours after the operation of emphysema of the lung. The third patient died of emphysema of the lung twenty-four hours after the operation, having exhibited no diphtheritic complication. In the fourth case there was a thick, firm membrane of the tonsil and pharynx, evidently invading the larynx. The patient was given large doses of the tincture of chloride of iron and stimulants. Dyspnœa increased; tracheotomy was performed; the child did well for three days, but died on the fourth of bronchial obstruction and diphtheritic asthenia. The fifth patient was a boy, aged five, who had a croupy membrane of the tonsil extending upward into the nares and downward into the larynx. He was found walking about the room; the invasion was very insidious. Dr. Hadden placed him in bed, applied persulphate of iron and glycerine to the throat. Tracheotomy became necessary, after which the iron and glycerine was applied to the tracheal mucous membrane. Six days later the membrane had entirely disappeared. The tube was removed on the eleventh day, all signs of obstruction having disappeared. On the twelfth day there appeared albumen in the urine and paralysis of the muscles of deglutition. The patient died of paralysis of the heart. He had not received the nursing which he should have had, and death took place from causes not due to obstruction of the air-passages. The sixth patient died of pulmonary emphysema. The seventh patient recovered against their expectations. One other member of the family died from the disease. The eighth patient died, at the end of thirty hours after tracheotomy, of pulmonary emphysema and asthenia. The ninth patient had membranous laryngitis following measles, and died of broncho-pneumonia. In the tenth case he was called to perform tracheotomy when dyspnœa was extreme; the tube pushed the membrane before it, and the patient died on the operation-table. The eleventh patient died thirty hours after the operation of diphtheritic asthenia. The twelfth patient was seen with Dr. Reid; there was severe tonsillitis, no membrane was visible, and the temperature was 103° F. When Dr. Hadden arrived the child was cyanotic. Tracheotomy was performed. The lumen of the trachea was almost occluded. At first it was thought that a membrane was obstructing the tube, but examination of the trachea showed its mucous membrane to be smooth and the submucous tissue highly œdematous. Artificial respiration and irritation of the inner surface of the trachea enabled them, after about ten minutes, to bring about quite uniform respiration, and after about half an hour a very unpromising case was markedly relieved. The patient went on to recovery. The case was instructive because extremely rare. Dr. Hadden had never met with a similar one. It was evidently a case of œdema of the submucous tissue of the trachea, with but little catarrhal inflammation, and without any pseudo-membrane whatever.

It would be observed from the cases presented, that the author had made a distinction between croup and diph-

theria, and true membranous croup. He would not enter upon the question of the duality of these diseases further than to explain the details of his treatment. Many of the ablest authors at home and abroad held that where there was a pseudo-membrane diphtheritic inflammation was present. For the opinions of these gentlemen he entertained profound respect, but it seemed to him they were based more upon the revelations of histology than upon clinical phenomena. Pathology had not shown a difference between the lymph of varicella and small-pox, yet there was a vast difference between the two diseases. Clinically, croupous laryngitis and tonsillitis was markedly sthenic in character, non-infectious, of comparatively short duration, not leaving much constitutional disturbance. The disease began with marked symptoms; the temperature and pulse ranged high. Diphtheria, on the other hand, was asthenic in character. It might be in some cases ushered in with convulsions, followed by swollen tonsils, cervical glands, high temperature, but these were very malignant cases, as a rule; usually it began with general malaise, with fever, perhaps not higher than 100° F. So little was the throat affected that it was apt to be overlooked by the attendants.

It was important, according to the nature of the disease, whether a true croup or a diphtheria, to adopt an entirely different plan of treatment. The one called for treatment which was depressing in its effects, as cathartics, emetics; while the other, in its invasion and even at the height of its development, required stimulating and vigorous supporting treatment. Both required absolute rest in bed. If a child was attacked with croupy symptoms which he believed to be of a pseudo-membranous character, during the febrile stage he at first administered an emetic, afterward a calomel cathartic, and febrifuges of squills, aconite, or veratrum viride, as the case might be. On the following day, while the fever continued, he sometimes gave small doses of antimony. When the fever subsided he used iron and glycerine as a local application several times a day, continued until the exudation disappeared. If the croupy symptoms increased beyond a huskiness of the voice, he placed the patient under a steam tent. He gave a generous liquid diet, and kept the bowels free by a mild cathartic. Careful nursing, iron and quinine, constituted the main elements of treatment during convalescence.

On the other hand, if the case were one of diphtheria, he gave no depressants, but a mild cathartic, stimulants, iron and soda mixture, solution of bromine (Thomson's), the local application of iron; enjoined rest, kept the atmosphere moist with steam, because it was soothing to the air-passages, careful attention to the temperature of the room.

Dr. Hadden referred to the success which Dr. O'Dwyer had had with intubation of the larynx. Dr. Hadden had not yet employed the method, but he was disposed to think well of it from hearsay. His last twelve cases of tracheotomy had not been quite as successful as those already reported.

Dr. J. Lewis Smith opened the discussion with a brief paper on the local treatment of croup prior to the performance of tracheotomy. Alkaline inhalations had been in use in the treatment of croup as far back as the recollection of the oldest physicians extended. They had a solvent effect upon the fibrin of the croupous membrane. As water took up only a small portion of lime, it had been recommended of late years to increase the alkalinity, and to add to the alkaline medium the digestive ferment tripsin. If asked how to treat membranous or diphtheritic croup prior to a resort to surgical methods, Dr. Smith knew of nothing better than the constant or almost constant inhalation of the following: Tripsin, a quantity sufficient, or as much as could be added to the other ingredients without clogging the atomizer; bicarbonate of sodium, two drachms; lime-water, six drachms. The only objection to tripsin was its expensiveness. The result of the treatment of croup by inhalation depended to a great extent upon the earliness of its commencement. In his opinion the slight laryngeal catarrh which was the forerunner of croup might in a considerable proportion of cases be removed by inhalations, and the disease under discussion be prevented.

But if these slight symptoms passed unheeded, and inhalations were not used at the proper moment, and pseudo-membrane formed on the laryngo-tracheal surface, we all knew how incapable were inhalations of checking the progress of the membrane and of saving life. The physician was often not summoned until the disease had become fully established. One benefit of inhalations was that they rendered the muco-pus thinner, and they probably liquified the fibrin present in the pus.

Muriate of pilocarpin was recommended by those who used it in diphtheria, on the theory that by the abundant secretion from the surface of the air-passages which it caused it produced detachment of the pseudo-membrane. But, Dr. Smith said, it must be remembered that the expiration of the bronchial secretion was difficult in membranous croup, on account of the obstruction produced by the pseudo-membrane, so that pilocarpin was likely to cause filling up of the bronchial tubes, increased dyspnœa, and sudden death. This effect he had seen after the employment of pilocarpin, and warned physicians against its use.

Dr. Smith had been very favorably impressed with O'Dwyer's laryngeal tube for the relief of dyspnœa, and he had seen it rescue patients from impending suffocation in a number of cases of croup. Dr. O'Dwyer had spent some years in improving the instrument, and he now used one which seemed to be as nearly perfect as it could be made. It was not until recently that Dr. O'Dwyer had been made acquainted with the fact that Bouchut, in Paris, employed intubation of the larynx, and advocated its use in the place of tracheotomy, in 1858. Trousseau, being a great advocate of tracheotomy at that time, opposed the method, and the result was that a committee was appointed by the Academy, of which Trousseau was the head, and in their report they condemned intubation and recommended tracheotomy. The following facts relating to the use of O'Dwyer's tube could be considered as established: (1) the tube can be inserted in the fractional part of a minute, and can be removed in less than a minute; (2) in all cases in which the disease is confined to the larynx and trachea, it relieves dyspnœa as effectually and permanently as does tracheotomy; (3) in all cases of urgent dyspnœa or great prostration intubation is preferable to tracheotomy, since it can be quickly performed and without loss of strength accompanying hemorrhage; (4) the consent of the family can be obtained for tubage when they refuse it for tracheotomy; (5) there is no antagonism between tubage and tracheotomy, but tubage should precede tracheotomy, although the latter procedure was not likely to give relief when the former failed.

Dr. John H. Ripley said he had nothing very new to add on this subject. During the last six years he had made very little progress in the treatment of membranous croup; so far as he was concerned, the treatment was not any more successful that it was six years ago. Some epidemics had been more severe than others. His last fifty cases of tracheotomy had been more successful on the whole than the first fifty. In his first fifty about one in four patients operated upon recovered; during the last three or four years one in three and a fraction had recovered. He had done tracheotomy altogether one hundred and fifteen times. So far as he was able to judge, there had been no improvement in the general treatment except that patients got less medicine. In his last fifty cases he had given very little treatment aside from stimulants and nutrition. Formerly he gave chlorate of potassium very freely, but now he gave very little. Careful and continued examination of the urine of the

children showed that nephritis was a common complication, and he believed that chlorate of potassium was injurious in such cases. He thought it was injurious in small doses, and it was a well-established fact that it was a dangerous drug in large doses. He employed steam after the operation. He preferred simple steam to medicated steam. In one case in which he performed tracheotomy on a little child, the steam was medicated with a small proportion of carbolic acid. The mother thought that a little being good, more would be better, and they discovered that she had increased the quantity of the acid by the symptoms of poisoning which the child manifested. The patient finally got well.

Dr. Ripley was glad to see some support in the paper of his view, that children after tracheotomy for croup did not die of pneumonia. The author had said that five of the patients died of emphysema; Dr. Ripley thought it probable they died from extension of the membrane downward, producing emphysema. He supposed it was not the emphysema which caused death, for emphysema might exist indefinitely.

The author seemed to attach considerable importance to applications of persulphate of iron, in the belief that it prevented the formation of membrane. But if it prevented the formation of membrane simply at the point of application it would not do much good, for children did not die of membrane in the trachea.

The question of duality of croup and diphtheria had been up for discussion at almost every medical society in this city, and it was not necessary to discuss it this evening. He did not think the author had advanced anything which would go far toward settling the question. He said this with all courtesy to Dr. Hadden. It was said that in diphtheria there was a low temperature, and in croup a high temperature. Dr. Ripley had seen many cases of diphtheria in which, at the onset of the disease, there was a temperature of 104° or 105° F.

And regarding what the author called membranous croup, but what Dr. Ripley would call primary diphtheria of the larynx, the temperature ordinarily was not very high. After tracheotomy a high temperature was no proof of pneumonia; the child might die of secondary croup with a temperature of 105°, or with a temperature of 97°. He hoped to be able to demonstrate beyond contradiction, sooner or later, that it was bronchial croup which killed the majority of children who died after tracheotomy, and not pneumonia. Those opposed to him would call attention to, perhaps, little patches of pneumonia, but these would not produce death. It took a good deal of pneumonia to kill a child, as a rule.

Dr. Joseph E. Winters said he had not heard all the paper, but he inferred from the discussion that the author made a distinction between diphtheria and membranous croup. As Dr. Ripley had said, this subject had been extensively discussed in this city. Dr. Winters believed, from clinical and post-mortem examinations, that they were identical. We had no anatomical basis on which we could differentiate a membranous laryngitis due to cold and a membranous laryngitis of diphtheritic origin. If there was a membranous non-diphtheritic laryngitis, it could not be demonstrated clinically or pathologically from laryngitis of diphtheritic origin.

Dr. Winters believed that the extension of the diseased process into the larynx in diphtheria was only accidental; that it was not the natural tendency of the disease to spread into the larynx, but that such extension was due to exposure and the influence of cold. He had never seen a case of membranous laryngitis in the course of diphtheria which could not be attributed to cold or improper local treatment. As to local treatment, he did not believe it was curative; on the contrary, he believed that in a great many cases it was injurious. He was sure he had seen children recover after suspension of local treatment, who would have died had he persisted in the violent application of local measures which were so often used. The inhalation of the fumes of sulphurous acid produced a moisture of the throat and gave the patient great comfort, when a healthy person might find them very disagreeable. He thought patients did better with small doses of quinine and larger doses of iron than when they received nothing.

Dr. A. Jacobi asked Dr. Hadden whether he had meant to say certain of his patients had died of emphysema, or whether he did not mean of pulmonary œdema?

Dr. Hadden replied of pulmonary emphysema.

Dr. Jacobi would have to differ from him. When he found emphysema at autopsy, he would not claim that it had been the cause of death. He would say that it was only one of the consequences of the disease.

There was one fact spoken of by the author which was of great importance, namely, paralysis of the muscles of deglutition at an early period. Dr. Jacobi had seen a few cases in a long practice of paralysis of the muscles of the mouth, the result of œdematous effusion, and it was necessary to give food by a tube. When this condition arose there was great danger of food entering the air-passages and exciting a fatal pneumonia.

Another interesting fact was the case related by the author in which there was œdematous swelling of the submucous tissue at the seat of the operation which obstructed the tube. Dr. Jacobi had seen this condition very few times, and always with a considerable amount of pulmonary œdema. But he had never seen submucous œdema to such an extent as to contract the lumen of the trachea.

Again, the author had stated that in one case the membrane in the trachea was quite adherent. The stress which he failed to lay upon this fact Dr. Jacobi would now lay, for certainly when we opened the trachea and found a thick diphtheritic or croupous membrane that membrane was not usually embedded in the tissue. It swam, as it were, on the mucous membrane. This case offered stronger proof against the duality of the two diseases than the author had been able to bring in favor of their duality.

As to treatment, he would say that when steam was used it should not be produced by an alcohol-lamp or gas-jet, which burned up the oxygen in the room, but by a kettle on the fire, and conveyed through a cylinder under the bed-sheet surrounding the patient. He did not agree with Dr. Hadden that the temperature could be taken as in any way pathognomonic.

Dr. Jacobi related a case illustrating his statement that whenever one had a case of uncomplicated laryngeal stenosis, and no elevation of the temperature, he could feel satisfied that it was a case of membranous croup, and not of catarrhal or inflammatory croup. In inflammatory or catarrhal croup there was always elevation of temperature.

Dr. Henry D. Chapin would say a word with regard to tripsin, which he believed he was the first to use in croup. Certainly outside of the body it dissolved the membrane, and inasmuch as it was not irritating, he thought the fellows need not hesitate to use it through fear of doing harm.

Dr. Hadden, in closing the discussion, said that emphysema in the cases referred to was evident on physical examination. As to the use of persulphate of iron with glycerine, he was convinced of its benefit. There was a tendency for the membrane to extend from the tonsils down into the larynx, which he thought it tended to prevent. It constricted the capillary vessels, and enabled the mucous membrane to throw off the pseudo-membrane much sooner. It was not a painful application; it was soothing after being applied. He also believed in keeping the throat clean with a weak bromine solution.

Dr. Brown gave the result of intubation by O'Dwyer's method in twenty-five cases of membranous croup in the New York Foundling Asylum. In fifteen, which had already been reported in The Medical Record, there were four recoveries; since then it had been employed in ten cases with two recoveries.

The Academy adjourned.

MEDICAL SOCIETY OF THE STATE OF NEW JERSEY.

One Hundred and Twentieth Annual Convention, held at Sea Girt, N. J., June 8 and 9, 1886.

TUESDAY, JUNE 8TH.—FIRST DAY—AFTERNOON SESSION.

THE meeting was opened with prayer by the REV. DR. BROWN, who also made the address of welcome in a few happy remarks.

DR. PIERSON then made the report for the Committee on Credentials.

Dr. M. C. Hazen, delegate from Connecticut, and all other delegates, were invited to sit with the Society.

The minutes of the preceding meeting were read and approved.

DR. BALDWIN, Chairman of Committee on Business, reported the following subject for discussion at the next annual meeting of the Society, viz., "What is the Personal Experience in the Use of Antipyrine, and does it permanently Reduce Temperature?"

TREASURER'S REPORT.

Total receipts, $1,900.04; balance, $2,050.

The discussion was opened upon the results of the use of the muriate of cocaine in ophthalmic surgery, and also in general practice, as developed by the experience of individual practitioners.

DR. C. J. KIPP, of Newark, in speaking of

THE USE OF COCAINE IN OPHTHALMIC SURGERY

said he had used it in many operations upon the eye and had not been disappointed in its anæsthetic effect. He has, since its introduction, done away very largely with the use of ether and chloroform.

In cases of iritis it subdues the pain; in fact, in all painful affections of the eye he has found it of great benefit, especially when there is photophobia and lachrymation. In conjunctivitis he has not found it to be of much use. The doctor has not used it in enucleation of the eye. He has never witnessed any bad effects from its use.

DR. BOARDMAN REED, of Atlantic City, said it had been his experience that the persistent use of cocaine, in cases in which the mucous membrane was hypertrophied and congested, led to an exaggeration of the condition.

DR. KIPP said this result might be obviated by the use of caustic immediately after the application of the cocaine.

DR. OSBORNE, of Newark, had found it useful in allaying the pain of quinsy, and in rendering the tissues painless in small operations.

DR. PARRISH had used it in cases of melancholia, with apparent temporary effect. He had used the wine of coca with better success.

DR. WATSON had used it in a case of amputation of the thigh, injecting the cocaine at many points along the line of incision. While the patient suffered but little pain during the operation, his mental agony was distressing. Dr. Watson thought it unwise to employ cocaine in operations of such magnitude.

EVENING SESSION.

DR. JOSEPH PARRISH delivered the

ANNUAL ADDRESS OF THE PRESIDENT,

and took for his subject the

GEOGRAPHY OF MALARIA.

He said that to the unprofessional mind it means chill, fever, aching bones, creeping rigors, and all or either of the symptoms which announce the advent of the fever, whether it be ephemeral, intermittent, remittent, pernicious, or continued.

To the professional mind it covers a range quite as extensive, and is used with a vague and limitless meaning that is as surprising as it is groundless. The doctor questioned whether there was another word in the nomenclature of medicine that is employed in such a careless and indifferent sense as this single word *malaria*. For a number of years the doctor has thought that the phenomena of these fevers could be fairly accounted for without penetrating the realm of mystery or assuming the existence of an impalpable poison that has so far evaded the most thorough microscopic investigations and failed to disclose itself under the most rigid chemical analysis. He does not deny the existence of marsh poisons. On the contrary, he recognizes the fact that in the process of decomposition there is eliminated a variety of gases, either or all of which may be poisonous to human blood and tissue; but he did not feel relieved by this admission, for he is confronted by a stubborn fact which is the result of observation and experience during many years, and that fact is that similar, and even identical, effects are exhibited in localities where there are no paludal conditions and no chance even for poisonous exhalations from the soil. With such antagonistic conditions and the appearance of similar morbid phenomena the conclusion is inevitable that there is at least a lack of uniformity in the etiology of these fevers, which fact suggests the following inquiry:

If it can be shown that the characteristic chill, fever, and sweat, prevail in mountainous, rocky, and arid places, may not the marsh theory be excluded, even from localities where marsh is the prevailing type? In other words, if it can be shown that like symptoms can be traced to causes that are identical both in regions of mountains and rocks, as well as in delta and swamp, why need we resort to the inexplicable hypothesis of paludal miasm as the cause? It is generally admitted that what we recognize as malarial disorders prevail most extensively in hot climates, so that the focus of malaria may be said to be within the tropics. It should be remembered also that in such tropical regions the malarial type of disease is most apparent at those periods of the year when there is the most sudden transition from the greatest heat to the greatest cold.

DR. PRICE dissented from the views advocated by Dr. Parrish. He did not think that chill alone could be the cause of malaria.

DR. ROGERS considered it a mistake to say that an ordinary cold might be a cause of malarial manifestations. In genuine malarial fever (intermittent) there is a recurrence of symptoms, in the case of an ordinary cold there is none. In malarial fever the symptoms recur after the effect of the medicine has gone.

DR. STEVENSON argued against Dr. Parrish's theory, stating that on the Atlantic slope of New Jersey, south of Burlington County, for a distance of about forty miles from the coast, there was no malaria, while in the section of country adjoining on its western side, and south of Camden County, there is a great deal of malaria.

DR. B. REED, of Atlantic City, thought the cases of "malaria" reported as developing at Atlantic City were misnamed. He considered all the cases due to sepsis, or to the influence of typhoid-fever poison.

DR. FISHER spoke in favor of the marsh theory.

DR. BENJAMIN spoke of newly upturned earth as a cause.

DR. T. J. SMITH, Chairman of the Standing Committee, reported upon

THE HEALTHFULNESS OF THE VARIOUS COUNTIES.

In Essex County epidemic influences have been felt during the last year. In Newark there have been many cases of diphtheria and croup. In Atlantic County throat and lung diseases have prevailed. In Mercer County there have been quite a large number of cases of scarlatina, diphtheria, and typhoid fever. In Middlesex County dysentery has been prevalent. In Monmouth County there was quite a severe epidemic of measles. In Salem County a more than usual amount of alimentery disorders were observed. In concluding

his report he stated that there has been less sickness in the State than in several years. Malarial fever is becoming more rare each year.

Fevers have been moderate in amount, and singularly governable by treatment. The ordinary endemics—rubeola, whooping cough, and parotitis—were less frequent and of milder type than in years past. Diphtheria has been restricted in its prevalence to a few localities. Scarlet fever was less in amount, and did not present any striking features. A limited number of cases of puerperal fever have been reported. There have been a few cases of cerebro-spinal meningitis. The State has been almost exempt from small-pox.

Dr. Elmer, Corresponding Secretary, then made his report.

Wednesday, June 9th—Second Day—Morning Session.

Dr. Godfrey, a delegate to the American Medical Association, gave a very interesting report of that Association.

Dr. E. M. Hunt moved that so much of the report as did not refer to the suggestions of the St. Louis Society be accepted. His motion, after considerable debate, was carried.

Dr. W. B. Bronson and M. C. Hazen, delegates from Connecticut, made a few congratulatory remarks, which were acknowledged by Dr. Parrish.

Dr. H. Genet Taylor made a report on

MEDICAL EDUCATION.

He said that a casual glance at the history of the New Jersey Medical Society, and a retrospective view of the past seventy years, and particularly the original Act under which this Society was incorporated, is conclusive evidence that in order to elevate its standard, and to guard against the evils growing out of a want of knowledge of our science, the Legislature of New Jersey conferred upon us certain sacred trusts, to protect which, we, as successors of the handful then composing our Society, are bound by every principle of honor. In the supplement passed two years later, the same ideas were again promulgated, and further powers given to carry into effect the original object of corporation. Under this Act and supplement the Society worked successfully until empiricism and quackery began to assume gigantic proportions, when, in order to better protect the rights conferred under the original Act, relief was again given in the Act of 1830, which Act, if in force to-day, would guard our thresholds and place the medical profession in New Jersey beyond the reach of impostors and those unworthy of the honors of membership. In the year 1864, when surrounded by many difficulties at almost every step, we concluded to surrender all our remaining rights to the State, and organize under a comparatively new law which was then passed, but which confers few powers beyond ordinary corporation privileges. So now to-day, with a large increase in our membership, and a much larger one in the form of quackery and illiterate pretenders of the healing art, we cannot claim that protection conferred fifty-six years ago by the Act of 1830, and, unless an effort is made, or some action taken to reform our present system, I feel the day is not far distant when the Medical Society of New Jersey will exist only in name. The doctor urged that the student of medicine should be possessed of knowledge sufficient to make an impression on the popular mind. He should devote himself in his early years to the study of the classics, to researches in metaphysics, mathematics, and natural sciences, for, as Bishop Barclay justly says, "that it is of the number of those preparatory studies which may be compared with crops raised, not for the sake of the harvest, but to be ploughed in as dressing to the land." He further said that "that rivalry between schools which should lead to constant efforts to elevate the character of medical instruction, and to raise the moral value of the diploma as a certificate, has been perverted, under the influence of this mistaken system, to results precisely opposite."

Dr. W. K. Newton, of Paterson, N. J., read a very interesting paper on

THE RELATIONS OF THE PHYSICIANS TO THE STATE.

He said that while the physicians of to-day know more about disease, its causes, pathology, and treatment, than ever was known before, they do not, perhaps, exercise the same therapeutic instinct possessed by their fathers. Much may be learned by observing the habits and practice of our ancestors in medicine. If they were less scientific than are we, they were nearer to the hearts of the people, were oftener sought to counsel in the affairs of State, and had more influence in political life. Dr. Newton emphasized the fact that the physicians do not show sufficient interest in the affairs of the State. He said that the doctor should be found (as an interested party) in the front rank, and not behind, shirking his duty. He would not have the doctor converted into a political wire-puller, for then he would be a hybrid, but he would have him take such a personal interest in the political affairs of the State as to at least make an effort to clarify the present unclean condition of State politics. He then pointed out some of the exemptions granted to the doctor by law, also the duties imposed. He also stated that a physician as an expert cannot be forced to testify unless compensated; further, that as an expert he may state conclusions and hypothetical facts, whereas an ordinary witness may state only facts.

DISCUSSION UPON THE REPORT OF THE COMMITTEE ON EDUCATION.

Dr. T. J. Smith thought that while it might be desirable for some reasons to urge the acceptance of the recommendation of the Committee, for certain other reasons it might not be practicable. He thought that the young men anticipating the study of medicine would conclude to go to one of the colleges in New York or Philadelphia, and thus escape the provision made in their behalf by the New Jersey Medical Society. As a member of the Committee he would not urge its acceptance, if it could be shown to be impracticable.

Dr. Benjamin thought we should consider the interests of mankind rather than the pecuniary interests of the colleges, and would therefore urge the acceptance of the recommendation of the Committee.

Dr. Sehlbach, in a very positive manner, objected to a part of the recommendation, namely, that every person contemplating the study of medicine shall be able to translate with facility three books of the "Commentaries" of Cæsar, "two Orations" of Cicero, and two books of the "Æneid" of Virgil; Greek language, including its grammar, the "Anabasis" of Xenophon, and two books of the "Iliad" of Homer. Dr. Sehlbach considered it unnecessary to be able to translate so much of Latin and Greek in order to begin and successfully complete a medical education. He thought the elements of physics, chemistry, and natural history, including botany and zoölogy, were far more important. As a method of annihilation he considered the course proposed by the Committee a good one, for it proposed to allow Xenophon to knock the trembling applicant down, Cæsar to kick him out of the window, and Cicero to trample upon him. He therefore urged that the further consideration of the question be indefinitely postponed.

Dr. Rogers thought that Dr. Sehlbach would annul all law and order, and institute a pernicious individual liberty. We should create a healthy public sentiment upon this point, and elevate the standard of medical education by careful preliminary instruction. He claimed that unless a student understood Latin he could not fully understand his own language, and therefore but imperfectly grasp the meaning of the terms so frequently used in every text-book and every lecture.

Dr. Pennington fully endorsed Dr. Rogers' views, and opposed Dr. Seabach's sentiments in a very emphatic manner. He considered the classics as essential if the mental faculties are to be properly trained and developed.

Dr. G. H. Ballery then read an unusually instructive paper on

ABDOMINAL SURGERY.

He cited many cases which had come under his own observation, and which were replete with information and points of interest.

OFFICERS ELECT.

The Nominating Committee next made the following report :

President—C. J. Kipp.
First Vice-President—J. W. Ward.
Second Vice-President—H. G. Taylor.
Third Vice-President—B. A. Watson.
Corresponding Secretary—Wm. Elmer.
Recording Secretary—Wm. Pierson.
Treasurer—W. W. S. Phillips.
Standing Committee—T. J. Smith, E. S. Marsh, D. C. English.
Delegates to American Medical Association—E. North, J. W. Ferry, D. Benjamin, C. R. Wiley, C. J. Kipp, John Ashcroft, W. P. Watson, D. C. English, H. J. Cook, S. H. Reed, A. W. Rogers, W. S. Ewen, W. J. Swinton, J. Miller, S. W. Oakley, J. Parrish.

Dr. Benjamin then offered the following resolution, viz., that the New Jersey State Society recommend only such colleges as have preliminary examinations and a three years' course.

Approved.

Dr. Wittingham offered a resolution

ON EXPERIMENTAL RESEARCH AND VIVISECTION

in the following form :

Whereas, In the investigation of questions pertaining to life, health, and disease, experiments upon lower animals are absolutely necessary to determine the causes and results of diseases or injuries ;

Resolved, That this Society not only countenances but approves of such experimental research, and disapproves of the action of societies or persons who, on the ground of preventing cruelty to animals, would throw obstacles in the way of experiments having for their object the relief of human suffering.

Approved.

The next annual meeting will be held at Beach Haven, N. J., in June, 1887.

MASSACHUSETTS MEDICAL SOCIETY.

One Hundred and Fifth Anniversary, Held at Boston, June 8 and 9, 1886.

TUESDAY, JUNE 8TH—FIRST DAY.

The fellows made the usual visits in the morning to the Massachusetts General, the City, and the Children's Hospitals.

During the day Dr. Ernst exhibited, at the Harvard Medical School, apparatus for bacteriological research, with cultivations and microscopic preparations. At the Institute of Technology there was an exhibition of drugs.

At 2 P.M. the members met in Huntington Hall, and listened to a paper on

THE ABUSE OF MEDICAL CHARITY ;

A Remedy applied in 3,000 Cases of Out-door Patients, Results, by Dr. Frederick F. Daggett, of Boston.

Dr. Doggett spoke of the well-recognized abuse of medical charity, and described his plan for its prevention. This consisted in a systematic investigation of the worthiness of applicants, and had, as shown by the writer's statistics, resulted in a large decrease of the number of unworthy applicants.

Dr. John L. Hildreth, of Cambridge, read a paper entitled

[illegible] THE LAW RECENTLY ENACTED IN [illegible] TO PREVENT THE SPREAD OF [illegible] DISEASE ?

The conclusion of the paper was that the spread of the contagion had probably been prevented, but the doctor stated that, were he to criticise the rules, he would say "they were not definite enough where the law says," in regard to the dangers of contagion, "two weeks from the recovery of the last case." "Physicians have different notions as to where, in the ordinary cases, recovery begins."

PAPERS READ.

"The Present Status of Bacterial Pathology" was next considered in an interesting paper by Dr. Albert N. Blodgett, of Boston ; followed by one on "The Management of Cases of Rigidity of the Os Uteri in Labor," by Dr. Wm. E. Boardman, of Boston.

Dr. Charles Harrington, of Boston, then read an interesting paper upon

A NOT WELL-RECOGNIZED SOURCE OF DOMESTIC POISONING, WITH CASES.

The essayist said that bichromate of potassium is now regarded as by far the most useful mordant for the manufacture of woollen goods, but that it was a poison. Several cases were cited in support of this theory. One was that of a strong, healthy woman who worked on cloth such as is used in making boys' caps. Her symptoms were intense itching of the head and body, cutaneous ulceration, and the loss of six finger-nails. Other cases cited were those of two young boys and an aged clergyman, who experienced similar symptoms, all of which the essayist attributed to the wearing of clothing and gloves made of materials in which bichromate of potassium was used as a mordant.

The final paper was upon "Abdominal Cellulitis," by Dr. Julian A. Mead, of Watertown.

The Annual Conference of Censors was held at No. 19 Boylston Place, at half-past two o'clock. Routine business only was transacted.

THE ANNUAL MEETING OF THE COUNCILLORS

was held at No. 19 Boylston Place, at 7 P.M., President Charles D. Homans, M.D., in the chair. There have been 35 deaths the past year, and the gain has been about 78, the present membership being about 1,675. The diplomas of 24 additional colleges have been recognized during the year. The Society's financial condition is good. The following officers were elected for the ensuing year : President, Thomas H. Gage, of Worcester ; Vice-President, John M. Harlow, of Woburn ; Treasurer, F. W. Draper, of Boston ; Corresponding Secretary, C. W. Swan, of Boston ; Recording Secretary, F. W. Goss, of Boston ; Librarian, E. H. Brigham, of Boston ; Orator, G. H. Townsend, of South Natick ; Anniversary Chairman, W. L. Richardson, of Boston.

WEDNESDAY, JUNE 9TH—SECOND DAY.

The annual meeting was held in Huntington Hall at 9 A.M.

President Charles D. Homans, M.D., of Boston, in the Chair.

The records of the last annual meeting were read by the Recording Secretary, Dr. Francis W. Goss, of Roxbury, and were approved by the meeting. There have been 78 new fellows admitted to the Society during the last year, and 31 have died. The Treasurer, Dr. Frank W. Draper, of Boston, presented his report, from which the following figures are gleaned : Last year's bal-

ance, $1,710.73; total receipts, $10,452.40; total expenditures, $8,685.03; balance this year, $1,767.37; total balance, $3,478.10. The invested funds are $32,420.17, bearing interest at the rate of four per cent. Thirteen members of the Society have forfeited their membership by removal from the State or failure to pay their assessments. The names of three fellows have been dropped from the rolls on account of delinquency in payment of fees. There are now 1,605 fellows in the Society.

The following papers were then read: "An Epidemic of Malaria in Eastern Massachusetts in 1885," by Dr. Zabdiel B. Adams, of Framingham; "The Causation and Treatment of Lateral Curvature," by Dr. Edward H. Bradford, of Boston; "Some of the Results of Fractures," by Dr. Joseph E. Garland, of Gloucester; "The Etiology and Treatment of Summer Diarrhœa of Infants," by Dr. Henry C. Haven, of Boston.

After the reading came the introduction of delegates. This was followed by an intermission of fifteen minutes, and then the orator, DR. RICHARD M. HODGES, of Boston, delivered the annual discourse, upon

UNDERCURRENTS OF MODERN MEDICINE.

The discourse, which occupied about an hour in delivery, was one of the greatest excellence, and showed a close grasp upon, and a thorough knowledge of, the various branches of the subject treated on the part of the writer. The orator was rewarded with the closest attention of the Society throughout the entire delivery of the discourse, each good point was received with appreciative recognition, and as he closed there was enthusiastic and prolonged applause.

The President-elect, DR. THOMAS H. GAGE, of Worcester, then made a short speech of thanks.

At the close of Dr. Gage's speech, the procession of the Fellows, formed in the order of seniority, proceeded to the Clarendon Street Skating Rink, where, at half-past one o'clock,

THE ANNUAL DINNER

was served. Anniversary Chairman Dr. Edwin B. Harvey, of Westbury, presided, and made the opening speech. On his right, in the order here designated, sat the retiring President, Dr. Charles D. Homans, President-elect Gage, Dr. John M. Harlow, Dr. B. E. Cotting, Dr. H. W. Williams, Dr. H. P. Walcott, and Surgeon-General Holt. On his left were President Pillsbury, of the State Senate, Dr. Gerrish, Dr. Lyman, Rev. Minot J. Savage, Dr. Hartnell, Dr. R. M. Hodges, and Dr. George W. Gay. The divine blessing was invoked by Rev. M. J. Savage, after which about an hour was spent in discussing the dinner. During the dinner, and at intervals during the speaking, the Germania Orchestra rendered pleasing musical selections.

The toast "The Massachusetts Medical Society" was responded to by PRESIDENT-ELECT GAGE.

In the unavoidable absence of Governor Robinson, HON. ALBERT E. PILLSBURY, President of the State Senate, was introduced to respond for the Commonwealth, and was received with loud applause. After a few facetious references to the presence of lady members, misnamed "fellows," and to the infallibility of the Legislature, he took up the subject of the State Board of Health, Lunacy, and Charity.

The REV. MINOT J. SAVAGE, of Boston, followed with some remarks on the parallels suggested to him between the medical and clerical profession.

DR. GEORGE W. GAY, of Boston, then read a poem written for the occasion by Mrs. M. E. Blake.

The last speaker was PROFESSOR JOHN HARTNELL, of Johns Hopkins University, who made a strong plea in behalf of physical culture and hygiene in schools and colleges; after which the exercises were brought to a close, and the one hundred and fifth anniversary of the Society ended.

Correspondence.

"IS DISEASE OF THE UTERINE APPENDAGES AS FREQUENT AS IT HAS BEEN REPRESENTED?"

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have just read in your issue of April 10th the report of a paper by Dr. Henry C. Coe on the question, "Is Disease of the Uterine Appendages as Frequent as it has been Represented?" This title is to me a most extraordinary one, because I do not know that anyone has attempted to make any representations as to how frequent the disease may be, and when people talk about its extreme frequency they mean, of course, only its relative frequency. It is more frequent in my practice than in the practice of anybody else, simply because patients are sent to me from all over the world with the various forms of this disease for treatment.

I have not the pleasure of knowing who Dr. Henry C. Coe is, but I must ask you to allow me to ask his authority for two statements which he fathers upon me. He says that he is not "prepared to accept the statement of Mr. Tait that it was illogical to attempt to make a differential diagnosis between certain conditions, and, on the contrary, he believed that it was illogical not to attempt to separate the different classes of cases." I want to know where in all the writings that I have issued on this subject this statement is to be found, for I cannot find it. Again, I want to know how Dr. Coe justifies the following sentence, "That against the sweeping statement made by Mr. Tait, that in chronic inflammatory disease of the ovaries the tubes were invariably involved, Dr. Coe protests." I should like to know where in all my writings Dr. Coe finds this statement, for I cannot find it.

My friend, Dr. Lusk, says "that he had a suspicion that even Mr. Tait did sometimes remove ovaries and tubes which might have been properly included among the healthy." I want to know Dr. Lusk's authority for this statement. I protest that his suspicion is groundless.

Dr. Lusk says "that the theory that the abdominal cavity should be opened in doubtful cases was at the bottom of the mischief which the paper was intended to combat." Will Dr. Lusk tell us who has ever propounded or supported such a theory of foolishness, or will Dr. Lusk give up talking in this slipshod way and confine himself to exact utterances?

What I presume he meant was what has been termed "Tait's Law" by my friend, Dr. Joseph Price, of Philadelphia, and the words of which he has quoted with scientific accuracy, and not with the dimness of memory evinced by Dr. Lusk: "That in every case of disease of the abdomen or pelvis in which the health is destroyed or life threatened, and in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made." Like Dr. Price, I think this is a matter to which everyone must be a convert, but they must not pervert it by alterations or suppressions such as Dr. Lusk has been guilty of; at any rate, if they do, they must be kinde nough to leave my name out of the discussion. I will not accept the paternity of such nonsense.

The harm that has been done, and there can be no doubt great harm has arisen, has come entirely from slipshod readings of this law, and not from its observance. Dr. Lusk is an example which all wise men will do well to avoid. I am, sir, etc.,

LAWSON TAIT.

BIRMINGHAM, May [illegible].

ABNORMALITIES AND SURGICAL OPERATIONS UPON THE VISCERA.—The occasional absence of one of the kidneys was recently the cause of a fatal result from nephrectomy. During a course of operative surgery at Vienna, the operation of left lumbar colotomy was performed, and transposition of the viscera was found.

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Original Articles.

ON FATTY AND SARCOMATOUS TUMORS OF THE KNEE-JOINT.[1]

By ROBERT F. WEIR, M.D.,

PROFESSOR OF [illegible]

In 1883 a young man presented himself at my clinic, at the College of Physicians and Surgeons, for the treatment of an affection of the knee-joint which had existed for nearly three years, and which did not result from any injury that he could recall. The joint was found moderately distended with synovial secretion, and was somewhat tender to the touch. He stated that this swelling diminished on several occasions by rest and by the use of an elastic bandage, and would suddenly recur, but without symptoms of interarticular "catching." On further examining the joint a mass of considerable firmness, like an ordinary loose cartilage and the size of an almond, was felt on the inner side of the patella. This could be moved up and down and crowded under the patellar ligament, and by pressure caused again to emerge, but it was evidently pedunculated, as it could not be forced into other superficial parts of the joint. He was sent into my wards at the New York Hospital, and under ether, October 13th, an incision two inches long was made down to the supposed cartilage. On nearing the capsule the increasing softness of the mass was observed, and when it was exposed it proved to be a portion of fatty tissue, harder than usual, and attached by a rather broad and thick pedicle, which stretched under the *ligamentum patellæ* and across the joint. As this mass could be pulled out with moderate traction, an attempt was made, in addition to the removal of the button-shaped end, to cut off, after ligating it, as much of the lipomatous growth as was possible. To accomplish this, even imperfectly, an unusual amount of manipulation of the joint occurred. To obviate the possible ill effects of this, the cavity of the articulation was washed out with a sublimate solution of 1 to 2,000, a drainage-tube inserted, an iodoform and sublimate dressing firmly applied, and the limb finally secured on a posterior splint. Notwithstanding the whole operation had been conducted on carefully carried out antiseptic precautions the case went to the bad. On the fifth day suppurative synovitis had set in, for which the joint was freely opened on the other side and drained. A hygroma over the internal hamstring, which was noticed to fill and empty as the joint was washed out, also required opening to evacuate the pus which the joint-drains did not control, and this was, in all probability, the starting-point of the extra-capsular abscesses which eventually riddled the popliteal space and calf of the leg. A vain attempt to save the limb terminated, November 27th, in an amputation of the thigh in its middle portion, which was closed by Neuber's deep occlusion method, with the result of entire primary union, so that the patient was able to walk about on crutches eighteen days after the last operation. The tumor removed was pink in color, with an irregular surface, and according to the report of the pathologist of the hospital, Dr. Peabody, was of the consistency of heart muscular tissue. Microscopically it was found to be made up of very vascular connective tissue, rich in fat and connective-tissue cells.

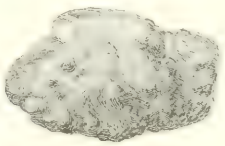
It cannot be doubted that the treatment of the case would have been more surgically correct had less been done to the fatty mass extending under the patella, and had also drainage been then made through the hygromatous pouch on the posterior aspect of the limb. The novelty of each of these conditions contributed to the errors, which should be kept in view in similar cases.

A case, very like the above, a few months later, came under the charge of my colleague, Dr. William T. Bull, and was as follows: Alice B. B——, aged twenty-four, entered the New York Hospital, March 2, 1884, for pain, stiffness, and swelling in the left knee, which had lasted over a year, and for the production of which she could assign no cause. She could always flex and extend the limb, and had not experienced any sudden catch or pain while walking, though several times, when quiet, she had seizures of short, sharp pain on the inner side of the joint. Seven months previously a painful lump had been recognized in the knee. On examination this was readily detected internal to the patella and was of the size of a large bean, hard, and movable for about an inch, parallel to the axis of the limb. Moderate joint effusion coexisted. Under a carbolic spray the joint was opened, April 3d, over the tumor, by an incision two inches long, the tumor exposed and lifted out, and its slender pedicle ligated and cut off. The wound was not sutured. Iodoform and sublimate dressings were tightly applied and the knee immobilized by a plaster-of-Paris dressing. The patient progressed satisfactorily. The dressings were removed at the end of a week, and she left the hospital on the eighteenth day. She was seen again May 15th, walking satisfactorily without pain and swelling, and only feeling a little weakness in the joint. The tumor was reported by the pathologist of the hospital to be composed chiefly of small, round, and spindle cells, with a minimum amount of intercellular tissue; also many giant-cells, much blood-pigment, and a few good-sized blood vessels; he therefore gave the diagnosis of a sarocma with giant cells.

A few days after this case Mr. William P——, aged thirty-nine, was sent to me by Dr. Henry F. Walker for relief from a loose cartilage in his left knee joint. I had seen this gentleman two years before, and advised then the removal of a movable body from his joint, which he stated had at that time existed for three years, and which came without any injury, inconvenienced him but little, save after dancing, to which amusement he was much devoted. The mass was then about three-fourths of an inch in diameter, but its motion was quite limited in area. The pain that he felt was variable and at no time great, nor was it associated with any distention of the joint. He declined any surgical interference at that time. Within a year subsequent to his last visit to me he had much more uneasiness, and occasional painful fixation of the articulation, which would prevent his walking for a day or two, but which apparently produced no effusion. I found that the supposed loose cartilage had much increased in size, and that its excursions were greater than when I had last examined the knee, though they were still limited to the inner side of the joint. On April 19, 1884, under a carbolic spray and full antiseptic precautions, I cut down on the tumor, which was held for me by an assistant, and brought into view an irregularly shaped, softish growth, yellowish-pink in color, and marked by sundry ecchymotic patches on its surface, the

[1] Read at a meeting of the Practitioners' Society, held May 7, 1886.

latter evidently the result of prolonged terpsichorean efforts made a few evenings before. This mass was held by a long, slender pedicle which was tied and subsequently divided. The ligature of catgut, however, slipped, and allowed some two or three ounces of blood to be extravasated into the joint cavity. This was evacuated by pressure over the knee, and the hemorrhage checked by a continuance of the same for five or six minutes. In consequence of this mishap, instead of simply leaving the wound open, a drainage-tube was inserted, and the usual iodoform and sublimate dressings applied, and the limb placed at rest in a posterior splint. The tumor removed (see diagram) was one and one-half



inch long by one inch broad, and nearly three-fourths of an inch thick. It looked like an ecchymotic mass of fat, but its microscopic examination by Dr. Peabody showed it to be formed of connective tissue, containing in its meshes a great many round and spindle cells and much blood pigment. He classed it as a fibro-sarcoma. The recovery was uninterrupted. On the third day slight elevation of temperature took place, and on removing the dressing it was seen that choking of the egress of synovial secretion had been occasioned by the ordinary iodoform gauze used (which I have since abandoned from this and similar experiences). On its removal several ounces of clear synovia escaped, and the dressings were reapplied, with iodoform merely dusted on the sublimate gauze, with rapid restoration of the normal heat. The wound was found closed in a week. At the end of the third week the patient was going about. He has been frequently seen since, and his joint functions are fully restored, and no sign of local or other recurrence has been observed.

The rarity of both of these varieties of movable bodies in the knee-joint is great, and concerning those having sarcomatous elements I can find, in a fairly extended search, but one other case, and this is reported by Simon.[1] It was met with in a man, forty-six years of age, who had had an impaired knee-joint for over six months. On the inner side of the knee was felt a mass the size of a patella, which was cut down upon and extracted after division of its broad base. It was attached to the outer side of the patella. Full restoration of the joint-functions took place. The tumor, 5 ctm. in diameter and 1½ ctm. in thickness, was smooth and shining, and in color a whitish-red. In consistence it was soft and somewhat elastic, though in the interior were perceived hard masses the size of peas. Under the microscope the tumor was covered with epithelium, and its substance, rich in vessels, consisted of many spindle- and irregular-shaped cells, with oval nuclei and with occasional fatty cells. Blood extravasations were dispersed throughout the tumor. Besides these were found large, irregular-rounded, or slightly angular cells, as is found in sarcomata. Simon called this tumor a hypertrophied sarcomatous synovial fringe, and gave illustrations of the mass, gross and microscopical, which latter sustain his diagnosis. But of the lipomatous growths there are a number (eight[2] besides my own) on record. Volkmann[3] reports a case in a man, sixty-three years of age, which had lasted a year and a half. It produced occasional severe pain, though the catching between the bone-ends was not distinctly marked. It was removed under spray, with prompt recovery. The mass was the size of a cherry. The same author[4] gives a drawing of a remarkable fringing, about the patella and periphery of the joint-capsule, of fatty masses in great number, but of small size, taken from the case of J. Müller. König[5] states briefly that he had operated on two cases of such fatty tumors, one of which was of traumatic origin.[6] Barwell, in his work on "Diseases of the Joints,"[7] gives a noteworthy case, where two pedunculated fatty masses were removed from the same knee-joint, one of which was over the outer end of the bone, just above the patella, both only slightly movable, and associated with marked hydrarthrosis. They were, after removal, in shape like an oyster, lipomatous in character, and each about one and a half inch long. Recovery was perfect. No traumatism was recognized in the history of this case. Schmolck[8] has very recently published two additional cases of fatty tumors in the knee-joint, which have the interesting accompaniment of a synovial tuberculosis attached to them, but apparently without any causative action. The first of these was encountered in a man, twenty-three years of age, of good health and no tubercular history. His right knee-joint had been the seat of slight, repeated inflammation for years. In 1880 he was treated for hydrops articuli. In 1883, after active gymnastic exercise, he had severe pain in the joint, and after that time two small, rather movable soft bodies were felt in the joint. This was opened by Schmolck by a long cut on its inner side, for the treatment of what was considered a tubercular synovitis, but no discharge of fluid took place, but a prolapse of a large number of fringe-like masses, some of them of the size of the end of the thumb. A number of these which rested on the anterior surface of the femur were cut off with free hemorrhage. Besides this mass three others, larger and more polypoid, were found and removed by a separate incision on the outside of the joint. Antiseptic washing out, drainage, and dressing employed. Six weeks after the wound healed, which occurred promptly, the patient could bend the limb to an angle of 120 degrees, and was rapidly improving; could then walk without limping, and rapidly. Over the surface of these tumors were seen very many slightly defined pearl-gray dots. These miliary deposits were also seen over the portions of the synovial membrane which had been cut away. Microscopically the smallest fringe showed a slight fibrinous skeleton, with spindle-, round-, and star-shaped cells, and in these the fatty tissue was but small. In the larger masses this latter tissue was the main constituent. In some of the larger miliary deposits giant-cells were seen, with occasional bacilli in them.

The second case reported by the same observer occurred in a man, fifty-two years of age, without tubercular antecedents, whose right knee-joint, from a strong exertion, became slowly enlarged with synovial effusion, but no symptoms of joint-locking occurred. Several soft, flabby masses could be distinguished, one as large as a twenty-five cent piece. The articulation was opened on each side of the patella, and after the escape of the synovial fluid many deep red folds projected into the wound, studded with multiple grains of minute size. The rest of the capsule was also much thickened. These masses were removed by scissors and scalpel, and the joint thoroughly washed out with an antiseptic solution. Improvement, but not a cure, followed. This was apparently a case of thickening, from a rather early treated tubercular synovitis, as bacilli were found microscopically, and it should hardly be classed, as Schmolck does, among the lipomatous growths, for such swollen synovial projections are not infrequently seen even in uncomplicated traumatic synovitis.

Barwell assigns, as a mode of production in such cases, that fatty and other formations may project farther and

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[1] Billroth and Pitha: Handbuch der Chirurgie, Bd. ii., S. 576.
[2] Lehrbuch der Chirurgie, Bd. iii., S. 476.
[3] Operation [illegible] assisted by Kredel, his assistant.
[4] [illegible] Internat. [illegible] Chirurg. [illegible]
[5] Zwei Fälle von Lipoma arborescens genu. Deutsche Zeitschr. f. Chirurg. Bd. xxiii., Hft. 3 u. 4. 1886.

farther into a joint, and, by a kind of hernia inward, may be transformed from an extra-articular to an intra-articular situation. A glance at the admirable plates (Nos. 32 and 35, pp. 350 and 365) in Morris' work on the "Anatomy of the Joints," 1879, will show how readily this can happen with the fatty tissue beneath the *ligamentum patellæ*, and also how such lipomatous tumors can be developed elsewhere in the folds of the synovial membrane, which often normally contains an appreciable amount of fat. Volkmann also presents the same explanation, and König remarks that the retro-capsular space above the condyle is frequently the site of fatty deposits, and which might be the genesis of lipomatous joint tumors. I should judge that this etiology will be accepted in connection with those cases where the element of traumatism is absent. But an injury, when developed in obtaining the history of a case of lipomatous tumor of the knee-joint, may be considered often as a satisfactory cause of its production. This has been well shown in a rather striking case reported by Lauenstein, of Hamburg.[1] This surgeon twice removed tumors of a fatty nature from the knee-joint, and in both instances a marked trauma tism had been received. In one, however, in which the tumor was the size of a plum, and where there had been, three years before, an operation near the articulation for the removal of an enchondrosis, the influence of this injury upon the causation of the fatty movable body in the joint was not clearly apparent; but in the second case the influence of an antecedent accident could be more distinctly made out. It happened in a sailor, aged forty-two, who had sustained, several years prior to his reception into the Seaman's Hospital at Hamburg, a severe compound fracture of the femur at its lower third, which had united with considerable deformity. At a later period a fracture of the patella of the same side had taken place, with rather broad ligamentous junction and decidedly impaired function of the limb. The evening before entering the hospital he had fallen and ruptured, or stretched, the band that held the patella fragments together, and his limb was rendered so useless that wiring of the patella was, after the subsidence of swelling, etc., undertaken. In the performance of this operation it was noticed that the lower part of the joint, from the patellar ligament backward to the crucial ligaments and the *fossa condyloidea*, was filled with a coarse lump of fat, which had (as König had previously suggested) probably been forced through the overlying ligamentum mucosum by the force of the injury which had caused the fracture of the patella a year previously. This mass was removed and the operation completed, with a very tardy but good result. Lauenstein offers the explanation that his first case, where the pedicle arose from the anterior surface of the femur, just above the cartilage, might be classed in those spoken of by König (alluded to above) as due to a gradual accumulation of retro-capsular fat, and that when so occurring it is to be expected that the development of such will be more gradual than those due to the rupture of the subligamentous fat into the joint.

Since treating my last case I have encountered two knee-joints in which I have detected small, movable, soft masses which gave rise to no disturbing symptoms, and which therefore were not subjected to surgical interference. One has been under observation more than a year, without any inconvenience in locomotion. The practical outcome that can be made from the review of so few cases of a somewhat obscure affection is, that too much effort should not be made in the fatty growths to effect their total extirpation, since the removal of the floating portion is all that is called for; and that in the cases where the suspicion of sarcoma is microscopically revealed, the subsequent progress of the two cases observed in the report leads to the belief that the same conclusion will be arrived at.

17 West Thirty-third Street.

[1] Centralblatt f. Chirurgie, No. 19, 1884.

SARCOMA OF THE CEREBELLUM IN THE CHILD OF A SARCOMATOUS MOTHER.

By GEORGE L. PEABODY, M.D.,

The brain that I have to show you this evening, Mr. President, was removed from the head of a child who died in my service at the New York Hospital. As the interest of the case turns somewhat upon the question of heredity, I will give you the history of the child's mother at some length before proceeding with that of the child.

Mary F——, aged twenty-four, a native of the United States, married, was admitted into the New York Hospital on October 15, 1884. Eight years before, she had noticed a swelling beneath the middle of left side of the inferior maxilla. Three years ago a similar swelling occurred on the right side of her neck. These had grown gradually and without pain. Her general health was excellent at this time.

The tumor on the left side of the neck was as large as a cocoa-nut; that on the right side the size of a small lemon. The skin over them was normal and freely movable. They were smooth in outline, they fluctuated, did not pulsate, and were neither painful nor tender. On aspiration blood only was withdrawn. The tumor on the left side was removed by Dr. W. T. Bull, on October 20th, and that on the right side on November 3d.

Each of these tumors was found to be enclosed in a fibrous capsule, and to consist, besides the blood, whose presence was proved by the aspirator, of rough, shaggy, fleshy masses, growing from the periphery inward toward the centre. This fleshy interior was made up of small, round, and spindle cells in an abundant fibrous stroma. Blood-channels without distinct walls were very numerous, and some of them were large. Many scattered masses of blood-pigment showed that hemorrhages had occurred.

The wound healed kindly, and the woman left the hospital in good condition. These tumors were both fibro-sarcomata.

On December 29, 1885, she was again operated upon by Dr. Bull, and a tumor removed from the left side of the neck, at the site of the growth previously described as removed from that situation. It was about the size and shape of a small hen's egg. It had attracted the patient's attention soon after the previous operation, and had grown steadily. It was almost entirely enclosed in a fibrous capsule, and was very rich in blood, which was found in large vascular channels without distinct walls. It was composed largely of small spindle cells in a fibrous stroma, and was regarded as a spindle-celled sarcoma.

The wound did well, as on the previous occasions, and the patient soon left the hospital in good condition.

A month later she noticed a lump on the left side of her back, between the internal border of the scapula and the spinal column, which in two months had attained the size of a goose-egg. It was hard, smooth in outline, not fluctuating, freely movable, not painful, but slightly tender. The skin over it was normal. This was removed by Dr. Markoe on March 11, 1886. It was found histologically to be in part a fibro-sarcoma and in part a spindle-celled sarcoma. It was not very vascular. The wound did well, and the patient again left the hospital.

On May 6, 1885, she brought her boy, three years of age, to the hospital, and he came under my care. She said that he was always a well child until two weeks before. At that time he began to complain of headache, and became unable to walk, was restless at times, and stupid at others. He had had no convulsions. On admission his temperature was 100°. He was a fairly nourished child. His abdomen was prominent, his chest not very well developed. Here and there over his body were round, pigmented, depressed cicatrices. His pu-

[1] Presented at a meeting

pils were normal in size, and reacted slowly to light. There was slight internal strabismus. He would lie with his extremities all partially flexed much of the time, though often very restless, and making automatic movements with his arms and hands. His head was thrown back, his neck was stiff, the muscles of the neck being very rigid. He took but little notice of what was going on about him, though he decidedly resented interference or examination. His head was large, measuring twenty and a half inches in fronto-occipital circumference. The fontanelles were closed. His respiration and pulse were normal.

On the next day he became quieter, and the rigidity of the muscles of the neck disappeared. When he was placed in a sitting posture his head would fall forward. Ptosis of both eyes began to be developed. His bowels did not move, in spite of a dose of compound licorice powder given on the previous night, and followed by an enema. He began now to suffer from retention. There was no photophobia. After a day or two his bowels were freely moved by castor-oil. Ophthalmoscopic examination revealed a normal fundus in each eye. In a few days double ptosis became more marked, and left facial paralysis was observed. All this time his temperature, respirations, and pulse remained substantially normal, as was also his urine.

After ten days of constant use of the catheter he was given a cystitis and balanitis from which he never recovered. He ate well, but from day to day became more and more stupid. After about two weeks' hospital residence he developed a bronchitis of the larger bronchi. Three weeks after he came under observation he died, on May 27th, having become progressively weaker and more stupid during the previous ten days. A few hours before death he had convulsive twitchings of the hands and feet, but no general convulsions. There was a rise of temperature just before death, ptosis became complete, and the pupils became tightly contracted and not responsive. The post-mortem temperature was 107°.

The autopsy was made six hours after death. The lungs were congested and œdematous. Excepting the brain, now to be described, the other organs were substantially normal.

Brain was well developed. Pons and medulla were both seen to be very much flattened, symmetrically, and the cerebellum unusually prominent. The convolutions were normal. A vertical section through the median line, passing through the cerebellum, cuts into almost exactly equal parts a tumor occupying in the first place the inner two-thirds of the white matter of each lobe of the cerebellum, extending longitudinally from the corpora quadrigemina, along the surface of the medulla, to a point below the decussation of the pyramids, and in width occupying the entire thickness of the cerebellar lobes, a lamina of the superior vermiform process apparently covering the tumor above.

The corpora quadrigemina, which are very much flattened, overlie the anterior upper extremity of the tumor on each side. The tumor seems adherent to the floor of the fourth ventricle throughout, but the substance of the pons and medulla seems to be invaded by the growth only for the depth of a millimetre.

The tumor is in its antero-posterior diameter 6.5 ctm.; its largest vertical diameter is 5 ctm.; its longest transverse diameter is 4 ctm. Its shape is ovoid, the small extremity being forward.

The tumor occupies only the white matter of the cerebellum, its convolutions being apparently free.

The aqueduct of Sylvius and the fourth ventrical seem to be completely obliterated.

The microscope reveals the nature of the growth to be a small round-celled sarcoma of moderate vascularity. I place some sections under the microscope, and you see the characteristic vascular spaces of large size with very thin walls, and some of them without well-defined walls; but the blood-supply is not so great as it frequently is in sarcomata of this class.

The position, size, and general characteristics of the tumor are still well shown in the brain as it lies before you.

The chief interest centres in the occurrence of this tumor of the cerebellum in a child whose mother has repeatedly suffered from sarcomata.

Clinical Department.

A NEW AND ORIGINAL METHOD OF SURGICAL DRESSING.

Dr. Charles W. Strobell, of Middletown Springs, Vt., writes that he was led by the paper of Dr. Hamilton, and the criticisms upon it in recent numbers of The Record, to consider what improvements might be made upon the modes of antiseptic dressing now in use. The main objection to the ordinary dressings of cotton-wool, gauze, etc., is that it conceals the wound from view, so that inflammation, secondary hemorrhage, and other accidents cannot be detected at their onset, and may become only too well established before the surgeon becomes aware of their existence. In order to obviate this, Dr. Strobell proposes to cover the wound with a thin glass globe, so constructed as to fit closely to the part, provided with two openings for drainage-tubes and a large opening on the top to permit of access to the wound, in case of need, without removing the globe. These openings are provided with glass stoppers, so that they can be hermetically closed. The base of the globe is provided with a flange, and its sides, up to within two inches of the drainage-tube openings, are roughened so as to facilitate the adhesion of the isinglass plaster used in sealing it. When applied to stumps after amputation, a thin rubber band, three inches wide, is applied over the flange, so that it rests with one-half its width on the integument of the limb to secure additional safety. The flange is covered on its external surface with isinglass plaster, adhesive on both sides, so that the band of rubber shall adhere firmly to the globe. In the case of an amputation at the knee-joint, after the sutures and drainage-tubes are in place, the wound is capped with a disinfected globe of the proper size to fit snugly over the limb, the drainage-tubes in the globe being on a line with the anterior surface of the wound. The rubber band is now turned down over the limb, and strips of adhesive silk, one inch in width and twelve inches in length, are applied longitudinally from the upper part of the ground portion of the globe up the limb, each strip overlapping slightly the preceding one, a final strip being placed circumferentially around the flange and covering in the ends of the longitudinal ones. In a case of laparotomy an oval-shaped globe may be applied in a similar manner.

The following are the conclusions of the writer: "The method commends itself to the profession: 1. In the complete isolation of wounds that can be obtained in the event of infection of hospital wards by erysipelas, etc., as the globe can be hermetically sealed. 2. All changes can be noted clearly at any moment, with the minimum amount of discomfort to the patient, thereby increasing largely his chances of recovery. 3. The perfection of drainage, which has never been obtained in so great a degree, obviating the necessity of soaking off bandages saturated with dried pus, blood, and serum, often adhering so firmly to the wound that the most gentle manipulation is required to avoid laceration of the tender granulations. 4. Secondary hemorrhage can be detected at the earliest possible moment. 5. The first evidence of inflammation can be noted, and its movement forestalled by removal of the cause. 6. The action of topical remedies can be observed without exposure of

the wound to the air. 7. The dressing can be adapted to wounds of almost every description. 8. Refrigerant and thermal water-dressings can be applied with the utmost facility. 9. Lotions or powders can be easily applied to the wound through the main opening in the globe without disturbing the dressings. 10. If it is desired to prevent the ingress of infected air, the drainage-tubes can be filled with plugs of iodoformed or carbolized cotton. 11. In the event of inflammatory swelling rendering the constriction of the base of the globe excessive, the apparatus can be replaced by one of larger size with less expenditure of labor and time than is required in the application of a Lister dressing. 12. Facility is afforded for determining the therapeutic effect and germicidal action of direct sunlight in the treatment of wounds. 13. By means of long, slender forceps and scissors the sutures, drainage-tubes, and adhesive plaster may be easily removed through the main aperture in the globe. 14. The weight of the apparatus is not as great as that of the ordinary Lister dressing. 15. If perfectly applied, there should be no more constriction of the limb than results from moderately firm bandaging. 16. The expense is comparatively light, as the globes can be used indefinitely, being thoroughly disinfected by boiling water. 17. The apparatus may be adapted to any external surface by taking, in special cases, wax impressions and transmitting them to the manufacturer. In conclusion, I will say that my claim to originality is, in my opinion, well founded, as nowhere in surgical works have I seen glass mentioned, used in the way I have indicated, as a protective dressing."

Progress of Medical Science.

Delusions Caused by Intestinal Accumulations. —Dr. A. E. Bridger relates the following interesting case in the *British Medical Journal* of April 10, 1886. The patient, a lady fifty years of age, had been married twenty-nine years, had brought up a family of six children, and had always enjoyed fair health until about a year ago. At that time she began to lose appetite and flesh; her skin became harsh, dry, and yellowish in tinge; her digestive powers became greatly impaired; once or twice there had been some vomiting of blood, and a troublesome dry cough had developed itself. Remedies failed to relieve her symptoms; and, about eight months ago, mental delusions began to show themselves. These at first took place invariably at night, and were, from first to last, of one class only—namely, that connected with taste and smell. At first, two or three times a week, and of late nightly, the patient would complain that some one was burning sulphur or phosphorus in the room. She became impressed with the idea that her husband and children produced these smells in order to annoy her, and, if possible, to kill her; and twice she had left the house, and remained away for days, in order to rid herself of her supposed persecutors. The smells, however, followed her wherever she went, and she came to believe herself the victim of a widespread conspiracy. About this time she began to refuse food, alleging that it contained poison, and that she could distinctly taste arsenic and sulphur in everything that was prepared for her. When first seen by the writer she was much emaciated, and disinclined to talk, had a stupid and spiritless aspect, a cachectic look of the skin, yellowish conjunctivæ, etc. She made no special complaint, other than of the conduct of her friends. The bowels were said to be regular. The urine was thick, depositing lithates in abundance; no albumen or sugar. Examination of the special senses and of the chest resulted negatively. Inquiries about the abdomen elicited the fact that a sense of weight and of movement had latterly been much complained of, and, on inspection, the position of the transverse and descending colon was seen to be occupied by a large elevated ridge, and the movements of the smaller intestine were distinctly visible through the thin abdominal walls. The elevated ridge was produced by an immense collection of hardened fæces, which it took several days, with the aid of spoon-handles, injections of glycerine, castor-oil, hot water, and the free use of mild aperients, to remove. Within a few weeks after the removal of this accumulation the patient increased greatly in weight, her appetite returned, and she slept easily and quietly. Her delusions disappeared, and her friends stated that she was better, both mentally and physically, than she had been for years.

Herpes Facialis Affecting the Eye. — At a recent meeting of the Ophthalmological Society of the United Kingdom (*British Medical Journal*, April 17, 1886), Mr. W. H. Jessop read a paper based on four cases of herpes facialis affecting the eye. In the first case the herpes followed the track of the external division of the supra-orbital nerve; the eye was affected with iritis, keratitis punctata, and increased tension; recovery, with perfect vision, occurred quickly. In the second, herpes along the lachrymal division of the ophthalmic nerve was followed by keratitis punctata and interstitialis. In the third case there were herpes along the frontal and lachrymal divisions of the ophthalmic nerve, early anæsthesia of the cornea, and superficial keratitis. In the fourth case the herpes followed the course of the infra orbital nerve, and there were phlyctenular ulcers on the cornea. It was pointed out that herpes facialis followed the distribution of the fifth nerve, and that, when the eye was involved, the branch affected was usually the ophthalmic, but sometimes the superior maxillary. The most usual distribution was along the frontal, but there was no recorded instance of the nasal being the only branch affected, nor of the nasal and lachrymal branches being simultaneously attacked, while the frontal escaped. The fourth case was, he believed, the only recorded instance of the cornea being affected in herpes infra-orbitalis. Mr. Hutchinson had pointed out that the eye was affected if the oculo-nasal branch were attacked. The most common ocular complications were swelling of the lids, conjunctivitis, and increased lachrymation; the cornea might become affected by superficial ulceration, phlyctenulæ, interstitial keratitis, or keratitis punctata; and neuroparalytic keratitis had been recorded. Serous or plastic iritis might occur; and the pupil, though generally contracted, had been found sometimes dilated. The chief affection of the fundus was papillitis. The tension was said to be generally lowered. Palsy of the extrinsic muscles and paresis of accommodation had been recorded. After referring to the *post-mortem* evidence of neuritis and dilatation of the ophthalmic artery, Mr. Jessop expressed the opinion that all the ocular symptoms, with the exception of the rarest, might be explained by supposing a dilatation of the vessels due to irritation of the sensory nerve. Vascular dilatation lasting some time would especially influence such a structure as the eye. If the whole attack were due to the neurotic storm, the different nerves would be affected nearly simultaneously, and the ocular symptoms would be coincident with the cutaneous eruption, which was not the case. Mr. Jessop attributed to Mr. Hutchinson the credit of first separating herpes accompanying the ophthalmic division of the fifth nerve from erysipelas.

The Treatment of Menorrhagia. — In young girls, as a rule, a powerful tonic treatment is required. Sometimes the iron is not sufficient, and I have to resort to astringents and tonics not ferruginous. I have used bichloride of mercury and quinine in these cases. Occasionally we meet with cases of this kind in which the patient apparently is in robust health. Under such circumstances I know of nothing better than iodide of potassium.—*Dr. Wm. Goodell.*

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE QUESTION OF MEDICAL ADVERTISING.

IN order to succeed in the practice of his profession a young physician, or an old one, must not only possess a knowledge of his science and the ability to apply it, but must also make himself known to others, or, as it is usually called, must advertise himself. Great erudition and skill are practically of little value unless they can be made use of to the profit of the possessor or of his fellows. Doctors must have patients, and the problem which all must solve is how to secure patients in order to turn the capital of knowledge into a means of support.

We have received a communication from a valued Iowa correspondent, "E. H. H.," in which the writer advocates newspaper advertising as the surest, most honorable, and best method of securing a profitable clientele. He says:

"Considering the change in the mode of doing business in all trades and professions, there is a possibility that there is some consistency in a demand for some change in ours as well. Specialization in medicine, improved travelling facilities, and the demand on the part of the public for proficiency in all branches of knowledge, change to so great a degree the situation, that a new definition of what constitutes dignity in advertisements seems loudly called for. Advertisement—that word which causes such a bellicose flush to mount into the face of the orthodox—is a word which describes the motive of much of the conduct of a great majority of our brethren in the profession. They must know that to it they owe three-fourths of their success. We must advertise, that is certain. Many are the ways that the physician has to resort to, aside from his 'unintentional' notices in the papers. He spends much of his time at the public resorts—at the corner grocery, at the lodge, church, or saloon—the grade depends upon the social class among which he expects to get his practice, or the town in which he has cast his lot. A higher grade of the methods in advertising is lecturing before schools, exhorting in churches, officiating in lodges, publishing advice, and heading new movements. The founding of the numerous medical colleges figures largely under this head, and may be considered the best of all. If the young physician cannot do these things with sufficient suavity and polish, he will certainly starve on the threshold of his career, or be driven from it to some employment under salary, or to some business that affords an opportunity to make some use of the usual ways of becoming known.

"Is there not, in the relations of the profession of medicine to the public, a necessity which is repugnant and nauseating to a really modest man? Would it not be more dignified to be allowed to announce himself by the methods of a first-class business, under the restrictions above cited, and governed in it by his taste, announcing his business, his place, his facilities, so far as his appliances are concerned, for doing that business? If he has a hospital, let him announce it, leaving out all mention of personal qualifications, advantages had, or relations sustained heretofore; these are the elements that are out of taste and undignified, and the part that should be discountenanced.

"Unwholesome laws which prevent the growth of giants in a profession or trade, but which trim all alike, as a hedge fence, on the ground of fairness toward their neighbors in the same business, dwarf the whole system, and bear fruit below the standard of which the human mind is capable, and prevent a healthy action of that law which determines the fittest man for the work. Every facility consistent with right and true dignity and adaptation to the age should be allowed for development. Life is short, and there is no reason why half of it should be wasted waiting for a living practice only, or that half of it should be given to illegitimate work to make one's self known.

"These arguments, it is true, do not so much apply to the family doctor, or to the attendant on acute diseases and routine practice, as to the practitioner in chronic diseases, who finds himself in circumstances very different. People now are not satisfied with the final judgment of the man who has a general knowledge of the whole round of medical and surgical practice, but seek for the specialist, however distant, to look into their cases, before they are willing to rest their chances for weal or woe. It is easy to learn where to invest money, to get an education, and the safest route to take on a journey; but the same source from which people obtain this information directs them to the lowest level of the representatives of our profession, where they are swindled and get the least skill in the art."

We agree with our correspondent that there is much that is reprehensible in the methods too commonly employed by many physicians to make themselves known and to keep themselves prominently before the public; but we doubt whether the substitute which he proposes would be a desirable one in any sense. A simple and modest advertisement in the public journals would be no guarantee of the advertiser's ability or skill. If all should advertise no one would be more conspicuous than his fellows, and the least conscientious and honorable would be the very ones who would have the most conspicuous and alluring display. The writer applies his remarks more particularly to the specialists; but, whatever may be urged in favor of the general practitioner presenting his claims for patronage in this manner, we cannot admit that the specialist would be justified in so doing. The part of the specialist in medical economy is to assist the general practitioner in cases in which more than the ordinary knowledge and skill is required. It is to the medical profession, and not to the public at large

that the specialist should look for his practice. The family physician has the physical well-being of his patient committed to his trust, and is responsible for its preservation. If he enjoys the confidence of his patient he will naturally be consulted in the selection of a specialist, when necessity may arise, and will recommend the patient to the man whom he considers the most capable and skilful. And surely he would not be influenced in his choice by a well-displayed newspaper advertisement.

We see no objection to a specialist, if he so desire, printing a simple card in the medical journals, but there is another and better way. Let him not only assert his ability to treat certain diseases, but let him prove that he possesses the requisite knowledge by well-written articles. The columns of the medical press are open to all who have anything to say, and who can say it in a way to interest their professional brethren. If a man can show his fellows that he is an expert in his particular field, he will not have to wait long for patients, and he will receive them on the advice, and with the good will, of the family physician. But let him seek, through advertisements in the public press, to draw to himself patients, against the will of their medical advisers, and he is close to the borderland of charlatanism. Honest professional work is what pays best in the long run.

RUMINATION IN MAN.

Among the oddities of medical literature are the accounts which appear from time to time of merycism or rumination in the human being. There are some forty cases of this nature now on record, one of the most recent of which is reported by Johannesen in the *Zeitschrift für klinische Medicin*, vol. x., No. 3. The subject of this relation began to ruminate when he was four years of age, the affection being first noticed during convalescence from measles. About fifteen minutes after a meal a portion of the ingested food was regurgitated, and after this was swallowed another bolus would make its appearance, the process being repeated during a variable period of from ten minutes to an hour. The patient could, by an effort of the will, return the food-mass to the stomach before it had entered the mouth, but all efforts made to prevent the expression of the bolus from the stomach were without effect, and usually caused pain. The man seldom vomited, and never suffered from acid eructations. The matter regurgitated had no unpleasant taste, but, on the contrary, the act of rumination was very agreeable. Œsophageal examination was easy, the sound passing the cardiac orifice with facility, but no diverticula could be discovered in the stomach or œsophagus, nor was there any apparent dilatation of these organs.

In the article on merycism in Jaccoud's "Dictionnaire de Médicine et de Chirurgie," M. Blanchard gives a very interesting account of the affection as he has observed it in his own person, being himself a ruminant. He says that he was always a *mérycole*, and did not imagine that there was anything abnormal about it until he discovered the fact during his studies in physiology. The process is a pleasant one, and the writer confesses to having often selected certain articles of diet in anticipation of the agreeable sensation which he would experience during rumination. If the food have been in the stomach for three or four hours, however, the regurgitated bolus usually has a bitter or sour taste.

The cause of merycism is somewhat obscure. It does not seem to be, strictly speaking, a pathological process, for the subjects of the affection seldom suffer from any unpleasant or painful gastric symptoms. Most of the reported cases have occurred in males, and many of them in large eaters, or else in those who bolt their food without having masticated it thoroughly. The affection may begin at any period of life, but occurs for the most part as a congenital condition, or at least begins so early in life that the subjects do not remember ever to have done otherwise than ruminate. Brown-Séquard suffered for a time from acquired merycism, brought on by certain experiments to determine the period of time required for the digestion of various aliments. He swallowed a sponge attached to a string, in the centre of which the food was contained. After a time he found that his stomach rejected the sponge, and soon it expelled whatever food was swallowed as well. This regurgitation of food continued for a considerable time after the sponge experiments had been abandoned. In most cases, however, no definite cause can be invoked to account for the trouble. In Johannesen's case one of the brothers of the patient was an epileptic, and some other observers have noted a similar relation, if such it be, between epilepsy and rumination.

It would seem probable that merycism should be classed among the neuroses, since in most cases evidence of gastric disease is wanting. The act is probably excited by spasmodic contraction of the muscular coat, assisted by the diaphragm and abdominal muscles, the propulsion upward of the food being favored by a somewhat patent condition of the cardiac orifice. It is not unlikely that the affection may be beneficial, rather than otherwise, to its subjects, since the food, if not subjected to a second mastication and admixture with saliva, might put too great a tax on the stomach, and thus excite gastric troubles.

ON THE AFFECTIONS OF THE JOINTS WHICH COMPLICATE OR FOLLOW SCARLATINA.

An admirable paper bearing the above title was recently read by Dr. Ashby before the Manchester Medical Society. The author traces the literature of the subject through the writings of Trousseau, who admitted the existence of a scarlatinal rheumatism. Bristowe recognized the fact that the joint trouble might go on to suppuration. Dr. Ashby's paper is a summary of our knowledge at present. He makes four classes of scarlatinal joint troubles: first, synovitis; second, acute or chronic pyæmia; third, acute or subacute rheumatism; and fourth, scrofulous disease.

In synovitis he has found the wrists and fingers the most frequent seat of the lesion. Sometimes the tendon sheaths of the flexors and extensors are also involved. The regular symptoms are pain and tenderness, less often redness and swelling. In one case chronic synovitis resulted, lasting sixty days, but the fluid was finally absorbed. The synovial affection generally comes on from the eighth to the tenth day. True rheumatism, however, generally occurs during convalescence, or at

the commencement of the febrile attack. Synovitis is more common in the prolonged cases. Hæmic murmurs are often heard. They are adjudged to be of this nature because of their disappearance during convalescence. From this fact, and from the time of invasion, he claims the possibility of a differential diagnosis between simple synovitis and true rheumatism.

For the synovitis he has prescribed sodium salicylate, more as a matter of routine than from any faith in the drug. He regards the disease as a fugitive one, generally disappearing without any treatment whatever.

It is the septicæmic form which is the most dangerous. Even in cases of recovery permanent cardiac mischief results. The tubercular diathesis naturally determines the nature of a joint complication.

WITCH-HAZEL.

The history of popular domestic remedies for bruises, sprains, and other minor surgical ills is full of interest, and it shows how much a matter of fashion is the mode of treating these complaints. According to Drs. John Marshall and H. C. Wood, in *The Therapeutic Gazette*, thirty years ago the American housewife gathered the flowers of St. John's wort, soaked them in sweet oil, and made with them a so-called "red-oil," for the solace of aching limbs. Later arnica became the universal panacea, while in recent years this has been superseded by various "extracts" of witch-hazel (*Hamamelis virginica*).

Doubtless physicians have often been obliged to listen to stories of the wonderful virtues of this, the mother's latest favorite, and they have perhaps often wondered whether there was any subtle and mysterious element in this plant which evaded the chemist and the pharmacologist, and was only brought out by contact with bruises and black-and-blue spots of all sizes and dimensions. For our text-books, so far as they have spoken, give no reason for witch-hazel being any better application for injured surfaces than arnica, or alcohol, or a dozen other things.

In *The Therapeutic Gazette* for May last, the authors to whom we have referred report the results of experiments made to solve this problem of the popularity of witch-hazel.

A very strong watery distillate of the drug was made, and this was injected in enormous doses into several frogs and into one mammal. The results were absolutely *nil*, and the experimenters conclude that the volatile principle of hamamelis is entirely inert.

Experiments were then made to determine the presence of a volatile oil, and the composition of the alcoholic and ethereal extracts. No tests of physiological properties were made, but the writers state that their conclusions were in harmony with those reached by Dr. Hector Guy, of Paris, who found as a result of numerous experiments that hamamelis virginica is not toxic, that it has no special action on the vascular system, and that it contains no alkaloid. There is a very large percentage of tannic or gallic acid in the fluid extract, and to this and the alcohol it is believed the active properties of hamamelis, such as they are, are due.

The famous witch-hazel preparations, therefore, which cure so many diseases, external and internal, appear to be nothing but dilute tinctures of tannin, made odorous by an inert volatile oil. We fear that there is nothing in the drug which will prevent the fancies of fashion, or the exigencies of trade from overturning its supremacy. Mothers may return to arnica, but more likely some new and wondrous extract will take its place. We shall yet write the history of the decline and fall of witch-hazel.

News of the Week.

Dr. D. Bryson Delavan has been appointed Professor of Laryngology at the New York Policlinic in place of Dr. E. Elsberg deceased.

Dr. Coe's Reply to Mr. Lawson Tait.—Dr. H. C. Coe writes: "Will you kindly allow me a small space in your columns, in order that I may reply briefly to a rather imperious question which Mr. Lawson Tait does me the honor to address to me in your issue of June 19th? He asks for my authority for two quotations which appeared in my recent paper entitled, 'Is Disease of the Uterine Appendages as Frequent as it has been Represented?' I refer him to the original paper (and *not* to a condensed society report), in which he will find the desired information. The second statement, I acknowledge frankly, was made on the authority of Dr. Thomas, as was also stated in the paper. Mr. Tait should not forget that his writings (especially the *polemical* ones) are numerous, and that he may sometimes forget written and verbal statements, which nevertheless carry great weight with the profession at large, especially in America. When he comes to consider my position more calmly, and to remember that the obnoxious paper was read before an American audience, Mr. Tait may find that, so far from seeking to lessen the value of his work in the eyes of my countrymen, I have only insisted upon the very limitations of the so-called 'Tait's operation,' upon which he himself laid such stress in his Edinburgh address."

Conveyance of Infection by Flies and Mosquitoes.—As the warm season sets in, it may be well to be reminded of the fact that Dr. Maddox has published in the *Journal of the Royal Microscopical Society* some experiments on the subject of flies. He fed flies in confinement on the comma bacillus obtained by culture, and found that this organism "can pass through the digestive tube in insects in a living state." Previous experiments by Dr. Grassi, of Rovellasca, point in the same direction. Dr. Manson has proved the conveyance of the ova of filaria sanguinis hominis by mosquitoes, and it has very recently been asserted that yellow fever can be communicated by the same insect.

The Apostle of the Lepers and the Contagiousness of Leprosy.—From the London papers we observe that Father Damen, who has long been known as the Apostle of the Lepers of Molokai, is beginning to suffer from the disease with which he has been so long in contact. For years he has lived on the island upon which are collected the lepers of the Sandwich Island group. For a long time Father Damen continued in good health, but in a letter written recently he says: "Impossible for me to go any more to Honolulu, on ac-

count of the leprosy breaking out on me. The microbes have finally settled themselves in my left leg and my ear, and one eyebrow begins to fall. I expect to have my face soon disfigured. Having no doubt myself of the true character of my disease, I feel calm, resigned, and happier among my people. Almighty God knows what is best for my sanctification, and with that conviction I say daily a good *Fiat voluntas tua*."

The First British Lady Surgeon.—The first lady surgeon qualified in Great Britain was invested with the Letters Testimonial of the Irish College of Surgeons recently, under the new power granted to it by its charter of 1885.

Arsenic in Skin Diseases.—The editor of the *Journal of Cutaneous and Venereal Diseases* is desirous of ascertaining to what extent arsenic is used by American physicians in the treatment of diseases of the skin, and also the results of their experience as to its therapeutical value. Information upon the following points is requested of every physician who reads this: Are you in the habit of employing arsenic, *generally*, in the treatment of skin diseases? In what diseases of the skin have you found arsenic of superior value to other remedies? What ill effects, if any, have you observed from its use? What preparation of the drug do you prefer, and in what doses do you employ it? Address Editor of the *Journal of Cutaneous and Venereal Diseases*, 66 West Fortieth Street, New York.

Successful Porro Operations.—Professor Breisky, of Prague, has performed six Porro operations, and in each case saved both mother and child.

The Sequel of Two Great Operations.—At a recent meeting of the Basle Medical Society, Professor Socin, of Basle, showed the stomach from a woman in whom he had performed, first, resection of the pylorus, and, subsequently, a year later, gastro-enterostomy. The patient died, from return of malignant disease, eighteen months after the second operation.

Of the Dozen Doctors in the English Parliament only four voted with Gladstone for Home Rule.

"The new Medical School at Oxford," says *Truth*, "is hardly a success so far. At the last examination, three learned 'dons' were duly appointed to examine, at a fee of £15 each, but only one candidate presented himself. He was ploughed. People are naturally asking what is the use of paying £1,000 a year to a Professor of Medicine to teach our students nothing."

Medical Exhibition in Berlin.—An exhibition is to be held in September in Berlin, at which it is intended to present a picture of the progress made in recent years in all departments of medical research. The sections will include physiology, pathology, anatomy, and general pathology, pharmacology, dermatology, and syphilology, surgery, gynæcology, ophthalmology, psychiatry, neurology, laryngology, together with military and sanitary affairs. The secretary of the exhibition is Dr. Lassar, 19 Karlstrasse, Berlin.

Seats for the Store-girls.—It is stated that the Board of Health of Chicago has brought a suit against a dry goods firm in that city, for not providing seats for their women clerks.

The Fifty-fourth Annual Meeting of the British Medical Association will be held at Brighton on August 10, 11, 12, and 13, 1886, under the presidency of W. T. Edwards, M.D., F.R.C.S. An address in Medicine will be delivered by Surgeon John S. Billings, M.D., U.S.A. An address in Surgery will be delivered by Frederick Abell Humphry, F.R.C.S. An address in Public Medicine will be given by E. D. Mapother, M.D. The scientific business of the meeting will be conducted in nine sections.

An Industrious Physician.—Professor Balthazar Luchsinger, of Zürich (formely of Berne), who died suddenly, in his thirty-seventh year, in Meran, on January 20, 1886, has left seventy-one original experimental works on physiological, pharmacological, and toxicological subjects; moreover, ten inaugural works were made under his guidance in Berne.

Dr. Edwin J. Bartlett, of Dartmouth College, and Dr. William G. Thompson, of this city, are to lecture on physiology at the University Medical College during the coming session.

The Late Professor Von Gudden was sixty-eight years of age. He left eight children. It is stated that he had nearly one hundred brains, showing various atrophies, which he was intending to study.

Successful Cholecystectomy.—Dr. E. Koehl, of Zürich, describes (in the *Correspondenzbl. für Schw. Aertze*, No. 8, 1886, p. 193) antiseptic cholecystectomy performed by Professor Kroenlein, for dropsy of the gall-bladder, in a woman aged thirty-four. The patient was up and about by the end of the third week, and left the hospital on the forty-first day. When seen five weeks later, she weighed five and a half kilogrammes more than before the operation. It is the eleventh cholecystectomy in literature, according to a correspondent of the *British Medical Journal* (the other ten cases were published by Langenbeck, Heyernam, Reidet, and Courvoisier).

Can Metaphysicians Practise Medicine?—A question is now agitating Chicago medical circles, says *The Sanitary News*, involving the right of metaphysicians to treat disease without submitting to the examination required by the State Board of Health, and possessing the diploma of some reputable medical college. It is needless to state that, were these requirements inflexibly enforced, metaphysicians would be unable to treat patients legally. Dr. John H. Rauch, Secretary of the State Board of Health, thinks the law does not apply to that class of doctors, as they do not treat with medicine and are not, therefore, medical practitioners under the State law. The question will be decided by the State Board of Health at its next meeting.

The Boydston Medical Prize has this year gone to an American, Dr. Charles F. Withington, of Boston, for an essay entitled: "The Relation of Hospitals to Medical Education."

A Homœopath Invited to St. Louis.—It appears that the members of the Medical Press and Library Association of St. Louis conceived and carried out the wicked idea of inviting to the medical editors' banquet the editor of the *N. E. Medical Gazette*, "a monthly journal of homœopathic medicine."

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, May 7, 1886.

SAMUEL SEXTON, M.D., CHAIRMAN, *pro tem.*

IN the absence of the author, Dr. R. F. Weir, the paper of the evening (see p. 725), entitled

FATTY AND SARCOMATOUS TUMORS OF THE KNEE-JOINT,

was read by the Secretary, Dr. C. L. Dana.

DR. H. F. WALKER thought that in considering the question of the origin of such tumors it was worth while to mention the fact that the patient whose history Dr. Weir had related, and who had been under Dr. Walker's care at different times, had had the lesions of primary and secondary syphilis, but he had never shown any tertiary manifestations of the disease.

SARCOMA OF THE CEREBELLUM IN THE CHILD OF A SARCOMATOUS MOTHER—CEREBRAL LOCALIZATION—THE SIGNIFICANCE OF THE CHOKED DISK.

DR. GEORGE L. PEABODY presented a specimen of sarcoma of the cerebellum, with a detailed history of the same (see p. 727).

DR. DANA inquired whether any symptoms were produced by the tumor which would throw any light upon localization.

DR. PEABODY replied that pressure upon the corpora quadrigemina and upon the aqueduct of Sylvius, destroying the centre for the third cerebral nerve, would account for the ptosis. It was not evident that any ataxic symptoms were present. When in the hospital the boy was bedridden; there was progressive muscular weakness, but the patient was able to make movements and to resent interference. The mother's account of the case prior to admission to the hospital was not very satisfactory; the boy, she said, had been perfectly well two weeks previously.

DR. AMIDON first saw the patient with him, and they both thought he had tubercular meningitis, but as the case progressed without fever they abandoned this diagnosis. He agreed with Dr. Dana, who remarked that it was singular there was no loss of vision.

DR. ROBINSON asked the gentlemen present whether they had found examination of the fundus of the eye a very important means of diagnosticating brain-tumors. He believed it had been settled by the oculists that it was not.

DR. PEABODY said that in his experience there was usually the so-called choked disk, but not always. In the present case there was none; the fundus of the eye was normal. He was of the impression that the oculists attached greater value to an examination of the fundus of the eye than did general practitioners.

DR. DANA asked what was the origin of the tumor.

DR. PEABODY thought it probable the tumor began near its present centre, in the white matter of the cerebellum, and grew in all directions.

TREPHINING UNDER COCAINE.

DR. C. L. DANA related the following case, the hospital notes having been taken by his house physician, Dr. J. M. Kingman: William H——, single, aged thirty-eight, born in Ireland, a bricklayer, was admitted to the hospital, February 17, 1886. Examination, February 19th: The patient said that his father had had fits. The patient himself had a fit about ten years ago; he fell backward and was unconscious for about twenty minutes. Otherwise he had been a well man until eight months ago. He was then hit on the back of the head by a bar, and remained unconscious for some hours. A day or so later he began to notice difficulty with his speech—a halting and stammering. He also began to notice loss of power in his legs and arms, which has remained about the same. His appetite has remained good; he sleeps well; he has no trouble with micturition or defecation.

Since the receipt of the blow he has had several fits, says he felt dizzy, and had trouble with breathing just before the fits came on. The fits lasted from ten to twenty minutes. He would fall forward and his head would be drawn to one side. The fits recurred once or twice a week. The last one took place four days before admission.

Examination shows left hemiplegia with some atrophy and contractures, the left patella and other tendon reflexes exaggerated. As to skin reflexes—the right cremasteric reflex was exaggerated; left cremasteric reflex abolished; both plantar reflexes good; slight abdominal reflexes on both sides. Sensation for touch and pain good. Left leg and arms somewhat diminished in size. Can move left arm and leg, but cannot walk without support. Arm and leg about equally affected. Face but slightly affected. The patient has considerable halting and lisping in his speech. The mind is weak, memory poor; he cries easily.

On the left side of the head is a deep scar and depression. It is about an inch and a half long, and lies over the left half of the occipital bone.

The urine is pale yellow, alkaline; specific gravity, 1.010; no albumen; clear, with occasional casts; no sediment.

Dr. Dana decided to trephine the patient. The operation was performed by his late house physician, Dr. Symonds. The patient was a rather weak man, and as Dr. Dana had several times seen epileptic patients get an attack under the influence of ether, he thought it proper to try cocaine instead of ether as an anæsthetic in this case. The head was shaved, and about fifteen minims of a four-per-cent. solution of cocaine was injected into the skin in the region of the scar which had been left by the blow.

The injection was made deeply, so as to reach the periosteum. Subsequently other injections were made as needed. After the periosteum had been raised and the trephine applied to the bone, no more cocaine was used, as no pain was complained of. About one drachm of the four-per-cent. solution was employed during the whole operation, which lasted an hour and a half, including the final dressings. At first he employed an incarcerating coil of tubes, applied by the aid of an Esmarch bandage in the way described by Dr. J. W. Wright, but the bandage was so uncomfortable, and finally painful, to the patient, that it had to be removed, and the major part of the operation was performed without any incarcerating coil whatever. The operation, for several reasons, was somewhat prolonged, but the patient endured it without complaint, sitting in a chair with his head resting on his arm on a table in front of him. The incision was made over the occipital bone on the left side, near the junction of the temporal bone, and three inches to the left of the occipital protuberance. A depressed fracture, linear, and over an inch long, was found. The anterior portion showed some loss of bone-substance, which was replaced by fibrous tissue.

A large button of bone was removed, which showed some depression of the internal table. Pieces of bone were also removed with the forceps.

The exposed dura mater did not appear to be sensitive.

After the operation the patient had one fit the next morning and two others a month later. Since then he had remained free from attacks, though taking the same dose of bromide as before (gr. xlv. daily). His mind was much clearer, his speech greatly improved, and he was able to walk alone, when before the attack he could not walk at all, except with the support of attendants.

The speaker said that one interesting feature in the case was the fact that the hemiplegia was on the same side as the injury (the left). It must have been caused, therefore, indirectly by a meningeal hemorrhage, at a point almost diametrically opposite to the point of fracture. A careful examination of the topography of the skull showed that the motor convolutions were in fact directly opposite the depressed fracture. It would, perhaps, have been a rational procedure to have trephined over these convolutions, but the speaker had preferred to attack the visible lesion first.

Dr. Dana spoke of the various methods of mapping out the convolutions on the living head devised by Féré, Championnère, Giacomini, and Reid. They all gave somewhat different results. That of Féré was the one ordinarily used, while that of Reid was the most complete.

Dr. Dana had found in a number of measurements that in American adults the distance from the root of the nose to the coronal suture was 130 to 140 mm. (In an epileptic it was only 120.)

The distance from coronal suture posteriorly, to upper end of fissure of Rolando, was 45 mm. (Féré), 48 mm. (Scwalbe), 53 mm. (Championnère). The distance or dinarily from the root of the nose to the upper end of the fissure of Rolando, therefore, was from seven to seven and three-fourths inches. The fissure passes down and forward from this point to meet a vertical line starting in front of the external auditory meatus, with which line it makes an angle of 30° to 35°.

Dr. Dana showed an instrument cut out of lead, which could be applied to the cranium, and by proper adjustment could be made to show the location of the principal fissures and convolutions. All measurements in the living subject for determining the location of underlying convolutions were only approximate however, and the apparatus exhibited was mainly for assistance in class demonstration.

Dr. Ball asked whether cocaine was employed during the last stage of the operation.

Dr. Dana replied that it was not found necessary after the periosteum had been cut through. They were able to scrape the bone and to rub the dura mater (usually thought to be quite sensitive) without apparently causing the patient any pain.

Dr. J. B. Hunter asked whether there were any definite objections to giving ether, as a rule, to patients subject to epilepsy.

Dr. Dana could reply only by saying that he knew of three instances in which ether had brought on the condition of status epilepticus; two were cases in which he administered the anæsthetic himself. The patients, it was true, came out all right; at the same time he had recently seen a patient die in status epilepticus.

Dr. Hunter had asked the question because he once gave ether to an epileptic patient who became profoundly comatose, and remained so eight or nine hours, notwithstanding efforts to arouse her by artificial respiration, galvanism, etc. While in this state her color was blue.

Dr. R. W. Amidon remarked with regard to cerebral topography that he would be glad if some one would contrive a better method than those now employed for mapping out the convolutions. Those now in use could be readily applied to the denuded skull, but not during life.

The only objection to fixed measurements, like those suggested by Dr. Dana, was the very variable conformation of different heads and consequent variable position of subjacent convolutions. But in ordinary explorations of the head exactness was not demanded, and present methods might answer. He thought it would be worth while for some ambitious young American to repeat and confirm the correctness of Féré's mapping of the convolutions.

The Society adjourned.

OHIO STATE MEDICAL SOCIETY.

Forty-first Annual Session, held at Akron, O., June 2, 3, and 4, 1886.

Wednesday, June 2d—First Day—Afternoon Session.

The President, Dr. William Morrow Beach, of London, called the meeting to order promptly at the appointed hour. Prayer was offered by Rev. R. L. Ganter, and addresses of welcome were made by the Mayor, Hon. L. D. Watters, and Dr. R. E. W. Howard. A fair number of delegates were present at the opening.

The Secretary reported 41 new members, 11 deaths, and 40 forfeitures, making the membership 557, of whom 11 were non-residents. The death-roll was then read, numbering some of the best men of the Society. Suitable notice was made of their decease. Three new societies were reported as applying for the privilege of auxiliaries. Bills amounting to $673.10 were reported.

Vacancies in committees were filled. Reports were made from the Committee on Publication and from delegates to other societies.

Mrs. F. W. Leiter, of Mansfield, made a

temperance speech,

which was well received. A member made a disrespectful reply, which was not well received. Mrs. Leiter is President of the Society for Scientific Temperance Instruction.

miscellaneous business.

A telegram from the Medical Society of Ontario, Canada, was properly responded to.

Dr. H. Z. Gill, of Cleveland, made a verbal report of a "Case of Posterior Torticollis, with Treatment."

Dr. A. Hurd, of Findlay, read a paper on "The Close Relation and Probable Identity between Scarlatina and Diphtheria," which was discussed by Drs. S. B. Hiner, W. J. Scott, James Bennett, L. S. Scovill, H. Z. Gill, W. H. Harmon, and E. Williams.

Dr. N. P. Dandridge, of Cincinnati, read a paper on "The Present Aspect of the Treatment of Vesical Calculus." Discussed by Drs. S. F. Forbes, F. W. Hamilton, and E. W. Russell.

Dr. H. Z. Gill, Chairman of the

committee on the collective investigation of disease,

made the report. He introduced a number of carefully prepared charts showing the relation between the temperature and death-rates, referring especially to Cleveland. During the year there were 518 deaths among children from cholera infantum; 418 occurred during July, August, and September; 375 of them during the two former months; 16 deaths are recorded July 31st; of these 13 were from cholera infantum. The relationship between scarlet fever and diphtheria, as shown by the chart, he thought rather more than accidental. The subject of typhoid fever was also discussed. Ill ventilation, crowding as in sleeping-rooms, school-rooms, etc., he considered great evils. Ventilation dilutes until it destroys; dilution attenuates until it renders innocuous. The reports of Drs. Starling Loveing and C. O. Probst, members of the Committee, were also submitted.

Adjourned for dinner.

Thursday, June 3d—Second Day—Morning Session.

The Committee on Admissions reported a large number of new members. The Committee on a State Board of Examiners Bill reported and were continued. The Committee on Finance reported $340.01 in the treasury. The druggists in session at Springfield were thanked for a kind remembrance by telegraph.

Dr. F. D. Bain, of Kenton, read a paper on

SOME PRACTICAL OBSERVATIONS IN OBSTETRICS.

Discussed by Drs. Merriman, Herrick, Hiner, and A. Dunlap.

Dr. Dudley P. Allen, of Cleveland, reported

A SELECTED CASE OF OVARIOTOMY,

and showed specimens.

Dr. W. B. Hamilton, of Columbus, read a paper on a similar subject.

Dr. B. M. Ricketts read a paper on

EPITHELIOMA, ITS ETIOLOGY, DIAGNOSIS, AND TREATMENT.

He opened with a reference to the extreme amount of suffering entailed upon the subject of cancer. He thought the authorities prone to elaborate and mystify rather than to simplify their thoughts. Owing to the voluminous character of their productions they are to the general practitioner inaccessible. Bichat, Mueller, and Rokitansky first discovered the histological tissue-development. According to Parker, $\frac{1}{150}$th of the deaths of the world are from this disease. On the Nile, among the American Indians, Hindoos, Egyptians, and native negro population of Africa it is absent. It is found most common on the water-courses of England and Wales. Epithelioma is the only form of cancer the origin of which has been satisfactorily associated with previous local disease—constant irritation being the most common cause. It was not till 1840 that Rokitansky placed our knowledge of this disease on a high footing, and epithelioma was known to be a distinct form. It is claimed that the upper lip has an immunity against this disease, but two cases have been reported by Hebra. The average time required to destroy life is fifty-three months, longer than any other form of cancer. The author gave a number of tables going to show that this variety comprises one-fourth of the cases of cancer, that it occurs oftener in men than in women, and that it is found oftenest in the face. The classification of the epithelioma was then discussed. First, the superficial or flat, with which some think the rodent ulcer to be identical, then the deep-seated, then the papillomatous or warty cancer, the most common of them all.

The diseases liable to be confounded with epithelioma are, lupus, syphilis, and rhino-scleroma, from which differential diagnosis is comparatively easy.

Treatment should be both local and constitutional. There is no question but that either form of the disease should be removed as early as diagnosed. The only difference is how to remove it. The superficial is the most easily cured, and is thought by some to be the only one in which caustics should be used. Mr. Erichsen firmly believes that excision with the knife cures. Caustics, though brought into disrepute by charlatans, are undoubtedly of use, The essayist next discussed the actual cautery, the black paste, made of sulphuric acid and saffron, the chloride of zinc paste, caustic arrows, Fells' paste, arsenious acid, Mance's ointment of pyrogallic acid, acetic acid, electrolysis. Escharotics, he said should not be used unless there was a considerable amount of tissue underneath. Cauterants should be followed by warm poultices and carbolized oil dressing. He further discussed repair of the lost parts by flap operations, skin- and sponge-grafting. He recommended highly the local or subcutaneous use of cocaine to relieve pain, spoke of local anæsthesia from salt and ice, but feared sloughing as a result. He recommended, in closing, special attention to the general condition of the patient.

Discussed by Drs. Sisler, Merriman, R. H. Reed, J. T. Whittaker, and William Corlett.

Afternoon Session.

Dr. C. A. L. Reed, of Hamilton, read a paper on

SOME CASES OF ABDOMINAL SECTION.

Three papers having been read on this subject now, it was taken up and a very lively discussion followed. This was taken part in by Drs. A. Dunlap, of Springfield, W. B. Hamilton, of Columbus, and H. J. Herrick, of Cleveland.

THE ELECTION OF OFFICERS

being called for, resulted as follows:

President—Thomas MacEbright, of Akron.
First Vice-President—J. M. Weaver, of Dayton.
Second Vice-President—W. S. Battles, of Shreve.
Third Vice-President—X. C. Scott, of Cleveland.
Fourth Vice-President—Jesse Snodgrass, of Kenton.
Secretary—G. A. Collamore, of Toledo.
Assistant-Secretary—E. C. Brush, of Zanesville.
Treasurer—T. W. Jones, of Columbus.

It was decided to hold the next meeting of the Society in Toledo.

The President, having forgotten his manuscript, did not deliver an address, but read a number of letters from those who could not attend, from home and abroad.

Dr. E. Williams, of Cincinnati, read one of his characteristic humorous papers, full of wit and good hits at quacks and quackery. His subject was "Ocular Delusions." It was greeted with laughter and applause.

Dr. A. B. Threasher, of Cincinnati, read a paper on

HYPERTROPHIC NASAL CATARRH,

in which he thought the disease, as a rule, due to a strumous diathesis in addition to the common irritative causes of chronic nasal catarrh.

There was only difficulty in diagnosis when the hypertrophic tissue has a tendency to become pedunculated, when it may simulate, or really become a true polyp.

The prognosis is wholly governed by the treatment, and is bad if no treatment is instituted. This should be two-fold: constitutional and local. The former should be both hygienic and medicinal, subject to the peculiarities of the case. The local treatment should be the radical removal of the thickened tissue. This should be done, as a rule, by the galvano-cautery.

Friday, June 4th—Third Day—Morning Session.

Dr. R. Harvey Reed, of Mansfield, read a paper—subject,

THE IMPORTANCE OF EARLY OPERATIONS IN SURGICAL INJURIES.

He did not mean rash carelessness, but the sooner a man's limb is off after operation is determined upon the better.

Dr. Dunlap, of Springfield, had been in the habit of operating immediately. He fully endorsed the paper. The A. C. E. was his favorite anæsthetic.

Dr. J. M. Weaver, of Dayton, thought the question when to operate a serious one. It should have our best judgment. The true ground he believed to be the middle, as is the case usually where there are two extremes presented. He doubted if it was good surgery to make the immediate operation when you have a severe accident, as in railroad injury. You had better not operate if there is danger of the patient dying on the table. You had better wait. May be that feeble, flickering life might revive, if not subject just then to another shock.

Dr. E. H. Hyatt, of Delaware, begged leave to take exception to the statement in the paper that the day had gone by when authors advised waiting for reaction. He thought every case to be a rule unto itself. After shock we have a weak heart. Then, will you put a knife to that patient, and add shock to shock? You should know the degree of the shock before operating. If it is not intense, if the patient is suffering from hemorrhage, then operate. What danger is there in waiting if the patient is not bleeding? He favored the use of ether. It is a stimulant, and not so dangerous to the heart. He would not use chloroform, hence not A. C. E., for it contains chloroform. Would not give alcohol. Artificial heat is the best treatment. He wished to enter his pro-

test against the sweeping recommendation, to operate in every case, no matter what the condition of the patient.

Dr. H. Z. Gill, of Cleveland, understood the rule to be, early operation when the case will admit. He thought this settled.

Dr. T. G. Scott, of Cleveland, favored giving Bourbon whiskey.

Dr. R. B. Hall, of Chillicothe, thought the degree of shock should determine whether the operation should proceed or not. He favored dry heat and whiskey.

Dr. N. Gay, of Columbus, thought that ether could be used to diagnose shock. If the patient went down under ether, he should not be operated upon.

Dr. J. W. Hamilton, of Columbus, favored the primary operation below the knee- and shoulder-joint. Above these points, wait. He thought it reasonable to suppose that ether might stimulate reaction, and chloroform retard.

Dr. J. Harmon, of Warren, thought that chloroform as well as ether has a stimulating effect. The apparent depressant effect with chloroform is due to the more rapid anæsthesia. If you push ether to the same anæsthetic effect you will have the same depression. Chloroform as given in obstetrics stimulates.

Dr. N. Gay, of Columbus, read a paper on

THE TREATMENT OF MALIGNANT GROWTH.

He gave the history, treatment, and results, in two cases. Favorite treatment, carbolic acid and olive oil in equal parts.

Dr. Hamilton, of Columbus, thought carbolic acid a two-edged sword. He reported a case where a woman with a felon had applied carbolic acid externally. The finger died and had to be amputated.

Dr. Weaver, of Dayton, reported a case where a young woman came to him with her finger perfectly dead, caused by an application of carbolic acid. It had been applied accidentally and immediately wiped off. Gangrene set in in two or three days.

Dr. Underwood reported the case of a girl, aged ten, who burnt her finger. Her mother having heard that carbolic acid was good for burns, applied it. The finger remained wrapped up till morning when it was found dead; the doctor called, and the finger was amputated.

A lengthy experience-meeting followed, carbolic acid being the subject, drifting into its use for hæmorrhoids.

Dr. J. F. Whittaker, of Cincinnati, read a paper on

THE CARDIAC COMPLICATION OF BRIGHT'S DISEASE.

The essayist commenced by comparing the relation of the heart and kidneys in the machinery of man to that of a force or feeding-pump, and the escape or waste water-pipe. Disease of one was therefore followed sooner or later by disease of the other. In this relation the disease might begin first in the heart and be followed by acute or chronic nephritis; secondly, in both heart and kidneys simultaneously, under the operation of the same cause, as in alcoholism, syphilis, gout, arterio-capillary sclerosis, etc.; and, lastly, in the kidneys, to be followed by pericarditis, much more rarely by endocarditis, but always by hypertrophy of the left ventricle. This hypertrophy, which we now know to be compensatory, hence to be forced and sustained in every way, accompanies every case of chronic nephritis, except in a few cases of extreme debility where new tissue cannot be supplied. It is not limited to renal cirrhosis, but is found equally in chronic parenchymatous nephritis; in fact there is no chronic nephritis without it. It is a valuable sign in that it shows itself early, in the course of from two to four weeks after the reception of the disease in the kidneys, at which time it may be detected chemically as well as demonstrated upon autopsy. The various causes assigned for its production were next discussed, and the symptoms—increased tension of the pulse, dislocation of the apex to the left increased dulness, and accentuation of the aortic tone were dwelt upon in its recognition. The symptoms ar, all the more valuable in that they may all exist in a marked degree in the entire absence of subjective signs on the part of the heart. In the absence of a valve-lesion to account for them they excite the suspicion of the practitioner at once as to the existence of Bright's disease. So long as this compensation is exact there is no dropsy and mostly no uræmia, but so soon as it becomes disturbed with an excess or failure, gross symptoms supervene. Failure is eventually inevitable. It shows itself in the pulse, which becomes weak and quick; next in the lungs with signs of dyspnœa, bronchitis, asthma, and œdema; lastly, in the general system, with anasarca and hydrops of the serous sacs. The paper concluded with the treatment of dilated heart, and urged the importance of gauging the stage of Bright's disease by the condition of the heart.

Dr. H. G. Sharpe, of London, discussed the action of the over-active heart upon the excretions of the kidneys. He thought in weakened heart-action we might have albumen in the urine without kidney trouble.

Dr. William B. Davis, of Cincinnati, reported a case of intermittent albuminuria in an applicant for life insurance.

Dr. Whittaker, in closing, thought albumen in the urine always denotes disease of the kidneys. He thought Dr. Davis' case might be due to malaria.

Dr. Wm. B. Davis, of Cincinnati, read a paper entitled

THE ALCOHOL QUESTION.

He referred to the interests, moral, physical, and temporal, which the question involved. He discussed the physiological action of alcohol in the body. He considered it an antipyretic unless, may be, in the first stage, when the blood is driven to the surface. He thought alcohol was a food. Sulphur is also a fuel. We would hardly use it to heat a room. Alcohol can be used as a food advantageously in fevers and some other diseases, but should not be used in health. He then reviewed the immensity of the subject in this country and in England.

Dr. McIntyre, of Delaware, thought alcohol always deleterious, never beneficial. It is not a stimulant, it is an irritant and a depressor, a narcotic and a poison.

Dr. E. H. Hyatt, of Delaware, discussed alcohol as a food. He was not settled as yet in his belief. One thing controverting this idea is that the power of endurance is not increased.

Dr. W. C. Jacobs read a paper on

PHOSPHOR-NECROSIS.

One of the largest match factories in the United States is in Akron, and consequently the opportunity of observing this disease is quite frequent. He described the process of match-making in detail. About one-seventieth grain of phosphorus is contained in each match-head. In the dipping- and packing-rooms is where the danger of phosphor-necrosis is greatest. Here they are handled more, and in damp weather fumes are given off. The effects of phosphorus are local. In my ten cases all started from unsound teeth. Gums kept from the teeth by tartar is also a cause. It is generally thought that the patient must have been exposed for a long time to the fumes of the phosphorus. Essayist knew one girl who was exposed only two years. The physician rarely sees it in the initial stage. Generally the patient comes a few days after having a painful carious tooth extracted. He wishes to know why he still has pain.

Treatment: Tincture of myrrh is good. Deep incisions have not been so successful in the essayist's hands. He is a firm believer in the early operation. Prevention: First, allow none to work in the dipping and packing department who have not sound teeth; second, good ventilation; third, operators not allowed to eat dinner in their work-rooms, and compelled to keep their hands clean; fourth, keep a solution of the alkaline carbonates near as a mouth-wash.

Dr. F. Garrison, of Mount Vernon, showed a dicephalous monster.

Dr. Sherry, of Tippecanoe, exhibited a case of mastoid trouble, with vomiting and brain symptoms.

Dr. H. J. Herrick, of Cleveland, taking as his subject

DIETETICS IN IDIOPATHIC FEVERS,

presented points which he thought to have been neglected in the treatment of fevers. He referred to dietetics. Too much food is often given. Food not assimilated is a veritable poison. It is my custom to prescribe definitely the food and drink my patients receive. I can bring on malarial fever by means of food. He discussed dietetics with typhoid and bilious fever. Milk, he thought, was sometimes prescribed too freely by physicians in typhoid fever. Give more good pure water.

Dr. J. W. Shively, of Kent, read a paper on

THE EFFECTS OF FOOD IN HEALTH AND DISEASE.

He referred to what food had accomplished in the Colorado beetle by increasing its numbers so greatly. Also how fleet it had made the race-horse, how it had elongated the intestine in the domesticated pig over the wild boar. He discussed food and diet in the treatment of dyspepsia, diarrhœa, scurvy, torpidity of the liver and corpulency. The value of food and diet have been known for a long time. They have not been spoken of highly enough. The value of drugs has been overestimated. We lack the moral courage to say: "You need no drugs, go and do so and so and be whole." We pander to the desire for drugs. We are afraid to give our advice and charge for it, but must give some miserable drugs. The doctor with his drug-store attachment is the most popular.

Dr. William T. Corlett, of Cleveland, read a paper on

DISEASES OF THE SKIN OCCURRING IN THE SUBJECTS OF GOUT.—A REPORT OF THREE CASES.

Case I.—Aged sixty-two, Irish, immediate ancestors free from gout, rheumatism, or any protracted illness. A brother died with symptoms similar to those of this patient. Up till the time of the menopause she enjoyed good health. At this time she suffered from an inflammation of the small joints. At fifty-five an eruption broke out on the legs and finally resulted in two ulcers. The forearms and legs on admission were covered with an eruption of a dark reddish color, slightly scaly, moist only when scratched; itching moderate; joints of foot anchylosed; those of the hand markedly stiffened and enlarged; urine acid at time of passing, specific gravity 1.028, slightly albuminous; serum from a blister treated with acetic acid showed uric acid crystals. Beer and ale disagreed with her since coming to this country, and had been discontinued.

Treatment: Wine colchicum, 10 minims, liq. pot., 10 minims, and inf. gentian, 20 minims, after each meal; ulcers diminished one-half; is now free from eruption.

Case II.—Aged twenty-one, single, daughter of preceding patient. Good health until eighteen, when an eruption appeared on her forearm and legs; very itchy and moist; disappeared and recurred several times. Suffered from muscular rheumatism. She had an eruption which seemed a hybrid between psoriasis and eczema; urine acid at different times, specific gravity 1.018; contained urates, uric acid, and oxalate of lime; saliva acid; serum from blister with acetic acid gave negative results; constipated. She was given blue mass, four grains, and Rochelle salts in hot water before breakfast; tar ointment locally. Recovery rapid.

Case III.—Aged fifty-five, married, Englishman; was a sailor, but obliged to quit on account of scurvy. Then turned painter, and suffered several times from lead colic. At the age of thirty-three, he had a scaly itching eruption, sudden in appearance, which covered the whole body and disappeared soon, but returned with great frequency; complained of general debility and sciatic pains. The epidermis came off in large flakes the size of the palm, the underlying skin being moist; appearance that of advanced senility; anæmic, with marked arcus senilis; muscular tremors and an atheromatous condition of the arteries; urine scanty, twelve ounces per diem, high color, acid in reaction; specific gravity 1.030; albumen, urates, oxalate of lime and granular casts were present; given milk, stale bread and green vegetables *ad libitum*, fresh mutton and beef twice a day with lemon-juice in lieu of coffee or tea, also alkalies, vegetable bitters and Rochelle salts; locally, alkaline baths, followed with tar ointment. Is improving.

Of the lithæmic eruptions which came under the essayist's notice the following are the most noteworthy features: 1, They were scaly; 2, the color was reddish and generally syphilide; 3, there was a tendency to a symmetrical distribution; 4, they were met with in adults, usually after forty-five, except when inherited; 5, they were accompanied by other evidences of lithæmia; 6, they were prone to return. As to diet, cases differ. Some require more than usual, others must be restricted to lenten simplicity. Generally to be interdicted are: Strawberries, rhubarb, apples, pickles, sugar, and acids except in moderation. Eggs, lobsters, and fats are generally badly borne. Malt liquors, port wine, and champagne should be especially prohibited, and the free use of water should be encouraged. Diet, fresh air and exercise. The alkalies, colchicum and the mineral acids are recommended. Rochelle salts, Carlsbad salts or the mineral waters are required at times; again the lithic salts act best, especially if the eruption is accompanied by muscular rheumatism. From colchicum he had derived but little benefit. Local treatment was of little importance, except to mitigate the suffering. The alkaline baths, preparations of tar and ammoniated mercury comprise the means most in vogue and best suited to this end.

Dr. A. W. Ridenour, of Massilon, read a dicephalic paper. First subject: Report on Trephining the Spine; second, The Radical Cure for Hernia. This, in the words of the author, was more of an experience paper than an elaborate scientific affair.

Dr. E. S. McKee, of Cincinnati, read a paper entitled

CONSANGUINITY IN MARRIAGE.

The tenor of the paper was that consanguineous marriages, other things being equal, have no ill effect upon the offspring.

Dr. L. Slusser, of Canton, read a paper on

THE RELATION OF THE PHYSICIAN TO THE PUBLIC.

He did not see why a physician was not as fit for public office as any other class or calling. He referred to the prominence medical men took in the boards of this State during and previous to the time of Governor Chase. Now they are almost entirely absent from these boards. He thought we had disfranchised ourselves by persistently refusing office. The doctor should have a careful watch over the public health. He should constitute himself sanitary inspector of his patient's surroundings. In China, the less sickness there is in a certain district the more pay the doctors of that district receive. He referred to the State Board of Health. It is not all we could wish, yet it is an entering wedge and we should support the board.

Dr. H. Z. Gill presented a resolution of encouragement to the State Board of Health, which was adopted.

Dr. Wm. B. Davis, of Cincinnati, offered amendments to the constitution to the effect that the officers be elected by a committee of one from each county represented, and that the meeting be divided up into sections of medicine and surgery.

The register showed 107 names against 109 last year.

Adjourned to meet at Toledo the third Wednesday in June, 1886.

To the true chronicler of news there remains one fact to relate. Entertainment was absent. The Committee of Arrangements, it seems, had done absolutely nothing. True it is that on this very account one night-session, a very profitable one, was held, the programme cleared, and two volunteer papers read. Nevertheless, to one who had just come from the hospitality of St. Louis, and had, on somewhat similar occasions, been dined and wined at New Orleans and London, there was a want well felt. Akron is not small, and its wealth is great. There exists, apparently, no excuse. This occurred once before in Cleveland, due to a factional quarrel.

Correspondence.

ELECTRICITY IN THE TREATMENT OF EXTRA-UTERINE PREGNANCY.

To the Editor of The Medical Record.

SIR: In his article in THE MEDICAL RECORD of June 12th, Dr. C. C. Lee refers to the use of electricity in extra-uterine pregnancy, and states that it has been popularized chiefly by the writings of Thomas and Garrigues. As no mention of my efforts in this direction was made by Dr. Lee (simply an oversight on his part, I doubt not), it may not be improper for me to say that I have successfully treated eleven well-authenticated cases of this character—an individual experience perhaps unparalleled.

In THE MEDICAL RECORD of February 17, 1883, many of these cases will be found reported, and both in that article, and in the third and fourth edition of "Beard and Rockwell's Medical and Surgical Electricity," I have described more fully than can be found elsewhere the simple details of the operation. One of the unpublished cases I saw very recently in consultation with Drs. Goelet and Lee. It will probably be reported by Dr. Goelet. The twelfth and last case, one of unusual interest and specially instructive, I treated during the past week for Dr. J. E. Janvrin. The full details of the case will soon be given by him. Notwithstanding the number of times that this important therapeutic procedure has been brought to the attention of the profession, the fact still remains that many have incorrect knowledge as to the proper method to be employed; while not a few, strange as it may appear, remain in ignorance even to this day of the fact that in electricity we have a sure and speedy remedy for tubal pregnancy, if detected before the third or fourth month. As a striking illustration of the first statement, reference is made to a series of articles on Electro-Therapeutics, recently published in one of our medical journals, where it was gravely stated, that for the relief of extra-uterine pregnancy a needle is introduced into the sac and electrolysis performed. Comment is unnecessary. The beauty of the operation is its simplicity. No needles are used, the fœtal life being destroyed without danger or special pain to the mother.

A. D. ROCKWELL, M.D.

THE INDISCRIMINATE USE OF ATROPINE.

To the Editor of The Medical Record.

SIR: Your issue of May 29th contains, under "Medical Items," a paragraph referring to a condemnation of the indiscriminate use of atropine for the purpose of dilating the pupil, as an aid to examination, by Dr. Barraquer, in the *Boletin de la Clinica Oftalmologica*. The justice of this reflection upon the frequent use of atropine for this purpose cannot be disputed.

Leaving out of consideration the cases in which atropine is positively harmful, the inconvenience resulting from paralysis of accommodation which atropine induces is often a matter of importance, as in the case of business men and others, who are compelled to distinguish near objects in the discharge of their daily duties.

Were the drug used to paralyze accommodation and thus to aid in determining errors of refraction, such inconvenience would be of secondary consideration; but we find this mydriatic used very frequently, merely to dilate the pupil, for making easy an ophthalmoscopic examination—an aid which the general practitioner makes use of more frequently probably than the ophthalmologist, for the latter's constant practice enables him, in most cases, to explore the fundus oculi through the undilated pupil.

In these cases mydriasis should be produced by *cocaine;* one or two drops of a four-per-cent. solution will dilate the pupil as rapidly as will atropine, the effects will last long enough for even a lengthy ophthalmoscopic examination, accommodation is not as seriously embarrassed, the effects pass off very speedily, and thus there is practically no inconvenience to the patient. Ever since the introduction of cocaine, I have employed it in those cases in which dilatation of the pupil was necessary for ophthalmoscopic examination, and a paralysis of accommodation was not required.

Simple as the substance of the above lines may be, I am led to write them, since, as far as I have observed, the use of cocaine as a mydriatic is still very limited, while it deserves a much more extensive employment for this purpose.

Very truly yours,

CHARLES H. MAY, M.D.

[illegible], New York.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from [illegible] to [illegible], 1886.

FRYER, BLENCOWE E., Major and Surgeon. Sick leave of absence still further extended six months on surgeon's certificate of disability. S. O. 131, A. G. O., June 7, 1886.

TILTON, HENRY R., Major and Surgeon. Ordered for duty Post Surgeon, Presidio of San Francisco, Cal. S. O. 38, Department of California, June 1, 1886.

WATERS, WILLIAM E., Major and Surgeon. Ordered from Department of the East to Department of Columbia. S. O. 133, A. G. O., June 10, 1886.

MERRILL, JAMES C., Captain and Assistant Surgeon. Ordered from Columbus Barracks, Ohio, to Department of Columbia, to take effect upon the expiration of his present leave of absence. S. O. 133, A. G. O., June 10, 1886.

ROBINSON, SAMUEL Q., Captain and Assistant Surgeon. Ordered from Department of Columbia to Department of Texas. S. O. 133, A. G. O., June 10, 1886.

OWEN, WILLIAM O., Jr., First Lieutenant and Assistant Surgeon. Ordered from Department of Columbia to Department of the East. S. O. 133, A. G. O., June 10, 1886.

CARTER, W. F., Captain and Assistant Surgeon. Ordered for duty (temporary) at Fort Concho, Tex. S. O. 55, par. 2, Department of Texas, c. s., granting Assistant Surgeon Carter leave of absence for one month, is revoked. S. O. 64, Department of Texas, June 1, 1886.

BLACK, C. S., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Stockton, Tex. S. O. 64, Department of Texas, June 1, 1886.

BILLINGS, J. S., Major and Surgeon. Granted two months' leave of absence, with permission to go beyond sea, to take effect July 9, 1886. S. O. 138, A. G. O., June 16, 1886.

LAUDERDALE, J. V., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon at Fort Concho, Tex. S. O. 70, Department of Texas, June 12, 1886.

COMEGYS, EDWARD T., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon at Madison Barracks, Sackett's Harbor, N. Y. S. O. 60, Division of the Atlantic, June 15, 1886.

BLACK, C. S., First Lieutenant and Assistant Surgeon. Ordered from Fort Stockton, Tex., to Fort Clark, Texas. S. O. 69, Department of Texas, June 11, 1886.

Official List of Changes in the Medical Corps of the United States Navy during the week ending June 19, 1886.

SWAN, R., Passed Assistant Surgeon. Detached from the Brooklyn and wait orders.

LOVERING, P. A., Passed Assistant Surgeon. Detached from Navy Yard, New York, and ordered to the Brooklyn.

ARTHUR, GEORGE, Passed Assistant Surgeon. Ordered to Navy Yard, New York.

RUSH, C. W., Passed Assistant Surgeon. Detached from the Franklin and ordered to the Brooklyn.

HAWKE, J. A., Surgeon. Detached from the Wabash and ordered to the Essex, July 1st.

SMITH, HOWARD, Surgeon. Ordered to the Wabash.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 19, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
June 19, 1886.....	0	9	36	5	65	71	1	0
Deaths.								
June 19, 1886.....	0	2	7	5	3	31	1	0

THE MORTALITY OF DIPHTHERIA.—Dr. Winslow Anderson, of San Francisco, agrees with Dr. Beach in his criticism of the paper on "Diphtheria and its Treatment," as to the mortality statistics there cited. He writes: "To establish the rate of mortality at forty-two per cent. in this much-dreaded disease is open to many objections. In malignant epidemics and endemics of diphtheria which I observed while a resident in Salt Lake City, as well as those seen in San Francisco, I must say, adopt what plan of treatment you may, exclusively local or constitutional, or both, your mortality will not stop at forty-two or fifty-two per cent., but will reach from seventy-five to ninety per cent. On the other hand very mild cases and epidemics occur in which two to five per cent. will cover the death rate. It is well known that not half the cases are reported to the Health Department, so that the statistics are very uncertain. Granting, however, the correctness of the reported cases, every practitioner knows how many pseudo-diphtheritic cases are included—particularly in the so-called "eclectic" and "homœopathic" practice. I do not decry the local treatment, but, on the contrary, use it whenever it is indicated. But of one thing I am very sure, viz., that to hold a little patient as in the case quoted, where the assistant, nurse and father were required to master the little one while the doctor used his spray, is certainly more likely to kill than to cure.

AN INTERESTING RÉSUMÉ OF THE HISTORY OF OVARIOTOMY is given by Lawson Tait. He writes to the *British Medical Journal*: "I have exhaustively studied the history of this operation since its first successful performance by Robert Houston in 1701. Its history may be divided, roughly speaking, into three phases. The first begins with Ephraim McDowell, and ends with Nathan Smith, about the year 1824; and, during these years, the whole achievements of modern surgery were almost equalled in success, if not in extent. The principle of the intraperitoneal treatment of the pedicle with the short ligature was fully established; and the great regret, in the history of the operation, is that it ever was departed from. The second phase begins with Charles Clay, who first performed ovariotomy in England on September 27, 1842; and, during the succeeding twenty-five years, he performed three hundred and ninety ovariotomies, with a mortality of very nearly twenty-five per cent. This second phase ends with the close of the career of Mr. Baker Brown, in 1867. Dr. Charles Clay, unfortunately, departed from the principles of Nathan Smith, and used long ligatures. Baker Brown, on the other hand, adopted a complete intraperitoneal method; and between May, 1865, and September, 1867, he performed forty consecutive operations upon this principle, with a mortality of only ten per cent. The third phase in the history of ovariotomy begins with Mr. Spencer Wells, who, between 1857 and 1878, performed one thousand ovariotomies, with a mortality of twenty-five per cent.; he having, most unfortunately, like his predecessor, Dr. Clay, departed from the successful method of Nathan Smith. This third phase ends with Dr. Thomas Keith, who again re-established Nathan Smith's principle; and from that, I venture to say, no one will ever again have the hardihood to make a deviation."

LADY DOCTORS IN THE FIFTEENTH CENTURY.—Dr. Horowitz, of Frankfort-on-the-Main, has (*The Jewish Chronicle*, May 14, 1884) published a work, entitled "Jüdische Aerzte in Frankfürt," in which the learned author mentions the interesting fact that, as long as four hundred and fifty years ago, Jewesses practised medicine in that city; they especially devoted themselves to ophthalmia. The female oculist, Dr. Zerlin, whom we meet with in the volume as having practised in the year 1428, ventured to reside outside the Judengasse, and believed that she could claim exemption from the payment of taxes on account of her talent, and the general esteem in which she was held. The municipal council rejected her application, and, in 1489, they ordered that Jewish lady doctors should either quit the city or pay taxes like other Jews. A Jewish doctoress was, however, more fortunate in the year 1494; she was relieved from the payment of "sleeping money," a tax imposed on foreign Jews for every day that they stayed in Frankfort. With this exemption was coupled an official recognition of her profession which was of the utmost advantage to the lady.

A CHINESE THEORY OF RABIES.—Dr. George O. Williams, of Greene, N. Y., writes that the Chinese notion of the etiology and treatment of rabies, as given in "La Matière Medicale chez les Chinois," suggests the method of alleged cure, recently mentioned in these columns, as practised by a peasant in Hungary. He thinks the Chinese method may be a traditional antecedent of the treatment mentioned. The following is the account as given in the work referred to: "The 'mylabris cichorii' (the Chinese blistering fly, allied to the cantharis) is frequently prescribed to act upon the urinary organs, and to produce abortion, but it is more highly esteemed as a remedy for hydrophobia. According to the theory which the Chinese hold of that malady, the bite of a rabid dog determines the impregnation of the individual bitten, and a cure cannot be effected until the expulsion of the product of the impregnation is secured through the urinary organs. The hydrophobia persists as long as the gestation continues. Now, as the administration of the mylabris is followed by strangury and sanguineous urine, they suppose the *canine fœtus* to be expelled along with these symptoms."

A German Oculist.—Dr. Duncan writes (in the *Canadian Practitioner*) from Marburg, of Professor Schmidt Rimpler: "His rather tall, well-formed figure, rapid, graceful movements, genial, expressionful eye, with an indescribable air of courage and buoyancy, at once attract and inspire respect. A gentle, quiet manner is almost necessary to success as an oculist, but Schmidt Rimpler has more than that. His thoughtful courtesy toward the poorest and most degraded patient is a lesson to students, teaching them to avoid the harsh, rough, ungentlemanly manner so often assumed by medical men, and reminds one forcibly of the fascinating courtesy toward the lowest of Dr. Gaillard Thomas, of New York, which, as a pattern to the profession, is beyond praise."

Water in the Treatment of Obesity.—M. Albert Robin, arguing that liquids taken in abundance increase the process of oxidation within the economy, lays down the following indications for a liquid or a dry diet in the treatment of obesity. In the case of fat persons who secrete an abnormally large amount of urea, a dry diet should be enjoined. On the other hand, in the case of those whose secretion of urea is below the normal, an abundance of water and other liquids should be prescribed. Finally, when the excretion of urea is neither increased nor diminished, one must look to the "coefficient of oxidation," that is, the relation existing between urea and the solid matters of the urine, for a guide. When the coefficient of oxidation is high a dry diet is indicated, but when it is lowered, fluids should be taken in large quantities.—*Bulletin General de Therapeutique*, April 15, 1886.

The Influence of Forebodings in Disease.—In the *Asclepiad* for January, 1886, Dr. B. W. Richardson writes that there are two kinds of forebodings—the fanciful and the serious. False forebodings are presented by persons of flighty or fanciful natures, who are really fond of contemplating risks, and who suggest anxieties one minute, but laugh at them a few moments afterward. These forebodings have no serious importance. True or serious forebodings emanate from persons who are firm and thoughtful, who, as a rule, keep to themselves what is on their minds until something like a crisis has been reached, when they come to a conclusion to which they adhere and by which they are much influenced. These forebodings in a critical disease are bad: they have a direct effect upon the physical powers, the heart's action is impaired, the digestion becomes affected, and there is a want of tone very much opposed to restorative efforts. It is a wise plan to take as little notice of these forebodings as possible, but to ridicule them is bad.

Tartar on the Teeth.—A correspondent takes umbrage at a paragraph appearing in The Record for April 24th, stating that "some enterprising dentists have named this" (tartar on the teeth) "'Rigg's Disease,' a condition requiring treatment, in place of the old-fashioned scraping off the tartar." Our correspondent thinks this a "slur upon a class of specialists whose work and literature are proof against such defamatory attacks on their own merits. Rigg's disease, or more properly pyorrhœa alveolaris," he says, "is a disease characterized by purulent discharges from the alveolus and occasioning loosening of the teeth and other pathological conditions familiar to dental surgeons. The disease is very common to certain cachexias, notably the scorbutic. Incident to the progress of the disease 'pockets' or recesses are formed between the roots of the teeth and their alveolar investments; in these 'pockets' 'tartar' or 'salivary calculus' *sometimes*, not always, deposits. Tartar *never* is the *only*, seldom an accessory, cause of 'Rigg's disease!'" No surgeon, we believe, could confound suppurative inflammation of the gums with the more familiar accumulations of tartar upon the teeth, but it will scarcely be denied that of the immense number of persons legally entitled to designate themselves "dental surgeon" but few possess the requisite medical knowledge to treat this or any other disease. Our correspondent himself states that the so called Rigg's disease depends on constitutional causes, notably scurvy, a disease which the "class of specialists" called dentists are by no means generally qualified to treat. The Record has already called attention to the fact that a "specialist" capable of treating diseases of the mouth cannot be turned out by a "dental college" any more than a person qualified to practice gynecology could be graduated from a gynecological college. While there are many workmen, both honest and skilful, among dentists, there are but comparatively few physicians among them possessing a medical education and capable of treating such diseases as arise in connection with diseased teeth. That an oral or dental literature exists is due to the labors of medical men rather than dentists. The Record has no wish to disparage the excellent work for which our American dentists are justly famed, but it is to be feared that the too superficial curriculum of the numerous dental schools springing up throughout the country, graduating persons to practise medicine (at least as specialists), will not only contribute to further lower the tone of medical education, but possibly divert attention from the mechanical training every dentist should receive.

Cultivation of Pathogenic Micro-organisms.—Dr. E. Bumm, of Würzburg, advocates, in the *Deutsche Med. Wochensch.*, the use of human blood-serum, adopted by Koch, asserting that it is the only convenient and safe method for producing some specific human micro-organisms. He obtains the serum from the placenta, whence alone he thinks a sufficient supply can be got under ordinary circumstances. He has lately thus cultivated the gonococcus, and, as compared with cultivation with the blood-serum of animals, he finds the results most satisfactory, being able to obtain successive generation. At the very outset, the advantage of the method is apparent in the immediate spreading of the gonococci from the periphery of the pus to the surface of the serum. His method is as follows: He obtains the blood while the placenta is still in the uterus. The umbilical cord having been in the usual way tied and cut, the rest of the cord is cleansed with corrosive sublimate and sterilized water, compressed with the fingers, and again cut above the ligature. The end of the cord is introduced into the neck of a glass retort, the pressure of the fingers is removed, and fifteen to twenty cubic centimetres of blood flow into the vessel at once, and, by waiting for successive pains, forty to sixty cubic centimetres. The blood must be allowed to stand undisturbed for eighteen to twenty-four hours. If proper coagulation follow, fifteen to twenty cubic centimetres of perfectly clear serum may be thus obtained.

Osteo-malacia.—Dr. F. Piesbergen reports six cases of this affection seen in the course of four or five years at the clinic in Tübingen. But one of the cases was sent with the diagnosis previously made, and the writer believes that the disease is more common than is generally supposed, its frequency not being suspected by reason of diagnostic errors. The prognosis, in the earlier stages of the disease, is not wholly bad, and a suitable treatment is often productive of excellent results. It is important to make a careful examination of the pelvis and other parts of the skeleton in women, especially those who have borne many children, who complain of pain in the region of the pelvis, in the lower portion of the spine, and in the inferior extremities, and who experience difficulty in walking or standing. The treatment consists in promoting good nutrition by milk and cod-liver oil. The author places special reliance upon the salts of lime. He gives saccharated carbonate of iron, fifteen grains; carbonate of calcium and phosphate of calcium, each thirty grains; divide into twenty powders, and take one powder twice a day.—*Schmidt's Jahrbücher*, March 15, 1886.

Birth during Hypnosis.—Dr. Edward Pritzl records, in the *Wiener Med. Wochenschrift*, a case of this kind. A young woman was under his care in a lying-in hospital who, he had reason to believe, would be easily brought into a hypnotic condition; and some preliminary trials showed his surmise to be correct. When, therefore, the case ultimately proved to be one in which narcotics should in the usual course be employed, Dr. Pritzl determined to give hypnosis a trial. In spite of her pain and the nervous excitement produced by the presence of several medical men, who wished to witness the experiment, the woman, after looking but a few seconds at the brilliantly-illuminated thermometer-bulb that was passed before her eyes, sunk back, unconscious. The following observations were made: The intervals between the pains lasted nearly two minutes; the pains themselves were more violent than is usual under a narcotic, and lasted on an average fifty seconds, being at their height actively aided by the pressure of the abdominal muscles, and the intensity of the latter was quite normal. The patient was perfectly insensible, but the left lower arm was cramped and the left leg became stiff. There was no change observable in the right side. She turned her head hither and thither as if she were angry, frowned, and groaned. In the intervals, she resembled one asleep. In forty-five minutes from the time she became unconscious, a healthy child was born. In forty-five minutes after this, the woman was roused from her sleep, and would not believe she had been delivered, being hardly willing to own the child. The case, up to the time of writing, had taken a favorable course. Dr. Pritzl lays stress on the following points as remarkable: 1. It was easy to induce hypnosis in such a case as labor. 2. The pains were violent enough to arouse reflex action of the abdominal muscles, but not to rouse the patient. 3. Evidently the hypnotic state accelerated labor, for it had been expected to last several hours. 4. The after-birth stage, which lasted forty-five minutes, was remarkable for the character of the pains, which, though short, were intense and assisted by abdominal action. The loss of blood was slight. Dr. Pritzl has similarly experimented in two other cases, which, though successful, were neither so rapid nor so perfect.

Myrtol.—In a recent thèse de Paris, Dr. Linarix gives an account of the properties of this substance. Myrtol is both an antiseptic and a disinfectant agent. By its presence it prevents the decomposition of fermentative and putrescible organic substances; applied to the skin, it does not produce the slightest irritation, if the epithelium be intact. If there be a slight abrasion, a few drops will produce a very trifling burning sensation, which quickly goes off. Myrtol stimulates the digestive faculties; all who use it find their appetite increased. In small doses it acts as a sedative. It is eliminated by the lungs and kidneys, and has also a powerful balsamic action, but is more easily tolerated than most balsams. Its use is not followed by dyspepsia, nor by any of the other troubles attending the use of balsams in general. Dr. Linarix says that myrtol does not produce the same result at all periods of the affections of the respiratory system; in subacute and chronic catarrhal affections, it should be administered when fever has subsided; then the sputa become less abundant and less purulent. The drug is given in capsules containing each fifteen centigrams (2¼ grains), in doses of two capsules three times a day, before meals.—*British Medical Journal.*

Breathing Cold Air in a Warm Room.—Dr. J. H. Churchill, of Cross River, N. Y., writes: "Seeing a paragraph with this heading in the current number of The Medical Record, I am induced to describe a similar apparatus which I devised about ten years ago. Briefly, it consists of a face-piece of tin, guarded with soft rubber, to cover the mouth and nose, with attachments for two rubber tubes, and fitted with valves so that the air is inspired through one tube, and finds exit through the other. A board three inches wide, and of a length to fit the window in which it is to be used, is pierced with two tin tubes, and to them are attached the rubber tubes. The outer end of each tin tube is protected with wire-strainer cloth to prevent entrance of insects, and also a tin pent-house to guard against rain. The sash being raised the board is placed in the window, and the sash lowered upon it. This device benefits not only the patient, but the attendants also, who are thus relieved from breathing the excreted impurities. After the statement was published of the effect of cold on the tubercle bacillus, it occurred to me that this apparatus could be made efficient the year through by the use of a coil of pipe in broken ice through which the inspired air is drawn. Setting aside theoretical considerations, the practical advantages are, diminished cough (slight temporary increase), improved nutrition, with diminution of night-sweats due to better aëration of the blood, and the by no means unimportant consideration of immunity of the attendants from much that is disagreeable and unwholesome. The apparatus is held in place by a band of elastic webbing around the head, which permits the face-shield to be pushed to one side for the purpose of expectoration. There is one more point of which I have not yet made a practical test, but am about to do so. By arranging a spring so that it can be brought to bear on the outflow valve when wanted, and only when wanted, the effect of breathing into compressed air can be obtained, and a certain amount of expansion of the lung accomplished."

Gastric Syphilis.—Dr. L. Galliard reports some cases of gastric trouble successfully treated with mercury and iodine, and recalls two instances in which Klebs and Cornil found gummy tumors in the wall of the stomach. He concludes that there exists a syphilitic disease of the gastric mucous membrane, which consists in the presence of ulcerated gummata of the wall of this viscus. This gastric syphilis would seem to be less uncommon than has hitherto been supposed, and the author believes that many cases of alleged simple ulcer occurring in syphilitic patients are really referable to the action of the specific virus, and that much good would result from specific treatment in such cases.—*Schmidt's Jahrbücher*, March 15, 1886.

The Treatment of Disorders of the Stomach.—1. *Dyspepsia.*—Causes of Functional Indigestion: (1) Eating too rapidly; (2) drinking too much water at meal-time; (3) improper food; (4) want of exercise; (5) too much tea and coffee; (6) too much tobacco. Treatment: Underdone meats and but little bread. No sweets. Pepsin sacch., gr. v., at each meal. The mineral acids before meals, as muriatic, nitro-muriatic, or phosphoric. Certain bitters, as nux vomica and strychnine combined with gentian or calumba. An alkali a few hours after meals when there is great acidity, but should not be used too frequently.

2. *Dilatation of the Stomach.* — Treatment: Dry, solid food; underdone meats; no milk. Carbolic acid to allay fermentation. Wash out stomach occasionally. Strychnia, hypodermatically or by mouth.

3. *Chronic Gastritis.*—Treatment: Cause to be removed. A scanty supply of food. Pepsin at each meal (gr. v.). Milk, with a little meat, may be taken as food. Oxide of silver, gr. ½, a dose, will be found of value. Bismuth is useful. Avoid tonics, but use the mineral waters to keep portal system drained.

4. *Gastric Pain* (*Gastralgia*).—Treatment: Diet of little importance; stimulus at meals in small amounts. Morphia relieves at once, but use it carefully. (1) Bismuth, with a little opium; (2) nitro-muriatic acid, gtt. ij.–iij., diluted; or, (3) Morph. sulph., gr. $\frac{1}{32}$; acid. carbolici, gt. j.; aq. menth. pip. ad f ℥ j., ter die; (4) Fowler's solution, beginning with gt. j. and increase to gtt. v., ter die.—Dr. Da Costa, in *Coll. and Clin. Record.*

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Original Articles.

ALEXANDER'S OPERATION ("SHORTENING OF THE ROUND LIGAMENTS").[1]

WITH A REPORT UPON FIFTEEN CASES IN BELLEVUE HOSPITAL.

BY WILLIAM M. POLK, M.D.,

THE remarks indulged in to-night concerning this operation are based upon the results of my labors in Bellevue Hospital.

I have not had sufficient time to study the latest reports from Great Britain, France, or America—the three countries in which the most attention has been paid to it—so that to-night I simply present the outline of my own work, unbiased by that of others. Those who wish to look more deeply into the subject I refer to the little book issued by Mr. Alexander, to the article of Mr. Adams in the *Glasgow Medical Journal*, to an extensive article by M. Doleris, in *Nouvelles Archives d'Obstetrique et de Gynécologie*, No. 1, January 1886, and to the latest one from Mr. Alexander, in the *British Gynecological Journal*, November, 1885.

The situation, origin, attachment, and function of the round ligaments are sufficiently well known to this audience to spare me the necessity of entering into any anatomical or physiological discussion concerning them. There are two points, however, toward which I should direct your attention; these are, their ability to withstand traction, and the effect of the operation upon them and upon the adjacent structures. These ligaments are considered of so little importance, in the non-pregnant state particularly, that we have been in the habit of regarding them as trivial in all respects, certainly as having little capacity to resist anything like prolonged strain.

The observations upon this point made by my colleague, Professor Williston Wright, are, independent of the experience gained by the operations, conclusive. I removed the outer two inches of both ligaments in our case, and handed them to Professor Wright, that he might test their strength by attaching weights to them. This was done, and he reported that one of them broke only when the weight had reached five pounds; the other at four and three-quarters; the portions tested, remember, being the weakest part of the ligaments, the outer ends. By the time that the break occurred they had become stretched to about twice their normal length, but the stretching did not begin until the weight had reached two and three-quarter pounds with one, and three pounds with the other. If, now, we remember how much less than three pounds any prolapsed or retroverted uterus will weigh, it is seen that any part of the ligament is sufficiently strong to answer the objects of the operation. It has been my good fortune to examine and note the position of the uterus, round ligaments, and folds of the broad ligaments in a case which had been operated upon some ten months before, by actually placing my fingers directly upon these parts. It was a case in which the uterus had been held down by a fibroid tumor upon its posterior aspect. The ligaments had been shortened, and the uterus, with its fibroma, was lifted forward and upward, so that the fundus was in the plane of the superior straight. But relief had not been obtained, and the patient, who at the time of Alexander's operation had refused to have Hegar's operation done (removal of the ovaries), now consented to this latter procedure. This offered me an excellent opportunity to observe how far the uterus had maintained its position, as also the condition of affairs about the broad ligaments. The uterus was found to have remained in the position gained for it in the original operation, and the upper border of the broad ligament was spread out like a web, between the round ligament in front, which was moderately taut, and the line occupied by the tube and the infundibulo-pelvic ligament behind, which was also taut. There was no thickening or other pathological condition of these structures. This action upon the upper border of the broad ligament, spreading it out, is what one would naturally expect, and is in miniature what happens, as the uterus, rising in pregnancy, makes taut these same anterior and posterior lines. It was of interest, likewise, to note that the ovaries and tubes were lifted well up, but otherwise were unchanged.

The effect of equal traction upon both of the round ligaments is to lift the fundus of the uterus forward and upward, which movement is in direct proportion to the amount of traction, until the fundus is placed immediately behind the symphysis pubis, where it will stop. If the traction be made upon one ligament only, the fundus will be drawn to one side and upward, until it rests on the pelvic brim, about at the pectineal eminence. In other words, the uterus will follow traction made upon the round ligaments until it is drawn to the anterior and upper parts of the pelvis. Thus, if it be desired to lift the entire organ well upward and forward, as in procidentia, one may rely upon its accomplishment through this traction. And if this be so in these extreme cases of displacement, certainly it will answer in simple posterior displacement, with little or no descent, in which we merely wish to make the organ rotate upon its transverse axis, and perhaps lift it to but a slight degree. These assertions can be verified on either the dead or living body by any competent operator.

I have now and then heard it said that those who have performed the operation upon the cadaver have found some difficulty in drawing the ligaments out from the inguinal canal. I can readily understand this, as it was my own experience in the first dissection made; but I have never had the least trouble in drawing them out on the live subject. I think the difference can be accounted for by the fact that, in the condition of *rigor mortis* (the condition in which such dissections are usually made), the separation of all tissues is more difficult than in the living subject.

A question which at once presents itself is, What would happen should pregnancy occur? Will the uterus be able to rise into the abdominal cavity? This to me was the one possible objection to the operation, until one of my own cases became pregnant, where I have been able to watch the result. The uterus has now completed its sixth month of gestation, and but for a dragging pain along the round ligaments, I have been unable to detect any important deviation from the normal course. The ligaments can be easily felt through the abdominal wall, a rare possibility in pregnancy under other conditions. Mr. Alexander, I believe, has reported several cases that have gone on to term without accident of any kind.

Another question which suggests itself is as to the state of the bladder after the operation. All the cases have been questioned upon this point before leaving the hos-

[1] A paper read before the New York Academy of Medicine, June 17, 1886.

pital, and some several months after. Each one has told me that they suffered no inconvenience with that organ —being able to retain the water as long as usual.

What I have said as to the behavior of the uterus as a result of traction upon the round ligaments, sufficiently explains the *modus operandi* of the operation in relieving the condition to be specified, and the experiments of Professor Wright answer the question as to the ability of these comparatively slender structures to withstand any strain that they might possibly be called upon to bear.

But the crucial test is the clinical result. A number of cases have already been reported by others, and now I beg leave to add fifteen to the list, comprising, as they do, all the patients upon whom I have performed this operation.

Case I.—M. Mc——, aged twenty-three. Uterus retroverted, enlarged, and tender. Suffers from menorrhagia. Has made repeated attempts to wear a pessary, but could not bear the pain it caused. Uterus was curetted, and two weeks later an attempt at Alexander's operation was made. At the expiration of three-quarters of an hour one round ligament had been found, shortened, and stitched in place. The shortening of the second was deferred. The patient expressed so much relief that she was allowed to leave the hospital temporarily, but she did not return. The uterus was drawn to one side and lifted forward, so that it was in the position of latero-version. This operation, though imperfect because of my lack of skill, gave the patient so much relief that she expressed herself as content with the result.

Case II.—J. G——, aged thirty-five. Extreme retroflexion. Cannot wear a pessary. Menstruation irregular and profuse. Bowels constipated, and every movement of them accompanied by pain. Has habitual backache. Operation performed March 16th, 1885. Discharged cured, May 15th. Uterus well up and anteverted.

Case III.—A. M——, aged thirty. This is the case of uterine fibroma mentioned above, in which Hegar's operation was subsequently performed. The result of Alexander's operation was to lift and keep the uterus in a position of anteversion for ten months—in fact up to the date when last seen, which was a year after the original procedure.

Case IV.—A. R——, aged thirty. Uterus retroflexed and left ovary prolapsed. Cannot wear a pessary because of its pressure on the ovary. Suffers constantly from dragging pains in the lower part of the abdomen and the back. Operation performed April 28, 1885. Discharged, cured, June 10th. Uterus anteverted and well up.

Case V.—E. J——, aged thirty. Uterus prolapsed, so that when standing the cervix rests at the ostium vaginæ. It is somewhat enlarged. Suffers from backache and irritability of the bladder. A pessary has been found useless. Operation performed June 17, 1885. Discharged, cured, July 19th. A small sinus remains at the site of the left incision. Uterus drawn well up behind the symphysis, the fundus being about on a level with the superior strait.

Case VI.—A. S——, aged thirty-four. Uterus retroverted, large, tender, and soft. Cervix lacerated, but not ulcerated. She has backache, menorrhagia, and profuse uterine leucorrhœa. A pessary has been tried repeatedly; it caused so much pain it could not be worn. The patient suffers a great deal from nervousness and palpitation of the heart. Operation performed September 21, 1885. The incisions did not heal well, profuse suppuration taking place in both. Slow healing by granulation, therefore, was the result. With this exception she made a good recovery, leaving the hospital with the uterus anteverted and in excellent position, December 7, 1885. She became pregnant about December the 17.

Case VII.—B. C——, aged fifty-one. Fourteen years before entering the hospital prolapse of the uterus occurred as the result of heavy lifting. This has grown steadily worse until the uterus, at the time of this observation, was entirely without the vulva, the vagina being everted. The uterus, even after the patient had been confined to the bed in the hospital for two weeks, measured four inches. The bladder and rectum participated in the prolapse, and as a result there was much annoyance from frequent and difficult urination and painful defecation. Operation performed October 5, 1885. On November 2d following, the wounds had healed, the uterus was well up behind the symphysis, and measured two and a half inches. On November 16th the vagina was narrowed, and the perineum, which had been torn many years before, was repaired. The patient was discharged early on December 26th, cured; the uterus being then in the same position as placed by Alexander's operation, and measuring two and a half inches, as reported above.

Case VIII.—A. S——, aged thirty-eight. Retroversion of the uterus, the organ being bound down by adhesions. Examination showed also tubal disease. Tait's operation was suggested as the surest measure of relief, but it was declined after the pain and tenderness about the uterus had been relieved. Alexander's operation was performed with the hope that we might be able to overcome the traction of the adhesions. The uterus was drawn into the normal position, and the ligaments were stitched to the pubic bone. But in spite of supporting vaginal tampons, the organ lapsed into its former position, so that on leaving the hospital her condition was much the same as it was on admission.

Case IX.—A. R——, aged thirty-five. Uterus retroverted, large and tender, but movable. Has suffered from the displacement for five or six years. Has been under treatment constantly, but never received benefit. Pessaries could never be worn. Operated upon January 25, 1886, the uterus being easily placed in its normal position. Discharged, cured, March 25th. Examined June 20th. The uterus found in its normal position, and the patient stated that she was perfectly well.

Case X.—Aged forty-five. Uterus retroflexed and bound down by adhesions. She suffered a good deal from pain in the back, and the uterus was tender. Menstruation was going on as usual. Operated upon January 9, 1886. The general result was much the same as in Case VIII., although some relief from the troublesome symptoms was obtained.

Case XI.—A. A——, aged thirty. Uterus retroverted, enlarged, and tender, and, as with all the cases except VIII. and X., the organ was freely movable. The usual symptoms of an enlarged and retroverted uterus were present. Had been under treatment for eight years, during which time every device had been tried for her relief, but all failed. Operated upon March 22, 1886. The uterus was placed in excellent position. She had some suppuration in both incisions, which, in connection with rather a depraved state of the general system, retarded the recovery, so that when she was discharged from the hospital, May 15th, her condition was not as good as was hoped for. The uterus was in excellent position. She was seen again June 20th, and then she was better than she had been in years. All the symptoms belonging to the retroversion had disappeared, but a burning pain in the incisions annoyed her a good deal. The uterus was well up and anteverted.

Case XII —B. K——, aged thirty-eight. Uterus retroflexed, enlarged, and tender. She believes that the displacement resulted from a fall five years before admission to the hospital. Has suffered from the symptoms of posterior uterine displacement ever since. Has never been able to get relief, although she has been under treatment for several years. Operated upon April 13, 1886. Discharged, cured, May 17th, the uterus being in good position, anteverted.

Case XIII.—M. C——, aged twenty-three. Both ovaries prolapsed, slightly enlarged, and tender. The uterus, although sharply antéflexed, is very low in the pelvis. She suffers from dragging pelvic pain, has menorrhagia and dysmenorrhœa. These symptoms have been present only one year. Treatment outside of the

hospital has failed to afford relief. Operated upon April 26, 1886, the uterus and ovaries being lifted up and forward, so that they were well away from the posterior pelvic floor, their former position. Discharged May 26th, the uterus and ovaries in the same position as placed by the operation. The troublesome symptoms have disappeared, and she says she is well.

Case XIV.—K. C——, aged twenty-seven. Uterus retroverted, large, tender, but movable. She has suffered for six years from the symptoms of posterior displacement and congestion of the uterus. All treatment has proved unavailing. Operated upon May 28, 1886. Uterus placed in the normal position. The right incision suppurated, otherwise the case did well. June 26th: She is now in the hospital, but is doing so well she will be able to leave in a week or ten days.

Case XV.—A. F——, aged forty-five. Prolapse of the uterus for five years. Operated upon June 23, 1886. The uterus was drawn well up to the symphysis. This is the only case in which I have found the round ligaments fragile. Both of them broke with the ordinary traction before I could draw them from the rings. The canals had then to be opened, the ends were again caught, and by very careful traction I succeeded in getting them well out. The age of the patient would scarcely account for the brittleness, for in Cases VII. and X., the first fifty-one years, the second forty-five, no such condition was found. I can only suggest that possibly it is a condition found in very fat women, for obesity was fully developed in this patient. The ligaments were smaller than in any of the other cases. This patient having been operated upon since my paper was read, too little time has elapsed to make any report upon the result.

A glance at these cases will show that I have applied the operation to all the conditions for which it has been recommended, and to two which have been excluded by the originator of the procedure, the two with adhesions holding the uterus down. The result in these satisfies as to the propriety of excluding all such. So long as the uterus cannot be easily placed in a normal position by the sound, it stands outside the domain of Alexander's operation. Such cases can only be treated successfully by a plan which I have been driven into, namely, by abdominal section; then tearing up the adhesions, and removing the tubes if they require it; but if they do not, by placing a drainage-tube behind the uterus, as we have to do in many ovariotomies, and leaving it in for forty-eight hours. By this method, I believe, we secure permanently an anterior position for the organ.

Recapitulating the conditions for which I have performed Alexander's operation we find them to be: Retroflexions, 4 cases; retroversions, 6 cases; retroversions with prolapsed ovary, 1 case; prolapsed ovaries, 1 case; prolapse of the uterus, 3 cases.

In studying the advantages of Alexander's operation, I confess that its application to cases of prolapse of the uterus has interested me most. At the risk, therefore, of wearying you with a side issue, I will speak more particularly of it. Prolapsus uteri is the joint result of rupture of the perineal structure, and stretching of the uterine ligamentous supports. These supports are chiefly the utero-sacral and basic lines of the broad ligaments. Its principal perineal support is the pubo-coccygeal division of the levator ani, or, as I think it better named, the pubo-perineal division, *enclosed between its layers of fascia.*

The manner of the destruction of the usefulness of this muscle matters but little, the result sooner or later will be the yielding of that portion of the pelvic floor which it guards, and the descent, first, of the vaginal wall, next, of the uterus.

If it were possible in all cases to restore the normal resistance of the pelvic floor we might not find it necessary to do more for the prolapse; but, as a matter of fact, this is rarely accomplished, because of the great difficulty of reaching and uniting the torn ends of the pubo-coccygeal muscle and its fasciæ; or the impossibility of correcting the relaxation due to subinvolution or congenital defect.

That the recognized perineal and vaginal operations fail to reach the essential causes of defect in the pelvic floor is proven by the constant recurrence of prolapse in cases subjected to the most elaborate and thorough operations upon the perineum and vagina. This being so, we must see if aid cannot be obtained from the round ligaments. I am sure that it can be.

It would appear that the prolapse of the uterus is preceded by a backward displacement of it, and there is much reason for believing that if the organ can be kept not only anteverted, but well forward in the pelvis, it will escape the full force of the intra-abdominal pressure and thus avoid prolapse; and again, when prolapse has already taken place, it is natural to suppose that the relaxed ligamentous supports will the more readily regain their normal dimensions and strength if they can be reinforced by some other suspending support. Now by this operation we not only antevert the uterus, but draw it well up and forward, thus giving its ligaments the reinforcement suggested, and if in addition we do what is possible toward the restoration of the pelvic floor, we then will have given the case the best, and, to my mind, the most rational treatment yet devised.

The indications for the operation may now be summed up as follows: Prolapse of the uterus; retroversions and retroflexions of the uterus, in which the organ can be placed in the normal position, and yet a pessary cannot be comfortably worn; prolapse of the ovary, the organ being reducible and not large enough or diseased enough to demand removal.

From this statement it will be seen that the operation has a limited but a well-defined application, and that it reaches cases which, without it, we would either abandon or else subject to graver procedures.

Operation.—I prepare patients for this operation as carefully as I do for an ovariotomy. The bowels are cleared out both by a cathartic and an enema. The food is mainly fluid for thirty-six hours before the patient is placed on the operating-table. Etherization is a necessity. The first step in the operation proper is the shaving of the mons veneris, and then the *thorough* cleansing not only of that space, but the whole of the abdomen and the upper and inner part of the thighs. The vagina should then be carefully washed out with some disinfecting fluid. The entire region is then surrounded with carbolized towels. The operator may now stand between the thighs, which are extended, or else take a position to either side. Next, the guide for the incision is to be sought for, and that is the spine of the pubes. This is to be cut down upon, making the incision parallel to Poupart's ligament, and about two inches or more, if necessary, in extent.

The first objective point is the tendon of the external oblique muscle—for in that lies the external inguinal ring. Having reached it, place a finger on the pubic spine, and slide it upward and outward, about half an inch, then the depression of the ring will be felt. Next clear away all the fat and connective tissue which covers the tendon of the oblique muscle about the ring. In this way it is readily exposed. As you watch it now, you will see a mass of fat and vessels, and sometimes the reddish fibres of the round ligament protruding, and rising and falling with the respiratory movements. This mass should now be seized and drawn out; in a moment the round ligament will come into view; then it should be grasped with the forceps and isolated, continuing the traction it will slide from the ring. If you have mistaken a portion of the tendon of the muscles, you can easily determine the question by running the finger outward along the muscle, for as you make traction you will feel the tendon as a taut line extruding outward above Poupart's ligament. Traction on the round ligament will give no such line. Should you find it necessary to enter the canal in search

of the ligament, in view of the important structures which will be approached, the dissection should be carefully made upon a director.

As soon as one ligament has been isolated, the other should be sought for and isolated in the same manner.

The uterus should now be placed in its normal position, unless the case be one of prolapse of the uterus; then it should be pushed as far up and forward as is compatible with safe pressure.

For this purpose I prefer a sound with as large a bulbous end as can be easily passed into the uterus. The sound is a necessity in cases of retroflexion, but the fingers may be substituted in other cases, being placed either in the vagina or rectum as occasion demands.

The ligaments should now be drawn moderately taut, and stitched to the anterior face of the pubic bone, carefully prepared fine silk being used, three to each ligament sufficing. These, having been cut short, the loose ends of the round ligaments should next be cut away. If the ring gapes, or if you have opened the canal, the columns should be carefully stitched together with silk.

If the incisions have been made through a thick layer of fatty tissue, it is best to introduce bone drainage-tubes, closing the wound around them; but otherwise you may close the wound directly, using deep, silk sutures.

Aseptic cotton tampons are then placed in the vagina, and are allowed to remain for forty-eight hours. I do not know that they are required, but I think it probable that they relieve the strain upon the round ligaments, and thus aid in their secure attachment in the new position. For a month the patient is kept in bed; after that she is allowed to go about at will; but she should be cautioned to avoid straining efforts, for six months at least. Coition should be infrequent for a period of two months, dating from the operation; and this is the more imperative if there be tenderness along the line of the ligaments.

With one patient too frequent indulgence led to a good deal of annoying pain along that line. Mr. Alexander advised, after his early operations, that the patients should wear a pessary for two or three months. I have not found this precaution necessary; all of the patients, so far as I know, having been without them from the date of the operation.

Some operators use but one incision, making it just above and parallel to the crest of the pubes, extending to the outside of each pubic spine. I have not tried this path, consequently I am not in a position to speak of its advantages or disadvantages. I find that an impression prevails to the effect that Alexander's operation is both difficult and dangerous; I cannot say that I have found it so. Any competent surgeon who understands his anatomy, and who is familiar with uterine disorders, can readily perform it, and the dangers are trivial provided the operator is *clean*. Abscesses will develop now and then in the incision, but never if proper precautions are taken, and even when they have occurred with me, no serious result has followed. The question of the development of a cellular inflammation in the broad ligaments, as a consequence of this operation, has also been raised. I can only report that I have had no such result in any of my cases.

Increased experience with the procedure convinces me that it is not a difficult operation, that it is a safe one, and more than all, that it is a valuable addition to the measures of relief which we have to offer to quite a number of weary sufferers.

SMOKING, DRINKING, AND CHEWING.—It is estimated that coca is used by 10,000,000 of the human race; betel-nut by 100,000,000; chicory by 40,000,000; coffee by 100,000,000; 300,000,000 eat, or smoke, hashish; 400,000,000 use opium; 500,000,000 use tea; and all the known people of the earth are addicted to the use of tobacco.

CONSANGUINITY IN MARRIAGE.[1]

BY E. S. McKEE, M.D.,

CINCINNATI, O.

WE find, permeating all classes of all nations, the belief that consanguineous marriages are followed by evil effects upon the offspring. This tradition gains credence from occasional cases where dire results have occurred, and the *post hoc* is taken for the *propter hoc*, the many instances where no evil happened being forgotten.

An endeavor to show the falsity of this belief is the object of this paper.

Attention will be directed, in the greater part, to the marriage of cousins, especially those of the first degree. (This is partially because the majority of consanguineous marriages are between cousins, and because the marriage of relatives nearer than first-cousins, even if proven not to be harmful to the offspring, should be discouraged on other grounds.)

Consanguinity denotes blood relationship. It is quite different from affinity, which signifies relationship by marriage. A man is related to his brother by consanguinity. His wife is related to that brother by affinity.

Lineal consanguinity is that which exists between persons in the direct line of descent or ascent. The consanguinity is collateral when two persons descend from a common ancestor, but not one from the other.

Great confusion has arisen from counting degrees of consanguinity by two different methods. Civil law counts the number of generations up from the one individual to the common ancestor, then down to the other. The canonical law counts the degrees in but one line, the longer, from the common ancestor. The canon law, formulated by Pope Gregory I., A.D. 590–604, is imperfect. It gives persons the same relationship to a certain person when it is not true. Prohibiting marriage in the third degree by the canon law prohibits many more than by the civil law.

The relationship existing between Jupiter and Juno, Osiris and Isis, shows that unions of the closest degrees of consanguinity were not abhorred in ancient mythologies. The story of Œdipus and Jocastra shows that marriage in the direct line of descent was looked upon as impious. The ancient Egyptians intermarried very closely, a large proportion being between brother and sister. The Persians did likewise, as did also the Israelites prior to Moses. Abraham married his half-sister, Sarah; Isaac his first-cousin, Rebekah; and Jacob his two first-cousins, Rachel and Leah. This was a nation renowned for vigor, and in the first fourteen generations reached six hundred thousand fighting men. The sons of Adam must have married their sisters, and we are all descendants from consanguineous marriages, and, according to some, idiots.

The Mosaic law, Leviticus xviii., prohibits the following marriages: With a parent, step-mother, sister, half-sister, granddaughter, aunt or uncle's wife, step-daughter or step-granddaughter, or with a wife's sister during the lifetime of the former.

The Greeks forbade marriage in the direct line of descent, yet permitted it between half-brother and half-sister. The Athenians allowed marriage between brother and sister of the same father, but not of the same mother. The Lacedemonians allowed marriage between uterine brothers and sisters, but not between those having the same father and mother.

The Romans excluded marriage between brothers and sisters, whole or half, and any marriages nearer in degree than first-cousins were practically illegal. The institutes of Justinian forbade marriage in direct line and in collateral line within the fourth degree. First-cousins and all remoter kin might marry.

The present canon law, in force in most Roman Catholic countries, forbids marriage only outside of the fourth

[1] Read before the Ohio State Medical Society, at Akron, June 4, 1886.

degree, that is, third-cousins are forbidden to marry. The civil law allows the fourth civil degree, that is first-cousins, to marry.

Henry VIII. modified very stringent marriage laws in England. They are now practically the Levitical. First-cousins may marry, also nephew and great-aunt, niece and great-uncle. While a man may not marry his grandmother, he may his sister. This law holds in Great Britain, Ireland, and the colonies. The law forbidding a man to marry his deceased wife's sister is not Levitical, and despite the annual effort to throw it off, remains in the home country, but has been dispensed with in Canada and Australia.

The Levitical code is followed generally in the various States of this nation, but New Hampshire, Ohio, and Indiana forbid the marriage of first cousins. Most States forbid a man to marry his aunt or niece, but it is permissible in New York.

Reliable statistics, free from flaws, are exceedingly difficult to procure. The best we can do is to gather all the reliable testimony obtainable.

George H. Darwin, who has so thoroughly studied the marriages between first-cousins in England, says: "It thus appears that in London, comprising all classes, the cousin marriages are about 1½ per cent.; in urban districts, 2 per cent.; in rural districts, 2¼ per cent.; among the landed gentry, 3½ per cent.; aristocracy, 4½ per cent. An average for England of 3 per cent. The average for Scotland is 5½ per cent. This large percentage leads Mr. Darwin to think that such marriages are more frequent in Scotland than in England and Wales. From the mountainous nature of the country this is, perhaps, to be expected. After a thorough search through the institutions for idiots, insane, deaf and dumb, etc., he found that between 3 and 4 per cent. of these descended from consanguineous marriages. In 366 families, in the urban districts other than London, concerning which accurate information could be obtained, 8—that is to say nearly 2.2 per cent.—were the offspring of first-cousins. From his investigations Mr. Darwin had deduced 2 per cent. as the proportion of first-cousin marriages in these districts. Including 350 cases from Newcastle, concerning which the information is not so accurate, reduces this to 1.9 per cent. Probably 3 or 4 per cent. of the patients in the idiot and lunatic asylums are the offspring of first-cousins. Taking into consideration the inaccuracies of the modes of gaining information, both as to the number of these descending from consanguineous marriages and the percentage of these marriages—3 per cent.—the above cannot be said to be in excess. As to deaf-mutes, the proportion of offspring of first-cousin marriages is precisely the same as the proportion of such marriages to the whole number of marriages. Therefore there is no evidence whatever of any ill-results accruing to the offspring from the cousinship of their parents.

Professor Mantagazza, M. Boudin, and Dr. Balley are of the opinion that consanguinity tends to sterility. After a most thorough investigation, making much use of Burke's "Landed Gentry," and "Peerage," Darwin finds that consanguineous marriages are slightly more fertile than the non-consanguineous. He thinks the cause of this is probably the fact that marriages between first-cousins will be more apt to take place where there is a large group of persons who bear that relationship to each other. In such families fertility will be hereditary. The alleged infertility of consanguineous marriages, whether direct or indirect, cannot be substantiated. Mr. Darwin's investigations concerning the alleged excessive death-rate among the offspring of cousins, although rather meagre and unsatisfactory, tend to invalidate the allegation, yet there remains a shade of evidence that the death-rate is slightly higher than among the families of non-consanguineous parents.

Dr. Crichton-Browne, of the West Riding Lunatic Asylum, England, says: "It has always seemed to me that the great danger attending such marriages consists in the intensification of the morbid constitutional tendencies which they favor. Hereditary diseases and cachexia are much more likely to be shared by cousins than by persons who are in no way related, and these are transmitted with more than double intensity when common to both parents. Persons of similar temperaments ought not to marry."

Dr. Howden, of Montrose Lunatic Asylum, Scotland, says: "As regards insanity, my own opinion is, that unless there exists a hereditary predisposition, the marriage of cousins has no effect in producing it. . . . Neither in insanity, nor in any other abnormal propensity, do two plus two produce four; there is always another factor at work, neutralizing intensification and bringing things back to the normal."

Dr. Lauder Lindsay, Murray Royal Institution for the Insane, Perth, Scotland, is of the opinion that the ill effects of cousin marriages are much less, in regard to insanity, than represented.

Dr. Scott, of Exeter, says that 7 out of 241 families in which deaf and dumb children have been born, were first-cousin marriages. In three or four of these families more than one child was so afflicted.

Dr. Arthur Hopper, of the Deaf and Dumb School at Birmingham, out of sixty-two congenitally deaf children, found not one to be the offspring of consanguineous marriages. He thinks it possible for the deafness to show itself in future generations, though dormant now.

Mr. Neill, of the Northern Counties Institution, Newcastle-on-Tyne, says: "350 have been admitted into the institution, and I think in not more than 6 cases were the parents cousins. In one family, whose parents were cousins, there were four deaf-mutes." Mr. Neill has been engaged in the tuition of the deaf and dumb for more than forty years. He thinks the offspring of cousins so affected fewer than supposed.

Mr. David Buxton, of Liverpool, thinks that one in ten of the deaf and dumb in his school descend from consanguineous marriages.

Mr. William Sleight, of the Brighton School, says: "As far as I have been able to ascertain, about seven per cent. of the congenitally deaf children are the offspring of cousins."

Dr. George Wallington Grabham, Asylum for Idiots, Earleswood, says: "Consanguinity of parents accounts (partially only) for about six per cent. of the cases which have been admitted into the asylum during the last six years and a half. In 11 cases only out of 543, the parents were first-cousins, and no other cause could be obtained. Where hereditary predisposition coexists with marriage of consanguinity, we frequently find, as might be expected, more than one child affected. We may, therefore, regard with less disfavor marriages between cousins where there is no hereditary taint on either side."

Dr. Rayner, of the Hanwell Lunatic Asylum, reports 3 out of 255 as the offspring of cousins; Dr. Byewater Ward, of the Warneford, Oxford, Lunatic Asylum, none out of 20; Dr. Adam, Metropolitan District, Caterham, lunatics, 20 out of 560; Dr. Yellowless, Glamorgan County, lunatics, 9 out of 218; Dr. Lawrence, Chester County, lunatics, 3 out of 225; Dr. Mickle, Grove Hall, Bow, 8 out of 181; Dr. Oscar Woods, Hatton, Warwick, 8 out of 258; Dr. Grabham, Earleswood, Surrey, idiots, 53 out of 1,388; Dr. Orange, Broadmoore, lunatics, 2 out of 150; Dr. Gilchrist, Crichton Royal Institution, Dumfries, 4 out of 51; Dr. Anderson, Southern Counties, Dumfries, 8 out of 200; Dr. McIntosh, Perth District, Murthly, 3 out of 78; Mr. W. H. Warwick, Asylum for the Deaf and Dumb, Kent, 52 out of 632.

Dr. Arthur Mitchell, of Edinburgh, Department Commissioner of Lunacy in Scotland, has made a most thorough investigation of the subject in his paper. "Blood Relation in Marriage." (He found among 146 born from 45 consanguineous marriages, 37 of them being fertile, 5.5 per cent. idiots, 3.4 per cent. imbecile, 7.5 per cent. insane, 1.4 per cent. epileptic, 3 per cent. paralytic, 1.4 deaf-

mutes, 2 per cent. blind, 15 per cent. consumptive, scrofulous, or manifestly weak in constitution.) He arrives at the following conclusion: Under favorable conditions of life the apparent ill-effects were frequently almost *nil;* while if the children are underfed, badly housed and clothed, the evil might become very marked. He thinks the danger greater between uterine relatives than those having a common father, but different mothers, for two reasons: one because more good or evil is inherited from the mother; the other because, while we are always the sons of our mothers; yet we may not be the sons of our fathers.

Sir W. Wilde, in his appendix to "Aural Surgery," considers consanguinity of parents as a paramount cause of ear troubles in children.

Mayr found the following proportions of deaf and dumb, out of 10.000 persons, in various countries: in the Netherlands, 6.72; among Netherland Jews, 15.34; in Germany, 19.32; among Bavarian Jews, 36.47; in Baden. 24.24; in Prussia, 12.44.

Reich found deaf and dumb, out of 10,000 persons, as follows: Argentine Republic, 75.74; United States of North America, 8.39; British Australia, 5.65.

He lays this to the fact that in the Argentine Republic the people are enervated and passive. In both other lands they are very active.

In Sweden consanguineous marriages are not more numerous than in North America, yet, from the abuse of alcohol and other habits detrimental to the general system, the frequency of the deaf and dumb is 20.57 to 10,000 inhabitants. Falk also considers the social condition one of the weightiest tendencies to deafness and dumbness.

Boudin and others claim that the greater frequency of mental diseases among earls and the aristocracy is due to consanguineous marriages. It is probable that this is not so much more frequent among them than among other people, but is more noticed. Then, too, why not lay it to debauchery, extravagance, and corruption?

Dr. Charles F. Withington, of Roxbury, Mass., read a paper before the Massachusetts Medical Society in 1885, in which he gave a collection of 108 consanguineous marriages; 103 were fertile, bearing 413 children. Excluding all those having defects of the slightest nature, 312 remained, being 75.5 per cent. This is as high a per centage, certainly, as can be found in any equal number of children taken at random. The defects present could not be ascribed positively to the consanguinity of the parents. They consisted of: Deaf-mutes, 12; insane, 7; idiots, 13; blind, 8; died of consumption, 15; nervous, 5; of less than average intelligence, 8; died in infancy, 16; not robust, 6; hermaphrodite, 1; died of meningitis, 2; cross-eyed, 2; still-born, 2; deaf (not congenital), 2; stammerers, 2; myopic, 2; deformed, 2; epileptic, 1; total, 101.

Of these 108 marriages fertility was present in all save 5. In one of these there was a mechanical impediment on the part of the wife; in another the marriage had lasted only two years. Three of these were physicians, and one a member of the Boston Tea Party, certainly very respectable members of society.

The marriage of Jones and Jones, Brown and Brown, Smith and Smith, probably means the marriage of distant relatives, though the parties themselves are not aware of it.

Dr. Bemis reported to the American Medical Association a collection of 843 consanguineous marriages, producing 3,942 children, 4.6 births per marriage; 28.7 per cent. are put down as defective; 3.6 per cent. as deaf-mutes; 2.1 per cent. as blind; 7 per cent. as idiots; 2.04 per cent. as insane; 1.5 per cent. as epileptic; 7.6 per cent. as scrofulous, and 2.4 per cent. as deformed; 22.4 per cent. are recorded as having died young.

M. Burgeois gives the history of his own family, descended from a consanguineous union in the seventeenth century. Sixty-eight marriages all feel the effects of consanguinity, yet only one was infertile, and this the fault of the wife, a woman of alien stock. The health of all the 200 descendants is excellent, except in one family, where scrofula has crept in.

Seguin gives the particulars of 10 marriages of kin in his own family, two of the number being uncle with niece, and the rest of first-cousins. Sixty-one children were born, not one of whom showed deaf-mutism, hydrocephalus, stammering, or polydactylism. All lived to be grown up.

Dally gives a case of intermarriage between two families, all being first-cousins save two, who were second-cousins. This has continued for five generations, with an average of three or four children per marriage. There has been no case of idiocy or deaf-mutism, and but one of insanity, in an old woman.

M. Voisan reports observations, in the isolated commune of Batz, of 46 consanguineous marriages. These gave 172 children. Sterility occurred in two instances. Mental disorders, idiocy, deaf-mutism, hemeralopia, albinoism, retinitis pigmentosa, or malformations were all unknown. The community consisted of 3,300 souls. They were simple, intelligent, and moral, and had intermarried from time immemorial.

Dr. Cameron makes the statement, based upon the Irish census of 1881, that of the 5,136 deaf-mutes enumerated in the country, 135, or 2.6 per cent. were the children of first-cousins.

Dr. Derby, in a total of 12,130 cases in his ophthalmic practice, has met 23 cases of retinitis pigmentosa. Ten of these were the children of cousins. In none of the 23 cases were any other abnormalities noted. Dr. Derby also gives figures by other observers, which, together with his own just referred to, amount to 210 cases. In 70 there was relationship, in 139 no relationship, in 1 no information.

Dr. Standish, in the Carney Hospital, Boston, in a total of 3,726 patients, found 3 cases of retinitis pigmentosa. In 1 there was no record as to consanguinity, in 1 no relationship, in 1 the parents were first-cousins.

Liebreich found retinitis pigmentosa and deaf-mutism closely connected. From investigations with the ophthalmoscope among the inhabitants of Berlin, he found deaf-mutism among Catholics, who prohibit consanguineous marriages, 1 in 3,000; among Protestants, who permit, 1 in 2,000; among the Jews, who encourage, 1 in 400. According to Liebreich and data from Moorfields Hospital, the development of retinitis pigmentosa is favored by consanguineous marriages.

It will be seen that the testimony is British. Your essayist wrote to a number of British and American gentlemen connected with public institutions, asking for information. The British answered, but the Americans did not. The latter probably did not have the information, or were too busy looking after their political fences to impart it. Your essayist is under many obligations to the gentlemen from England, Scotland, and Ireland.

Conclusions.—1. Like breeds like, good or bad, entirely independent of consanguinity.

2. Evil results have undoubtedly followed consanguineous marriages, but whether dependent upon consanguinity is extremely doubtful.

3. Intemperance, luxury, dissipation, sloth, and shiftlessness, as well as hygienic surroundings and innumerable other causes, among them the depraved moral state dependent on births the result of incest, should bear much of the responsibility laid at the door of consanguinity.

4. Testimony is often weakened by religious or other prejudices.

5. Data are of doubtful reliability, full of flaws and false reasoning. The noted cases are the unfortunate ones. The favorable are unknown or forgotten. It is the ill news which travels fast and far.

6. We as physicians know that there is much more illicit intercourse than is generally discovered. May not

many people be related though not aware of it. Many marriages may thus occur between relatives presumed to be non-relatives, thus again vitiating statistics.

7. Statistics show about the same proportion of deaf-mutes, idiots, and insane persons, descendent from consanguineous marriages, to the whole number of those unfortunates, as the number of consanguineous marriages is to the whole number of marriages. They show fertility among the consanguineous to be slightly greater than among non-consanguineous. They also show a somewhat greater frequency of retinitis pigmentosa.

8. Atavism explains fully the fact that in some instances healthy consanguineous parents beget unhealthy children. This, as is well known, occurs in most hereditary troubles. Furthermore, a less superficial examination may show this healthfulness to be only apparent.

9. Evil results in the offspring of consanguineous marriages prove that *something* was wrong. That it was the consanguinity has not been proven. It may have been one of a hundred things, and dependent on all of the antecedents for generations. Such results remaining absent after these marriages prove, for that case at least, that consanguinity was harmless, for it was known to be present. Further, if consanguinity was the cause, the effect should follow where the cause is present.

10. Consanguineous marriages which bring together persons having a disease or morbid tendency in common are dangerous to the offspring. Not, however, one whit more so than the marriage of any other two persons not related, yet having an equal amount of tendency to disease in common. Conditions present in both parents, good or bad, are simply augmented, and the result would have been the same were they not related.

11. Given, a malformation or disease firmly established, we have a tendency to breed true. Given, a defect or peculiarity in a family, race, or sect, this will naturally be propagated by intermarriage, *e.g.*, color-blindness is remarkably hereditary among the Jews and Quakers. The Quakers are educated to abhor color. Those who admire color separate themselves from the sect and thus intensify the tendency in the remainder. The defect has probably crept among the Jews, and is kept up and intensified by intermarriage. The same means has also had its effect among the Quakers.

12. Certain inherited diseases—as scrofula, phthisis, and rachitis—which are ascribed to consanguineous marriages, probably in every instance, could be traced back to an ancestor.

13. Man is an animal, anatomically, physiologically, and sexually. He is subject to the same laws of propagation. In-and-in breeding in animals is carried on to an extent not only not permissible in the human species, on moral grounds, but also beyond the bounds of human possibility. Yet this is done by cunning breeders to improve the stock and put money into their pockets. The Jersey cattle have been bred for the last hundred and fifty years on a small island, six by eleven miles. You would not raise them for beef or oxen, yet they command a high price for their milk and butter. This was probably the recommendation of the first cattle on the island, and this quality has improved from that time to this through in-and-in-breeding.

14. It would be better for the offspring were consanguineous marriages under medical supervision. Certainly no better than for all marriages to be under like supervision.

15. The half a hundred abnormalities ascribed to consanguinity, including almost all the ills that flesh is heir to—among others, whooping-cough—approaches the ludicrous.

16. The factors which lead to consanguineous marriages are, portions of country geographically isolated or mountainous, rendering communication with the outside world difficult; religious or political sects of an exclusive nature, and aristocratic ideas. As examples, note the percentage of consanguineous marriages in Scotland, 5.25 per cent., to those in England, 3 per cent.; the preponderance in Martha's Vineyard, the commune of Batz, and among the Jews and Quakers.

17. The facts do not warrant us in supposing that there is a specific degenerative effect caused *ipso facto* by consanguinity.

18. Consanguineous marriages, no other objection being present, should not be opposed on physiological grounds.

Boudin: Dangers des unions consanguines, Annales d'Hygiène pu-

Cadiot: Comptes Rendus, tome lvi., p. 978.

Cohn and Bergman: Ueber die Ursachen der Taubstummheiten mit besondere Berücksichtigung der Ehen unter Blutsverwandten,

iv., No. 40-1.

Darwin, G. H.: Statistical Society, London, July, 1875, p. 22; also, 1875; also, a translation into the German: Ehen zwischen Geschwister Kindern.

Devay: Hygiène des familles, 2e edition, 1858; also, Du danger des

quoted in Edinburgh Medical Journal, vol. vii., p. 680.

Dally: Anthrop. Review, May, 1864, p. 95.

Falk: Zur Statistic der Taubstummen, Arch. für Psycatrie, 1871.

Grabham, Dr. George Wallington: British Med. Journal, January 16, 1875; also, reprint, Earlswood, Surrey.

Guipon: Comptes Rendus, vol. lvi., p. 513.

Hutchinson, Jonathan: Med. Press and Circular, 1881, July, pp. 1, 22, 41, 65.

Howe: Journal Psychological Med. and Mental Pathology, July,

Liebreich: Deutsche Klinik, February 9, 1861.

Lent: Statistic der Taubstummen des Regierungsbezirks, Köln.

Leviticus: xviii.

Morris: Annales d'hygiène, January, 1862.

Mayer: Die Verhütung der Blindheit, der Taubstummheit, des Blödsinns und des Irrsinns in München, 1877.

Mitchell: Memorandum before the Anthropological Society, London, vol. ii., 1866, p. 408.

Mantegazza, Signore Paola, of Pavia, in his work on the subject.

Oesterlen: Handbuch der Med. Statistic, Tübingen, 1865.

Perier: Mémoires de la société d'anthrop., 1861.

Real: Encyclopädie, vol. ii., Blutsverwandtschaft, p. 352; vol. iv., p.

Reich: Pathologie der Vervölkerung, Berlin, 1879.

Roosa: Practical Treatise on Diseases of the Ear, New York, 1885.

Retinitis Pigmentosa: Derby reports 23 cases; Pagenstecher, 11;

8; Hocquard, 15. Total 79; 18 were the descendants of cousins.

Steiman: A Pathological and Philosophical Essay on Hereditary Disease, with an appendix on Intermarriage, Inheritance, etc., Lon-

Sturtevant: The Laws on Inheritance.

Seguin: Comptes Rendus, vol. lvii., 1863, p. 253.

Uhl and Wagner: Handbuch der Allgemeinen Pathologie, VI. Auf-

Voisen: Études sur les mariages entre consanguins dans la commune de Batz, 1805; also, Mémoires de la société d'Anthropologie de Paris, vol. ii., 1805, p. 433.

Withington: Tr. Mass. Med. Soc., Boston, 1885; also, N. Y. Med.

20 and 27, 1885; also, Wood's Reference Handbook of the Medical Sciences, vol. ii., p. 272.

Walker: Intermarriage.

A New Solvent of Urinary Calculi.—At a recent meeting of the Therapeutical Society, M. Limousin showed a specimen of pichü, or piché. It was a solanum to which the Chilians gave that name. It had recently been introduced into France. In its native country it was believed to disintegrate urinary calculi. M. Limousin prepared a fluid-extract of pichü, of which four dessertspoonfuls represented thirty grammes of the plant, the dose generally administered in twenty-four hours. M. Limousin believed that piché acted especially on the mucin, which held together the different elements of calculi, and dissolved it, and lessened vesical catarrh. In consequence of the resin it contained, M. Dujardin-Beaumetz confirmed this statement.

GENERAL PSORIASIS AND PSORIASIS PALMARIS ET PLANTARIS IN A CHILD.

By GEORGE T. ELLIOT, M.D.,

THE development of psoriasis usually occurs about the age of puberty, or later in adult life, but only in rare instances does it make its appearance in childhood. Dühring mentions a case, seen by Stellwagon, which occurred in a child under five years of age as exceptional, but Kaposi states that he has seen the affection in infants. Without doubt these very early cases present themselves occasionally to every one in large dermatological practice, but they are always viewed with interest as being exceptions to the rule.

That any fundamental reason for this exists does not seem patent to us, since we do not know the cause or causes which produce psoriasis, but as yet are only able to consider the changes in the skin after the disease has developed itself. The changes observed in psoriasis are situated especially in the rete Malpighii, it is true; but whether these changes are primary (Thin, Jamieson, Robinson) or secondary to papillary outgrowth (Vidal, Leloir, Kaposi, etc.), or due to the presence of a parasite (Lang, Wolff, Eslund), or to an inherited weakness of that nervous centre which regulates the nutrition of the skin (Weyl), is as yet entirely undetermined, and even the indisputable proving of either one of the two former views would help in no way in deciding the cause of the affection. The presence of the disease is the only factor of which there is no doubt; but we cannot explain why the affection should appear at times in infants and children, and at others at the age of puberty, and again only after adult life has been reached.

The manifestations of the affection are at all ages similar. With the exception of the palms of the hands and the soles of the feet, which are very rarely implicated in the process, the lesions appear indiscriminately upon all parts of the body, preferring, however, the extensor surfaces of the extremities.

In the following case two points of interest are found: the exceptionally early age at which the psoriasis appeared, and its presence upon both the palms of the hands and the soles of the feet. I have not been able to find in the literature of the subject mention of any case in which true psoriasis plantaris et palmaris occurred at so early an age, though, in all probability, such cases may have been observed.

CASE.—K. K——, female, eighteen months of age, was first seen by me December 28, 1885. She is well nourished, of good size for her age, apparently healthy, though rather pale, but has not yet begun to walk. Her general functions, such as appetite and bowels, are in a normal condition. As far as is known there have been no diseases of the skin in her family. The father and the mother have not, nor have they had, any skin eruptions whatever, and both of their other two children are entirely well. The mother, who came with the child, states that it was in perfectly good health up to the age of thirteen months. It became at that time very peevish, irritable, and restless, and has remained so up to the present. A few days after the inception of this general condition an eruption, consisting of erythematous papules, appeared upon the forehead. These grew larger, slowly becoming covered with thin, whitish brown, easily removable squamæ. The actions of the baby in continually scratching the forehead showed that the lesions were itchy. Succeeding this outbreak similar erythematous papules appeared upon the upper and lower extremities, which in turn were covered with squamæ. No lesions appeared upon the body at all.

Status præsens.—On examining the little patient a diffuse patch was observed upon the forehead extending almost to the eyebrows. Posteriorly it was continued over the vertex as far back as the occiput. The squamæ covering it were easily detached, and from admixture of sebum were slightly fatty. Over the parietal bones were discrete lesions, varying in size from a pea to a nickel, and of typical appearance. Here and there on the face were also a few characteristic lesions. The trunk was absolutely free. On the forearms, about halfway up to the elbows, there were a number of psoriasis lesions varying in size from a pinhead to an ordinary pea.

On the thighs the eruption began at Poupart's ligament, and more or less closely aggregated extended to the knee. On the legs and feet the lesions were quite numerous, and in some places were plaques as large as a twenty-five cent piece. On the labia majora also there were a few spots.

On the palms of the hands four or five small lesions were found. They were about as large as a pea, rosy in color, uninfiltrated, not elevated, and without squamæ. Near the wrist were a few more lesions. On the soles of the feet, both in the arch and anteriorly near the toes, were a number of similar papules. There were seven or eight on each sole, which presented the same characteristics as those on the palms of the hands. The mother stated that these lesions had been present only for a week or ten days.

The baby had been under treatment for a month previously, but the mother said that the eruption had not changed whatever. I gave her minute doses of arsenic in cod-liver oil, and externally applied a three per cent. ointment of hydrargyrum ammoniatum. At the same time good nourishment and frequent baths were ordered.

January 4, 1886.—The eruption had almost completely disappeared from the forehead and head, and had greatly improved upon the rest of the body. She seemed better in every way, less irritable and stronger. Bowels and appetite were in good order.

January 11th.—Only a few of the lesions were remaining. The skin where the lesions had been presented no appearance of redness, but was slightly rough, and slight pigmentation was seen here and there. The spots on the palms and soles were in *statu quo*.

January 20th.—Only two of the lesions have not disappeared. The pigmentation is also less. The palmar and plantar spots are very faint, but still distinguishable.

February 10th.—The baby presents no lesions whatever. The palms and soles are also free beyond a slight rosiness remaining where some of the lesions had been. The general condition of the little patient is greatly improved. She is stronger and is beginning to walk. The same treatment was kept up for a week longer. Since then she has continued getting stronger and better, and has remained free from lesions.

As already pointed out, the age at which the psoriasis appeared in this patient is an exceptionally early one; but aside from this, the presence of the affection upon the palms and soles is important. Not only at an early age, but at every age, the presence of true psoriasis lesions upon these portions of the body is comparatively rare. In fact, so much is this the case that papular lesions, presenting the characteristics associated with psoriasis palmaris et plantaris, if found on these places, are almost invariably set down as being due to syphilis. Some even hold that true psoriasis never appears upon the palms and soles, but if these parts are affected it is unquestionably owing to syphilis. The papular syphilide has a predilection for these portions of the body, it is true, and the condition which has been called psoriasis palmaris et plantaris is seen very commonly in both the early and late stages of this disease; but yet this does not exclude the possibility of non-syphilitic psoriasis occurring there. How often this latter does occur in a given number of cases it is difficult to say. In the last six months I have seen three patients in whom the disease was present at the time of consultation, and one with well-marked general psoriasis, who stated that the affection showed itself first of all on the soles of the feet.

When I saw him, however, these surfaces were entirely free from lesions.

The presence of true psoriasis upon the palms and soles should not offer any particular difficulty in diagnosis. It can be confounded with the early papular syphilide possibly, but that only rarely, since it is very exceptional for psoriasis to be situated on those surfaces alone, but in the same manner as the syphilide it always shows itself more or less distributed over the whole body. Neumann is the only one, I think, who has reported a case in which the true psoriasis was limited to the palms alone, the rest of the body becoming affected only several years later. But it is unfortunate that when psoriasis is present on the palms and soles, many will disregard the lesions present on the body, or consider them as a squamous syphilide, and immediately diagnose syphilis. This was very forcibly brought to my notice last winter by an elderly member of the profession. He had palmar and plantar psoriasis, had been told that it was syphilis, and notwithstandinding the fact that from head to foot he was covered with psoriasis lesions and patches, he had firmly convinced himself that he had syphilis. He had in consequence followed an anti-syphilitic treatment for months, uselessly as might be expected, and was fast becoming hopeless.

It is in such cases that the occurrence of true psoriasis upon the palms and soles must be remembered, and the serious mistake of confounding together two widely different processes be carefully avoided. It is possibly difficult to make a correct diagnosis from the lesions themselves; but yet, in each affection, there are characteristics which, when recognized and given proper weight, go far in leading the practitioner to the proper conclusion. We find that the lesions in true psoriasis appear symmetrically upon both palms or both soles, but in syphilis it very commonly happens that only one palm or sole is affected. Psoriasis appears under the form of erythematous uninfiltrated papules, which offer no subjective symptoms beyond slight itching. In syphilis the papules are of a dark brownish red, presenting a distinct circumscribed infiltration, which is often painful to pressure. In both affections the lesions are only slightly if at at all elevated above the level of the skin.

In psoriasis the papule exists only a short time before squamæ form over it. This does not occur as rapidly as when the lesions are present on the body, owing to the thickness of the epidermis on the palms and soles. The squamæ are rather thick at first, though later offering the same characteristics as do the scales of psoriasis on other portions of the skin, are detachable with ease, and the surface underneath is found to be only slightly infiltrated and bright red in color. The papules may coalesce together, occupying the whole or only part of a palm or sole. In a patient with psoriasis of the palms, who came under my treatment a few weeks ago, the entire palm was implicated, while on the flexor surfaces of the fingers were other lesions, some as large as a nickel, some smaller. In all stages of the papules, from the time that squamæ are first observed, the epidermis scales cover the entire surface implicated, not a portion of it alone, and as long as the affection is present, the renewal of these scales or lamellæ is continuous over this entire surface. The peculiar punctate hemorrhage, seen after removing the scales from a lesion of psoriasis on the body, I have not been able to observe when the disease was present on the palms or soles, nor have I seen a psoriasis annularis or gyrata on these surfaces. Yet even should these latter forms be observed, their characteristics *in toto* would be the same as those already mentioned. Greater care, however, would be called for in giving each symptom its proper weight, owing to the increased possibility of confounding these forms of psoriasis with the late palmar syphilide. Lastly, psoriasis on the palms, like psoriasis on the body, also tends to disappear and to return of its own accord.

In syphilis the papules usually remain intact for three or four weeks, and then desquamation begins. The upper layer of the epidermis, situated over the infiltration, is cast off; a continuous formation of squamæ occurring only at the periphery. At this stage the lesions appear as small scaly rings enclosing a dark brownish-red infiltration covered by a layer of thin epidermis. The lesion may remain presenting this appearance for a variable length of time, and then if treated entirely disappear, or, the infiltration on the centre being absorbed, the scaly rings grow larger peripherally. The formation and renewal of the squamæ are not only different from these same processes in psoriasis, but the scales themselves differ materially in the two affections. Instead of the white, silvery, loosely adherent scales covering the entire lesion, as is seen in psoriasis, we find in the early palmar syphilide small yellowish-white adherent scales, which require some force to remove them, and which are situated around the periphery of the infiltration.

The specific psoriasis palmaris et plantaris does not, however, always appear in the form just described, but at times occurs as very small, sensitive infiltrations, covered with thickened epidermis, which after a longer or shorter time either fall out or can be peeled out like a clavus;[1] or again, under the form of a superficial diffuse infiltration of a brownish-red color, distinctly demarcated and covered by a parchment-like slightly desquamating epidermis. Differentiation between psoriasis and the palmar syphilide which appears in the late stages of syphilis offers no particular difficulty. In this latter the lesions appear in groups or segments of circles. They may become confluent, and then appear as a dense, diffuse infiltration of the skin, covered with thin adherent scales, and bounded by arched borders made up of separate papules; or the lesions may progress peripherally, with consecutive involution, producing the form to which has been given the name serpiginous, one so commonly seen in late syphilis. Fissures are often present, owing to the fact that the dense and deep infiltration yields only with difficulty to the movements of the hands. These, the main characteristics of the palmar and plantar lesions in both psoriasis and syphilis, are thus seen to offer peculiarities which would seem decided enough to exclude errors in diagnosis, and, in fact, if proper signification is given to other lesions which may be present it would be impossible. The differences between them are no less marked when each is treated. Psoriasis of the palms disappears as readily and as rapidly under treatment as psoriasis on other portions of the body, while the persistence and rebelliousness of syphilis on those surfaces is of daily observation.

In the history of the little patient given in this article it was mentioned that there were not any squamæ upon the lesions of the palms and soles. The papules had been present about a week or ten days, and though desquamation was absent yet other characteristic symptoms were not. Even had a doubt existed as to their nature it would have been immediately removed on seeing the typical lesions present on the other portions of the body. Their disappearance under treatment was *pari passu* with those on the extremities, and no factor existed which could have suggested syphilis instead of psoriasis.

[1] For deepest seated.

Carbolic Acid and Chloral.—When carbolic acid and chloral hydrate are mixed together, provided the proportion of carbolic acid does not exceed 1.7 to 1 of chloral, a liquid is formed, as when chloral is triturated with camphor. This liquid is perfectly soluble in water. If more than the above proportion of carbolic acid be present, corresponding to three molecules of carbolic acid to one of chloral, the excess will separate on the addition of water. The substances separate in any case on the addition of heat.

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[1] Finger, Die Syphilis, etc., Vienna, 1

Clinical Department.

TREATMENT OF ASPHYXIA OF THE NEWBORN.

Dr. L. N. Sharp, of Minneapolis, Minn., writes that the perusal of an abstract with the above title in a recent number of The Record, has led him to describe a method accidentally discovered many years ago by himself. He was trying to resuscitate an asphyxiated newborn child, but did not succeed, and the pulsation ceased in the cord. "I cut the cord and continued Marshall Hall's method till I became convinced the child was dead. So many years have now passed that I cannot speak of the condition of the heart, but am under the impression I continued my efforts till the beat of the heart could not be heard. Then I asked for a cloth in which to wrap the body, and took the child in my hands, holding the feet in an elevated position with my right hand, while the back and shoulders of the child, in a depending position, lay upon my left hand. The nurse was tardy in bringing me the cloth, and while I was holding the babe it gasped. I laid it down on the bed and again commenced Marshall Hall's method for resuscitation, but no results; I became convinced again that the child was dead. Taking it in my hands again in the manner above described, I asked for a cloth, and as before had to wait a little, and while waiting the child gasped. The thought came to me at once that the child gasped because the force of gravity carried the blood to the brain, and the lack of this was why the child was dying. I held the child in the same position till gasp after gasp brought respiration and circulation to a normal condition. The child lived. And many, many times since have I resuscitated children which I think would not have lived had I used the ordinary methods."

COCAINE IN LAVAGE OF THE STOMACH.

Dr. Charles N. Dixon Jones, of Brooklyn, writes: "Gastric lavage is rapidly becoming our most reliable treatment in chronic dyspepsia and gastritis. In order to avoid some of the disagreeable features attending this operation, I have resorted to the following expedient: About fifteen minutes before commencing the operation the patient is allowed to hold in his mouth a piece of absorbent cotton saturated with a four per cent. solution of hydrochlorate of cocaine; in a few minutes the palate and fauces are painted with the same solution. The stomach-tube is lubricated with a mixture of olive-oil, oil of wintergreen, and cocaine, after which it may be introduced and the stomach irrigated without that disagreeable vomiting of the tube, and efforts at gagging, which frequently attend the operation. I have adopted this method in some of the most trying and difficult cases, and always with the most happy result."

LARGE DOSES OF IODIDES AND BROMIDES IN MENINGITIS.

Dr. J. F. Stevens, of Shabbona, Ill., reports a case of meningitis occurring in an infant eight months of age. The disease when the child was first seen had so far advanced that parallelism of the eyes was lost, strabismus ensuing. The little patient was evidently failing rapidly, was unconscious, with head retracted somewhat. This condition had come on slowly. There had been no convulsions or convulsive movements. The bowels were extremely constipated, with the abdomen somewhat retracted. The respiration was irregular, and pulse somewhat quickened. A powder containing five grains of calomel was given, and was followed in one hour by a full dose of castor-oil. Blisters were placed behind the ears and mustard to the feet, taking care to cover the soles thoroughly, and an ice-bag was placed at the head. In about one hour the patient aroused somewhat, and in an hour and a half, by which time the bowels moved, cried out several times.

℞. Sodii brom. ..... ℥ ss.
Aquæ,
Syr. simplex ..... āā q.s. ad ℥ iij.
Sig.—One full teaspoonful every hour.

Ten grains of bromide of sodium were given every hour, and one-half grain of iodide of potassium was given every second hour. At the end of twenty-four hours the latter was given only once in three hours. The bromide of sodium was given in doses of gr. x. every hour, continuously, for four days. Under this treatment the condition of the patient slowly improved, but any attempt at reduction of the dose was sure to be followed by bad symptoms.

At the end of four days the bromide was given once in two hours; from this to once in four hours, and then three times a day. The iodide was persisted in until symptoms of iodism manifested themselves, when the medicine was gradually withdrawn. During all this time the ice-cap, filled now with simply cold water, was used. The bowels were kept open with the oil.

Some fourteen days after the case was first seen small abscesses appeared on the scalp, which would discharge about a teaspoonful of pus when opened. These continued until ten were formed. On the eighteenth day the treatment was changed, citrate of iron and ammonium in cod-liver oil three times a day. Small doses of brandy were also given from time to time. The patient is now steadily improving, and bids fair to recover. Both ears have discharged fetid pus freely.

There was no history of syphilitic trouble in the parents, though there had been tuberculosis in a preceding generation.

PERMANGANATE OF POTASSIUM IN AMENORRHŒA.

Dr. F. Tipton, of Selma, Ala., reports a case of amenorrhœa of twelve months' standing, in which all the most reliable emmenagogues, including the faradic current, had been tried without result. The menses reappeared after one week's treatment with the tablets of permanganate of potassium, in doses of two grains, given three times daily, for seven days previous to the expected period.

HYOSCYAMINE IN DELIRIUM TREMENS.

Dr. F. Tipton, of Selma, Ala., has had most satisfactory results with Merck's hyoscyamine, in doses of $\frac{1}{30}$ grain hypodermatically administered, in the treatment of all the distressing symptoms of delirium tremens. He writes: "It has never yet failed me, nor have I experienced any bad results from this drug in these doses. I treat all cases of delirium tremens with this drug as soon as chloral and the bromides fail, and they all get well rapidly. I use the following formula, which I obtained from Dr. P. Bryce, of the Alabama State Insane Asylum: ℞. Hyosciamin, Merck's, gr. j.; alcoholis, ℥ j.; aquæ, ℥ j. M. Sig.—Inject from five to ten minims for one injection."

Centenarians.—The reports which appear from time to time of individuals who have lived to round out a century of existence have frequently been doubted by vital statisticians. In order to settle the question, Professor Humphrey, of England, is now engaged in collecting and sifting these reports, and promises soon to publish those whose authenticity is undoubted.

Progress of Medical Science.

The Differential Diagnosis Between Fibromyomata of the Uterus and Distention of the Fallopian Tubes.—Dr. P. Horrocks, in an article in the *British Medical Journal* of May 1, 1886, thus summarizes the points of difference between these two affections: 1. Fibromyomata are usually accompanied by menorrhagia, and distentions of the tube are not. 2. Fibromyomata, especially when intramural, cause uterine enlargement; while in distention of the fallopian tube the uterus is not enlarged, or only slightly, unless complicated by some other condition. 3. Fibromyomata are usually painless, except that there is often dysmenorrhœa, and, if large, a bearing-down pain, or sense of weight; while in distention of the tube the pain is constant throughout the intermenstrual period, aching in character, and aggravated by the menstrual period. 4. Nutrition is not much affected in fibromyomata, while it is in distention of the tube, especially when the distention is caused by pus; hence, wasting or loss of flesh is a valuable distinction. 5. The temperature is normal in fibromyomata, raised more or less according to nature and amount in distentions of the tube. 6. Fibromyomata, when intramural, move much more rigidly with the uterus than distentions of the fallopian tube. 7. Fibromyomata are much less painful, on pressure, than distentions of the tube. 8. Fibromyomata are usually much firmer in consistence than distentions of the tube. 9. Intermenstrual discharges, usually yellow, are much commoner in distention of the fallopian tube than in fibromyomata. 10. The position and direction of the uterine cavity is much more affected by fibromyomata than by distention of the tube. 11. Fibromyomata are usually more or less spherical, distentions of the fallopian tube cylindrical. 12. Aspiration yields serum or pus in hydrosalpinx or pyosalpinx, and blood in fibromyomata and hæmatosalpinx. 13. Distentions of the fallopian tube are accompanied by pelvic inflammation much more frequently than fibromyomata.

Warm Ether as an Anæsthetic.—Dr. M. W. Hobbs writes in the Cincinnati *Lancet-Clinic* of May 8, 1886, concerning the advantage of warming ether previous to its administration in the production of anæsthesia. He uses a special form of inhaler, in which the ether is warmed by being placed in a chamber surrounded by hot water, and the vapor is mixed with a certain proportion of air before being inhaled. He finds that anæsthesia is produced more rapidly and with the expenditure of less ether, than when the agent is used cold. He and Dr. Taylor have tried the method in upward of thirty cases, and he writes that the patients not only came under the influence of the drug more readily, but they also recovered more rapidly and pleasantly from the anæsthesia than patients generally do who have been brought under its influence in the ordinary way of administering ether cold.

A Clinical Picture of Rachitis.—In an article on this subject, Heubner writes that it is as yet uncertain whether the disease has a premonitory stage. In many cases three classes of symptoms are observed to precede the appearance of the osseous changes: 1. There are certain functional troubles, such as inability to walk, or convulsions, which are the first signs indicating the existence of any morbid process. 2. Chronic digestive troubles or a chronic catarrh of the respiratory passages, following acute infectious diseases, or accompanying chronic infectious maladies, such as tuberculosis. 3. Restlessness, insomnia without appreciable cause, a marked tendency to sweating by night and day, peevishness, and nutritive disturbances, manifested by emaciation and by frequently recurring diarrhœa. These symptoms may present themselves weeks before the apparition of the osseous changes, or they may appear at the same time with the typical rachitic bone lesions, or they may fail altogether. In young children the first change in the osseous system may be sought for in the cranium, the maxilla, the anterior wall of the thorax, and the lower portion of the spinal column. The parts lying in proximity to the two fontanelles and, in general, the parts most recently ossified, are portions of the cranium which are prone to be first attacked. In these regions, soft spots can be felt in the bones, while in those parts which have been longer ossified there is a little hyperplasia and thickening. The first appreciable change is a general pallor, interrupted, on the cheeks, by a faint red tinge. The skin is soft and delicate, and the muscular tissue is modified as regards its volume and firmness. The head loses its rounded form, the occiput is flattened, and there is a depression in the region of the greater fontanelle. The eyebrows are abnormally elevated, and the physiognomy presents an expression of suffering. The thorax projects forward (pigeon breast), the vertebral column is curved posteriorly or laterally, the belly is abnormally large, and the pelvis is flattened; the development of the extremities is arrested, the bones are considerably thickened at the epiphyseal junction, and, in some cases, bent and twisted. The teeth appear late and may be imperfect in their structure; while the vegetative and animal functions of the economy are nearly equal, the intellectual functions may be well developed. In general, the child becomes weak, peevish, apathetic, and apparently suffering all the time. It suffers also from chronic dyspepsia, indigestion, and constipation alternating with diarrhœa. There is also a tendency to catarrhal troubles of the bronchial tubes. The blood participates in the morbid process, as is evidenced by anæmia; there is swelling of the spleen and of the lymphatic glands, and convulsions are frequently observed. The disease is not a local one, limited to one system, but general, involving the entire economy. The older the children the less grave will the disease be, as a rule.—*Journal de Médecine de Bruxelles*, May, 1886.

Congenital Supra-umbilical Fissure.—Dr. Gibert describes, in *La Normandie Médicale* of May 15, 1886, a peculiar condition which he has observed many times, and of which he relates four cases occurring in individuals from the age of three years up to adult life. From a study of these cases he formulates the following conclusions: There is sometimes found in children from the age of three years, and perhaps earlier, a sort of minute eventration, an intermuscular fissure in the linea alba above the umbilicus, forming a buttonhole, which is the cause of a series of accidents which may be briefly stated as follows: Pain in the epigastric region, not constant, which may be very acute, causing the child to utter sharp cries. When the pain is very severe it causes vomiting, usually merely of food. In order to ease the pain the child flexes its body, refusing to straighten up, and sometimes even presses with its two hands on the abdomen, thus indicating very plainly the seat of the pain. The general health is not impaired, and sleep is sound. The symptoms occur only during the day-time, usually while the child is at play. Examination shows the absence of any umbilical or supra-umbilical hernia, and the existence of a supra-umbilical buttonhole or fissure. The writer states that he has never found a loop of intestine engaged in this slit, though such an accident is theoretically possible. As to the mode of formation of this fissure, M. Gibert does not express any decided opinion, though he inclines to the belief that it is due to a congenital absence of fibrous union between the recti abdominales in this situation. The umbilicus is not actually closed until several months after birth, at which period it is occluded at its upper part by a fibrous bundle, containing, as Richet believes, some elastic fibres. It is possible that the continuous crying of the infant during the first weeks or months of life, may weaken this fasciculus at its upper part, and thus open in some way the linea alba between the recti muscles.

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SUPPRESSION OF PAIN IN LABOR BY THE LOCAL APPLICATION OF COCAINE.

AN American surgeon, Dr. William M. Polk, was the first to make any report regarding the use of cocaine in operations upon the female genital organs. We believe also that an American obstetrician first reported upon the use of cocaine in labor.

This is denied, however, by Dr. M. S. Jeannel, who in an article entitled "The Suppression of Pain in Labor by Local Applications of Cocaine," claims that the idea is essentially French, and was first carried out by MM. Doléris and Dubois. These gentleman, on January 17, 1885, announced that they had applied cocaine locally in eight cases of labor, and in six of them had observed great relief. In September, 1885, Dr. George H. A. Dabbs related his experiences, which were of a similar character, and affirmed that, thanks to cocaine, women could bear children nowadays with very little pain.

Dr. Jeannel (*loc. cit.*) records his observations made during the past year in La Maternité de l'Hôtel Dieu, Saint Eloi. He first applied the cocaine in the form of an ointment with vaseline. He got no results, partly because the vaseline is not absorbed, but mainly, as he believes, because corrosive sublimate injections were made, which drug decomposes the cocaine—a fact worthy to be borne in mind. Aqueous solutions were then employed, and it was found that a five per cent. solution was sufficiently strong. In the first stage of labor a speculum was used, and the solution painted over the neck and vagina, or a tampon, saturated with the solution, may be introduced. In the second stage the tampon is introduced directly, without the aid of the speculum, and the liquid should also be carefully applied over the vulva. The operation must be repeated several times.

The pains of labor are due to the following causes, according to Professor Doléris:

First, the muscular contraction of the uterine walls. The pains from this source are usually slight, and cannot be affected by cocaine.

Second, pains are produced by the dilatation of the neck, and of the vaginal walls, the nerves of those parts being pressed upon and torn. These pains are relieved to a remarkable degree in many cases by cocaine.

Third, pains of an acute and severe character result from pressure of the child upon the nerve-trunks of the pelvis. Cocaine is powerless to relieve these.

Fourth, some pain is felt from the stretching of and pressure on the mucous membrane. This is suppressed by cocaine.

Fifth, most atrocious pains are produced in the expulsion of the head by the stretching of the vulva and perineum. These, also, according to Doléris and Jeannel, are relieved by cocaine.

The total result of the analgesic application seems to be that in most cases the patient feels but slight pain in the pelvis, and only complains of a dull pain above the pelvis, and pains in the loins.

It yet remains to determine whether the amount of cocaine used is ever sufficient to cause constitutional effects, or to affect the normal contractions of the uterus.

It appears very certain, so far, that cocaine is not so effective or convenient as chloroform, and its claim for adoption must be based on its greater safety and absence of any bad after-effects.

At present the most satisfactory use for cocaine at the time of labor is probably in cases of lacerated perineum. Here a hypodermatic injection of a few drops allows the immediate and painless suture of the parts.

THE DISSIPATION OF MAMMARY TUMORS BY UTERINE MASSAGE.

UNDER the title of "Hysterical Breast" Dr. Edward P. Fowler (*New York Medical Times*) reports in minute and careful detail three cases of hysterical women suffering from painful tumors in the breast, which disappeared solely, it would appear, as the result of manipulations directed to the womb. He says:

"From the three cases recited in this paper, together with several other confirmatory though less striking experiences, I am convinced that among other maladies connected with the female generative organism there is a class of breast-tumors, formidable in appearance, but which may be entirely controlled and dissipated by uterine manipulations, perhaps we might say uterine massage.

"From such experience as I have I should say that tumors of this kind are characterized by unusual hardness, freedom from attachments, great sensitiveness, especially upon light touch, absence of all other glandular swellings, hysterical temperament, and with more than an ordinary degree of sexual differentiation.

"I think they will generally be found in company with a tenderness in the upper cervical portion of the spine, sensitive ovaries, pressure upon which will give a sense of relief, even though it increases the pain, and with a uterine hyperæsthesia, unassociated with either ulceration or other inflammation.

"It probably would be most often associated also with a profusion of hair, heavy eyebrows, long lashes, and full lips, especially upper lip."

His first case was that of a young unmarried woman who had a tumor in the left breast about the size of a hen's egg. This was very tender, especially when attention was directed to it. The patient had a "never-ending pain" in the ovaries. Pressure upon them produced a sensation partly painful but partly pleasurable and erotic, and the pressure would throw the patient in a deep hypnotic sleep lasting from ten to sixty minutes.

The girl had had hysterical attacks, and some of the relatives were epileptic. A vaginal examination revealed nothing. Several distinguished physicians and surgeons had examined the tumor and advised its removal. Dr. Fowler, after a careful study of the case, decided to make the same recommendation, but delayed doing so until his next visit. To his surprise he was told that his "treatment" had greatly benefited her. Subsequent experience showed that the simple vaginal examination produced a steady improvement in the symptoms, the tumor grew smaller, and finally disappeared. The second and third patients gave histories of much the same character.

They are most instructive, as showing the marked influence of the generative organs over nutrition in such cases. It is well known that fibroid tumors apparently disappear spontaneously at times. In the present cases one can trace a tolerably clear connection between the relief of genital irritation and the disappearance of the new growths.

THE AUTOPSY UPON THE LATE KING OF BAVARIA.

GREAT interest attaches to the question of the alleged madness of the late King Louis of Bavaria. Many have hinted that his eccentricities were purposely exaggerated by those about him, and that he was not in reality insane. A leading English medical journal takes this view.

The full report of the autopsy, which we give below, will therefore be read with close attention. It seems that on June 8th Professor Von Gudden, Dr. Hagen, Professor Grashey, and Dr. Hubrich deposed under oath (1) that King Louis was suffering from a well-advanced form of mental disturbance known to alienists as paranoia (Verrücktheit); (2) that this form of disease was one of gradual, progressive development, and was, in his majesty's case, then incurable; (3) that through this disease the free will of thinking was completely destroyed, and he was permanently incapacitated for governing.

Such was the unanimous opinion of the physicians mentioned.

The post-mortem was made by Professor Rüdinger, in the presence of Professor Grashey, and Drs. Kerschensteiner, Halm, Hubrich, and Rückert. Marked changes of various forms and of a degenerative nature were found in the skull, brain, and meninges. These changes were partly abnormal developments, partly chronic inflammations of old and recent date, and are described as follows:

The scalp was very thick and enormously vascular. The skull was disproportionately small and asymmetrical. For example, the diagonal diameter from the left brow to the right side of the occiput was 17.2 ctm., while from the right brow to the left occiput it was 17.9 ctm. The skull was extraordinarily thin, its thickest portion being only 3 mm. The coronal and sagittal sutures on the inner surface of the skull were completely ossified. The longitudinal sinus was too much dilated posteriorly and narrowed anteriorly. There were several large and small bony protuberances on both sides of the inner surface of the frontal bone.

The dura mater was in general much thickened, especially over the frontal bone, where it was vascular and roughened. The left petrous bone showed a projection which corresponded to a depression in the temporal lobe. The tentorium was irregularly thickened, and on stretching appeared porous and friable.

All the blood-vessels of the base were filled with a dark fluid blood.

The brain, without the dura, weighed 1,349 grms., or about forty-three and a half ounces.

The arachnoid on both convexities of the cerebrum was thickened and milky-looking. At one place, about at the junction of the left first frontal and the ascending frontal, the pia and arachnoid membranes had become thickened and raised by fibrous proliferation. The skull over this point was almost as thin as paper.

In certain localities on both sides the convolutions appeared shrunken, viz., at the beginning of all three of the frontal convolutions, the mesal parts of the anterior central convolutions, and in the region of the middle of the post-central fissure. The brain substance was vascular and soft.

No microscopic examination has yet been made.

The account thus given apparently does reveal degenerative changes. Taken in connection with the personal and family history they place the insanity of the king beyond all reasonable doubt, and make it quite unnecessary to suppose that there was any dark conspiracy in connection with his tragic end.

THE CONTRIBUTORS TO THE MEDICAL RECORD.

DURING the year ending with June, 1886, there were received and published in THE MEDICAL RECORD four hundred and eighty-one communications from its readers and subscribers. A still larger number of articles was received, but for various reasons could not be published. This large number of communications is most gratifying, as showing the scientific activity, powers of observation, and literary diligence of the American physician. For at least four-fifths of these articles were from general practitioners, and represented the fruits of sound studies and of practical experience in the treatment of disease. The contrast between this state of things and that in France and Germany is striking. The number of contributions in the leading medical weeklies of those countries is perhaps one-half less, while the number of contributors is still fewer. Though open to some criticism, it is, on the whole, the better way that medical art should be advanced by the observations and contributions of the many rather than by the laborious studies and closet-work of the few. At least these methods usefully supplement each other. The American notes his results and reports them to THE MEDICAL RECORD or other journal, but the German and Frenchman appear to leave this mostly to their professors and their assistants.

It is naturally agreeable and consoling also to find how widespread is the interest taken in the columns of THE RECORD. We have received and published contributions from every State in the Union except Vermont, Delaware, and Florida.

A very considerable majority of our contributors are from outside the city and State of New York. Ohio, Pennsylvania, Maryland, and Illinois come first in the number of articles sent. But Massachusetts, Indiana, California, Missouri, and Kentucky follow closely after.

Quite a number of esteemed correspondents reside in Alabama, North Carolina, Wisconsin, Minnesota, Michigan, and the robust State of Texas. Thus THE RECORD'S columns receive equally solid support from the sunny fields of the South and the rock-bound coasts of New England. Physicians in Oregon, New Mexico, Nebraska, and Arizona, however, send us more than our neighbors in Vermont, New Hampshire and Rhode Island. The United States Army and Navy have furnished most valuable papers, and we yearly have, besides, communications from England, Mexico, Japan, Corea, and Palestine.

Without any desire to indulge in self-praise, we feel nevertheless that it is but right to say that this widespread and gratifying support of our columns is due to the steady and consistent purpose with which THE MEDICAL RECORD has aimed to present whatever appears in medical literature that could possibly interest, instruct, or benefit the general practitioner in his daily work. It has been our aim, also, to promote in every way the moral, social, and educational condition of those practising the high calling of medicine. In pursuing these ends, naturally local and geographical considerations entirely disappear; medicine is cosmopolitan, and of this there can be no better evidence than the columns of THE MEDICAL RECORD, upon whose contributors the sun never sets.

THE TRUE OBJECTS OF MEDICAL SOCIETIES.

DR. FRANCIS DELAFIELD, in his inaugural address at the opening of the Association of American Physicians and Pathologists, stated in a few pregnant sentences the objects of the Association. They told well the story of the objects of the new Society, but they might also be profitably used as a guide for all national and local Associations. He said:

"We all of us know why we are assembled here to-day. It is because we want an Association in which there will be no medical politics, and no medical ethics; an Association in which no one will care who are the officers and who are not; in which we will not ask from what part of the country a man comes, but whether he has done good work and will do more, whether he has something to say worth hearing, and can say it. We want an Association composed of members, each one of whom is able to contribute something real to the common stock of knowledge, and where he who reads such a contribution feels sure of a discriminating audience.

"We are all busy men, working men, ambitious men. We all like to give instruction and to gain reputation, and both of these we can do in the societies already existing. But we also want a society in which we can *learn* something. And this, I take it, is the real object of the enterprise which we inaugurate to-day: to form an Association of Physicians and Pathologists to which we may come year after year with the well-founded hope that at each meeting we will find something to *learn*."

SCARLET FEVER IN THE COW.

DR. JAMES CAMERON has reported the results of observations tending to show that cows may suffer from a peculiar, hitherto undescribed, infectious disease, and that consumers of the milk of these cows may get scarlet fever. His attention was attracted to the subject by an outbreak of scarlet fever which occurred in a certain district in and near London. It was found that the families in which the fever appeared used the milk from a certain dairy, the cows of which were affected by the peculiar disease in question. The disease is not exactly a new one, being known to farmers as "sore teats," "blistered teats," etc., but its nature has not been recognized. In veterinary text-books it is spoken of as "crythema mammillarum." Dr. Cameron believes it to be a specific contagious affection, occurring usually in the first instance among newly-calved cows, and capable of being communicated to healthy cows by direct inoculation of the teats with virus conveyed by the hands of the cowman. The disease may continue from four to six weeks, and is characterized by general constitutional disturbance, a short initiatory fever, a dry, hacking cough, sometimes quickened breathing, sore throat in severe cases, discharges from the nostrils and eyes, an eruption on the skin round the eyes and hind quarters, vesicles on the teats and udder, alteration in the quality of the milk secretion, and well-marked visceral lesions.

As it is admitted, we believe, that scarlet fever may be disseminated by milk, the importance and interest of Dr. Cameron's observations are at once apparent.

Scarlatina has been described by Professor Barlow as affecting the cow, but the clinical description given is more like that of purpura hæmorrhagica.

THE REVENUE MARINE AND NATIONAL QUARANTINE.

THE Executive departments of our Government certainly present some curious anomalies. Among the latest is that of the Treasury Department patrolling the coast with steamers for the purpose of keeping out infectious diseases. The object is a commendable one, but it is very remote from national finance. The Secretary of the Treasury, some weeks ago, issued an order to the officers of the Revenue Marine to the effect that the President had "determined to establish, by means of the vessels of the Revenue Marine, a national patrol of the coast of the United States, so far as it may be practicable under existing law, and consistent with the performance of the other duties confided to that service."

The revenue steamers are directed to "cruise actively," speak all vessels from southern or foreign ports, and if any contagious disease is found, to send the vessel to the outer quarantine of the destined port. The quarantine-officers to be recognized by the service are the medical officers of the Marine Hospital Service and local or State officers.

LAPAROTOMY IN AMERICA.

WHEN *The Lancet* made some incorrect criticisms of American work in connection with laparotomy for abdominal wounds, THE MEDICAL RECORD was the only American medical journal to see and point out the injustice done. For this we have received no thanks from our esteemed but less alert contemporaries; on the contrary, we have been attacked with the whole artillery of literary weapons, from gentle words of sadness and reproach to burning sentences of indignant denunciation.

Our sin, we believe, was in not mentioning Dr. Parkes' dogs, thus putting, we are told, a deliberate slight upon the whole West and South.

Our contemporaries, who have been so quick to see our deficiencies, should have read *The Lancet* and corrected it themselves. We made our criticism and did not attempt to give the whole history of laparotomy.

If we had we should have been obliged not only to do justice to Dr. Parkes, but we should have had to speak of Nothnagel's experiments in 1883, showing how a bowel may be strangulated by a mechanical irritation; of the eight or ten successful cases of laparotomy for stab-wounds performed by foreign surgeons; of the perfectly unique case of laparotomy for rupture of the intestine performed by a London surgeon, Mr. Owens; of the laparotomies for septic peritonitis performed, up to a recent date, almost exclusively by foreign surgeons (we speak of surgical not gynecological cases); of Jobert's experiments upon dogs; of the cases of successful laparotomy for pistol-shot wounds done by Kocher, Ramsay, and Legouest, already numbering more than those done in this country.

Perhaps if our critical contemporaries were more familiar with the history of the subject, they would be less inclined to blame us for not turning an editorial note into a historical and bibliographical monograph.

It is perfectly true that laparotomy for wounds of the abdominal viscera was conceived and perfected in America, and that Dr. Parkes' dogs were therein *magna pars*. It is possible that the same idea was conceived abroad, however, and it is certain that already more successful cases of this kind have been reported by European than by American surgeons.

News of the Week.

Remarkable Lesion of the Nerve-centres in Leucocythæmia.—Dr. Byron Bramwell reports (*British Medical Journal*) a typical case of leucocythæmia in which the vessels of the nerve-centres presented remarkable varicosities. He thinks also that he observed micrococci in the substance of the superior cervical ganglia. It is thought that this condition of extraordinary vascular dilatation and extravasation may not be unusual in leucocythæmia, although no cases of the kind have hereto fore been put on record.

Lister and Antisepsis.—Sir Joseph Lister is said to be making extensive trials of various non-volatile antiseptics, double chlorides, and double cyanides of mercury chiefly, and with results which appear to be most satisfactory. In addressing his class, after operations, Sir Joseph Lister speaks with all his former confidence as to the healing of wounds under the simpler methods at present employed, which do not now include the troublesome spray or impervious waterproof dressings.

Poisonous Asparagus.—We learn from the *Lyon Medical* that asparagus grown in certain localities becomes impregnated with minute amounts of sulphide of carbon. Persons eating this are affected with violent colic and diarrhœa.

Professional Amenities in Boston.—One year ago a homœopath, Dr. Conrad Wesselhoeft, by invitation, gave his views upon homœopathy to the Boylston Medical Society of the Harvard Medical School. On April 15th last, Dr. V. G. Bowditch, President of the Boylston Medical Society, delivered an address before the Hahnemann Society of the Boston University, on homœopathy as viewed by a member of the Massachusetts Medical Society.

Professor Kaposi succeeds the late lamented Professor Auspitz as editor of the *Archivs für Dermatologie und Syphilis*.

The Rhode Island Medical Society, at its seventy-fifth annual meeting, held at Newport, June 10th, elected the following officers: Dr. Horace G. Miller, President; Dr. Albert Potter and Dr. John W. Mitchell, Vice-Presidents; Dr. George D. Hersey, Recording Secretary; Dr. E. M. Harris, Corresponding Secretary; Dr. Charles H. Leonard, Treasurer. The Trustees of the Fisk Prize Fund awarded two prizes of $200 each, as follows: (1) To Dr. Charles V. Chapin, of Providence, for the best essay on "Methods of Treatment and Practical Results of Malarial Diseases in New England"; (2) to Dr. Hobart Amory Hare, of Philadelphia, for the best essay on "New Methods and Modified Forms of Disease, due to Progress of Modern Civilization in the Last Half Century." Two prizes, of $200 each, were announced for the ensuing year, to be awarded for the best two essays on these subjects: (1) "Antiseptic Midwifery in Hospital, Dispensary, and Private Practice"; (2) "Membranous Enteritis."

A Correction.—Dr. B. A. Watson, of Jersey City, writes: "In the report of the transactions of the recent meeting of the New Jersey State Medical Society, I am erroneously quoted as saying that I had made use of cocaine as a local anæsthetic in amputation of the thigh, and also that I objected to this use of the drug. What I did say was, that I had *witnessed* an operation (the operation—amputation of the thigh—was done by Dr. Varick, who so far as I know was the first to use cocaine in major amputations) in which cocaine was used as a local anæsthetic, and that, owing to the *severe mental suffering* in these cases, I did not approve of cocaine as an anæsthetic in major operations, except in cases where sulphuric ether could not be given with safety. I shall be pleased to have this matter corrected in the columns of The Record."

The Suit brought against Dr. B. A. Watson, of Jersey City, by the Society for the Prevention of Cruelty to Animals, is most unjust and iniquitous. Dr. Watson's experiments with dogs were conducted for the purpose of solving one of the most obscure and perplexing problems in pathology, viz., that of spinal concussion. It is greatly to be regretted that they have been interfered with.

A Good Thing to Cultivate.—The art of thinking, then, is well worthy of cultivation, whether the individual is naturally endowed with logical capacity or represents only indifferent ratiocinative capacity.—*New York Medical Monthly*.

Mode of Payment of Fees in Vienna.—In Vienna it is usual to give medical men their fees at the end of the attendance, so that when honoraria are offered the hint is understood, and no more visits are paid without further request. Some time since a practitioner was sent for to see the child of a certain tailor, whom he found suffering from fever, but with no signs enabling a diagnosis to be made. The fee was given, and the doctor, hearing nothing further, did not consider his services were required again. However, it was discovered by the police, shortly afterward, that some of the children in the tailor's house were suffering from small-pox. The tailor and the doctor were both summoned, the latter being acquitted, while the former, who was shown not only to have concealed the existence of the disease, but to have taken in work at the time, was sentenced to ten days' imprisonment.

A Bacteriological department will be opened in connection with the Pathological Institute at Berlin, presided over by Professor Virchow. It is probable that Dr. Israel will be nominated director of the department.

Reforms in Spanish Medical Study.—Some much-needed reforms, says *The Lancet*, are in contemplation by the Ministry of the Interior regarding the regulations affecting medical study in Spanish universities. Though no addition will be made to the duration of study, the course for the license will be better arranged, so that preliminary subjects will be necessarily studied during the earlier portion of the student career, *e.g.*, histology, which at present is considered an advanced subject, is to be divided into normal histology for first-year's men, and pathological histology for third-year's men. Besides this, elementary clinical study will be included in pathology, and a new subject, viz., the diseases of children, will be added. The doctorate will consist of three subjects, the history of medical sciences, chemical analysis, and public hygiene, including the geographical and historical study of epidemics. The students will also be allowed to visit and practise in the provincial hospitals.

Whooping-cough Successfully Treated by Insufflations of Quinine.—Dr. J. Bachem, of Bonn, has treated sixteen cases by blowing into the nostrils a mixture of quinine muriate and powdered gum arabic (3 to 1). The application was made once or twice daily, and the disease was cured in almost all cases in about three weeks.

Enormous Negro Mortality.—In many Southern cities, large and small, the negro mortality-rate is nearly double that of the white population. But in Savannah, Ga., according to the *Times-Democrat*, while the annual mortality-rate among the whites is 12.19, that among the negroes is 122.94; and among negro children under five years of age 601.93 per 1,000.

The Vermont State Medical Society at its last annual meeting had a very active discussion on the subject of Ethics. Several prominent members frankly confessed that they consulted with some homœopaths, and not with some so-called regulars. The general sentiment seemed to be that the society should either conform to its Code or abolish or change it. Definite action will be taken at the next annual meeting.

Pasteur has lost still another patient. The sum of over one million francs has been subscribed to the Pasteur Institute.

Discovery of the Microbe of Rabies.—Dr. G. F. Dowdeswell, announces in *The Lancet* that he has discovered the microbe of rabies. He says: "It is a micrococcus, not very minute, and of the usual form. It stains, however, with some difficulty; and this accounts for its having hitherto escaped observation. In the cases of dogs which I have as yet examined, its principal seat is evidently the central canal of the spinal cord and medulla oblongata; thence it pervades the other tissues of the central nervous system, occurring (sometimes in vast masses) around the walls of the blood-vessels, and in some cases within the vessels among the red blood-corpuscles. In the cortex of the hemispheres I have found it, but in very small numbers, and, so far, only in the perivascular and peri-cellular lymph-spaces. In the cerebellum I have not found it at all, neither have I as yet succeeded in finding it in the salivary glands. I shall shortly publish the methods by which it may be stained with certainty. I must, however, state that it does not stain by hæmatoxylin, either with or without a mordant, as asserted by Fol. I have repeated his methods carefully. Neither does it occur within the nerve-fibres, as he states; and, lastly, it is fully three times the dimensions which he gives. I may add that it does not occur in the same situation, treated by the same methods, in normal animals. In the one case of a rabid dog, which I had examined to control my previous observations, the tissues were placed in alcohol so shortly after death as to preclude the possibility of the occurrence of septic organisms. In addition to which, all saprophytes, as far as yet observed, stain very readily with the usual aniline dyes, which this microbe does not. I must point out, in justice to the genius of Pasteur, that these observations on the occurrence of the microbe go far to confirm his statement of the seat of the virus; it may further afford a means of diagnosis in any doubtful case." Preparations of the microbe were shown at the meeting of the Royal Microscopical Society on the 9th ult.

Professor Von Langenbeck was recently operated upon by Professor von Pagenstecker, for cataract. The operation, we learn, was a successful one.

Apomorphine as a preventive of epileptic attacks is highly recommended by Vallender, who uses it hypodermatically in the usual doses.

Ringworm in a New-born Infant.—A correspondent of *The Lancet* writes that a lady, who for some time past had had a dread of ringworm appearing in any of her children, was delivered of a female child which was found to have several spots of ringworm on its body and one on the scalp. These have gone on increasing, and now rather an extensive surface of the back is covered with the rings. The writer asks if it is not unusual for this affection to appear in a child of that age.

Long-lived Professors.—It is said that there are at present at the various German universities no fewer than 157 professors between the ages of seventy and ninety. Of these, 122 deliver their lectures as usual.

Reports of Societies.

THE ASSOCIATION OF AMERICAN PHYSICIANS.

First Annual Meeting, held at Washington, D. C., June 17 and 18, 1886.

THURSDAY, JUNE 17TH—FIRST DAY—MORNING SESSION.

THE first meeting of the Association of American Physicians was held in the Army Medical Museum, Washington.

The meeting was called to order by the President, DR. FRANCIS DELAFIELD, of New York.

ABSTRACT OF PRESIDENT'S ADDRESS.

It was my intention to say some words concerning the objects of the Association, and the best methods of carrying these objects into effect, but when I considered the character and attainments of those whom I was about to address, such a plan seemed to me unnecessary and even impertinent.

We all of us know why we are assembled here to-day. It is because we want an Association in which there will be no medical politics and no medical ethics; an Association in which no one will care who are the officers and who are not; in which we shall not ask from what part of the country a man comes, but whether he has done good work and will do more; whether he has something to say worth hearing, and can say it. We want an Association composed of members, each one of whom is able to contribute something real to the common stock of knowledge; and where he who reads such a contribution feels sure of a discriminating audience.

We are all busy men, working men, ambitious men. We all like to give instruction and gain reputation, and both of these we can do in the societies already existing; but we also want a society in which we can *learn* something. And this, I take it, is the real object of the enterprise which we inaugurate to-day—to form an association of physicians and pathologists to which we may come year after year with the well-founded hope that at each meeting we shall find something *to learn*.

Without further preface I shall ask your attention to a subject of much practical importance:

CHRONIC CATARRHAL GASTRITIS.

The fact that the lining membrane of the stomach is both a mucous membrane and an organ of digestion does, in a measure, confuse our appreciation of the inflammations of this membrane. We are apt to notice especially the disturbances of digestion, and to include all the cases in the general class of gastric dyspepsia.

But the lining membrane of the stomach is, in part, a mucous membrane. It is frequently the seat of chronic catarrhal inflammation, and it then behaves as do the other mucous membranes under the same circumstances.

Now let us turn to the consideration of chronic catarrhal gastritis. Whether we consider the cases which are found at autopsy, or the cases seen during life, it is evident that in the majority of persons the inflammation goes no further than to affect the function of the mucous glands. They constantly produce a thick, tenacious mucus, which adheres in a thick layer to the surface of the mucous membrane. Less frequently the mucus is thin and fluid, and is vomited. With such a change in the mucous glands, the peptic glands may also give evidence of disordered function; but it is important to remember that unimpaired gastric digestion is perfectly compatible with chronic catarrhal gastritis.

Chronic catarrhal gastritis may mean, 1, that the mucous glands produce too much mucus; 2, that, in addition, the functions of the peptic tubules are affected; 3, that the structure of the mucous membrane is so profoundly changed that its digestive functions are anatomically impossible; 4, that from relaxation of the muscular wall, or stenosis of the pylorus, the food is not entirely discharged from the stomach, but portions remain.

The ideas which one has as to the causes of chronic catarrhal gastritis will vary somewhat according to the experience of the hospital autopsy-room and the character of the cases observed in private practice. In the autopsy-room we find more of the cases associated with complicating diseases, or exhibiting the very advanced lesions of gastritis. Organic disease of the heart, emphysema of the lungs, cirrhosis of the liver, Bright's disease, phthisis, and alcoholism are evidently in most of the cases the causes of the gastritis. In private practice, on the other hand, I find most of the cases in adults between the ages of twenty-five and fifty; a smaller number in children and in old persons. In the majority of the cases no cause is to be discovered other than the mode of life and the character of the locality in which the patient lives. The same climatic conditions which predispose to chronic naso-pharyngeal catarrh and chronic bronchitis, have the like effect as regards chronic gastritis. In a smaller number of cases other causes can be discovered. An attack of acute gastritis, or of gastro-duodenitis, or of gastro-enteritis, may be followed by chronic gastritis. Typhoid fever and the malarial fevers may be accompanied with an acute gastritis which may assume the chronic form. In some women the disease seems to begin during pregnancy. Alcoholism and the abuse of drugs furnish their quota of patients. Rheumatism and gout are sometimes unquestionable causes. Cirrhosis, Bright's disease, emphysema, phthisis, and cardiac disease also furnish a certain number of cases.

The first among the symptoms comes pain, varying from a mere feeling of oppression or discomfort to the most severe and agonizing pain. Most common is the feeling of uneasiness or discomfort, either following the ingestion of food or occurring when the stomach is empty. It is not always easy to distinguish this from pain belonging to the small intestine or to the colon. Much worse is the severe pain due, in some cases, to the presence of food in the stomach, a pain which is often followed by vomiting. At first it only comes on when the stomach contains a considerable quantity of food, but later continuing, even after repeated vomiting, so long as the smallest fragment is left. It is so severe that the unfortunate sufferer has no rest by day or by night, deprives himself of almost all nourishment, and finally falls a victim to the opium habit.

Nausea and vomiting are also regular symptoms. The nausea belongs to the early morning hours. The vomiting is most frequently a vomiting of food either in considerable quantities, or vomiting kept up so long as the smallest particle of food is left in the stomach. In other cases large quantities of brownish fluid, mixed with mucus and food, accumulate in the stomach and are vomited from time to time. This is especially the case when the stomach is dilated. Vomiting of pure mucus is seen in a few cases. Vomiting of blood, usually not in large quantities, may occur. Regurgitation of acid fluid, in the morning especially, belongs to alcoholic gastritis.

Retention and fermentation of the food in the stomach are most common with the dilated stomachs, but are by no means confined to them. They are found often enough in other cases of chronic gastritis.

Constipation seems in some cases to depend directly upon the gastritis, and will disappear as this improves without the use of any laxatives. In the same way there are diarrhœas which can be cured by treatment directed to the stomach.

Headache is a symptom. It may follow a variety of types, but perhaps the most common is that which comes on at intervals.

A general loss of health, of which emaciation and loss of muscular strength are the most prominent features, is found with the worst cases of the disease. Inflammation of the tongue and a variety of abnormal sensations referred

to the throat, mouth, and tongue belong to some of the cases.

These are the most marked symptoms which may be referred to the gastritis directly. In the complicated cases, of which there are many, other symptoms are added which it is not necessary to consider at the present time.

The course of the disease is naturally prolonged over many years, and interrupted by periods of improvement. The symptoms come on in attacks, at first not severe, not of long duration, easily relieved in a variety of ways. As the disease continues, each succeeding year marks a greater severity and longer duration of the symptoms.

In attempting to establish a satisfactory treatment for chronic gastritis it is important to state as clearly as possible the problem to be solved. First, we must remember that all patients who suffer from gastric symptoms do not necessarily have chronic gastritis. Besides those who have functional disturbances of the stomach, or cancer or ulcer of the stomach, we find many others in whom gastric symptoms are due to diseases of other parts of the body. Anæmia, uterine disease, the neurotic and hysterical condition, and constipation, often behave in this way. In old people the function of gastric digestion is often impaired simply as a result of old age. To each one of these conditions belongs its appropriate treatment, but it is not the treatment of chronic gastritis.

Still further, we must remember that in many cases of gastritis, palliation of the symptoms is all that we can hope for. After excluding all these there remains a large and important group of cases of chronic catarrhal gastritis, in which we may hope not only to alleviate the symptoms but to cure the disease.

It is evident from the nature of the disease that any treatment intended not merely to palliate, but to cure, must be of long duration, and that it must be repeated from time to time when the inevitable relapses occur. The different plans of treatment which may be adopted are: the curative treatment of climate and mode of life, the regulation of the diet, the administration of drugs, and the use of local applications directly to the inflamed membrane.

Climate and mode of life, I believe, offer the most certain means of curing chronic gastritis. The two points of importance are, first, the locality selected must be one where the patient can live an out-of-door life; and second, the patient must live in this climate either for several years or for a considerable part of each year. Excellent as this method of treatment is, it is evident that it can be carried out only by a limited number of persons.

The regulation of the diet is a matter which demands consideration in every case of chronic gastritis. In trying to ascertain the best way of feeding these patients I have found only one satisfactory method, and that is to feed them experimentally with different articles of food, and then, after an interval of several hours, wash out the stomach and see how thoroughly these articles of food have been digested and removed from the stomach. After pursuing this course for a number of years I have arrived at the following conclusions:

It is necessary that the patients should be well fed, a starvation diet never answers.

The stomach does not require any rest from the performance of stomachic digestion; on the contrary, it is all the better for being called upon to perform its natural function.

The patients' own ideas as to what food agrees with them are usually erroneous. They are apt either to starve themselves, or to select the least nutritious articles of food.

The use of artificially digested foods, or of substances such as pepsin to assist stomachic digestion, is unnecessary.

The starches, oatmeal, corn-meal, bread, the cereals, the health-foods, are, as a rule, bad. Portions of them remain undigested in the stomach for many hours.

Milk in adults is an uncertain article. It answers very well for some persons, not at all for others.

Meat is usually readily and well digested, but there are occasional exceptions to this rule.

Vegetables and fruits can be eaten, but the particular varieties must be selected experimentally for each patient. I do not believe that any case of chronic gastritis is to be cured by diet alone.

The advantageous use of drugs belongs to the earlier stages of chronic gastritis. At that time they often palliate symptoms, and sometimes even seem to cure the inflammation. In the later stages of the disease their use becomes more and more unavailing.

The use of local applications, made directly to the mucous membrane of the stomach, I regard as the most efficacious plan of treatment for those patients who are not able to leave home and seek a proper climate. The local applications are readily made by the introduction of a soft-rubber tube through the œsophagus into the stomach. Liquid applications are the best. They should be made in such quantities as to come thoroughly into contact with the entire surface of the mucous membrane, although the pyloric end of the stomach is the region where the inflammations are principally situated. They should be made at a time long enough after eating for the stomach to be as nearly empty as possible.

For many cases warm water alone, in considerable quantities, is the only local application needed. In some, however, there is an advantage in medicating the water, and for this purpose I employ a variety of substances. The alkalies, the mineral acids, bismuth, carbolic acid, the salicylates, iodoform, belladonna, ipecac, gelsemium, may each one be employed according to the particular case.

For the first week of this treatment it is wise not to expect any special improvement. Indeed, even a longer time than this may try the perseverance of the physician and the confidence of the patient. Sooner or later, however, the expected improvement begins; the nausea and vomiting cease, the constipation or diarrhœa is improved, the flatulence is no longer troublesome, the headache becomes less frequent, and of more real value than these, the improvement in the general condition of the patient becomes evident. The color, the weight, the appetite, the sleep, the spirits of the patient all show a change for the better. Of all the symptoms the pain is the one which is apt to persist the longest.

For two or three months the patient has to be kept under observation, and the applications to the stomach made by the physician. After this the patient is dismissed, but continues the treatment himself, first every other day, then twice a week, then once a week for several months. The regular relapses of the disease are managed in the same way, but are much more quickly relieved.

I have tried thus succinctly to lay before you the characteristics of a common and important disease, and yet a disease which seems to me not to meet the recognition and attention which it demands. If I can secure for the patients who are made miserable by it a more careful and intelligent management than they are now apt to receive, the purpose of this paper will be answered.

The Committee on Permanent Organization reported a constitution and by-laws. Adopted. The main provisions of the constitution are: That the Association has for its object the advancement of scientific and practical medicine. It shall be known as the Association of American Physicians, and shall hold its annual meeting in the month of June, in the city of Washington, D. C. That the proceedings shall consist of discussions on subjects of general interest in the departments of medicine and pathology; of original communications and of demonstrations of gross and microscopic preparations; of apparatus and of instruments. That there shall be members and honorary members. The number of members shall be limited to one hundred. Physicians of sufficient

eminence to merit the distinction may, to a number not exceeding twenty-five, be elected honorary members, and as such shall be entitled to attend all meetings and take part in the proceedings, but not to vote upon business questions. That nominations for membership shall be signed by two members, be referred to the censors, and be acted upon at the succeeding meeting.

The following Nominating Committee was then appointed to report on Friday morning: Drs. James Tyson, A. Brayton Ball, George B. Shattuck, Frank Donaldson, and Hosmer A. Johnson.

The first paper was entitled,

TENDON-JERK AND MUSCLE-JERK IN DISEASE, ESPECIALLY WITH REFERENCE TO POSTERIOR CLERKING OF THE SPINAL CORD,

by S. Weir Mitchell, M.D., of Philadelphia, and Morris J. Lewis, M.D., of Philadelphia.

It was stated that while a muscle or a nerve may be excited by both electrical and mechanical irritation, the former is to be regarded as a ruder agent than mechanical stimulus. In some cases electricity is inapplicable beyond a certain extent. It was held that the knee phenomenon was a direct muscular response and not due to reflex action. The most delicate test for determining the condition of the muscle is by striking the stretched tendon. This can be done in various situations, as at the knee, ankle, elbow, and jaw. Every distant muscular exertion, such as winking, if accurately timed, exaggerates these phenomena. To demonstrate this the patient should lie down with the knee slightly bent. At the time that the tendon is tapped, or just before, the patient is directed to wink, and it will be noticed that the jerk is much increased. A decided sensation, such as heat, cold, or an injury will increase the responsive power of the muscle or tendon which has been struck. Both the tendon- and the muscle-jerk are reinforced by irritation of distant parts. This reinforcement disappears when the muscles are cut off from the spinal centres.

A blow on the muscle causes the muscle-jerk to extend up and down, but not transversely. In some cases of disease this jerk is irregular. In addition to this contraction the muscles may form a little eminence or mound, which disappears slowly. Late in ataxia this is unusually well marked. It is also observable in some healthy muscles.

The phenomenon of reinforcement was attributed to an increase of tone in the muscle as a result of the distant irritation.

A tabular statement was then presented, giving the results of observation in twenty-three cases of locomotor ataxia. In this table the various symptoms and signs presented were represented by signs. In this way the history of each case could be seen at a glance.

In the first stage of locomotor ataxia the tendon-jerk is diminished or absent, while the reinforcement is fair. In the subsequent stages both the tendon-jerk and its reinforcement are absent. The muscle-jerk and its reinforcement continue normal through the first two stages. In the third stage, while the muscle-jerk is normal, the reinforcement is absent. In the fourth stage the muscle-jerk is increased, while the reinforcement is absent. In the fifth stage the muscle-jerk is diminished, and the reinforcement is absent. In the sixth stage both the muscular jerk and the reinforcement are absent. The increase of the muscle-jerk, late in the disease, may be due to some irritative changes in the muscle, but this has not been positively determined.

In regard to associated movements, in a certain proportion of cases, if the patient is directed to shut his right hand, the left hand will also shut to a certain extent. And if the patient is sitting down the leg may be drawn up. This condition has become more marked as the ataxic condition has increased.

Another symptom referred to, and which was considered a new symptom, was prominence of the eyeballs. While the condition is not as marked as in exophthalmic goitre, it is sufficiently distinct to be apparent if attention has been called to the matter.

Dr. E. C. Seguin, of New York, suggested that when the patient performs some movement, or when his attention is attracted by excitation of a sensory nerve, the cerebral inhibitory influence over the spinal cord is momentarily reduced, and the reflex powers are raised for the moment. The reinforcement seemed to be rather a negative condition.

Dr. H. C. Wood, of Philadelphia, thought that the explanation of the knee-jerk was based on physiological ideas. There are three classes of movements, the voluntary, the reflex, and movements originating in the muscle or in the nerve-endings in the muscle. Until the fact that the time of the knee-jerk is so different from the time of the other reflexes is explained, we must consider that we have these three classes of movements. It is possible that the movements in the muscle are the result of inhibition, but at present we have no proof that such is the case.

Dr. F. Peyre Porcher, of Charleston, S. C., read a paper on

TYPHOID FEVER.

The author described a method of treatment which he considered very satisfactory. As in all cases of high temperature, there is costiveness, the result of the arrest of the intestinal secretions. He recommended a mild laxative at the beginning of the treatment. Any laxative may be employed.

In the treatment of typhoid fever three things are to be considered; the necessity for maintaining the strength of the patient, the support of the system by the use of stimulation, and the morbid effect of high temperature. Special attention was directed to the latter element of the treatment. In reducing the temperature, the speaker had resorted to the use of ice-cold water, which was applied to the head, hands, and arms by the use of towels wrung out of the water and reapplied as frequently as necessary. The applications are continued for ten to fifteen minutes, until the heat of the skin is reduced. The use of baths was considered objectionable, on account of the difficulty of their application, and on account of the prejudice against them. He prescribes for internal use a fever mixture, prepared as follows:

℞. Potassii acetatis ..... ʒ j.
Liquor ammonii acetatis ..... ʒ j.
Spt. ætheris nitrosi ..... ♏ ss.
Tinct. aconiti ..... ♏ ss.
Aquæ ..... ad ℥ iv.

Sig.—A dessertspoonful in a little water, every two hours, so long as the fever continues.

Morphia or the bromides may be added to the above preparation. It may also be employed in other fevers.

Hot pediluvia may also be employed. In malarial cases quinia and arsenic are employed. Later the use of the mineral acids are added. With reference to the use of stimulants, these may be continued as long as the tongue is dry. Oil of turpentine is often called for on account of tympanitic distention of the abdomen. It is also of value as an astringent, and as a general stimulant. The speaker had treated thirty cases in private practice in this manner, of which number three died. In these cases there were causes sufficient to explain the fatal termination.

Dr. James Tyson, of Philadelphia, described a case in which, to reduce the temperature, he wrapped the patient in a sheet which was kept constantly wet with ice-water. This was entirely successful. In this case both antipyrine and thaline were employed, but although they promptly reduced the temperature it soon returned to its original position. When it is necessary to keep the temperature continuously reduced, some modification of the cold pack is, I think, the best method.

Dr. James T. Whittaker, of Cincinnati, referred to the possibility that the high temperature might be nature's way of getting rid of the poison. It has been found that the virulence of the typhoid-fever bacillus can be reduced by heat. It is also possible that the changes formerly attributed to heat may be due to bacilli.

Dr. E. Darwin Hudson, of New York, described the plan of treatment employed at Bellevue Hospital. The treatment is almost negative, consisting in sponging the patient every two hours during the continuance of the temperature above 102.5°, and adherence to an absolute milk diet. The only other measures employed are those directed to the relief of special symptoms occurring in the course of the disease.

Dr. Samuel C. Chew, of Baltimore, referred to the use of quinia by hypodermic injection, in order to reduce the temperature. It seems to have almost a specific action when used in this way.

Dr. William H. Draper, of New York, said that there was, perhaps, nothing more fallacious than statistics in typhoid fever. Cases of fever not truly typhoid are confounded with specific typhoid fever. We have all seen cases in which there was a continued fever, but in which the temperature did not run the typical course. I think that in such cases we have no evidence that they are cases of typhoid fever.

He thought that in the majority of cases the value of antipyretics is not so much in reducing the mortality, but in affording comfort to the patient. The mortality of typhoid fever in the majority of cases depends upon conditions over which a reduction of the temperature would have no influence.

Dr. William Pepper, of Philadelphia, thought that we should be slow in accepting a mortality of fifteen or even ten per cent. as evidence of much success.

An excellent rate of mortality, he thought, could be secured by absolute rest from the first moment of suspicion, and a rigid diet of milk or milk diluted. In addition, he believed that the abstraction of heat by the use of cold water is of great value. A remedy directed to the constant and important lesion of typhoid fever aids in reducing the temperature. Under proper treatment he thought that the mortality should not exceed five or six per cent.

Afternoon Session.

The first business of the afternoon session was the discussion of the question:

DOES THE PRESENT STATE OF KNOWLEDGE JUSTIFY A CLINICAL AND PATHOLOGICAL CORRELATION OF RHEUMATISM, GOUT, DIABETES, AND CHRONIC BRIGHT'S DISEASE?

Dr. James Tyson, of Philadelphia, referee; Dr. William H. Draper, of New York, co-referee.

Dr. Tyson, the referee, began by defining the diseases included in the subject. The usual definitions of rheumatism and gout, as general diseases with local expressions, were given. Diabetes was subdivided into two varieties, the milder and the more severe form. The former consists essentially in a defect in that particular metabolic office of the liver by which glucose is converted into glycogen. It is due to over-stimulation of the liver-cells by the excess of absorbed glucose arising from the habitual over-use of saccharine and starchy foods. The more severe form of diabetes may be termed neurogenous, and is caused by some direct or reflex influence on the vaso-motor centre, whence arises a hyperæmia and accelerated circulation through the liver, as the result of which the glucose absorbed during intestinal digestion is carried too rapidly through the liver to permit its conversion into glycogen. To this is added, in advanced stages, glycogen resulting from the splitting up of the products of digestion of nitrogenous foods.

Taking up the discussion, first as to rheumatism and gout, the referee called attention first to the difference in the morbid anatomy of the two diseases, in the absence of anything specific or peculiar in the changes in the joints in rheumatism, while in gout there is the peculiar deposit of sodium urate in the joints or their vicinity. The composition of the blood is definitely altered in gout by the almost constant presence of an excess of uric acid in combination with sodium, whereas no change of corresponding importance is found in the blood of rheumatism. Heredity plays a much more important rôle in gout than in rheumatism, reaching, in the former, according to various observers, to fifty to one hundred per cent., while in rheumatism the maximum claimed is thirty-four per cent. The early age at which rheumatism presents itself, as compared with gout, implies a difference in the etiology, as does also the absence of renal and the presence of cardiac complications. Alcoholic liquors and over-indulgence of food have no influence in the causation of articular rheumatism. In gout they are all-powerful.

The exciting cause of rheumatism is always cold, dampness, or both. The cause of the explosion or the acute attack of gout is the cause of the disease itself, and is due either to the over-accumulation of uric acid in the blood, whether as the result of increased formation or defective elimination, or to diminished power of resistance of the organism through some accidental cause, atmospheric or physical.

Moreover, except in the case of salicylic acid, which is admitted by all to be useful in both affections, Dr. Tyson thought that the treatment required by the two diseases was different. The treatment of gout is eliminative, that of rheumatism restorative. It is true salicylic acid is efficient in both diseases, but this is not sufficient proof that they are the result of the same cause, so long as that cause is so easily demonstrated in one and not in the other.

The relation of gout to that form of chronic renal disease known as chronic interstitial nephritis is a true correlation, since there is every reason to believe that the cause of gout is one of the causes of this form of chronic renal disease so common in gout, and the evidence of renal disease is often found long before the gout manifests itself.

To estimate the relation between gout and diabetes, it is necessary to remember that there are the two forms referred to. With neither of them is there any pathological relation. Between gout and the first or mild form of diabetes there is a clinical correlation, although many of the facts on which it has been founded the referee believed to be erroneous. Thus, although uric-acid sediments are quite common in diabetes, yet careful quantitative analysis shows no increase in the amount of uric acid excreted. The uric-acid sediments must, therefore, be the result of the excessive acidity so characteristic of diabetic urines, due to the fermentative processes.

Again, it is said the lithæmic urines often contain sugar. This he was confident was much rarer than is commonly supposed, because of the fact that uric acid reduces the salts of copper, and this reaction is mistaken for that of sugar. He thought that the inability of gouty persons to digest saccharine and starchy elements of food should not be regarded as a proof of clinical correlation, because it simply indicates a feeble converting power of the intestinal digestive fluids over the carbo-hydrates. In diabetes there is no defect of this kind. The carbohydrates are converted into glucose with facility. The trouble is with the liver, which is not able to reconvert the glucose into glycogen.

Between gout and the more severe form of diabetes, which is the result of disease at a point distant from the liver, there is no correlation, either clinical or pathological.

Between diabetes and Bright's disease there is a relation of this kind. The effect of the circulation through the kidneys, surcharged with sugar alone, or with sugar,

acetone, and diacetic acid, is to irritate the renal cells and produce a degree of chronic parenchymatous nephritis instead of the interstitial nephritis which is so closely correlated with gout. From recent observations there is reason to believe that these changes take place in the kidney much earlier than used to be supposed, and that albuminuria appears correspondingly early, either coincidentally or in alternation with glycosuria. The difference between the relation of gout to Bright's disease and of the more severe or neurogenous diabetes is, that in the former that which causes the gout causes the Bright's disease, so that there is a true correlation, whereas in neurogenous diabetes, it is a result of the diabetes which causes the renal complication.

As to diabetes and rheumatism, the idea that these two diseases are closely correlated has apparently received substantial support from the results of treatment of the two diseases by salicylic acid. Occasional reports as to the efficiency of salicylic acid in diabetes have acquired additional impulse from views which have recently been promulgated by Latham, who concludes, on clinical grounds, that there are two forms of diabetes—one due to neurotic disturbances of the function of the liver, and the other due to neurotic disturbances of the functions of muscle. As the result of the latter, glucose is formed in the muscles and passes thence into the circulation. This latter is so closely related to rheumatism, that one degree of oxidation develops the materies morbi of rheumatism, and another develops glucose. Having shown also by the same reasoning that the administration of salicylic acid arrests the formation of uric acid, lactic acid, and glucose, he thus explains the usefulness of salicylic acid in some forms of diabetes, and says that in doses of from ten to twenty grains three times a day, he has seen it produce marked improvement. More recently, Holden reports the successful treatment of six cases of diabetes with salicylic acid.

The referee, whose experience with salicylic acid in the treatment of diabetes had not heretofore furnished satisfactory results, had not yet had the opportunity of applying this more recent principle, that it is in the cases with rheumatic pains that it is especially serviceable. He held that until more cases were collected in which this principle of treatment was applied, the question was not ripe for decision. In a single case which had come under his observation in which it was claimed that salicylic acid had been very useful, the sugar had been found increased rather than diminished.

Dr. William H. Draper, the co-referee, said: It is fair to presume that this question would not have been propounded if clinical experience did not suggest it. It certainly is not yet justified by the present state of knowledge in pathology. Although the question is premature from a pathological point of view, it can hardly be regarded as without interest, and possibly importance, from a clinical standpoint. It is from this latter aspect that my remarks shall be made.

By gout is meant, I take it for granted, not simply the arthritic malady, but a diathesis which manifests itself through more or less well-defined derangements of nutrition, which give rise to a variety of secondary cerebro-spinal irritations, and provoke definite structural changes in the blood-vessels, in the connective tissue of the parenchymatous organs, and in the nervous system.

By diabetes we are to understand, I suppose, the more common and lesser form of that disease.

Rheumatism is so vague in its ordinary application that it is not easy to comprehend exactly what is meant in this question. It is presumed that it covers acute articular rheumatism and the subacute forms in which the differential diagnosis from subacute gout is so difficult.

The form of Bright's disease is, probably, the form of chronic diffuse nephritis which is characterized by extreme sclerotic changes in the connective tissues of the kidneys and in the arteries, and by cardiac hypertrophy.

I think that the experience of most clinical observers will justify the statement that gout, rheumatism, diabetes, and chronic Bright's disease are frequently associated, sometimes in the same individual history, more frequently in the histories of families. The association of gout and even chronic rheumatism with chronic Bright's disease is very common in the individual, while the association of gout with diabetes, or of diabetes with granular kidney, is not common. Chronic rheumatism may exist without even being complicated with gout or diabetes, or chronic nephritis, but in families where the association of morbid phenomena can be traced, I think that it will be acknowledged that these diseases are frequently found in more or less marked alliance.

Granting this association, are there any facts to show their correlation? Are they reciprocal, interchangeable affections, transmutations of the same morbid process, and therefore recognizing a common determining cause, as yet unknown?

The first fact that suggests the idea that they are cognate forms is that of heredity. First, as to gout and diabetes. Glycosuria often recognizes a gouty ancestry—the term glycosuria being used to express the lighter form of the disease. In many cases the grave form of diabetes is not traceable to a gouty origin. The speaker had seen many cases leading him to believe that, excluding the cases of diabetes of nervous origin, careful investigation of the family history would reveal the presence of gout in the majority of cases.

Second, concerning gout and rheumatism. The fact of heredity as establishing a connecting link is not so evident. But it has been pointed out that articular rheumatism frequently occurs in the children of gouty parents. The influence of heredity in determining the association of the subacute form of rheumatism and gout cannot be positively decided.

Third, as to the frequent manifestation of heredity in the history of gout and interstitial nephritis, I think that there can be no question. This form of Bright's disease not only occurs as a complication of inherited articular gout, but is often observed in the members of gouty families who have themselves never exhibited any articular lesions. This is especially seen in the female line.

I wish next to call attention to the association with these diseases of certain common derangements of nutrition. While it cannot be claimed that organic chemistry has as yet done more than formulate the general principles that gout and diabetes are associated with the signs of incomplete metamorphosis of the food-elements, it is daily making progress in solving the complex processes by which each atom of carbonaceous and nitrogenous food is finally resolved into carbonic acid and urea. In these two diseases there is a diminished capacity for converting the carbo-hydrates. The occurrence of sugar in the urine of gouty persons, and of lithic acid deposits in the urine of diabetics, is not infrequent.

Gout, diabetes and rheumatism, in their treatment by medicines, exhibit reciprocal relations. In these various affections the alkaline treatment is used with benefit. It is admitted that the value of the alkaline treatment in acute rheumatism is not sufficiently well established to justify the proposition that the disease is on that ground a correlation of gout. The value of salicyl compounds in the treatment of gout, diabetes, and rheumatism suggests the idea that these diseases have something in common, either casual or concomitant, which the preparations of salicin antagonize.

The clinical observations which support the idea of a correlation of gout, diabetes, rheumatism, and certain definite structural changes in the kidneys and blood-vessels, namely, the frequency of hereditary transmission in the same family, and their occasional co-existence in the same individual, the common idiosyncrasy of a diminished capacity for the complete conversion of the carbo-hydrates, and, finally, the common reactions which they exhibit to the same remedies, are of course open to criticism, but they nevertheless excite a reasonable sus-

picion that these diseases have at least certain common features which in all probability proceed from similar derangements of physiological functions.

This much it seems to me may be acknowledged, even in the absence of any adequate pathological evidence that these diseases are attended with any common structural lesions or specific functional disturbances.

There are many unsolved problems in the pathology of gout, diabetes, and rheumatism, and the working hypotheses of the clinical observers in this field are being constantly unsettled by the revelations of the physiological laboratory. It would seem, therefore, that the only conclusion we are at present justified in making as to the correlation of the disease in question is this: Clinically, they are often associated by hereditary transmission, by co-existence and alternation in the same individual, by presenting similar idiosyncrasies in regard to the power of converting the carbo-hydrates, and by being more or less successfully controlled by the same remedies; pathologically, they must still be regarded, in the absence of any demonstrable common determining cause, either functional or structural, as more or less distinct and specific diseases.

Dr. J. T. Dana, of Portland, Me., said that it seemed to him that this discussion might properly have been extended a little, so as to include rheumatoid arthritis. In this affection he thought that the differentiation of it from the other affections has been well made out.

Dr. E. G. Janeway, of New York, remarked that the English people, all through, are gouty. Any rheumatic tendency, except in such individuals, will not hold in other countries. We do not find the same correlation in America. A point which he had noted was, that while members of the Hebrew race are very subject to diabetes, they do not have gout and rheumatism in the same proportion.

With reference to the presence of albumen in the urine of diabetics, in many cases this was to be explained by the irritation of the urinary passages by the saccharine urine.

Dr. A. L. Loomis, of New York, said from a pathological standpoint we could not at present regard these diseases as, directly at least, correlated, but from a clinical standpoint there are many things which make it difficult for us to divest ourselves of the idea that there is a correlation in rheumatism, gout, diabetes, and chronic Bright's disease. These clinical phenomena are often so striking that one comes almost to regard these diseases as different manifestations of the same causes.

There are cases which compel us to take the position that, while in their clinical phenomena they differ very markedly, still in their origin and development they seem to have many things in common; in other words, their correlation seems to be complete.

Dr. H. C. Wood, of Philadelphia, had been led by his experience to conclude that gout and rheumatism were the same thing. He was unable to make the diagnosis between them.

Dr. William Pepper, of Philadelphia, said that the clinical evidences of the correlation of these diseases seemed to him to be so great that we cannot safely disregard it. In considering such common diseases, we must, of course, exclude mere coincidence. He agreed with Dr. Janeway as to the frequency of diabetes in the Jewish race, but he had also found such persons very subject to lithæmia. In all these cases, the importance which a diminution of vital resistance of any particular part plays in the development of the local manifestation must be remembered.

Dr. Dana has referred to rheumatoid arthritis. This appears to be the form in which the nervous element is most marked. All have seen cases in which rheumatoid arthritis has been preceded by influences acting directly upon the nervous system. When we consider the immense amount of nerve-force required in co-ordinating the digestive processes of the stomach, liver, and kidneys, and in superintending the metabolism in the tissues, it seems clear that a depressed condition of the nervous system must play a large part in the production of these affections. In studying cases of these diseases we are usually able to obtain a history of some cause of depression of the nervous system, and this affords a powerful argument in favor of the correlation between these diseases.

The explanation of Dr. Janeway as to the cause of the albuminuria does not hold good in many of these cases. The disappearance of the sugar is not always accompanied by a corresponding decrease in the quantity of albumen.

Dr. A. Jacobi, of New York, said, in regard to the connection between diabetes and gout, that there are several forms of diabetes. The form particularly connected with gout is that due to disturbances of the nutritive processes, particularly that of the liver. This is the form in which the salicylates do good. Their action has seemed to him to be due to the influence of these remedies over the liver, in increasing the quantity of bile and in liquefying it. They are therefore powerful agents in diminishing the tendency to the formation of gall-stones. The forms of glycosuria which come and go are usually benefited by salicylate of sodium. This form of diabetes is generally found in anæmic persons, and not infrequently among women of the Jewish race.

In reference to Bright's disease, this is quite common at the age of forty or fifty, when atheroma of the small arteries appears. At that time gout is also common, and the co-existence of the two does not necessarily indicate a common causation.

Dr. William H. Draper, of New York, in concluding, said that in the cases of rheumatoid arthritis where a reliable history could be obtained he had, as a rule, found evidences of a gouty origin. In regard to gout, he was strongly inclined to believe that the presence of uric acid is only an epi-phenomenon, and that its presence in the joints is not absolutely essential to the occurrence of other true gouty lesions.

In the diabetes of Jews, he had seen the same association of lithæmic conditions as in other races.

He agreed with Dr. Wood in regard to the difficulties of diagnosis. The practitioner cannot always satisfy himself whether he is dealing with gout or rheumatism.

Dr. James T. Whittaker, of Cincinnati, O., read a paper on

SPASM OF THE GLOTTIS IN RICKETS.

The author emphasized the fact that this accident belongs exclusively to rickets, and dwelt upon the value of recognition of this fact, because rickets is, generally speaking, a curable disease, and the spasm of the glottis disappears with the successful treatment of its cause, while treatment addressed to the larynx directly remains without effect.

The speaker next quoted from a number of authorities, to show that this relation between the two affections is not so universally recognized in this country and England as in Germany and France. The two latest authors of text-books in Germany, Strimpell and Sichorst, declare, one that two-thirds, and the other that nine-tenths, of all cases of spasm of the glottis depend upon rickets.

Spasm of the glottis is often the first sign to unmask rickets, for the other evidences of the disease are often attributed to other causes. Thus, general malaise is attributed to dentition, intestinal catarrh to errors in diet, fever and sweating to malaria, bone deformities to premature efforts upon the feet, etc.

Spasm of the larynx indicates the stage rather than the degree of rickets, in that it occurs mostly in cases of rapid advance of the disease, and does not appear in cases of slow progress. So in the spring and fall, when rickets advances in leaps, spasm of the glottis has occurred in epidemic form.

The essayist discussed next the various theories of rick-

ets, which continues to elude investigation to a degree characterized as exasperating. But facts accumulate which go to give it place among the chronic affections. The exemption of hot climates and mountains, Iceland, the Faröe Islands, the complete immunity of Davos, notwithstanding the improper feeding and improper hygiene of sucklings at these places, shows that faults in diet cannot be the cause of it and the symptomatology of it fits better among the chronic affections produced by specific causes.

Spasm of the glottis, in the absence of any constant lesion, falls among the neuroses. The question as to the reflex or direct character of the irritation producing it was decided, after a review of the evidence, in favor of the latter, and since Rosenbach has demonstrated the micro-organism of tetanus, which often begins with and may go no further than trismus, the maintenance of a mycotic theory for the laryngospasm of rickets may be adopted as the best provisional explanation. The mode of onset and character of the accident were next detailed and the symptomatology illustrated with a typical case.

The inefficiency of anæsthetics and all direct means of treatment, as by intubation, tracheotomy, etc., were mentioned next, and douches, flagellations, electricity, cold air, direct appeals to the skin on the first appearance of attack, were described as the best means of combating, and more especially of preventing, the attack. Cod-liver oil, and more especially phosphorus, which may be looked upon almost in the light of a specific, were considered the best means of speedily relieving the rickets, and thus removing the cause of the laryngeal spasm. It has the most favorable prognosis of all kinds of laryngospasm, as Monte lost but 8 of 329 cases.

Dr. Edward T. Bruen, of Philadelphia, read a paper entitled

NOTES ON SOME CASES OF DIAPHRAGMATIC PLEURISY.

Dr. Bruen said that the object of his paper was to briefly state the diagnostic features of diaphragmatic pleurisy. He did not attempt a review of the interesting historical literature of the disease. He admitted that the diagnosis of this affection was often only established at the post-mortem table, since the process is often latent and frequently possessed few distinctive physical signs. Primary pleurisy of this part of the pleura he considered rare. It is oftener a complication attendant upon acute inflammatory processes in the adjacent pulmonary lobes, the costo-parietal pleura, or in the liver or peritoneum. Under the foregoing conditions, invasion of the diaphragmatic pleura may be characterized by special symptoms which may entitle one to designate this class of cases as acute inflammation of the diaphragmatic pleura.

Inflammation of this portion of the pleura may be a subacute or chronic process, developed in consequence of contiguous subacute or chronic inflammation or malignant growths. In such cases, the process in the diaphragmatic pleura may become specialized by symptoms which should lead the clinician to differentiate the diaphragmatic pleurisy from the associated pathological changes.

In the acute form of this disease many of the more prominent and differential symptoms may be masked by the greater importance of the primary disease.

The symptoms of diaphragmatic pleurisy may also be masked if the liver be enlarged or the intestines distended with gas, for these conditions may sensibly modify the freedom of the diaphragmatic movements.

The terminations of the acute cases are intertwined with the associated pathological processes, and the gravity of the case is not necessarily increased if the symptom of hiccough is subordinate, the latter being an exceptionally uncontrollable and exhausting symptom. In primary cases a favorable issue may occur.

To show that the diaphragmatic pleurisy may progress to a marked degree without the manifestation of diagnostic symptoms, the case of a negro man was related in whom post-mortem examination showed lesions of general miliary tuberculosis, with marked thickening of the diaphragmatic pleura. It was shown in this case that the peritoneum was infected through the connecting channel of lymphatics between the pleura and peritoneum. During life some friction-râles were heard along the upper border of the fifth rib and near the margin of the seventh in the axillary line, although a large amount of fluid was contained in the chest. The autopsy showed that the lung, rendered rigid and thick by the tubercular infiltration, projected as a rigid mass into the pleural space, displacing the fluid, and then the separation of flakes of exudation doubtless produced the râles. It was stated that in the subacute or chronic cases the special symptoms of diaphragmatic pleurisy were more conspicuous than in many of the acute forms of the disease.

Illustrative cases were cited, one occurring in the Philadelphia Hospital, secondary to induration of the right apex and general emphysema, in which the disease was correctly diagnosticated, as the post-mortem examination showed.

The diagnosis of a disease in which there is often so little that is distinctive, must necessarily be a difficult problem. It was shown by the relation of several post-mortem examinations that the process can exist in advanced form, on one side of the diaphragm at least, without special symptoms. If the diaphragmatic pleurisy should complicate any form of pulmonary or hepatic pathological process, or circumscribed peritonitis of the superior part of the abdominal cavity, one may note that the subjective sense of respiratory distress and the objective symptoms are disproportionate to those conditions, and therefore the possibility of the existence of diaphragmatic pleurisy should be considered.

The more important diagnostic symptoms which, if present, should direct attention to the possibility of diaphragmatic pleurisy, are, in the order of their frequency and importance, as follows: Subjective sensation of pain over the zone which borders the diaphragmatic plane, pain at the point described by Dr. Mussey, viz., one or two fingers'-breadth from the middle line on a level with the tenth rib, or at the intersection of a line drawn from the osseous part of the tenth rib and one drawn along the sternum. The pains may be constant, yet also paroxysmal or provoked by pressure, or by increased respiratory motion, by irritation of the diaphragm, swallowing or vomiting, or by the pressure of the distended abdominal viscera. Radiating pains around the chest and upper abdominal zone may occur. Fixation of the diaphragm is an equally important symptom. There will usually be feeble or absent respiratory murmur near the diaphragmatic zone. Dry or moist friction râles may be audible along the converse surface of the diaphragmatic pleura. The percussion resonance may be dull when there is much exudation, but more commonly it is tympanitic, since the partial paresis of the diaphragmatic muscle permits the pressure of the abdominal viscera to raise it somewhat above its usual area. In certain cases the posture of the patient may be bent forward with hypochondriac retraction and epigastric hollowness, but the dorsal decubitus is very often maintained. The respiration is quickened in a few cases, so that there may be dyspnœa or orthopnœa, but these symptoms may be almost entirely absent in subacute or chronic cases on account of the compensatory costal respiration. Cough is a variable symptom, and the same may be said of hiccough; both are often absent. Finally, in the writer's experience, diaphragmatic pleurisy has been chiefly a thickening with adhesions, rather than accompanied with much fluid effusion. Hence the importance of noticing the foregoing symptoms, since the presence of much fluid effusion would be more obvious by means of percussion, auscultation, and other physical signs.

The prognosis was stated to be intertwined with the

intercurrent pathological processes, and the power of adaptation possessed by the pulmonary system is so great that the duration, even of diaphragmatic pleurisy, may be indefinite.

DEMONSTRATION OF BACTERIAL CULTURES FROM A CASE OF MYCOTIC ENDOCARDITIS IN MAN,

and of Specimens showing the Experimental Production of the Disease in Rabbits, by DR. T. MITCHELL PRUDDEN, of New York.

The communication was a preliminary one, the experiments not having yet been completed. For some years the presence of bacteria has occasionally been observed in the cardiac and peripheral lesions of malignant ulcerative endocarditis. It has, however, been found that, not only not all cases of acute vegetative endocarditis, but not even all cases of ulcerative endocarditis, present bacteria in their lesions. The speaker thought that the anatomical distinction was not clearly enough drawn between simple and malignant ulcerative endocarditis. Of eleven cases of well-marked ulceration of the valves which he had studied within the past four years only four showed the presence of bacteria.

In only one case of malignant ulcerative endocarditis was he able to isolate and study the living bacteria. This was a case of pyæmia following cuneiform osteotomy for club-foot. The tests applied showed the bacterium to be the staphylococcus pyogenus aureus.

The experiments on animals were then described, and the following conclusions were drawn: If we sum up the results of combined morphological and biological examination of the cases thus far studied, we find that the sphero-bacteria found in the cardiac and peripheral lesions were the stryphococcus pyogenus and the staphylococcus pyogenus aureus and albus, either alone or together. The intravenous injection of either of these, or a mixture of them, into the rabbit, after mechanical or chemical injury of the endocardium, is capable of inducing lesions strictly analogous, if not identical, with those found in malignant ulcerative endocarditis in man. The coccus sepsis of nicolain is capable of producing similar results. Neither the endocardial injury nor the intravenous injection of bacteria alone are sufficient to induce the cardiac lesion. Both are necessary. As far as the observations go, they tend to confirm the view that malignant ulcerative endocarditis is simply one of the forms of pyæmic lesion determined by the predisposing conditions of the endocardium. Whether or not there are other forms of the disease induced by other species of bacteria, or having no relation to bacteria at all, are questions which are more likely to be settled by experiment than by conjecture.

Adjourned.

FRIDAY, JUNE 11TH—SECOND DAY—MORNING SESSION.

The first paper was by DR. W. T. COUNCILMAN, of Baltimore, on

CERTAIN ELEMENTS FOUND IN THE BLOOD OF MALARIAL FEVER.

It has long been known that changes in the blood occur in this disease. It is now known that in the red corpuscles there are certain bodies which appear to be living organisms, and these occur only in this disease. These are found by taking a drop of blood and spreading it on a slide, so that there shall be but a single layer of corpuscles. These are stained with a weak solution of fuchsin. The nuclei of the white corpuscles will be intensely stained, the red slightly stained, and in some of the red corpuscles will be seen brightly stained bodies of irregular shape. These exhibit distinct amœboid movements. The variety of their changes of form was illustrated by drawings. Certain hyaline bodies are also found, and were described. The speaker then referred to the work of other investigators in this field, and gave a review of the results which they had obtained.

TETANY,

was the title of a paper by DR. H. M. LYMAN, of Chicago.

Tetany may be defined as a more or less generalized intermittent, usually tonic convulsion of the muscles of the limbs and trunk; sometimes involving the face and visceral organs, usually painful, but never attended with loss of consciousness. The disorder is functional, and is based upon no distinctive pathological lesions of the central nervous organs. It is manifested in a series of attacks which occur at intervals, varying in length from a few hours to weeks or even months. During the paroxysms the flexor muscles are usually the seat of contracture, but sometimes the extensor muscles of the limb are principally involved. Single muscles alone may be attacked. These contractions may be very energetically developed, with considerable pain, or they may be sluggish and painless. The pain is usually due to the muscular spasm, but neuralgia may be associated with the cramp, and the skin may sometimes become inordinately sensitive. The pain may at other times become located about the joints, which then present the characteristic appearance of rheumatism. Diminished sensibility in certain parts of the body may be sometimes observed during or after an attack. The special senses are rarely disturbed. The action of the heart is seldom changed, except by transient palpitations.

The disease is rarely fatal, although death has occasionally resulted from prolonged spasm of the respiratory muscles. The duration of the disorder is quite variable and relapses are rather frequent.

Having no relation with any particular lesion of the nervous centres, tetany appears to be dependent upon a functional instability of the nervous and muscular organs.

The treatment must be directed in a general way against the fundamental instability of the individual constitution. Mild attacks require no special therapy, but severe attacks often demand the energetic use of narcotics and anæsthetics for their relief.

DR. REGINALD H. FITZ, of Boston, read a paper on

PERFORATING INFLAMMATION OF THE VERMIFORM APPENDIX; WITH SPECIAL REFERENCE TO ITS EARLY DIAGNOSIS AND TREATMENT.

The paper was based upon an analysis of two hundred and fifty-seven cases of unquestionable perforating ulcer of the appendix, and of two hundred and nine cases diagnosticated as typhlitis, perityphlitis and perityphlitic abscess. In the latter series the diagnosis was clinical, not anatomical.

The important features in the etiology of appendicitis were considered, also the limitations as to sex and age. It was found that the disease occurred most frequently among previously healthy youths and young adults, especially males; that a fecal concretion or foreign body was present as a local cause in more than three-fifths of the cases. Attacks of indigestion and acts of violence, especially when indirect, were exciting causes in one-fifth of the cases. The action of these causes was favored by a constipated habit or by congenital or acquired irregularities in the position and attachment of the appendix.

The first characteristic symptom of a perforating appendicitis was found to be a sudden severe abdominal pain, usually in the right iliac fossa, where tenderness could always be found, even when the pain was referred to some other locality. The pain was attributed to the actual perforation or the detachment of fresh adhesions.

Fever was the next characteristic symptom, and occurred in the course of twenty-four hours. Finally came the swelling, which made its appearance in the course of three days.

The chief source of danger from the appendicular peri-

tonitis arose from its becoming generalized. Such a result followed most frequently between the second and fourth days. More than two-thirds of the patients died during the first eight days, and two-thirds of these between the fourth and eighth days inclusive.

The reader recommended at the outset the opium treatment, with rest and a liquid diet, the food being given in small quantities, frequently repeated. If it became evident that general peritonitis was imminent at the end of twenty-four hours after the sudden intense pain, the appendix should be exposed and removed. Usually the symptoms were not so urgent that the appearance of the swelling could not be awaited. Although Willard Parker advised that the abscess might be opened as early as the fifth day, the practice has been to operate at a later date. Forty-seven per cent. of the cases were operated upon in the second week, and twenty-six per cent. after the third week.

More favorable results in the future were to follow the earliest possible opening of the swelling. This, in most instances, was at the outset a sac formed by a circumscribed peritonitis. It was usually present on the third day of the disease, dating from the pain, its first marked characteristic symptom. Negative results from a diagnostic puncture did not contraindicate the operation.

Dr. William Pepper had been led by his experience to believe that perforation of the appendix is only the explosion of an old catarrhal appendicitis, and that it is not an acute idiopathic affection.

The diagnosis in these cases is a matter of great difficulty in the early days, except where it is associated with considerable pericæcal inflammation.

He agreed with Dr. Fitz that early operation gives the only chance of saving the patient; the third day is not too soon. The difficulty is to arrive at a sufficiently clear diagnosis at that early date to justify laparotomy as an exploratory operation.

Dr. J. T. Dana, of Portland, Me., thought that it was not rare to find inflammation of the appendix as a latent affection. In a case which he had recently seen the first symptom was the occurrence of general peritonitis. The case resulted fatally in seventy-two hours. At the autopsy general peritonitis was found, and there was an opening in the appendix through which a concretion had escaped. A second was found within the appendix. There had been no previous symptoms to call attention to disease of the appendix.

Dr. A. L. Loomis, of New York, remarked that this was a positive paper, and it gives us some positive data on which to base our modes of action in this condition. He thought that it was impossible, in the majority of cases, to make an early diagnosis by the ordinary means. Of the symptoms given by the patient the most certain indication seems to be given by the occurrence of a chill. When pain is marked it will usually be localized in the left side, but not necessarily. Recognizing the importance of the early diagnosis, he decided, some years ago, to put the patient under the influence of an anæsthetic, and examine by the rectum and externally. The patient died. In three cases he had made the diagnosis by this plan. It must be remembered that the vermiform appendix does not occupy the same position in all individuals.

As soon as the diagnosis of perforation is made out the operation should be performed.

Dr. E. G. Janeway, of New York, divided these cases of appendix disease into three classes. In one an inflammatory process of the cellular tissue, with or without the formation of pus, is established. This may go on to recovery. If pus forms, surgical procedures should be resorted to. In another class of cases there is a circumscribed collection of pus in the peritoneal cavity. In this class operation should be resorted to as soon as the presence of pus is determined. In the third type we have, as a result of the perforation of the appendix, general peritonitis. The pain and tenderness in these conditions are not always on the right side. As has been said, the position of the appendix is not constant.

In these cases you can generally find, on careful examination in the region of the cæcum, at some point, a feeling of deep-seated induration, and at this point there is tenderness.

The Association then went into executive session.

The officers elected for the ensuing year are as follows:

President—Dr. S. Weir Mitchell, of Philadelphia.

First Vice-President—Dr. Francis Minot, of Boston.

Second Vice-President—Dr. R. Palmer Howard, of Montreal.

Secretary—Dr. George L. Peabody, of New York.

Recorder—Dr. James T. Whittaker, of Cincinnati.

Treasurer—Dr. W. W. Johnson, of Washington.

Council—Dr. William H. Draper, of New York; Dr. Robert T. Edes, of Boston; Dr. H. M. Lyman, of Chicago; Dr. Samuel C. Busey, of Washington; Dr. Frederick C. Shattuck, of Boston; Dr. William Osler, of Philadelphia, and Dr. W. W. Welch, of Baltimore.

The proposition with reference to the formation of the Association of American Physicians and Surgeons was presented and approved. The following committee was appointed to confer with other organizations: Drs. William Pepper, of Philadelphia; Robert T. Edes, of Boston; R. P. Howard, of Montreal; James T. Whittaker, of Cincinnati, and Francis Delafield, of New York.

Adjourned.

Afternoon Session.

Dr. William M. Polk, of New York, read a paper on

PELVI-PERITONEAL INFLAMMATION,

which will appear in a future number of The Record.

AN EXPERIMENTAL STUDY OF ACUTE GLOMERULO-NEPHRITIS,

was the title of a paper by Dr. W. H. Welch, of Baltimore.

The questions which have not as yet received full and satisfactory answers are: What is the origin of the cells which often in nephritis occupy the space between the glomeruli and the capsule of Bowman? Does migration of the white corpuscles or diapedesis of the red corpuscles take place through the glomerular capillaries? What relation, as to frequency and intensity, do changes in the glomeruli play in the pathology of Bright's disease? In expectation that light might be thrown upon these questions the speaker had experimented on rabbits and white mice, by the production of acute cantharidal poison.

Microscopical examination of the kidney in the rabbit shows here and there foci of infiltration, with small round cells, doubtless migrated white blood-corpuscles. The epithelium of the convoluted tubes is in places normal in appearance; in other places it is swollen, and often the inner part of the cells is broken off, appearing as a granular mass in the lumen of the tube. The most marked change is found in the Malpighian bodies. In the greater number of these there is between the glomerulus and Bowman's capsule a wide space, partly or wholly filled with cells. These are larger than white blood-corpuscles. They are frequently arranged in a crescentic mass. These appearances are similar to those described in glomerulo-nephritis in man. In the latter case these cells are attributed to the swelling and desquamation of either the capsular or glomerular epithelium. Such explanation does not hold in the present case. There are no appearances which justify the derivation of the greater number of the cells from the epithelium of the glomerulus. These cells cannot be regarded as white blood-corpuscles changed by the action of the poison, for the cells circulating in the blood are exposed to the same poison. These cells may be derived from

the epithelium of the convoluted tubes in immediate communication with the Malpighian bodies. The cells in the capsular space are identical with those in the convoluted tubes. At times there can be found groups of cells arranged in the form of a ring, with a central space just like the epithelium of the uriniferous tubules.

Swelling of the endothelium and accumulation of cells in the glomerular capillaries appears to be a nearly constant lesion in the acute nephritis of scarlet fever. In one case examined this was almost the only lesion in the kidney. Occasionally pathologists meet with kidneys in which the apparent changes do not explain the symptoms. In such cases careful examination of the glomerular capillaries should be made. It is difficult to think of any lesion of the kidney more destructive to its function than occlusion of the capillaries.

While disposed to attach much importance to the changes in the glomerular capillaries, we are not justified in asserting that these changes constitute the primary and essential cause of Bright's disease. They are co-ordinate with other lesions.

Dr. William Osler, of Philadelphia, read a paper entitled

BICUSPID CONDITION OF THE SEMILUNAR VALVES AND ITS RELATION TO AORTIC DISEASE.

A bicuspid condition may be said to exist when two of the three sigmoid cusps have more or less perfectly fused, so that the arterial orifice is guarded by only two segments. The abnormality is a well-recognized one. Dilga recently collected the statistics; and has found sixty-four cases of this condition in the pulmonary artery, and twenty-three in the aorta. This statement gives an incorrect idea of its frequency in the latter vessel. In over eight hundred autopsies at the Montreal General Hospital, there were eighteen cases, seventeen in the aortic valves alone, and in one pulmonary and aortic segments were both involved.

With the exception of one case, a fœtus at the eighth month, the patients were adults. The ages ranged from twenty to sixty years. This contrasts in a marked manner with the history of this defect in the pulmonary artery. A great majority of the instances present other serious anomalies of development, and death takes place before puberty. Unquestionably the majority of the cases are congenital, and result either from faulty development or fœtal endocarditis. The former view seems the more probable.

Dr. George M. Sternberg, U. S. A., read a paper on

THE BACILLUS OF TYPHOID FEVER.

Recent researches support the view that the bacillus described by Eberth in 1880 bears an etiological relation to enteric fever, although the final proof that such is the case is still wanting. This proof would consist in the production in one of the lower animals of the specific morbid phenomena which characterize the disease as it occurs in man, by inoculation of a pure culture of the bacillus. Thus far we have no evidence that any one of the lower animals is subject to the disease as it occurs in man; but Fraenkel and Simmons have shown that the bacillus of Eberth is a pathogenic organism, and that pure cultures injected into the peritoneal cavity of mice, or into the circulation of rabbits, causes the death of these animals, and that colonies of the bacillus are found in the spleen, which resemble in every respect the colonies found in the spleen and other organs of typhoid cases.

The researches of Eberth, Meyer, Gaffky, Fraenkel, and others, indicate that this bacillus is constantly present in the intestinal glands and in the spleen of typhoid cases, and Gaffky has shown that pure cultures may be obtained from the spleen even in cases in which a microscopical examination fails to demonstrate the presence of the characteristic colonies.

The researches of Brieger show that a toxic ptomaine is produced as a result of the vital activity of Eberth's bacillus, when it is cultivated in albuminous culture media. This injected into guinea-pigs, causes salivation, diarrhœal discharges, debility, dilated pupils, rapid respiration, and death at the end of twenty-four or forty-eight hours.

Demonstrated facts relating to the propagation of typhoid fever indicate that it is due to an organism which is capable of multiplication external to the human body, in a variety of organic media at comparatively low temperatures. Eberth's bacillus complies with these conditions. In consideration, therefore, of its constant presence, and the absence of any other organism, as shown by microscopical examination and culture experiments, the inference seems justifiable, in the recent state of science, that this bacillus bears an etiological relation to the disease in question.

Dr. E. C. Seguin, of New York, gave

A CLINICAL REPORT OF NINE CASES OF HEMIANOPSIA.

He presented an abstract of nine cases of lateral hemianopsia due to cerebral lesion, and called attention to the following points of the nine cases: Five had right lateral hemianopsia, and four left lateral hemianopsia. Three of the cases of right-sided hemianopsia presented the following association of symptoms: Hemianopsia, right-sided hemiparesis with post-paralytic ataxia and partial hemianæsthesia. Two of these cases also exhibited alexia without other aphasic symptoms. It is interesting to note that all cases of right-sided hemianopsia do not have ataxia, and also that post-paralytic ataxia is not always accompanied by hemianopsia, though probably this is more common than is generally supposed. The six other cases were practically cases of pure hemianopsia, *i.e.*, there were no paralytic or sensory symptoms or aphasia indicating extensive cerebral disease.

In the first category the lesion is probably placed on the outer edge of the thalamus, so as to involve the fasciculus opticus and the posterior division of the internal capsule. In the second category the lesion is quite certainly farther back, or in the white matter of the occipital lobes. In two cases of the second category marked and increasing weakness of both legs was present—a symptom perhaps due to the upward and forward extension of a tumor toward the paracentral lobule. A very peculiar symptom in two cases of the second category, and one which the author thinks is new, was the occurrence of hallucinatory images for a short time in the darkened half-field. This is a symptom of irritation, and analogous to the convulsive movements which sometimes precede paralysis of a limb when its motor centre is being destroyed by disease.

A very puzzling point is the perfection of central vision in these and other cases of central hemianopsia. The vertical line always passes by the point of fixation, no matter on which side the blindness is. We must conclude that the macula is not involved in the loss of function, and the question arises can the macula have a double enervation from the visual centre? This point the author intends to study thoroughly.

The speaker also exhibited specimens illustrating the seat of lesion in certain cases of hemianopsia.

Dr. Henry Formad exhibited specimens of kidneys demonstrating some peculiarities of cyanotic induration of those organs. This condition is produced by anything which interferes with the circulation through the kidneys. The shape of the kidney where the cyanotic induration results from the use of alcohol is rounded and shortened. The kidney presents a pig-back appearance. Where the cyanotic induration results from heart disease the shape of the organ is not altered, as the condition takes place gradually.

The following papers were read by title: "Notes of a Case of Hepatico-Bronchial Fistula," by Dr. J. E. Graham, Toronto; "Pancreatic Hemorrhage as a Cause of Sudden Death," by Dr. F. W. Draper, of Boston; "Pernicious Anæmia," by Dr. A. Jacobi, of New York; "A

Case of Hodgkin's Disease," by Dr. F. Forsheimer, of Cincinnati.

A vote of thanks was tendered the Government officials and the profession of Washington for courtesies extended.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 17, 1886.

CHARLES CARROLL LEE, M.D., VICE PRESIDENT, IN THE CHAIR.

DR. A. B. JUDSON, Statistical Secretary, announced the death of

HORACE PUTNAM FARNHAM, M.D.

DR. W. M. POLK then read a paper (see p. 1) on

ALEXANDER'S OPERATION, AND ITS APPLICATION TO UTERINE DISPLACEMENTS.

The discussion was opened by DR. J. B. HUNTER, who regarded the operation as one yet on trial, and concerning which argument was not of much avail unless it could be supplemented by clinical experience, such as had been given by Dr. Polk. He thought there was no question that the operation had a future, and that there were certain cases in which it was a suitable one to perform. To say that it was suitable in only certain cases was only to say that which was true of every operation.

The real question was, whether it gave any advantage over other methods of treatment. He had operated in three cases, and had had opportunity to examine the patients very recently, and had found the uterus firmly "moored behind the symphysis pubis," as Dr. Alexander had expressed it. Dr. Hunter agreed with Dr. Polk as to the cases in which it was advisable; that is, where the uterus was prolapsed, and where it was uncertain whether by the perineal operation it could be kept in position. He thought no one would attempt to perform the operation where adhesions to any considerable extent were present. It seemed to him that in those cases in which the uterus was retroverted with prolapsus of the ovaries, and where no form of pessary could be tolerated, the operation gave a certain amount of advantage over any other procedure which could be resorted to. He thought, however, that there was a certain amount of risk of the occurrence of peritonitis. Three cases of death had been reported, one occurring in this city, but he thought that with careful antiseptic precautions the operation could be regarded as a reasonably safe one. He also regarded it as no more dangerous than the operation for lacerated cervix, and that it was no more difficult to perform. In one of his cases the ligament was so small that he could not at first believe that it would answer for the purposes of traction. But as it was drawn out it grew larger and larger, and proved to be abundantly firm to moor the uterus. He had found less trouble, so far as finding the ligament was concerned, in cases in which there was a large amount of fat than in lean patients. As to whether the operation was efficacious, time would be required to form any intelligent opinion. One year, at least, must elapse before it could be decided whether or not the operation had been successful. He had made it a point to keep the patient in bed four weeks and to use a pessary. He preferred the use of the bone drainage-tube. In all of his cases union has taken place rapidly. He believed that in all suitable cases where other means did not offer good prospect of cure that the operation was advisable, and he should continue to perform it until he was satisfied of its value or the reverse.

DR. W. T. LUSK said that he had had but little experience in the performance of this operation. So far he had been an observer chiefly, with the additional fact that at first he was somewhat sceptical concerning the advisability of the operation, but at the same time not so prejudiced but that he could be convinced of its utility. He had been favored by Dr. Polk with the opportunity of seeing several of his operations, and had watched the cases with a great deal of interest. He only arose to say that he had been completely converted to the operation, and he believed that it was destined to do a great deal of good to *working-women*. He regarded it as an operation only moderately difficult to perform, and that ordinary anatomical knowledge should serve one in attempting it. With proper precautions the operation should not be attended with any danger. True, there had been serious cases, but it had seemed to him that the accidents which had followed the operation should have been avoided. The operation was not extremely difficult; it was reasonably safe, and the dangers which had followed were not inherent in the operation itself. The question then arose, Was it necessary? Dr. Lusk's answer to this question was that pessaries would not enable us to get all the results desirable in the class of cases to which the operation was applicable, and that these results might be obtained by the operation. Pessaries might be well enough for the rich, who could have housekeepers, nurses, and carriages, but they were not sufficient for the successful treatment of women belonging to the working class. If relief could not be afforded to the latter class of patients, they were in a sad condition indeed, and many of them were so afflicted that they went from one hospital to another, or went home, and, being unable to perform their household duties, became the subjects of the abuse which so frequently occurred among the lower classes. If any operation could be devised which would place these unfortunate women on a level approximating that of their more fortunate sisters, it was of immense importance, and it seemed to him that Alexander's operation would relieve a great many of them, and he should hereafter attempt to give the benefit of the operation to those poor women.

There was one point which it was difficult to decide, and that was the result of the operation on pregnancy. That is to say, was it not possible to so shorten the ligaments as to draw the uterus forward to such an extent as would interfere with the patient passing safely through her confinement? Dr. Alexander had reported two cases in which the women had passed through pregnancy and labor safely after his operation had been performed; but more cases were needed to enable us to decide this point.

DR. H. J. BOLDT had not had any experience in the performance of the operation upon the living subject, but he had encountered some difficulty in securing the round ligaments when operating upon the cadaver. From his experience simply in operating upon the dead subject he thought it important to make traction sufficient to bring the uterus into its normal position rather than to rely upon the sound in the uterus for that purpose. Although Dr. Alexander had reported cases in which women had done well during labor after the performance of his operation, Dr. Boldt regarded the effect which the position of the uterus might have upon labor as an important question.

DR. LEE had operated in three cases in private practice. All the operations had been performed within the last eighteen months, and all the patients belonged to the middle class. The results had ultimately been good, although in one an abscess formed which gave him a good deal of trouble. In another case he had to resort, after the first week, to the use of a pessary. But in all three patients the uterus had remained in place up to within one month or six weeks.

With reference to the causes which led to the performance of the operation, there was no procidentia in either case. In each instance there was simply an incomplete retroversion or retroflexion without adhesion, attended with such a degree of tenderness that a pessary could not be tolerated, and there was no difficulty attending the performance of the operation. He certainly thought, in common with Dr. Hunter and Dr. Lusk, that the opera-

tion had a great future in the class of cases described and limited by Dr. Polk in his paper.

Dr. Polk, in closing the discussion, referred to a note which he had received from Dr. Jacobus, who had examined one of the women upon whom he had operated, and had reported to him that the uterus was in as bad a position as it was before the operation. Dr. Polk said it was very evident that the patient to whom Dr. Jacobus referred was one in whom he found adhesions, and to whom he had already referred in his paper. It was one case in which the result had not been so favorable as could be desired, but he did not pretend to say that, in every case, Alexander's operation would be successful. He only claimed that in the majority of instances it would succeed.

The Academy then adjourned.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 19 to June 26, 1886.

Perin, Glover, Colonel and Assistant Surgeon-General. Granted leave of absence for one month, with permission to apply for one month extension. S. O. 54, Department of Dakota, June 14, 1886.

Brooks, John, Major and Surgeon. Ordered for duty as Post Surgeon, Fort McHenry, Baltimore, Md. S. O. 67, Division of the Atlantic, June 23, 1886.

Dewitt, Calvin, Major and Surgeon. Ordered for duty in Department of Dakota. S. O. 142, A. G. O., June 21, 1886.

Gardiner, John de B. W., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Newport Barracks, Newport, Ky. S. O. 67, Division of the Atlantic, June 23, 1886.

Gibson, Robert J., Captain and Assistant Surgeon. Granted leave of absence for thirty-five days. S. O. 43, Division of the Pacific, June 14, 1886.

Official List of Changes in the Medical Corps of the United States Navy during the week ending June 26, 1886.

Beardsley, Grove S., Medical Inspector. Detached from the Navy Yard, Norfolk, and ordered to the Brooklyn.

Bright, G. A., Surgeon. Detached from the Brooklyn and ordered to Navy Yard, Norfolk.

The Ethics of Journalism.—A medical journal of Paris has issued a circular, addressed to physicians practising at various watering-places in France, in which it offers, for a consideration of one hundred francs, to insert their names each week during the season in a special department entitled: "Thermal Stations of France, Season of 1886." The names of those physicians only who pay the fee will be printed in connection with the description of their special stations. A number of the other Parisian journals have united in a public protest against this action on the part of their esteemed contemporary.

Discontinuance of a Journal.—With the issue of April 3, 1886, the *Revue Médicale* has suspended publication. This action was caused by the death of the editor, Dr. Edouard Fournier, the family not wishing the publication to continue under other hands. Dr. Fournier left two sons, and the hope is expressed that they will, in a short time, resume the pen laid down by their father.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 26, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
June 26, 1886.....	0	6	33	5	55	73	3	0
Deaths.								
June 26, 1886.....	0	0	5	5	8	27	0	0

The Question of Operation in Congenital Torticollis.—Dr. B. E. Hadra, of Austin, Tex., sends a reply to the criticism made by Dr. Brooks upon his article on "Congenital Torticollis." He says that when speaking of cicatricial tissue, and then of fibrous degeneration, he claims to be in accord with the present teaching, which regards the former as a certain stage of the latter; and that by degeneration of muscle he means an increase in the fibrous tissue at the expense of the muscular fibres which become atrophied. He does not deny that there are cases of congenital torticollis which may be cured without cutting, but maintains that there are some which demand the knife, and quotes Bouchut that "myotomy is indicated, though orthopædic treatment will often suffice, but the former is preferable, and always surer in results." Dr. Hadra continues: "Dr. Brooks further tries to frighten the surgeon by the dangers of such operations, and advises them to operate rather on a six-months child than on a six-weeks-old baby. But surgeons know that there is no danger in such operations, and that it makes no difference whatever whether the child be six months or six weeks old. Still, being of a pacific temperament, I am willing to compromise. I am willing to concede that waiting for a reasonable time would be good policy, if, otherwise, circumstances allow it, because we might not be able to make out positively the nature of such cases. In that I am yielding to the aggressive doctor, though I am satisfied that cases like mine will never get well without the use of the knife. I have seen some cases of torticollis in later life, and they were of such nature, and should have been operated upon in early infancy. For illustration, I have now in mind the case of a thirteen-year-old boy who was born with torticollis, as the parents testify, and who is disfigured yet, in spite of a protracted emollient and orthopædic treatment. In conclusion, I would state that there was an error in my article (January 23d, page 91), the word 'not' having been misplaced. The sentence should read: 'That the fibrous degeneration was *not* limited to the point of rupture, but extended over the whole,' etc."

Chorea of the Larynx.—Professor P. Masucci, after describing two cases of this affection, recently observed by him, writes of the two theories at the present time in vogue to explain its occurrence. Massei thinks that chorea of the larynx is due to increased reflex sensibility of the larynx, while Schrötter looks upon it as a pure neurosis. The latter opinion is shared by most authorities. As regards the treatment, the author obtained rapid and permanent results from the use of the galvanic current alone. In this strange affection many remedies have been found efficacious at one time and utterly useless at another, so that it is impossible to decide upon the precise pathogenesis from the results of treatment.—*Rivista Clinica dell' Università di Napoli*, April, 1886.

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Original Articles.

TWO CASES OF MYXŒDEMA, WITH REMARKS ON THE PATHOLOGY OF THE DISEASE.

BY A. BRAYTON BALL, M.D.,

[HOSPITAL TO CURE DISEASES OF THE THROAT AND LUNGS.]

So few cases of this remarkable affection have been reported in this country (I have collected reports of only eleven[1]) that the following two cases, occurring in my own practice, may not be without interest. The first has been under observation for twelve years, the other for only the past eight months.

Mrs. B——, married, aged forty-eight, Jewess. Her father died in 1880, aged seventy-three, of myxœdema of more than ten years duration, terminating in cardiac and Bright's disease. Dr. Schwedler, of this city, his family physician, informs me that the symptoms were of a typical myxœdematous character. An older sister of my patient also died of myxœdema in 1884, aged fifty-two, with renal symptoms. Dr. Mark Blumenthal, her physician, informs me that in her case the disease ran a comparatively rapid course. Five years before her death she had a small goitre, which disappeared within a few months, and was soon followed by well-marked myxœdema. Albumen was not found in the urine until eighteen months before her death; then serious œdema of the lower limbs developed, with ascites, accompanied by a certain amount of relief from the myxœdematous symptoms, as has often been noticed in other cases of this disease when serious effusions take place. In my patient also, Mrs. B——, there is a history of preceding goitre following the birth of her first child, in 1860. Under treatment the tumor subsided within a few months. Between 1860 and 1871 she gave birth to seven children. In 1873 her menstruation ceased, and remained absent for three years, then returned at irregular intervals for eighteen months, and disappeared finally in 1877, at the age of thirty-seven. In 1879—menstruation having ceased entirely for nearly three years—she became pregnant, and was delivered of a healthy child after an easy labor, and without subsequent complications. In 1873, without assignable cause, except perhaps the rapidly recurring pregnancies, she became very anæmic. She came under my care in 1874, and from that time until 1881 was regarded as a puzzling case of obstinate anæmia. The development of myxœdematous symptoms was very gradual; the order of development being first general anæmia, then solid infiltration of the skin, followed by sluggishness of bodily movements and mental functions. Her present condition is as follows:

The face has a cretinoid appearance. It is enlarged in all dimensions, especially in its transverse diameter. The cretinoid effect is enhanced by the apparently small size of the forehead, where the skin is less swollen. On the cheek and rest of the face the skin is waxy and translucent. Each cheek presents a bright pink flush, sharply defined and bounded above by the inferior border of the lower eyelids. Friction increases the size of the patch, and renders it more vivid. The eyelids, especially the lower, are swollen, baggy, and wrinkled transversely. The palpebral fissure is diminished in size; the eyes consequently appear small and farther apart than is normal. The nose is thickened and broadened; the lips swollen, especially the lower one, which is pendulous, everted, and of a violet hue. The mouth is widened. There is an excessive flow of saliva, especially at night upon the pillow, but this symptom is less marked now than formerly. The tumefaction and stiffness of the face obliterate its natural curves and lines, and give it an expressionless, mask-like appearance. On the body and limbs the skin is everywhere swollen, harsh, scaly, and does not pit on pressure, except on the lower part of the legs, where there is some serous œdema. The hands are thickened, broadened, "spade-like;" the nails brittle and incurvated. At times a rapid increase of the cutaneous œdema takes place, producing an uncomfortable sensation of being hide-bound, and accompanied by a marked diminution in the amount of urine. After a few days profuse discharge of pale urine occur and the body perceptibly diminishes in size, with relief to the feeling of tension. For the past year these attacks have recurred less frequently.

On each side of the neck, in the posterior triangles, are bolsters of fat, such as are found in sporadic cretinism, and as were regarded by Hilton Fagge as a constant accompaniment of that disease. At the back of the neck is a considerable deposit of fat, but no definite tumor; large deposits are present also on the breasts and abdomen, the latter especially. The hair on the scalp is scanty, dry, brittle; the eyebrows have almost disappeared, and there is no hair on the axillæ or pubes. During the past year there has been a slight growth of new hair on the scalp, a point of some interest in connection with a diminution of the swelling of the hands during the same period, as showing that the mucinoid stage of the disease is probably now declining. Two congenital moles on the face have grown considerably within the past few years; on the outer aspect of the right forearm are several deeply pigmented moles of recent appearance. The skin of the forehead presents a brownish-yellow discoloration, resembling the pigmentation seen in Addison's disease. This pigmentation was noticed among the early symptoms, before she came under my care, and led to the diagnosis of Addison's disease by a prominent physician of this city. The tongue is swollen, the mucous membrane of the mouth pale, the soft palate, uvula, and pharynx thickened and relaxed. Her voice is hoarse, guttural, without intonation, and nasal in quality, as if she were suffering from enlarged tonsils. She speaks slowly and with deliberation, but under emotional excitement her manner of talking becomes at times quite natural. When she begins to talk, swallowing movements are often noticed, induced probably by the swollen and dependent uvula. Several times daily, with increasing frequency during the past year, she has attacks of aphonia, beginning and ending suddenly, which are occasioned by mental excitement, fatigue, or prolonged conversation. These attacks are accompanied occasionally by choking sensations, and even alarming dyspnœa. Aphonia and dyspnœa can be produced at any time by moderate pressure upon the trachea, which is apparently diminished

[1] W. A. Hammond, one case (Neurological Contributions, New York, 1881, vol. ii, No. 3, p. [illegible]); F. M. Crisler, one case (Archives of Medicine, New York, 1881, vol. viii, No. [illegible], p. [illegible]); A. M. L. Hemeter, two cases (Medical Record, New York, 1882, vol. [illegible], p. [illegible]; Journal of Nervous and Mental Disease, [illegible] 1882); J. W. Holland, one case (American Practitioner, Louisville, 1883, vol. [illegible], p. [illegible]); I. A. Robinson, one case (Medical Record, New York, 1884, vol. [illegible], p. [illegible]); [illegible] Fagge, one case (Lancet, London, 1882, vol. [illegible], p. [illegible]); Robert T. Edes, two cases (Boston Medical and Surgical Journal, 1885, vol. [illegible], p. 385); E. G. West, one case (Boston Medical and Surgical Journal, 1885, vol. [illegible], p. 501); O. F. Wadsworth, one case (Boston Medical and Surgical Journal, 1886, vol. [illegible], p. 5.

in size, and is certainly more flexible upon pressure than is normal. This abnormal flexibility of the trachea, and the production of dyspnœa by a very moderate pressure, was noticed by Professor Kocher in his cases of cachexia strumipriva, to be considered later. No trace of the thyroid gland can be felt in front of the trachea, but the neck is too much swollen to justify a positive opinion as to the size of the gland.

On the part of the muscular system there is some paresis, but less than would be expected from her gait, which is slow, uncertain, waddling; she readily stumbles, and sometimes falls to the ground. The flexors and extensors of the limbs fail to show marked loss of power; there is no static ataxia. The difficulty in walking seems to be caused rather by lack of harmony in the action of opposing groups of muscles. The nuchal muscles are particularly weak, allowing the head to fall forward upon the chest. There is no apparent muscular atrophy; on the contrary, the muscles appear to be fully developed. The knee-jerk is well preserved; the superficial reflexes weak. Tactile sensation good, and not perceptibly delayed in transmission. No cutaneous anæsthesia, general or local, such as is commonly observed in myxœdema, but rather a noticeable amount of hyperæsthesia. All bodily movements are sluggish. The act of dressing takes up a good part of her morning, and many of her household duties have been given up because she has not time for them. Parallel with the muscular lethargy is the condition of mental functions. With the exception of slight impairment of memory, there is little loss of intellectual capacity, but her mind acts slowly; she is slow in apprehension and expression. The mental process, though retarded, is, however, in the end performed correctly. She is easily annoyed by trifles, and irritable in temper, conditions which are the opposite of her natural disposition. Sight and hearing are both impaired, especially the latter. There is no perversion of taste or smell. Her sleep is often disturbed by unpleasant or frightful dreams. All the vital processes are carried on in a sluggish manner. The pulse is slow, with low arterial tension; heart's action feeble, impulse not felt, but no murmur is audible. The excretion of urea is diminished, averaging but little more than half the normal amount. The urine is pale, of low specific gravity (1.010 to 1.015), lessened in quantity—except during the periods of profuse diuresis before mentioned—and hitherto, at repeated examinations, has never contained albumen or casts. Liver and spleen not perceptibly enlarged. The temperature of the body ranges from 95° to 98°, rarely reaching the latter point; she consequently suffers from exposure to cold, and is worse in winter than in summer. At present her disease seems to be in a comparatively stationary condition.

The second case is strikingly similar to the one just described. C. R——, male, aged fifty-nine, Jew. No family history of myxœdema or of special nervous disease; no personal history of mental shock or anxiety. In 1873 he had a severe attack of intermittent fever; shortly afterward symptoms of myxœdema manifested themselves, and have progressed steadily up to the present time. He now presents the typical symptoms of the disease: swollen face, puffy, wrinkled eyelids, pink cheeks, broadened nose, thick lips, spade-like hands, general solid infiltration of the skin, supraclavicular and suboccipital bolsters of fat; slow, waddling, uncertain gait; peculiar deliberation and nasal intonation of speech. With the exception of a scanty beard the loss of hair is almost complete. The hairs of his head can be numbered without difficulty, as there are none left except a few scattered ones on the vertex and occiput. The baldness is so complete that he is obliged to wear a wig. The scalp is deeply pigmented, of a tawny color, parchment-like, seamed with creases, resembling a piece of tanned leather. Three congenital moles, one on the forehead, one on the right cheek, and another on the tip of the nose, have grown considerably within the past few years, and are now as large as a pea. Six others, smaller in size, have made their appearance on the face, and a few, still smaller, on the scalp. Half of his teeth are gone, the rest badly decayed and loose in their sockets. The thyroid gland cannot be felt in front of the trachea. There is no history of a previous enlargement of the gland. The submaxillary gland is much enlarged on both sides. Saliva dribbles upon the pillow at night, but less now than formerly. As in the previous case, the trachea is unusually small and flexible, and moderate pressure produces marked dyspnœa. Smell and taste not impaired. Dr. Charles S. Bull has kindly examined his eyes and ears, and sends me the following report:

"*Eyes.*—Right eye: Secondary converging squint following paresis of external rectus occurring in childhood. Some œdema of ocular conjunctiva in both eyes. Irides rather sluggish in action; small arcus senilis in corneæ; media clear; no sign of either retinitis, neuritis, or atrophy of the optic nerve. Refraction hypermetrophic in both eyes; vision has always been defective in the right eye, and is normal in the left eye. The veins in the retina of both eyes are somewhat engorged, but no more than is seen in normal eyes.

"*Ears.*—Auditory canals somewhat narrowed from thickening of cutaneous lining; epidermis scaly; drum-membranes sunken, thickened, opaque, and inelastic; uvula long and flabby; mucous membrane of the nasopharynx thickened, hyperæmic, and secreting a rather tenacious mucus; watch not heard in either ear, even when placed against mastoid, squamous, or frontal bones; tuning-fork not heard at all when placed in vibration against frontal or mastoid bones, but patient *says* he hears it faintly when made to vibrate strongly, and held immediately in front of meatus.

"*Diagnosis.*—1. Chronic catarrhal (proliferous) disease of middle ears. 2. Chronic degenerative disease of some part of the acoustic nerve, which may be either primary or secondary to disease of the middle ear.

"CHARLES S. BULL."

He has much difficulty in walking, and requires the help of a cane; but the impairment seems to be chiefly ataxic, as he retains considerable muscular power in all his limbs. Knee-jerk present; superficial reflexes lost; slight anæsthesia of hands and legs. Tactile sensation delayed. Memory perfect about business matters and events of early life, but unimportant recent occurrences he forgets more readily than formerly. He is despondent, irritable, easily annoyed by trifles, and keenly mortified by his personal appearance, which attracts much attention on the street. His handwriting is unchanged, but he writes very slowly. He plays the organ with nearly his former skill, but the clumsiness of his fingers prevents the execution of rapid movements. His wife assures me that she observes no diminution of his mental capacity. In conversation the shrewdness and aptness of his remarks are very noticeable, but talking with him is excessively tedious on account of his provoking slowness. A like torpor affects also his intestinal movements. They require the daily stimulus of a purgative, and even with its assistance a whole hour has to be devoted to the water-closet. Heart's action feeble; no murmur; no increase of arterial tension. His urine, since he has been under my care, has always been free from albumen or casts. Liver, spleen, and lungs present no signs of disease. The bodily temperature is subnormal, and frequently lower upon one side of the body than upon the other; at the last examination it was 96° in the mouth, 95.8° in the right axilla, 96.6° in the left. During the past year he has become more helpless, but in other respects there has been little change.

A few points of special interest in these two cases may be noted:

Heredity.—In the case of Mrs. B—— there is a clear history of both direct and collateral heredity. I have found but one similar case reported, that of Dr. Ord, who says he has seen two daughters who were myx-

œdematous like their mother. Dr. Saville[1] and Dr. Francis Taylor[2] have each reported a case of direct heredity. Several reports mention that one of the parents had died of Bright's disease, and possibly some of the deaths may have been due to myxœdema terminating with renal symptoms.

Influence of sex.—When Sir William Gull first called attention to this disease in 1873, by an article "On a Cretinoid State Supervening in Women in Adult Life,"[3] all of the cases he reported were of the female sex. Dr. Ord's cases, up to October, 1879, six in number, were also females. Of the fifteen cases reported by Dr. Morvan, of Lanniles, in Basse Bretagne, France, in 1881,[4] fourteen were female, one male. As recently as 1882, myxœdema in men was regarded as rare, but since then a considerable number in the male sex have been reported. I have collected reports of 121 cases of myxœdema, and find that of this number 101 were women, 20 men, the proportion of the latter being, therefore, about twenty per cent.

Size of the thyroid and submaxillary glands.—No mention is made of the condition of the thyroid gland in 67 out of the 121 collated cases. Of the remaining 54, in 2 cases slight enlargement is reported, in 7 normal size, in 14 marked diminution in size, and in 31 it is mentioned that the organ could not be felt. Examination of the thyroid in myxœdematous subjects is usually unsatisfactory, owing to the thickness of the tissues of the neck; still there seems to be a very general agreement as to the presence of thyroid atrophy during life, while at autopsies this condition has been always found. In my first patient, and also in her sister, the myxœdematous symptoms were preceded by a temporary enlargement of the gland. Similar cases have been reported by others. A history of exophthalmic goitre has been noted occasionally. In my second case the submaxillary glands were much swollen. I have not seen this symptom reported in other cases; nor, so far as I can learn, has the condition of these glands been examined *post mortem*. Mr. Horsley found hypertrophy of the submaxillary gland in all his cases of thyroidectomy in monkeys.

Condition of mental functions.—Neither of my patients, it will be observed, presented any marked disturbance of the psychic functions. A number of cases have been reported, however, of more serious cerebral lesions, as shown by hallucinations, melancholia, aggressive mania, and imbecility.

For most of our knowledge of the characteristic lesions of this affection, as well as for the name by which it is generally known—myxœdema (μύξα, mucus)—we are indebted to Dr. Wm. M. Ord, of London.[5] The lesions found at his first autopsy[6] were briefly as follows: In the skin marked increase of the fibrillar element of the connective tissue; the nuclear element highly developed and the nuclei enlarged. The interstitial spaces in the connective tissue were large, and filled with "an excess of the mucin-yielding interfibrillar cement." Portions of the skin showed fifty times the normal amount of mucin. Increase of connective tissue was found also in the adventitia of the arteries in the liver, separating the cells from one another and producing atrophy in them, and in the heart inducing attenuation of its muscular elements. The cerebral arteries were extremely degenerated and atheromatous, as were also the great arteries, especially the carotid. No microscopical examination was made of the central nervous system. The kidneys were granular, with thickening of minute arteries and atheroma of renal arteries. The thyroid gland was atrophied; its alveoli compressed, and almost annihilated by the connective-tissue growth around the vessels.

The resemblance of the swollen connective tissue to that of the umbilical cord led Dr. Ord to adopt the view that the essential lesion of myxœdema was a reversion of this tissue to its embryonic state. His views upon this point have since changed, and he now regards the marked development of the nuclear element as indicating that the lesion is rather one of imperfect development.[1] The distinction may not be of much importance, but it is proper that his more mature views should be stated.

The characteristic muscular and mental lethargy of myxœdema was ascribed by Dr. Ord to "the condition of the skin interfering with the natural exposure of the nerve-ends to stimuli." The padding of the peripheral nerves and touch-corpuscles by myxœdematous tissue impedes, he supposes, the transmission of external impressions, and induces inertia of the nerve-centres. But well-marked myxœdema of the skin and sluggishness of movements and mental functions may co-exist in the same patient without noticeable interference with transmission of cutaneous impressions, as in my first case, in which there was no retardation of tactile sensation, but rather a hyperæsthetic condition of the skin. Again, as Dr. Goodhart has pointed out,[2] there is no reason to suppose that in adult life, after the nerve-centres are fully developed, the abolition of a special sense can do appreciable harm to the intellectual faculties. Certainly no such result follows deafness, blindness, or anæsthetic leprosy. Dr. Ord, after discovering lesions of the central nervous system in his third autopsy,[3] conceded that the same changes which occur in the skin certainly exist also in the nerve-centres, and are quite sufficient to account for the nervous symptoms.

In a paper read before the Association Française pour l'Avancement des Sciences, in 1882, Dr. Henri Henrot gives the results of a careful investigation of the nerve-lesions found in a case of myxœdema.[4] In addition to the cutaneous and visceral lesions described by Dr. Ord, he found mucinoid degeneration of the pneumogastric and glossopharyngeal nerves, of the brachial plexus, especially of the ganglia and cord of the great sympathetic, with enlargement of the pituitary body and pineal gland, and concludes that myxœdema is characterized by a return of the subcutaneous, submucous, and interstitial connective tissue to its embryonic state, and by the formation of mucin under the influence of the enlarged pituitary body and pineal gland, which preside over this function.

In a case, with autopsy, reported by Dr. E. M. Cushier,[5] which had presented marked paresis of lower limbs during life, important changes were found in the spinal cord. The walls of the small vessels were thickened and infiltrated with a transparent homogeneous substance. In portions of the lumbar cord, in Clark's columns, and in the lower cervical region, slight hemorrhages were observed. Sections from the lumbar cord showed here and there complete "yellow degeneration" of cells in both anterior and posterior horns, also atrophy of the cells, and absence or diminution of their processes. Similar changes were found, but to a less extent, in the dorsal and cervical regions. "The thyroid gland was smaller than usual, especially the left lobe. The latter had undergone cystic degeneration. The right lobe was of unusually firm texture." On microscopical examination the walls of the alveoli were seen to be thickened, and their contents had entirely disappeared or were replaced by a homogeneous substance.

Lesions of the sympathetic system have been noted in

[1] British Medical Journal, [illegible]

[2] Transactions of the Clinical Society, [illegible]

[3] Lancet, 1882, i., 107.

a number of autopsies. Dr. John Harley,[1] in one case, found the thoracic ganglia deeply implicated in the adherent and degenerated pleuræ. On the left side the ganglia could not be distinguished. Dr. W. M. Hadden, of London, who is a strong advocate of the view that the essential pathology of myxœdema is a lesion of the peripheral sympathetic system, or of its supreme centre in the medulla oblongata,[2] reports that in two cases examined by Dr. Goodhart and himself an alteration resembling sclerosis was found in the cervical sympathetic. "The ganglia were very fibrous, the nerve-tubes degenerated and atrophied, but the cells not apparently affected." In a third case the semi-lunar ganglia were swollen, very firm, and apparently sclerosed. Sclerotic and degenerative changes were observed also in the thyroid gland in all of his cases, but the earliest changes, he maintains, are external to the alveoli, and the organ becomes atrophied secondarily. He admits, however, that thyroid lesion is a constant fact in the morbid anatomy of myxœdema.

Although thyroid changes are invariably found in myxœdema, they are by no means always accompanied by important lesion of the sympathetic. In a recent autopsy by Dr. W. Hale White[3] the thyroid was very small and atrophic. "There was little or no proper thyroid structure left; a few bodies, evidently the remains of vesicles, are to be seen, and in one or two instances just a trace of the epithelial lining still remains. These degenerate vesicles are filled with small epithelial cells, which have been apparently produced by the multiplication of the proper epithelial lining. . . . The whole organ has undergone extreme simple degeneration." Sections were examined from the right middle cervical ganglion of the sympathetic, right superior cervical ganglion, right cervical sympathetic nerve, left superior cervical ganglion, and the semilunar ganglion. In the section from the right middle cervical ganglion "the cells were abundant, very few pigmented; in many a distinct nucleus and nucleolus are visible. Considering how cells may vary in ganglia which we have no reason to think abnormal, these cells appear very healthy; it is true that some are blurred and have no distinct nucleus, but this is not more so than is often the case. The connective tissue has the degenerate, ill-defined, sodden appearance already described; the result of this is that it is pressed on the nerve-cells so as to reduce the size of the capsule, and in several instances the connective tissue is brought in such close contact with the cell that the line of demarcation is not very evident. Here and there this condition obscures the nerve-fibres. There is no small-cell proliferation." In all the other sections the connective-tissue changes were less marked; more nuclei were seen, and the nerve-cells were healthy in appearance. The slight changes found in the sympathetic Dr. White regards as the result, and a not very important result, of the thyroid atrophy.

This brings us to the question as to the function of the thyroid gland; whether it be of such a nature that its abolition is capable of initiating the remarkable series of morbid changes found in myxœdœma? Physiologists have long suspected that this body possesses important glandular functions. Its relatively large size during the period of bodily development—its proportion to the weight of the body during infancy being that of 1 to 240 or 400; in adult life, 1 to 1,800—and the structure of the organ seem to point in this direction. Its vascular supply is so large that "the sum of the sectional area of its arteries is more than half that of the cerebral arteries, while the lymphatics form huge lacunar spaces immediately outside the margin of the alveoli" (Horsley). The acini are lined with epithelium, at first columnar, later cubical, are surrounded with a rich capillary network, and are filled with a homogeneous or finely granular colloid material, identical with that found in the lymphatics of the gland. Berthelot has shown that the blood in the thyroid vein has a very different composition from that in the jugular vein (the former containing 8.81 to 10.92 per cent. less blood-corpuscles and more fluid ingredients than the latter), and Baber [1] has further shown that this colloid material is largely formed by destruction of the red corpuscles, which are found in the vesicles in all stages of disintegration. From this fact he infers that the thyroid gland exerts a general influence upon the composition of the blood. Simon, Schiff, and others have concluded, from experiments on the lower animals, that the gland secretes something which modifies the nutrition of the nervous system, especially the brain. Let us now see what light is thrown upon the subject by the results of thyroidectomy.

Cachexia strumipriva.—In 1883 Professor Kocher, of Berne, Switzerland, reported eighteen cases in which symptoms closely resembling those of myxœdema followed complete removal of the thyroid gland for goitre.[2] His attention was first drawn to the matter by a remark of Dr. Reverdin, of Genf, that two of his operations for goitre had been followed by diminution of mental capacity. Shortly afterward Professor Kocher saw one of his own patients, from whom he had removed the entire gland in 1874, and the remarkable changes which had resulted in her induced him to investigate the condition of all the other goitrous patients upon whom he had operated, 101 in all. It was found that none of the partial operations, that is, operations in which one lobe alone, or one lobe with the isthmus, had been removed, were followed by cretinoid symptoms. Of the 34 total excisions 3 had died from the operation; 2, after healing, had died from unknown causes, and in 1 the cancerous goitre had reappeared. No news was received from 4. Six sent a written account of their condition; 4 of them were said to be in good health, but little value was attached to these reports, as careful examination might have detected incipient symptoms; in the case of the other 2, symptoms were mentioned which corresponded with those observed on personal inspection in the other cases of complete excision. Of the 18 patients with total excision who presented themselves for examination only 2 had remained well; in 1 of them a small accessory thyroid had developed, and in the other the goitre had returned. The remaining 16 all presented serious disturbances of health, the symptoms being more marked in proportion to the time that had elapsed since the operation, and relatively more marked also in those operated on during the period of growth. To the group of symptoms observed in these cases Kocher gave the name cachexia strumipriva (struma-goitre).[3]

The symptoms developed, as a rule, immediately after leaving the hospital, but sometimes only after four or five months. They began in the form of lassitude, weakness, and pains in the limbs, followed by sensations of coldness in the extremities. In winter, especially, the hands and feet became swollen, bluish, and cold, and chilblains were of frequent occurrence. Diminution of mental capacity, with slowness of thought and speech, was also noticed, particularly in the children who were attending school. Ciphering was especially difficult for them, and in recitation they showed so much deliberation and delay in their answers that in some cases the teacher had been obliged to abandon their further education. Some of the pa-

[illegible]

[2] Transactions Clinical Society, London, 1885, p. 159.

[1] E. C. Baber: Philosoph. Transactions Royal Society, London, 1876, 1881.

[illegible]

[3] At the time of writing his article, Professor Kocher seems to have been unaware of the existence of such a disease as myxœdema; at least he makes no reference to the cases of this disease reported in England and France. Spontaneous myxœdema in adults in Germany and Switzerland must be very rare, if one can judge from the absence of reported cases in these countries. Moebius, in Schmidt's Jahrbücher (1883, Bd. 198, s. 35), inquires whether the disease occurs only in England and Latin countries, or whether it has been merely overlooked in Germany. Since that date I have been unable to find a single case reported in German journals.

tients, who had been servants, had been compelled to give up their situations on account of their slowness in speech and movements.

In the advanced cases the skin of the whole body was swollen. This change began as temporary fluctuating swellings of the face, hands, and feet, lasting for a few hours, particularly in the morning, most marked in the eyelids, and after some time became permanent. When it was fully developed the face was broadened, the lids swollen and translucent, as in some cases of Bright's disease, the nose and lips thick, and the hands, legs, ankles, and feet enlarged. The body became stouter, especially in the region of the lower thorax and abdomen. The skin was infiltrated, hard, dry, and on the body hung in folds. In two cases there was marked alopecia. In advanced cases the skin and visible mucous membranes were markedly anæmic. The pulse was small, thready, easily compressible; the heart-sounds clear, weak, and the second aortic, still more the second pulmonary sound, accentuated. On examination of the blood all the cases showed marked diminution of the red corpuscles, with relative increase of the white, but no changes in their size or form. Aside from the sluggishness of the mental functions there were few cerebral symptoms. Faintness and headache were occasionally noticed. In one case paroxysms of severe cramp occurred four months after the operation, followed later by epileptic attacks with loss of consciousness. All the cases were examined ophthalmoscopically by Professor Pflüger, but even in the cases of advanced cachexia nothing was observed except a remarkable narrowness of the arteries — no hemorrhages such as are found in progressive pernicious anæmia. The muscles of the limbs, even in those who complained most of weakness and had been obliged to give up work, were so well developed as to remind one of pseudo-muscular hypertrophy. Pulmonary symptoms were not observed, nor albuminuria, except a trace of albumin in one instance. Some of the patients complained of dysphagia, and had difficulty in swallowing dry bread and solid food. Choking sensations in the neck were of more frequent occurrence. In these persons the trachea was more flexible and softer than natural, and apparently atrophied: moderate pressure upon the trachea produced marked dyspnœa. No tracheal atrophy was observed when only a part of the gland had been removed, except slight softening in a few cases on the side of operation. The softening and atrophy were thought by Professor Kocher to be due to ligation of the thyroid arteries in the operation, the trachea deriving its main supply of blood from the inferior thyroid arteries.

Since the publication of Kocher's 18 cases of cachexia strumipriva, 17 more have been reported: Five by J. L. and A. Reverdin,[1] 4 by Baumgärtner,[2] 2 by Julliard, 3 by Professor Bruns, of Tübingen,[3] and 3 by Professor Gussenbauer, of Prague,[4] making, with Kocher's cases, a total of 35; 23 females, and 12 males. One of Professor Brun's cases was of extreme interest, as showing that when the thyroid is completely removed during childhood, bodily and mental development is arrested, just as in sporadic and endemic cretinism. The patient was a young man, aged twenty-eight, from whom, eighteen years before, a goitrous thyroid had been removed by Dr. P. Sick, of Stuttgart. Six months after the operation Dr. Sick had noticed a marked change in his mental condition: "Before the operation he was a bright, cheerful boy; now he is remarkably quiet, reticent, and takes almost no part in the sports of his playfellows; on the other hand, in regard to his ability and willingness to learn in school, and to help his parents in their work, there is no change at all."

Seventeen years later, when Professor Bruns examined him, his condition was as follows: The boyish but plump body is surmounted by the beardless head of a man. The total length of the body is only 127 ctm. (4 feet 1½ inch). While the head is of normal size for his age, his height is that of a boy ten years old. The trunk and extremities are well proportioned to each other. The whole face, particularly the lips and lower eyelids, is much swelled, and idiotic in expression; the skin and visible mucous membranes pallid. The skin of the whole body is dry, scurfy, and thickened by a peculiar brawny infiltration. The hair on the head is very scanty; there is no trace of a beard, and only a few hairs are present on the pubes. The genital organs are well developed. Speech is slow, and evidently impeded by swelling of the tongue, gums, and tonsils. The thyroid gland is absent; larynx and trachea normal; respiration free; heart's action weak. No enlargement of spleen or increase of white blood-corpuscles.

Another characteristic symptom is well developed. While the sensibility of the skin and coarse muscular strength are well preserved, the patient cannot perform the lightest work, and can scarcely walk fifty steps. This muscular incapacity has been complete for several years; when he left school, at fourteen years of age, he was unable to learn a trade or work in the fields, but applied himself industriously to knitting; but a few years later he was obliged to give up that occupation also. There is marked loss of mental capacity. While the boy, before and immediately after the operation, was an excellent scholar, he is now less developed than a child of ten years; his apprehension of ideas is sluggish, and his answers to very simple questions are correct, but very slow. His manner is sober, quiet, but never foolish. Sight and hearing are both defective.

Results of thyroidectomy in the lower animals.—Zesas, in experiments upon dogs and cats, found that after complete removal of the gland the animals remained well for a few weeks, then became drowsy, lost their appetite, staggered in walking, and finally died of convulsions and paralysis. Schiff found in dogs and cats that thyroidectomy was followed by death in from four to twenty-seven days. The symptoms produced were fibrillar contractions of muscles of the extremities and body, attacks of tonic and clonic convulsions, disturbances of sensibility, apathy, somnolence, and death. That the fatal result was not due to lesion of the recurrent nerves, the cervical sympathetic and vagus, was shown by the absence of the characteristic symptoms when the gland was merely exposed, and the thyroid branches of the recurrent and superior laryngeal nerves divided. Similar results were obtained also by J. Wagner. In his experiments no disturbances ensued after partial excision of the gland.

The symptoms following thyroidectomy in the lower animals have recently been restudied by Victor Horsley Brown, Professor of Pathology in the University of London.[1] The operations were performed with strict antiseptic precautions, and with special care to avoid injury to the recurrent laryngeal nerve. In monkeys the symptoms were, briefly, as follows: "At a variable period after the operation, but averaging about five days, the animal is found to have lost its appetite for a day or two, and on closer examination to exhibit constant fibrillar tremor, in the muscles of the face and hands and feet more especially. These tremors disappear at once on voluntary effort. At the same time the animal is noticed to be growing pale and thin, in spite of the appetite returning quickly with great increase; rapidly the tremors increase, affect all the muscles of the body without exception; the animal becomes languid, paretic in its movements, and imbecile. The puffiness of the eyelids and swelling of the abdomen follow, with increasing hebetude. During the last stages the temperature, gradually falling, becomes subnormal, and the tremors gradually disappear as they came. Meanwhile the pallor of the skin often becomes intense; and leucocytosis having become well

[1] Dr. Mayo [illegible]
[2] Langenbeck's Archiv [illegible]
[3] [illegible]
[4] Reported by E. Pietrowski, Prager Med. Wochenschr. [illegible]
885, p. 5.

marked, oligæmia follows, and the animal dies perfectly comatose in a variable period, but usually about five or seven weeks after the operation."

Sensation was found to be affected only in the advanced paroxysmal stage, and then in the form of slight anæsthesia. The superficial reflexes were diminished, the knee jerk was always well marked, except when prevented by muscular rigidity. The spinal lumbar centres acted normally; no permanent bulbar symptoms, but occasionally transient dysphagia and dyspnœa. Disturbances of the higher cerebral functions were observed in the form of listlessness, irritability of temper, increasing hebetude, and finally partial or complete imbecility. On the part of the circulatory system there were lowered arterial tension, diminution of the red and increase of the white corpuscles, and the presence in the blood of a small amount of mucin. The salivary glands were much enlarged. The submaxillary glands secreted a large amount of mucin, the parotid a less quantity. The secretion of mucin by the latter is worthy of note, because normally the parotid secretion is serous and contains no mucin. The urine never contained albumin, but in some cases there was a transient glycosuria. The skin was very pale, but not dry. The lower eyelids were swelled, the palpebral fissure diminished one-half, and the whole face of the animal presented an appearance similar to that of myxœdema in the human subject.

At the autopsy the subcutaneous connective tissue was "swollen, jelly-like, and shining," and contained from three to four times the normal amount of mucin. Everywhere the connective tissue was notably hypertrophied, but especially in the triangles of the neck and over the hypochondria. There was also an atrophy of fat, as seen in wasting diseases. The muscles exhibited no change except increase of their connective tissue, and the same was true of the circulatory system. Marked indications were found of increase of the mucin-formation function of the alimentary canal. The parotid and submaxillary glands were enlarged to three or four times their normal size, and their cut surface exuded a sticky, glairy fluid. Dr. Halliburton made a chemical analysis of the skin and subcutaneous tissue, tendons, parotid and submaxillary glands and blood, and found a marked increase of mucin in all except the blood, which contained only a trace. The mucous membrane of the intestines was swollen in three cases, and semi-translucent in all. The spleen was hypertrophied, but otherwise normal. In the central nervous system no changes were observed to the naked eye, except anæmia and atrophy, but at the time of the report the sections were not ready for examination. Sections of the cervical, sympathetic, and musculo-spiral nerves were quite normal in appearance.

During the past year, in a new series of thyroidectomies in monkeys, Mr. Horsley found that under the influence of a high temperature the life of the animal could be prolonged to five or six months, with modification of the severity of the neurotic symptoms. Directly after the operation the animals were kept in a room at an average temperature of 90°, and as soon as symptoms occurred, were placed in a hot-air bath with a temperature of 105°. Under this treatment the first symptoms did not appear until ten days or longer, and then were less intense. The monkeys survived the stage of mucinoid degeneration, lost their excess of mucin, and passed into an atrophic stage, in which they died of failure of the lower visceral centres. Such a survival of the mucinoid stage is seen not infrequently also in myxœdema, and accounts for the comparatively slight excess of mucin which has been observed occasionally at autopsies of advanced cases of this disease. The influence of cold in increasing, and of an equable climate in ameliorating, the severity of symptoms in myxœdema was observed in the earlier reports of cases. Dr. Morvan, of Lanniles, in Lower Brittany, France, whose report of fifteen cases has been referred to, expressed his surprise at the severity of the disease in England as compared with the mildness of his own cases. Among his patients, all peasants, one had presented symptoms of myxœdema for ten years, another for seventeen years, a third for twenty years, and yet all three were able to attend to household duties, and engage in active farming work. The explanation, he thinks, lies in the comparatively equable climate of the Finistère, where, owing to the proximity of the Gulf Stream, the temperature rarely falls below the freezing-point. The practical bearing of these interesting observations upon the treatment of myxœdema is obvious.

From the histological structure of the thyroid gland, and the results of his experiments, Mr. Horsley draws the following conclusions:

1. "The thyroid gland appears to consist of two distinct portions: (*a*) glandular, consisting of highly vascular acini, which excrete into their interior a mucoid substance, this substance, or something closely similar, being found in the lymph-vessels of the gland—mucin-excreting function; (*b*) highly vascular lymphoid nodules—hæmatogenous function.

2. "Excision of the gland is followed, according to my experiments, by an increase in the amount of mucin in the tissues which normally possess it, by a retrograde histological change, by an increase in the activity of the glands which normally excrete it, and (what is still more striking) by the assumption of the muciparous function by a gland which normally possesses none or very little mucin—by the parotid gland.

3. "Excision of the gland is followed by profound changes in the blood, viz., a diminution in the number of corpuscles, preceded, as regards the white elements, by a temporary increase in their number, by an alteration in the coagulability and albumens, and by an abnormal presence of mucin.

4. "Excision of the gland is followed by nerve symptoms indicating change in the lowest motor centres, these changes causing tremors with rigidity and paresis; it is also followed by changes in the higher psycho-cortical centres, such producing imbecility, and ultimately death in the comatose state."

In a preliminary note published by P. Albertoni and G. Tizzoni, of Bologna, in June, 1885, two interesting observations are reported in connection with their thyroidectomies in dogs.[1] Examination of the blood several days after the operation showed that the arterial blood contained no more oxygen than the venous blood, sometimes even less. Blood taken from the femoral artery of a healthy dog, kept under the same conditions as the dogs experimented upon, contained 17.8 vols. oxygen to 100 vols. of blood, whereas only 8 to 11 vols. oxygen in 100 vols. blood were found in blood taken from the same vessel in dogs from whom the thyroid had been removed. That neither the deficient oxygenation of the blood nor the other symptoms were due to mechanical interference with the respiratory process was shown by the fact that the same results were obtained in dogs who had been tracheotomized after thyroidectomy.

Albertoni and Tizzoni also call attention to a lesion not mentioned by other experimenters, but defer their final opinion as to its significance until they have examined the central nervous system.[2] The lesion is a degeneration of the peripheral nerves, even of those situated at a distance from the site of operation, *e.g.*, the sciatic nerve, limited to certain portions of the nerve-fibres, and resembling the degeneration found after nerve-stretching. It consists of changes in the medullary sheath, destruction of the axis-cylinder, and increase of the protoplasm of the fibres, with multiplication of their nuclei, especially at points where the degeneration is most advanced.

It has been claimed by several writers that the ca-

[1] Ueber die Folgen der Exstirpation der Schilddrüse. Centralblatt für die Med. Wissenschaften, June 13, 1885.

[2] At the present date (June, 1886) I learn that their complete report has been published.

chetic symptoms which follow thyroidectomy in man and the lower animals are not due to loss of the gland, but rather to injury to the cervical nerves. Thus Baumgärtner[1] ascribes the result in some cases to direct injury of the recurrent nerve, or the thyroid branches of the cervical sympathetic, in the operation, but more frequently to subsequent lesions in one or both of these nerves, induced by processes of inflammation, adhesion, and cicatrization in surrounding parts. The same view has been adopted by Pietrzikowski in his report of Gussenbauer's cases,[2] and also by Dr. Hadden, Dr. Stokes,[3] and Dr. White.[4] This explanation is unsatisfactory for several reasons. In Horsley's thyroidectomies no lesions were found at the autopsies in the cervical, sympathetic, and musculo-spiral nerves, while during life the only symptoms that could be referred to the recurrent nerve were occasional transient attacks of dyspnœa, but no permanent laryngeal symptoms. Moreover, myxœdematous symptoms have never been observed to follow either the numerous experiments that have been made on the cervical sympathetic, or the removal of large cervical tumors, other than those involving the thyroid gland. But even if we admit that during the operation of thyroidectomy, or subsequently, in consequence of adjacent inflammatory and adhesive processes, local injury is inflicted upon the recurrent nerve, or the cervical sympathetic, it is altogether unlikely that such local injury can lead to the widespread changes in the brain, spinal cord, and sympathetic system that have been found in myxœdema, and are, presumably, present also in advanced cases of cachexia strumipriva. The diffuse character of these changes points, with great probability, to some cause outside of the nervous system, which, directly or indirectly, influences it as a whole, and not to a local nerve-lesion spreading by continuity of tissue.

It remains to consider briefly the condition of the thyroid gland in sporadic and endemic cretinism—affections closely allied to myxœdema in the adult. The most striking peculiarity of cretinism, viz., partial or complete arrest of bodily and mental development, we have already seen may follow thyroidectomy when performed in early life. Furthermore, cretins present most of the characteristic symptoms of myxœdema—the broadened face, full cheeks, thick lips, spade-like hands, nasal intonation and slowness of speech, sluggish movements, and many of them also the mucoid infiltration of the skin. Now, in sporadic cretinism the thyroid atrophy is even more marked than in myxœdema, there being no trace of the gland at the autopsy in some cases, as in those reported by Mr. Curling,[5] Dr. Fletcher Beach,[6] and others. In other cases the gland, though present, is atrophied or extremely degenerated, even a small goitre being exceptional. It is a suggestive fact in this connection that deficiency of the thyroid body, as the result of disease, has never been observed except in connection with cretinism or cretinoid symptoms.

But it will be objected that in *endemic* cretinism, the more common form, goitrous enlargement of the gland is the rule. According to the reports of the Sardinian Commission in 1848, and of the French Commission in 1873,[7] two-thirds of endemic cretins are goitrous. Of the remaining third it is merely stated that they had no goitre, but the exact condition of the gland, whether absent or atrophied, is not mentioned. Dr. Hadden, in his paper on "Myxœdema" at the recent Medical Congress in Copenhagen,[8] asks whether "the goitre of the cretin has the same structure as the goitre of the non-cretin? If so, it is clear that the essential cause of cretinism is not the goitre." No investigation has ever been made, so far as I am aware, as to the comparative amount of thyroid degeneration in the two classes; but there is at least presumptive evidence that the goitre of the cretin is more degenerate than the goitre of the non-cretin. Hilton Fagge[1] has pointed out that, when a family moves into a region where goitre is endemic, goitre first appears, and cretinism does not present itself until the second or third generation. It is a fair inference from this fact that the thyroid gland has become progressively more degenerate in the descendants, and this inference is confirmed by the probable existence of a greater or less degree of atrophy in one-third of the cases.

It is difficult, then, to resist the conclusion that the thyroid gland has important metabolic functions, and that in many cases its loss, either by operative removal or by the slower processes of disease, must seriously impair the general nutrition of the body, especially that of the nervous system. In what order of development the lesions of myxœdema follow the loss of thyroid function we can only conjecture. Possibly, the mucoid infiltration and enormous connective-tissue dystrophy may be determined directly by withdrawal of the part taken in the metabolic processes by the thyroid gland, and the nerve-lesions, in part at least, may be the result of compression by hypertrophied connective tissue. It seems more probable, however, from the symptoms following thyroidectomy, that the loss of thyroid function modifies the nutrition of the nervous system directly. Upon this view the connective tissue changes may be regarded as a neurotic dystrophy, and the more important symptoms as due to lesions arising from defective nutrition in the brain, medulla, spinal cord, and sympathetic system. But these are points upon which our present knowledge does not warrant positive conclusions. The object of this paper has been accomplished in directing attention to the highly probable, if not conclusive, evidence that in myxœdema the determining factor in the group of lesions is the one which is the most constant and conspicuous, viz., degeneration and atrophy of the glandular elements of the thyroid body.

[1] [illegible]

[2] [illegible]

[3] [illegible]

[4] Lancet, [illegible]

[5] [illegible]

[6] Pathological Transactions, London, 1874, p. 265.

[7] Baudarger [illegible]

[8] [illegible]

SELECTED CASES OF LAPAROTOMY.[2]

By DUDLEY P. ALLEN, M.D.,

THE cases of abdominal section presented in this paper have been selected, not to show brilliant results, but rather difficulties encountered in operation. Some of these difficulties have been successfully overcome. Others, though insuperable, have not prevented recovery.

We present five cases: The first was an exploratory incision in a case in which extra-uterine pregnancy seemed the most probable diagnosis; the second, an interstitial fibroid; the third, an unusually adherent ovarian tumor; the fourth, a double ovarian tumor; the fifth, a dermoid cyst. Four of the cases recovered, one died. The cases will be detailed very briefly, and only the prominent features dwelt upon.

The first case was the patient of Dr. H. J. Lee, of Cleveland, and was seen in consultation with him and Dr. W. J. Scott. The patient, Mrs. D——, aged thirty-three, had been married eight years, she miscarried once seven years ago, and had one child, two years of age, living. Her previous health had been good, and she had suffered from no uterine disease.

Early in April, 1885, she menstruated; not menstruating in May, and experiencing considerable nausea, together with the sensations of her previous pregnancy, she supposed herself pregnant. About June 1st, while in church, she had quite a severe hemorrhage. She was carried home, but bled little after her arrival, but says a little fleshy material came away, though she retained nothing looking like a fœtus.

[1] [illegible]

[2] [illegible]

She was admitted to Charity Hospital, July 14th. Since the time of her supposed miscarriage the patient had suffered from continued abdominal pain and occasional bloody discharge from the uterus, and after entering the hospital had a fever varying from 99° to 101°. She had had two physicians, both of whom considered the case to be a miscarriage. She was anæmic and somewhat emaciated. Examination per vaginam showed a patulous os, with the uterus slightly deflected to the left, having a depth of three inches. In the right iliac region, equally distant between the cæcum and the uterus, was a spherical, semi-fluctuating mass to be felt, both externally and per vaginam. This was somewhat tender on pressure.

Previous to my seeing the case the interior of the uterus had been explored by Dr. Lee, and found empty. The diagnosis was between a malignant or inflammatory disease of the cæcum, a cyst, a local peritonitis, and extra-uterine pregnancy. The latter was considered most probable. Nearly four months having elapsed since menstruation, the most favorable time for the destruction of the fœtus by electricity had passed. The propriety of the application of electricity was, however, carefully considered, but the condition of the patient was such as to make the delay necessary for its application and the determination of its success or failure seem unwarrantable. An exploratory incision was determined upon, and was made August 6th. An aspirating needle was plunged through the wall of the vagina into the tumor, to see if any information could be gained by this means; only a drachm of clear fluid was obtained. An incision was then made parallel to and one inch above Poupart's ligament, extending from the anterior-superior spinous process of the ileum on the right side to the outer border of the rectus muscle. The peritoneal cavity being opened, an adherent mass was found filling the length of the incision. Dense, heavy bands of adhesion extended from this toward the right side of the uterus, and included the fimbriated extremity of the tube, but neither uterus, ovary, nor the tube proper were involved in the mass.

These adhesions were divided between ligatures. A persistent effort was made to reach the centre of the mass by separating the adhesions which surrounded it, tearing them away successively from the superior, inferior, and internal surface, but all these efforts were unsuccessful. Nothing save an extensive destruction of adhesions was accomplished. Further operative interference being denied, unadvisably the abdomen was closed. The diagnosis remained undetermined between abdominal pregnancy, malignant or inflammatory disease of the cæcum with adhesions, and a local peritonitis. Within a few days after operation the patient's fever ceased, and she made an uninterrupted recovery. At the present time the patient is in perfect health, and only a small mass can be felt where the oval tumor formerly existed.

The question of diagnosis was at the time, and is now, uncertain. The recovery of the patient excludes, however, malignant disease; a cyst was excluded by aspiration. A salpingitis or oöphoritis, with pelvic cellulitis arising therefrom, was excluded by the fact that neither uterus nor appendages were included in the adherent mass. That it was simply inflammatory seems improbable, from the fact that the immediate effect of the operation was to reduce the temperature, which soon became normal; that the pain, which had been constant, disappeared, and that the mass, which had been steadily increasing, at once began to decrease in size. If the case were one of extra uterine pregnancy the effect of the operation was to break down adhesions, destroy the vascular supply, and thus prevent the further development of the fœtus. The insertion of the trocar would have the same tendency.

The question of diagnosis and operation, in cases of extra-uterine pregnancy, is an unusually difficult one, both because cases do not present themselves for examination until perhaps the membranes have ruptured and hemorrhage occurred, and also because the determination of the positive existence of extra-uterine pregnancy is sometimes well-nigh impossible. Should even a probable diagnosis be made, it would seem that the question of some operative interference should be seriously considered. This is demonstrated by a specimen which we present to you of ruptured tubal pregnancy at the fourth month, resulting in death. Could this have been diagnosticated, operation would have been easy, and a cure reasonably certain. The specimen shows the fœtus surrounded by amniotic fluid and membranes, with the portion of the tube occupied by the placenta ruptured. Death followed the rupture in about ten minutes. There were absolutely no adhesions, and at the post-mortem only the tube had to be divided to remove the fœtus.

Case II.—Mrs. P——, aged thirty-seven, married, general health good, had been troubled for over a year with difficulty in micturition.

Should she go without micturition for more than one to two hours it became impossible, and catheterization had to be resorted to.

The case was under the charge of Dr. F. J. Weed, and was seen in consultation with him and Dr. H. K. Cushing. The catamenia recurred every three weeks or a little more, and were of late excessive. Examination showed the uterus to have in its wall a dense tumor, firmly wedged into the pelvis so that it could not be moved. The sound entered the uterus four and a half inches. The fundus could be felt above the pubis. In order to relieve the difficulty in micturition, an effort was made to lift the uterus out of the pelvis by means of an inflated colpeurynter. This was continued three days, but produced pain, tenderness, and a temperature of 101°, so it seemed best to remove it. It was then thought possible that the fibroid which bulged into the uterus might be removed through the vagina. Being firmly surrounded by the pelvis, it seemed that by dilating the cervix, and using ergot, and applying pressure from above, the tumor might be crowded downward, since it could go in no other direction.

Treatment by fl. ext. ergot was continued during four weeks. It was administered hypodermatically, by mouth and by rectum, and caused slight decrease in the size of the tumor. Administration by rectum of one drachm night and morning was most efficient and caused least disturbance.

Since the progress was not satisfactory, July 2d, four weeks after entrance to hospital, the patient was etherized, and the cervix was incised bilaterally up to the vagino-cervical junction, and the cervix was dilated as widely as possible with a large Sims dilator. The cavity of the uterus was explored with the finger, and the fibroid did not bulge into the cavity sufficiently to warrant an attempt at immediate enucleation. With this incision, and dilatation of the cervix, it was hoped that by the use of ergot and pressure externally upon the fundus the fibroid might be forced downward. The patient's temperature did not go above 98.8°, and the tumor bulged downward a little, but not sufficiently to warrant an operation for its removal per vaginam. About three weeks after operation the patient went home. Passage of urine had become normal. The tumor was considerably diminished in size, and the loss of blood was less. In November the patient was seen again, in consultation with Drs. Weed and Cushing. Of late there had been considerable increase in size of tumor, and the menstrual periods had recurred about once in three weeks, and the loss of blood was excessive. It was decided that the patient's only chance for health, and almost for life, was to remove both tubes and ovaries. Accordingly, on November 3d, the abdomen was opened. To do this was extremely difficult, for the bladder was found spread out over the front of the tumor, reaching half way from the pubis to the umbilicus, the peritoneum being reflected

horizontally from the abdominal wall to the top of the tumor above the fundus of the bladder. Only one ovary could be felt, and both ovaries and tubes were so impacted in the pelvis that their removal was utterly impossible. The only thing remaining was to close the abdominal incision, which was a complicated procedure. The patient progressed satisfactorily until eleven days after operation, when the left leg was found to be largely swollen. The swelling continued, and the leg was somewhat painful, presenting every appearance of a thrombosis of the iliac vessels. The swelling of the leg gradually decreased, and the patient made a good recovery, leaving the hospital December 18th. At present the patient is in better health and flesh than for a long time. Her menstrual periods have recurred at from four to seven weeks, being much less frequent and severe than formerly. Micturition is normal. The patient says that if she did not know about the tumor, she would be unconscious of its presence. The fibroid is much smaller than at the time of the operation, as evinced by its greatly increased mobility. The history of the case would seem to indicate that the abdominal incision resulted in a thrombosis of the uterine plexus of vessels, which extended to the iliac vessels, thus causing the swelling of the left leg.

The history of the case gives rise to two questions. Has the decrease in size of the tumor been caused by the thrombosis of the uterine plexus of vessels, or has the simple incision produced a change in nutrition, of a sort not fully understood, but well-recognized in its influence upon various diseased abdominal conditions?

Case III.—Mrs. P——, aged thirty-five, married, entered the hospital in March, 1885, the patient of Dr. G. C. Ashmun. She had been visited by several gentlemen, and the case had at first been considered one of pregnancy. She was seen the last of March in consultation with Drs. Ashmun and W. J. Scott. The patient was greatly emaciated, being so thin that she was obliged to lie lengthwise upon a pillow. She sat up a short time each day, but could not walk. She ate almost nothing. Her pain was so intense that she had one grain of morphine hypodermatically every night. The abdomen was very prominent, and so tense as to look like parchment. The pulse before operation ranged at about one hundred. All agreed upon a diagnosis of ovarian tumor, and that though an operation offered the only chance for life, the case was wellnigh hopeless from the condition of the patient, and the probability of extensive adhesions. There was great fear lest the patient should die on the table.

The operation was performed April 2, 1885. The tumor was adherent to the abdominal wall over its entire anterior surface, but these adhesions were not difficult to separate. The whole superior surface was closely adherent to the omentum, and this had to be divided between successive ligatures. The posterior surface was adherent to the small intestine, and at least one yard of gut was removed from the cyst by slowly tearing between thumb and fingers the adhesions. There were also adhesions to the pelvis on both sides, and the pedicle, which was not over one inch long, was adherent to the pelvis on the left side, and to the sigmoid flexure. To tie it was the most difficult part of the operation, and when tied it was not less than one and a half inch in diameter. The bleeding was excessive, being most abundant from the intestines and mesentery. A large number of vessels were tied with catgut, but since the hemorrhage still continued from the intestines and mesentery, at the suggestion of Dr. Mellikin towels were wrung out in hot water and repeatedly inserted deeply into the abdomen, beneath the bleeding intestines. This controlled the hemorrhage. The time occupied in the operation was two hours and ten minutes, and the difficulties overcome were extreme. The patient was in a state of collapse when put to bed, and it was thought in the night she was dying. She was kept up with artificial heat, subcutaneous injections of brandy and enemeta of brandy, beef-tea, and laudunum. She improved slowly, sitting up in bed three weeks from the day of the operation, and made a good recovery. The case has been related as one which recovered under the most adverse circumstances, and also to show a method of stopping a general oozing of blood in the abdominal cavity, by the application of towels wrung out in hot water. Though this is a common method in other locations its advantages have not perhaps been sufficiently recognized in hemorrhages deep in the abdomen. Having employed it on various other occasions we can commend it as a valuable and safe procedure.

Case IV.—Miss G——, aged twenty-six, slender; noticed a growth in her abdomen in July, 1885. This increased gradually. The case was under the charge of Dr. H. J. Lee, and was seen, in consultation with him and Dr. W. J. Scott, October 27th. The case seemed to be one of simple ovarian cyst, probably without adhesions. It was operated on October 29th. One cyst, which weighed eight pounds, was easily removed. After its removal, a second cyst, about three inches in diameter, was found to involve the other ovary. This lay on the floor of the pelvis, being thick and dense. To remove this cyst it was necessary to ligate, and divide into two portions the broad ligament. The cyst had its point of attachment to the right and posterior surface of the uterus, almost down to the utero-vaginal junction. The only thing to mark the operation was the weakness of the patient's pulse. This had averaged ninety before the operation, and became very feeble. The pulse, which was 112 the evening of the operation, gradually increased until, on the fourth day, it was 142. The day before a slight discharge had appeared from the vagina, resembling that of menstruation. The temperature had reached 103.2°. The chief difficulty, however, seemed to be the weakness and feebleness of the pulse. The tympanites was only moderate. It became evident that without some relief the patient must die.

Since the vaginal discharge made the presence of some septic process seem possible, the only indication was to relieve this. Accordingly, a vaginal douche was given, and the lowest stitch in the abdominal wound was removed, and a Kerth drainage-tube carried down to the bottom of Douglas' pouch. Not more than two teaspoonfuls of bloody serum were obtained. One quart of a solution of thymol, 1 to 1,000, at a temperature of 99°, was then injected into, and again removed from, the abdominal cavity. The patient endured all this without ether, and said it caused only a little smarting. There was no exhaustion, and patient was, if anything, more comfortable after than before the operation. The urine, which had been scanty, measured, at next catheterization, nearly one pint. The patient gradually failed, the pulse growing more rapid and feeble, and she died about four and a half days from the time of the operation. The autopsy was performed about twelve hours later. There was considerable tympanites. No fluid was found in the abdominal cavity, nor the slightest sign of any inflammation. There were only nominal adhesions to the points where the tissues had been divided. The uterus, which was removed entire, and which is presented to you, shows the ligatures intact and the uterus in a normal condition. The kidneys were examined, but nothing abnormal could be discovered in the appearance of the abdominal viscera or cavity. No signs of sepsis could be found. We were not permitted to open the thorax. It would have been interesting to have examined the heart, to see if a clot had caused the weakness of its action. Its failure had been out of proportion to the gravity of other symptoms, and has produced the conviction that the weakness of its action was a leading factor in the outcome of the case. Examination of the point of attachment of the right ovary will show the difficulty of its removal. The case is interesting as demonstrating that what would seem a simple case before oper-

ation, may possess unseen elements of difficulty, and result fatally.

Case V.—Mrs. C——, aged twenty-seven, married, in excellent general condition, was operated upon October 22, 1885. The case was seen in consultation with Drs. H. K. Cushing and W. J. Scott. An ovoid mass was found to the right of the uterus, semi-fluctuating, and was thought to be separate from the uterus. Its nature was not determined. It was removed without any unusual incidents. On being opened it was found to be a dermoid cyst, containing about one and a half pints, made up of sebaceous material and hair. Attached to the wall was a piece of bone, and upon this were growing two well-formed teeth. You may be interested to see it. The convalescence proceeded remarkably well, with the exception of one complication. A week after operation the patient developed a universal and very severe bronchitis. Careful treatment was followed by marked improvement after twelve hours, and after twenty-four hours the danger was past, and the patient made an uninterrupted recovery.

The foregoing cases have all been performed with the strictest precautions with regard to cleanliness and antisepsis. Carbolic acid and bichloride of mercury have been used, great care being exercised that none should enter the abdominal cavity.

They have been reported to show, first, the difficulty of diagnosis in extra-uterine pregnancy; second, to record the presence of an unusually developed bladder, greatly endangering operation; third, to record the benefits following an exploratory incision in a case of uterine fibroid with excessive hemorrhage; fourth, to record the successful removal of an ovarian tumor with almost universal adhesions; fifth, to emphasize a desirable method of controlling excessive bleeding deep in the abdominal cavity, by means of cloths wrung out in hot water; sixth, to show that the weakness of the heart may prove a serious complication after ovariotomy.

A NEW VAGINAL IRRIGATOR.

By JOHN W. GORDON, M.D.,

PLYMOUTH, ME.

Recumbent position of the patient, long-continued application of copious injection fluids of high temperature, such, in brief, are the more essential factors in successful vaginal irrigation, as evinced by the clinical experience of the modern gynecologist; and it is to be borne in mind that the external female genitals will not bear contact with that high degree of heat which is well tolerated by the vaginal canal and cervix uteri, and which is demanded in the management of various pathological states of the pelvic viscera.

The many vexatious inconveniences which attend the measures usually employed in private practice for administering vaginal irrigation often disgust or discourage the patient, and thus in many instances absolutely bar a continuation of the process, more especially when injection fluids of the highest requisite temperature are ordered; while the inefficiency of such measures, even when faithfully carried out as far as practicable, so detracts from the just and possible results of this invaluable method of medication as to frequently disappoint the expectations of the physician and patient alike.

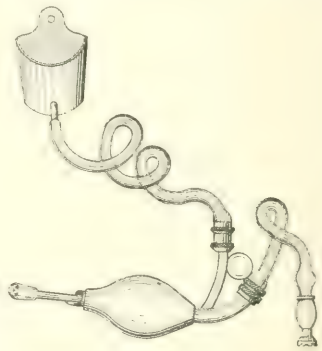
An instrument has been recently constructed for the purpose of wholly relieving patients of such inconveniences and discomfort as well as for greatly enhancing the efficiency of this method of treatment, and the unique device is being used with most gratifying results.

The instrument consists of an injection-tube, which may be attached to, and operated by, all kinds of syringes—the ordinary rubber-bulb, alpha, fountain, or hydrant. This injection-tube is surrounded—a portion of its length—by a larger tube, which supplies means of ample drainage. Surrounding the intra-vaginal portion of the drainage-tube, and attached thereto, is a hollow, soft rubber bulb or tampon, conical in form, elastic and compressible, which, when the instrument is inserted within the vagina, gently and perfectly occludes the orifice of that canal, thus preventing the surplus injection fluid from escaping therefrom otherwise than through the drainage-tube, which communicates with a receptacle which is placed on the floor at the side of the bed or couch.

Thus, while this elastic and compressible tampon affords absolute immunity from leakage, it also, by means of the inclosed air-chamber, protects the sensitive vulva and perineum from undue contact with heat, thereby enabling the patient to make use of injection fluids at the highest requisite degree of temperature with entire impunity during the most lengthened period of irrigation.

Patients—without the aid or presence of an attendant—conveniently and willingly operate the instrument in an efficient manner while occupying every variety of the recumbent position; indeed, all desirable postures are equally available, and no accessories whatever are required.

By virtue of the peculiar mechanism of this device and the simplicity of its operation the user easily controls the mechanical action of the injection fluids employed. Thus by simply compressing the drainage-tube between the finger and the exterior of the ring by which the instrument is held in place—thereby obstructing the outflow—the vaginal canal may, whenever advisable, be distended to the fullest extent by the gentle means of equable hydrostatic pressure, by which manœuvre the rugæ are thoroughly separated and the irrigating liquid finds direct access to the entire mucous surface of that organ, and may be thus retained indefinitely; while by means of the dependent position of the drainage-tube the injection fluid—obeying the fundamental law of hydraulics—wholly escapes from the vagina ere the instrument is withdrawn from its position at the termination of each period of irrigation; and hence, whatever the posture of the patient, and whatever the properties of the liquid used, perfect cleanliness of person and the avoidance of wetting or soiling clothing or bedding is insured from first to last.



The smallness of the apex of the tampon—five-eighths of an inch in diameter—renders the device no less available to the maid than matron.

The small size of the entire instrument renders it easily kept from the observation of children, as well as from the prying eyes of children of larger growth; while its portability renders it eminently serviceable to those who journey in pursuit of health, "the conventional saturnalia of bucket-blankets, pans, stools, and so forth," being left behind, laid away to be numbered with the lost arts.

Equipped with this irrigator I order systematic and thorough hot vaginal irrigation in the recumbent posture, with full assurance that in every instance my instructions will be promptly and faithfully followed by the patient,

who dispenses with the services of attendants, together with the whole paraphernalia of aids, and in the seclusion of her room secures all the benefits to be derived from the most advanced surgical art as conveniently and in as cleanly a manner as she can make or unmake her accustomed toilet, and feminine æsthetics is no longer outraged.

Progress of Medical Science.

A Method of Removing Foreign Bodies from the Ears.—Mr. Jonathan Hutchinson writes in the *British Medical Journal* concerning a simple method used by him in the extraction of foreign bodies lodged in the external auditory meatus. It consists in the use of a silver wire-loop, instead of either forceps or scoop. He has never, since he was a student, used either of the latter instruments; and, for the purpose of extracting hard bodies from the ear, holds that they are most dangerous. With a flexible silver wire-loop, or if need be, with two placed at right angles, he says he has repeatedly succeeded when all other means had failed. Thus, not only is the loop quite devoid of danger, but it is both more easy of use and far more efficient than any other method. It is impossible that it can injure the membrana tympani, or the walls of the canal. The method of procedure is, after having put the patient under an anæsthetic, to introduce the loop gently into the ear, and turn it about until it is believed to have got behind the foreign body. This it will often do at once; but sometimes a little patience is necessary. In one instance the writer took out a piece of heavy lead in this way with very little trouble, using two loops at right angles with each other. The simplicity, safety, and efficiency of the method make it desirable, he thinks, that it should be better known.

Albuminuria during an Attack of Prurigo.—Dr. Umberto Dieci reports the following case in a reprint from the *Gazzetta degli Ospitali*. A shoemaker, thirty-four years of age, had suffered for nearly his whole life from prurigo of the entire body. At the time of coming under treatment, after an aggravation of the skin affection, he had œdema, beginning in the face and thence spreading over the rest of the body. The urine was found to be albuminous, but this together with the œdema, quickly disappeared under appropriate treatment. Six months later the œdema again appeared, and the patient was received into hospital. At that time the prurigo was marked and the œdema extensive; there was great hypertrophy of the heart, a systolic murmur was audible at the apex, albumin and casts were found in the urine. In the course of a month the cutaneous affection became better, the œdema disappeared, and the urine became normal. The treatment consisted in warm baths and the hypodermatic injection of pilocarpine. No albumin was found in the perspiratory secretion. The writer believed that the kidney affection was secondary to the skin disease.

Collapse after Antipyrin.—Dr. Blore relates the case of a woman who suffered from a fever following abortion. Quinine was first given, and then antipyrin. Of the latter drug a dose of thirty grains was given, and three hours later fifteen grains more. After the second dose she went into a collapse, and died at the end of about thirty hours, in spite of every means employed to excite a reaction. The author believed the fatal collapse was not a result of the disease, but was caused by the rapid fall of temperature induced by the antipyrin.—*Wiener Medizinische Wochenschrift*, No. 15, 1886.

Infantile Atrophy of the Extremities.—This peculiar affection has been observed and described by Charcot and Marie, Ollenburg, Eichhorst, and Joffroy, some thirty cases in all having been reported. The affection begins in the muscles of the feet and legs, affects those of the thigh but never of the trunk. Then there is a pause of several years in the progress of the disease, after which the muscles of the hands and forearms begin to atrophy, but those of the arms, shoulders, and face are never affected. M. Joffroy reported two cases of this nature at a meeting of the Hospitals Medical Society of Paris (*L'Union Médicale*, May 1, 1886). One of these, a young girl, had been in good health up to the age of five, when she had an attack of scarlatina. Seven or eight months after it was noticed that she did not walk very well, the toes turning inward and the child meeting with frequent falls. A diagnosis of talipes equino-varus was made, and tenotomy was performed and an orthopædic apparatus applied. There was no improvement. A little later, examination showed the foot and toes to be motionless, cold, and cyanotic, and chilblains caused much trouble. The patient could stand with difficulty, and stumbled in attempting to walk. All these troubles were developed in the space of one year, and then there was an arrest in the course of the disease for a period of five years. When the girl was eleven years of age, without any apparent cause, the muscles of the upper extremities commenced to atrophy. The hands tired so rapidly during piano exercise that the teacher was the first to notice the trouble. The thenar eminences grew rapidly thin, and soon the atrophic *griffe* was formed by permanent extension of the first phalanx and atrophy of the second and third. At the time of the report the faradic and galvanic contractility had disappeared in the lower extremities, and while some of the muscles of the upper extremities responded faintly to the electrical stimulus, the reaction of degeneration was present. M. Joffroy thinks that the clinical picture of this form of atrophy is sufficiently defined to warrant a distinctive name for the disease. Heredity seems to play an important part in the etiology of the affection, as of the 30 cases recorded up to the present time, 25 were observed by different physicians in members of one family.

A Peculiar Symptom called by Atropine.—Dr. Rampoldi writes in the *Annali Universali di Medicina e Chirurgia*, that, having a slight conjunctivitis, he instilled into the eye a drop of what he supposed was a solution of zinc sulphate, but what was really a twenty per cent. solution of atropine. He was surprised to feel no smarting. About fifteen minutes later he had the sensation of a dancing white light, apparently just on the borders of the eyelids, which disappeared after a time, and returned whenever the field of vision was disturbed. The same phenomenon was observed in others upon trial with atropine and duboisine.

An Italian Predecessor of Pasteur.—The claim is put forward in a secular journal, *Il Popolo Pisano*, that Dr. Eusebio Valli first made use of inoculations for the prevention of rabies in 1799. In a book upon the "Plague of Constantinople," he gave an account of inoculations of animals with the saliva of a mad dog, modified by admixture with gastric juice. Finding no ill effects resulting from these experiments, he then inoculated the child and the maid of a lady of Pisa, who had been bitten by a rabid dog, and they escaped without any bad symptoms. A similar claim, it will be remembered, was made on behalf of Pacini, concerning the discovery of the comma bacillus. It seems to be the fate of Italians to make discoveries which are at once forgotten, until they are rediscovered by some French or German worker. It would be a patriotic act for some Italian of leisure to ransack the medical literature of his country for the past century or two, and to collect and publish anything which might be suspected to have in it the germ of a great discovery, and thus secure a sort of copyright on it so as to circumvent any adventurous foreigner who might think he had found out something new.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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SUBLIMATE SOLUTIONS AND THEIR DANGERS IN OBSTETRICS AND SURGERY.

THE use of corrosive sublimate in the dressing of wounds is as old as Paracelsus, but its systematic adoption dates back only five years. Davaine in 1873, and Billroth in 1874, showed the germicidal power of the sublimate, and, acting on Davaine's suggestions, Tarnier in 1881 recommended it for disinfecting the hands; while in 1882 he substituted injections of sublimate solutions for those of carbolic acid in the wards of la Maternité. In this same year Schede and Kummel, basing their plan upon the experiments of Koch, applied corrosive sublimate to general surgery, and since the announcement of their results its use has rapidly increased in this country and in Europe.

Up to the beginning of this year the use of corrosive sublimate dressings and of corrosive sublimate as a wash and injection has been reported upon favorably by twenty-three surgeons and physicians, according to Dr. Lucien Butte, who has written an elaborate article upon this subject in *Nouvelles Archives d'Obstétrique et de Gynécologie.* Among obstetricians and gynecologists Schroeder, Hegar, Stegman, of Dresden; Keller, of Bern; Leopold, of Dresden; Toporski, of Breslau, have made favorable reports upon its use. Articles upon this subject are now appearing in a Vienna journal, from Professor Braun. We note a total of 2,078 cases reported, with only 7 intoxications.

Some have stated that since the use of sublimate they have had no more parametritis.

Dr. Butte is not content with this record, however, and he has industriously collected all the instances of mercurial intoxication, fatal or otherwise, which have been reported.

The first discordant note in the concert of eulogium was struck by Dr. Stadfeldt, of Copenhagen, in 1884. In using washes of sublimate 1 to 1,500, he observed, among seven patients, death in one case and diarrhœa with gingivitis in two cases. In the case of death there were bloody stools, and on autopsy characteristic renal lesions were found.

Hofmeier, assistant in Schroeder's clinic at Berlin, has observed three cases of mercurial intoxication, two being fatal. In these cases vaginal irrigations of a 1 to 1,000 solution were used. Vohlz (*Schmidt's Jahrb.*, 1884, No. 3) reports a case of fatal poisoning following an intra-uterine injection of a 1 to 750 solution. Dr. W. Thorn, assistant at the clinic at Halle, has reported two fatal cases, and one non-fatal case of intoxication. In one of the fatal cases vaginal irrigations, in the other intra-uterine injections, of 1 to 1,000 were employed. Keller, of Bern, reports, during the year 1884–85, four non-fatal and one fatal case.

At the Gynecological Society of Berlin, Lower and Veit each reported cases of lacerated perineum which were sewed up, and injections of a 1 to 1,000 solution used. The patients died with sanguinolent diarrhœa. Drs. Müller, of Bern; Netzel, of Stockholm; Partridge and Peabody, of New York, have reported one or more cases of fatal mercurial intoxication.

E. Fraenkel, of Hamburg, among fourteen autopsies made upon Schede's patients (all of whom had been treated with antiseptic dressings), found evidences of toxic irritation of the large intestine in all cases, and in two instances he attributed death to the mercury.

Finally, three fatal cases are reported by Krukenberg and Ribbert, of Bonn; one by Winter, two by Braun, and two by Mickulicz. Besides this long list of fatal cases, Butte has collected reports, from six observers, of several non-fatal cases. Naturally, only a small part of these cases, however, would be likely to be published.

It thus appears that over thirty cases of death have already been recorded from the use of sublimate solutions, either in the form of vaginal or uterine irrigations or in the washing and dressing of wounds.

The clinical symptoms in this form of poisoning are already so well defined that the diagnosis is not difficult. The drug seems to act, as a rule, on the lower part of the bowel, salivation and stomatitis being rarely observed. The patients first have diarrhœa, then soon complain of rectal tenesmus; finally the diarrhœa becomes bloody, fetid, and profuse, with acute rectal and abdominal pains.

In non-fatal cases the mouth is much oftener affected than in those that are fatal. Nausea and vomiting are generally present.

The amount of urine is lessened, albumen and casts, and sometimes mercury, appear in it. The nervous system shows signs of great depression, but intelligence is not impaired.

Post-mortem, the two most marked and characteristic changes are a gangrenous enteritis, and deposits of amorphous masses of oxalate of lime in the kidneys. This latter change is not always present, but when it does occur it is said to be absolutely pathognomonic of mercurial poisoning.

Occasional fatal mercurial poisoning from sublimate washes and dressings is thus established beyond doubt. But it will be noted that in the majority of cases the solutions used were strong, *e.g.*, 1 to 1,000, or even 1 to 750. Such solutions are to be very carefully applied to open surfaces of the human body. With proper precautions sublimate solutions need not be regarded as dangerous. They may have killed tens, but they have saved thousands.

ENTRANCE EXAMINATIONS FOR MEDICAL COLLEGES.

ONE at least of our leading medical colleges has finally arrived at that point of worldly prosperity when it is able to seriously consider the subject of the elevation of the

standard of medical education. It is universally conceded that in the line of such elevation lie entrance examinations and a graded course of instruction. The former is, we think, of more importance, and is the initial step in the whole matter. Given, then, the probability of consummation of this end, so long hoped for in New York, the question arises, what should be the ground covered by such examinations. In other words, what is the ideal preparation for medical study.

We have to guide us in the decision the experience of other institutions, especially those which form an integral part of a university system. At Yale, for instance, the requirements are algebra to quadratics, Euclid two books, the metric system, and elementary physics. The examinations are all conducted in writing, and the papers handed in are regarded as a test of the candidates' attainments in grammar, spelling, and construction. At Harvard the requirements are that "a student shall pass a satisfactory examination in English, Latin, Physics, and some one of the electives, Botany, French, German, elementary algebra, or plane geometry." In both these institutions, as well as in others, where entrance examinations are required, a candidate is excused from competing if he can present a degree in Letters or Science from some recognized literary institution, or a certificate of entrance to some one of the larger colleges.

This whole subject has been quite thoroughly discussed in a recent address before the Massachusetts Medical Society by Dr. Hodges, of Boston. His criticism of the present methods is seen in the following words: Commenting upon the Harvard requirements, he says that if instead of this a knowledge was alone demanded of the comprehension of those principles "which govern the action of living things, and which are the substrata of human anatomy and pathology, a great gain would be made." He asserts that no field offers a wider scope for the application of various accomplishments than does medicine, and that what we need is men of mental energy who have had their preliminary training in those studies which encourage precision, and which lead to the development of our tactile, visual, and auditory senses.

Coincident with this idea are the views recently expressed in England at a meeting of the General Council of Medical Education and Registration. A special committee reported that the subjects for preliminary examination should include elementary mechanics of solids, and that the subject of hydrostatics should also receive attention. Anyone who has seen the average student wrestle with the problem of vascular pressure will not regard the last bit of advice as at all out of place.

Coming to the requirements suitable for a New York school, we should include some knowledge of Latin. This is pre-eminently the language of nomenclature. More recent derivations from other languages can generally be traced back to this one. The requirements in physics and mathematics as expressed in either of the schedules previously mentioned seem to us sufficient. Acquaintance with French or German, while vastly increasing one's acquaintance with the literature of the profession, cannot be regarded as absolutely necessary. Not out of place would be moderate requirements in those sciences which especially involve the doctrines of classification—as botany, natural history, and chemistry. Dr. Hodges places especial emphasis on biology and elementary physiology. They are most valuable preliminaries, and an accurate presentation of their principles necessitates no mean knowledge of English. Of course the requirements could not include simple mechanical drawing, but we regard it as a very decided help to the study of anatomy, and an accomplishment well worthy of cultivation by an aspirant for medical honors.

A NEW [illegible]

We are glad to chronicle the establishment of an institution distinctively for convalescents. A small institution has recently been opened by one of the sisterhoods of the Protestant Episcopal Church, near Stuyvesant Square. It is intended to receive those who are well enough to leave the large general hospitals, but who are not yet able to go to work. Working women needing rest, food, and possibly slight medical attention, will also be admitted. Those who pay for themselves will be charged six dollars per week. The principal support, however, must come from annual subscriptions and donations. An annual subscription entitles the contributor to one letter of admission, available for the current year, which can be given to any eligible patient, and will entitle the latter to a fortnight's stay in the Hospital. The name of the new institution is St. Andrew's Convalescent Hospital, and it is situated on East Sixteenth Street. The house of the sisterhood is at No. 233 East Seventeenth Street.

It is evident to anyone familiar with the hospitals of New York that our great present need is institutions similar to the foregoing. We have accommodation for all acute sickness, but the convalescents would be restored to health much faster if they could be conveyed to sanitariums instead of remaining in hospital. We need also a large institution for phthisis patients. Nearly every hospital now has its quota. They are treated in a routine manner, with cod-liver oil and cough-mixtures, while very little care is taken to study each case individually. A case of phthisis is usually voted a bore unless the chest is a museum of physical signs, when some interest is taken in it. If all these cases, or a large number of them, could be grouped in one institution, a more systematic study could be made of the clinical aspects of the disease. We have nothing in this country at all comparable to the Cousumptives' Home at Brompton, on the other side. Here is another opportunity for the charitably disposed.

CAN SYPHILIS BE TRANSMITTED TO ANIMALS?

One of the chief obstacles in the way of a better comprehension of the nature and pathogenesis of syphilis has hitherto been the impossibility of studying the disease otherwise than as it occurs in the human subject. Numerous attempts have been made to inoculate the lower animals, but without success, as they seem not to be susceptible to the action of the syphilitic virus. This fact has been made use of as an argument by divines and others, who maintain that the disease is a scourge sent to man in punishment for his sins; but it has been a source of discouragement and regret to those who seek to find out rather what syphilis is than why it is.

It is not beyond the range of possibility, however, that we may yet find some animal which shares with us the unenviable susceptibility to this affection. Dr. Sabater y Casals, in an article in the *Gaceta Médica Catalana* of May 15, 1886, says that he has seen two dogs, inoculated with the syphilitic virus, which presented symptoms very closely resembling, if not actually those of, the disease in question. There were the indurated ulcer at the seat of inoculation, the exanthem, the glandular enlargement, and, in one case, an almost unmistakably syphilitic affection of the nail. The differences between the symptoms exhibited by the dogs and those of syphilis in the human subject were only such as might be expected to exist, and as are seen, for instance, in malignant pustule when it attacks different species. Two cases are not sufficient to prove anything, but they serve to suggest the possibility that syphilis may be transmitted to some of the lower animals.

THE MORTALITY AMONG PHYSICIANS.

It is a well-established fact that the mortality among medical men is much above the average of that incident to most occupations. Dr. W. Ogle recently presented some interesting statistics bearing upon this point at a meeting of the Royal Medical and Chirurgical Society of London. He found that the mortality among English physicians for the three years from 1880 to 1882 was 25.53 per mille, while that of barristers was 20.23, and of clergymen 15.93. As might be expected, the infectious diseases found more victims in the medical profession than in other callings. Scarlet fever killed 59 out of a million physicians, while of adults in other pursuits only 16.01 died of this disease. The figures for diphtheria were 59 and 14 respectively, for erysipelas 172 and 136, and for typhoid fever 311 and 238. It is instructive to note, however, that the mortality from smallpox among physicians was many times below the average for non-medical adults, due, without doubt, to the greater care that medical men take to insure perfect protection by repeated vaccination. Pulmonary diseases are apparently less fatal to physicians than to others, for Dr. Ogle found that the number of deaths from this cause was twenty-seven per cent. below the average for the general adult population.

It is rather humiliating to find that deaths from alcoholism are more frequent among the members of the medical profession than among those of other occupations. Suicides are also more frequent, and what is worse, it is stated that medicine is the only calling among the members of which there is a steady yearly increase in the number of cases of self-destruction. It would be interesting to learn the cause of this increase, and whether it is dependent upon overcrowding of the profession and the consequent more bitter struggle for the means of subsistence. We suspect that the prevalence of both suicide and alcoholism may be traced, partly at least, to this cause.

A SPONTANEOUS CURE OF HERNIA.

The radical cure of hernia is a subject which has for centuries engaged the attention of surgeons, and the possibility of which is even yet, despite the great advances made in recent years, doubted by some. Undoubted cures are often obtained by Heaton's and other methods, yet spontaneous cures without operation sometimes occur, and perhaps more frequently than is generally supposed.

Several writers in *L' Union Médicale* have recently reported cases of this kind, some of which were a source of anything but joy and congratulation to the medical attendant. One of these is reported by Dr. L. Michalski. He was called to see a young man, who was said to have strained himself in dancing, and found a rather large inguinal hernia on the left side. He was unable to reduce it on the first trial, and three seances of taxis were required before the intestine was wholly replaced. Excepting this difficulty in reduction, the hernia presented nothing worthy of note, and the patient was dismissed wearing a truss. Two and a half years later the man returned to request a certificate in order that he might be relieved from serving in the army. Dr. Michalski thought a certificate unnecessary, but as he remembered the case well, gave it, neglecting to examine the patient again. At the medical examination, however, it was asserted that the man was sound, and fit for military duty. He then abandoned his truss and served out his term, without having any return of the hernia at the end of ten years.

Such a certificate, given in perfect good faith, might well have brought considerable trouble to the writer had he been unknown to the medical examiners, or had collusion with the conscript been suspected. The case is instructive, showing, as it does, that a hernia may not return after its reduction. And the possibility of such an occurrence should be borne in mind, not only by the surgeon in attendance, but also by those who may see the case afterward, and who may be led unjustly to accuse the former attendant of ignorance or something worse.

THE CAUSE OF CIRRHOSIS OF THE LIVER.

The cause of cirrhosis of the liver, of the common type, is uniformly ascribed to the use of alcohol, and the disease even has the name of gin-drinker's liver. In Germany one-third of the cases are attributed to brandy drinking (Thierfelder), while in England gin and brandy together share the opprobrium of setting up the disease.

While alcohol is always asserted to be the great cause, it is alcohol in the form of strong spirits which is believed to be most mischievous. For this reason the disease is said to be most common in North Germany and England, and less common in wine-drinking countries.

It is possible, however, that we may have to amend in some respects these conventional views as to the origin of cirrhosis of the liver. The disease was well known to the ancients long before distilled liquors were introduced. It occurs to a large extent in women, who comparatively rarely indulge in excesses with distilled liquors. In some years the number of deaths from hepatic cirrhosis, in this city, has been almost equally divided between males and females (105 and 93). The disease in this city has also increased in the past ten years about one-third, *i.e.*, from 0.6 per 1,000 deaths to over 0.9 per 1,000, while the increase in consumption of alcohol has been in the direction of fermented, not distilled, liquors.

In a recent article on "Alcoholic Cirrhosis," by M. Lancereaux, of Paris, who is well known for his studies regarding the effects of alcohol, he makes some statements which are likely to be regarded as heterodox. Alcoholic cirrhosis of the liver, he says, is not increasing in frequency (in France), while alcoholism is doing so. This is because alcoholism is due to the abuse of distilled liquors, cordials, etc. (an abuse which is increasing), while cirrhosis is due to an abuse of wine (an abuse which is not increasing). "Wine," continues M. Lancereaux, "is the most common and, perhaps, the only cause of the cirrhosis of drinkers, in France, at least." The proofs of this are: First, that cirrhosis is relatively frequent in wine-drinking countries, where alcoholism is rare; second, the almost absolute uniformity of a history of vinous excess in cirrhotics.

M. Lancereaux's statistics include 95 cases, all observed with the utmost care. These showed simple excess in the use of wine in 24 cases; excess in the use of wine and brandy, 63 cases; excess in the use of wine and beer, 1 case; excess in the use of wine and cider, 1; excess in the use of brandy, rum, or absinthe, 6.

The amount of wine used daily varied from two to six litres, the average being about three litres. The wine used was generally of a very cheap quality, and was mostly red wine. The other data regarding cirrhosis agree in the main with those of other observers. The age of greatest frequency was between forty and fifty, and there were 18 women to 77 men.

M. Lancereaux's statistics are most interesting in their relation to the subject of causation. His conclusions are certainly weakened by the fact that a large proportion of his cases (sixty-five) indulged excessively not only in wine but in brandy, and he does not say that the latter drink was not, after all, the favorite one. His claim, however, that cirrhosis is most common in wine-drinking countries is certainly worthy of attention, as it is quite opposed to current views. Thus Dr. Bartholomew, in his article upon Cirrhosis of the Liver in Pepper's "System of Medicine," states that the disease is not common in wine-drinking countries. In support of Lancereaux, it must be admitted that French pathologists were among the earliest and most active contributors to our knowledge of this disease.

A REVOLUTION IN THE AFTER-TREATMENT OF CATARACT AND IRIDECTOMY OPERATIONS.

We believe that it is only ophthalmic surgeons who, after operating, submit their patients to the horrors of the dungeon, obliging them, in the language of the contemporaneous drama,

"To lie in sodden silence in a dark, damp dock."

But there have now arisen certain gentlemen who have the boldness to decry this practice as unnecessary, and even hurtful. At the St. Louis meeting of the American Medical Association, Dr. Michel advocated the plan of using a light bandage to the eyes after cataract operations and iridectomies, and allowing the patients to be in a lighted room, where friends can come and read to them. Dr. Michel's plan was not favorably received at St. Louis, but it has been tried by Dr. Chisolm, of Baltimore, who reports fourteen cataracts and four iridectomies treated in this way. The method in detail is simply this: After the removal of a cataract or the performance of an iridectomy, the eyes if a cataract, the eye if an iridectomy, is closed in its normal position and a bit of isinglass plaster, about two and a half inches long by one inch wide, is then rendered flaccid by immersion in some germicide fluid and is neatly applied to the surface of the closed lids. When dried this forms a close, firm band. The patient is then allowed the full liberty of his room. In every case thus far operated upon by Dr. Chisolm the results have been uniformly good, and he has consequently abandoned the old method.

News of the Week.

The International Medical Congress.—The *Scottish Medical Journal* publishes editorially a letter from an American correspondent, concerning the International Medical Congress. The writer, after giving an account of the trouble, says:

"This democratic spirit has had full play, with the sad effect of alienating a majority of the men who, to an independent onlooker, must be regarded as essentially the representative men of the profession. It is useless for the present organizers of the Congress to comfort themselves with the thought that they have filled the places of the 'irreconcilables' with men equally good for Congress purposes. A comparison of the officers of sections named by the original committee with those finally selected by the present committee affords a most painful contrast; and the notable absence in every section of the men most prominent in American medicine will strike even the casual observer. The great cities of the East, Boston, New York, Philadelphia, and Baltimore, will not be represented scientifically, for, with two or three exceptions, the leaders and workers will hold aloof. Austin Flint, Jr., Lewis Sayre, and Lewis Smith, of New York, are the only men of first rank to represent the East in the present Congress. A list of those who are 'out' will embrace the men best known in Europe as American writers and workers, such as Bigelow, Bowditch (H. J.), Bowditch (H. P.), Holmes, Warren, Chadwick, and Homans, of Boston; Delafield, Draper, Dalton, Loomis, Seguin, Sands, Markoe, Jacobi, Lusk, Barker, and Lefferts, of New York; Stillé, Da Costa, Pepper, Bartholow, Goodell, Gross, Weir Mitchell, Agnew, Ashhurst, Wood, and Leidy, of Philadelphia. It has been a struggle of the West and South against the North and East, and the West and South have won."

Mississippi Valley Medical Society.—A partial programme of the Twelfth Annual Session of this Society, to be held at Quincy, Ill., July 13, 14, and 15, 1886, is as follows: Surgical Treatment of Hypertrophic Nasal Catarrh, W. C. Pipino, M.D., Des Moines, Ia.; A Case of Obstruction of the Bowel, Thomas D. Washburn, M.D., Hillsboro', Ill.; The Discovery of Anæsthetics, H. N. Lyman, M.D., Chicago, Ill.; Albuminuria and Disease of the Kidney, B. M. Griffith, M.D., Springfield, Ill.; Is the Pneumatic Cabinet a Practical Failure? H. J. B. Wright, M.D., Olney, Ill.; The Therapeutics of Bismuth and Asclepia Tuberosa, Amos Sawyer, M.D., Hillsboro', Ill.; Enterocolitis of Children, A. J. Steel, M.D., Charlestown, Ill.; Eti-

ology of Chorea, Frank R. Fry, M.D., St. Louis, Mo.; Neuro-retinitis Albuminurica, William Cheatham, M.D., Louisville, Ky.; Heart Failure, W. W. Fuque, M.D., Memphis, Tenn.; Intestinal Obstruction, J. H. Luckett, M.D., Owensboro', Ky.; Peritonitis, Andrew Seargent, M.D., Hopkinsville, Ky.; Operative Interference in Inflammation of the Knee-joint, A. R. Jenkins, M.D., Henderson, Ky.; Yellow Fever in Brazil, Preventive Vaccination, Frinxe's Method, Personal Observation on the Ground; Beriberi on the Coast of Brazil, Personal Observations, both by Horace M. Lane, M.D., Brazil, S. A.; A paper, by William Porter, M.D., St. Louis, Mo.; Surgical Treatment of Pleuritic Effusions, William A. Byrd, M.D., Quincy, Ill.; Artificial Alimentation, I. N. Love, M.D., St. Louis, Mo. Those in attendance will be returned at one-third fare by showing a certificate of having paid full fare coming. This is not a delegate body, but admits to membership, simply by registration, all practitioners in good standing. A cordial invitation to be present is extended to all members of the profession. Address Joseph Robbins, M.D., Chairman Committee of Arrangements, Quincy, Ill.

A Warning.—The Charity Organization Society begs to suggest to the physicians of New York City great caution in responding to appeals for assistance from one "Dr. Watson," who claims to have been a victim of the "Oregon" disaster. He is apparently near forty years old, tall, has thin face and dark complexion, Irish cast of features, and slight brogue. He exhibits a forged letter and gives a false address. He carries a list of several prominent physicians who appear to have given him sums of money.

The American Association for the Advancement of Science will hold its Thirty-fifth Annual Meeting at Buffalo, N. Y., beginning August 18th.

The Alabama Medical and Surgical Journal is the title of a new medical monthly, edited by Drs. J. D. S. Davis and W. E. B. Davis, of Birmingham, Ala. The first issue contains much interesting material, and shows excellent judgment in its arrangement. We are glad to see new journals starting in the Southern States. They are indispensable in developing the common interests of the medical profession of the States, as witness the good work done in Texas, Florida, and other localities.

Dr. Hunter P. Cooper, of Atlanta, Ga., lately of this city, has been made an adjunct professor of chemistry in the Atlanta Medical College. We congratulate the doctor and the College.

Medical Professorships.—Dr. L. Kirn, Extraordinary Professor in Freiburg, who had been elected by the medical faculty of Dorpat to the Professorship of Psychiatry, with charge of the clinic for mental diseases, has declined the invitation, preferring to remain in Freiburg. This can hardly be considered surprising, says *The Lancet*, if the rule which exists in Russian universities compelling professors to submit their lectures in manuscript to a police official several months before delivery is enforced in Dorpat, or at least in the medical faculty. There is, however, no doubt that professorships in Russian universities are not very comfortable posts at present, and that is the secret of numerous resignations which are so constantly being announced.

There is a Prospect of a new medical college being started at Colfax, Ia.

A Sensational Statement about Perambulators.—A somewhat sensational statement has been arrived at by the medical officer of the rural sanitary district of Hexham, in Northumberland, England, who, in explanation of the fact that 124 out of every 1,000 children in his district die before attaining the age of twelve months, asserts the mortality to arise from exposure of children in perambulators.

American Neurological Association.—The Council of the American Neurological Association announce that the regular business meeting of the Association will be held at Long Branch, N. J., on Wednesday, Thursday, and Friday, July 21, 22, and 23, 1886. Two daily sessions will be held, one in the morning from 10 A.M. to 1 P.M., and one in the afternoon from 3 to 5 P.M. A suitable room has been engaged at the Howland House, where the meeting will be held. A number of interesting papers have already been contributed, thus insuring the success of the meeting.

The International Medical Congress.—A committee of twenty-five members has been appointed in Vienna for the purpose of making arrangements for the forthcoming International Congress to be held here in 1887.

President Cleveland has consented to be one of the patrons of the Congress.

Suppression of Pain in Labor by the Local Application of Cocaine.—Dr. E. L. Partridge, of this city, writes: "Your editorial upon the 'Suppression of Pain in Labor by the Local Application of Cocaine' prompts me to a brief expression of views which, in the main, *dissent* from those quoted and endorsed (though not with great strength) by your journal. My experience is *wholly opposed* to the view that any relief can be obtained by the local use of cocaine previous to the passage of the head from the uterus. My view is based upon hospital observations and those of private practice which I have made. From a theoretical standpoint, I would also differ from the views quoted, calling attention to the fact that the pains of labor, up to the time of complete dilatation of the cervix, are in the ilio-inguinal and ilio-hypogastric nerves (belonging to the cerebro-spinal system), and that these pains are transmitted telegraphically, so to speak, by the irritation of the nerves supplied to the uterus and cervix (which belong chiefly to the sympathetic system). Now, it seems to me that there is one settled fact relating to the benefits conferred by the local use of cocaine, which is, that to secure them it is necessary to employ the agent directly to the nerves which have, or are to give, the sensation of pain, or to the immediate nerve-trunks, or nerve-centres. No applications to the cervix can accomplish this. I have never employed cocaine after the escape of the head into the vagina, nor shall I do so, for I am sure that chloroform can afford much more satisfactory moderation of pain; and in all cases where comparison might be instituted, the latter agent, intelligently administered, will be free from danger. I may add that I never use chloroform during the first stage of labor, relying upon chloral, or, rarely, morphine when any measures are required."

INDIANA STATE MEDICAL SOCIETY.—The following officers have been elected for the ensuing year: G. W. H. Kemper, M.D., President, Muncie; W. V. Wiles, M.D., Vice-President, Spencer; E. S. Elder, M.D., Secretary, Indianapolis; J. McLean Moulder, M.D., Assistant Secretary, Kokomo; C. B. Higgins, M.D., Treasurer, Peru.

THE INCREASE OF PHYSICIANS in New York and Brooklyn during the last three years is shown in the following table:

Years.	New York.	Brooklyn.	New York, Jersey, Connecticut.
1884-5	128	[illegible]	[illegible]
1885-6	113	57	[illegible]
1886-7	24	11	[illegible]

The decrease in the annual increment of New York City would be striking if the figures were trustworthy.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION has had an excellent record and has taken a place among the leading societies of the country. In the last year or two it is reported to have dropped off a little in activity, and at the last meeting of the American Medical Association its delegates were not admitted because the society had never adopted the Code. We learn that the next meeting at Quincy, Ill., promises to be a most successful one.

THE PASTEUR INSTITUTE OF THIS CITY has got to work, and a boy, bitten some weeks ago "by a dog supposed to be mad," has been inoculated *secundum artem*.

PROBABLY AN IMPOSTOR.—We think it just to warn the members of the profession in New York against a man who says he is a physician from the West, passing through the city on his way to visit his dying mother. He called on several physicians on Monday evening to beg a loan on a check, saying that he had lost his pocket-book, containing a sum of money and some certified checks, and that it was absolutely necessary for him to leave on the 11.30 P.M. train in order to see his mother alive. On Tuesday evening he called on others, alleging that he must leave the city on the nine o'clock train. Our suspicions may possibly be unjust to an unfortunate man, but it will do no harm to warn physicians against loaning money to any stranger who can give no better security than a check on an out-of-town bank.

HEN'S BLOOD IN THE TREATMENT OF ANÆMIA AND CHLOROSIS.—It is not easy to take seriously the claim of Dr. Francesco Brancaccio, of Naples, that the blood of the domestic fowl is an efficient remedy in pernicious and simple anæmia and chlorosis. Dr. Brancaccio, however, reports in detail eight cases to substantiate his opinion, two of these being of primary anæmia. All were first thoroughly treated with the ordinary remedies—iron, arsenic, quinine, and oxygen, but with no success. Hen's blood was then given in doses ranging from eighty to two hundred grammes daily. Examinations with the globulimeter were made to determine the diagnosis and progress of the disorder.

CREDIT TO WHOM CREDIT IS DUE.—The *Weekly Medical Review* is a wide-awake and progressive journal, but it makes a mistake in crediting the *Therapeutic Gazette* with an article on the "Diagnostic Test for Typhoid Fever," which appeared in the editorial columns of THE RECORD of May 22d.

CHRONIC DEFORMING RHEUMATISM—RHEUMATOID ARTHRITIS.—Many authors have of late years considered this to be a neuro trophic disease. Now, MM. Pitres and Vaillard announce that in two typical cases they found extensive and profound multiple degenerative neuritis.

KAVA KAVA IN GONORRHŒA.—Dr. H. C. Rogers, of Brooklyn, N. Y., writes: "I beg to avail myself of the medium of your journal to answer various letters addressed to me by gentlemen in reference to my paper 'On the Use of the Fluid Extract of Kava Kava in Gonorrhœa,' published in THE MEDICAL RECORD of May 8, 1886. I do not think that kava kava controls the disease as quickly as cubebs or copaiva, when they are taken at regular intervals for several successive weeks. There are few patients, however, who can take these medicines regularly, for even a brief period, without having their stomachs rebel, and thus becoming victims to nausea, eructations, vomiting, and anorexia. The consequence is that the medicine is taken very irregularly, or not at all. In nearly two hundred cases where I have used the fluid extract of kava kava, I have not seen or heard of a single case in which the medicine produced any unpleasant stomach symptoms, nor am I aware of any instance where it impaired the appetite. In fact, many of the patients informed me that it increased their desire for food. I wish to add that the cases mentioned in my paper as treated 'at the hospital' were of those in the out-door department of the hospital, as distinguished from those treated in private practice. In regard to both these classes of patients, I venture the opinion that the average duration of the disease would have been somewhat less had my instruction respecting the disuse of alcoholics been more strictly observed."

AT A DINNER GIVEN TO DR. WILLIAM H. PANCOAST on his retirement from the Chair of Anatomy in Jefferson College, he said that he had accepted the Chair of General Descriptive and Surgical Anatomy and Clinical Surgery, in the Medico-Chirurgical College of Philadelphia, an institution which is working out the problem of higher medical education by establishing preliminary examinations and a three years' graded course. This college, he said, had just purchased a commodious property near the centre of the city, and when the alterations were completed the Philadelphia Dental College, the Charity Hospital for Skin-diseases, and the School of Anatomy would unite with the Medico-Chirurgical Hospital and College in furthering the great and important work in which they are engaged. The dinner is described as beyond anything "since the dinner given to Professor Gross." We are at a loss to understand why among the guests there are mentioned none of the Jefferson College Faculty, or so few of the names of Philadelphia's well-known physicians.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-first Annual Session, held at Winchester, Ky., June 23, 24, and 25, 1886.

WEDNESDAY, JUNE 23D.—FIRST DAY.—MORNING SESSION.

THE meeting was called to order by the President, J. P. THOMAS, M.D., of Pembroke. The minutes were read and the reports of the Committee on Credentials, the Committee of Arrangements, the Librarian, Secretary, and Treasurer, received and adopted. The amount in the treasury was $183.60. The report on necrology included the names of Drs. R. W. Dunlap and A. R. McKee, both of Danville.

Then followed

THE PRESIDENT'S ADDRESS.

He took for his subject "The Best Doctor for the Commonwealth, or the Doctor as an Officer of State." After a few remarks laudatory of the Society and its work he launched into the question of a higher medical education. He referred to the poor results attained in his own State, but was gratified at the work done in Alabama, Illinois, North Carolina, and Virginia. He would not compel, or even advise, the embryo doctor to waste his time in the

STUDY OF THE CLASSICS,

but endeavor before entering upon the study of medicine, to get a good English education, supplemented with all the knowledge of the natural sciences possible, especially chemistry and physiology.

The National Government is very strict in the selection of her medical officers. Why? Because she cannot afford to place incompetent medical men in charge of the lives of her soldiers and sailors. Why not the same solicitude as to her citizens? There are stringent rules as to the government of railroad engineers, because human life is constantly dependent upon their skill. Why not as strict laws regarding the education and training of medical men and women, who are also the guardians of the lives of the people? The present law in this State is utterly useless and inoperative and should be erased from the statutes.

The only way to get

PROFESSIONAL AGGRANDISEMENT

is by the co-operation and zeal of its members; whatever the doctors unitedly want they can get. Our greatest enemies are in our own ranks and camp. Why is it that our Legislature constantly shows more willingness to appropriate sums sufficient to stamp out disease in animals than to protect the health and prevent disease in the people. Two thousand five hundred dollars per annum is reluctantly granted our State Board of Health to crush out and prevent epidemic disease among the people of the entire State, and $6,000 voted from the treasury to stamp out a single disease in a single locality and among a single herd. The wonder is that the Kentucky State Board of Health has been able to accomplish what it has with the amount of money at its disposal.

DR. M. F. COOMES, of Louisville, then made the report on "Ophthalmology."

DR. J. G. CARPENTER, of Stanford, reported a case of

ULCERATION OF THE SIGMOID FLEXURE OF THE COLON.

It occurred as the sequel of dysentery. The patient was a male, aged twenty, American, good family history and constitution. Case seven months in duration. He elevated the trunk to seventy or eighty degrees, retracted the anus with a Sims speculum, inflated the bowel, used at different times sunlight, lamplight, and the electric lamp, and laryngoscopic mirror. He could see within the bowel twelve inches by measurement. To cleanse the bowel he used water as hot as could be borne. On looking up the literature the reporter found that Sims had reported a similar case in "Bryant's Surgery." This hot water was used twice daily for cleansing and antiphlogistic purposes. Nitrate of silver was applied every six to eight days, of a strength of forty to sixty grains per ounce.

DR. PINCKNEY THOMPSON, of Henderson, thought the claims of the reporter impossible.

DR. W. H. WATHEN, of Louisville, thought it could be done.

DR. WILLIAM BAILEY, of Louisville, thought that the reporter had been "able to see farther into the subject" than anyone else.

Adjourned till 8 P.M.

EVENING SESSION.

DR. E. WILLIAMS, of Cincinnati, read one of his customary witty papers on

THE UNCOMMONNESS OF COMMON POLITENESS.

Why is politeness like small-pox and scarlet fever? Because it is contagious. Non-contagious politeness is malignant. Like common sense, common politeness is a scarce thing in the market. The address was received with laughter, applause, and a vote of thanks.

DR. D. S. REYNOLDS, of Louisville, made

THE REPORT ON PATHOLOGY.

In considering this new science which we call pathology he wished to instil a sort of scepticism which rejects as facts everything which cannot be clearly demonstrated. He stood to affirm that

TUBERCULOSIS IS AN INFECTIOUS AND CONTAGIOUS DISEASE,

disputed by no one who has undertaken experimental investigations. Heredity, he thought, had nothing to do with it. He reported cases where he had found tuberculous bacilli in catarrh of the nose and ear. He reported, also, his examination of water from typhoid-fever wells in Louisville, and exhibited microscopical specimens.

DR. F. C. WILSON, of Louisville, thought heredity had much to do with the production of tuberculosis. He thought many cases could be traced to contact.

DR. PINCKNEY THOMPSON, of Henderson, thought that the specific cause of typhoid fever had not been discovered. In the city it is impossible to find a case which cannot be traced to some other case. In the country he had seen typhoid fever exist where it was impossible to have come from another case.

DR. WILLIAM BAILEY, of Louisville, objected to some of the positive assertions made in the paper. To him

THE GERM THEORY IS THE MOST PLAUSIBLE ONE.

Most theories must, as yet, be held *sub judice*. He thought we could not dismiss heredity with a wave of the hand, and was sure that we could not make the insurance companies dismiss heredity from their questions.

DR. J. T. WHITTAKER, of Cincinnati, said that in discussing the acquisition or

HEREDITY OF TUBERCULOSIS

we should inquire, Is there not more than one element in this disease? Disease requires not only seed, but soil. We might inherit the soil in which the disease would develop. The whole question hinges upon inoculability. This is proven. Introduce bacteria into the eye and you can see every stage of its development. If the disease is inoculable it must be contagious. Thirty per cent. of us die of it. Most of us recover, as is shown by the presence of tubercles post-mortem. The seed had not fallen in suitable ground. There is no disinfectant like ventilation. We use horrible disinfectants, are [illegible] obliged to open the windows, and thus get ventila-

tion. We should destroy the sputum by burning, or expectorate into a jar containing bichloride solution. In Germany they separate tuberculosis cases from others. Here there is a great hue and cry if small-box is exposed in the ward. Yet tuberculosis is so exposed every day. It is a question whether a child ever inherits any disease from its father. Pneumatic differentiation, he thought, had entirely changed the prognosis of tuberculosis. The ventilation of the lungs is the great thing. He did not wish to be quoted as saying that this was a sure cure for consumption. The best method we had was to secure ventilation of the lungs. No spray will destroy all of the bacilli. It cannot reach them all. This pneumatic treatment is not as good as a mountain-top, yet it is the next best thing. I do not think everyone who has tuberculosis must die.

Dr. J. N. McCormac, of Bowling Green, thought that if it was true that micro-organisms are given off which are dangerous to persons in the room, we are guilty of criminal neglect in not acting accordingly. He spoke of the action of the National Board of Health at its recent meeting; spoke in favor of the disinfecting of typhoid-fever stools, and said there was no one here who did not believe that THE FIRST CASE OF CHOLERA, if found, could be stamped out. He referred to Sternberg's investigations of disinfectants, which he said were only deodorizers and delusions. He favored the use of the bichloride.

Dr. E. R. Palmer, of Louisville, thought that the feature most worthy of discussion was that bearing on heredity. He thought the pendulum had swung too far. He agreed with Dr. Whittaker that the father could not transmit a specific taint. He might transmit an inherent weakness. We are probably all constantly inhaling tuberculous germs, but they do not find the proper soil. The father may transmit to his offspring certain conditions of body, which may be followed by tuberculosis. He thinks, with Dr. Otis, that unless the father syphilizes the mother, he does not syphilize the offspring.

Dr. T. A. Reamy, of Cincinnati: So long as the wife is not pregnant she is safe, unless mucous patches or sores are present. He had known the father to propagate the disease ten years after the disappearance of all symptoms.

Dr. D. S. Reynolds, in closing the discussion, said he assumed that no one except those gentlemen who have not undertaken investigation will assume that tuberculosis is due to one cause. It is well known that many persons inherit so-called strumous diathesis. The point in relation to the transmission of tuberculosis by the father has been settled. The father cannot transmit to the offspring anything except tendency to form. He cannot transmit direct disease. The principal point is, What shall be done to prevent this disease? Answer, The destruction of the media by which it is transmitted.

The Committee on Nominations reported the following

NAMES OF OFFICERS

for the ensuing year, who, on motion, were declared elected:

Dr. W. H. Wathen, of Louisville, President; Dr. J. M. Harwood, of Shelbyville, Senior Vice-President; Dr. J. H. McKinley, of Winchester, Junior Vice-President; Dr. J. Steel Bailey, of Stanford, Permanent Secretary; Dr. F. C. Simpson, of Bardstown, Assistant Secretary; Dr. Edward Alcorn, of Hustonville, Treasurer; Dr. J. G. Brooks, of Paducah, Chairman Committee of Arrangements; Drs. D. S. Reynolds, of Louisville, A. W. Willis, of Winchester, A. Sargent, of Hopkinsville, J. H. Letcher, of Henderson, W. E. Poynter, of Midway, J. W. Harwood, of Shelbyville, Board of Censors.

The next place of meeting will be Paducah, the third Wednesday in June.

The newly elected President was conducted to the chair, and made a few remarks, after which the Society adjourned till 8 A.M.

THURSDAY, JUNE 24TH—SECOND DAY—MORNING SESSION.

Dr. J. N. Irvin, of Louisville, made the

REPORT ON THE PROGRESS OF THE PRACTICE OF MEDICINE.

He discussed tricuspid regurgitation, tubing of the larynx for croup and diphtheria, intra-uterine injection for the purpose of producing premature delivery, fatal results of these injections, the mechanical theory of inflammation, and the importance of inflammation producing the pyrexia of many fevers.

Dr. J. T. Whittaker, of Cincinnati, thought that tricuspid regurgitation reveals itself by a bruit a considerable time before pulsation in the neck is observed. The earliest sign is an increasing tension of the radial artery and hypertrophy of the left heart.

INTUBATION OF THE LARYNX

has been pointed out as feasible in the treatment of diphtheria and croup. My experience has been inevitable failure. I resort to tracheotomy. This is done so easily and readily by the surgeon now. He dwelt especially on that class of cases having crowing respiration. Rickets, he said, were very much more common than generally supposed. This spasm of the larynx calls attention to rickets. Diarrhœa is most common in these children, alternating with constipation, often sweating and restlessness make up the diagnosis in the earlier stage of the disease, after which come the enlarged ends of bone, the roseola, the deformities of the pelvic, and other bones. We should treat rickets early. It needs only treatment to be relieved. Cod-liver oil and phosphorus are the remedies. Write as follows: Phosphorus, one-seventh grain; emulsion of cod-liver oil and gum-arabic, two ounces. The laryngismus stridulus disappears with the disease.

As to pyrexia—we are about to undergo great change in the treatment of fevers. We have been taught to subdue fevers at all cost. This view is changing. It is pretty well settled that typhoid fever is due to a specific cause. It would seem that nature's method of attenuating virus is by elevation of temperature. It may be that we are taking away this very method of nature to relieve herself of trouble, and we are not justified in resorting to extreme methods of antipyresis.

Dr. William Bailey, of Louisville, thought that intubation of the larynx had proven successful in the hands of those who had used it. He thought croupous pneumonia not simply an essential fever, but there was something back of that. He thought these fevers quite different from those of boils and abscesses. They take a typical course.

Dr. J. A. Larrabee, of Louisville, spoke

REGARDING RICKETS.

He thought the prevalence of the disease had increased. The trouble is, it is not recognized until the elaborations and distortions show that the disease *was* rickets, not *is* rickets. So many children are thrown upon the world, like Romulus and Remus, to be brought up on the modern wolf—the feeding-bottle. The origin of the disease he believed to be in the intestinal canal. Phosphorus is of less use than the care of the intestinal canal. Hygienic surroundings are all-important. The principal means of treatment are not found in the apothecary's shop. Fresh air, food, and exercise are required. This is one of the most important diseases in infantile practice.

As to intubation, I have been enlightened. I had been somewhat drawn toward it, but had no practical experience.

Dr. M. T. Scott, of Lexington, made the

REPORT ON THE PROGRESS OF SURGERY.

He first discussed abdominal surgery and thought true conservatism consisted in saving the lives of our patients.

He spoke laudatorily of Kentucky's patron saint, McDowel, and considered his boldness, sagacity, and success no less worthy of admiration and praise than the 135 consecutive, complete, and successful ovariotomies of Tait. He next considered the advisability of abdominal section for traumatic peritonitis. Tait, for years, has not allowed a patient to die from acute peritonitis without extending the chances of recovery offered by abdominal section. He has operated on 44 such, all but 3 recovering. Owing to modern improvements in firearms, visceral lesions will in all probability be vastly more frequent than formerly. Laparotomy for perforating wounds has the following objects: 1, To establish diagnosis; 2, to repair breaks in the continuity of the organ; 3, to arrest hemorrhage; 4, to remove extravasated and extraneous matter.

Gastrotomy as a means of removing foreign bodies and locally treating the stomach is now recognized as justifiable. He referred further to duodenostomy, surgery of the spleen, liver, gall stones, cholecystotomy, operations on the kidney, spleen, and bladder—also to the action of cocaine on the genito-urinary tract. This remedy, he thought, lessened the calibre of the urethra.

AS TO ALEXANDER'S OPERATION,

he thought that careful gynecologists would decide with Emmet that as much good can be accomplished without subjecting the patient to such questionable risks.

Dr. D. W. Yandell, of Louisville, complimented the paper highly. He found little room for discussion, but wished to speak on one point, the difference between

STAB AND SHOT WOUNDS,

of which we unfortunately see so much in Kentucky. The size of the ball is of first importance. I think Otis' statement with regard to Minié balls correct, viz., the man who gets a Minié-ball through the small intestine dies. The small six-shooter, especially the Smith & Wesson, often causes injuries which we can reach. Hence I always inquire, when called to a shot injury, was it a Smith & Wesson? The principal question is that which relates to symptoms. Shot-wounds cause more or less shock, as to the nature of the wound, the individual, and the circumstances of their occurrence. To say that in all shot-wounds which enter the belly we should open the abdomen, is a very loose statement. I would say in either shot or stab wounds, open no belly unless there are symptoms demanding it. These symptoms, if going to occur, are generally present by the time you have reached the patient. Men are not shot down by your side. In shot-wounds, unless there are symptoms on the part of the pulse or temperature that there has been injury to some viscus, I do not open the abdomen. I would make the abdominal cut large enough to see every possible danger. As to cocaine in cystitis and operations done on the urethra, I have been disappointed.

Dr. J. G. Brooks, of Paducah, reported a case of

LAPAROTOMY.

A lad, aged eleven, was stabbed in the abdomen with a Barlow knife. A large piece of intestine protruded. He was found pallid, vomiting, and nearly pulseless. On consultation it was decided to open the abdomen. The boy was thought to be dying. An incision was made in the median line; on opening the peritoneum a pint of blood spurted out. A brief search revealed a wounded vessel in the mesentery, which was tied, the cavity cleansed, the intestine washed with warm antiseptic water and returned. Brandy was given hypodermatically. No sponges were at hand. The operation was made on the bed and by lamplight. Fortunately the most elegant operations do not always result most elegantly. The third day the patient sat up, and the tenth day attended court and testified. The sixth day the sutures were removed and the wound found healed. A considerable amount of blood was allowed to remain, but was fortunately readily absorbed. The propriety of this and the propriety of keeping the stab-wound open might be questioned. Had the operation been adverse, the lawyers at trial would probably have said the doctor, not the knife, killed the boy.

Dr. J. N. McCormac, of Bowling Green, would have commended the operation had it been adverse in result. He reported a case in which, nine years ago, he had removed eleven inches of the small intestine for gangrene.

Adjourned till 2 P.M.

AFTERNOON SESSION.

Dr. D. T. Smith, of Louisville, read a paper on

SOME MOOT POINTS IN THE MECHANISM OF LABOR.

The points discussed were, the cause of head presentations, the physics of expulsion, and the mechanism of rotation. The doctor believed that the great preponderance of head presentations is induced by the effects of swimming movements upon animals in water in connection with the changes undergone by the uterus during gestation. A man in water not using the arms, but making natural movements with his legs, is drawn head foremost to the bottom. The child in the womb scarcely uses its arms, and the movements of its legs cause it to take the position head downward. In the latter months of pregnancy, the uterus being conical in the lower segment, the child is retained in that position. The animal, on the other hand, swims by its natural movements upward to the outlet. The mechanism of expulsion has for its object the changing of the uterus from the spherical to the cylindrical form, and thereby the most economical reduction of its capacity. Hence the development of the circular band of fibres around the middle of the organ and the arrangement of muscular contraction which causes the body of the parturient to curve forward. The essayist was of the opinion that the reflexes from the lower segment of the uterus are conveyed to the dorsal and abdominal muscles instead of its own muscles. He doubted if the iliac and psoas muscles are greatly contracted during labor.

In rotation he inclines to think that the fact that the face and forehead are more angular in outline and are also smoother and more easily freed from vernix, has a share in determining rotation. This condition increases on the passage of the face. This feature, the essayist suspected, might exert a very decisive influence in rotation from right to left occipito-posterior positions to occipito-anterior positions.

Dr. J. M. Harwood, of Shelbyville, read a paper on

THE THIRD STAGE OF LABOR.

In this paper he advocated the immediate removal of the placenta and recommended the same treatment in cases of retained placenta.

Dr. W. H. Wathen, of Louisville, thought this was a subject to which the physician pays too little attention, believing that nature will attend to it, and she usually will. So may an ignorant midwife in a majority of cases; yet there are others which require scientific knowledge, and without scientific knowledge children and women are permitted to die. The dangers are

HEMORRHAGE AND SEPTICÆMIA.

He considered first the question of hemorrhage. To prevent this, the moment the child is born let your hand follow down the uterus. Keep your hand over it, above the symphysis pubes, and watch that the uterus does not relax. If it is contracted, let nature have an opportunity to expel the placenta. If not, use gentle friction.

Dr. J. G. Cecil, of Louisville, did not agree with the essayist in his views as to traction on the cord. He described, minutely, Crede's method. He did not think it best to hurry too much in expressing the placenta. We owe some duty to the child. It has been proven that

the early tying of the cord robs the child of from one to three ounces of blood. As one-ninth of the child is blood, and if the child weighed seven pounds, this amount —12.33 ounces—would be felt. He believed Crede's method the best method to prevent hemorrhage. He would defer separating the placenta till pulsation had ceased.

Dr. Turner Anderson, of Louisville, could not conceive of anything more hurtful than this

TELEGRAPHIC METHOD OF DELIVERING THE PLACENTA.

He thought that all practitioners, as they grow older, find fewer cases requiring the introduction of the hand into the uterus. In the earlier years of my practice I encountered more cases of retained placenta than since. This has diminished, till now a retained or adherent placenta, or hemorrhage, is one of the rarest things, and I am beginning to believe that they are occurrences which happen in our earlier practice. I advise to wait. My practice is to allow the patient to recover somewhat from the shock of the second stage. Unless there are contra-indications, I wait from fifteen to forty-five minutes. The patient by this time has recovered from the shock, and tonic contraction has set in. I prefer the method of Crede to all others where I am obliged to assist. I do not believe in introducing the hand when avoidable; not that I think a clean hand will cause any trouble.

Dr. T. A. Reamy, of Cincinnati, promised to discover no new thing to the Society, but wished to condemn the method of Crede in natural labor. The adoption of Crede's method throughout the country has been the cause of much more injury than good. You may just as well cut the cord at once as compress the uterus and expel the placenta. The latter stops the pulsation. Placing the hand on the abdomen is only for the purpose of making observations, not to contract the uterus. We never have hemorrhage when there is pulsation in the cord. While the cord pulsates you may rest easy.

POST-PARTUM HEMORRHAGE IS A GREAT BUGBEAR.

When the cycle is complete the uterus will contract. It knows how to contract; the idea of our teaching it how! True obstetric science is marvellous. Irregular contraction and retained placenta is often due to this compression. After the placenta is detached the pulse becomes weak and ceases.

Dr. Harwood, in reply, said that he had not found more cases of hemorrhage and retained placenta in the earlier years of his practice, but they increased as he grew older.

Dr. J. B. Marvin, of Louisville, made a clinical report on

PROGRESSIVE MUSCULAR ATROPHY,

in which he reported a case and dwelt on the incurability of the disease.

Dr. H. H. Grant, of Louisville, made the report on the

SURGERY OF THE GENITO-URINARY CANAL.

Dr. D. W. Yandell, of Louisville, instead of making the incision into the bladder with the scissors, uses the finger-nail. He cuts down on to the bladder, then lays aside the instruments and scratches his way into the bladder with his finger-nails. This method avoids all hemorrhage. He does not use stitching, but inserts the drainage-tube. Harrison's operation of perineotomy, he thought, would grow in favor.

Dr. Joseph Ransohoff, of Cincinnati, said that in 1880 he was called into Indiana to see a man who had been passing his water every ten to fifteen minutes. The parts were so sensitive that it was impossible to pass any instrument. The patient was put under ether, as we had not cocaine as yet.

A PAPILLOMATOUS TUMOR OF THE BLADDER

was found, and perineotomy was done. In large, flabby persons, those who generally have enlarged prostates, the perineum is very long. He related a case where his patient died in twenty-four hours after he removed two quarts of urine by the catheter. The patient suffered more from his successful introduction of the catheter than from the unsuccessful attempts of his predecessors. He died from shock, as one does from the removal of too great an amount of ascites at one time. He did not favor delay in operating in prostatic enlargement.

Correspondence.

OUR LONDON LETTER.

ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURE—CONTAGIOUS AND [illegible] FEBRILITIES—TESTS FOR ALBUMEN—ANÆMIA—THE NEW ACT AFFECTING MEDICINE—EXTRA-CANONICAL INFLAMMATION—SEXUAL SERVICES RENDERABLE—DEGREES TO FOREIGN MEDICAL STUDENTS—THE MEDICAL COUNCIL AND THE VISITATION OF EXAMINATIONS—STATISTICS OF PNEUMONIA—THE MEDICAL BILL AND THE REGISTRATION OF FOREIGN MEDICAL DEGREES.

[illegible], June 21st, 1886.

At a recent meeting of the Medical and Chirurgical Society an interesting paper, by Dr. Steavenson and Mr. Bruce Clarke (both of St. Bartholomew's Hospital), was read. The subject of it was "The Treatment of Stricture of the Urethra by Electrolysis." They maintained that their results bore out in every particular those reported by Dr. Newman, of New York. The negative pole of the battery was applied within the urethra. The electrolytic action could be limited to the points touched by the electrode, as the current need not be passed until the apparatus was *in situ*. No anæsthetic was used and they had found but little pain to be caused, and usually no hemorrhage. The authors suggested that for parts difficult of access, such as the male urethra and the uterine cervical canal, the use of electricity might be advantageously substituted for that of ordinary caustics. Eschars produced by caustic alkalies were said to heal with less contraction than wounds otherwise caused, and electrolysis with the negative pole of a battery was a means of applying the same destructive action as that caused by caustic alkalies to parts difficult of access by other agents and methods.

In the discussion following the paper Messrs. Berkeley Hill, Swinford Edwards, and Buckstone Browne took part, and expressed a guarded approval of electrolysis as a therapeutic agent in dealing with urethral stricture. The general opinion of the speakers seemed to be that the cases operated on were as yet too few, and the time which had elapsed too short, for a final opinion to be expressed on the subject—a view which was shared by the authors themselves.

Some discussion has taken place respecting consultants, general practitioners, and their mutual relations. A good deal of jealousy apparently exists, for the existence of which something may be said on both sides. Among consultants, specialists are apparently the greatest sinners. I have heard of a specialist who, in taking sole charge of a patient to operate on him, gave as a reason for excluding the general practitioner in attendance, that it was no part of his duty to teach his own specialty to the latter. I hope and believe that such instances are not of common occurrence. Still, it is undeniable that some consultants are apparently only too ready to take entire charge of patients who have really been sent them simply to obtain an opinion—not to place themselves under them for a course of treatment. The question has, of course, like most others, two aspects. I have heard consultants remark that some general practitioners would never send their patients to a

physician or surgeon until they were obliged to, but kept them in hand as long as they could themselves.

At the last meeting of the Clinical Society the report of the Albumen Test Committee was presented. In this the various tests were reviewed. Nitric acid was pronounced to be, on the whole, the most reliable and delicate. Those practitioners who have gone on using it, and have been too conservative to adopt any of the numerous new tests introduced within the last few years, may therefore now have the satisfaction of feeling that they are, after all, quite abreast of modern science. Dr. Oliver's urinary test-papers received a well-deserved commendation for their portability and delicacy of reaction. The committee also reported favorably on Dr. Johnson's picric-acid test, Dr. Pavy's pellets (ferrocyanide of potassium and citric acid), the potassio-mercuric iodide test, and Sir William Roberts' acid-brine test.

At the same meeting of the Society Dr. Caton, of Liverpool, read notes of a case of aneurism of the hepatic artery. Only ten cases of this affection had, he said, been previously placed on record. In Dr. Caton's case the aneurism was not diagnosed during life.

Dr. Hale White read a paper on a case in which simultaneous inflammation of several serous membranes occurred. The patient was a girl of nineteen. She had never suffered from rheumatism. Peritonitis, pericarditis, pleurisy, and endocarditis all occurred. Recovery ensued.

A special meeting of the Metropolitan Counties Branch of the British Medical Association was held on Monday last, to consider the question of medical degrees for London students. The chair was taken by Dr. Walter Dickson, President of the Branch. Speeches in favor of the movement were delivered by Sir Andrew Clark, Mr. Jonathan Hutchinson, Mr. Macnamara, Drs. Habershon, Moxon, Broadbent, Sansom, and the chairman. The following resolution was moved by Sir Andrew Clark, and carried with only one or two dissentients: "That negotiations with the University of London not having led to the desired result, this meeting recommends that the Royal College of Physicians of London and the Royal College of Surgeons of England be requested to endeavor to obtain power to grant degrees in medicine." A circumstance which cannot but have contributed largely to concentrate professional attention on this subject has been the increase of late years in the number of students going north. I do not mean to say that the entries in all the London schools have absolutely decreased, but they have most decidedly not gone on increasing as they would have done but for the exodus northward. Students are finding out that practically they can, by going to one of the Scottish universities, obtain a degree in as little time as it takes them in London to get the ordinary diplomas. They may have to work a little harder, but they have the stimulus before them of a greater reward, and modern medical students are by no means so devoid of industry as those would think whose sole acquaintance with them is derived from the pages of Dickens. The "Bob Sawyer" type has for the most part disappeared. Needless to say, the stationary state of the entries at the London schools has proved a powerful stimulus to London teachers to take up the degree question. The argument to the pocket is a very powerful one, and has, to say the least, proved a powerful adjuvant to more worthy motives.

The recent meeting of the General Medical Council has been, if not very instructive, at any rate amusing. Dr. Haughton, of Dublin, moved a resolution that it was desirable to visit and report on the methods of teaching required by the licensing bodies. Dr. Matthews Duncan, in seconding the motion, sounded the praises of the lecture system, and maintained that a man would learn midwifery better in three months by attending lectures than in two years from a book. "The *viva voce* lectures of a good teacher," he said, "would always be valuable." But unfortunately all teachers are not good, and those who are condemned to sit and listen to lectures from bad lecturers will be tempted to echo Dr. Quain's remark that he had "no faith in lectures." Dr. Struthers, of Aberdeen, defended the lecture system, and also the Scotch plan of teachers being also examiners. No system of examination, he maintained, could be complete in which the teacher did not take part, and he would rather sell stamps in a post-office than be a teacher under those circumstances. Dr. Struthers wound up a very laudatory account of the Scotch system by referring to the slight remuneration of Scotch teachers. Mr. Rawdon Macnamara satirically remarked on Dr. Struthers' omission to refer to Scotch modesty, and Dr. Haldane said that, as for the moderate incomes of Scotch teachers, why, some of them were making three or four thousand pounds a year. Dr. Haughton's motion was carried, as was also a resolution that visitors be appointed by the General Medical Council to visit the several medical schools and report upon their methods of teaching.

Some lively discussion took place on the presentation of the report of the committee who had visited the final examinations of the universities of the United Kingdom. Much of the report will certainly excite surprise. Oxford has the repute of being sufficiently lenient in its medical examinations, but got off with very slight censure. The classical paper was condemned, and the examination in surgery was deemed insufficient. At Cambridge, which is generally belived to be more exacting in its medical examinations, both surgery and midwifery were condemned. Durham was favorably reported on, which certainly seems rather anomalous after the censure passed upon what have been believed to be severer examinations. The medical degrees of the London University have long been regarded as the most difficult to obtain of any in the kingdom, but their arrangements have met with unsparing criticism. The clinical examination in medicine and the examinations in medicine and surgery have been branded as not sufficiently searching. Dr. Quain defended the university, and admitted that oral examination might be extended, and that more surgery might be included in the M.B., but was it worth three hundred and seventy pounds to secure that, for that was what the visitation cost? Dr. Struthers rejoined that it was worth three hundred pounds to find the University of London out, for they had all been told to look up to it as a model institution.

The question of the teachers being also examiners was raised again in 'connection with the University of Edinburgh. The examinations in practical surgery for the Edinburgh degree were deemed unsatisfactory, and the absence of the laryngoscope and the ophthalmoscope from the examinations was remarked upon. Dr. Matthews Duncan said he disapproved of the uterine sound being used in the examination, as had been stated by the visitors to be the case. There was nothing to show that the same woman might not be subjected to the same operation by a succession of students. The University of Glasgow was favorably reported on. With reference to the University of Dublin, whose examinations have a high repute for severity, it was stated by the representative in the Council of the Royal University of Ireland (Dr. Banks) that if (at the University of Dublin) a man passed well in other subjects, but failed in one, he was put back, but not re-examined upon the subjects upon which he answered well. Dr. Banks remarked that it was a very hard thing for a man who answered well in clinical medicine and surgery, and who might fail upon some less important subject, to have to keep up his knowledge of minute anatomy, and be re-examined upon it at the end of another six or twelve months—an observation which examining boards in general would do well to bear in mind.

At the concluding meeting for this session of the Medical and Chirurgical Society, Dr. Angel Money read an elaborate paper on some statistics of pneumonia, referring especially to the relations of delirium and tempera-

ture. Dr. Money concurred with Heinze in the latter's conclusion that mere pyrexia has little to do in the production of delirium, but he admitted that prolonged pyrexia and high transitory fever must exercise a deteriorating influence on the nervous centres, and therefore predispose to delirium. From his investigations he had found that the number of cases with delirium was largest in those in which the highest temperature recorded was 104° and 105°. The presence or absence of delirium appeared to exert no influence on the mortality. The third decade of life (in cases where the temperature exceeded 104°) seemed most fertile in the production of delirium, but the largest number of cases of pneumonia occurred at that age and with that degree of fever.

Dr. Wilson Fox said it was important to recognize that delirium often set in with a falling temperature, and he opposed the wholesale adoption of the cold treatment of pneumonia.

Dr. Norman Moore discussed the causes of death in pneumonia, a prominent place amongst which he was inclined to give to emphysema. He considered the amount of exudation was a point of importance in relation to prognosis, and that this might be determined to a large extent by careful physical examination.

Dr. Moxon opposed Dr. Norman Moore's views as regards emphysema, and deprecated excessive physical examination, which might, he thought, have something to do with the causation of a fatal issue.

Dr. Oliver Wendell Holmes was one of the guests at the *conversazione* at the College of Surgeons, given by the President, on Wednesday last. Over thirteen hundred persons were present, and the museum was illuminated by the electric light. On the same evening he had previously dined with Sir Henry Thompson—Mr. Gladstone, Mr. John Morley, Mr. Browning, Sir James Paget, and others being invited to meet him.

The dissolution of Parliament being so near, there is but little chance of the medical bill passing, although Mr. Gladstone has promised it shall receive special attention. It has been so emasculated that, should it pass, the best that can be said of it is that it is not likely to do any harm. On the suggestion of Dr. Balthazar Foster, M.P., one very useful clause has been added, viz., one to permit the registration of foreign medical degrees obtained by British practitioners already registered. At present no foreign degree, however honestly obtained, can be registered, although the holder may already be registered in virtue of other qualifications.

OUR PARIS LETTER.

[From our Special Correspondent.]

Paris, June 24, 1886.

In the month of January last, Dr. A. Nicolas, formerly a surgeon in the French navy, was engaged by the Society of Public Works of Paris to proceed on a mission to the Isthmus of Panama, with a view to organizing the medical service of the Society, and at the same time to ascertain whether the Isthmus is as insalubrious as it has been reported to be, and if so, to make researches as to the cause or causes, and to suggest such measures as may be found necessary to extenuate the effects of the climate, and render the place habitable by the employés of the Society. Dr. Nicolas returned to Paris about three weeks ago, and soon after his arrival read his report before the Academy of Medicine, which is a most interesting document, but which, for want of space, cannot be reproduced here in its entirety. I may, however, mention that it is anything but encouraging to those who may have an idea to go thither in search of employment, or of locating themselves there, as I gather from the report that the climate at the Isthmus is as disastrous alike to Europeans or white races as it is to the natives or blacks. According to Dr. Nicolas, the prineipal cause of insalubrity is the amount of stagnant water about the place, and the pernicious influences peculiar to tropical regions, the prevailing diseases being hepatitis and dysentery among the whites, fevers, dysentery, and chest affections among the blacks. The whites are, of course, also subject to fevers, but nothing like in the same proportion as the blacks. In studying the etiology of these diseases, Dr. Nicolas does not hesitate to affirm that in the negro they are produced by cold, as it is well known that the power of resistance to climatic influences is not very great in them. The fevers most prevalent are intermittent, or the common paludal type, remittent bilious fever, and yellow fever.

The author avers that, for the first time in all his practice, he heard during his stay at Panama of cold being incriminated in the etiology of fevers, and during his sojourn of three months in that locality he learned by experience the confirmation of this assertion, for which he offers the following explanation: "The perspiration produced by the heat at Panama is more passive than otherwise; one is constantly plunged in a bath of wet linen, or, when one is naked, in a layer of water that does not evaporate; and one is obliged to perform ablutions and change one's clothes three or four times a day. The latter are hung up in the apartments to dry, which contributes to the dampness and coolness of the air in the rooms. This in its turn renders the body cold, which, added to the fatigue of the day and sleepless nights, reduces the power of resistance of the body, and causes it to become more liable to contract the fevers of the locality." Dr. Nicolas makes out that in all his travels he never experienced anything like the heat of Panama, though he has been in many places situated near, or on, the equator—not that the temperature is exceptionally high, but it is of a stuffy and enervating character. This enervation is manifested by the "powerlessness of cerebration" and blunting of the memory, as well as by sleeplessness, which condition is almost permanent and produces a state of cerebro-spinal irritability, followed by depression of spirits and its attendant evils. As regards the lassitude that is felt, the author suggests that the pathology of that resulting from fevers is identical with that attending fatigue, and that the state of the nervous tissue approaches to that of the muscles, which are loaded with the waste elements of the organism which the urine or the perspiration were powerless to eliminate. After painting the country in such sombre colors, Dr. Nicolas, in his patriotism, nevertheless recommends the undertaking now in progress at Panama to the consideration of his countrymen, "as it is a national work and the whole world has its eye thereupon."

Whatever may be the ultimate result of M. Pasteur's anti-rabic inoculations, M. Pasteur himself is being covered with honors, and money is flowing in from all sides for his institute. About a week ago he received a medal from the Humane Society of the Seine, which was handed to him at a meeting of the Society at the Sorbonne, and under the presidency of the Minister of Public Instruction. Several government functionaries and members of Parliament were present, and M. Anatole de la Forge, the well-known deputy, in presenting M. Pasteur to the Society in company with M. de Lesseps, expressed himself to the effect that these two illustrious men have deserved well, not only of their own country, but of the world at large, for their persevering exertions for the benefit of mankind in general, though the bent of their genius has been turned in different directions.

The subscriptions for the institute amount to this date to 1,194,182 francs, as shown by the official journal. This sum includes 400,000 francs voted by the French Parliament. The Paris Municipal Council, however, has not only displayed less generosity in a pecuniary way, but has also taken every opportunity of throwing a damp on M. Pasteur's efforts, as some of the members are somewhat sceptical as to the real value of M. Pasteur's discoveries.

INFLUENCING SEX IN UTERO.

To the Editors of The Medical Record.

SIR: From time to time communications appear on the topic of influencing the sex of a child *in conceptione*. It is a very old topic, and always an interesting one, though its solution is surrounded by many delicate obstructions that appear almost insurmountable. Its honorable study, in my judgment, is no more an impropriety than is the study of any other topic connected with the physiology of generation.

I have no new theory to present, nor any old one to defend. This, like any other problem in science, is not to be determined by theoretical opinions, except as such opinions are established by numerous facts which are in themselves accurate, without coloring, without contortion. Some facts that I have carefully collated during a practice of thirty-five years may be interesting.

Making the common-place observation that some parents had only girls, while others had only boys, I was prompted to seek for all attainable information as to circumstances or conditions that might influence the generative system to these results. In one family the following facts were obtained: Seven boys had been born and no girls. The wife died, the husband married again, and to him the second wife bore four girls and no boys. The two wives were nearly identical in build and temperament; the husband was a man of medium size and very healthy. This father was one in a family of four boys; the first wife was one in a family of five girls and one boy; the second wife from a family of two girls and three boys. The first wife habitually went to sleep early in the evening, on a sofa; awoke when her husband came from business, and retired with him about 10.30 to 11 P.M.; rose an hour or more before the husband in the morning, he being a late sleeper. The second wife was a great reader; seldom retired till after midnight, the husband having been in bed and asleep for an hour or more; and she commonly arose about an hour after the husband in the morning.

Knowing these circumstances, it occurred to me that cohabitation with the first wife probably took place when they retired in the evening, and with the second wife in the morning. Venturing on suitable inquiries, I learned from the husband that my surmise was correct, the habits of the two women probably not varying these respective times of congress.

"One swallow does not make a summer;" nor do marital peculiarities in one family establish a physiological rule. The above, which may be numbered as Case I., is but a single instance in a series that has come under my observation. A few from the list may be mentioned briefly.

CASE II.—H——, owner of a bakery, arose between 2 and 2.30 A.M., leaving his wife asleep; usually lay down soon after his evening meal and took a nap, and retired with his wife about 9.30 P.M. They had six boys and no girl. He informed me that he probably never had had connection except in the evening hour, soon after retiring.

CASE III.—C—— was a merchant, fond of going to his club about 9 P.M., and returning about midnight. The wife usually retired about 10.30, rarely knew when the husband came to bed, and the two rose quite late in the morning. Five girls were born, but no boy. Then his business and place of residence changed, he was beyond reach of his club, and then usually retired with his wife about 10.30. After this change in life, three boys were born, but no girl. He told me his habits led to marital indulgence in the morning during the years when the girls were born, and in the evening when the boys were born; and he thought these times of cohabitation had not varied during those respective periods.

CASE IV.—K—— had three sons and three daughters, born in interrupted order as to their sex. He told me his wife announced her consciousness of each conception within half an hour after the fruitful intercourse, from sensations that to her were satisfactory; and she had kept a record of them all, partly from curiosity and partly as data in preparing for confinement. He kindly obtained from her, and gave to me, a copy of this record. It showed the conception of the three boys as having occurred respectively at 10, 10.30, and 10.30 P.M.; and of the three girls at respectively 5.30, 5.30, and 6 A.M.

CASE V.—Mrs. R——, a widow at the time I made inquiry, was mother of three boys and one girl. She told me she knew positively that the three boys, born consecutively, were conceived in the evening; and that the one girl was conceived in the morning. Delicacy forbade questioning as to details.

CASE VI.—Mrs. M——, an extremely punctilious lady, was mother of a daughter, two sons, another daughter, another son. She said she knew, in the most unquestionable manner, the moment of each of these five conceptions; and that the conception of the two daughters occurred in the later morning hours before rising, and those of the three sons in the evening hours soon after retiring. The husband said she announced to him, in peculiarly emphatic terms, the fact of each conception within a few minutes after its occurrence.

These six cases are typical of seventeen others within my knowledge, all equally clear. To give the other seventeen in detail would be merely cumulative. In yet fifteen other families, the general data bear out the same thought, but are not equally definite. They years ago gave me the belief that male children are conceived in the evening, before the midnight hour; and that females are conceived in the morning hours. To help confirm this belief are the following: In thirty-five years of professional life, I have attended in a number of cases where children were born out of wedlock. In nineteen (19) of these cases the mothers gave me full information as to the hour of fruitful connection. Sixteen of these nineteen children were boys. Thirteen of these boys were conceived between the hours of 10 and 11.30 P.M.; two were conceived between 4 and 5 P.M.; and the other about 7 P.M. Three of the nineteen were girls, and these were conceived, respectively, about the hours of 2 A.M., 4.30 A.M., 6 A.M.

A few opportunities have arisen for testing the correctness of my view, and thus far they seem to sustain it. Mr. C. E.'s lady had three girls in succession, and he consulted me as to the possibility of perpetuating the family name through a boy. I advised adherence to evening congress, strictly. He said his habit had been chiefly, though not invariably, in the morning; and possibly this accounted for three girls. My suggestion was followed rigidly for five years, during which time two boys were born to him; after that he did not adhere to the evening hour, and a girl was born. In two other instances I gave the same advice; it was followed, and boys were born. In one instance the morning hour was advised and followed, and a girl was born. In other instances my advice was not adhered to with sufficient exactness to be of value, though apparently sustaining my view.

I offer no theory in the matter, for the data are not sufficient. In the above cases, and in a much larger number of others, it would seem that the wife has altogether the least responsive feelings in the morning, and most in the evening. This may not be at all uniform with wives; and even if it were uniform, it may not influence the sex of the child. I merely offer the few facts I have gathered, presenting only those which are clear and determinate. Perhaps they will not correspond with information gathered by other gentlemen, although they coincide with facts imparted to me by a few professional friends, to whom I have mentioned my views within the last twelve years. It would be interesting to know if the profession at large has any clear data on this line of thought; and whether the sum of such informa-

tion sustains, throws into doubt, or quite overthrows my idea that boys are conceived before midnight, and girls in the morning hours.

WM. H. COOK, M.D.

CINCINNATI, O.

THE CURE OF HICCOUGH BY SNEEZING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It may be gratifying to Dr. Robert B. Wilson to learn that his treatment of singultus is classical, and was recommended by Hippocrates, as the aphorism given below will show. The following appeared in the April, 1886, number of the *New York Medical Abstract*, and was credited to Dr. G. A Gibson in the *Edinburgh Medical Journal* of the same month: "No doubt many of my professional brethren are acquainted with the Hippocratic aphorism 'Υπὸ λυγμοῦ ἐγγενομένου πταρμὸς ἐπιγενόμενος λύσει τὸν λυγμόν,' 'Sneezing occurring after hiccough removes the hiccough,' or, as it is rendered by Adams, 'Sneezing coming on in the case of a person affected with hiccup, removes the hiccup.'" When devoting a leisure hour to Plato's Dialogues, as translated by Jowett, I was struck by a passage in the Symposium, which had never arrested my attention before. Translated by Jowett, it stands thus: "When Pausanius came to a pause, Aristodemus said that the turn of Aristophanes was next, but that either he had eaten too much, or, from some other cause, he had the hiccough, and was obliged to change with Eryximachus, the physician, who was reclining on the couch below him. 'Eryximachus,' said he, 'you ought either to stop my hiccough, or to speak in my turn until I am better.' 'I will do both,' said Eryximachus; 'I will speak in your turn, and do you speak in mine; and while I am speaking, let me recommend you to hold your breath, and if this fails, then to gargle with a little water; and if the hiccough still continues, tickle your nose with something and sneeze, and if you sneeze once or twice, even the most violent hiccough is sure to go. In the meantime I will take your turn, and you shall take mine.' 'I will do as you prescribe,' said Aristophanes, 'and now get on.'" The hiccough was not cured by the first nor by the second remedy suggested by Eryximachus, but by the production of sneezing. The method of tickling the nostrils has been tested by us in cases of obstinate hiccough, and has been very successful. It is not necessary that the stimulus applied to the nose be followed by sneezing; the application of a gentle irritant to the nasal mucous membrane may be quite enough to put a stop to the hiccough, by diverting the nervous energy into other channels, although it may not be of sufficient power to induce sneezing.

Yours truly,

J. BENNETT, M.D.

SCRANTON, PA., June 7, 1886.

LAPAROTOMY IN ABDOMINAL WOUNDS.

TO THE EDITOR OF THE MEDICAL RECORD.

MY attention has just been directed to an article, "Laparotomy in Abdominal Wounds," in your issue of May 8th. It is astonishing how "chaotic" is the notion of many Europeans relative to America and her works, but in reality, the notion of some few in the East, relative to the West, is not remarkably less "chaotic." In answer to *The Lancet*, THE MEDICAL RECORD, in an editorial, is satisfied by simply stating: "It is very well known to American surgeons that it was the cases of Dr. W. T. Bull, and subsequently those of Dr. J. B. Hamilton and others, which specially turned attention in this country to laparotomy for abdominal wounds." The case of Dr. Bull was published in the month of February, 1885; that of Dr. J. B. Hamilton, in September, 1885. Previous to this, however, in the spring of 1884, at the meeting of the American Medical Association at Washington, Professor C. T. Parkes, of Chicago, read a paper, presented diagrams—living and anatomical specimens of the result of an extensive series of experiments on dogs. These experiments were made with the avowed purpose of ascertaining what should be done in gunshot wounds of the intestines. The animals were shot, the abdomen opened, the wounded parts of the intestines treated with appropriate surgical methods, and the external wound closed—in fact just such treatment adopted as, the necessary changes being made, would suggest itself to any surgeon now when confronted with an abdominal wound associated with indications of a perforation of the viscera. It would seem as though, in correcting the statements of a European journal, that an American journal would take some cognizance of the labors of the men in the western part of America. The article detailing the particulars of these experiments of Professor Parkes, was published in full both in the *Medical News*, and in the *Journal of the American Medical Association*. I mail you a copy of the reprint. We do not think THE MEDICAL RECORD means to discriminate between the East and West, and that it will accord this short notice in the cause of accuracy. To show that some did not fail to see the bearing of Professor Parkes' observations on abdominal surgery, we venture a short extract from a lecture by Professor W. W. Keen, of Philadelphia, and published in the *Popular Science Monthly* for May, 1885. "In May of last year, Parkes, of Chicago, reported to the American Association a series of systematic experiments on thirty-seven dogs, that were etherized, then shot, the abdomen opened, and the wounds of the intestines, arteries, mesentery, etc., treated by appropriate surgical methods. The result confirmed the belief awakened by earlier experiments and observations, that surgery could grapple successfully with multiple and formidable wounds, by sewing them up in various ways, or even by removing a piece of the bowel and uniting the cut ends. Hard upon the heels of this important paper, and largely as its result, comes a striking improvement in practice. . . . November 2d of last year, a man was brought to Chambers Street Hospital, in New York, with a pistol-shot wound of the abdomen. Under careful antiseptic precautions, and following the indications of Parkes, the abdomen was opened by Dr. Bull."

ROBERT TILLEY.

JAMAICA, L. I., June 7, 1886.

QUININE IN TYPHOID FEVER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: We do not intend "to beard the lion in his den," nor anything especially audacious, in entering this mild but decided protest against the too sweeping remarks of Dr. George M. Dewey, as quoted and largely indorsed by your journal in its issue of May 22, 1886.

The closing remarks of the editor in reference to the routine use of quinine and other antipyretics in continued fevers are timely enough; but taking the article as a whole, the inevitable bearing it has is to drive a large number of readers entirely from the use of that drug in the treatment of typhoid fever.

Such a scare was not needed in a large scope of Georgia territory, where every fall the "busy practitioner" meets more or less of this tedious malady.

Within the last decade—certainly embracing the period during which quinine and other antipyretics have been used directly with the view of combating dangerous temperature—we have not known an instance wherein we were assured that it was being used prejudicially to recovery in typhoid fever.

There are many instances of it, doubtless, for the world is abundantly sprinkled with routine and extremist doctors. To the latter class, in all sincerity, we would certainly relegate any medical man who could to day write—"The Utter Worthlessness of Sulphate of Quinine in Typhoid Fever."

Thirty years' experience in watching the behavior of the fever in question, with little medicine, with no medicine, and with quinine, and plenty of it, overwhelmingly convinces us of its very great value in the treatment of typhoid.

With all that has been written on it, from Hutchinson to his critic Dewey, the profession is largely at sea about the treatment.

Within the last ten years we have often had occasion to observe the unsettled and indefinite views of many members of the medical profession as to its pathology and clinical history. Not a few have failed to discover that a man ordinarily has the disease but once in life.

One and another has scarcely discerned that his too vigorous cathartic, with which he opened the case, has produced complications ever afterward beyond his control; that the patient who passes the night without morphine and without rest will inevitably report worse the next day; and now, seemingly, we would infer from Dr. Dewey, of Maine, that a protracted high temperature means only tissue waste, and finds its proper antidote in "sweet milk." Hutchinson deserved the rebuke given by his less distinguished reviewer, but for not advising quinine in larger doses. During the many years we have been giving it in large doses in typhoid fever and with the most gratifying results, we have not found *any* good in the use of it in "three- or four-grain doses four times a day." Nor do we use it at all until the temperature passes 102°, and shows a plain tendency to go higher. But when the exacerbations, daily, in general, mount up to 103° or 104°, to the manifest distress of the patient and the production of visceral congestions, fraught with structural changes of a vital nature, to say nothing of the tissue waste inseparable from such a "fast life," we give a capsule containing eight to ten grains of quinine every four hours, beginning early in the morning and repeating till three are taken—then discontinuing until the following morning, and so on, with more or less variation, suited to difference in constitution and environment, until the temperature stands again at a figure compatible with the patient's comfort and safety. The happiest results have followed, and no one is more cognizant of the source of relief than the taker himself, who, as such, is apt to be in pretty good possession of his faculties. A temperature that may be followed for many days without serious injury to the organism in one case, will jeopardize life in the next.

E. P——, a robust farmer, aged thirty-five, confined to the bed for one week—seen for the first time—remarks: "My fevers have been very high and made me feel bad; I don't think I have any now, and am feeling better." A corrected thermometer, placed under his tongue three and a half minutes, reveals a temperature of 104°.

Mrs. M——, a lymphatic lady, with small, soft pulse, aged fifty, has been under observation ten days. Has typhoid fever, temperature not exceeding 102° in the exacerbation. Second week, temperature averages a little higher daily, until it reaches 103⅘°, during the acme of the exacerbation, and she is in extremities, and every symptom threatening.

An eight-grain capsule of quinine, given every four hours till the temperature is 102° in the hot stage, makes her not only comfortable, but removes every symptom of impending visceral complication.

Of course we recognize and take it for granted, in the discussion of this question, that it is conceded by all, that the essence of the disease is intestinal eruption, splenic congestions or engorgements, and internal hyperæmia everywhere; and in speaking of visceral complications we mean to refer to the exaggerated and disorganizing degrees of these lesions. Time and again, self-accused, we have thought perchance we were drifting into that professional Slough of Despond that knows no excelsior cry, viz., routineism, and have put the stopper in our Powers & Weightman and let it remain there day after day and visit after visit; and have as often been reminded to return to it, and in doing so have realized that fortunate state of being in happy accord with our client.

A mere record of recoveries may be a very narrow view of medical progress, but, as a test of good therapeutics, strikes with some force both in the profession and the laity. To jump theories and circumlocution and call for results is truly American. Measured by this rough and ready rule, an experience of the last ten years, with constantly enlarging opportunities for exhibiting the drug in sporadic and endemic features of the disease, pronounces strongly in favor of sulphate of quinine as a remedy of inestimable value in the treatment of that form of continued fever generally known as typhoid.

As to the nosology of typho-malarial fever we are in perfect agreement with the article referred to in the issue of May 22d. The malarial "tail" has no practical bearing, only as it serves to delude some shallow thinker into modifying his plan of treatment. For whoever treats his so-called typho-malarial case differently, or with an eye less singly directed to the main life-imperilling lesions, because of this doubtful appendage "malarial," will, except he is rescued by the kind offices of that great conservator—the natural tendency to recovery—meet with eminent defeat.

In the treatment of typhoid fever, as in every disease of possible gravity, we try to approach the bedside with no preconceived ideas as to diagnosis or treatment. On each separate visit we would let the clinical facts alone account for the day's medication, keeping steadily in view Thomas Watson's great injunction, "*the tendency to death.*"

Proceeding thus, we have found it abundantly profitable to give veratrum and aconite, and always associated with an opiate, mostly morphine, to procure rest and calm an excited circulation; cold alkaline baths and frequent changes of linen, preferably administered (the bath) during the exacerbation, for general hygiene; "sweet milk" with or without whiskey for feed, and *quinine* in emphatic doses whenever the temperature produces notable discomfort or threatens to produce dangerous complications in the run of the fever. Barring the accidents of profuse hemorrhage, or intestinal perforation, recovery has been the rule.

HARRIS FISHER, M.D.

EASTMAN, GA., May 25, 1886.

ANÆSTHETICS IN CHILD-BIRTH, FROM A RELIGIOUS POINT OF VIEW.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: A prominent physician of this city lately requested me to express my opinion as to whether there were any religious objections to the application of anæsthetics during delivery. The reason for this request was, that ladies in travail often refused to be placed under the influence of chloroform, on the ground that such practice was against the words of the Bible: "In sorrow (pains) thou shalt bring forth children."

As other physicians, probably, sometimes meet with similar objections on that ground, I beg leave to say a few words on this subject.

It is true that the words just referred to are found in the Book of Genesis, ch. iii., verse 16, as having been addressed by the Lord to mother *Eve*. But these words must by no means be taken literally as a divine *command* to every woman, so as to make it a duty for her to suffer the pains and pangs of parturition without being permitted to apply means to alleviate them, or to become insensible to them. In the same passage of Scripture, in which these words are addressed to the first woman, as a penalty imposed on her because of disobedience, we also read the words directed to the first man: "In the sweat of thy face shalt thou eat bread." Now, if we are to take the former words literally as a divine injunction to every

woman, we must do the same with the latter words addressed to man, so as to make it sinful for everyone to eat bread, except in the sweat of his face. But no religious man ever scrupled to dry the sweat of his brow before eating his bread, or to eat a morsel before his face was bathed in perspiration.

The Jewish religion never attached to the narrative of the so-called *Fall of Man* that importance which Christian theology attached to it by basing thereon the doctrine of Redemption. Rational interpreters of Scripture in the Middle Ages already were inclined to divest that narrative of its literal sense, and regard it as a sublime allegorical legend intended to illustrate sin's origin, its progress, and its evil consequences. In accordance with the general view of Holy Writ, that moral causes are underlying all events and occurrences of human life, man's usual toils and troubles in gaining his sustenance, and woman's cares and sorrows connected with her maternity, are here represented as consequences of disobedience against the divine will. If we look upon that narrative in this light, the words "In sorrow shalt thou bring forth children" are as little a divine commandment as the words "In the sweat of thy face shalt thou eat bread," but both sentences are rather a description of what usually happens to woman and to man. In this light even the ancient Rabbis viewed that passage. For, while pointing out all commandatory and prohibitory laws of the whole Pentateuch, to the number of 613, they wisely refrained from counting the words just referred to among those laws.

Although the use of anæsthetic agents (soporific potions) under surgical operations was not unknown in antiquity, and is occasionally even mentioned in the Talmud (B. Metzia, fol. 83[b], where it is termed *Samma d'shina*, somnific drug), still the practice of applying such agents to women in travail is of too recent an origin to have been considered by the ancient Rabbis. Had they known it, they would certainly not have objected to it, as they expressly provided that the criminal, before an execution, should receive a narcotic potion, which the noble women in Jerusalem used to prepare for him in order to be rendered insensible to the sufferings of a capital punishment (Talmud Sanhedrin, fol. 43[a]). If he who was to suffer death to atone an atrocious crime was permitted to be rendered insensible to his deserved suffering, what wrong can it be for our good and tender ladies to be placed under influences that remove from them the pains and pangs of maternity?

M. Mielziner, M.D.,
Professor in the Hebrew Union College.
Cincinnati, O., June 1, 1886.

The Drug Business in Kansas.—A student in the Michigan University recently applied to the proprietors of a drug store in a Kansas town for a position as prescription clerk. In reply he received the subjoined letter, which is printed just as it was written, except that the names of the town and of the firm are suppressed. It throws some light on the operations of the prohibitory liquor law in that State: "Dear Sir yours Recd in Reply i will Give you a Brief Description of our Business Perhaps you understand the nature of a Drug Store in knansas we Do Some liquor Business in a Back Room By the Drink our Prescription trade Runs from two to three thousand Pr year Some Clerks objects to the Back Room trade I Give you the facts in the case So that you will not be Disappointed your Board By the week will cost you from $3.50 to $5.00 a week now if you accept this Position answer By telegraph at once as I kneed a clerk very bad & must have one as Soon as Possiable. Yours truly"

For Excessive Perspiration of the Hands, washing with a saturated solution of boracic acid is often effective.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from [illegible], 1886.

McParlin, Thomas A., Colonel and Surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 146, A. G. O., June 25, 1886.

Page, Charles, Lieutenant Colonel and Surgeon. Leave of absence extended ten days. S. O. 146, A. G. O., June 25, 1886.

Magruder, D. L., Lieutenant-Colonel and Surgeon. Granted leave of absence for two months, to take effect on or about July 1, 1886. S. O. 146, A. G. O., June 25, 1886.

Vickery, Richard S., Major and Surgeon. Assigned to duty as Surgeon in Charge of Army and Navy General Hospital at Hot Springs, Ark. S. O. 150, A. G. O., June 30, 1886.

PROMOTION.

Brown, Joseph B., Lieutenant Colonel and Surgeon. To be Surgeon with the rank of Colonel. January 24, 1886.

Heger, Anthony, Major and Surgeon. To be Surgeon with the rank of Lieutenant Colonel. January 24, 1886. Circular, A. G. O., June 28, 1886.

Official List of Changes in the Medical Corps of the United States Navy during the week ending July 3, 1886.

Green, E. H., Passed Assistant Surgeon. Ordered to Naval Laboratory at Brooklyn, temporary duty.

Brown, J. M., Medical Director. Member of Retiring and Examining Board.

Ogden, F. N., Assistant Surgeon. Ordered to Juniata.

Siegfried, C. A., Surgeon. Three months leave abroad.

Hall, J. H. H., Passed Assistant Surgeon. Detached from Museum of Hygiene, ordered to Naval Hospital at Brooklyn.

Wentworth, A. R., Assistant Surgeon. Detached from St. Louis and ordered to the Brooklyn.

Corbin, J. Decker, Assistant Surgeon. Ordered to St. Louis.

Berryhill, T. O., Assistant Surgeon. Ordered to Museum of Hygiene.

Neurasthenia and Abdominal Belts.—The inhabitants of this globe, says *The Lancet*, may suffer from nervous weakness, or neurasthenia, simply because they neglect to wear abdominal supports. At least that is the conclusion that naturally follows from the recent teaching of M. Glénard, of Lyons, who believes that some cases of nervous exhaustion are attributable to gastroptosis, or lowering of the stomach; to hepatoptosis, or descent of the liver; or to nephroptosis, which is another name for floating kidney. Imagine the following colloquy in a physician's consulting room: Patient: "And now, doctor, after all this sounding and examination, pray tell what is the matter with me." Physician: "My dear sir, you have habitually bolted your meals, which have likewise been too abundant; as a consequence you have caused your stomach to descend from its natural situation—*facilis descensus Averni*—and this gastroptosis, as we call it, has acted seriously on your nervous system, hence your languor, irritability, and general loss of tone, etc. My advice to you is to read 'Stuapmore,' put on an abdominal belt, and cultivate a waist!"

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 3, 1886:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Smallpox.	Yellow Fever.
Cases.								
July 3, 1886.....	1	11	20	5	57	84	0	0
Deaths.								
July 3, 1886.....	0	2	4	5	7	30	1	0

COCAINE is of no value in sea-sickness.

PHTHISIS AND THE NEGRO.—According to Dr. F. Tipton, of Selma, Ala., before the war, the negro never had phthisis, now it is the greatest scourge among them.

THE NEGRO FROM A MEDICAL STANDPOINT.—The negro is rarely or never myopic. Their only eye trouble is phlyctenular conjunctivitis. They rarely have granular lids. The negro bears surgery remarkably well. Syphilis in the negro is generally very mild. One half of all negro men have syphilis, and it does not seem to seriously hurt them. Gonorrhœa is easily cured in the male. In the female it does most harm, causing endometritis and sterility. The negresses often have uterine fibroids, but very rarely ovarian tumors. Uterine cancers are very rare, although lacerations of the cervix are very common. Insanity is rare.—DR. TIPTON in *N. Y. Medical Journal.*

THE ANCIENT PRIESTS AND THE MICROCOCCUS PRODIGIOSUS.—In using the potato as a growth-medium for micro-organisms, Koch imitates the priests who in old times scratched some religious symbol with a needle-point upon a potato, and presented it to people, who were astonished some days after to find the symbol in blood-like letters on the surface of the potato. The priests made use of a fungus known as the prodigiosus, whose chief characteristic is a purple, blood-like growth. Cut open a potato and, with a needle dipped in the fungi, trace a line upon the newly-cut surface; some days later the line will appear in dark purple. Koch uses the potato for various growths.

THE MICROBES IN MILK AND WATER.—It has been calculated that in a cubic centimetre of milk—about twenty drops—there may be between 2,000,000 and 3,000,000 microbes, and possibly hundreds or thousands of different kinds; and the next twenty drops of milk may contain as many more varieties. The microbes in a drop of water taken from the well may consist in a number of straight rods; at the end of an hour these rods break in two, and in another hour another division takes place, the number doubling about every hour. Every minute that the water is exposed to the air adds to its hundreds of microbes, and yet water is pronounced good or bad, according to what the analyst sees through his microscope or thinks he sees when the water finally reaches him in his laboratory.

POST-DECAPITATION PHENOMENA.—Professor Martin (*Centrb. f. d. Med. Wiss.*, Nos. 40 and 44, 1885) relates that he once was present with Professor Rossbach at a decapitation where the division occurred between the fourth and fifth cervical vertebra. The trunk dropped down lifeless and with every muscle relaxed, simply obeying the law of gravity, while the head continued for one and a half minute to make dyspnœa-like respiratory motions, just like a person who, when suffering from the most intense dyspnœa, would endeavor to breathe.

BRUISES.—Dr. S. M. French recommends an ointment of equal parts of extract of belladonna and glycerine for the relief of the pain following a bruise.

STERILITY AND OBESITY.—Dr. A. Brondel writes in the *Bulletin Général de Thérapeutique* that he was consulted by a married lady on account of sterility, which caused her great unhappiness. The lady was excessively corpulent, so much so that the nurse was obliged to lift up the fat on the mons veneris with both hands before a speculum could be introduced. The genital organs were healthy. The patient was placed on a spare diet in order to reduce her obesity, and persevered in the regimen ordered for eighteen months, at the end of which time she had lost forty-four pounds in weight. The menses, which had formerly been irregular, returned, and the patient soon after became pregnant.

CHEWING GUM AS A FATTENING AGENT.—A Southern secular paper is authority for the following statement regarding the fattening effect of chewing-gum: "Twenty years ago the rule was the Southern women were thin and delicate; it is not the rule now. Southern women are not physically equalled in all North America. Any physician who is as well informed as he ought to be, will tell you that this is true. This change is due to the habit of chewing gum. You may smile, you may even laugh if you please, but I am telling you a plain fact. As to Southern men, they are as thin and gaunt as they ever were, and so they will remain until they cease to chew tobacco and begin to chew gum."—*Medical and Surgical Reporter.*

REPORT OF THE MISSION HOSPITALS AT SWATOW AND UNG-KANG-FU.—We have received the reports of these hospitals for the year 1885. The institutions are under the care of Drs. P. B. Cousland and J. F. McPhun. At Swatow 5,637 patients were received, 3,867 of whom were in-patients. There were 944 operations performed. At the hospital in Ung-Kang-Fu, under the care of Dr. Riddel, there were 2,620 patients treated, of whom 400 were in-patients; 180 operations were performed, including 23 teeth extractions. Instruction was given to a class of native junior assistants and pupils in materia medica and therapeutics during the fall and winter, the students being taught the Latin names of the drugs. The religious work of the hospitals is reported to have been moderately successful.

SCIENTIFIC ARDOR OR OBSTINACY?—Some of the female medical students in Boston would seem to require instruction in ladylike deportment as much as in medicine. The *Boston Medical and Surgical Journal* says that there have been some scenes in the operating-room of the City Hospital, during the last few weeks, which were not calculated to inspire the beholder with chivalric sentiments toward the female sex, as represented among the students of one of the medical schools of the city. In defiance of the distinct rules of the trustees regarding admission to the operation, certain women have repeatedly forced themselves into the seats, even during the performance of private operations upon the private parts of private male patients, so that the operator was obliged to remove his patient to another room. This course was continued even pending action by the trustees of the hospital on demands of the petitioners.

POISONOUS FISH.—In an article on "Poisonous Fish, and Fish-poisoning in China," in the *Chinese Recorder* for February, 1886, Dr. D. J. Macgowan says, that the flesh of the porpoise is regarded as one of the greatest delicacies, but that it is apt to be exceedingly poisonous, many persons dying every year from eating it. All cases of fatal poisoning, however, appear to be due to neglect of certain precautions that should be observed, as the rejection of certain portions of the fish, and long boiling of the part that is to be eaten. The symptoms are those of paralysis of the extremities and tympanites.

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Original Articles.

THE USE OF COCAINE IN GYNECOLOGY.

BY GEORGE WOODRUFF JOHNSTON, A.M., M.D.,

[illegible]

MANY new drugs and preparations have been introduced to the world of late years. Announced by their discoverers or manufacturers in the most boastful and pretentious terms, they have enjoyed a transient notoriety and then have speedily been forgotten. Cocaine, however, offers a most remarkable exception to this rule. Vaunted by the public press and by the members of different branches of the medical profession as peculiarly suitable to the treatment of each of a variety of pathological conditions, differing widely as to nature and location, in spite of its popularity it has lived, and enjoys to-day a degree of confidence rarely meted out to any single pharmaceutical preparation. That this confidence is justly deserved no one can doubt who has had any extended experience with the drug. Indeed it may be said with truth, we believe, that no such valuable addition has been made to our pharmacopœia since the discovery of ether, of which, curiously enough, it has become a dangerous rival. In view of all this it is much the more to be regretted that the isolation of so valuable an anæsthetic as cocaine cannot be clearly and without question attributed to one individual. The weight of opinion, however, seems to be in favor of Niemann as the one "who first (1859) gave to cocaine a certain amount of physiological individuality," although the claims of Percy and Gardeke are not without an appearance of truth and justice. Be this as it may, its value as a local anæsthetic was, after a considerable interval of time, systematically tested by Koller (1884) in the eye, and Jelinek (1884) in the throat, with results in both cases most eminently satisfactory. To Fränkel, of Breslau, perhaps, more than any other, is due the credit of first (1884) calling the attention of gynecologists to its value, and recommending its use in the treatment of many of the diseased conditions found in women. Since then its efficacy has been tested in a variety of conditions calling for the production of limited surface insensibility. So far as we are aware, aside from reports of its effects in a few individual conditions, and broad generalizations as to the limit of its value in the diseases of women, American gynecological literature is barren of information in regard to cocaine. It has not been the fortune of the author to meet anywhere with an account of a systematic series of experiments in regard to the range of its adaptability, and many points which could be settled only by collective investigation remain unsettled. It is the object of this paper to present a brief outline of as much as possible of what has been written in relation to the employment of cocaine in gynecology, and to add the histories of a very few and widely dissimilar cases in which is to be read nearly the sum total of the author's own experience with the drug in the diseases of women. Such a contribution will, the author believes, not furnish, but aid to a slight degree, some others in furnishing the results of a complete, accurate, and satisfactory study of cocaine in its relations to gynecology, so that this drug, whose value has not been even yet generally or fully appreciated, may reach thereby the full measure of its usefulness.

There are many purposes in gynecology for which anæsthesia is employed. It is often impossible to make a complete and satisfactory vaginal examination, for the nervous system is always very irritable in affections of the genital system without its aid, and there are but few operations which can be performed unless preliminary surface insensibility, and hence, some degree of general muscular relaxation, have been secured. Under the term reflex cramp of the muscles of the pelvic floor,[1] a variety of conditions have been described which serve to render adequate diagnosis, or the employment of local treatment, painful, difficult, or impossible. Mere reflex cramps, originating in mental or physical excitation of a local era of hyperæsthesia, situated at some point at or near the urethral, vaginal, or rectal outlet, in women who are anæmic and neurasthenic, manifest themselves as painful spasms of one, a group, or of all the muscles of the pelvic floor. The forced contracture of those ring muscles or sphincters which serve, when in a state of health, to maintain a proper degree of tonicity in the walls and at the outlets of the three pelvic floor-clefts, accentuates the prevailing degree of tonicity or markedly exaggerates it, until closure of these canals, more or less absolute, supervenes. Irritation of the local areas of hyperæsthesia and contraction of the muscles of the pelvic diaphragm are accompanied by pain, amounting in some cases to the extremest agony, which is entirely out of proportion to the nature or degree of either the irritation or of the muscular spasm. The most gentle attempts at separation of the labia, or introduction of the examining finger, will often call forth greater pain and more marked muscular contraction than the roughest manipulation. To properly appreciate the especial cause of these reflex cramps, and often to institute appropriate methods of treatment, anæsthesia is necessary. To meet these indications ether, in this country at least, has been generally employed, and to secure a few moments' insensibility to pain and muscle relaxation, it has been necessary to submit patients to the inconveniences of etherization.

If we are to rely on the testimony of reported cases, however, its use is no longer necessary. Its place has been largely taken by cocaine. By the aid of the latter drug, without the slightest constitutional disturbance, we are enabled, it is said, to thoroughly overcome any local hyperæsthesia or sphincteric contraction there may be, thus rendering accurate and complete diagnosis possible, while suitable therapeutic procedures may be at once successfully and painlessly instituted.

It is stated that in cocaine we have a cure for vaginismus. Reflex painful cramp of the sphincter vaginæ (constrictor cunni) muscle, when proving a cause of dyspa-

[1] Hildebrandt: Archiv. f. Gyn., Bd. iii., S. 221. Also, Die Krankheiten der Aeusseren Weiblichen Genitalien, Billroth's Handbuch, Stuttgart, 1877, cap. x., p. 103.

[illegible] Read at meeting of the Washington Obstetrical and Gyne[illegible] June 28, 1886.

NOTE.—For an account of the early history of the employment of cocaine [illegible] many points of interest connected with it, see Koller, Wien. Med. W[illegible] 1884, No. 45, p. 44; Jelinek, Wien. Med. Wochenschr., 1884, No. [illegible]; THE MEDICAL RECORD, New York, 1884, xxv., 5; Editorial in [illegible] Report, New York, 1884, xxvi., 521; Archibald, Geo., Knapp, [illegible] in Ophthalmia and General Surgery (New York and London, 1885); Hergott, [illegible] l'Emploi de la Cocaine dans la Pratique Medicale et Chirurgicale [illegible] also, Revue Med. de l'Est, Nancy, 1884, xvi., 177, 225; Wien. Med. [illegible] trali, Wien, 1884, xxv., 1, 2; also, Prag. Med. Wochenschr., 1884, [illegible] 466; Fränkel, Ueber Cocain, als Mittel zur Anästhesirung bei Operationen [illegible] (Centralbl. f. Gynäk., Leipzig, 1884, viii. 777-780); Corning, Local Anæsthesia in General Medicine and Surgery, etc., New York, 1885.

reunia, may be done away with by the use of cocaine in solution, oleate, or suppository; but unless the cramp is due to a condition likely to be removed by forced sexual congress, the employment of cocaine will prove of but temporary service. For in some, if not the majority of these cases, the lesion producing the reflex cramp will be aggravated by sexual intercourse, even though sensation in the parts be dulled, and after the temporary effect of the drug has passed away it will be discovered that connection is just as painful or impossible as before. It was found, in the interesting cases narrated years ago by Sims, that "ethereal cohabitation" was worse than useless; and, although the anæsthesia of cocaine may also permit of complete and satisfactory sexual congress, it will no more cure the disease than will intercourse with the patient under the influence of ether. It is therefore only in certain conditions, as, for example, when an unyielding hymen or a too narrow vaginal orifice offer a mechanical barrier to defloration, that its employment is at all justifiable. For it is very well known that cocaine can have little or no direct local effect in the cure or removal of those pathological conditions located about the vaginal outlet which give rise to reflex spasm; that these lesions are made worse, not better, by forced manipulation or intercourse, even under a local or general anæsthetic; that the much sought after pregnancy ending in labor aggravates and does not benefit them, but that rest is the absolute preliminary to their proper treatment. And, further, in many cases this vaginismus may be not the symptomatic expression of disease located at the vulva or vaginal outlet, the area covered on the application of the drug, but of a lesion, relatively speaking, far removed from the seat of spasm, and totally unaffected by the local anæsthetic. From what has been said, therefore, it may be concluded that in cocaine we have an invaluable aid in the induction of transient local anæsthesia, for the purpose, in suitable cases, of making difficult and painful vaginal examination satisfactory and painless; but that the plan of employing cocaine indiscriminately in the great variety of conditions grouped carelessly under the term vaginismus, although perhaps temporarily successful in relieving the symptoms of pain and spasm, and permitting the introduction into the vagina of the examining finger, specula, or the male sexual organ, is productive of no permanent good, and too often indirectly induces an aggravation of the very disease which it is sought to relieve.

The following abstracts of cases exhibit examples of the employment of cocaine in reflex cramp of the muscles of the pelvic floor. The word "cure" may often be freely translated "temporary relief."

Svot ("Chronic Vaginismus treated by a five per cent. Solution of Muriate of Cocaine and Vaseline," *Russ. Med.*, St. Petersburg, 1885, i., 460–462). Dyspareunia. Mind filled with terror at every thought of connection. Treated without benefit for ten years. Extreme sensitiveness of vaginal walls. Application of cocaine and vaseline. Successful and painless coitus. Pregnancy three months later. Svot thinks patients should be encouraged to think they will get well; this is an important element in treatment.

Dujardin-Beaumetz ("Sur un cas de Vaginisme traité avec succès par le chlorhydrate de cocaine," *Bull. gén. de thérap.*, etc., Paris, 1884, cvii., 489). Patient not nervous or hysterical. Intercourse first became painful, and then impossible, after birth of first child, and so continued for two years. Labor difficult; no forceps, no perineal rupture. Vaginal examination painful, difficult; chloroform, forced dilatation of orifice of vagina; no relief. Gradual dilatation with speculum; no relief. Painted internal face of lesser lips and whole circumference of vaginal orifice with a two per cent. solution of cocaine. Disappearance of local sensitiveness in one minute. Painless introduction of speculum. Application repeated four times. Cure. Has obtained equally successful results in other cases not enumerated.

Fränkel (loc. cit.). Young woman, married six weeks. Mucous membrane of introitus hyperæmic, swollen, injured in several places. Great sensitiveness and reflex cramp on attempting to introduce examining finger. Painted thrice, at two-minute intervals, with a twenty per cent. solution of cocaine. Repeated easy and painless introduction of finger.

Butaud ("Des applications thérap. de la cocaïne en gynécologie," *Rev. méd-chir. cl. mal. d. Femmes*, Paris, 1885, vii., 201–220; see, also, reprint from above, Clermont, 1885. Daix, 8vo). Patient with vulvo-vaginitis. Violent pain on introduction of finger; cannot introduce speculum. At least touch, spasm of sphincter vaginæ and transverse perineal muscles. Sexual intercourse long impossible. Pain on sitting down suddenly or riding. Application of a ten per cent. solution of cocaine for five to six minutes to hyperæsthetic region. In two minutes partial, and in five minutes complete, absence of pain or spasm on introduction of examining finger or speculum. Sensibility returned in ten minutes. Application repeated on six following days. Less violent contraction of vulvar ring on irritation of zone of hyperæsthesia. "Mais la cocaine n'ayant qu'une action temporaire sur le vaginisme." In this case there was "ulceration of the neck."

The same. Young woman; very nervous and susceptible; married two years. Never had been able to have sexual intercourse. Vaginal examination impossible. Application of a ten per cent. solution of cocaine for three minutes in hymeneo-vulvar furrow. Examination easy, introduction of speculum painless, nervousness diminished. Dilatation. After twenty-six applications intercourse possible. In this case there was spasm of transverse perineal muscle.

The same. Patient married four years. Sexual intercourse very painful, but not impossible. A ten per cent. solution of cocaine applied. Temporary relief only. Reapplication; excision of irritable carunculæ myrtiformes, seat of pain. Sensibility of parts returned in a quarter of an hour. Cure complete. In this case there was spasm of transverse perineal and constrictor vaginal muscles.

Thomas, C. H. ("Some Uses of Cocaine in Gynecology," *Med. News*, Philadelphia, 1885, lxvii., 567; also, *Maryland M. J.*, Baltimore, 1885–86, xiv., 80–82, Case of "Hyperæsthesia of Vagina with Mild Vaginismus"). One-grain cocaine suppository put in vagina half an hour before each treatment. Abolished spasm. Introduction of speculum easy and painless. Thomas used cocaine successfully in a case of vaginismus in which an examination was impossible.

Schrank ("Vaginismus and its Treatment with Cocaine," *Wien. Med. Wochensch.*, 1885, xxxv., 1140–1143, 1181–1184; also, transl. in *Louisville Med. News*, 1885, xx., 321–337). Patient believes vaginismus is due to irritation of a local lesion, which consists in a rupture of the hymen extending into vaginal tissue, produced at first by coitus and aggravated by contact. Pain and spasmodic phenomena. Recommends the use of a stronger solution of cocaine. With a four per cent. solution anæsthesia often delayed twenty minutes; requires frequent pencillings. After cocainization of the parts, gradual dilatation with Weiss' anal speculum; no pain. Cure complete, when the vagina is so large that no abrasion of the seat of hymeneo-vaginal laceration occurs on coitus. In two cases observed, immediately after period, more frequent application or stronger solutions were necessary to get anæsthesia of introitus.

Cazin ("Vaginisme datant de six ans, disparation du Spasme Vulvaire, rapprochements faciles par les Cacligeonnages et l'injection intravaginale d'une Solution de Cocaïne à deux pour cent," *Bull. et Mém. Soc. de Chir. de Par.*, 1884, N. S., x., 949). Patient a young woman, married six years. Sexual intercourse has always been impossible. Least touch on external genitals causes violent pain—even convulsions. A slight erosion at the

fourchette the cause of trouble. Advised forced dilatation under chloroform; not permitted. Later, patient advised to apply a two per cent. solution of cocaine to external genitals, and also to inject the same into the vagina through a catheter. Tried four days after period. Attempt at intercourse, five minutes later, absolutely without pain. Cocainization repeated before each coitus. Result only temporary. Pregnancy. Cazin believes that spasm and hyperæsthesia disappear after first labor.

Droiahl ("Behandlung des Vaginismus," *Centralbl. für Gynäk.*, Leipzig, 1886, x., 99; also, *Journ. of Nervous Diseases*, 1885, No. 10). Patient with vaginismus, treated with vaginal injections and applications to external genitals of solutions of chloral and borax (borax, 15.0; hydrate of chloral, 3.0, and distilled water, 250.0). "Bromhydrate, 0.006, and camphor bromat., 0.06," three times daily by the mouth, with iron. After eight days painless cohabitation. Early conception.

Droiahl quotes from the *Moniteur thérapeutique*" the history of a case of vaginismus. Pencilling of the external genitalia and vaginal injections of two per cent. cocaine solution made painless coitus possible in a few minutes.

Willmott ("Cocaine in Vaginismus," *Austral. Med. Jour.*, 1885, No. 10; also, *Centralbl. für Gynäk.*, Leipzig, 1886, x., 318). Young woman, married ten weeks. Coitus could not be accomplished, each attempt produced severest pain. Forced dilatation of constrictor; removal of hymen; improvement. Three fingers introduced into vagina without pain. After four weeks the original sufferings returned. Pencilling with four per cent. solution of cocaine half an hour before coitus made it painless. General condition of patient improved. She conceived soon after.

Von Ramdohr (*New York Med. Jour.*, 1884, xl., 588). Von Ramdohr succeeded in making an examination in a case of vaginismus, which had resisted every previous attempt, by brushing the mucous membrane with solution of cocaine.

Hoffmann ("Ueber die Anwendung des Cocains in der frauenärztlichen Praxis," etc., *Wien. Med. Presse*, 1884, xxv., 1594–1596, u. 1623–1627). Case 1: Patient young, handsome, and intelligent; general health good; muscles affected by reflex cramp—sphincter vaginæ, anal muscle, muscles of thigh, especially adductors, and the muscles of the abdomen. Contraction as if by faradic current, a veritable "muskelspiel." Introitus vaginæ inflamed and covered with muco-purulent discharge; this area, even if gently touched with cotton, is the seat of pain and origin of reflex cramp. Intense redness, blanched, and examination made possible and painless by the introduction into the vaginal inlet and vagina of suppositories of thirty-five milligrammes of cocaine. Piece of charpie soaked in a three per cent. solution of cocaine laid in the vagina and changed every two to three hours. Before each subsequent examination cocaine suppositories put in rectum. Marriage possible within one month.

Case 2: Patient married twenty months. Fourteen days after wedding husband complained that intercourse had been impossible. Thin muco-purulent discharge from vagina and meatus (husband had contracted gonorrhœa one year before), hymen ruptured, caruncule swollen, whole introitus inflamed. Severe pain on slightest touch; examination impossible. At end of one month's treatment could not introduce index-finger into vagina. Patient went to another physician. Returned to Hoffmann no better—local condition same as before. Cocaine suppositories, 0.035, per anum, and charpie pledget soaked in a three per cent. solution of cocaine laid in vaginal inlet. Vagina irrigated with astringent and disinfectant solutions, painted vaginal mucous membrane with a solution of cocaine, and introduced a cotton tampon soaked in solution of cocaine. Repeated next day. Coitus without pain or obstacle; first since marriage, twenty months before. Vagina cocainized three times in ten days.

The author. Patient a young girl, nervous, thin, anæmic, married two years, came to woman's clinic, Central Dispensary, for treatment.

History: Intercourse always difficult and painful; more since birth of only child, one year ago. At each attempt agonizing pain at vulva, and spasm of sphincter vaginæ. Impossible to introduce pipe of syringe, on account of pain and spasm. Intercourse entirely discontinued. Pain on walking and sitting.

Examination: On attempt to separate labia violent reflex cramp. Impossible to introduce examining finger. Pencilling of cleansed and dried accessible parts of introitus with a twenty per cent. solution of cocaine. Interval of five minutes. Attempt to introduce finger failed. Renewed application of cocaine; interval six minutes. Thoroughly successful digital exploration of vagina made without spasm and with but little pain. Pledgets of cotton, soaked in cocaine solution introduced into vagina and allowed to remain throughout examination.

Vagina malposed, lumen narrowed one-half by pubic arch crossing it midway;[1] uterus enlarged and retroverted; cervix lacerated. Attempt at introduction of speculum failed. In mid-line at post-commissure an elliptical, deep, angry-looking fissure, and a few areas of superficial erosion. Touch, though slightly painful, borne everywhere but here. Spasm reproduced, though not so violently as before, on touching fissure with camel's-hair brush. Primary cause of cramp, narrowing of vagina; immediate cause, fissure produced by attempts at intercourse, and aggravated by subsequent attempts, and by difficult and instrumental labor.

Subsequent history of case: In spite of prolonged and industrious use of cocaine, fissure showed no signs of healing, nor spasm and pain of ceasing until local rest and appropriate surgical treatment directed to the fissure had been instituted.

In this instance the temporary effect of cocaine was excellent, but total failure to secure any permanent relief after a fair trial of drug alone.

The chief interest in regard to the employment of cocaine in gynecology concerns its use in operative work. The question whether operations about the vagina and cervix are possible, without general ether or chloroform narcosis, has been settled in the affirmative. A considerable number of these operations have been done successfully without any anæsthesia at all, either general or local, but this practice, except in rare and unusual cases, is inadmissible. We have, therefore, at hand two anæsthetics, a general and a local, ether and cocaine, and we are often called upon to decide between them.

It is true, at the outset, that the employment of ether is rarely accompanied or followed by serious results; but in the search for the causes of mortality in operations, even of an apparently trivial nature, ether must always be considered as a possible, though not a probable cause; and when it can be done, all such possible causes of increased death-rate should be eliminated. But further than this, the amount of constitutional disturbance, even if it be but simple annoyance, often induced by ether, when most judiciously administered, and after careful preparation of the patient for narcosis, is entirely out of proportion to the gravity or duration of the operation. Indeed, for a few moments, complete loss of sensibility and of muscular rigidity, a patient is often subjected to hours of subsequent suffering and prostration.

It should be remembered by those most accustomed to giving ether indiscriminately in general, private, or hospital practice, that the gynecologist is called upon to

[1] This condition was [illegible] which the vagina was [illegible] Washington Obstetrical and Gynecological Society, by Dr. George Byrd H[illegible]. The author of this paper, at the same meeting, mentioned a further [illegible] the deformity, in which the vestibule was excoriated and [illegible] the male organ.

treat a class of cases—women, sensitive, bloodless, broken-down with suffering—who, however well they may yield to the influence of the anæsthetic, suffer markedly from its effects, and recall the incident with horror. In the eyes of a busy surgeon the etherization of a patient is not an affair of any great moment and is soon forgotten. But in the eyes of the patient the whole thing is different; it is an event in her life; it is dreaded as much in anticipation as the operation for which it is the preliminary, and frequently causes more after-suffering. It is a thing to be avoided. The very thought of it frightens patients into declining necessary surgical interference, which would be willingly sought if etherization was unnecessary.

It may be said, we believe, that cocaine is preferable to ether in a large number of gynecological operations. Its use is equally to be recommended in securing the briefest possible local anæsthesia, or in maintaining areas of tissue in a state of complete insensibility during the course of the most protracted operation, and it is especially indicated when the condition of the heart or kidney negatives decidedly the employment of ether or chloroform. By a series of the most remarkable operations, Emmet has been able to construct a urethra again and again, when apparently no tissue was to be found anywhere for this purpose. It has been necessary to give ether for each operation of this and of a similar kind, but cocaine would probably answer the purpose just as well, and all danger from the too frequent use of ether would thus be obviated.

When properly used, cocaine procures what is wished—local insensitiveness of tissue—and nothing more, and there is no drug whose external application is freer from difficulty or danger.[1]

There is no area in the body in which, after operative interference, union by first intention is more desirable than the female genital tract. In many operations union by granulation and cicatrization is synonymous with failure, and cicatrices exhibit in women the most extraordinary propensity—not so extraordinary as some would have us believe, however—to become the sources of reflex irritation and of pain. Everything should be done by properly cutting, cleansing, and approximating the wound edges to obtain rapid and permanent healing. But after-rest for a part is no less necessary than cleanliness and proper coaptation. Absolute rest, or any thing approaching it, is impossible in the case of the uterus, vagina, bladder, urethra, or rectum. In respiration the tissues comprising the pelvic diaphragm, and those adjacent to, and in relation with it, move as do the thoracico-abdominal septum and the contents of these two cavities. But these movements are slow and gentle, nor are advance and regression great; the tissues are never stretched. This cannot be said when the pelvic diaphragm is violently agitated by efforts at emesis following etherization. Anyone who has watched the rapid and forced movements of the anterior vaginal wall, for example, when the perineum of a vomiting patient is retracted by a Sims speculum, may be justly fearful of the success of an operation on tissues so stretched and tumultuously agitated. And it is in those operations, where absolute union of freshened edges is requisite, as in the relief of vesico-vaginal fistula, and where, to secure this union, rest, as near complete as possible, is necessary during the first twenty-four or forty-eight hours after the operation, that the employment of cocaine is most singularly applicable. That some patients do not vomit under or after ether, does not invalidate the truth of the foregoing statements, nor does the fact that many surgeons secure the most happy results under the most adverse circumstances. The efforts made in administering ether by the rectum, to do away with the effects of its inhalation in the usual manner, were successful in so far as the "gagging" and vomiting were concerned. But aside from the great dangers of rectal etherization, such a plan is unsuitable in operations on the female genitalia, except in securing primary, or as a preliminary to complete anæsthesia, when the vapor is to be subsequently inhaled.

The range of the usefulness of cocaine is, however, restricted. It can at best procure but a limited anæsthesia. It is essentially non-diffusible; chilling the sensibility only of the surfaces with which it comes in immediate contact, or the tissues in nearest anatomical relation with them. When an operation has to be performed requiring extensive superficial anæsthesia, this anæsthesia is easily produced. But in deep operations it is a question as to just how valuable cocaine is. By repeated applications of the drug, by deep hypodermatic injections, and by the use of strong solutions, the difficulty may be partly overcome. But in the graver operations which the gynecologist is called upon to perform, no reliance can be placed on cocaine, and the chances are they will ever remain beyond the pale of its usefulness, which, with few exceptions, will be confined to the vagina and portio vaginalis.

For one reason alone its employment in some of the simpler and nearly all the graver operations will be inapplicable, and the use of ether will continue to be preferred. However great a degree of anæsthesia of the tissues to be operated upon is induced, the patient will be constantly aware that something is being done, and there will be a tendency on her part, involuntary perhaps, to shrink away from the edge of the table and the reach of the operator. This will require readjustment of the speculum, if one is being used, and the operation will be constantly delayed while the patient is placed in a more satisfactory posture. But more important still, cocaine does not procure that complete absence of all muscular rigidity as does ether narcosis, which is of advantage in all gynecological operations, and absolutely necessary in some. At the most critical point of an operation, when it is necessary to secure a bleeding vessel, or obtain absolute coaptation of two denuded surfaces, the patient, exhausted by the constrained position in which she lies, begins to move about. In the experience of the author there has been more suffering during and after the operation from the maintenance for a long time of one position, and that not a natural or particularly easy one, than from the direct present or after affects of the operation itself. His patients have become restless, and have complained of tired and aching limbs. A comfortable operating-table can always be provided, but it is not always that an operation requiring no little nicety and precision can be done quickly, except by the most practised. When the patient is of an extremely nervous disposition, these difficulties become exaggerated, and ether is a necessity.

One cause of pain and discomfort—prolonged and forcible traction with the Sims speculum—can be eliminated by painting with cocaine, and rendering insensitive the surfaces by the tissues so drawn and compressed (Polk).

If the effect of cocaine on the healing of wounds, in tissues permeated by it, has not been investigated, it would seem that some data on this subject should be collected from experiments on man or the lower animals. If such investigations have been made, the author regrets that an account of them has not come to his notice. No conclusive dicta can be laid down as to the use of cocaine in gynecology until this has been determined. Cocaine must produce a marked degree of contraction of peripheral vessels, for tissues become blanched under its application, and in the author's own cases and others reported elsewhere, there has certainly been less hemorrhage during operations than is customary. How long this local anæmia lasts, whether long enough to exert any

[1] Whether ... [illegible] ... is [illegible] ... constitutional effect ... [illegible] ... solution were thrown under the skin of the back in two or three places to prepare the way for the use of [illegible] ... [illegible] ... were [illegible] ... [illegible]

effect upon rapid union or not, are both questions which he would not attempt to answer. In all the reported cases in which cocaine has been used, the rapidity and success of union has either been stated to have been satisfactory or else has received no comment. In no case in gynecological practice, so far as he has been able to ascertain, has any unfavorable influence on the healing of wounds been noted. In each of his own cases union has been all that could be desired.[1]

This faculty possessed by cocaine of diminishing the calibre of blood-vessels, and hence of the amount of blood in a part, has been taken advantage of in the treatment of inflammations of the vaginal mucous membrane. In the milder kinds of vaginitis it forms alone an available application, and in strong solutions is highly recommended as a preliminary or accompaniment to the use of nitrate of silver, sublimate solutions, etc., in the more severe types of gonorrhœal inflammation.[2]

Cocaine has been employed in solutions of various degrees of concentration in gynecology. Of these the four per cent. seems to represent the lowest effective strength, the ten per cent. the medium, and the twenty per cent. solution the highest that has been employed.[3] The degree of both local and general sensitiveness decides the necessary strength of the solution. As a rule the four per cent. solution acts sufficiently well to produce a decided and somewhat lasting effect when the conditions as regards general and local insensitiveness, superficiality of tissues to be affected, etc., are favorable. When these conditions are unfavorable; when the patient is nervous and susceptible; when the field of operation is hyperæsthetic, extensive, or removed from the surface; when the operation is likely to be a protracted one, the stronger solutions are found to be the most satisfactory. Injections with the hypodermatic syringe into the submucous tissues, or repeated pencilling with weak solutions, are quite effective; but the first is often unnecessary, and the second tedious and unsatisfactory.[4] The tendency among gynecologists, particularly in Germany, is toward the use of strong (twenty per cent.) solutions of the muriate, and unless it is some day shown that the action of the drug in this concentrated form is prejudicial to wound-healing, the use of the more powerful solutions, as being at once simple, rapid, and effective, will become general.[5]

The sensation of stinging, heat, or burning, imparted to tissues by the use of the twenty per cent. solution has never been noticed by the author.[1]

But as there are various lengths of time over which an operation may extend, and as there are various degrees of local and general sensitiveness, no unconditional assertion can be made as to the strength of the cocaine solution to be employed.

The methods of using cocaine in gynecology are given in sufficient detail in the histories of the appended cases. For external application, to render the absorptive capabilities of the part as great as possible, the field of operation must be thoroughly cleansed, preferably with soap and water, and then carefully dried. If carbolic or sublimate solutions are used, it should be before the application of the cocaine, and the parts dried as before. Continuous irrigation of cocainized surfaces during operations is difficult to carry out with success.[2] It is well, after first thoroughly pencilling the part with a solution of the desired strength, to apply a thin layer of absorbent cotton soaked in the same fluid over the surface, and allow it to remain for a certain interval.[3] This is simpler than frequent pencillings. The length of time required for thoroughly anæsthetizing a part depends of course on the strength of the solution, the rapidity of absorption, and other variable factors. Although the effect of the drug is sometimes very rapid, the tendency among operators is rather to wait too short than too long time, especially if it be not taken in minutes.[4] The loss of sensation in some accessible areas can be roughly determined by touching the parts with a pin or pointed instrument, at first gently and then with some force. From the observation of the author, with a twenty per cent. solution, although in a very few moments the parts are well anæsthetized, the maximum effect is reached in about four to six minutes. With a weaker solution a little longer time is required.

In some situations the deep submucous injection of weak solutions answers an excellent purpose, while in positions where tissues are thick and the absorptive power is not good, rubbing the drug, in the form of solution or ointment, well into the previously cleansed and dried surface will insure the requisite degree of anæsthesia.[5] The effects of cocaine last a variable length of time.[6] During an operation it is extremely difficult to repeat its application, but with care and patience the bleeding surfaces may be sufficiently dried to make the action of the drug possible, or submucous injections may be repeated. Where operations are performed involving an extensive surface, by commencing the denudation at the lowest possible point, so that surfaces above may be always dry, and uniting wound edges from below upward, areas to be denuded and united may be cocainized step by step as the operator comes to them. This, however, is not always possible.

It is well known that cocaine acts most effectively in tissues which have been rendered anæmic,[7] but it is difficult to drive the blood out of the parts upon which the gynecologist operates. The author has endeavored to reach this end, but with what success he is unable to state, by the administration of a prolonged and very hot vaginal douche just before applying the drug. By means of a neat little instrument devised by Bache Emmet, of

[1] Bosworth, see Knapp, loc. cit. Applied to [illegible] cocaine to nasal mucous membrane. In twenty to thirty seconds contraction of venous sinuses under mucous membrane. Entire depletion of part in three minutes[!]: later, anæsthesia; capillaries and blood-vessels affected in like manner. Mode of action—causes by absolute contact contraction of unstriped muscle-fibres. Does not act through nerve-supply. Time required for cocaine to act, proportionate to absorptive power of mucous membrane; more rapid in columnar than squamous epithelium; more rapid in children than in adults. Contraction of venous sinuses persists about twelve hours, or over. Dr. Canon Morgan, of this city, stated, in conversation with the author, that from a series of (unpublished) experiments in operations on the throat, he was convinced that cocaine delayed union and increased the risk of subsequent hemorrhage. Howe: New York Medical Journal, August 8, 1885. Series of experiments on healing of same lesions of both eyes in the same animal, cocaine being used in but one. Conclusions: Imperfect solutions do not appear to hinder the healing process in lesions of iris, conjunctiva, or cornea. As strong solutions possess strong antiseptic properties they would seem to exert a favorable effect in this respect. The above quoted by Corning, loc. cit., who says: "What influence cocaine has on the healing of wounds is a question that can be answered inductively, and that the above observations go far toward furnishing a definite conclusion. In each of the author's cases of trachelorrhaphy, extensive oozing after operation, coming on after an interval of twelve to twenty-four hours. In each case the period came on prematurely, which is, however, not unusual, and was excessive."

[2] Fränkel, Butaud, Thomas, loc. cit.

[3] Fränkel in his early experiments, which were made [illegible] and sensitive tissues, used two to five per cent. solutions [illegible] without decided results. A piece of cotton soaked in a two to five per cent. solution was laid in the vagina and allowed to remain five, ten, or fifteen minutes [illegible] subsequent reduction of sensibility. He next used a ten per cent. solution, but has finally come to rely upon a twenty per cent. solution almost exclusively. He recommends the following formula: ℞. Cocain. muriat., 1.0; aq. destil., 3.0; spir. vini rect., 2.0. To keep up effectiveness of solution a few drops of alcohol must be added from time to time. [Aqueous solutions of the muriate are, the author believes, generally used in this country.]

[4] Schramm (Cocain als lokales Anästheticum bei Prolaps Operationen, Centralbl. für Gynäkol., Leipzig, 1885, ix. 225–227) says his next experiments will be to ascertain if cocaine cannot be rendered more effective by applying it externally, or in subcutaneous or submucous injections in combination with morphia and other narcotics.

[5] Butaud, quoting Koenigstens, says, that in ophthalmic operations the anæsthetic power of cocaine increases from two per cent. to ten per cent., and diminishes beyond this degree of concentration. He believes that in gynecology the ten per cent. solution is sufficiently strong for the usual run of cases, and that the twenty per cent. solution should be reserved for use in active inflammations, as vulvitis and gonorrhœal vaginitis. [It is possible that in gynecology there may be some highest efficient strength of cocaine solutions yet undetermined, and that above this point solutions will increase instead of subduing tissue sensitiveness. A great deal of the variability in the action of different solutions of the same nominal strength is said to be due to some kind of deterioration. Boracic acid gr. ij. to cocaine solution 3j. will insure sterility and prevent one kind of deterioration. For some time the author supposed that aqueous solutions of the muriate of cocaine lost their strength with age, and had fresh preparations made before each attempt at cocainization. Of late he has used with perfect success solutions that have been made for months, and have remained in bottles carelessly corked since they were prepared. He does not know what has been the experience of others in this regard.]

[1] Schramm: loc. cit. Fränkel: loc. cit. [2] Schramm, loc. cit.

[3] Engelman: Weekly Medical Review, Chicago, 1885, xi., Suppl., 10, 17, 25. Engelman more than any one else insists on the desirability of this method of practice.

[4] Butaud, loc. cit. In some subjects fifteen minutes are required for complete absorption. Thomas, loc. cit., says, [illegible]

[5] Butaud, loc. cit., says powders have not been tried in gynecology, but, according to Jelinek, in the throat have [illegible] of solutions.

[6] Butaud, loc. cit., says we cannot [illegible] of absolute insensibility.

[7] Corning, loc. cit.

New York,[1] the tissues of the urethro-vaginal septum can be made bloodless preparatory to the "button-hole" operation, and the use of the uterine tourniquet might be revived to produce the same effect before trachelorrhaphy.

By surface pencilling with strong solutions it is believed that in nearly all the simpler and more frequent plastic operations about the vagina and cervix a sufficiently deep and prolonged anæsthesia may be produced.

In the removal of silver sutures, especially from the perineum, sometimes a very painful procedure, cocaine has been recommended and is much employed.[2]

After the preceding generalizations it may not be inappropriate to take up in detail the gynecological operations and procedures in which cocaine has been recommended or employed. Strange as it may seem, the published material to draw upon in accomplishing this result is scant, and represents, in the belief of the author, but a very small part.

Of the experiments made, or experience gained in the use of cocaine, an outline of the histories of individual cases is given, often in the words of the reporter, and observations of gentlemen whose names are not unknown in gynecology.

Some procedures are described which, it is thought, are not in accordance with the views of many American gynecologists.

I. The Vulva, Perineum, and Vagina.—1. *Retention of menstrual blood due to atresia of some part of uterogenital canal. Butaud* (*loc. cit.*) advises its use in operations for the above condition. He says that ether is inadvisable in many cases, for vomiting may cause rupture of the sac containing blood.

2. *Laceration of the perineum, true and so called; prolapse of the vaginal walls and of the uterus, cystocele, urethrocele, etc.* For use in operations upon the perineum and anterior and posterior vaginal walls, perineorrhaphy, and anterior and posterior colporrhaphy, cocaine has been suggested and has been tried with success.

Thomas (loc. cit..) says that Levis, of Philadelphia, has used cocaine with success in such plastic operations in the vagina.

Polk, of New York, recommends in perineorrhaphy the injection of four to five minims of a four per cent. solution of cocaine into the sides of the vagina, just within the ostium, and thoroughly rubbing the solution into the field of operation and its neighborhood.

The author can find no notice of the use of cocaine in primary operations on the perineum.

Schramm (loc. cit.). Case 1: Anterior and posterior colporrhaphy. Nervous subject. Prolapse of anterior and posterior vaginal walls; descensus uteri to the scissura vulvæ; no perineal tear. Sublimate douche; parts dried. Field of operation pencilled with a twenty per cent. solution of cocaine until pale and bloodless. Areas to be denuded and united; previously cocainized *seriatim*. In posterior colporrhaphy cocaine was applied five times with silver wire. Duration of entire operation two and a quarter hours. Only very seldom did patient give signs of there being sensation in parts. No rise of temperature. Union by first intention throughout.

Case 2: Anterior colporrhaphy and colpo-perineorrhaphy. Weak and anæmic. Prolapse of anterior and posterior vaginal walls; descensus uteri to lower third of vagina; retroflexion; laceration of perineum. Technique of cocaine application same as above, twenty per cent. Silver wire and buried catgut sutures. Duration of operation, two and a half hours. No pain. Subsequent progress uncomplicated and without fever. First intention.

In the above operation seven grains, or twenty per cent. cocaine solution was used. In part these operations are done by assistants.

Schramm says anterior colporrhaphy can be done without general narcosis, but not posterior colporrhaphy, for it is very painful.

Bataud (loc. cit.). Case 1: Laceration of perineum, involving sphincter ani. A ten per cent. solution of cocaine applied and well rubbed into parts (massage) for six to seven minutes. Each separate area to be denuded and united was thus treated when reached by the operator. Sensibility was diminished, but anæsthesia was not complete, for pain (slight) was felt on introduction of sutures. Anæsthesia persisted for twenty minutes. If flow of blood was diminished, it was to a very slight degree.

Case 2: Laceration of perineum up to sphincter ani.; prolapse. Ten per cent. solution of cocaine. Sulphuric acid applied to two surfaces of a gutter, in order to obtain union between them. No pain. Sensation had not returned at end of eighteen minutes.[1]

The author. Anterior colporrhaphy; Emmet's anterior wall operation. Woman's Clinic of Central Dispensary and Emergency Hospital, April 21, 1886. Negro woman; lymphatic disposition. Cystocele, urethrocele, uterine prolapse. Field of operation cleansed, and six injections of a four per cent. solution of cocaine, in all twelve to fifteen minims, thrown under the mucous membrane of the anterior wall. Very slight bleeding and no pain during the operation. One silver suture to secure three points at front and sides of cervix. Elliptical and crescentic denudations united with a continuous catgut suture. Perfect union.

Drs. Harrison, Fry, and W. W. Johnston, members of this Society, were present at the operation, as was Dr. Magruder, a member of the attending staff of the hospital.

3. *Cyst of the vagina. Schramm* (loc. cit.) recommends the use of cocaine in excision of vaginal cysts.

The author. Operation on cyst of anterior vaginal wall. Woman's Clinic of Central Dispensary and Emergency Hospital, June 12, 1886. The patient upon whom this operation was performed presented herself for treatment in April last.

Two vaginal cysts, situated on the anterior wall, were discovered. The fluid was partly withdrawn from them by means of a hypodermatic syringe, was examined, and an outline of the case reported to this Society. The patient at the time declined further operation. She returned on June 10th, having suffered much pain since her last visit. On account of her dense ignorance it was difficult to tell the nature of her sufferings. She was, she said, incapacitated for work. The cysts were found distended with fluid. The vaginal aspect of the larger cyst was cleansed, dried, and pencilled with a four per cent. solution of cocaine. Pledgets of cotton soaked in the same solution were kept in contact with it for six minutes. No douche given. A piece of the wall was then excised, the cavity of the cyst evacuated, and stuffed with iodoform gauze. There was some little pain during this operation, and disturbance after it, but the patient declined to stay in the hospital and went home.

As was feared, the opening showed a tendency to close; therefore, on June 12th nearly all of that portion of the cyst-wall projecting above the vaginal level was removed with a scissors, after the parts had been subjected to the influence of a twenty per cent. solution of cocaine, on pledget of cotton, for six minutes, and the membrane lining the cyst-cavity stitched to vaginal mucous membrane with ten catgut sutures, as recommended, we believe, by Schröder. There was considerable hemorrhage during this slight operation. There was no pain during or after it. Dr. Fernald, a member of this Society, was present.

4. *Vesico vaginal fistulæ. Schramm* (loc. cit.) recommends the use of cocaine in operations for the relief of vesico-vaginal fistulæ.

Doughty uses muriate of cocaine in operative gyneco-

[illegible] sequent discussion by Coe, Mundé, and Emmet.

[2] Polk, Knapp, loc. cit.

[1] I [illegible] to understand [illegible] case, or the [illegible] sulphuric acid in order to unite a rupture of the perineum.

logy and vesico-vaginal fistula (The Medical Record, New York, 1884, xxvi., 658).

Case of vesico-vaginal fistula. Very small fistula. Knee breast posture. Thorough cleansing of [illegible] surface. Two applications (two drops each) of two per cent. solution of cocaine made three minutes apart. Two minutes later fresh application; repeated in five minutes. In three minutes anæsthesia complete. Denudation for period of sixteen minutes, then for first time pain. Solution reapplied. Denudation completed in thirteen minutes, without pain. Patient put in Sims' position to rest. On resuming operation introduced first two sutures; considerable pain. Reapplication of solution. Introduction of remaining four sutures without pain. Very slight bleeding, noticed flow of blood increased as effects of the cocaine wore off. Coagula seemed firmer than usual.

Polk (Knapp, loc. cit.). Case of vesico-vaginal fistula. Small fistula. Four minims of four per cent. solution of cocaine injected on each side of fistula one-half inch away. Mucous membrane of bladder and vagina around fistula freely painted. Operation; no pain or discomfort.

5. *Pruritis vulvæ.* *Engelmann* (*St. Louis Courier Med.*, 1885, xiii., 248–254) says cocaine relieves itching of pruritis vulvæ.

Hoffmann (loc. cit.) employed cocaine with marked success in three cases of pruritis vulvæ. It was used in the form of an ointment, with vaseline, in the proportion of 3 to 100, and applied as often as the itching became annoying.

6. Cocaine has been employed very successfully as a preliminary step in the cauterization of the soft chancre.

Polk (Knapp, loc. cit.), four per cent. solution of cocaine.

Thomas (loc. cit.).

Butnam (loc. cit.), observations at the Lourcine, Paris, with five per cent. solution of cocaine.

II. The Uterus.—1. *Curetting.* *Schramm* (loc. cit.): Patient irritable and nervous; objected to chloroform narcosis. Rapid dilatation of cervical canal with Hegar's instruments of hard rubber; uterine cavity washed out with sublimate solution; dried with cotton wrapped on sound. Cotton impregnated with cocaine solution introduced on sound into cavity; allowed to remain five minutes. Thorough and satisfactory curetting and injection of undiluted liq. ferri sesquichlor. No pain; slight discomfort only. Further progress uncomplicated.

Fränkel (loc. cit.). Case: Curetting, slight pain. Fränkel advises above-described plan of treatment, but allows cocaine solution to remain in contact with walls of cavity for fifteen minutes, using pledgets of cotton impregnated with the drug.

Engelmann (*Medical Review*, loc. cit.) narrates interesting instances of the intra-uterine use of cocaine occurring in his own practice.

2. *Dilatation of the cervical canal; section of the cervix; use of actual cautery for removal of commencing epithelioma; curetting canal; ignipuncture; scarification of cervix, etc.* *Polk* (Knapp, loc. cit.) remarks that sensitiveness of cervix being less marked than that of most of genital tract, it is the more readily influenced by cocaine; that incision and forcible dilatation of the cervix, the use of caustics and of the sharp curette, the use of the actual cautery (in cases of commencing epithelioma), have all been practised satisfactorily and painlessly by the employment of cocaine. He recommends the injection of three to five minims of a four per cent. solution of cocaine into regions that are to be cut, stretched, or scraped.

Engelmann (*Medical Review*, loc. cit.) suggests the use of cocaine before rapid dilatation of the cervical canal, and the use of sponge-tents.

Case: Firm contraction of external os in a cartilaginous cervix. Painless dilatation of os and cervical canal two minutes after application of a four per cent. solution of cocaine on cotton.

Butaud (loc. cit.). Case 1: Very nervous woman. Ignipuncture of cervix. Forty punctures in forty-five minutes; six applications of cocaine; no pain. Sensibility returned in twenty minutes after operation.

Case 2: Very nervous woman. No pain. Ignipuncture, Butaud says, consists in introduction of the heated point of galvano cautery into tissues of cervix thirty, forty, fifty, or one hundred times, to the depth of fifteen to twenty millimetres. (See, by the same author, "De l'ignipuncture profonde du col de l'uterus," *Rev. Méd.-Clin. des mal. d. Femmes*, Paris, 1886, viii., 10–24.) This procedure is made painless by the application of a ten per cent. solution of cocaine to the neck, and repeated every ten minutes until the end of the operation. Sometimes, in spite of cocaine, the heated points are felt. Advises the use of cocaine before *scarification* of the neck.

Schramm (loc. cit.) recommends cocaine in *Schröder's operation for excision of cervical mucous membrane and in galvano-caustic amputation of portio vaginalis.*

Chéron (*Rev. Méd.-Clin. d. mal. d. Femmes*, Paris, 1884, vi., 664) has employed cocaine in two cases of ignipuncture which were rendered entirely painless by means of four successive applications of a five per cent. solution of cocaine.

Fränkel (loc. cit.). Experiments. Two deep punctures of cervix (according to Spiegelberg) loudly complained of. Surface then twice pencilled with a twenty per cent. solution of cocaine, and for five minutes cotton soaked in a solution of the same strength left in contact with eroded portio. Punctures; no pain.

3. *Trachelorrhaphy; Emmet's operation for laceration of the cervix uteri.* *Polk* ("Hydrochlorate of Cocaine as a Local Anæsthetic in Gynecology," The Medical Record, New York, 1884, xxvi., 489). Case 1: Double laceration of cervix uteri extending on both sides to cervico-vaginal junction. Parts washed with warm water and soap; dried. Cervix: Its canal and adjacent vaginal wall painted with a four per cent. solution of cocaine three times, at two to three minute intervals; after last, three minutes' wait. Operation elaborate of its kind; cicatricial plug from each angle. Time of operation, forty minutes. No pain or discomfort. In last ten minutes some soreness.

Case 2: Patient has less self-control than above. Preliminaries same as before. Acute pain; after twenty minutes application (fourth) was made. After three minutes' wait the operation was continued, and completed without pain. Polk says cocaine retarded blood-flow in first case.

Roeth ("Cocaine in Trachelorrhaphy," *American Practitioner and News*, Louisville, 1886, N. S., i., 37; see, also, *Boston Medical and Surgical Journal*, 1885, lxii., 527). Case 1: Laceration of cervix to vaginal vault on right side, admitting finger into cavity of uterus. Three hypodermatic injections into cervix, one on each side of rent, and one at base of sulcus. Five minutes' wait. Painted surfaces to be denuded. Shortly after began operation. No pain throughout. Quantity of drug used ℥ ss+. Roeth says in future he will use cocaine in preference to ether.

Fisher ("Trachelorrhaphy with Cocaine," *Northwest Lancet*, St. Paul, 1884–5, iv., 440). Case 1: Lateral laceration of cervix extending quite to vaginal junction. Tried general anæsthesia; abandoned on account of bad behavior of the heart. Operation postponed two days. Cervix brushed lightly with a four per cent. solution of cocaine; five minims injected into either lip about four lines from ulcerated surface. About thirty minims used in all. Usual operation: no pain or inconvenience, except from constrained position of patient and traction on the uterus. Union good. Fisher says cocaine is a good substitute for anæsthesia, but it does not secure relaxation of muscular tissues nor permit of uterus being drawn as near the vaginal orifice as is otherwise possible.

The author. Three cases of trachelorrhaphy. Case 1: Patient of lymphatic temperament. Bilateral lacera-

tion of cervix down to vaginal junction; tissues hypertrophied, rolled out, cystic, eroded, cicatricial. Hot carbolized douche; parts dried. Cervix, cervical canal, and vaginal fornix painted once with a twenty per cent. solution of cocaine. Six minutes' wait. Operation (May 27, 1886) very extensive. Hemorrhage very slight; absolutely no pain; silver wire. Time of operation, from first application of cocaine to twisting of last suture (a hot antiseptic douche being given before coaptation of parts), one hour and ten minutes. After operation no rise of temperature, no pain or discomfort. Discharge of blood from vagina began twenty-four hours after operation, and lasted twenty-four hours. Premature menstrual period five days after operation; more profuse than usual; lasted usual time. Sutures removed on fifteenth day, one at left angle on eighteenth day; union perfect. Dr. Fry, who is present this evening, will bear witness to the painlessness of this operation.

Case 2: Patient a very nervous and excitable woman, almost hysterical at beginning of operation. Slight right-sided tear of cervix, and considerable cicatricial deposit at angle. Operation June 12, 1886. Field of operation cleansed, dried, and pencilled as before. After first pencilling, a pledget of cotton, soaked in a twenty per cent. solution of cocaine, left in contact with cervix for six minutes. Time of operation estimated as before, forty-five minutes. When half over, cocaine applied very unsatisfactorily to denuded edges. Hemorrhage inconsiderable, less than what might have been expected; silver wire. Patient restless and fearful during operation, afterward assured author there was no pain attending it.

Drs. Fry, Fernald, and W. W. Johnston assisted the author in this operation.

There was slight oozing of blood from the vagina for twenty-four hours after the operation; no pain, subsequent discomfort, or fever.

Case 3: A very nervous patient. An extensive bilateral tear, up to internal os and outward to vaginal junction. Lips thin; tissues everywhere soft; no effort at nearing a deposit of scar tissue. Considerable erosion. Operated May 29th. Preparation of field of operation as in Cases 1 and 2, twenty per cent. solution of cocaine being used. The internal edges of the already made flaps freshened and brought together; very little hemorrhage; silver wire and two catgut crown sutures. Patient very restless, but suffered no pain during or after operation. Time estimated as before, one hour and ten minutes. No rise of temperature. Considerable oozing began twelve hours after operation; lasted one day. Period came on prematurely and was more profuse than usual. Drs. Fry, Cutts, and Johnston were present at this operation. Sutures removed on eighteenth day. Union perfect.

Of these three cases, operated upon by the author, all were white, one only being a hospital patient. One cause of pain and suffering during and after trachelorrhaphy was avoided by keeping the uterus fixed with tenacula, but exerting no irregular or injudicious traction upon it.

Schramm (loc. cit.) recommends the use of cocaine in Emmet's operation (trachelorrhaphy).

Engelmann (*Medical Review*, loc. cit.) describes a case of trachelorrhaphy done by Mundé, of New York. Solution of cocaine injected into cervix. No pain until introduction of deep sutures. Author has not seen original reference.

Fränkel (loc. cit.) describes a case in which cocaine was used successfully in forcibly breaking up some post-uterine inflammatory adhesions, thus restoring the uterus to its proper position.

III. URETHRA.—1. *Dilatation of urethra.* [illegible] ("Cocainum Hydrochloricum als Anästheticum bei der Simian'schen Dilatation der weiblichen Urethra," *Centralblatt für Gynäkologie*, Leipzig, 1885, ix., 695). Patient very anæmic, nervous, and susceptible. Diagnosis made of tumor in the bladder; to complete diagnosis dilatation of urethra was desired; chloroform contra-indicated by condition of heart, etc.; bladder emptied by catheter; cotton wrapped on sound and soaked in twenty per cent. solution of cocaine put in urethra, and application of same strength of solution to vaginal wall and about meatus; four such applications of cocaine solution in twenty minutes; mucous membrane pale; meatus enlarged with scissors; Hegar's dilators. After introduction of No. 18, index finger was introduced, both having circumferences of 6 ctm. Diagnosis completed. No pain on cutting or dilating. Slight discomfort from stretching on introduction of finger far into bladder. Whether cocaine would be effectual in the removal of such a tumor yet remains for demonstration.

2. *Galvano-caustic division of the urethro-vaginal wall. Butaud* (loc. cit.) gives a case of a very susceptible patient. Chloroform contra-indicated on account of condition of kidneys and arteries. Calculus of urethra. Solution of 0.50 ctgm. cocaine to 5 gm. water used. Anterior vaginal wall, meatus, introitus, etc., pencilled repeatedly and same solution thrown into pocket containing calculus. Section of septum by heated platinum wire; lasted four to five minutes. No pain. No loss of blood.

3. *Excision, torsion, or cauterization of urethral caruncles; vegetations of meatus, polypi of meatus urinarius, prolapse of urethral mucous membrane, etc. Godson* (*British Medical Record*, January, 1885) quoted by Butaud, see original.

Butaud gives vascular vegetation of meatus urinarius, twenty per cent. solution of cocaine, twice pencilled on vegetations and surrounding parts. Excision, scissors; no pain; weaker solution of iodide probably answer.

Butaud (loc. cit.). Case 1: Pediculated vegetations of inferior lip of meatus; five per cent. solution of cocaine; cautery; no pain.

Case 2: Polypus of urethra, size of filbert, hung from meatus; ten per cent. solution of cocaine; torsion; thermo-cautery to seat of implantation; no pain. Sensation had returned in ten minutes.

Case 3: Two small urethral polypi hung from meatus, very painful; ten per cent. solution of cocaine. Anæsthesia in four minutes; excision, scissors; galvano-cautery, no pain. Sensation had completely returned in fifteen minutes. Under cocaine polypi blanched.

Fränkel (loc. cit.) recommends employment of cocaine in the treatment of superficially seated growth of vulva, condylomata, etc., and in caruncles of urethra.

Polk (Knapp, loc. cit.) recommends cocaine in removal of urethral caruncles; four per cent. solution of cocaine, med. cautery.

Emmet's "button-hole" operation.

Thomas (loc. cit.), painful and irritating inflammation of female urethra.

From the preceding enumeration of a few of the almost infinite number of conditions in which cocaine has been used as a local anæsthetic in gynecology, and with the thought before us that in obstetrics,[1] ophthalmology, laryngology, and general surgery the results of its application have been no less gratifying, it will be seen how great is the measure of its usefulness.

HUNGRY POLES.—Some Poles in Toledo came near creating a riot because the meat-inspector attempted to prevent them from eating the meat from a cow which had died of splenic fever.

[1] It may be [illegible] following articles. Knapp [illegible] quotes experiments of Le Fevre, an interne at Bellevue, with cocaine in the first stage of labor; Weiss (loc. cit.), Cocain gegen unstillbares Erbrechen der Schwangeren; Lucas, Del [illegible] de la [illegible] Paris, xvii. 163–169; also, Compt. Rend. Soc. de Biol., Paris, 1885, 8. S., ii., 37–40: Fränkel (loc. cit.), On Cocaine in First Stage of Labor; Uhler, Muriate of Cocaine in Labor, Maryland M. J., Baltimore, 1884–85, xii., 20: Cocaine in Completion of Second Stage of Labor. Hergott [illegible] De l'emploi de la cocaine en obstétrique. Hergott reports instances of usefulness of cocaine in fissured and painful nipples: Thomas (loc. cit.) refers to employment of cocaine in vomiting of pregnancy, and first and second stages of labor; Engelmann, Med. Rev. (loc. cit.), gives instance of success of application of four per cent. solution cocaine to eroded cervix in vomiting of pregnancy; Cincinnati Lancet and Clinic, etc., 1884, xiii., 552, The Use of Cocaine in Painful Catheterization after Labor; also the last number of the Nouvelles Archives [illegible]

A CONTRIBUTION TO THE SYMPTOMS AND PATHOLOGY OF ENDARTERITIS OBLITERANS.[1]

BY GEORGE L. PEABODY, M.D.,

[illegible] AND [illegible] NEW YORK.

My communication this evening concerns the details of a few cases that have recently been under my care, most of them with fatal termination, and followed by autopsies which rendered the lesions sufficiently plain. They are offered to the Society not as something new, but as bearing with some distinctness upon a chapter in special pathology upon which comparatively little work has been done—at least here. It is interesting that death may result from this lesion, with striking clinical evidences of destruction of motor areas in the brain, which autopsy reveals to be intact. The only explanation which suggests itself is that, in addition to the partial obliteration of the lumen of the nutrient artery of the area affected, there must have been a spasmodic contraction of the vessel or vessels which was sufficient to cause complete local arrest of the circulation. The duration of this spasmodic contraction varies. In some attacks it lasts only a few minutes, and then all the symptoms pass away as rapidly as they come. In others the duration is prolonged to such an extent that life comes to an end before it ceases; and yet the duration may not be sufficiently prolonged to cause softening of the brain-area affected.

Another possible termination is hemorrhage, as is seen in one of my cases.

This lesion is common enough in nearly all the organs of the body. I have frequently seen it in the lungs, kidneys, heart, and in neoplasms, especially in epitheliomata. It has been, however, in my experience, commoner in the brain than in any other organ. It needs not to be said that it does not always produce symptoms.

It was, at one time, supposed to be invariably due to syphilis, but that idea is now no longer held, although it is more common in syphilitics than in others.

The earlier writers on this subject—Steinburg, Heubner, Wilks, and others of more recent date—maintain its dependence upon syphilitic infection; but it has occurred in so many patients in whom no other evidence of that disease could be found, either clinically or anatomically, that it seems to me fair to admit that this cannot always be the case.

One of the first cases that came under my observation, some years ago, occurred in the person of a prominent surgeon of this city, who realized the necessity of giving a complete history of his life to his physician, and who had had a large family of healthy children. He certainly did not know that he was syphilitic. Other cases of this kind have come under my observation.

Hilton Fagge believed it to be always a lesion of syphilis.

The most recent writer on this subject of whom I have any knowledge is a Frenchman named Hippolyte Martin, who has an elaborate article in the *Revue de Médecine* for January of this year. He is quoted in the *Centralblatt f. kl. Medicin* for May 15, 1886.

In a very elaborate article he endeavors to prove that a large number of organic diseases are due to this arterial disease. He considers that it occurs earliest in the *vasa vasorum* of the ascending aorta, and regards alcohol, lead, and uric acid as efficient causes of the lesion. A great many cases are not susceptible of explanation, such as those which relate to young children of three or four years of age, who are affected neither by tuberculosis nor syphilis. He regards micro-organisms as an occasional cause. Certain trophic disturbances of the nervous system are also vaguely alluded to in reference to etiology. This disease in the aortic nutrient vessels may give rise to atheroma of the aorta. He ascribes the origin of many cases of hitherto unexplained mitral disease to this lesion in the arteries of the valve, as well as also degeneration of the heart-muscle and new-growths in it. Atrophic changes in the kidneys are thus produced. Similar changes occur in the spinal cord, and sclerosis of the posterior columns is instanced as one of the commonest of them.

Atheroma of the cerebral arteries is traced to progressive obliterating arteritis as a cause. We know but little of the consequences of this disease in the lungs, liver, spleen, alimentary canal, and skin, but cirrhotic changes in most of these organs are probably thus produced.

This paper by Martin is long, clearly written, and very suggestive.

The following cases have occurred to me during the past few months:

CASE I.—J. M——, aged fifty-six, a native of Ireland; widower; a tailor by occupation; was admitted to my service in the New York Hospital April 22, 1886. He gave the following history: His mother was rheumatic; his father he knew but little. He said that he (the patient) had had rheumatism in his hips for six years. He denied malarial history. He had a soft chancre years ago, and suppurating bubo, but he denied symptoms of syphilis. He has partaken immoderately of spirits for the past twelve years. During the entire past winter he has suffered from a continuous headache, and from ringing in the ears. He has not been dizzy. About ten days ago he suddenly fell to the floor, and was unable to move either of his right extremities, and was unable to talk; he did not lose consciousness. In half an hour he was able to talk, and power had returned in great measure to his leg, but less to his arm. Four or five times since then he has had slighter attacks of a similar character, when he could not speak or move, but recovered always in a few minutes. There was never any loss of consciousness. He never had an attack previously to ten days ago. His appetite is fair, his bowels regular. His temperature is 100.6°, respiration 24, and pulse 82, on his admission to the hospital at 11 A.M. He is senile; his superficial arteries are stiffened and tortuous. He is poorly nourished; there is no œdema. There is incomplete right facial paralysis. The tongue on being protruded deviates to the right. There is well-marked right hemiparesis; there is no disturbance of sensation; there is lateral curvature of the spine; the chest is barrel-shaped; the heart-sounds are normal.

His urine gives the following results on examination: Reddish-yellow, acid, 1.024, no albumen, negative microscopically.

Treatment.—Potass. iodid., gr. xx., every three hours.

April 23d, at 3 A.M.—He had a seizure at this time characterized by loud, gasping, stertorous breathing, and complete inability to speak or protrude his tongue. His pupils were normal. He could move both arms and legs, but there was marked diminution in the power of both of his right extremities. Consciousness was complete. In about half an hour he recovered from this attack, was able to speak perfectly, and told accurately all that had happened. He could protrude his tongue readily. It deviated somewhat to the right. His temperature and pulse were normal; his respiration somewhat accelerated. The iodide of potassium was increased to gr. xxx. at a dose. He felt well, and was allowed solid food at his own request. In the absence of the attendant he tried to get into bed from the night-stool this morning, but fell and was unable to get up without assistance. At 5.30 P.M. he had an attack similar to the previous one. It lasted forty minutes. Recovery from it was slower and less complete. He could soon protrude his tongue, but with difficulty. He could talk so as to be understood, but talking was an effort, and his speech was indistinct.

April 24th.—During the early part of the night he again got out of bed and fell, and was quite restless. He said that after both attacks his head ached very severely, and he was unable to eat. Very early this morning he had a similar attack, but much more severe than any of the previous ones. At 4.30 A.M. he was still suffering from

[1] Read at a meeting of the Practitioners' Society, on June 1, 1886.

it, was conscious, but now was entirely unable to move the right side.

At 9 A.M. he was unconscious, in a profuse perspiration, and breathing with marked stertor. His temperature was 104° F., respirations 52, pulse 129. He continued in this state, rapidly growing weaker, till 1.45 P.M., when he died. The temperature after death was 105.8° F.

The autopsy was made about an hour after death. The weather was warm, and therefore, to prevent the occurrence of post-mortem changes the body was taken directly from the ward to the autopsy-room. It was fairly nourished. Rigor mortis was absent. There was no œdema. The organs generally were normal. The cortices of the kidneys were a trifle thin, but the surfaces were smooth, and the markings distinct. There was slight hypertrophy of the left cardiac ventricle.

There was a mass of grayish-yellow material in the liver, measuring two by three centimetres. It contained caseous material, and proved on examination to be surrounded by a layer of connective tissue, and to be an old gumma.

With the exception of the brain, now to be described, the other organs were substantially normal.

The arteries in the circle of Willis showed several small, insignificant patches of atheroma. In most of them, notably the basilar and left middle cerebral, there was a well-marked growth of connective tissue from the wall of the intima. The calibre of the vessels was thus distinctly encroached upon, but by no means completely obliterated. In many of these regions was found the small-celled growth of periarteritis as well.

There was no alteration in the color or consistency of any part of the brain, and no other change was found.

A microscopic examination of the affected arteries showed the lesion to be a chronic endarteritis, *i.e.*, a connective-tissue growth from the intima, which involved to a varying degree almost the entire circumference of the vessel. The lumen was thus not obliterated, but very materially encroached upon.

I have the pleasure of showing you here the arteries in question, and also several microscopic sections of the left middle cerebral and basilar arteries. They are so very demonstrative as to need no detailed description.

CASE II.—R. O. H——, aged thirty-six, a stenographer, seen on January 26, 1886, with Drs. Franz Foerster and Schlegel, of this city. For several weeks prior to his illness he had complained of vague and indefinite pains in the occipital region, and of sharp lancinating pains on the right side of the head. He had been treated with quinine and phosphoric acid, with partial relief. On January 25th he worked steadily at his calling all day, ate a heavy supper at 7 P.M., and continued his work until 11 P.M., when he went to bed. At one o'clock next morning his wife was aroused by loud stertorous breathing, and found him sleeping so heavily that she became alarmed. After much effort she succeeded in arousing him, but not to a condition of consciousness. He was wildly delirious, raving like a madman, and endeavoring to force his way through the wall into the next house. His wife succeeded in persuading him to return to bed, and in a few moments he became profoundly comatose. From this condition of coma he was never again aroused. The doctor was summoned and found the temperature not elevated, pulse scarcely perceptible, respiration very shallow, pupils unevenly dilated. Under treatment his pulse improved, and his temperature rose to 100°. I saw him before noon on this day. He could not be roused, but when loudly spoken to and shaken his face would become distorted as if he were in pain, and he would bring his right hand to his head and groan. His pupils were normal and reacted well, and his pulse was 80 and feeble. He continued in this state all of that day and the next. His urine was suppressed for twenty-four hours, and then became fairly abundant and of normal characteristics.

During much of this time there was marked cutaneous hyperæsthesia, and there was never any paralysis. His pulse was never full and slow; his temperature rose to 101° shortly before death. On January 27th he grew steadily weaker, his coma became more profound, and he died at 10 P.M., forty-five hours after the commencement of the attack, respiration having ceased before the heart ceased to beat. Dr. Foerster tells me that the patient always considered himself syphilitic; but that he (the doctor) never satisfied himself that he was so. He was of very temperate habits.

The autopsy was made twelve hours and a half after death. Examination of the head only was allowed.

The pia was found intensely congested. Beginning at the optic commissure, and extending thence backward over the base of the brain, there was a thin layer of blood on the surface of the pia and in its meshes. Its point of greatest thickness was over the pons, where it measured 3 mm. It completely surrounded the basilar artery. The wall of the basilar artery was seen to be very thick, owing, as can still be seen, to a growth from the intima. This growth covers only a centimetre in length, and though it markedly diminished the lumen of the vessel it did not entirely obliterate it. There was marked softening with punctate hemorrhages in the right temporo-sphenoid lobe, and in much of the gray matter of both occipital lobes upon the vertex. The vessels at the base were otherwise normal. There was a little bloody serum in both lateral ventricles, and there were small, well-formed clots in the third and fourth ventricles.

The convolutions were not flattened.

The microscopic examination of the basilar artery at the site of the lesion revealed, combined, the evidences of a well-marked periarteritis and endarteritis obliterans. The lesions are both well seen in the sections which I lay before you here upon the microscope. The extensive, small-celled, moderately vascular growth surrounding the vessel exactly at the site of the connective-tissue growth from the intima would clearly account for marked interference with the lumen of the vessel.

This combination of lesions I have before recorded (in the "Transactions of the Pathological Society") in a patient who died after repeated attacks of well-marked cerebral syphilis, which frequently yielded completely to treatment. That patient died, after having persistently neglected treatment, in the fourth attack of cerebral symptoms; and in his case the combination of this periarteritis and endarteritis was situated in one of the fissures of Sylvius, and involved the middle cerebral artery, with the production of secondary softening in the floor of the corresponding lateral ventricle.

CASE III.—M. E——, aged eighty; Ireland; married; was admitted to my wards in the New York Hospital, May 30, 1885. She was brought in by the ambulance, with the history that she had been unconscious a week, having suddenly become so. On admission her temperature was 100.6°; respirations, 20; pulse, 100, at 2.30 P.M. She was in a condition of coma from which she could not be roused. There was complete paralysis of the left arm, incomplete paralysis of the leg of the same side. The extremities of the right side were rigid, and there were automatic movements of the right hand and arm. Reflexes were exaggerated on the right side and delayed on the left. Both pupils were slightly dilated, the right rather more so than the left, and they reacted sluggishly to light. Her tongue was dry and brown, and did not deviate. Her pulse was imperceptible, respiration shallow. Her urine was of low specific gravity, and contained albumen and casts, both hyaline and granular. She was unable to swallow, and an attempt was made to nourish her by enemata, but they were not retained. On May 31st her temperature had risen to 103.4°, and her respirations were 32, her pulse being 152. Her face was flushed, paralysis became more complete, the automatic movements of the right side had ceased,

and the rigidity had become more marked. Toward afternoon her pulse failed, and she grew progressively weaker, and at 4.30 P.M., twenty-six hours after she first came under observation, she died. Her temperature rose before death to 107°.

The autopsy was made twenty hours after death. The muscular tissue of the heart contained a little fat. The kidneys had many small cysts in the cortices, and the cortices were thin. The cortex of the brain showed the condition of senile atrophy usual at her age. The vessels at the base of the brain, and the two middle cerebral arteries, extending well into the fissures of Sylvius, showed the condition of obliterating arteritis. There was no alteration either in the color or consistency of the brain tissue, such as indicates softening.

CASE IV.—John M. B——, aged forty-five, a native of the United States, unmarried, a watchman by occupation, was admitted to my service in the New York Hospital, February 13, 1886. He was brought in by friends, who stated that he had been suddenly attacked that morning with convulsions, which were much more marked on the right side than on the left. At first he had vomited a large quantity of watery fluid. From that time until the time of his admission, at 3.50 P.M., the convulsive movements had been repeated to a slight extent occasionally. His friends also stated that he had suffered from rheumatism, and had complained from time to time of headache, dyspnœa on exertion, and some difficulty with his eyesight. His temperature on admission was 103°. Respiration was 22; pulse was 90. He was poorly nourished. There was no œdema. His superficial arteries were rigid and tortuous. There was rigidity and occasionally convulsive movements of the left extremities. There was slight right facial paralysis. Reflexes were normal, pupils also. He presented a senile appearance generally, and was probably really much older than his friends thought. Arcus senilis was marked. The heart-sounds were feeble, but there were no murmurs. There was complete amnesic aphasia. His urine was normal.

He was given potass. iodid., gr. xx., every three hours. At 9.30 P.M. his temperature had fallen to 100.4°.

The next day his temperature was normal all day. He passed his urine involuntarily during the night, and after the first dose was unable to swallow his medicine or to take any nourishment. During the night his medicine and food were both administered by rectum, but on the day following his admission he was able to swallow with ease. On the next evening his aphasia was gone and he became very noisy and delirious, and was given morphine hypodermatically without much effect.

On February 15th his delirium was again repeated at night. As his bowels had not moved, he was given calomel, and subsequently croton-oil, with the effect of producing one evacuation. His temperature that evening was 101°.

February 16th.—He was very noisy last night, and morphine (gr. ¼) again failed to quiet him when given hypodermatically. He imagined through the night that he was being devoured by rats, and was finally quieted only after four doses of digitalis, chloral, and bromide of potassium had been given at intervals of one hour. His iodide of potassium had been increased to forty grains every three hours.

February 17th.—His temperature varied between 98° and 101.2°. He was quiet most of the day, and was easily quieted to-night with much less medicine than he took last night.

February 18th.—He commenced to recover his memory, his mind became clearer, and he talked rationally. He still had to be catheterized at regular intervals. His urine continued normal.

February 19th.—Last night he passed urine without help. He remained perfectly quiet, and continued to be perfectly rational on most subjects. He was allowed soft diet.

February 20th.—Pulse, temperature, and respiration were normal.

February 21st.—He was allowed to get up and dress, and seemed to feel perfectly well. There was no trace of paralysis, and no return of aphasia.

February 24th.—Iodide of potassium was reduced to gr. xxx. t.i.d. He was now rational on all subjects, and presented no symptoms whatever, except that he was not very quick of apprehension.

February 26th.—He left the hospital apparently well.

Inasmuch as the patient recovered, there is, of course, room for doubt of diagnosis; but the course of his disease seemed *to me* to preclude the possibility of syphilitic pachymeningitis—the only other lesion at all to be considered.

Clinical Department.

GUN-SHOT WOUND OF KNEE JOINT—RECOVERY.

DR. JOHN RODMAN, of Abilene, Tex., reports the case of a man who was shot horizontally through the knee-joint with a "bull-dog" pistol, the ball ranging outward. A large quantity of synovia was evacuated, and as the joint was entered, the bone was found to be shattered, one spiculum of which was removed at the time the ball was spent by the bone, and was extracted from the fascia on the outer side. The probe grated over a large surface of comminuted bone, and came in contact with pieces of bone that could not, however, be removed through the wound. The latter was irrigated and cleansed with corrosive sublimate solution and hermetically sealed, a posterior splint being applied. The temperature was but 99⅘° on second day, and was normal on the fourth day and afterward. The dressing was removed fifteen days after the receipt of the injury, and no pus could be found. The joint is now being flexed daily, and the prospects are that no stiffness will result. Dr. Rodman says that in his past experience of knee-joint wounds (from railroad injuries solely), he has never known a recovery, even after amputation, when the joint was opened and the bone comminuted.

CONGENITAL TUMOR OF THE RECTUM.

DR. W. H. HAYNES, of 330 East Fourth Street, referring to a case of supposed congenital external piles, published in THE MEDICAL RECORD of November 22, 1884, writes that he has recently met with a somewhat similar condition. The patient, a female, the second child of a healthy mother, had from the day of its birth a tumor of the rectum.

After each stool there was seen projecting from the anus a globular tumor about the size of a small cherry-stone, dark red in color, suspended by a short pedicle from just above the muco-cutaneous border of the anus. No hemorrhage attended its appearance, and it was painless and semi-solid to the touch. It was seized with a pair of forceps, which caused slight bleeding. A silk ligature was tied around the pedicle at its base, and on the morning of the third day following, the tumor fell off during a stool, and was thrown away. When the child was seen a few days later there was nothing unusual to be noticed about the anus, except a little point of ulceration just within its border. There was no reason to suspect any predisposing influence other than that the mother was afflicted with internal hemorrhoids, but not to any great degree of suffering.

Dr. Haynes writes: "Objections may be raised to the term 'congenital hemorrhoids,' yet it certainly succinctly describes the conditions found in this case and the one before referred to, better than any other that could be

mentioned, although it may seem inconsistent to name a deformity after a disease, though they resemble each other in every respect except as to cause. Again, it may be thought that the last case was one of polypus of the rectum; but as to that I would reply that its location and appearance were certainly not that of the soft gelatinous polypi met with in children, nor of the hard fibrous tumors found in adult life, but it did resemble more than anything else what is termed hemorrhoids or piles. In neither case were the contents of the tumors noted. In the first they were not looked for, and in the other the tumor was lost."

AN ANODYNE FOR USE IN VESICAL IRRITATION.

Dr. W. P. Copeland, of Eufaula, Ala., writes: "In almost every community there are old men who suffer from enlarged prostates, accompanied with a chronic inflammation of the neck of the bladder, rendering them miserable sufferers and a care and anxiety to their friends and families. Having had the professional care of several of this class of cases, and dreading the tendency they so frequently incur by the administration of opium for the relief of pain, I resorted to various washes for injecting the bladder, resulting in my adopting a solution of benzoate of soda, ten grains to one ounce of water, with twenty to thirty drops of the green tincture of gelsemium; this is warmed and injected by the patient through a soft-rubber catheter, whenever the pain is severe, and the catheter withdrawn, leaving the medicine to be voided in twenty or thirty minutes; or where they are not able to pass anything from the bladder, the catheter is reintroduced and the medicine allowed to escape. My experience with this treatment has been so satisfactory that I cannot refrain from giving it publicity to the profession."

SOME OF THE THERAPEUTIC EFFECTS OF CAFFEINE WHEN HYPODERMATICALLY ADMINISTERED.

Dr. John Cochrane, of Lowell, Mass., writes that some two years ago, while seeking a preventive of the depressing effects sometimes noted after the administration of morphine, he became interested in the study of caffeine and its therapeutic value, and determined to test the assertion that caffeine increases the force of the heart and arterial tension. "During these two years," he writes, "I noted my cases, and from these notes select the following cases, because they prove conclusively to me that the above statement is correct:

"Case I.—A professional gentleman, aged forty-three; has suffered constantly during the last thirty years from intermittent fever and chronic rheumatism; he is addicted to the morphia habit, and during the greater part of the last sixteen years has been taking from one-fourth of a grain to twenty-five grains per diem, just as he felt inclined. He has repeatedly tried to give up the drug, and as often failed. During one of these struggles I found him suffering from excessive debility and wretchedness—thirst, anorexia, soreness in back and limbs, headache, eyes dull and pupils small, tongue flabby, dry, tremulous, and like raw beef; heart slow, weak, heaving; pulse, 72, weak, and almost imperceptible; respirations, 14, shallow, and interrupted every few moments by a half-gasp, half-sigh, as if the air escaped too quickly, and accompanied by a feeling of want of breath; temperature, 98.8° F. I dissolved one-half of a grain of caffeine in twenty minims of warm water and injected the solution into his arm. In half an hour the headache, irritability, soreness, dulness of eyes, and wretchedness had disappeared; the respirations were 16, full, deep, and uninterrupted; the heart was strong and steady; pulse, 84, large, strong, and full; temperature, 99.2° F.; the patient expressed his feeling by saying he felt 'like a well man.' These direct effects lasted between three and four hours. In the afternoon the same quantity of caffeine was injected, and followed by the same effects. There were several ill effects—excessive thirst, a craving for a renewal of the medicine, and next morning the sites of the injections showed signs of ulceration.

"Experience has led me to put the utmost confidence in caffeine as a synergist. The following case illustrates the value of the drug in this respect:

"Case II.—A professional gentleman, aged thirty-six, unmarried. Excepting cardiac weakness, caused by a severe and prolonged attack of rheumatic pericarditis sustained six years ago, the patient is in excellent health. But he has a habit of eating according to the mood he is in—sometimes he masticates slowly, and sometimes he 'bolts' his food. This bolting is followed by indigestion and colic. During the twenty months of my attendance he suffered from fifty-six such attacks. At first I administered sometimes morphia alone, at other times dissolved tablets of morphia, atropia, and sodic chlor.; relief from pain followed almost immediately, yet the exhaustion, occasionally amounting to collapse, and the indescribable wretchedness resulting from the remedy would be so great as to require a day's rest. In 1885 I began to use the following combination:

"℞. Pulv. caffeine et
Pulv. morphiæ sulph.....āā gr. ½.
Pulv. atropiæ sulph..... gr. $\frac{1}{100}$.
Aq. camph..... ℥ xx.
"M.

"This was employed more than twenty times, and succeeded in every instance, a second injection being required on only three occasions. Excepting intense thirst, the patient felt relief as quickly and more satisfactorily than by the former combination; the heart beats stronger and steadier, collapse and wretchedness never followed, and in about twenty minutes he would resume his duties, and, what is more satisfactory in his case, his dislike to morphia is intensified on account of the thirst induced. With all my other patients I have succeeded as well, and I take care to order grs. iij. of caffeine, with a seidlitz, to be taken three hours after the injection; this clears the alimentary canal and sustains the nervous system.

"Case III.—A youth, aged eighteen, laborer; general health excellent until rheumatic fever set in. I found the patient prone, helpless, and moaning piteously on account of pain in his joints and the præcordial region. Auscultation revealed peri- and endo-carditis; the pulse was 156, small, weak, and intermittent; respirations, 60, shallow and gasping; temperature, 106° F. Twenty minutes after injecting the caffeine mixture the patient was helped to place himself where he could lean against several pillows, and then declared himself as feeling 'just splendid.' The pain, irritability, and dyspnœa had disappeared; the heart beat steadily and strongly, the pulse fell to 120, and in twenty minutes more the patient was sound asleep. So greatly was he relieved that he insisted upon having the remedy administered hypodermatically every night throughout his illness.

"I have treated several cases of acute rheumatism since then, and each has been as signally benefited by this auxiliary, *especially when there were signs of cardiac failure.*

"I have repeatedly used this combination in cases of hysteria, of convulsions in infants and children who were teething or suffering from meningeal irritation, etc., with the best results. In acute alcoholic mania, when the heart begins to falter on account of the duration of the insanity and its concomitants, I cannot speak too highly either of its power to stimulate the heart or of its calmative co-operation with morphia, while maintaining the nervous system and so preventing dangerous symptoms.

"Case IV.—Lastly, I will speak of one case more, to show that the patient's feelings and belief have no influence on the therapeutic action of the drug. The patient

is an elderly lady who suffers from incidental chronic traumatic stricture of the bowel. At the time of which I speak she was suffering intense pain. A few minutes before I called she had dismissed a quack, who styled himself 'a metaphysician,' because, after four hours' praying, he had failed to relieve her. To test whether her confidence in the 'regular' treatment was as strong as she claimed, I injected ten drops of pure water. In a few moments she declared herself much easier; in five minutes more she expressed pleasure at the great relief she was experiencing. Now, that she really suffered, the vomited matters and pulse showed; but she believed I had injected the caffeine compound as usual, and, as she is sometimes so ill that a repetition of the remedy is required, I told her she must have a second dose to insure a night's rest. Two minutes after injecting the mixture she said she felt strangely, which feeling merged into giddiness. In five minutes more the pulse had lost its usual intermittency and became stronger and slower, the body grew warmer, intense thirst set in, and the patient soon went to sleep.

"A perusal of the foregoing cases must force any reasonable person to acknowledge that, in a general way they prove that caffeine, or a compound containing caffeine as a synergist, does, indirectly, make the injection of morphia a safe proceeding, and directly 'increases the force of the heart and arterial tension.'"

Progress of Medical Science.

Aconite in the Fevers of Childhood.—Dr. W. Barrett Roué, writing in the *Provincial Medical Journal* of May 1, 1886, complains that English physicians make too little use of aconite in the febrile affections of childhood, and urges its more general employment. He gives it in small and frequently repeated doses (one-fourth to one-half minim of the tincture every three or four hours for children three or four years old), combining it with tincture of belladonna (one to two minims) to prevent depression. As soon as the child perspires freely, the medicine has done its work and should be stopped, to be again employed if there be a further rise of temperature. In cases of more than usual prostration he combines the aconite with carbonate of ammonia, and accompanies the mixture with brandy. The aconite, he says, will act equally well in such a combination, and there is nothing unscientific in so prescribing it.

Intra-pericardial Rupture of the Aorta.—Professor E. Winge reports the following case in the *Norsk Magazin for Lægevidenskaben* for June, 1886. The patient, a man fifty-four years of age, had had apoplexy sixteen years before, but had made a perfect recovery. He had had a little malaise and complained of indefinite pains in the shoulder for a few days, but had exhibited no grave symptoms up to the moment when he dropped dead. At the autopsy the pericardium was found distended with blood, and in the connective tissue, between the origins of the pulmonary artery and the aorta, was found a sinus, filled with blood, through which a probe could be passed into the aorta. The intima of the ascending portion of the aorta was found atheromatous and scattered over with numerous ulcerated or calcified spots. The heart was the seat of excentric hypertrophy, the valves and coronary arteries were normal, and the cardiac muscle was pale but not fatty degenerated.

The Physiological Effects of Massage.—Dr. F. Gopadze has published a series of observations undertaken with a view to determine the effect of massage on the transformation of the nitrogenous principles of food. Though there has been a general tendency among authors to assume that massage increases the assimilative power, no exact observations on the subject have hitherto been published. The author conducted his experiments upon four medical students, who for three consecutive weeks became inmates of Professor Manassein's clinic, and lived on certain articles of food—bread, milk, soup, veal, and roast beef, the quantities ingested being accurately noted. The nitrogen in all the samples of food, and in the fæces and urine excreted, was determined by the Kjeldahl-Borodin process. Massage was practised for from twenty to twenty-five minutes once a day, two or three hours after food. The operations were commenced by *effleurage*, beginning from the extremities and working toward the centre. This was followed by *massage à friction, pétrissage, tapotement*, a second *effleurage* of each part concluding the whole. In all four cases the appetite was decidedly increased, not only during the week in which massage had been practised, but after it had been stopped. The amount of nitrogenous transformation was also augmented during the continuance of massage in all four cases. The augmentation persisted in two of the cases, but in the other two the transformation was less during the third than during the first week. The quantity of nitrogen assimilated increased in all four cases, independently of the amount of food ingested. During massage two of the subjects gained slightly in weight, the other two losing weight; but during the week following the one in which massage was practised all four gained. The axillary temperature decreased, for about half an hour after the operation, to an extent varying from 0.1° to 0.5° C., after which it began to rise, attaining its original figure, or from 0.1° to 0.3° below it, about an hour after the end of the *séance*. The respirations became more frequent, and were of a deeper character. The effect on the pulse varied with the character of the massage. When this was carried on lightly, the pulse became more frequent; but when the manipulation was more forcible, the pulse became slower. The effects in both cases persisted for an hour or more after the termination of the operation. In conclusion, the author suggests that massage should prove useful in chronic gastro-intestinal catarrh, in chronic constipation due to an atonic condition of the intestines, also in various cases where there is a lack of tone in the abdominal muscles.—*The Lancet*, May 22, 1886.

The Relation of Osteomyelitis to Ulceration.—In a paper read before the Surgical Society of Paris, M. Lannelongue said that one of his horses had had an enormous swelling over the frontal region, accompanied by suppuration, and speedily followed by grave constitutional symptoms and death. The appearance of the disease was preceded by an ulceration in the buccal cavity. This occurrence led the author to examine carefully the bodies of all children brought to him with the commencing symptoms of osteomyelitis, and he found in all cases superficial ulcerations, either of ecthyma or of eczema, on some part of the body. These ulcerations usually preceded the declared symptoms of osteomyelitis by a period of one to three weeks. The speaker thought that possibly these abrasions were the portals through which the specific micro-organisms gained entrance.

Treatment of Glaucoma without Operation.—At the meeting of the Académie de Médecine de Paris of June 15, 1886, M. Panas read a paper on this subject, the conclusions of which were as follows: 1. Myotic collyria, hitherto regarded as simple palliatives, may, in certain forms of glaucoma, be regarded as veritable curative agents. 2. The varieties of the affection which seem to be most benefited by these agents are precisely those in which operation alone (iridectomy or sclerotomy) is often ineffectual. 3. To obtain the best results from myotics, it is necessary to continue their use for a more or less extended period of time. 4. These remedies, in fine, constitute one of the most effective means which we possess for arresting the onward course of the glaucomatous process, when operation has been shown to be powerless to effect this. The author hoped that others would test the efficacy of myotics in glaucoma, and would report the results obtained.

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A NEW MODE OF APPLICATION OF THE PLASTER JACKET IN THE TREATMENT OF SCOLIOSIS.

THE treatment of lateral curvature of the spine is one of the most thankless and unsatisfactory tasks which the surgeon is called upon to undertake, and we venture to say that there are few practitioners of experience who assume with any confidence the management of a case of this nature. The prognosis must always be guarded; the most that can usually be hoped for is that the progress of the deformity will be arrested, and he would be rash indeed who would promise to correct absolutely a true, so-called rotary, lateral curvature of the spine.

Considerable advances have, it is true, been made in the therapeutics of this affection within the past few years. The cumbersome, and sometimes even cruel, forms of apparatus, in common use a decade or two ago, have been very generally discarded, and figure at the present time only in the illustrated catalogues of the instrument-makers. Their place is now taken by some light and comfortably fitted instrument, or by the plaster-of-Paris jacket, and reliance is chiefly placed upon active or passive exercises designed to increase the lateral flexibility of the spine, the mechanical support serving merely to hold the patient in the improved position acquired through these exercises. But, notwithstanding these improved methods of treatment, we are yet far from the attainment of our end—far, that is, from the cure—and not the simple arrest of the onward course of this unsightly deformity. For this reason it is interesting to note the new methods of treatment proposed from time to time, and to read the reports of cures thereby obtained in a marvellously short period by their enthusiastic advocates. And even though experience usually serves to justify our scepticism concerning the real curative value of the proposed methods, we are nevertheless encouraged to recognize some of them as steps in the right direction and as sign-posts guiding us to a more rational system of mechanical therapeutics.

We find in the *Wiener Medizinische Wochenschrift* of May 8, 1886, the details of a modification by Dr. Alexander Fraenkel in the mode of application of the plaster-of-Paris corset, which seems, theoretically, to be a real improvement, but of which it is, of course, too early to speak with any confidence. The writer argues that the treatment of lateral curvature should be conducted on the same plan as that of club-foot, that it is not sufficient to place the vertebral column nearly, or quite, straight, but that the deformity should be over-corrected before the spine is immobilized. The first part of the treatment consists in passive exercises, designed to overcome the abnormal rigidity of the curve to such an extent that the spine can be forced into the reverse position. This is effected in the case of children by placing the point of greatest convexity of the primary curve over the thigh and bending the trunk above and below forcibly downward, in the same manner that one would straighten a bent stick across the knee. Daily séances of these manipulations, of about half an hour each, extended through one or two weeks, are usually sufficient, Dr. Fraenkel says, to render the spine fairly flexible. When this has been accomplished, the time has come for the application of the plaster jacket. The patient is suspended, as in Sayre's method, the hips are firmly fixed, and then two loops of strong bandage are passed around the body, resting against the apices of the primary and secondary curves. In order to avoid pressure-sores the convexities of the curves are well padded. Two assistants, one on either side, now make firm traction on the bandage loops so as to pull the curves in the opposite direction, and the plaster-of-Paris is then applied so as to retain the spine in this position of over-correction. The author does not favor a removable corset, but prefers a frequent reapplication of the plaster, opportunity being taken at each renewal to resume the passive movements.

A somewhat similar method has been proposed by Petersen in Langenbeck's *Archiv*, Heft i. Bd. 32. He places the patient in a position of lateral suspension in Barwell's sling, the weight of the body acting as the correcting force. This plan does away with the necessity of so many assistants, but it is evident that a less efficient force can be thus brought to bear upon the scoliosed spine than when lateral traction is made by bands.

Fraenkel says that his success thus far has been encouraging, though the method is too young as yet to be judged by its results. It is, of course, only applicable to comparatively recent cases, or rather to those cases in which, whatever the degree or age of the curve, the lateral flexibility of the spine is still present. Old cases of scoliosis, in which extensive alterations have taken place in the shape of the bones, and in which the vertebræ are so soldered together that the spine is as rigid as a solid bar, unfortunately are, and always will be, beyond the possibility of rectification.

NARCEINE IN WHOOPING-COUGH.

AT a recent meeting of the Société de Biologie, MM. Brown-Séquard, Laborde, and d'Arsonval united in praising the effects of narceine in whooping-cough and chronic bronchitis with hypersecretion. Narceine, $C_{23}H_{29}NO_9$, is one of the alkaloids of opium, but exists in it to a very small amount, at most not over 0.02 per cent. Most investigators agree that in its action upon man it resembles morphine, but is milder and causes no excitement. Claude Bernard first called attention to it by his assertion that it was a safer and more agreeable drug than morphine, but had about the same sedative and anodyne effects. Narceine was carefully tried by several Phila-

delphia physicians, some fifteen years ago, and they concluded that it was almost inert, even in doses of from one to five grains. Froumüller states that he has given twenty grains with no effect. On the other hand, many Continental physicians (Rabuteau, Behier, Debout, Eulenburg, Liné, and Laborde) have found that in doses of one-half to one grain it causes quietude and sleep.

The testimony heretofore has been so conflicting that doubts have arisen as to whether the same alkaloid has been used. M. Laborde now says that a very easy test of its purity is to add to the solution a drop of muriatic acid, when a beautiful blue color is produced.

Surprisingly quick results in whooping-cough have been observed by the French physicians above mentioned. The best mode of administration is to make a solution in syrup, so that a teaspoonful represents one centigramme of the drug. This is the minimum dose for children, the average dose being from 2½ to 5 centigrammes.

AN AMERICAN CONTRIBUTION TO BACTERIOLOGY.

Dr. J. W. McLaughlin, of Austin, Tex., has been carrying on a series of experiments in order to determine the nature of dengue, a disease which prevailed epidemically throughout Texas in the fall of 1885. As dengue presents all the clinical characters of an infectious disease, Dr. McLaughlin's researches were designed to discover, if possible, the presence of a parasite. The exceedingly difficult nature of the task in question was fully realized by the investigator; and we are glad to say that the details given of his work show him to be thoroughly imbued with the spirit of the careful searcher after truth. Dr. McLaughlin's work, carried on amid all the difficulties that attend one engaged in active practice, deserves the attention, and should awaken the pride, of every American physician; for he has shown, as Koch did, that after all, leisure, money, and elaborate appliances are not absolutely necessary for scientific work, and that the general practitioner who folds his hands and says he has no time for anything but practice, is really handicapped not so much by his surroundings as by his own indisposition.

Dr. McLaughlin, so far as we can judge by his report (*Journal of the American Medical Association*, June 19, 1886), used all the numberless precautions necessary in investigating the nature of the blood of dengue patients. He examined microscopically fresh specimens, as well as others that were dried and stained, and sterilized. He also obtained pure cultures of a micro-organism, and watched its growth in successive cultivations.

He believes that there is always in the blood of these patients a peculiar micro-organism, having its own method of growth, and taking up with especial avidity a stain of methyl-blue dissolved in caustic potash. This micro-organism is spherical in shape, and about $\frac{1}{2\,5\,0}$ to $\frac{1}{3\,5\,0}$ the diameter of a red blood-cell. The organisms grew well upon sterilized jelly, always preserving their morphological character in successive cultures. All the experiments seemed to show that the blood of persons suffering from dengue contains these micro-organisms, and no other.

Inoculations of the pure cultures were not made, apparently, and this seems strange, since dengue is a mild disease, and there should be no difficulty in finding subjects of experiment. It cannot be said either that this micrococcus is not identical with that found in other diseases. Dr. McLaughlin's experiments, therefore, are not conclusive of anything, as yet, but they furnish an important stepping stone for further research. Dr. McLaughlin has come quite near being the first American physician to find the specific micro-organism of a disease affecting man. American investigation, so far, has been confined to imitating the work of European investigators.

ICE-CREAM POISONING.

The summer season has been ushered in by numerously reported cases of poisoning from eating ice-cream. The two most important instances are those which have occurred in Michigan and in New Jersey. In the latter case, a large number of persons were attacked, shortly after partaking of the cream, with all the symptoms of a gastro-enteric irritant poisoning. The clinical aspect of the cases strongly suggested arsenic. There is some reason to suppose (so say the daily papers) that the cream was tampered with by persons having criminal intent. Several parties are under suspicion, and a legal inquiry is now in progress.

In the Michigan case, over one hundred and forty persons exhibited symptoms of irritant poisoning after having eaten the cream. A portion of the latter was sent for analysis to Professor Vaughn, of Michigan University. He reports, it is said, an important discovery made during his tests. He says that he had a short time previously isolated an active element in poisonous cheese. This substance he has named tyrotoxicon. He says, also, that traces of this body were present in the suspected ice-cream, and that to it, in his opinion, were the irritant symptoms due. On this assumption it is claimed that tyrotoxicon is due to the decomposition of milk, and may be developed in any milk kept in unclean vessels, or in an unwholesome atmosphere. The germ giving rise to this new product seems to propagate very rapidly, and as is the case with all other similar organisms, a small amount will speedily infect a large body of milk.

A very important fact, and one of great medical interest, is implied in the foregoing. It may account for much of the intestinal disturbance in children during the warm weather, notably cholera infantum, and kindred conditions. Professor Vaughn's report to the State Board of Health will be awaited with interest.

REORGANIZATION OF THE OUT-DOOR DEPARTMENT OF BELLEVUE HOSPITAL.

Despite the increase in other hospitals, Bellevue continues to be by far the largest institution in the city, or country, for the treatment of acute diseases, and it is still regarded by the colleges as the most important centre for clinical teaching. The hospital has provision for 1,200 beds, the actual number being 800, and it treats in its wards nearly twelve thousand patients (in 1885, 11,894) annually, while its out-door department each year relieves 33,000 persons.

Realizing the importance to the colleges of the hospital, the commissioners, some years ago, established the rule which gives an equal representation on the Medical and Visiting Board to each of the three large colleges,

and to the non-collegiate portion of the profession. The out-door department of the hospital, however, has not been so divided, but has been practically in the control of one college.

At a recent meeting of the commissioners, the Medical Board of the hospital was requested to draw up a plan of reorganization of this out-door department, which plan should place it under the control of the Hospital Board, and give to each college, and to the non-collegiate division, an equal share in the appointments at the dispensary. Such a plan has been drawn up, and will, we understand, soon go into effect. The result will be not only to give a just distribution of the clinical material, but the non-collegiate division of the Hospital Board, which represents, in part, the post-graduate school and polyclinic, has also its share. The result of the reorganization will, it is hoped, be a greater activity and efficiency in attending to the patients, and a juster distribution and more satisfactory use of the clinical material.

FEHLING'S TEST AS A REAGENT.

Of the various tests for sugar in urine the copper solution of Fehling has become popular on account of its simplicity and general reliability. Undoubtedly, the best form for using this test is the preparation made by Squibb, of Brooklyn, which is made in proportions recommended by Sutton in his work on "Volumetric Analysis," where each cubic centimetre under definite conditions is equal to 5 milligrammes of glucose; hence the 2 c.c. used for the testing are equivalent to 0.01 gramme of glucose, and that amount in 1 c.c. of urine is just one per cent. The two solutions, which are sold separate and accurately prepared, enable the tests to be used both qualitatively and quantitatively. The latter, however, is only roughly approximative, but still indicating 1 per cent., 0.25 per cent., and 0.1 per cent., according to the color shown and behavior of deposit. These results are sufficiently accurate for all practical purposes, and may be used at the bedside.

We now notice in a contemporary that a new use of Fehling's test-liquor has been suggested. It is said that if 1 c.c. of the test is mixed with 8 to 10 c.c. of urine, shaken up and boiled, and the fluid remain blue, nothing is indicated; but if decolorized with a pale yellow, flocculent precipitate, *peptone* is indicated. If the liquid turns orange and there is an orange precipitate, of course we have glucose.

If equal parts of Fehling's liquor and urine are mixed in a test-tube and boiled, and the clear liquid remain blue, there is little uric acid. If it becomes green, the urine contains an excess of uric acid or of a urate. If the precipitate is scanty, there is little phosphoric acid, but if copious phosphoric acid is present in excess. If these new reactions of Fehling's test be confirmed, they will undoubtedly prove of interest to the uroscopist.

The Attempt in this City to inoculate a boy who had been bitten by a rabid dog, with the preventive virus, has, it is said, been given up. Several inoculations were made by Dr. V. Mott, but the boy began to show such severe nervous symptoms that it was thought wise to discontinue the treatment.

News of the Week.

A Hasty Indorsement.—At the last meeting of the American Medical Association the following resolution was adopted by a majority of 159 to 106: "*Resolved*, That cremation or incineration of the dead has become a sanitary necessity in populous cities, and that this Association advises its adoption." This is an example of the hasty and careless action which too often characterizes our societies. While cremation is an excellent thing for those who like it, it has not yet been demonstrated that it is "a sanitary necessity in populous cities." The cremationists have not yet been able to trace a disease, much less an epidemic, to the suburban graveyards of our populous cities. We have always commended the practice of cremation as an advance in sanitation, but it is too soon to call it a necessity.

Dr. John B. Hamilton, Supervising Surgeon-General of the United States Marine Hospital service, has accepted the Professorship of Surgery in the Chicago Polyclinic.

The Emperor of Brazil has commissioned M. le Dr. Ferreira dos Santos, of Rio Janeiro, to proceed to Paris and study Pasteur's method, for the purpose of establishing later an institute in Brazil.

Cremation on Long Island.—Since December 4, 1885, there have been forty-five bodies cremated at the Crematory of the New York Society, Fresh Pond, L. I.

The Fight against the Microbe Theory.—At the meeting of the Académie de Médecine, some weeks ago, Professor Le Fort strongly attacked the microbists, and referred to the experiments of Rose, of Zürich, who left amputated surfaces exposed to the atmosphere, *et aux fureurs de tous les microbes*, without appreciable detriment to his patients, and contrasted it with that of Billroth, who, with identical hygienic conditions, had results less fortunate, although he invoked every possible antiseptic precaution. He also stated that he had tried similar experiments, having left two stumps—one at *Beaufort* and the other at *Hôtel Dieu*—entirely unprotected for several days, without the slightest interruption of the process of cicatrization or the development of any constitutional disturbance.

Medical Progress in Chicago.—Dr. Gregory writes to the *Medical Press* of Western New York his impressions on visiting Chicago after a six years' absence. He says: "In the six years last past the medical element of Chicago has developed beyond the stage of personal gain, and reached that of public benefit. Physicians there are not now telling of the number of prescriptions written in a day, so much as they are detailing anomalous conditions met with. To be sure, even a professional man, breathing a truly professional spirit, cannot live in Chicago without becoming imbued with a business fervor; consequently nearly all physicians have a down-town office as well as one at their residence. This peculiarity is very noticeable, as sometimes as many as twenty-five physicians are grouped in down-town offices over a drug store. St. Louis is the only other city

where this concentration of physicians' offices downtown and over drug-stores occurs so conspicuously. While in this feature Chicago differs from Eastern medical centres, she now resembles them in multiplied agencies through which physicians render the public gratuitous service. Six medical societies and an unknown number of clubs are maintained, and eight medical journals are published in the city. With this mass of public work and the large number of men thus engaged, it must be evident that a far different professional spirit would be engendered than without such agencies. Chicago must therefore be recognized as the medical centre of the West. Undoubtedly one of the agencies tending to produce this result is the State medical law, for in marked contrast to its previous condition is the present absence of charlatan advertisers and nostrum doctors."

A CHRONOMETER for measuring the swiftness of nerve-impulses has been devised by M. D. Arsonval. It is said that it can be easily managed by the clinician or practitioner.

"PROGRESS" is the title of a new monthly medical journal edited by the experienced journalist, Dr. Dudley S. Reynolds, and published in Louisville, Ky.

A "NEW" TREATMENT FOR GONORRHŒA. Dr. Edward Warren Bey, writes to *Gaillard's Medical Journal*: "There has been a new departure announced in the treatment of that opprobrium of the profession, *gonorrhœa*. Dr. Bourgeois, in an article published in *The Archives of Military Medicine and Pharmacy*, takes the position that the discovery of the special *microbe* of this disease furnishes the indication for its specific and certain cure. The problem resolves itself into the task of finding some topical agent sufficiently energetic to destroy the parasite without irritating the urethra. There are three such agents, according to Dr. Bourgeois' experience, viz.: permanganate of potash, bichloride of mercury, and sulphate of quinine—the first of which he employs in a solution of 1 to 2,000, the second in a solution of 1 to 20,000, and the third in a solution of 1 to 100. He recommends that these solutions shall be first warmed, and then injected in such a way as to reach every portion of the urethra four times daily—the last injection being made invariably at midnight, so that the *microbes* may not have time to reproduce themselves. Internally, he administers from one to two grammes of bromide of potash, and in scrofulous cases he supplements it with a daily dose of cod-liver oil and the potassic tartrate of iron. According to his statements, the disease is more rapidly and permanently cured by this treatment than by any other—the special indication being the destruction of the gonorrhœal gonococcus, and its elimination from the urethra.

LISTER'S LATEST ANTISEPTIC DRESSING.—A correspondent of the *Canadian Practitioner* writes: "It may be news to a great many to learn that Lister has discarded the use of the spray almost entirely. He now uses salalembroth exclusively in his wards for dressings, and it has so far given very fine results. It is a double mercurial salt formed by the sublimation of a mixture of perchloride of mercury and chloride of ammonium, and is exceedingly soluble. The salt was known to the alchemists, but has not been used in medicine in modern times. Lister prepares all his dressings now with a 1 to 100 solution of this—gauze, cotton-wool, lint, bandages, draw sheets, and where the wound is covered by the shirt it is rendered aseptic by dipping it in the solution and drying before the fire. To make any of these dressings, all that is necessary is to soak them in this solution and dry. Not being volatile, it does not require to be kept sealed in tin cases. He also colors these dressings with aniline blue 1 to 10,000; the benefit to be derived from this is that wherever an alkaline discharge comes in contact with the dressing the blue is removed and turns reddish, enabling one at once to see where the discharge has been, if the quantity was ever so small and had dried up before the dressing was removed. There is one precaution in using this dressing, and that is this: the dressing being dry and frequently handled might have some septic matter from bedclothes, hands, etc., so he always dips it in 1 to 2,000 perchloride just before applying it. He is making a salalembroth protective, which will be surcharged with the antiseptic, so that as a discharge comes through a dressing it will come in contact with this protective and can be kept aseptic."

THE ASSOCIATION OF AMERICAN PHYSICIANS.—The *Journal of the American Medical Association* makes a long attack upon The Association of American Physicians and Pathologists, and alludes very sarcastically to the "so-called American Ophthalmological, Otological, and Gynecological Societies." Its Washington correspondent questions the right of a hundred medical men to associate themselves together and call themselves The Association of American Physicians, and he asks if "the American Medical Association is to be degraded by a set of men in its own ranks?" At the same time the *Journal* says that it is not prompted by any feeling of opposition to the new Association, only it wishes it to sail under its own flag. The tone of the article is one of petulance and ill-will. It is not creditable to the *Journal*. The "so-called gynecological" and other associations do not need defence, however, any more than they deserved attacks.

A CURIOUS CASE OF MEDICAL ADVERTISING was brought up for the consideration of the Medical Society of North Carolina at its last annual meeting. It seems that Dr. Oscar Gregory, a physician who had been in good standing, moved to the town of Oxford, N. C., and having prepared to practise in that locality, he had printed a number of handbills setting forth the date and place of his graduation, the various positions of distinction he had held, the length of time of his professional services, concluding with the announcement that, "having always enjoyed a liberal patronage from every community in which he has lived, he is encouraged to hope for the same from Oxford, where he has determined to make his permanent home. Charges will be the same as those of the physicians of Oxford. He also claims to possess that charity for which his profession has always been so justly distinguished." The Board of Censors having charged him with violating Section I., Article 2, of the Code of Ethics, Dr. Gregory replies defending his course; he says, "I had not read the Code in some time before the circulation of the advertisement to which I

suppose you refer. But, after a careful perusal of the section mentioned, I fail now to perceive how the freest rendering of it prohibits a doctor from placing before a new community his proper credentials as a physician. I conceive, if this is not his privilege, he has no right to ask the patronage of that public. If, however, you, as the Board of Censors, interpret it, thus, I submit, and would be glad to have the specific infraction explained to me." The Board refused to consider Dr. Gregory's explanation tenable, holding that the issuing of handbills was not permissible under a just interpretation of the Code. The Society very properly sustained the Board.

A Belgian Prize Taken by an American Physician.—The competition instituted by L'Académie Royale de Médecine de Belgique in 1881, and continued through 1883, is closed, and the report of the commission of the Académie is made known. The question submitted was: "To Elucidate by Clinical Facts and by Experiments the Pathogeny and the Therapeutics of the Diseases of the Nervous Centres, and especially of Epilepsy." A number of memoirs were submitted, which were entered by European authors of pre-eminent rank in this department of research. The honors of the competition have, however, been awarded to an American physician, Dr. George T. Stevens, of New York. His memoir is the only one selected by the Royal Academy for publication, and the only one for which an award was made.

An Inconsistent Critic.—The *Weekly Medical Review* chooses to read us a lesson for publishing the fact that the St. Louis Medical Press Association invited a homœopath to its dinner, and intimates that The Medical Record is "uncertain, hybrid, narrow, provincial, and dishonest!" This is a rather sweeping charge, truly, to come from a quondam host. All that need be said is this: The hospitable editors of *The Review* invited to their dinner a homœopath. Yet it defends the policy of an association which forbade him membership, on moral grounds. Its course is very much like that of a man who invites a guest to his home, and then hurrahs for the crowd that would besplash him with mud as soon as he gets out of the door. We do not say that such conduct is "hybrid, narrow, or provincial," but it is, at least, not very consistent. We do not criticise *The Review's* list of guests, but rather praise its liberality, and are gratified for the courtesy of its editors.

Iodide of Ethyl is recommended by Dr. Bartholow in the treatment of brain syphilis when a prompt action of the iodine is desired.

The Woman's Medical College of New York.—Dr. H. M. Silver has been appointed Professor of Surgery in the Woman's Medical College of this city, and Dr. W. Meyer, Clinical Professor of the same branch.

The Medical Department of Niagara University.—Dr. W. A. Wheeler, Surgeon, United States Marine Hospital Service, has been appointed Professor of Surgery in the above institution, vice Dr. W. S. Tremaine, resigned. Dr. C. M. Daniels has been appointed Professor of Anatomy, vice Dr. William H. Heath, resigned.

The Abuse of Medical Charity.—On the ground, we presume, of the acknowledged fact that there is an excessive and pauperizing amount of medical charity in the larger cities, the Erie County Medical Society recently voted to oppose the granting of any appropriation of money for dispensary purposes by the Board of Supervisors of the county.

A Combined Board of Medical Examiners Wanted in California.—The State of California has a medical registration law which creates three Boards of Medical Examiners—one regular, one homœopathic, and one eclectic. Each board licenses the physicians who practise in these respective "schools." The plan does not work well, and the *Pacific Medical and Surgical Journal* urges the substitution of a single combined board.

Deciding against a New Medical College.—The Committee of the Medical Society of South Carolina, to whom was referred the question of the establishment of a medical school in connection with the University of North Carolina, reported that "there is no necessity for the addition of a medical department to the State University, and at present the scheme is utterly impracticable."

Enforcing the Medical Law in New York.—A long-haired, elderly man, calling himself Dr. George R. Harding was arrested on July 12th on a charge of practising medicine without a license. He is the head man of an "Indian village," encamped at Eighth Avenue and One Hundred and Twenty-eighth Street, from which placards are distributed advertising the cure of all diseases by means of "Indian Sagwa." An agent of the County Medical Society took his son, aged eight years, to the village for treatment on Friday. The "doctor" said that the boy had eczema, and sold the father some "worm-killer" and a bottle of ointment. In court he said that he was only an agent for a patent medicine firm, but he was held for $300.

A Pasteur Institute has been founded at Milan, under the direction of Dr. Barattieri.

Dr. Brown-Séquard has at last been elected a member of the Paris Académie des Sciences.

To Make the Punishment Fit the Crime.—The papers circulate the following story about an English surgeon. We are glad that such things do not occur in this country. An English surgeon a few days ago performed an operation on a little boy. The operation was comparatively trifling. The mother and the father and the little boy were in the surgeon's house just a quarter of an hour. "What is your fee?" said the father. "A hundred guineas," was the reply. The father was startled, and said he had not a hundred guineas. "Oh! then I will take fifty guineas." "But I cannot afford it," said the father; "and had you told me what your charge would be, I would not have come." "Then I will take twenty-five guineas." After a little more delay the surgeon took ten guineas on account.

Influencing Sex in Utero.—Dr. Alfred L. Carroll writes: "The letter of Dr. William H. Cook, under the above heading, in your issue of the 10th inst., while it recites some interesting coincidences, does not seem quite in accord with 'the sum of the information' accessible to the 'profession at large' in relation to the

subject in question. Aside from any argument based on the comparatively limited experience of individuals, it is certain that in the vast majority of marriages the first cohabitation occurs at a time when, according to Dr. Cook's hypothesis, a male child should be the fruit; but in the accessible statistics of nativity the male births of primiparæ outnumber the female by only about ten per cent. It is, of course, impossible in most instances to determine the particular act of coition which has caused impregnation, and the preponderance of males in still-births must be to a considerable extent placed to the account of primiparæ; but there still remains a sufficient multitude of first-born females to cast doubt upon any relation between sex and time of conception. Moreover, the idea advanced by Dr. Cook is not borne out, as far as my observation goes, in the lower animals, especially in the case of dogs and horses, where the time of intercourse can be positively ascertained. I should not trouble you with this note were it not that the embryological point involved is important, and that its scientific consideration demands more data than we yet possess."

Squier Littell, M.D., of Philadelphia, who died at Bay Head, N. J., recently, aged eighty-two years, was a member of the Philadelphia City and County Medical Societies, of the College of Physicians, and a licentiate of the Academy of Medicine of Buenos Ayres. His contributions to medical literature, extending over a period of fifty years, were very many. In 1828–29 he edited *The Journal of Foreign Medicine*. His most important work was his "Manual of the Diseases of the Eye," which was issued both in this country and England. He edited the American reprints of "Walton's Ophthalmic Surgery." For thirty years he was surgeon to Wills Hospital, Philadelphia.

Those St. Louis Pictures.—Dr. William A. Hammond was the only New York physician who was honored with a portrait and biography in the daily papers of St. Louis during the last meeting of the American Medical Association at that place, so says *Daniel's Texas Medical Journal*. We retract our intimation that New York was slighted.

The United States Naval Medical Department.—A correspondent of the *Globe-Democrat* has set in circulation the following account of the Medical Department of the United States Navy. The statements are certainly much exaggerated. He says: "The position of surgeon in the navy is not an enviable one. The examination that applicants are required to undergo is very rigid, and, as a rule, physicians who are capable of passing the ordeal can find fields for their usefulness more congenial to their taste and very profitable to them by engaging in private practice. When a physician obtains a position in the navy he is assigned to the steerage, without rank, and is given an ordinary salary. In the army it is the reverse. When a physician joins that branch of the service he is commissioned a second lieutenant and is paid accordingly, and commands all the respect the position is entitled to. The result is that there are no vacancies in the army, while there are over two hundred candidates for positions. In the navy there are fifteen vacancies, with no applicants to fill them."

The Cholera is extending quite rapidly in Italy. A large number of cases are reported daily at Brindisi, Latiano, and Fontana.

We perhaps owe an explanation to our esteemed contemporary, *The Medical and Surgical Reporter*, for blaming its editor because his name appeared in the papers and in advertising pamphlets indorsing a proprietary and specific mineral-water. The Old Code does not expressly forbid this practice. The New Code does do so. Perhaps this is the reason that our staid contemporary has shown such aversion to the latter. The New Code says: "It is reprehensible for physicians to give certificates attesting the efficacy of wines, mineral-waters, health-resorts," etc.

Regulating the Practice of Medicine in North Carolina.—*The North Carolina Medical Journal* comments in a courteous and judicial manner upon the letter published recently in The Record by a "North Carolinian." The editor says: "We think that 'North Carolinian' has not understood the temper and disposition of the medical profession in the State if he believes that anything was contemplated by them save to have a law enacted which would give to the people of the State better doctors. We know, also, by some of his allusions that he has in his mind certain *soi-disant* leaders who do not represent the profession. It is very humiliating, not more to the representatives of the younger than of the older class of physicians, to see exhibitions of gross ignorance upon the witness-stand and elsewhere, but this does not justify the sneer which he cast upon all of the older men of the profession in the State."

Explosion at a Hospital.—One of the wards of the Portsmouth (Eng.) Military Hospital was wrecked not long ago by a gas-explosion. There were several patients in the wards, but they all escaped injury. One man, who was delirious, tried to jump out of the window, and was with difficulty restrained.

An English Professor's View of the Importance of Latin.—Professor M. Charteris, of Glasgow, in an article on "Prescriptions," in the *Provincial Medical Journal*, says: "Every qualified medical practitioner, on being called to a patient, is expected, in addition to dietetic rules, to embody his ideas of medicinal treatment in the form of a prescription. This prescription is written out in Latin—a language which should be familiar to every educated man. It is the masonic badge of our profession, and he who is ignorant of it and its grammatical construction is an interloper in the practice of medicine, although he may be dubbed M.D. by a university, or receive the license of physician and surgeon by conjoint corporations."

A Curious Discovery, bearing upon the Phenomenon of Sleep, has been made by Mons. E. Bouchard (*Comptes Rendus*, cii., p. 727). Some experiments made by him on the difference in urine produced during sleep and during wakefulness have shown that the former has a convulsive action on animals, and the latter a narcotic one. He therefore concludes that the body while awake elaborates a substance which causes sleep, and when asleep produces a something which can cause muscular shock and provoke wakefulness. It may be hoped that

further investigations will enable him to detect the substance causing natural sleep, so that it may be turned to account in therapeutics.

The Use of Condiments by the Sick.—Dr. William A. Hammond says, in *The Journal of Reconstructives:* "It is rarely the case that sufficient attention is given to the use of condiments in the sick-room; they are often either altogether excluded, or the patient is allowed to take them at his discretion, whereas much benefit will frequently be obtained by the judicious employment of these important agents. In certain low fevers of typhoid type, and in almost all malarial disorders, condiments may be largely used with advantage. Probably no one of them is more generally efficacious than black pepper. Mustard is also frequently relished, and we all know how grateful to us in our illnesses a little vinegar has been. In inflammatory affections of the stomach and bowels the stronger condiments, such as pepper, cayenne, mustard, and horseradish, are seldom admissible; but many cases of diarrhœa are very decidedly benefited, especially when they occur in persons who have somewhat run down in general health, by black pepper, cayenne, or mustard, taken in quantities far above those which a healthy person would be likely to ingest. I have frequently known severe cases of diarrhœa to be cut short by a few doses of twenty or thirty grains each of cayenne, taken either in a little water or syrup. Black pepper is well known to be a remedy of no mean power in the common fever and ague of this country; it will often cut short attacks with as much promptitude as would large doses of quinine."

Dietetic Fallacies.—1. That there is any nutriment in beef-tea made from extracts. There is none whatever. 2. That gelatine is nutritious. It will not keep a cat alive. Beef-tea and gelatine, however, possess a certain reparative power, we know not what. 3. That an egg is equal to a pound of meat, and that every sick person can eat them. Many, especially those of nervous or bilious temperament, cannot eat them; and to such, eggs are injurious. 4. That because milk is an important article of food, it must be forced upon a patient. Food that a person cannot endure will not cure. 5. That arrow-root is nutritious. It is simply starch and water, useful as a restorative, quickly prepared. 6. That cheese is injurious in all cases. It is, as a rule, contra-indicated, being usually indigestible; but it is concentrated nutriment, and a waste-repairer, and often craved. 7. That the cravings of a patient are whims and should be denied. The stomach often needs, craves for, and digests articles not laid down in any dietary. Such are, for example, fruit, pickles, jams, cake, ham, or bacon with fat, cheese, butter, and milk. 8. That an inflexible diet may be marked out, which shall apply to every case. Choice of a given list of articles allowable in a given case must be decided by the opinion of the stomach. The stomach is right, and theory wrong, and the judgment admits no appeal.—*Technics.*

Notes on Some New Remedies.—Some physiological experiments made with the dog mercury (*Mercurialis perennis*), by Dr. Hugo Schulz, to ascertain whether the plant really possesses the poisonous properties attributed to it, show that although in no case it proved fatal, yet it produces a paralyzing action on the muscular apparatus of the bladder, and decreases the peristaltic action of the bowels, while at the same time the quantity of urine excreted is considerably increased, and more or less diarrhœa is present. A new alkaloid has recently been extracted from manaca-root, and is named *francisceine*, after the plant which yields it, which is *Franciscea uniflora.* The alkaloid is said to have a very powerful diuretic action, and to possess, in addition, emmenagogue and diaphoretic properties. Under the name of *Pingo pingo* a new drug has lately been imported into Hamburg from Chili. It has been identified as *Ephedra andina* (*Gnetaceæ*), and, like other species of the same genus, is reputed to possess diuretic properties and to be useful in certain diseases of the bladder. A narcotic principle, to which the name of *Kelline* has been given, has been obtained by M. Moustapha from the *Ammi Visnaga*, the El kellah of the Arabs of Algeria. It is an umbelliferous plant, having an aromatic taste, the seeds of which have been used as a diuretic and aperient, and to form a mouth-wash in gingivitis and dental caries. The narcotic principle was found, in the experiments made upon animals, to cause vomiting, paralysis of the hinder extremities, slowing of the respiration, and irregularity of the heart's action.—*Prov. Med. Journal.*

A Source of Vegetable Musk.—Dr. A. G. Chase, of Millwood, Kan., writes: "I would like, through The Record, to call the attention of pharmacists to a probable new source of vegetable musk, viz., the tips or latest growth of watermelon-vines. I have not attempted to extract it, but each year, for the past six or eight, I have had it in mind to call public attention to it. On the fresh growth of the vine the pure musky odor is very strong—almost overpowering; and if easily extracted, the abundant source of supply would admit of this somewhat valuable medicine being sold more cheaply."

Galen on the Treatment of Obesity.—"The best method of getting thinner consists in gradually withdrawing from the body that whereof there is superfluity, and in strengthening at the same time those parts which had been expanded. Bodily exercise will undoubtedly prove very advantageous, as we see stout horses getting lean by heavy work. Thus, likewise, those will never grow fat who are obliged continually to toil with hard labor. This, however, requires great precaution, it being certain that fat people frequently run danger of death when attempting violent bodily exercise." And Galen says: "Regular alvine motions, energetic bodily exercise, a moderate life, a diet which, although satiating, yields but limited nourishment; which explain why Hippocrates advises stout people wishing to grow thin to dine on vegetables cooked with fat, in order that they may become satiated by a small quantity of food."

Better than Thanks.—The Dental Association of the Province of Quebec held its annual meeting in the hall of Laval University, in Montreal, which was placed at its disposal by the authorities of the University. At the conclusion of the session, instead of the ordinary vote of thanks, the Association expressed its gratitude by a gift of fifty dollars to the medical library of the University.

Reports of Societies.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-first Annual Session, held at Winchester, Ky., June 23, 24, and 25, 1886.

Dr. John L. Taylor, of Bowling Green, read a paper on

INJURIES OF THE HEAD.

He reported the case of a boy who received a severe blow on the head.

Dr. J. H. Letcher, of Henderson, reported a case of

MANIA AFTER CATARACT OPERATION.

He operated one year ago on a well-preserved old gentleman, Mr. B——, a farmer, who had been blind for some time from a mature cataract of both eyes. Shortly after the operation Mr. B—— became insane, and thought everyone was mistreating him. He was without fever and the pulse was normal. Morphia gave relief. He thought it might be due to the drops of atropia instilled into the eye. There were no other signs of atropia-poisoning present. He queried could this disturbance be due to the closure of the eyelids and the effect of the bandage; could it be due to confinement, the forced recumbent posture in a man wont to be active, or might the unaccustomed noise about the house be to blame.

Dr. E. Williams reported a similar case.

Dr. J. G. Cecil, of Louisville, read a paper on

PUERPERAL FEVER.

He paid especial attention to the treatment. Puerperal fever he considered puerperal septicæmia, or surgical fever allied to the puerperal state. No better being given we may pin our faith to micrococci as the most probable cause. Prevention is the great thing. Absolute cleanliness in every detail. We should give attention to ventilation and sewerage. Nearness to water-closets is prejudicial. Bathing the external genitals with antiseptics is a good practice. The proper care of the uterus in a case of labor in private is to let it severely alone, being always ready for an emergency. The indications for vaginal injections should be present before this dangerous practice is undertaken. In such proportion as the case has been difficult or protracted is the demand for intra-uterine injections. He did not wish to convey the idea that vaginal or uterine injections will always prevent puerperal fever.

Management: Improvement in this line has been perfectly wonderful. Temperature, pulse, and odor of the lochia are the indications for the douche. The solution *par excellence* is bichloride 1 : 1000 to 1 : 10,000, always given hot.

SECOND DAY—EVENING SESSION.

Dr. J. A. Larrabee, of Louisville, made the

REPORT ON PEDIATRICS.

In the broad and open field of pediatrics we have great opportunity to use preventive medicine. Two-thirds the whole number treated in his children's clinic are the effects of syphilis. He reviewed methods of acquiring syphilis. Within four months I have treated two young men with chancre on tongue, four young ladies with chancre on lips, latter by kissing. As to mercury, it does not differ what preparation you use, as it acts as the bichloride. He greatly prefers the inunctions of the old-fashioned blue ointment. He next discussed the subject of medical legislation, which he thought must be the result of education, and where is the education to come but through the profession? We have not yet attained the medical wisdom of Solomon nor the sanitation of Moses. He compared the present rage about hydrophobia to the amount of damage done to humanity by hydrophobia and syphilis. How often do we hear ringing in our ears at the marriage ceremony these words, "who knows aught," etc., when we know all too much. The licensing of prostitutes for one year in St. Louis reduced syphilis thirty-five per cent. Had it been continued what would have been the result?

Dr. Ap Morgan Vance, of Louisville, read a paper on

THE ORTHOPEDIC SURGERY OF TO-DAY.

He said that the orthopedist had been accused of going outside of his specialty. This belief grew from an ignorance of the field of the orthopedist. He gave as a fair definition of the word the following: That branch of surgery which takes into consideration the treatment, cure, or palliation of diseases which tend to cause deformity of bones and joints. He discussed spinal caries, diseases of the hip-joint, elbow, burns, cicatrizations, and congenital deformities. In treatment he gave special laudation to rest.

Dr. George W. Ryan, of Cincinnati, said he was sure that every orthopedist will thank Dr. Vance for his broad definition of the work of the orthopedic surgeon. In common with other specialists the orthopedist is at times accused of stepping outside the limits of his work if he resorts to operative or other measures supposed to belong to the general surgeon. But as the reduction and cure of deformity is his profession, the means which are employed, be they the knife or the apparatus, have only a scientific interest.

The paper has much in it on which we can all agree, and the author is to be congratulated on the excellence of his result in the case reported. But there are some statements to which I might take exception, notably those concerning the treatment of lateral curvature of the spine and the rachitic deformities.

I should be very far from agreeing to what the author justly terms the bold statement that the

MECHANICAL TREATMENT

of lateral curvature is unsurgical and cruel. I do not doubt he may find authority for this, but the judgment of most orthopedists is decidedly the opposite.

The mechanical treatment may possibly be considered of only secondary importance to the gymnastic exercises, the faradism, and the massage; but I believe it is of great value in securing a good result or in preventing an increase in the curvature. Certainly in my own case I have no reason to be dissatisfied with it. The

PLASTIC DRESSINGS,

so generally used, may certainly be considered unsurgical and cruel, for they are neither scientific nor satisfactory.

The value of proper and systematic exercise with

FARADISM AND MASSAGE

is unquestioned. Mechanically I have been using for the past two years elastic force over the convexity of the curve. This is obtained by using the heavy elastic webbing, such as the manufacturers of artificial limbs employ in their work.

A simple, light, steel frame is employed in order to get the fixed points. This is held by the ordinary corset front to the patient's body, a light pad being placed over the point where the pressure is to be made. The pressure is even, yielding to a certain extent, and its use is not followed by any pain. This apparatus, in conjunction with the adjuvants mentioned, has done excellent service. In one case of typical rotary lateral curvature it has been diminished a little more than one-third, and in others the treatment has been the means, in my belief, of arresting the growth of the curvature.

The views of Mr. William Adams, who is always con-

servative and always sound, are entitled to the very highest consideration. He says, in the last edition of his work on this subject (p. 280): "I can only say that after an experience of thirty years I shall adhere to the employment of spinal instruments in many cases, with the object and within the limit I have defined."

Concerning the statement that the rachitic deformities, such as bow-leg and knock-knee, should be held over until from three to five years for an osteotomy, I should say this was not altogether wise. Of course, if the bones have become thoroughly hard, osteotomy is proper, and, in fact, is the only means we have of correcting the deformity. But if the bones have not become hard and unyielding, the correction of the deformity by means of proper apparatus is about the easiest and simplest problem that presents itself to the orthopedist. Why we should wait for a year or two in order to perform an operation, when simple mechanical means will accomplish the same purpose without pain or danger, I confess I cannot very clearly see. Neither is the osteotomy devoid of all danger, though the per cent. of good results is very large; but I wish to be understood as appreciating the great value of the operation, and only question the wisdom of its employment in every case of curved limbs.

FRIDAY, JUNE 25TH—THIRD DAY—MORNING SESSION.

DR. J. MORRISON RAY, of Louisville, made the

REPORT ON OTOLOGY.

He referred to the rapid advance made in recent years in the knowledge of ear diseases. During the past year numerous valuable additions to the literature of this important branch of medicine have been made. One of the most noteworthy of these is a revival of the operation of multiple punctures of the membrana tympani in the treatment of certain cases of persistent catarrhal deafness. He said that when this operation was first introduced the profession was not in a position to discriminate between the proper and the improper cases, thus the method fell into disrepute. But since the correct interpretation of the tuning-fork test has been made, the cases that are apt to be benefited by this operation are more intelligently picked out. He, however, agreed with the opinion expressed by Schwartz and Von Tröltsch, that among the many favorable results none can be said to give sufficient evidence of its real value unless the patient has remained for a long time under observation after the operation. The modifying influence of syphilis on ear diseases, and the importance of its recognition when possible, was spoken of, and a case to the point cited. He agreed with Bomeray that malarial ear diseases do not exist, but that the malarial poison often exerts an influence on the course of ear diseases. The importance of a recognition of disease of the nose and naso-pharynx in cases of aural trouble was emphasized. The report of Bezold on the examination of the ears of school children was noted and attention drawn to the following statement: "My statistics show that the mental development of the individual suffers a limitation corresponding to the degree that his hearing power is diminished." Of the new drugs, he said, cocaine had not been as great a boon to sufferers from aural diseases as to those with eye troubles. The peroxide of hydrogen was spoken of in high terms, and it was claimed to be one of the best agents in the treatment of suppurating ears. Iodol was extolled, and was said to act promptly in stopping the discharge.

DR. ALLEN KELCH, of Louisville, read a paper on

THE CAUSE OF REGULAR ASTIGMATISM.

After calling attention to the coarse anatomy of the refracting media, and showing that three out of the four of them can be changed in form by reason of the absence of muscular fibre in them, in a passive manner only, he called attention to the fact that the faculty of accommodation resides in the changes of form, either active or passive, of the crystalline lens; that this being accepted as a fact, it must at once be admitted that regular astigmatism, as it is constantly met, cannot reside in the crystalline lens, for the reason that regular astigmatism is a constant, invariable quantity of defect of refraction, capable of measurement and correction by one unvarying, unchangeable lens; whereas, if it resided in the crystalline lens, it must and it could not do otherwise than vary with every varying degree of accommodation exercised. By the process of exclusion the aqueous and vitreous humors were incapable of being the seat of regular astigmatism, leaving only the cornea to be considered.

He showed how this medium, by reason of its projection and its position, must be attended in form by the pressure and the action of the eyelids in this, that it is compressed in the vertical meridian while it is lengthened in the horizontal, correspondingly increasing its refracting power in the vertical and decreasing its power in the horizontal. This being true, it must follow, as a natural consequence, that astigmatism, requiring a positive cylinder for its correction, must have that cylinder so placed as to increase the refraction in the horizontal meridian, inasmuch as the horizontal indicates the direction in which the cornea exerts the least refracting power. In order to add to the refraction in this meridian it is, therefore, necessary to place a positive cylinder in the vertical position.

Does large experience in the correction of regular astigmatism indicate this to be true? Experience follows the channel indicated by this theory most admirably, as he then proceeded to show.

In a recorded experience of 512 consecutive cases of astigmatism, occurring in the practice of Dr. Dudley S. Reynolds, who kindly permitted him to copy his notes, he found that in 448 cases, occurring in the right eye, there was required for correction, either alone or in combination with a spherical glass, a positive cylinder in the vertical meridian in 340. By a moment's reflection it will be seen that those cases requiring a negative cylinder in the horizontal meridian differ from the foregoing in degree only, and not in kind, and of these there were 37, making a total of 377.

In the left eye astigmatism existed in 452 cases, and required the positive cylinder in the vertical position in 337, and the negative, in the horizontal meridian, in 37, making a total of 374.

Of the 66 cases requiring correction in other meridians in the right eye, 23 required correction in meridians approaching within 10° of the vertical or the horizontal, which cases add their force to this theory, and swell the whole number to 400 cases out of 443 in the right eye. In the left eye those approximating within 10° numbered 32, making a total of 406 in the left out of 452.

This yields, sustaining this theory, 90 per cent. in the right eye, and 89.82 per cent. in the left eye.

The nature of the refracting media shows that regular astigmatism can exist only in the cornea, and the uniformity with which it here exists in a single direction, conforming exactly to what might be expected to be produced by the pressure of the lids, leads at once to that as the operating force in its causation.

He therefore derived the following conclusions:

(*a*) Regular astigmatism is due to changes of the spherical form of the cornea.

(*b*) The cornea has its contour altered by the pressure of the lids, and in this pressure we find the cause of regular astigmatism.

A paper was read by DR. WM. CHEATHAM, of Louisville, entitled

NASO AND NASO-PHARYNGEAL REFLEXES.

The paper dwelt principally upon hay fever. Dr. Cheatham uses electrolysis in reducing nasal hypertro-

phies. He claims that it is as rapid and the action is very much less dangerous than the galvano-caustic or other acids. The after effect is much more satisfactory. It leaves no cicatrix but at the point of the entrance of the needles. He uses cocaine to differentiate between true hypertrophy and engorgement. He locates sensitive areas in some cases in the larynx, pharynx, and conjunctiva. He also referred to the frequency of trigeminal cough and its proper management. He divided the causes of hay fever into: 1, External irritation; 2, predisposition; 3, vulnerable or sensible area. Especial attention was paid to the latter. He recommended to find this point and destroy it. He dwelt at length on the nerve supply of the nose.

Dr. J. A. Stucky, of Lexington, made the report on

RHINOLOGY,

which was the first report on this subject made to the Society.

The report was discussed by Dr. J. M. Thompson, of Richmond.

Dr. Edward Von Donhoff, of Louisville, read a paper entitled

CLINICAL DATA WITH REFERENCE TO A NEW METHOD IN THE TREATMENT OF FRACTURES.

Dr. Samuel E. Woody, of Louisville, read a paper on

THE REMOVAL OF HAIR BY ELECTROLYSIS.

On motion of Dr. S. Reynolds, of Louisville, the salary of the Permanent Secretary was raised from $50 to $100 per annum.

On motion, the thanks of the Society were tendered the President, the Committee of Arrangements, the citizens of Winchester, and the railroad companies.

The social programme consisted of a hop on Wednesday evening, and a banquet on Thursday evening, both very enjoyable. Kentucky can always be relied upon to do her share of hospitality.

The attendance reached 150.

Adjourned, to meet at Paducah on the third Wednesday in June, 1887.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, June 4, 1886.

F. P. Kinnicutt, M.D., President *pro tem.*

Dr. George L. Peabody read a paper (see p. 65), in which he reported cases of

ENDARTERITIS OBLITERANS,

accompanied by microscopic sections.

Dr. Sexton asked Dr. Peabody if he obtained any satisfactory results from the use of very considerable doses of iodide of potassium.

Dr. Peabody said that it was difficult to say whether *post hoc* was necessarily *propter hoc*, but in the case in which the patient recovered, recovery followed the use of iodide of potassium. When the lesion was syphilitic, he would suppose that iodide of potassium was indicated as much as in any other form of cerebral syphilis.

Dr. E. G. Loring thought that one of the chief points of interest in Dr. Peabody's paper was the elucidation of the fact that endarteritis may exist independent of syphilis. He was under the impression that this condition was seen in the eye very often, that there the endarteritis can be followed through years and the gradual obliteration of the vessel traced, and that finally the diagnosis can be confirmed by microscopical examination.

This disease occurs in young children, apparently as a regular inflammation which reduces the lumen of the vessel by some substance which is not atheromatous in the strict sense of the term, because the vessels of the eye are too small to be the seat of atheroma; but the material is so transparent as not to interfere with the appearance of the vessel, and there is apparently no change, except that the size is reduced and the walls are abnormally thick. These changes can be traced until, finally, portions are seen in which the lumen has been absolutely obliterated. In other cases there is a more active inflammation, and the arteries are changed into white cords, which can be distinctly made out as the result of endarteritis and periarteritis.

Dr. Loring was also much interested in the rapid recovery which sometimes takes place in cases with the symptoms which Dr. Peabody had related, and he would ask the doctor what, in his opinion, the exact lesion was that gave rise to the symptoms?

Dr. Peabody said that the explanation which seemed to him to be plausible, although purely theoretical, was, that in any vessel in which the lumen was already considerably encroached upon, there took place a spasmodic contraction of the muscle-cells in the walls of longer or shorter duration, and when this was relieved the blood again flowed to the parts to which the vessel was distributed.

Dr. Loring said that there were several cases on record in which spasmodic contraction of the arteries in the eye occurred, so that the vessels looked like mere threads. Graefe had reported a case on which he was about to operate when vision suddenly returned, showing that the condition must have been one of spasm simply. He had seen a case in which this would take place eight or ten times a day, and it was so distinct that the patient would watch and notice the blindness come on, and then observe it unwind and go again. Finally the eye went out altogether, and on examination he then found acute œdema of the vessel, which finally cleared up, when the endarteritis could be made out with slight hemorrhages, which were ultimately absorbed, and at last no vessels were left, neither veins nor arteries. He therefore thought that spasm of the small vessels would account for the sudden exhibition of the symptoms and their sudden disappearance.

Dr. Amidon asked concerning the condition of the heart in Dr. Peabody's cases.

Dr. Peabody said that it was normal, except in the first case, in which there was found very slight hypertrophy of the left ventricle. In that case also there was thinning of the cortices of the kidneys, and he regarded the hypertrophy of the heart as compensatory to the changes in the kidneys.

Dr. Amidon said that the reason he asked the question was, because it seemed to him that transitory aphasia and paralysis which occurred in syphilitics depended very much upon the condition of the heart. He thought that the symptoms could be better explained on the supposition that transitory weakening of the heart occurred, and lack of force sufficient to send the blood to the nerve-centres, than on the supposition that spasm of the arterial wall took place. Moreover, when the *intima* was so much hypertrophied, as it was often almost nodular, spasm of the *media* would perhaps be less likely to close the vessel than a weakened heart would be incapable of forcing sufficient blood through the narrowed lumen to supply the brain-substance. However, he did not wish to substitute one explanation for the other, but preferred rather to divide the cause of the disturbance between the two conditions.

Dr. Kinnicutt thought that Dr. Amidon's suggestion was rather contradicted by what occurred in certain patients suffering from renal disease, when the hypertrophied heart was doing its full work apparently, and yet the same train of symptoms were occasionally seen, and could hardly be explained except on the supposition of the occurrence of spasm of the blood-vessels. To be sure, there was a diseased condition of the blood-vessels, but the symptoms were more in harmony with the theory of spasm than with that of transient weakening of the heart.

The assumption of arterial spasm was also in harmony with the use of therapeutical measures which directly relieved the arterial spasm. Still the suggestion made by Dr. Amidon was worthy of full consideration.

Dr. Amidon asked if nitrite of amyl had been used in this condition.

Dr. Loring remarked that it had been used by Dr. Noyes in a case with wonderful effect, as it would clear up the blindness almost instantly. However, the weakened heart doubtless exerted an important influence.

Dr. A. B. Ball then read a paper, published in a previous issue, entitled

TWO CASES OF MYXŒDEMA, WITH REMARKS ON THE PATHOLOGY OF THE DISEASE.

Dr. R. W. Amidon said that he had been very much interested in Dr. Ball's paper, especially as he had the opportunity to see the first male case recorded, at Charcot's clinic in 1880, when Charcot told him that he had noticed the disease twelve years before that date, but unfortunately had never published anything concerning it. The patient was a male, aged fifty-seven, whose symptoms commenced in 1873, and consisted of swelling of the face, slight swelling of the extremities, with loss of appetite, etc. In 1878 Gumbold, his assistant, very carefully studied the case, and at that time the patient had the peculiar waxy facies, swollen tongue, eyes half closed, slow speech, husky voice, lips everted, teeth had all fallen out, but little hair remained upon the body, skin rough and scaly, mental condition slow, and progressive diminution of all the forces, with an apathetic condition, pain in the lumbar region, very sensitive to cold, etc. He improved on a milk diet, and it is not yet absolutely sure that it is a case of myxœdema, because the patient is still living. The fact, however, that he did improve is not evidence that it is not a case of myxœdema.

The experiments of Horseley were interesting with reference to the etiological features of the disease, as the group of symptoms produced by extirpation of the thyroid in animals were very much like those in the reported cases of myxœdema, and reminded him very much of some cases of paralysis agitans without tremor, also described by Charcot; but in these cases the patients complain of sensation of heat, and there is an abnormal temperature.

As to the primary etiological condition, Dr. Amidon was inclined to agree with Dr. Ball that it is in the thyroid gland, and especially because recently he had a case of perfectly typical sympathetic paralysis of one side, with atrophied thyroid, but no myxœdematous symptoms whatever.

Dr. Loring said, with regard to the condition of the arteries of the eye in the cases examined with the ophthalmoscope, that it might be there was deposit there, and it might also be that the reduction in size was not real, but was apparent on account of the dilatation of the veins. He had seen one case of myxœdema, that of a woman, in which he could recognize distinctly a peculiar ophthalmoscopic appearance, consisting of a moderate degree of neuro-retinitis, with much enlarged veins, and but slightly reduced arteries. In the case reported by Dr. Wadsworth there was an atrophied optic disk, and in the seven cases reported by Dr. Little there were no changes in the arteries.

Dr. C. L. Dana did not see how we could escape from the conclusion reached by Dr. Ball, although it was difficult to understand how so small a body as the thyroid could exert such an influence on the nutrition of the body.

Ever since he read the experiments made in connection with this affection, he had endeavored to ascertain whether or not there was any disturbance of the thyroid in cases of organic and functional diseases of the nervous system. In cases of chorea it was not infrequent to find the thyroid enlarged—in five to ten per cent. of the cases there was a marked enlargement—which disappeared when the chorea was recovered from. He thought that he had also detected change in the size of the gland in several cases of insanity; in some cases enlarged, and in some diminished, in size. He believed that the subject was worthy of investigation.

Dr. G. A. Peters said that the histories of Dr. Ball's cases brought vividly to his mind a case which was under his observation several years ago, but at which time he did not know the nature of the disease.

Dr. Kinnicutt referred to a case which he saw quite frequently for many years without recognizing it. With regard to the thyroid, it was not enlarged, and he had thought that it was either normal or slightly reduced in size. The patient still enjoys life fairly well, and is in fairly good general health, and her condition has not changed apparently for five years.

The Society then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HOSPITAL SUNDAY—THE NEEDS OF THE HOSPITALS AND NEW MODES OF MEETING THEM—CLINICAL FEES—PAYING PATIENTS—THE LATE MR. ROYES BELL—THE MEDICAL BILL—THE HAMILTON ASSOCIATION FOR PROVIDING TRAINED MALE NURSES.

London, June 28, 1886.

Yesterday was Hospital Sunday, and collections for the medical institutions of the metropolis were accordingly made in most of the leading churches and chapels of all denominations. This year an innovation is to be made, for not only the religious, but the play-going public, are to be persuaded into donating. A number of the collecting-boxes have been affixed in the theatres and other places of amusement. The "mechanical beggar" in the Colonial and Indian Exhibition may be expected to produce a good harvest. This is a collecting-box with a little oscillating ticket attached to it, bearing a request to give. On dropping a penny in, a little plate rises up with "Thank you" inscribed on it. It is the invention of a medical man. These—and all other means of extracting money from those who have any to spare—are all sadly needed, for truly the hospitals of London are in a poor plight. Forty thousand pounds are needed this year to make good the deficit of the hospitals and dispensaries of London. It is now some years since an entire block of St. Thomas' Hospital was, under the name of St. Thomas' Home, appropriated for the use of paying patients. A year or two ago Guy's Hospital was driven to a similar course, and the announcement was made that paying patients would be received at a charge of a guinea a week, this being but half the amount charged in St. Thomas' Home. It was intimated that the authorities of Guy's Hospital were obliged to adopt this method of adding to their finances, in consequence of the depreciation in the value of land, which had caused a serious diminution in the income of the hospital. Guy's Hospital has a magnificent endowment, but it is largely vested in landed property. Considering the impecunious condition of so many of the large general hospitals, it really seems a fair question whether it would not be desirable to appropriate for the hospital funds the large sums paid by students for attending hospital practice. At present this is nearly all divided among the physicians and surgeons, as fees for teaching. A physician or surgeon attached to a large hospital, therefore, although he receives no direct remuneration from the hospital for his services, gets a very handsome equivalent in the form of students' fees. For these he is supposed to give a *quid pro quo* in the shape of bedside teaching, but the quantity and quality of the latter is by no means always proportionate to the amount

paid for it. The instruction given varies greatly at different hospitals, and with different teachers. In some cases it is very excellent, while in others it is but meagre and indifferent. Most of the physicians and surgeons to the in-patients of our large hospitals have reached an age and attained a position such that they do not really need the fees they receive for hospital teaching. Their juniors, in the out-patient rooms, be it remembered, get no fees for the teaching they give there. The clinical material is, of course, not so valuable as that in the wards, but it has a value of its own, and much valuable instruction is often given by the aid of it. The work is, at any rate, as hard as that of the wards, and those who do it may be presumed to need remuneration more than their seniors.

One device, which has been adopted very largely of late years, is to make the patients pay. I have mentioned above the system of receiving paying in-patients. This is now in force in a large number of the smaller hospitals. At many institutions, though, out-patients are also required to contribute, and in many cases do to a very large amount annually. This method of raising money for hospitals and dispensaries was formerly much decried, but at present, whether right or wrong, it is a well-established procedure. Naturally, under such circumstances, many patients of a better class betake themselves to a hospital or dispensary when they find that, by making a small weekly payment, they can be relieved from the trouble and worry of obtaining a governor's letter of recommendation. Not without some truth does the general practitioner complain that the hospitals rob him of his patients. The special hospitals have displayed the greatest ingenuity in extracting payments from patients. In some of them the pay plan has been erected into a veritable system, and a sliding-scale constructed, according to which a patient is required to pay a sum varying from one to five shillings a week, according to his or her means. In this line of business the Throat Hospital, Golden Square, is *facile princeps*, for it has carried the paying system to such an extent that it is nearly self-supporting, and almost independent of donations and subscriptions. Indeed, I believe the last balance-sheet actually shows a profit on the working expenses.

Yet another hospital surgeon has passed away almost before reaching middle age. I refer to Mr. Royes Bell, Surgeon to King's College Hospital, who died at the early age of forty-four. Mr. Royes Bell was born in Australia, but came to Europe early in life, and was educated at King's College. In 1870 he became a member of the surgical staff of King's College Hospital. For many years he assisted the late Sir William Ferguson very largely in his private practice. Mr. Bell furnishes yet another example of long years of patient toil in out-patient practice, ending in death before the well-earned reward of so many years' work can be reached.

Contrary to expectation the Medical Bill has passed. It will not very materially alter the present position of practitioners in this country. Its most noteworthy features are those permitting the registration of foreign degrees (the holders being already registered in virtue of the possession of a British qualification), and of diplomas in sanitary science.

The first annual meeting of the Hamilton Association for Providing Trained Male Nurses was held on Wednesday last. Sir Thomas Crawford, K.C.B., Director-General of the Army Medical Department, presided and moved the adoption of the report. This was seconded by Sir Joseph Fayrer, and carried unanimously. Several gentlemen afterward addressed the meeting and spoke in favor of the movement. The report showed that during the past year satisfactory progress had been made. The male nurses supplied by the Association had given satisfaction in nearly every case, not only to their patients but also to the medical men under whom they had worked. The position of the Association appears to be unique. Although there are numerous institutions in London for supplying female nurses, in no one, although many profess to supply male attendants, is there a department for male nurses who have been through a systematic course of hospital training. Only trained male nurses are employed under the Hamilton Association. It should be added that the Association is not established as a commercial undertaking, or for the purpose of profit or gain.

OUR PARIS LETTER.

[TUBERCULOSIS IN CHILDREN AND INFANTILE HEREDO-TUBERCULOSIS—"THE TOLERANCE OF THE ORGANISM"—A FATAL BILIARY CALCULUS—THE MEDICAL OPPORTUNITY.]

As a corollary to your editorial note in THE RECORD of June 19th, anent tuberculosis in children and the question of congenital tuberculosis, I may here give a summary of a note read by Dr. Landouzy at the Medical Society of Hospitals on the same subject. The author's conclusions are: That tuberculosis in infancy—that is, from birth to two years of age—is more frequent than it is said to be. It does not often present any other localization than a broncho-pneumonia. The latter is sometimes simple in appearance, and can be proved tuberculous only by bacteriological examination; at other times, on the contrary, it coexists with other lesions manifestly tuberculous. Tuberculosis is transmitted to the new-born infant either by mediate contagion or by heredity. Hereditary tuberculosis is transmitted by the grain. The bacillary proof of heredo-tuberculosis has been given by Johne. This question of the heredity of the grain shows how difficult is the prophylaxy of infantile tuberculosis, and the author asks, if much could be done against tuberculosis by contagion, what can be done against infantile heredo-tuberculosis?

At the same meeting of the Medical Society, Dr. Robin communicated a curious example of what he termed the "tolerance of the organism," or the impunity with which a person can live even with grave lesions in the interior of the body. The subject was an old woman, seventy-nine years of age, who died in his ward at the hospital from the sequelæ of pneumonia. Dr. Robin stated that on different occasions he had treated the patient for slight attacks of bronchitis, but independent of these occasional attacks her life was passed without her ever having felt herself positively ill; nevertheless, at the post-mortem examination of her body, Dr. Robin found, in the first instance, a double aneurism of the abdominal aorta, which, however, was cured spontaneously. He then discovered considerable dilatation of all the biliary ducts, extra- and intra-hepatic, which were filled with calculi of different dimensions.

On the same occasion Dr. Legroux exhibited a voluminous biliary calculus, which was found in the dejections of a patient affected with hepatic colic. The stone measured 33 mm. in height and 22 mm. in breadth. Its composition presented nothing particular.

The *Semaine Médicale* has published a note from M. Rivolta, Professor at the Veterinary Institute of Pisa, in which the author gives an account of his researches on rabies, the microbe of which he believes he has discovered.[1] In adopting a special method of coloration he has succeeded in establishing the constant presence of a parasite in this malady. The following is the method adopted by the professor: After having allowed the spinal marrow, the medulla oblongata, and the other organs of animals which died from hydrophobia to harden in alcohol, he cuts them up into fine pieces, which he afterward puts into chloroform, where they are left for twenty-four hours, to rid them of the fat which they might

[1] The inference [illegible] though but partially.

contain. He puts them back into alcohol, and then into a mixture composed of ten parts of an aqueous solution of caustic potash (ten per cent.), three parts of distilled water, and three parts of glycerine, where they are left five or six hours, or even more. This done, the pieces are put into a solution of methylene blue, in which they are left for a few minutes, until they have been entirely tinted blue. After being washed with distilled water, they are placed on a plate of glass (object-glass), where they are allowed to dry slowly at a mild heat. The preparation is finally completed with Canadian balsam dissolved in chloroform. If, at this moment, the preparation is examined, it will present a diffuse coloration, but it is easy to obtain the coloration special only to bacteria by exposing, with precaution, the object-glass to the flame of a spirit-lamp to raise the balsam of Canada to the point of ebullition, and then allow it to cool. In acting thus the tissue becomes discolored, while the bacteria remain colored.

This operation of ebullition is repeated two or three times, until the bacteria appear of a beautiful blue on a ground nearly colorless. These bacteria, thus colored, are from 1.5 to 2 millimetres long, and 0.7 of a millimetre broad. Each bacterium appears to be formed by several round or oval granulations united together in chains. In some few cases they appear to be uniform, and to be formed of one single piece. They are found in very great numbers in the medulla oblongata. They are also numerous in the spinal marrow, but more rare in the cerebral hemispheres; they are also found in the epithelium of the parotid glands. They are rare in the spleen and in the kidneys, but numerous in the liver, where they lodge in the interior of the hepatic cells. Professor Rivolta mixed the half of the medulla oblongata of a rabic rabbit with distilled water which was previously sterilized, and he then filtered the whole through a filter of porcelain. With the liquid thus obtained he inoculated three rabbits after having trephined them. At the same time, and by the same procedure, he inoculated two other rabbits with the liquid remaining on the filter. These latter animals died of rabies at the end of thirteen days, whereas the three first did not manifest any rabic symptom four months after the inoculation.

At a recent meeting of the Academy of Sciences, Professor Brown-Séquard was elected member in the Section of Medicine and Surgery in the room of Professor Vulpian, appointed Perpetual Secretary.

At the last meeting of the Academy of Medicine, Sir James Paget, the eminent English surgeon, was elected member in the Section of Foreign Associates.

Mademoiselle Ribard, Doctor of Medicine of the Faculty of Paris, who accompanied Paul Bert to Tonquin, died of dysentery soon after her arrival in that country.

THE TREATMENT OF FEVER BY COLD BATHS, ACCORDING TO THE PROPHET.—It seems that cold bathing for the reduction of high temperature is not a novelty by any means. Dr. Bertherand, writing in the *Gazette Médicale de l'Algérie*, translates portions of an Arabic work which prove that Mohammed was an advocate of this therapeutic measure. Asma, in a visit to a friend, found her sick with a fever and poured water over her, saying: "The prophet of God has commanded this, for the fever must be cooled as it is a fire from hell." When the prophet himself had a fever he had himself sprinkled with cool water three nights, just before the dawn, for he said that fever was "a whiff from the winds of hell, and must be overcome by means of cool water." The writer of the work gives directions for cooling the water still further, if necessary, by the admixture of ice or snow, and he says also, that it is sometimes of advantage to add vinegar to it.

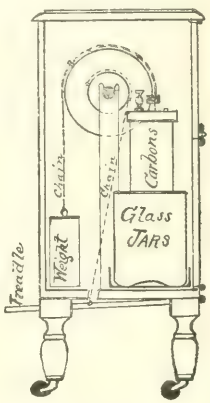
"THE SKUNK" is the title of a very strong article recently read before the Medical Association of Alabama.

New Instruments.

AN IMPROVED FORM OF GALVANO-CAUTERY BATTERY WITH DIFFERENT FORMS OF POINTS.[1]

BY BEVERLEY ROBINSON, M.D.,
NEW YORK.

To all specialists and workers in the field of nasal and throat diseases the galvano-cautery battery is at times an invaluable instrument. Hitherto it has not been used as often as it is desirable on account of the trouble of filling and emptying the cells, and the risk of spilling the fluid upon some article of value.



This statement is especially true of minor operations, or those in which some other means would answer fairly well. In making use of the improved form of galvano-cautery battery the objections urged above are reduced almost to a minimum. Besides, the battery can be kept in the office ready for any occasion when it is required. The fluid will rarely need changing, and when it is necessary, may be done with little annoyance.

I have been using one of these batteries during the past two months, and have found it a great convenience in office work. It seems to me equally well adapted to hospital work. Its cost is moderate, being $35.

As compared with a good storage battery with gravity cells it is two-thirds less expensive, and, I am inclined to believe, for cautery work alone will be found nearly as satisfactory.

In connection with the battery I desire to show you a number of cautery points and cups that I have found very serviceable in the treatment of different forms of nasal catarrh and hypertrophy of the turbinated bodies.

The following is the description of the battery given me by the manufacturer, Mr. H. E. Stammers:

"The cabinet galvano-cautery battery consists of a case of polished walnut 13×15 inches, 31 inches high, outside measurement. The top of the case opens on hinges. A door is placed in the back, as shown in the drawing, and two trays for holding the cords and electrodes, are set in the upper portion of the case. Two glass cells, 6×8 inches, are placed in a lead tray; three carbon and two zinc plates, 4×6 inches, are in each cell, connected with a counter balance weight by means of a chain which passes over a grooved wheel. Another chain is connected with a smaller wheel on the same shaft, and is attached to a treadle which, by depressing with the foot, lowers the elements into the fluid to any required depth.

[1] Shown to the Academy of the Practitioners' Society at a Stated Meeting held March 8, 1886.

A loop rate-rest holds the treadle in any suitable position, thus regulating the strength of the current to various sizes of electrodes. When the loop rate-rest is released the weight lifts the elements from the fluid and holds them suspended, ready for instant use. The ordinary bi-chromate of potash battery fluid is used (half a pint in each cell). One ounce of bi-sulphate of mercury should be added to each half-gallon of fluid after it is put in the cells, as it serves to keep the zincs amalgamated, and prevents a brown deposit from forming on them. If the fluid is in use several months, plain water may be occasionally added to it, to replace what is lost by evaporation. No corrosive fumes, however, rise from the fluid, unless a quantity of the solution is allowed to evaporate rapidly. The battery being provided with castors and handles, can be rolled, or lifted about, readily, and as the cells are only half filled, there is little danger of the fluid slopping over. The parts of the battery are constructed so that they can be taken apart and replaced in a few moments. The length of time the fluid lasts depends on the size of the electrodes employed and the length of time they are in use. For ordinary electrodes, when they are used about five minutes at a time, the fluid should last during twelve operations; one minute at a time, sixty operations—or what is equal about to one hour's work. For small electrodes the fluid should last during five or six hours' work, the explanation of this great difference in time being that a light *current* will still heat a small electrode even though it fails to heat a large one. Besides, the elements need not be lowered so deep into the fluid to heat the small electrodes. The treadle may be used as an *agitator* of the fluid whenever the current becomes too feeble to heat the electrodes properly, and will often serve as a valuable adjunct for this purpose."

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 4 to July 10, 1886.

PAGE, CHARLES, Lieutenant-Colonel and Surgeon. Leave of absence further extended one month. S. O. 156, A. G. O., July 8, 1886.

WATERS, WILLIAM E., Major and Surgeon. Ordered for duty as Post-Surgeon, Fort Spokane, Washington Territory. S. O. 112, Department of Colorado, July 2, 1886.

HOW TURKISH WOMEN PREVENT CONCEPTION.—One would suppose that the offspring at the harem would be large with such facilities at command, but such is not the case, the main reason being the systematic prevention of conception; and when pregnancy has occurred abortions are produced, of course not in every case, but in such cases as the master of the harem directs. Turkish women generally incline largely to these practices; consequently, the citizens of the empire are not increasing as they would under other conditions and circumstances. For preventing conception they use a piece of "bitter wood" an inch in diameter and about eight inches long. After the completion of the sexual act they proceed with this cylinder of wood introduced into the cavity of the vagina to mutilate the parts until free hemorrhage occurs, when they consider themselves safe.—Constantinople Cor. *Iowa Medical Reporter.*

MORALITY OF TURKISH WOMEN.—The Turkish women are, as a rule, true to the Turk. There is not a house of prostitution conducted by Mahometans in Constantinople. The English and other European representatives supply these immoral accommodations.—Constantinople Cor. *Iowa Medical Reporter.*

Medical Items.

CONTAGIOUS DISEASES IN THE CITY OF NEW YORK.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 10, 1886:

Week Ending	Typhus Fever	Typhoid Fever	Scarlet Fever	Cerebro-Spinal Meningitis	Measles	Diphtheria	Small-pox	Yellow Fever
Cases.								
July 3, 1886	0	7	25	3	7	63	2	0
Deaths.								
July 10, 1886	2	5	5	2	40	0	0	

THE TONGUE IN DISEASE.—A white-coated tongue indicates febrile disturbance. A brown, moist tongue indicates disordered digestion or over-loaded primæ viæ. A brown, dry tongue indicates depressed vitality, as in typhoid conditions and blood-poisoning. A red, moist tongue indicates debility, as from exhausting discharges. A red, dry tongue indicates pyrexia, or any inflammatory fever. A "strawberry" tongue, with prominent papillæ, indicates scarlet fever or rötheln.—*Technics*, March 25, 1886.

THE MICROBE OF SYPHILIS.—It is said (*La Enciclopedia*) that Alvarez has found a micro-organism in the normal secretion of the external genitals which is apparently identical, in form and characteristics, with Lustgarten's bacillus, supposed by him to be the specific microbe of syphilis.

THE DISCOVERER OF COCAINE.—Signor Torretti, professor of chemistry and pharmacology in the University of La Paz, Bolivia, has written a letter to the journal *El Ferro Carril* of Santiago, in which he maintains that cocaine was isolated for the first time in 1857, in the laboratory of the Botica y Drogueria Boliviana, by Sr. Pizzi, following the suggestion of the Austrian traveller Tschudy. He says that the manuscripts of Pizzi remain to attest the fact, and Herr Tschudy and Dr. Aquiles Reid, of Valparaiso, are still living and can add their testimony to support this claim.

OVARIOTOMY IN BARCELONA.—Dr. Miguel A. Fargas has published the histories of the first series of ten ovariotomies performed by him in Barcelona during the three years preceding July, 1885. The operations were performed as far as possible under antiseptic precautions. The first nine patients recovered, but death resulted in the tenth instance.

DETROIT INVECTIVE. — "Infinitesimal shrew-mouse squeaklet of a mediker," is one Detroit physician's characterization of another in the public prints. The language is unique and vigorous. We have endeavored to picture an individual to which it would literally apply, but having completely failed, conclude that it is merely a sort of figurative expression, calculated to convey the impression that the party of the first part cherishes none of that love for the party of the second part which the Scriptures enjoin.—*Medical Age.*

DEATH FROM DENTAL CARIES.—Dr. Poncet reports the case of a man who had an extensive gingivitis following caries of the teeth. He was admitted to hospital presenting the symptoms of septic poisoning, and died at the end of a few hours. At the autopsy numerous small abscesses were found in the mastoid process, and there were other evidences of septicæmia present. The origin of the disease was referred to the carious process existing in the teeth.

A Sign of Death.—Dr. Lesueur, of Amiens, says that one can determine with certainty whether a person is dead or not by thrusting a pin into the skin. In a cadaver the hole made by the pin will remain patent, just as if the pin had been stuck into a piece of leather, but if the person be alive the hole will immediately close, leaving scarcely a sign to show where the pin had entered the skin.

The Persian Mode of Treating Hernia.—Dr. J. P. Cochran sends to the *Medical Press of Western New York*, a description of the Persian radical cure for hernia. Dr. C. has seen three men who were perfectly cured. The method is described as follows: "We will take for example an oblique inguinal hernia. The intestine being reduced, the borders of the external abdominal ring are traced with ink, as a guide in the application of the hot iron. A thick ring of dough and somewhat larger in diameter is then placed around the part to be cauterized, to protect the adjacent tissues. The instrument used consists of a rough iron ring, one-fourth of an inch in breadth, and sufficiently large in diameter to include about one-eighth of an inch of the borders of the abdominal ring. It has an upright piece surrounded by wood for the handle; or it may be a solid disk, or else a ring with cross-pins in it. The patient is now made 'dead drunk' with arrack; or else, and especially if it be a child, is held perfectly still by a number of strong assistants. The iron is brought to a dull-red heat, and with all the neighbors—men, women, and children—who can crowd into the room where the struggling patient lies on the floor, the operation begins. The surgeon holds the instrument an inch above or over the part and as the surface is scorched and the iron has cooled somewhat it is placed within the ring of dough and directly upon the breach in the abdominal walls. After it ceases to burn the flesh it is again heated and the operation is repeated. The after-treatment consists in healing the ugly burn gradually."

Are We Still so Dirty?—Dr. George C. Wellner, of Wabash, Minn., writes: "I beg you kindly to permit me a few words of reply to your editorial, 'A Warning to the Careless,' of the issue of May 1st. You say: 'The medical profession, or rather the community at large, has cause to congratulate itself that it is living under the new dispensation of the gospel of cleanliness, and not dying from poison unconsciously administered by a careless or dirty medical attendant!' I believe your assumption is premature. We may indeed assert and reassert the gospel of cleanliness, but it is as yet idle to regard the community at large as living under the new dispensation, whether of Listerism or simple surgical cleanliness. The truth is, that a large proportion of the community at large dies now, as formerly, from poison, with this difference—that it is now *consciously* administered by a careless or dirty attendant. I say consciously administered, for since the advent of Listerism the medical profession has been well-nigh rationalized to death with the one or the other, Listerism or cleanliness, and it certainly cannot be possible that the efficacy of soap and water, as applied for the purposes of surgical cleanliness, must needs yet be persistently lauded and demonstrated to any number of the profession in America. We have now quite as much light already as we can manage well, and what we pray for now is more disposition to apply the facts we have. I mean that having embraced the gospel of either Listerism or cleanliness, the medical profession at large can have no excuse for withholding its dispensation. But, as yet, the great bulk of cases in which one or the other method is applicable, as well as most of the instruments in daily use, including the hands, do not receive even the odor of carbolic acid or the touch of soap. For example, the clinical thermometer is commonly removed from the patient's mouth to its case *uncleansed*. And it is fact, not fiction, that the pocket-case instruments—eye, ear, mouth, and nasal specula, tongue-depressor, catheters, and, indeed, the entire armamentary of minor instruments—are commonly not surgically cleansed. I do not wish to be understood as denying the existence of the new dispensation of the gospel of cleanliness. There is, indeed, a new dispensation, but it is, with a few exceptions, altogether quite within that comparatively narrow sphere of surgery and medical practice in which rivalry and emulation prevail. Without this sphere I believe we still partake largely of the old dispensation."

The Frequency of Rabies in Paris.—In 1885, there were 518 rabid animals killed in Paris and the Department of the Seine. Nineteen persons died of rabies.

Mineral Waters and Their Uses.—In an excellent article upon this subject, by Dr. Titus Munson Coan, in *The Journal of Reconstructives*, the following concise statements are given regarding the properties of the various mineral waters: For anæmia the reconstructive and tonic waters are needed, in conjunction with such diet as will restore the lacking elements of the blood. Beef peptonoids for the anæmia of dyspepsia; gluten bread and whole wheat bread for that of diabetes; cod-liver oil and milk for that of the phthisical diathesis are indicated. The springs of Auvergne, and of Salins, Luxeuil, and Bussang in France; Franzenbad in Austria, and our own Columbian Spring at Saratoga, will bring relief or cure when used with these adjuvants. When chlorosis accompanies constitutional anæmia, the contrasted influences of Alpine resorts and sea-bathing are alike useful. For asthma and bronchitis: Mont-Dore, Royat, Ems, Aix-les-Bains, Virginia Red Sulphur Springs. For post-nasal catarrh: Aix, Mont-Dore; but energetic local treatment in addition is sometimes needed. For dysentery: Rockbridge Alum Springs, Bussang in the Vosges. For dysmenorrhœa: the saline, iron, and sulphur springs must be chosen among. For dyspepsia: Carlsbad, Vichy, Pougues, Bagnères de Bigorre, Kissingen, Hombourg, Salins, Hathorn Springs, Greenbrier White Sulphur, and many others, according to the symptoms. For gout: Vichy, Vals, Royat, Buffalo Lithia, Sharon Springs. For acid gravel, the most frequent form: Carlsbad, Ems, Neuenahr, Buffalo Lithia, Capon Springs, Gettysburg "Catalysine." For alkaline gravel: the calcic waters. Clysmic is one of the best, and it is also a very pleasant table water. For hysteria: Pyrmont, Schwalbach, Spa, Néris, Schooley's Mountain, Rawley Springs, Congress Spring. A patient of mine, a delicate woman, found great relief at Luxeuil, in Eastern France. For intermittent fever and malaria, the waters of the Massanetta Spring have a desirable reputation. For laryngitis or "clergyman's sore throat," choose among the sulphur waters rich in sodium, or the alkaline, with chloride of sodium. Eaux Bonnes, Ems, Obersazbrunnen, Neuenahr, Selters, Sharon Springs, are typical and excellent waters of these kinds. For engorged and fatty liver: Carlsbad, Marienbad, Tarasp; when nutrition is badly impaired, Kissingen, Hombourg, Salins. For articular rheumatism: Aix, Springs of the Pyrenees, Hercules Baths, Baden Baden, Wiesbaden, Ischl, Sharon, Richfield Springs. For muscular rheumatism: thermal springs, as Teplitz, Warmbrunnen, Gastein, Ragatz, Plombières, Lebanon Springs. For torpid scrofula: Salins, Kreuznach, Ischl, Kosen, Bourbonne-les-Bains, Rockbridge Alum, Greenbrier Springs. For irritable or "erethic" scrofula: La Bourboule, St. Nectaire, and other springs of Auvergne. For skin diseases: the sulphur and arsenical springs offer a vast field of choice, according to the character of the case. Uterine diseases are variously treated by the alkaline, muriated, or saline waters, and with brine baths or the ascending douche. They form a large contingent of the cases treated at mineral springs, both here and abroad.

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Original Articles.

THE IMPORTANCE OF AN EARLY DIAGNOSIS IN CASES OF GENERAL PARESIS.[1]

BY HALSEY J. WOOD, A.M., M.D.,

[illegible]

Not many months since, there died in a neighboring city a distinguished actor, for years unapproached in the delineation of robust tragedy; upon whose lips thousands hung in admiration, and yielded their emotional nature to the sway of his own. A giant in his art, he toppled over, a mental and bodily wreck, at an age that should have witnessed the maturest expression of ripened genius.

But before he died—before, indeed, he had left that stage upon which his latest efforts all too surely presaged "the mighty tree thundering to its fall," he was permitted for weeks to keep up the melancholy travesty of his former genius; to riot in the excesses and indulge the extravagances peculiar to his disease, and to be permitted that liberty he could no longer govern, until he had reduced a noble physique to helpless decay; an exalted mind to empty fatuity; a considerable fortune to absolute penury; his wife and children to future charity.

A few days ago, there was admitted to Bloomingdale Asylum a prominent and successful dramatist, in the early stages of a progressively fatal disease. Early, but not in time to save from the wreck of a once sufficient competence the large sums squandered in the expansive and chimerical schemes bred by a diseased intelligence. His wife and family are in poverty, and he must be supported for the brief span left him by the benevolence of his former professional associates.

These are by no means rare cases. Similar ones might be multiplied by tens and by scores. The comfort and support of hundreds of wives and mothers, the accumulations of years, the studied economies of a lifetime, have been squandered in weeks in the delusional mania of which we speak.

My apology for the introduction of this subject before the Society is the comparative infrequence of such cases in the experience of the general practitioner, the importance of their early recognition, and the disastrous consequences of delay. It has been my fortune, in an asylum experience of more than seven years, to see many cases of general paresis. These were admitted in various stages of the disease, and in but three instances was the condition of the patient recognized prior to admission. This, I am well aware, indicates an extreme state of things, and argues an unfamiliarity with the subject only possible at a distance from medical centres. To see a sufficient number of cases to thoroughly familiarize one with the morbid manifestations, is sufficient, in most instances, to render the diagnosis prompt and certain.

To the French physicians belongs the credit of the earliest recognition of the disease, attention having been called to it in 1822 by Bayle. The first complete account was, however, given by Calmeil in 1826, and to him is frequently ascribed the merit of having been its discoverer.

[1] Read before the Harlem Medical Association, [illegible]

Many names have been proposed for it. Of these the most important are: General paralysis of the insane, paralytic insanity, paralytic dementia, incomplete general paralysis, progressive general paralysis, and general paresis, or simply paresis. It is proper to protest, in this connection, against the use of the terms paralytic insanity, or paralytic dementia, to indicate this disease, as they are properly associated with the organic dementia resulting from gross cerebral lesions, as apoplexies, ramollissements, tumors, atrophies, and chronic degenerations of the brain, affecting the convolutions and their functions, either primarily or secondarily. They have nothing whatever to do with general paresis, their use only confuses the issue.

Of late the term general paresis has been commonly used, and although it may be urged that, in preferring it to general paralysis, we substitute for the old name one equally vague and unscientific, the custom, if not the wisdom, of modern times is in the usage, and we shall follow it in our subsequent reference to the disease.

General paresis is a distinct disease, physiologically, pathologically, and psychologically; as unique and separate from all other disease as is variola from scariatina. I quote the following very satisfactory definition of general paresis from Dr. Clouston's "Clinical Lectures on Mental Disease":

"A disease of the cortical part of the brain, characterized by progression, by the combined presence of mental and motor symptoms; the former always including mental enfeeblement and mental facility, and often delusions of grandeur, and ideas of morbid expansion or self-satisfaction; the motor deficiencies always including a peculiar, defective articulation of words, and always passing through the stages of fibrillar convulsion, inco-ordination, paresis, and paralysis; the diseased process spreading to the whole of the nervous tissues of the body; being as yet incurable and fatal in a few years."

The victims of this disease are, for the most part, robust, middle-aged, active-minded men. It steadily progresses and rapidly destroys all that is human in the unfortunate subject, leaving him to exist for months together "an unconscious automaton."

It may be well to consider here the question often asked, whether general paresis can exist without mental disorder. Dr. G. H. Savage, editor of the *British Journal of Mental Science*, in his recent work on insanity and allied neuroses, asserts that he has seen several such cases in the wards of general hospitals; cases presenting all the physical symptoms, and to this extent undistinguishable. Griesinger, however, strongly dissents from this position, asserting that the cases are not similar, that they do not ultimately manifest the purely mental symptoms. Indeed, Dr. Savage acknowledges this issue to have occurred in very many of the cases referred to, the disease rapidly progressing to a fatal termination. A general impression as to the causation of general paresis, is that it depends upon *sexual excess*. Dr. Maudsley supports this view. Dr. Blandford writes: "I have held for some years the opinion, based altogether upon my observation of cases, that sexual excess has more to do with the causation of it than anything else." But the growing testimony of observers is in the direction of less positive assertion. The increasing number of cases in which this factor cannot reasonably be adduced as present, or as an important cause, demands a more guarded utterance. Undoubtedly sexual excess has much to do

with the causation of the disease, as does great alcoholic indulgence and other toxic influences; but it is chiefly in combination with other depressing and degenerating agencies that its force is recognized. It should be borne in mind that sexual excess is a common early symptom of the disease, and the effect should not be mistaken for the cause. The fact is, it is very difficult to establish the existence of sexual excess. Apart from the uncertain and unwilling testimony likely to be furnished, individuals differ greatly in susceptibility to the action of such a cause; excess for one being moderation for another. Syphilis is an active and undoubted cause in many cases, the extensive chronic degenerations peculiar to its course greatly predisposing to attack. But the cause or factor *most* commonly present, according to the experience of modern observers, is that of *anxiety, over-strain*, rather than overwork. The exhaustion consequent upon a prolonged struggle in the battle of life, with the odds always against one; the exhaustion, too, that comes to the successful toiler—successful in grasping the prize after a life of arduous struggle, to fall by the wayside a wreck! "Excessive mental excitement, and, in a still greater degree, emotional agitation," writes Griesinger, "appear to be important factors in its production" ("Mental Diseases," p. 401). Anxiety about business, sleeplessness, worry, loss of appetite, prepare the way for the sexual and alcoholic excesses that too often step in and give the finishing stroke.

"To sum up: general paresis arises, as a rule, from a combination of causes; the most direct being excesses of all kinds, whether sexual or alcoholic, which act more powerfully when associated with strain, worry, and anxiety. Traumatism affects some, as may also such diseases as syphilis," writes Dr. Savage.

General paresis is usually divided into three stages. Like everything else, it has a beginning and an end, and there is, of course, an intermediate period of varying duration. Roughly speaking, a period of incubation, a period of excitement, and a period of dementia. Blandford divides them into: 1, alteration; 2, alienation; 3, progressive paralysis and dementia. These are, however, quite inexact. Dr. Clouston classifies as follows: "The first stage is that of fibrillar tremblings and slight inco-ordination of the muscles of speech and facial expression, and of mental exaltation with excitement; the second, that of muscular inco-ordination and paresis with mental enfeeblement; and the third, that of advanced paresis, or no power of progression, almost inarticulate speech, and at last paralysis, with mental extinction" ("Mental Diseases," 1883, p. 354).

The first thing noticed by the friends of a general paretic is that an *alteration* has taken place in him. Before it is manifest that he has become insane, a change in habit or manner of life will be sure to attract attention. The nature and amount of this change will vary with the business, social position, education, etc., of the individual, but it will be noticeable as contradicting his previous character and habits. And it is an interesting fact that, in this progressive degeneration, it is the last and highest acquirements that fail first, so that the musician loses his power over his fingers, the seamstress can no longer sew, the *danseuse* forgets her steps, and the actor his part. The prudent man becomes suddenly prodigal; the cautious man, reckless; the modest, boastful; and the refined, coarse and obscene. And there will be an extravagance and silliness in all that is done that argues a peculiar want and mental defect. In the delusions of acute mania there is a certain reason in the unreason; for the acutely maniacal patient will often throw a certain air of probability about his claim by his urgent defence. But the general paretic does not argue about his delusions, and is rarely disturbed by contradiction. He advances rapidly from one notion to another, forgetting the one that dominated him yesterday in the brilliance of the one conceived to-day. Loss of memory for recent occurrences is a very noticeable symptom at this time, and is so marked as to explain much that he does or fails to do. He forgets appointments, payments, obligations. His notes go to protest, his business is in confusion from his lack of coherence and system. He gives opposing orders to his servants, and flies into a rage if they are not instantly executed. The purchase of useless articles, the sending of numerous letters and telegrams, and the accumulation of worthless trash are common symptoms. A patient of mine had expended $1,500 in the purchase of a barnful of wagon-jacks before his insanity was discovered. He is often destructive at this stage, tearing garments, books, etc., in shreds with the idea of an improved reconstruction. A general paretic alluded to by Clouston, tore his overcoat into strips, laying them upon the floor side by side. When remonstrated with, he replied, "I'll p-put it tog-g-ger ag-gain when I g-get to Jerush-lem—I've g-got a million coats there." His sleep is apt to be broken at this time. Some patients are so possessed by active delusions that they forget to go to bed. The appetite for food is often voracious, and the patient drinks excessively, forgetful of what he has already taken. But, in connection with these mental symptoms, there will also be observed peculiar motor disturbances. While the patient is giving utterance to his exalted delusions a defect in articulation, a slurring, slovenly enunciation is commonly noticed that is very characteristic. It suggests the speech of a man suffering from alcoholic intoxication, and these cases are not infrequently mistaken for such at this stage. Dr. Connolly describes it well in this wise: "There is in these patients, not a stammer; no letter or syllable is repeated, but a slight delay; a lingering, a quivering in the formation of the successive words or syllables, apparently from the want of a prompt nervous influence in the lips and tongue." In addition to the tremulousness and quivering of the lips, which at a later date extends in many cases to the facial muscles, there is a fibrillar tremor of the muscles of the tongue. The patient has little control over this organ. When asked to protrude it, a perceptible delay occurs before accommodation enables him to obey. The tongue is then shot forth convulsively, while it shivers, darting back and forth. Upon its surface are seen the fibrillar contractions of separate strands of muscle, quivering in well-defined lines. Irregularity of the pupils is a symptom present in a large proportion of cases. It is often transient, and may be present in the different stages throughout the disease. It is rarely permanent. Atrophy of the optic disks is a frequent symptom, but commonly occurs later. The first stage may last for several weeks. In the commencement of the second stage, the patient is often sulky, dull, and apathetic for a time, but exposed to attacks of sudden and violent excitement that commonly render his seclusion in an asylum a pressing necessity. To this condition there rapidly succeeds a mental exaltation, so characteristic as to be almost pathognomonic. Exalted delusions are common to several forms of mental alienation, but there is a preposterous absurdity about the claims of the general paretic that distinguishes them. Individuals suffering from acute mania, chronic mania, and monomania, will often claim to be kings and queens, but the general paretic will assert that he is God, the president, king, emperor, czar, duke, and marquis all at once, and if you suggest to his receptive mind other regal and princely titles, he will promptly appropriate them.

In addition to all this he has billions of millions of dollars, is to be married to-morrow, at Windsor Castle, to the Queen of England, who is to be but one of his hundred thousand wives, and that he has ordered all the steamboats and rail-cars in the world, his personal property, to transport spectators to the ceremony. A patient under my observation, seriously announced to me that he owned a reef of solid gold one hundred miles square, twenty leagues south of the Cape of Good Hope; that a million vessels manned by a billion men were, under his orders, engaged in removing this precious treasure and

carrying it to America, to be stored in his millions of billions of storehouses. He could, Midas-like, make gold by touching any baser thing, but, unlike Midas, could restrain the action of this talent at will. He was the strongest man in the world, had whipped all the noted pugilists, and could lift a ton of coal with his little finger. After the utterance of these boasts, it was by no means uncommon for him to beg a "chew of tobacco," and after describing how completely he had "laid out" John L. Sullivan, to ask assistance in reaching another part of the hall. General paretics accept and implicitly believe, as a rule, the delusions uttered by their fellow-patients. This is at variance with other forms of mental disease, for the contrary is generally true. Exceptions occur, however. Dr. Savage quotes the following conversation between two general paretics. "I am king of England," said one; the other, turning with a scornful laugh to me, said, "That man says he is king of England; I am God Almighty, and I don't know him." In the same way I have known a medical paretic recognize the disease in others by the very symptoms from which he was himself suffering. Anæsthesia of special senses is sometimes marked in this stage, and is usually more or less present. The ability to smell pepper is at times, though rarely, absent. The inability to taste quinine in solution is common. Color-blindness is frequent.

These patients are facile, easily diverted from their delusions, and usually conform to necessary restrictions without objection.

All paretics do not have these extravagant delusions, a sensible percentage being depressed and melancholic through the expansive period of the disease. This change often seems due to the presence of some visceral lesion, the cure of which is followed by the ordinary mental symptoms. But these cases are never melancholic, as are cases of melancholia. They usually eat well, and their depression, albeit accompanied by a dull and lethargic mental action, often gives evidence of a good deal of self-feeling. Such patients are often vain of their personal appearance, and evince ideas of self-importance in a more or less subdued form. In the third stage these cases differ in no respect from those previously described.

In the second stage the motor symptoms are more marked, and keep pace with the mental. The tongue-tremor and defective speech increase. The patient cannot say "Round about the rugged rocks the ragged rascals ran" without a serious clipping of syllables. A slow, shuffling, cautious gait, not at all like the walk of the hemiplegic or tabetic, is commonly seen at this time. It is hurried, spasmodic, like a man starting off for a run. They go ahead pretty well, but if suddenly called upon to stop, they cannot accommodate rapidly, and so come about clumsily, in a considerable half-circle. Alteration in penmanship is a very early symptom, the handwriting becoming coarse, illiterate and tremulous from increasing muscular inco-ordination. There is a strong and increasing tendency to drop words, the shorter and least important being usually omitted through forgetfulness. Epileptiform and congestive attacks are certain to occur more or less frequently throughout the disease. These are followed by hemipareses or paralysis of a more or less extended character. There is usually a subsequent period of confusion, that in some cases becomes unconsciousness, following these attacks, and is of variable duration. But any hemiplegia is soon recovered from, thus distinguishing these fits from apoplexy. Marked mental deterioration follows these seizures, patients often becoming careless of their person and gross in their appetites. The fits may kill at once, or may recur at irregular intervals, following a similar course in each attack. Hæmatoma auris is a frequent sympton in general paresis, may be unilateral or bilateral, and consists of a bloody gelatinous effusion separating the outer skin from the perichondrium. If left alone the tumor swells, fills the cavity of the helix, and at times ruptures. But whether it ruptures or shrivels, there is usually, unless properly treated, great resultant contraction and deformity. Alteration in the tendon reflexes should be mentioned as present in a large proportion of the cases. These may be abnormally exaggerated or diminished; in a few instances they appear unaffected. The patellar tendon reflex is the one most commonly examined. Patients are very prone at this time to become emotional; breaking down in the midst of a statement of some extravagant claim to weep piteously. Hysterical laughter is frequent also. Both appear without appreciable cause. There is a slight evening rise in the temperature of the general paretic. This is seldom less than 1°, save in cases where the disease is arrested; then it may be as little as 0.4°. Bucknill and Tuke give the temperature record of a case under observation from August, 1869, to January, 1875, in which the above fact is clearly demonstrated. Of course all diseased action which gives rise to increased temperature, independently of disease of the nervous system, must be carefully excluded. Dr. Macdonald, of the New York City Asylum, in an article published in the *American Journal of Insanity*, April, 1877, states that, in his cases, the average of difference between the morning and evening temperature was half a degree in *sthenic* cases, while in the asthenic form it was *lower* by half a degree in the evening than in the morning. He adds, fifty cases give a rise of 1° between temperature before and after a maniacal exacerbation, and of 1½° between that before and after a convulsion.

In the latter part of the second stage, as his mental movements become dull, the loquacity of the paretic subsides and his delusions are infrequently referred to. He accumulates flesh, becomes fat and gross, and his skin is flabby and greasy. Considerable mental improvement sometimes accompanies this remission, and patients are often removed from asylums by their friends in the belief that they are recovered or much improved. This hope is, however, fallacious. If removed they rapidly relapse. They are incapable of effort or continued application, and deficient in memory. The attempt causes exhaustion and lights anew the acute symptoms that had been allayed. At times, however, the apparent improvement, under favorable circumstances, may continue for a year or more. At such times it is not uncommon for the friends of such an one to move to set aside the action of the court in the appointment of a guardian over the person and property of the patient. Medical testimony is often sought as to the competency of patient to manage his business interests. It is never wise to set aside such control, a delay of a few weeks or months being usually sufficient to dissipate the favorable symptoms. This change is indicated in fresh excitement, degraded habits, and rapid mental and bodily degeneration. The facial expression becomes vacant and puffy. He rapidly tires; can walk but little, and requires constant attention. If confined to bed, bed-sores appear and rapidly spread. Complete relaxation of sphincters and the filthiest habits are common. His speech is now a tremulous drawl. He occupies one position for hours, hopelessly demented, and utterly fatuous. Discordant grinding of the teeth is a very common symptom in this stage; this is often kept up until the teeth are worn to the gums or are loosened from their sockets and fall out. The appetite is still good, but deglutition is apt to be feeble. If not carefully watched, patients will go on filling their mouths with food until it is impacted in œsophagus or larynx and strangulation is imminent. Many die in this way. The patient now requires the care and attention of a young infant, and as he gradually sinks into mental extinction, you may often catch in his eye the ecstatic self-absorption his tongue can no longer voice.

That ends this strange, eventful history,
[illegible]
[illegible]

Authorities agree in giving the average duration of general paresis as three years. Cases do, however, last longer, a duration of six years being not very uncommon. Blandford had a case that lived fifteen years, and Clouston one that had lasted *twenty-three* years at time of writing (1883). This phenomenal duration would seem to throw doubt upon the diagnosis. Males are largely the subject of general paresis, suffering eight times more frequently than females. Dr. Savage notes an interesting fact in this connection, that, with the enlarging scope of woman's work, cases of this disease are with them much more frequent. It is most common between the ages of thirty-five and forty-five. It rarely occurs before twenty, although cases have been reported at a much earlier age. The prognosis is uniformly bad. There is no well-authenticated case of recovery from general paresis. I have not mentioned the peripheral, sensorial, and tabetic forms of the disease, as they differ from the cases described in inception alone, their subsequent history following the characteristic course. It is sufficient, perhaps, to intimate that cases may originate in this way.

"The diagnosis of general paresis," says Griesinger, "is, in the great majority of cases, no difficult task. It is based upon the symptoms we have been describing; the general and incomplete nature of the paralysis; its progressive nature; upon the convulsive character of the early symptoms of the disease—its commencement with trembling of the tongue and lips; upon the special character of the mental derangement, particularly the ideas of greatness and the rapidly ensuing mental weakness; upon the irregular course. It is by regarding these symptoms that we, in general, succeed in distinguishing this affection from paralysis due to cerebral hemorrhage, embolism, encephalitis, tumors of the brain, hysterical and toxic paralyses; from progressive spinal paralysis, the tremor of old age, and grogressive muscular atrophy." It should be added that the diagnosis between this disease and conditions present in the insanity of chronic alcoholism is often, in the absence of a history of the case, well-nigh impossible. Dr. B. B. Fox, an English alienist, in the *Journal of Mental Science* (July, 1884), after giving cases of chronic alcoholism, in which all the typical symptoms of general paresis were at times manifested, adds:

"The mental exaltation of chronic alcoholism in some cases possesses nothing to distinguish it from general paresis. Occasionally, too, the physical signs of the two diseases so far resemble one another that they can only be differentiated by the history and other circumstances connected with the case, and in some rare instances only by watching the course of the malady. The delusions of chronic alcoholism are usually fixed, constant, and ineradicable."

The temperature changes are also absent in chronic alcoholism. Cases of chronic maniacal excitement often present diagnostic difficulties—puzzles that can only be solved by a careful analysis of symptoms and opportunities for prolonged observation.

From what has been said it will be inferred that the treatment of general paresis is unsatisfactory in the extreme. To attempt the treatment of a disease recognized as incurable cannot fail to be so. Yet, symptoms can in many instances be ameliorated, and the person and property of its unfortunate subject be protected by early recognition of the nature of the disease. First of all, the paretic needs a complete change of surroundings, removal from home, absence of all cares and responsibilities, a non-stimulating diet, and suitable out-door exercise, which should be under observation and not exhausting. Excesses of any sort operate unfortunately. An increased susceptibility to the influence of powerful drugs is noticeable, and considerable caution in their administration is required. The perfection of careful nursing, under unstimulating surroundings, does more to prolong the life of the paretic than anything else. For these reasons the longevity of paretics whose circumstances admit of constant observation and careful individual attention is much greater than in ordinary cases. The *advantage* of this, however, in a disease so distressing in many of its phases, and so certainly fatal, may well be questioned.

The *pathology* of general paresis has little to do with its *early* diagnosis, and is, therefore, rather without the scope of this paper. Cases occur that cannot be, or, at least, are not recognized until the characteristic degenerations are found at the autopsy. To go fully into this department of the subject is beyond my purpose and the limits of this article. It will be sufficient to give a rapid *résumé* of the appearances commonly present. Changes are marked in proportion to the duration of the disease. The scalp is thick and hairy; the calvarium dense, thick, and hard; deploë often obliterated. The membranes are all thickened and toughened, and commonly are abnormally vascular. The dura, in addition, is more or less adherent, and is separated from bone with difficulty. The arachnoid is mottled with white spots, or striated with white bands along the sulci. The convolutions are seen dimly beneath this through an opaque, gelatinous fluid that oozes out when the arachnoid is pricked. This is a compensatory fluid that fills the subarachnoid space, taking up the room lost through atrophy of the convolutions. The pia adheres so closely to the outer layer of gray substance on the *ridges* of the convolutions that in attempting to raise it portions of the cortex are pulled away with it, giving the convolutions an eroded appearance that is very characteristic. Considerable wasting of the gray matter is noticeable in cases of protracted duration. A line of red congestion is seen between the layers of gray matter, and irregular patches of congestion are found in the white substance. The ventricles are nearly always enlarged, and often contain an excess of fluid.

There are no constant visceral lesions. What, then, *is* general paresis?

Dr. Joseph Wigglesworth, in an article on the "Pathology of General Paralysis," published in the *Journal of Mental Science* (January, 1883), calls attention to the extensive hyperplasia of connective tissue, and increase and development of the cells of the neuroglia found in all cases of general paresis, as ground for the following deduction, as ingenious as it is fascinating:

"The conclusion, then, finally arrived at is, that general paresis is a true interstitial inflammation of the brain running a subacute or chronic course; that it is, in fact, a true cirrhosis of the brain altogether comparable to cirrhosis of other organs, such as that of the liver; in other words, that connective-tissue hyperplasia is the primary element in the disease, and the affection of the nerve-cells secondary."

This view was first advanced by Rokitansky, and other pathologists have given it their adherence.

57 West 130th Street.

The Surgery of the Pancreas.—In an elaborate paper, based upon experiments and clinical researches, and published in *The American Journal of the Medical Sciences* for July, 1886, Dr. Nicholas Senn attempts to lay the foundations for a rational method of direct surgical treatment of some of the injuries and diseases of the pancreas. The literature on the surgery of the pancreas is exceedingly scanty, and loosely scattered through the medical journals and text-books, as no previous attempt has been made to arrange the material in a systematic form for ready reference. Our present knowledge of the surgical treatment of diseases of the pancreas is limited to a few operations performed for the cure of retention cysts, by excision or the formation of an external pancreatic fistula. The clinical material which the writer has collected, and more particularly the description of pathological conditions found within and around the pancreas at post-mortem examinations, is utilized for the purpose of pointing out new indications for operative interference, by such methods as will suggest themselves from the results obtained by experiments upon animals.

THE DEATH-PENALTY: PROPER MODE OF ITS INFLICTION.

By WOOSTER BEACH, M.D.,

NEW YORK.

CAPITAL punishment under the laws of the United States may be inflicted for treason, murder, arson, rape, piracy, robbing of the mails, if associated with jeopardy to the lives of the custodians, rescue of a convict about to be executed, burning a vessel of war, and corruptly destroying a private vessel.

In Iowa, Wisconsin, and Maine capital punishment was abolished, but restored in the former State after four years' trial, as during this period it was found that there had been a material increase in violent crimes.

In former times death was the ordinary punishment for all felonies, and it is within the memory of some of our residents that persons were hung for robbery and other comparatively slight offences. Popular feeling tends at present toward the entire abolition of the death-penalty, but it is pretty generally conceded that the time for such a change has not yet arrived. All, however, seem to agree that when the death-penalty is inflicted it should be done skilfully, expeditiously, and in a manner causing the culprit as little pain as possible.

That with us this humane plan is frequently not carried out is attested by the numerous reports in the newspapers of bungling executions. In some the trap has failed to fall, and the prisoner has had to undergo the agony of a second and, in a recent case in England, a third preparation for death before the scaffold could be made to do its duty.

In others the same thing has occurred from the rope used for hanging, breaking as it was suddenly strained by the weight of the body. Again, the drop has been so long that the head has been completely torn from the trunk by the force of the fall.

At other times the noose has not tightened enough to completely cut off the air-supply, and a strangulation could only be effected by readjustment of the rope, while the body was still suspended. A mishap of this kind occurred when a negro was hanged at the city prison a few years ago. He was able to cry out for help for some time after being jerked into the air.

Various other accidents have happened, even when the hangmen employed have had experience and had the reputation of being skilled in their duty.

These painful exhibitions usually call forth expressions of horror and disgust from the press coupled with a tirade of censure against the "bungling hangman," and then the matter is dropped until, perhaps, the next execution, when there will be some variation in the bungling, and some variation in the press comments, but otherwise no change follows.

Attempts at reform in carrying out the death-penalty have been made in this country, but they have been mostly suggestions of some substitute for hanging.

On April 3, 1878, Dr. John H. Packard, of Philadelphia, read a paper before the Medico-Legal Society of this city in which he advocated the use of carbonic-acid gas to take the place of hanging. He proposed that a tight chamber, so arranged that it could be rapidly filled with the gas, be provided, and that the criminal, after being properly identified, be placed in it, the gas turned on, and he allowed to remain there until life was extinct.

Carbonic acid or carbonic oxide is used in a similar way to destroy dogs at the Philadelphia pound, and it works rapidly and effectually.

A committee was appointed by the Society to consider the paper of Dr. Packard. Their report was adverse to the proposed plan, or to any other than hanging.

In the discussion of the report Dr. William A. Hammond said that the proper method to hang a man was to dispense with the usual traps and weights, and draw up the body slowly. He further suggested that weights might be attached to the feet to obtain sufficient tightness of the noose to effect strangulation.

A paper was read before the Society of Medical Jurisprudence of this city by Dr. N. E. Brill, in which the inhumanity of the present mode of inflicting death was dwelt upon and a remedy called for. A committee on this subject was appointed who drew up a bill and presented it before the New York Legislature, but it was not passed. The bill made it possible for the culprit to choose the mode that should be used to take his life.

Dr. Graeme M. Hammond read a paper on hanging before the Medico-Legal Society in 1884, describing his own sensations when submitting to an experiment in which his neck was tightly constricted by a towel. From his experience and his study of the subject he reached the conclusion that death from hanging was not especially painful, and he advocated the plan, previously spoken of, of Dr. William A. Hammond, viz.: a slow, carefully conducted suspension of the body.

The methods of inflicting the death-penalty in civilized countries, other than by hanging, is, beheading by the sword in Germany, by the guillotine in France, garroting in Spain.

The substitutes for these, besides the one mentioned by carbonic-acid gas, are electricity, poisoning by hydrocyanic acid, or by chloroform.

The writer, in addition, would propose shooting, either as in military executions, when, if expert marksmen were employed as executioners, certain, speedy, and painless death could be relied upon; or, the following even more certain plan is suggested: Secure the condemned individual in such a position that a vital part shall be struck by a ball from the weapon which previously has been sighted and screwed fast in place. Thus any person discharging it could not fail to do so with fatal effect. The principal objection urged against electricity is that it is uncertain; that the apparatus for generating it may not be in perfect order; or, for other reasons, the charge may not be powerful enough to produce death. This objection can scarcely hold at present, as with improved machines a galvanic current quite powerful enough to kill a man can be generated with absolute certainty. Chloroform or hydrocyanic acid can be depended upon to cause speedy and probably painless death.

All these untried methods would undoubtedly be exceedingly difficult to bring into use to replace the present custom, firmly established by its employment for so long a time.

With shooting as a mode of execution, however, the public is familiar. It is adopted in the army, and it does not appear to the writer that it would be especially difficult to make its use general if it could be shown to possess special advantages over hanging.

But, before deciding on any attempt to substitute any other method for this, it will be well to examine its claims more fully.

Judicial hanging is now done in two ways. The person to be executed is either suddenly drawn up by a heavy weight or dropped by springing a trap on which he stands. In both cases there is more or less slack rope used, so that it is pulled taut with a jerk violent in proportion to the amount of slack and the weight of the body. The intention of the hangman is to cause death by breaking or dislocating the neck, rather than by strangulation. This failing, it is supposed that the jerk from the shock will be sufficient to abolish sensation to a degree that will prevent suffering from the constriction of the rope.

The rule is that none of these objects are accomplished by the methods in use.

Autopsies of bodies that have been thus hanged show that in not over five per cent. is either dislocation, fracture, or any injury to the cord observed. Unless the long drop is used, in which there is great danger of the head being torn from the body, it is unlikely that the vertebræ will be broken or displaced.

The movements of the individual soon after being suspended indicate purpose too plainly to be attributed to "reflex action," as is maintained by some, and if this does not prove that consciousness and sensibility are not destroyed by the fall, the fact of intelligent exclamations having been made under the same circumstances cannot make the matter doubtful.

It appears very certain, then, that neither the drop nor the weight accomplishes the wished-for object—a painless death—on the contrary, the effect of both is to very decidedly add to the suffering. The violent tightening of the noose not only deeply indents and wounds the surface of the neck, but the larynx or trachea are actually fractured by the powerful constriction, and until strangulation occurs, which is quite likely to be prolonged, from the rope being misplaced by the fall, the victim cannot but suffer exquisite torture till asphyxia produces insensibility.

In exceptional cases death from judicial hanging appears to be painless. The body remains motionless after it is suspended, and there is every indication showing that, with the tightening of the noose, immediate abolition of sensation takes place, yet examination after death shows no injury to brain or cord.

What is the explanation of these expeditious deaths? A study of the subject must lead to the conclusion that they will occur if the entrance of the air and its exit is completely prevented.

To discover the most effectual way of doing this, the writer made the following experiment: The thorax of the body of a man about thirty-five years of age was opened, the trachea divided low down, and a tube fastened into it. The neck was so arranged that a loop of rope crossed the throat, and, hanging down beneath, weights could be attached, thus indicating the pressure of the rope on the air passages. By blowing through the tube, the amount of obstruction to the passage of air could be appreciated with considerable exactness. It was found that fifteen pounds weight on the rope would produce complete obstruction if the pressure was brought to bear on the os hyoides, or just beneath over the thyrohyoidean membrane; but below, on the larynx or trachea, the weights that have been provided for the experiment were insufficient to stop the passage of air. The weight of a person (say one hundred and twenty-five pounds) standing on the loop, was not enough to produce occlusion.

That slight pressure, if properly applied, may cause death is attested by occasional suicidal cases. In one, observed by the writer, in this city, a large silk neckerchief served for the purpose of self-destruction. It was tied in a loop, one end of which suspended the neck of the suicide, and the other was thrown over the post of a low bedstead. Nearly the entire length of the body touched the floor, the head and chest only being held up by the neckerchief.

Similar cases are reported in works on medical jurisprudence. A number are described and illustrated by Tardieu, in "La Pendaison," all showing death to have resulted from very moderate pressure on the air-passages. Various causes of death in hanging are given, besides asphyxia. Shock, syncope, injury to the cord or medulla, obstruction of arterial and venous circulation, pressure on the vagi are said to take a more or less prominent part in extinguishing life. That the first three mentioned must act promptly cannot be denied, but they occur very seldom. Insensibility might take place after a time from pressure on the blood-vessels and nerves, but this cause could scarcely come into play in ordinary hanging.

Asphyxia, then, is what we have to depend upon to produce death, or, at least, the insensibility preceding death in our criminal executions.

That asphyxia can be produced with comparatively slight pain or distress when the constriction to the neck is made under certain conditions is proved in various ways.

Almost conclusive proof is furnished by the statements of those who have accidently been rendered unconscious by hanging and have been resuscitated—such as the cases of Fleischman and Hornshaw, quoted by Taylor, which certainly seem to prove the moderate amount of suffering caused by asphyxia. Dr. Hammond's experiments are also to the point.

It would seem, then, that if we wish to take life by hanging in the most speedy, certain, and painless manner we must adopt the plan before mentioned, as recommended by the Drs. Hammond—to put a rope around the neck of the man and slowly draw him up.

But this is not all that is required. It is essential that the noose be carefully placed, so that on tightening, it shall constrict the parts necessary to entirely cut off respiration; that is, just above the larynx, and there it shall remain unmoved till death takes place.

Some contrivance might easily be invented to hold the rope in place, as it is drawn taut, but the average sheriff ought to be depended upon to effectually manage so simple a matter.

OPHTHALMIA NEONATORUM—ITS CAUSE, PREVENTION, AND TREATMENT.

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It is not my intention in the following paper to discuss at length the cause and prevention of ophthalmia neonatorum. These points are already fairly well settled. As, however, there exists a wide diversity of opinion among the members of the medical profession in this country as to the proper method of treating this disease and gonorrhœal conjunctivitis in the adult, I may be pardoned for dwelling at some length on this point.

Ophthalmia neonatorum probably causes more blindness than any other one disease that the eye is subject to. An idea of the number of blind so caused may be obtained from the following: Institute for the Blind, London, twenty to thirty per cent. (Brady, 1884); of 326 blind in Constantinople, 4.3 per cent. (Milligan); Landesblindenanstalt, Purkeisdorf, sixteen per cent.; of 2,528 blind reported by Magnus,[1] 1883, 10.82 per cent.; of the blind in the city of Breslau,[2] 17.5 per cent.; in Mecklenburg,[3] of 172 cases of ophthalmia neonatorum, seven per cent. became blind; Horner states that of the children brought to the institutions for the blind in Germany and Austria, thirty-three per cent. have lost their eyes by this form of blennorrhœa. These figures are sufficient to indicate the importance of a thorough knowledge of how to prevent and how to treat ophthalmia neonatorum.

Etiology.—By far the greater number of the cases of ophthalmia neonatorum are caused by the entrance of the gonococcus into the conjunctival sac of the infant at the time of, or very shortly after, birth. This assertion has been proven to be true by the researches of Zweifel,[4] Widmark,[5] Welander,[6] Leopold and Wessel,[7] Kraus,[8] Andrews,[9] and many others. Widmark mentions two forms of ophthalmia neonatorum, of which one only is due to the gonococcus. His views correspond with my own in this respect. In seventeen cases of ophthalmia neonatorum that have been examined by me at the Ophthalmic and Aural Institute, recently, the gonococci were absent in two; these two cases developed about two weeks after birth, and were of a mild type. That the constitutional effects peculiar to gonorrhœa may accompany ophthalmia neonatorum is demonstrated by the case reported by Lucas:[10]

[illegible]

[6] Centralbl., f. Augenheilk., May, 1882, p. 134.

[illegible]

A child, eighteen days old, suffering from ophthalmia neonatorum, was brought to Gay's Hospital on account of an affection of the joints. The mother had had a thick purulent discharge from the genitals some time before the child was born. The child was undoubtedly infected during labor. The left knee was swollen and puffed out by an effusion into the joint. A synovitis at the wrist also existed.

Lucas is of the opinion that as synovitis from gonorrhœa of the urethra is probably due to the passage of the gonococci through the lymph-channels, the same may occur in gonorrhœa of the conjunctiva.

Landau [1] has inoculated the healthy urethra with pus obtained from the conjunctiva in a case of ophthalmia neonatorum; gonorrhœa of the urethra followed.

In regard to the number of the cocci contained in the secretions during the various stages of blennorrhœa of the new-born, I have found the following to be the rule: In the early stage, when the discharge is muco-purulent, the cocci are proportionately most numerous. They are then seen in the nuclei and at the margins of the epithelial cells, on the surfaces of and in the pus cells. When the discharge is very profuse their number is relatively less. They disappear entirely only when the discharge of pus has ceased.

Ophthalmia neonatorum due to the presence of the gonococcus is of very varying degrees of severity. The cause of the blennorrhœa can only be determined positively by an examination of the secretion with the microscope. I cannot agree with Andrews in his statement that gonorrhœal ophthalmia is nearly always severe. In six cases recently examined by me, where the gonococci were found, only two were severe. Ulceration of the cornea occurred in one case, but did not perforate. As to the manner in which ophthalmia neonatorum is contracted, Saemisch thinks that during long and tedious labors the infectious material may work itself between the lids. The first bath is probably a very fertile source of infection (Königstein). Unclean hands, sponges, towels, wrappings, etc., are also means for carrying the infectious material.

The chronicity of gonorrhœa in the female is a well-established fact, as indicated by the papers of Bockhart,[2] Currier,[3] and others; hence the appearance of ophthalmia in children, the mothers of whom have experienced the acute symptoms of gonorrhœa years before they became pregnant.

Prophylaxis.—Before the adoption of Credé's [4] method, Bischoff, of Basle,[5] Haussman,[6] Olhausen (Königstein), Credé, and others, practised douching the vagina with a one per cent. solution of carbolic acid at intervals during the first stage of labor. Bischoff, Hausmann, and Olhausen washed the eyes of the infant with the same solution, either immediately after birth or just after the first bath. Credé used a solution of boracic acid—1 to 60—and cleansed the eyes immediately after birth. These procedures greatly lessened the number of cases of ophthalmia neonatorum, but did not abolish the disease. In 1880 Credé began the use of nitrate of silver in the following manner: A small drop of a two per cent. solution was instilled into the conjunctival sacs of the infant, immediately after it had received its first bath. In some cases the reaction following was quite severe, necessitating cold applications to the lids. No serious complications, however, ever occurred. This method resulted in virtually abolishing ophthalmia neonatorum from the clinic. With 7.8 per cent. before, Credé had only about 0.31 per cent. of cases after adopting the use of the silver. The splendid results obtained by Credé were also obtained by Leopold and Wessel, Brunner and Pfeiffer,[7] Professor Schatz, Garrigues,[8] and many others.

A reference to the papers of Oppenheimer [1] and Kreis [2] is sufficient to explain the great efficacy of a two per cent. solution of nitrate of silver, when employed at this particular time. The silver is a simple germicide, and serves to kill the cocci that have found their way into the conjunctival sac of the infant.

In the papers on the prophylaxis of ophthalmia neonatorum I have seen no mention of the use of a solution of sublimate either for douching the vagina or for cleansing the eyes of infants immediately after birth. As sublimate, even in a solution of 1 to 10,000, is an active germicide, I cannot see why it should not be efficacious when employed as mentioned. That it is efficacious is largely established by the following: During my service of two and one-half years at the Emigrant Hospital, a system of treatment for the prevention of ophthalmia neonatorum was adopted which resulted in the complete disappearance of the disease from the lying-in wards of that institution. When labor pains became marked the patient was sent from the waiting ward to the lying-in room, where she was bathed and was given a vaginal douche of from one to two pints of a 1 to 2,000 sublimate solution, care being taken to cleanse the vagina thoroughly. Immediately after the head was born the eyes were bathed with a solution of sodium chloride, about ten per cent. The sublimate solution was sometimes used to wash the eyes also. The results here attained would indicate that if the vagina is thoroughly freed from the cocci before the second stage of labor begins, there is little danger of infection to the infant. The second step in this method is simply one to insure cleanliness.

Since the results of ophthalmia neonatorum are so disastrous, it is clearly the duty of every obstetrician to employ some efficient means for its prevention. Either of the above methods are simple and easy of application.

Treatment.—The treatment of ophthalmia neonatorum is the same, whether due to the gonococcus or to some other agency. I shall discuss it from a bacteriological standpoint, and in order that we may understand the conduct of the gonococcus in relation to the tissues involved, and the effect of certain remedial agencies on these micro-organisms, I shall give the researches of Bockhart, Oppenheimer, and Kreis, so far as they relate to these points.

Bockhart injected a portion of a pure culture of gonococci, fourth generation, into the urethra of a paralytic. Forty-eight hours afterward the meatus was red, and on pressure a drop of pus exuded which contained numerous cocci. The patient died eight days after the inoculation. On section the right kidney was found to contain many abscesses; left kidney normal. The mucous membrane of the bladder and urethra, except at the prostatic portion, was greatly congested. Microscopical examination demonstrated the fact that the surgical kidney, cystitis, and urethritis were caused by the gonococcus. The cocci were found in great numbers *throughout* all the affected tissues. White blood-corpuscles, containing the cocci in their nuclei, were found in large numbers deep in the tissue of the corpus cavernosum urethræ.

This case serves to show that the cocci are not confined to the surface of the mucous membranes, but that they attack and penetrate the epithelium, and enter the deeper tissues.

In experimenting with different medicinal substances, as to their effect on pure cultures of the gonococcus, Oppenheimer arrived at the following conclusions: Solutions of the nitrate or sulphate of mercury, 1 to 15,000 retarded development, 1 to 10,000 destroyed vitality; sublimate, 1 to 40,000 retarded development; 1 to 20,000 destroyed vitality; permanganate of potash, 1 to 50 retarded development; 1 to 25 destroyed vitality. The chlorates of potash and sodium were inefficient. Carbolic acid, 1 to 20 destroyed vitality in ten minutes; 1 to 100

[1] Königstein, Wiener [illegible] Presse, 1884, No. 1.
[2] Vierteljahresschrift f. Dermatologie u. Syphilis, 1883, vol. i., p. 8.
[3] New York Med. Journ., 1885, October, p. 417.
[4] Arch. f. Gynäk., vol. xxi., p. 179.
[5] Schweiz. Correspondenzbl. f. Aerzte, 1881, No. 8.
[6] Archiv f. Gynäk., vol. xvi., p. 95.
[7] Amer. Journ. Obstet., vol. xvi., p. 1.
[8] Amer. Journ. Med. Sciences, October, 1885, p. 1.

retarded development; creasote, 1 to 2 destroyed vitality quickly; nitrate of silver, 1 to 50 (two per cent.) destroyed vitality. Bromine, chlorine, and iodine in solutions of moderate strength destroyed vitality; methylic and ethylic alcohol, chloroform, sulphuric ether, and glycerine destroyed vitality only when undiluted; tannin and resorcine were ineffective; solutions of the subnitrate of bismuth, acetate of lead, and alum produced no effect; strong solutions of the sulphates of copper, zinc, and iron affected the microbes but slightly; turpentine was effective.

The influence of temperature on the development of the gonococcus is shown by Kreis' experiments with tube cultivations on agar. Below 30° C. no development; 30° C. to 35° C. very slight development; 35° C. to 42° C. develop rapidly; 42° C. to 48° C. develop slowly; 48° C. to 50° C. no development. An hour and a half in a temperature of 48° to 50° C. renders the microbe incapable of development. The effect of medicinal substances on the microbes Kreis found to be as follows: Nitrate of silver, one-half per cent., microbes did not develop; one per cent., microbes did not develop; sublimate, 1 to 20,000, development; sublimate, 1 to 10,000, no development; sulphate of zinc, one per cent., development; sulphate of zinc, carbolated, one per cent., no development; sulphate of copper, one per cent., no development; acetate of lead, one fourth per cent., development; acetate of copper, one per cent., development; alum, strong solution, development; chlorate of potash, five per cent., development; tannin and resorcine, one per cent. solutions, development; carbolic acid, five per cent., development; thymol, 1 to 1,100, no development; chloride of lime, one per cent., no development.

It is of interest to know how the remedial agents indicated as the best for the treatment of ophthalmia neonatorum, by the influence that they exert on the gonococcus, as shown by the experiments with the pure cultures, correspond to the remedies that experience has indicated as most efficient. For this purpose I have given a brief synopsis of the treatment advised by some of the various writers.

Mackenzie:[1] Eyes to be cleansed three or four times a day with a wash composed of sublimate, gr. j.; chloride of ammonium, gr. vj. to xij.; water, oz. viij. to xij. A solution of the nitrate of silver to be applied to the conjunctiva every six to eight hours. Solution, gr. ij. to x. to the ounce, not to be used if the cornea is affected. In one case two applications of the silver, made on the first and second days of the discharge, stopped the discharge. To preserve the lids from sticking together he employs an ointment of the red precipitate of mercury. A blister behind the ear is thought to be beneficial.

Stellwag:[2] If the secretion is profuse, "lead water" may be instilled between the lids. He recommends a solution of tannic acid as an application to the conjunctiva, but says that we may do still better by employing a 1 to 3 gr. solution of the nitrate of silver.

Wells[3] recommends a collyrium of alum and zinc (alum, gr. iv.; sul. of zinc, gr. ij.; water, ℥ j.) to be injected into the eye every fifteen to thirty minutes during the day; applications of the mitigated stick of the nitrate of silver to the conjunctiva once every day if the patient can be seen by the physician. Citrine ointment to the lids. In severe cases, leeches, scarification, and cold compresses.

Nettleship[4] advises washing the eyes frequently. Collyria of the sulphate or chloride of zinc, alum, or sublimate used every one to three hours; solutions of the nitrate of silver (gr. ij. to ℥ j.) applied from four to six times a day. Strong solutions of the nitrate of silver, or the mitigated stick, should be used in all severe cases, unless especially contraindicated, to shorten the disease; local cold by ice compresses, leeches to the temple, canthotomy if the swelling is intense, or scarification of the conjunctiva. He does not use strong solutions of silver until the discharge has become profuse. Corneal ulceration does not contraindicate the use of strong solutions of silver.

Julin:[1] To reduce pressure on the cornea, scarification of the conjunctiva, canthotomy, or vertical division of the upper lid as advocated by Mr. Critchett. "To cut short the inflammatory process, the best and most effectual treatment consists in the application of the solid nitrate of silver to the inner surface of the eyelids once in twenty-four hours, combined with the constant application of iced carbolized water and frequent ablutions of the conjunctival sac." The above quotation applies to gonorrhœa of the conjunctiva in the adult. A four to seven per cent. solution of the nitrate of silver is employed in ophthalmia neonatorum, instead of the solid stick. Uses carbolized water for cleansing the eyes, atropine if the cornea is affected.

Schmidt Rimpler[2] recommends constant cold applications to the lids, and the use of solutions of the nitrate of silver, or the mitigated stick, applied to the conjunctiva.

Dr. Abadie[3] favors the application of a three to four per cent. solution of the nitrate of silver to the conjunctiva every twelve hours, and says that it is an error to wait for the period of most profuse discharge before making the application. If the corneæ are threatened, must increase the frequency of the cauterization, must use ice compresses constantly.

Kianitzin[4] obtains good results from the use of a 1 to 2,000 solution of sublimate.

Landesberg[5] recommends solutions of boracic acid and a two per cent. solution of the sulphate of zinc in mild cases. Must use ice-cloths constantly if the swelling is intense; nitrate of silver, two to three per cent. solution, applied to the conjunctiva every twenty-four hours after the purulent stage is reached. Leeches canthotomy and eserine are recommended in severe cases.

The plan of treatment followed at the Ophthalmic and Aural Institute, is as follows: The conjunctival sacs are cleansed thoroughly every half hour, or more often if the discharge is profuse; constant applications of cold to the lids by the use of small pieces of linen, which are placed on a cake of ice near the patient, and are changed to the eyes every half minute, or as soon as the piece on the lid becomes warm another piece is substituted. The conjunctivæ are brushed with a one to two per cent. solution of the nitrate of silver morning and night, commencing when the discharge becomes profuse. If corneal complications arise, one or two drops of a one-half per cent. solution of atropine are instilled twice or three times a day.

In the plans of treatment recommended by the authorities mentioned, we find them agreed in the use of certain measures, namely, strict cleanliness, solution of the nitrate of silver, and hot or cold applications to the lids. It needs no argument to establish the advisability of cleanliness. The experiments of Oppenheimer and Kreis have demonstrated the fact that solutions of the nitrate of silver are active germicides against the gonococcus; and the experiments of Kreis, that a low or a high temperature prevents the development of the gonococcus. We find that the proper employment of these three factors is all that is necessary to meet all the indications in the treatment of ophthalmia neonatorum when the case is seen before perforation of the cornea has taken place. The duration of gonorrhœal ophthalmia, occurring in the infant (ophthalmia neonatorum) or in the adult, may be limited or cut short by proper treatment, the time required depending entirely on the extent to which the

[1] Mackenzie on the Eye, American edition, 1880.
[2] Stellwag on the Eye, American edition, 1880.
[3] Diseases of the Eye, edited by Reid.
[4] Diseases of the Eye, 1880.

[1] Ophthalmic Science and Practice, 1880.
[2] Augenheilmittel, Ophthalmoscope, 1880.
[3] Gazette des Hospitaux, No. 91, 1880.
[4] Wiener Medizinische Journal, November, 1884.
[5] New York Medizinische Presse, Bd. 1, No. 2.

gonococci have penetrated the tissues of the lid, the destruction of corneal tissue if the cornea is involved, and the rapidity with which the cocci are expelled from the tissues by the discharge of pus—the effort of the system to rid itself of the irritating agent. The so-called abortion of these conditions is simply a cutting short of the disease in its earliest stage. The following is an illustrative case:

Henry D—— came to the clinic at the Ophthalmic and Aural Institute, April 17th, at 2 P.M. On the morning of the same day patient noticed that the eye was painful and discharged a little mucus. When I saw the patient, a little after 2 P.M., the right eye was discharging muco-pus quite freely—conjunctiva of the left eye slightly congested. An examination of the secretion with the microscope showed gonococci in large numbers. A thorough application of a two per cent. solution of the nitrate of silver was made to the conjunctivæ of both eyes, and constant applications of iced cloths, with frequent cleansing of the lids was ordered. At 11 P.M. the lids of the right eye were much swollen. April 18th: Lids but little swollen; cold applications constantly day and night. April 19th: No discharge from the left eye; very slight discharge from the right eye. A second application of the nitrate of silver solution was made; cold continued. April 21st: No discharge; conjunctivæ only slightly congested. Patient discharged.

After the gonococci have penetrated the epithelium and have entered the lymph-channels we cannot expect to destroy them by a simple application to the surface of the conjunctiva; hence the necessity of employing some agency that will prevent their development, and at the same time will not interfere with the action of the tissues in their attempt to expel them. We have this means in the iced cloths employed, by the application of which we are enabled to reduce the temperature to the point desired. Heat may also be employed, but the rapid destructive changes in the tissues that sometimes occurs when the temperature is elevated, and the fact that cold applications are usually better tolerated by the patients, renders the latter more generally applicable.

The experiments of Kreis indicate that the coccus does not develop, or develops but slowly, at a temperature of 90° to 92° F. According to numerous tests that I have recently made, I find that the temperature of the conjunctival sac, in the various degrees of inflammation, ranges from 98° to 102° F. I also find that by constant cold applications the temperature of the conjunctival sac may be made 88° to 94° F., according as the lids are little or much swollen; this with the temperature on the surface kept at about 40° F. This reduction of temperature certainly retards the development of the gonococci, while it does not seem to interfere with the tissue-change necessary to expel them.

Taking into consideration what has preceded, the plan of treatment which I deem most rational is as follows, for the careful carrying out of which a trained nurse or a careful attendant is essential:

If but one eye is attacked, the well eye must be carefully guarded against the possibility of infection from the diseased eye. This is done by cleansing both eyes frequently with absorbent cotton or clean sponges, and clean, cool water, weak solutions of sublimate, boracic acid, etc. Sealing the eye in infants is very unsatisfactory; it may be done with benefit in adults. *Constant* cold applications to the lids should be made. I find the following method most efficient: Pieces of linen, twelve or eighteen in number, are folded into three layers, so as to form squares of an inch and a half. These squares are dampened and spread on a cake of ice. The nurse in attendance changes the pieces of linen to and from the eye sufficiently often to have a cold piece *always* resting on the lids. These applications are kept up *constantly* until the swelling of the lids subsides, and until the discharge has almost entirely ceased, usually from three to seven days. The plan of making the cold applications at intervals of two or more hours is certainly not advisable in these cases, as the temperature of the lids rises as soon as the cold is removed, and the development of any living germ in the tissue of the conjunctiva is resumed. I have witnessed the increase of inflammatory action in cases of this kind when the intermittent plan was followed. The secretion is removed from the conjunctiva by careful washing with cold or cool water, a clean sponge or absorbent cotton, usually every twenty or thirty minutes—more or less frequently according as the secretion is more or less profuse. Andrews' perforated speculum is a dangerous instrument in the hand of the nurse or the general practitioner, and although when properly used it may remove the secretion as well or better than any other method, it should only be used by one skilled in the manipulation of the lids. In these conditions applications of a one to two per cent. solution of the nitrate of silver are made to the surface of the conjunctiva every morning and evening, care being taken not to make the solution sufficiently strong to cause an increase in the inflammation of the lids when it is applied. The applications are made in the following manner: The lids are everted, and the solution of silver is brushed on the conjunctiva freely, with a soft camel's-hair brush. After the silver has remained in contact with the conjunctiva for fifteen to thirty seconds, it is washed off with a very weak solution of sodium chloride or simple water. The above-mentioned applications may be made in all stages of the disease, without regard to the condition of the cornea. If corneal ulcers exist, one or two drops of a one per cent. solution of the sulphate of atropine should be instilled between the lids two or three times a day. I find that the gonococci are present so long as the purulent discharge continues.

If the above plan of treatment be carefully carried out I am confident that no eyes need be lost by any form of gonorrhœal ophthalmia, if the treatment is commenced before the cornea becomes involved, and that corneal complications will be very rare. In nearly every case the progress of the disease will be arrested from the moment that treatment is begun. Canthotomy, Critchett's operation of a perpendicular incision through the middle of the upper lid, or scarification, I deem harmful and entirely unnecessary.

We may sum up as follows:

1. Ophthalmia neonatorum is one of the most productive causes of blindness.

2. By far the majority and all the severer forms of ophthalmia neonatorum are due to the presence of the gonococcus.

3. This disease is contracted during or shortly after the birth of the child.

4. Proper prophylactic measures may prevent its occurrence.

5. Ophthalmia neonatorum and gonorrhœal conjunctivitis in the adult are very variable in the degree of severity.

6. Both forms of this disease may be controlled and shortened in any of their stages by proper treatment.

Subcutaneous Injections of Citrate of Iron.—Dr. Mori recommends very highly the hypodermatic administration of citrate of iron in anæmia. In a pregnant woman with very marked anæmia great improvement followed daily injections of a syringeful of a one per cent. solution into the gluteal region. At the end of two weeks the patient was practically cured. In another pregnant woman eight injections sufficed to bring about a very great improvement. In a woman, fifty four years of age, suffering from a very severe degree of anæmia, induced by hard work and poor food, twenty-five injections were required before any satisfactory amelioration was to be noted.—*Centralblatt für Gynäkologie*, June 5, 1886.

CASTS AND ALBUMEN IN PROSTATITIS.

By C. DREW, M.D.,

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IN THE MEDICAL RECORD of February 13, 1886, in a letter from the special London correspondent, the following lines appeared:

"At the Clinical Society Sir Andrew Clark related a unique case of acute prostatitis, which had been seen by Sir James Paget and himself. During the whole course of the case the urine was found to contain hyaline cylinders and small, flask-shaped hyaline masses, which were in some cases connected with the cylinders. The casts were of the same character as those found in the urine in acute nephritis or acute congestion. An important diagnostic point was the presence of flask-like bodies attached to the hyaline cylinders." "He had met with two other cases which were similar, but less acute." The question naturally arises in the mind as to whether the structure of the prostate is of such a character as to develop a disorder moulding a plastic secretion, and its formation into cylinders or casts. Henle divides the prostate into "three portions—the two sphincters of the bladder; a tough, yellowish, muscular membrane; and the gland proper. The latter covering," he states, "sends off into the gland, a number of processes, forming a massive framework, and forming a considerable portion of the whole organ." "The separate elements of the gland, in number from fifteen to twenty, appear to be of the racemose kind. In them we find pear-shaped vesicles 0.1204 to 0.23 mm. in diameter, lined with columnar epithelial cells. The ducts of the gland are five, surrounded by a muscular coat. . . . They empty themselves singly, by fifteen or twenty openings, into the urethra."

"The sinus prostatica is a slender saccule, from 7 to 14 mm. in length, lying in the substance of the prostate gland. . . . It opens at the summit of the cannuliculi seminales, between the orifices of the ejaculatory ducts. The secretion of the prostate is probably allied to that of the vesiculæ seminales. In both we find albuminous matter, barely soluble in acetic acid" (Frey, "Histo-chemistry of Man"). We at once refer to Sir Andrew Clark's description of the pear-shaped hyaline masses, and compare it with Frey's description of the pear-shaped vesicles in the prostate. If plastic secretion is moulded in pear-shaped vesicles and thrown out as casts, many of them would doubtless retain their flask- or pear-shaped appearance. As the prostatic vesicles are lined with columnar epithelium, we would also expect to find another point of similarity to casts from the kidneys, namely, the presence of epithelia accompanying the casts of pear- or flask-shaped epithelial casts. So far as the writer is aware no mention has thus far been made of such bodies as having come from the prostate.

If such vesicles can form casts, we naturally infer that the prostatic sinus would also form them, and in confirmation of this, Drs. Van Buren and Keys, in their work on "Genito-urinary Diseases, with Syphilis," 1881, folio 247, state, in the article on "Acute Parenchymatous Prostatitis," "a false membrane may form in the prostatic sinus, but this is exceedingly rare."

Can prostatitis, like nephritis, give rise to albuminuria? There have been many cases of transient albuminuria reported, for which it has appeared difficult to account, and there is good reason for the suspicion that acute prostatitis, with albuminuria, may be confounded with acute nephritis. We repeat briefly the quotation from Frey, made above: "The secretion of the prostate is probably allied to that of the vesiculæ seminales; in both we find albuminous matter freely soluble in acetic acid." We append briefly a report of two cases illustrative of such a possibility. Both were cases of acute prostatitis, occurring in persons of amorous disposition, but rather continent habits. No combination of circumstances is more likely than this to induce prostatic trouble—a failure to relieve sufficiently often one of the most urgent calls of nature.

Mr. C——, of amorous disposition, but continent habits, had been for about a year troubled with slight vesical irritation. In the summer of 1884, being much debilitated from overwork, he was attacked by lumbago and intense vesical irritation, the urine being passed for several days in small quantities, and at intervals of about fifteen minutes. Examination with heat and nitric acid revealed a large percentage of albumen—about one-fifth the total bulk as it stood in the test-tube; no casts were found after a careful microscopic examination. In six weeks, or less time, all albumen had disappeared, leaving evidences not to be doubted of subacute prostatitis, viz., urethral hyperæmia, vesical irritation, abnormal erections, anæsthesia of glans penis, fulness and soreness in the rectum, and tenderness over the pubes. At this time an examination of the urine was made—chemically and microscopically—by an expert in such matters, who stated that there was no evidence that he could see of any disease of the kidneys having existed. This patient still has prostatic disease, but no tangible evidence of any kidney lesion. The inference is, that during an attack of acute inflammation the prostate gland secreted copiously, perhaps mixed with a secretion from the vesiculæ seminales, and that this gave to the urine, with the usual tests, an albuminous reaction.

Mr. W——, widower, of amorous disposition, became involved in *une affair de cœur*, which, after much excitement and prolonged waiting, gave negative results as far as his gratification was concerned. It was, however, followed by acute prostatitis, and much vesical irritation. In this case there was no suspicion of kidney disease, the history of the case having at once directed attention to the prostate; but, led by past observation, an examination was made of the urine, and a decided, but not copious precipitate of albumen found. In this case the attack was much less acute than in the first, and the amount of prostatic secretion perhaps much less. After a prolonged attack of prostatic trouble, assuming various phases, with many acute exacerbations, he has finally been restored to health, although up to the present time he finds it necessary to use extra precautions to avoid a recurrence of his old attacks.

A CASE IN WHICH VISION WAS TOTALLY OBLITERATED BY A GUN-CAP IN THE EYE.

By DAVID WEBSTER, M.D.,

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AN iron-moulder, aged thirty-five, residing near Sing Sing, on Saturday, November 14, 1885, at 10 A.M., attempted to remove the cartridge from a breech-loading shot-gun. The cartridge exploded and the cap struck him in the right eye, destroying the sight immediately. He was, without delay, sent to Dr. C. R. Agnew, at the Manhattan Eye and Ear Hospital, and on his arrival at that institution, a couple of hours later, he was examined by Dr. G. W. Hale, then the House Surgeon, now of Nashville, Tenn., who found that the gun-cap had passed through the upper eyelid and through the upper part of the ciliary region, a little to the outer side of the vertical meridian, the wound being irregular in shape and approaching to within an eighth of an inch of the corneal margin. The eye was without perception of light. The anterior chamber was filled with blood. He was seen later, on the same day, by Dr. Agnew, the conditions remaining unchanged.

I saw the patient, with Drs. Agnew and Hale, on Sunday morning—the morning after the injury. Then, as it seemed almost certain that the cap was in the eye, and as a good deal of inflammatory reaction was setting in, we agreed that the eye ought to be enucleated at once. As Dr. Agnew had an engagement elsewhere, he re-

quested me to perform the operation. Accordingly, assisted by Drs. Hale and King, I placed the patient under ether and enucleated the eye. I opened it on the [illegible] I found the whole of the interior of the globe filled with dark-colored fluid blood and blood-clots. The retina was not detached. The cap was found with its concavity backward, its sharp circular edge embedded in the retina and including the optic-nerve entrance. It was stuck so firmly in this position that it required some force to remove it with forceps.

The reason for the total obliteration of vision in the eye from the time of the injury was now evident. The edge of the gun-cap had cut off all communication of the retina with the optic nerve. Strangely enough, the gun-cap retained its original shape almost perfectly. The patient recovered promptly, and a week later was sent home wearing an artificial eye.

Clinical Department.

AN IMPROMPTU PUMP FOR STOMACH IRRIGATION.

Dr. Sara E. Post, of New York, sends us the following: Having recently a case requiring a stomach irrigation, I tried the funnel with the tube arranged as a siphon, in the manner usually recommended. The end of the tube with the funnel was elevated when pouring the water in, and depressed to induce its escape. The conditions were as perfect as possible, the portion of the tube outside of the body being longer than that lying within. When the tube was first depressed the water ran out freely, but it was found that, as a rule, the stomach was not completely evacuated by means of it. After the flow had ceased, manipulation of the epigastrium would cause it to recommence. Apparently the tube, either by not being introduced far enough, or by being introduced at too great length, and curling upon itself, would fail to reach the most dependent part; and as it is difficult to calculate the depth of the dilated stomach, this objection could not be overcome. As a weak solution of the bicarbonate of soda was used for the injection, the washing would be followed by several watery evacuations, apparently due to the cathartic action of the retained salt. Also, the water removed by the siphon would be almost clear, while from the history of the case it was expected that mucus would be withdrawn.

Some kind of a force-pump seemed necessary to accomplish the desired purpose, and having a stop-cock with two outlets, a rubber piston syringe, a stomach-tube, and some additional tubing, a suitable apparatus was readily arranged. The three arms of the limb containing the stop-cock were provided with tubing, the inlet was connected with the syringe, one of the outlets attached to the stomach-tube by a short intervening glass, and the other connected with the weight from the receiving tube of a Davidson's syringe, and sunk in the receptacle containing the fluid to be injected. It will readily be seen that by manipulating the stop-cock water could be withdrawn from the receptacle and injected into the stomach, or withdrawn from the stomach and injected into the receptacle. Compared with the siphon this method was most successful. The water withdrawn during the first washings was gray, from its admixture with mucus. The washings were no longer followed by diarrhœa, and relief of the symptoms was early obtained. After six washings mucus is no longer returned in the water, a localized tenderness of several years' standing has disappeared, discomfort so great as to interfere with sleep and to make the patient dread food has been lost, and digestion has apparently been re-established. The patient eats three meat meals per day, and is commencing to have a healthy desire for food. It might be added that the patient had previously been under the care of good physicians, and presumably had obtained all of the benefit which medication could give.

The washings are done three times a week, the patient taking no solids for six hours previously. Food could, however, be withdrawn by means of this apparatus, if the bore of the syringe and of the limb containing the stop-cock were sufficiently large. One quart of fluid is first injected and then withdrawn, the injection being repeated two or three times at each sitting. The introduction of the stomach-tube occupies but a few seconds. It seems better to force it down quickly, without much attention to efforts at regurgitation, as, when in position, the patient is comfortable, and breathes and talks with complete ease.

Previous spraying of the fauces with a four per cent. solution of cocaine facilitates the introduction of the tube.

This apparatus is, of course, not new. Its principle is exactly that of the ordinary stomach-pump. It is presented simply because while answering the same purpose it can be more cheaply gotten up.

AN INSTANCE OF SEEMINGLY UNUSUAL SUSCEPTIBILITY TO ETHER.

Dr. George W. Squires, of East Avon, N. Y., reports the following case: Mrs. W——, forty-five years of age, housewife, fell down stairs, striking her face against the railing, from which she sustained quite a severe contusion of the right cheek, with effusion of blood under the conjunctiva from the outer canthus to the margin of the cornea. When first seen she was suffering from a slight frontal headache, for the relief of which the writer applied to the forehead not more than six or eight drops of sulphuric ether with a camel's-hair brush. The patient at once said, "That is ether, and it is putting me to sleep," and in less than half a minute she was fully under the influence of the anæsthetic, remaining unconscious for several minutes, and upon recovery, and for some time afterward, presented all the symptoms following profound and prolonged etherization. She could not have inhaled more than three to five drops of the ether, as it was immediately washed from her forehead.

THE DESTRUCTIVE ENERGY OF THE TINCTURE OF THE CHLORIDE OF IRON ON THE TEETH.

An original paper of conspicuous merit, with the above title, was read before the Odontological Society of the State of New York, in June, by George W. Weld, M.D., D.D.S.,

As the researches of Dr. Weld in this direction possess many points worthy of the careful consideration of every physician, the salient features of the paper are presented to our readers.

Dr. Weld declares that the clinical operation shows that water increases the destructive energy of the tincture of the chloride of iron upon the enamel of the teeth more than any other fluid, and, as an illustration, he states that the effect of adding water to a simple solution of the chloride of iron, *devoid of free acid*, is to give basic salts of iron and the separation of free hydrochloric acid.

Dr. Weld showed conclusively that the tincture of the chloride of iron of officinal strength had but little, if any, effect upon the enamel structure of a tooth when immersed in the same for a period of twelve hours; but that, when immersed in a solution of the tincture and water, in proportion of one ounce of water to one drachm of the tincture, the enamel was materially injured in five minutes.

As an illustration of this phenomenon the doctor stated that when a piece of zinc is immersed in strong sulphuric acid (H_2SO_4) it has been observed that the acid has no effect upon the structure of the zinc, but if a little

water be added to the acid, the zinc is at once destroyed; so that it is not entirely a matter of the strength of the fluids, so far as the quantity of iron or acid is concerned, but a matter of construction or solubility. The zinc in the strong sulphuric acid is protected in the same manner that the tooth which is immersed in the strong tincture of chloride of iron is protected, viz., the surface is blocked up with the basic salts of iron insoluble in alcohol, which prevents chemical action. In the case of the zinc, it is the sulphate of zinc resulting from the first action, and insoluble in the concentrated acid, that forms a protecting coat over the surface of the zinc; the addition of water dissolves this protecting sulphate, and renders further chemical action possible. In the case of a tooth immersed in a strong solution of the tincture a similar action takes place, viz.: the oxide of iron first formed protects the enamel from immediate chemical action on account of its compact adherence to its surface.

To illustrate still further, Dr. Weld called attention to two specimens of teeth on the card [1] which had been immersed in the tincture and alcohol, and compared them with teeth which had been immersed with the tincture and water. Here it was observed that, although the alcoholic solution used contained the same quantity of the tincture and possessed apparently the same relative strength, and the teeth immersed for the same length of time, yet no injurious effect was produced on their lime salts. The reason is attributed to the fact that alcohol is a dehydrating compound, and the peroxide which is formed in the alcoholic solution is of the anhydrous form, and in character very compact, adhering closely to the surface of the tooth, thereby preventing immediate chemical action; while on the other hand, in the presence of water, the peroxide, which is precipitated in the hydrated form and is flocculent in character, does not so well adhere to the surface of the tooth, leaving the free hydrochloric acid in the solution to unite with the lime salts with greater facility.

There appears, then, to be two forms of peroxide of iron, viz.: 1, the hydrated form ($Fe_2(OH)6$), found in the water solution, which is flocculent and non-protecting to the teeth; 2, The anhydrous form (Fe_2O_3), formed in the alcoholic solution, which is heavy and compact, and protects the surfaces of the teeth. The following formula will show how the hydrated peroxide is formed from the anhydrous peroxide ($Fe_2O_3 + 3H_2O = Fe_2(OH)6$).

Synonyms: Ferric hydroxide.
Hydrated sesquioxide of iron.

The teeth immersed in an ounce of the elixir of the pyrophosphate of iron, with one drachm of the tincture of the chloride added, for a period of twenty-four hours, produced apparently no chemical effect on the enamel; but with the same quantity of water and the tincture the enamel was completely destroyed. The elixirs are composed of nearly twenty-five per cent. of alcohol, the presence of which, as observed in the strong solution of the tincture and in the alcoholic solution, affords a protection to the enamel of the teeth in the manner described. But it is to be noted that when a tooth is immersed in a solution of the tincture and simple syrup, in the above proportions, the enamel is but little affected. This is due to a mechanical reason, or a condition of fluidity of the solution, *i.e.*, the presence of the sugar in solution coats the surface of the enamel, preventing the chemical affinity between the acid, or perchloride of iron, and the lime salts in the teeth.

The manner in which syrup modifies the destructive energy of the tincture on the enamel was beautifully illustrated by the effect produced on the specimens of teeth which had been immersed in three different weak solutions of phosphoric acid. Two of these were proprietary medicines and contained water, and the effect was to injure the enamel of a tooth in one hour; while the third, a syrup solution (each fluid drachm containing two grains of free phosphoric acid), produced but little, if any, injurious effect on the enamel in twenty-four hours.

Equally interesting was the effect produced on the enamel of teeth which had been immersed in a solution of the tincture and the weak alkaline waters (notably Vichy).

When a drachm of the tincture is added to an ounce of the Vichy water, a slight effervescence occurs, indicating that the bicarbonate of soda contained in the water has neutralized a part of the free acid contained in the tincture; in consequence, when a tooth is immersed in such a solution, the destructive energy of the iron is, to a great extent, modified. Unless the specific nature of the tincture of the chloride of iron is materially affected (and the peculiar odor of the tincture remains), there seems to be no reason why this preparation of iron, at least in all cases of anæmia, should not be administered in combination with Vichy water.

There are, then, three menstrua which may be employed to modify the destructive energy of the tincture of the chloride of iron on the enamel of the human teeth. The first is alcohol in some form. The second is Vichy water, which neutralizes to a slight extent the free acid contained in the iron. And the third is some form of an elixir or simple syrup.

[1] A glass slip presented to the Odontological Society, containing [illegible] teeth, showing such various modifications the destructive energy of [illegible] and iron compounds on the enamel.

Progress of Medical Science.

Scarlatinal Nephritis.—Scarlet fever derives most of its dangers from disorders that complicate or succeed it. Of these the most important are derangements of the kidneys, and a number of recent writers assert that these organs are constantly affected in scarlet fever. In an article on this subject, in the July number of *The American Journal of the Medical Sciences*, Dr. I. E. Atkinson, of Baltimore, maintains that future research may show that simple renal catarrh accompanies all cases of scarlatina, but it is certainly not true that renal alterations, competent to excite albuminuria or to reveal themselves *post-mortem* to reasonably careful inspection, are invariably present. Renal catarrh, however, is much more frequently an accompaniment of scarlatina than is generally supposed. It usually escapes observation, as it is only exceptionally revealed by symptoms, and can only be recognized after microscopic examination of the urine, a procedure too often neglected, but of the greatest importance as often anticipating dangerous processes that may be averted by timely treatment. Its clinical history, pathological anatomy, and most approved method of treatment are fully considered.

The Functions of the Membrana Tympani Illustrated by Disease.—Sir William Dalby, in a brief but instructive article in the July issue of *The American Journal of the Medical Sciences*, maintains that our knowledge of the functions of the membrana tympani may be added to by the observation of this structure when it becomes altered by disease. He points out that structural changes in the tympanic membrane, as, for instance, extensive calcareous deposit of a very extensive nature, may exist without impairment of hearing. The history of cases in which there have been such deposits, with diminution of hearing, shows that the patients have at some previous period suffered from inflammation within the tympanic cavity, so that the changes then wrought will sufficiently account for the failure in hearing. That the position of the obstacle to hearing is in the conducting media, and, therefore, in the tympanic cavity, and not in the nervous structure, can be in such cases readily demonstrated by experiments with the tuning-fork. Loss

of continuity in the tympanic membrane, he also shows, does not necessarily interfere with its function, provided that the ligamentous support which it affords to the chain of ossicles is not impaired. In several instances in which the membrane has been accidentally pierced with a very sharp-pointed object, as a pin, the hearing has not been found, with the most careful tests, to be injured. In these examples the healing process occupied from three to four days. In one case, when a sudden explosion near the ear ruptured the membrane in two places, the hearing was perfect, and the ruptures healed in a few days. On comparing the notes of other cases in which the hearing was impaired by explosions, it was found that the hearing suffered more injury when the membrane was not ruptured than when it was. It would almost seem from this that the force of the explosion expended itself partially in rupturing the membrane, and so, in a measure, some hearing was saved. At any rate, the author says, it appears to be not an unfair conclusion that the loss of hearing must be due, in all cases, to damage to the nervous structures; in other words, to what, for want of a more accurate term, must be called shock. That loss of continuity in the tympanic membrane does not of itself interfere with its functions is still further shown by the careful and continual observation of cases in which the membrane is perforated by incision or by disease, and the author thinks that the loss of hearing is due to causes which do not include this loss of continuity in the tympanic membrane.

Chronic Hyperplasia of the Oral Mucosa, with Cornification of its Epithelium.—Dr. P. F. Harvey, U.S.A., in the number of *The American Journal of the Medical Sciences* for July, 1886, describes very fully our present knowledge of the clinical history and pathological anatomy of this rare affection, reporting five cases. The cure of any well-marked case is doubtful, but the writer's experience and study lead him to believe that the following method is best adapted to secure that end: Idiopathic and irritative patches, usually expressive of debility, require a restorative regimen and tonic treatment. The use of tobacco in any form should be discontinued as much on account of its general as of its local effects. Alcohol should also be interdicted. All stimulating articles of food, condiments, carbonic acid waters, hot liquids, or solids, etc., must be avoided. General medication should simply be directed toward improving the general health, and topical applications toward keeping the buccal secretions in good condition. Well-marked patches of *leukoplakia* should be treated in the same way, but weak chronic acid solutions may be used in addition. Resort may also be had to the constitutional use of arsenic, at first in tonic doses, but afterward, if necessary and not contraindicated, carried to the point of toleration. The drug, if resort be had to it, must be thoroughly diluted. Weak alkaline washes should occasionally be used once or twice daily, and it is important to persevere in the soothing and restorative plan of treatment for years, if necessary. Ichthyosis of the tongue seems to occur in perfectly healthy and robust men, and in its treatment the question of vital repair may not be one of so much importance. If the patch is not too thick, it may be first brushed with chromic acid solution (1 to 8); or if not likely to be benefited by that application, it may be curetted when clearly diagnosed. It should, in any case, be entirely removed by the galvano-cautery, the sharp spoon, or the knife, if necessary; for, otherwise, the author says, its transformation into cancer is only a question of time.

Serous Poliorrhomenitis.—Under this awkward name Cantani describes the case of a man forty-seven years of age, who had been previously healthy, except for malarial fever and some ulcerations of probably venereal origin. He lived in a dry locality, but was much exposed by his occupation to cold and dampness, and had been addicted to venery and the abuse of alcoholic liquors. Five years before the patient began to be troubled with severe pains in the epigastrium, and he soon noticed a swelling in the abdomen, and, later, enlargement of the lower extremities. There had never been any œdema of the face, or pain in the kidneys, or disturbance of micturition. Examination showed ascites and effusion in the pleural cavities. The spleen was somewhat enlarged, but the heart-sounds were normal, and the liver and kidneys were not diseased. No cause for the trouble could be discovered. Some micro-organisms were found in the fluid, but it was impossible to learn from their appearance the nature of the affection. Some benefit was derived from the exhibition of adonis vernalis.

The Treatment of Gleet.—In an address before the Medical Society of the County of Albany, Dr. O. D. Ball described a method of treatment employed by him successfully in a number of cases of chronic specific urethritis (*Albany Medical Annals*, June, 1886). He employs an ointment composed of oxide of zinc, three drachms; lard, three drachms; simple cerate, two drachms. The application is made by means of an olive-pointed bougie. The constricted portion of the bougie is filled out evenly and as smoothly as possible with the full calibre of the instrument. The bougie should be carried down to the prostatic portion of the urethra as rapidly as possible, and then, after being rotated in both directions, slightly withdrawn and pushed back again, in the hope that some of the ointment will be forced into the swollen mouths of the seminal and prostatic ducts. In the same manner the remaining portion of the urethra should be treated, giving plenty of time for the ointment to be melted and left in contact with the diseased membrane. The patient should have emptied his bladder previous to the application, and should be instructed to refrain from doing so again as long as possible. The applications should be made at least twice a day—in the morning and the last thing before retiring. The instrument should not be too large, but of just sufficient size to smooth out the folds of mucous membrane. For instance, when the penis measures three and a half inches in circumference, a No. 20 French will about answer the purpose. The average time of treatment of all the cases was a little over four weeks. The longest any one case was under treatment was eight weeks; the shortest was ten days, except in one case where the patient never saw any discharge after the first application was made.

Congenital Malformation of the Intestines.—Dr. Owen Pritchard reports the following case in *The Lancet* of May 15, 1886: The child (a female) looked quite healthy at birth, except that the abdomen was unusually distended, and on his visit in the evening the nurse drew Dr. Pritchard's attention to the large size of the abdomen, and stated that the child had been very sick. A teaspoonful of castor-oil was ordered, but at the next visit it was found that it had not operated, and that the sickness was getting much worse, the vomit becoming black and offensive. An injection was tried, but it succeeded in bringing away only a few very small lumps of fæces. The vomiting became more and more severe, and the child died at the end of a little over four days. At the post-mortem examination the stomach was found normal, and the small intestine for about three feet was also normal, but here it ended in a blind extremity which was greatly distended. Then, quite separate from all this, and not attached to it in any way, were coils of very small intestine several feet in length, and not measuring more than a sixth or an eighth of an inch in diameter. This passed on into the right iliac fossa, and there forming the ileo-cæcal valve, it continued in the course of the large intestine on to the rectum, its diameter in any part of its course not measuring more than a sixth of an inch.

A Remedy for Coryza.—Muriate of cocaine two grains, roasted coffee and white sugar of each one ounce. To be taken as snuff.—*Medical Press.*

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A NEW "SYSTEM" OF GASTRIC THERAPEUTICS.

ONE may well listen with respect to the teachings of a physician who has cured over one hundred cases of gastric ulcer. This is what Professor Leube, of Germany, claims to have done (*Bull. Gén. de Thérap.*, January 30, 1886). Professor Leube is a specialist in the department of gastro-enteric pathology. He preaches a gospel of which the three chief points are the need of accurate diagnosis, strict regimen, and copious use of the stomachal siphon. Professor Leube is one of those who have introduced a system into practice, based, like all systems, on the belief that its adoption will cure most cases of the diseases for which it is intended. Already there are establishments in Germany instituted with the sole object of treating gastric disorders according to the *régimes de Leube.*

Professor Leube has had an excellent training in physiological and chemical science, and having devoted himself largely for fifteen years to the subject of digestive disorders, it is not surprising that he should have evolved a "system" that merits some attention.

The therapeutic principles upon which Professor Leube depends are four in number: 1, Dietary regulations; 2, the use of the stomach-tube; 3, the use of hydrochloric acid and pepsin; 4, the use of various other drugs, such as powders, bitters, etc.

Preliminary to all treatment it is considered absolutely essential to make a correct diagnosis of the form of gastric trouble. To facilitate this the stomach-tube is used, and seven hours after a meal that organ is washed out. If there remain any food at this time, it is an evidence of digestive trouble. By using various foods, and then subjecting the stomach to the seven-hour test, a list of most digestible substances is obtained. On the basis of many such experiments Leube constructs his different regimens. They are as follows:

Regimen I. Soup (*bouillon*), meat-juice, milk, raw and soft-boiled eggs, unsweetened crackers, and mineral waters. The digestibility of meat solution as compared with light foods, such as calves' brains, rice, and chicken, was shown by many clinical examples as well as by experiments. A few patients, however, through some idiosyncrasy, cannot digest milk or eggs.

The diet above given is suitable for chronic catarrh and gastric ulcer. After it has been persevered in for about ten days, Regimen II. is introduced; this consists of boiled calves' brains, boiled sweetbreads, boiled chicken, and boiled pigeon. They are digestible in the order given. The chickens must be young and the skin must not be eaten. Well-boiled soups were also permitted, and for the evening repast soups, with milk, tapioca, beaten eggs, and calves' feet. This regimen, to which may also be added Regimen I., gives a considerable variety. Treatment may be commenced with Regimen II. if the stomach-washings show the inutility of the first. The patient should live upon these regimens for several weeks, or until his digestive powers will take care of them easily. Then he enters upon Regimen III.

Regimen III. This consists of Regimen II. with the addition of raw or very rare beefsteak. The best way of preparing it is to scrape as much meat from the raw steak as can be removed easily, and heat it up rapidly in a small quantity of fresh butter. Raw ham scraped and cooked in the same manner is also good, strange as it may appear. The ham must be tender. A small amount of mashed potato is allowed, a little bread (not too fresh), and small quantities of tea or coffee with milk.

Regimen IV. Roast chicken, pigeon, venison, partridge, hare, rare roast-beef (it is best cold), leg of veal, small fishes, maccaroni, and soup, with milk and rice; a small amount of butter in some cases. Later on a small quantity of Bordeaux or Rhine wine may be used, but cautiously. Great variety in diet should not be adopted too rapidly.

The number of meals *per diem* and the quantity of food ingested must be carefully regulated with reference to the seven-hour rule, and the conditions and peculiarities of patients. Leube finds that at the catamenial period digestion is considerably retarded. It should consequently be aided, or a longer time be allowed for it, and the food should be plain and simple.

Regimen IV. should be continued for several weeks, and, if necessary, for months; its conditions should be rigorously adhered to. When it is decided that the patient may return to his habitual diet he is directed to make the change very slowly and to keep himself informed as to his digestive ability by the use of the washing-out tube in all doubtful questions.

The only stomach affection in which dietetics play a secondary part is that which Leube describes as nervous dyspepsia. Patients will, however, do better, even in that malady, to adopt a definite dietary. Regimen IV. is recommended, and variety is advised in the use of it for such cases. Condiments may be used if needed, and hydrochloric acid with pepsin. It should be remembered that in treating nervous dyspepsia moral dietetics (*la dietetique morale*) has a preponderating influence.

Leube attaches considerable importance to giving the stomach certain periods of complete repose. For instance, he will wash out the stomach seven hours after luncheon, and give no more food until ten o'clock on the following day. At this time, soup and beef-steak are given, and, generally, a stomach-washing in the evening will show that the meal has been digested.

The drugs most used are hydrochloric acid and pepsin, bitters, cundurango, and mineral waters. The acid and pepsin are not given in nervous dyspepsia or in cancer

or ulcer. Bitters, including cundurango, are not thought much of, though the drug mentioned is one of the best. Mineral waters are prescribed in very moderate amounts (O ss. daily) and are to be taken slowly upon an empty stomach.

RAYNAUD'S DISEASE.

In The Medical Record of January, 1885, we referred to the articles of Petit and Verneuil upon "Symmetrical Dry Gangrene." The subject was also discussed editorially and elicited a number of contributions. Giovani, an Italian physician, and Bouveret, of Lyons, France (Medical Record, November 14, 1885), reported further illustrations of this affection. Dr. C. L. Dana, in an article on the "Acro-Neuroses" (Medical Record, July 18, 1885), discussed the same subject under the head of "Raynaud's Disease," a local syncope and symmetrical gangrene of the extremities, a history and bibliography of the affection being given, and several cases of the milder type reported. These various articles have excited considerable interest in an affection which is not particularly rare in its slighter forms, but which has not been generally recognized as a disorder of a distinct clinical type. In the *Philadelphia Medical Times* of May 29, 1886, Dr. J. H. Musser reports a classical case, and discusses the history of the disease in an instructive manner. In 1862 M. Raynaud gave a description of the disease to which his name is given, and which he described as a symmetrical local syncope and asphyxia of the extremities, ending sometimes in gangrene. It is characterized by paroxysmal attacks, in which the fingers, toes, and even the tip of the nose, the ears, and tongue become white, bloodless, and feel cold and dead. When the fingers alone are affected the trouble is called *digiti mortui*. In severe cases after a time trophic changes occur, and a slow, dry gangrene sets in. In most cases, even of the mild type, some sensory troubles, such as numbness, prickling, burning, or neuralgic pains are felt.

The gangrene is generally of a slight amount, although sometimes the fingers may have to be amputated.

The disease occurs oftener in women, and in persons between the ages of eighteen and thirty. Chronic uræmic poisoning and chronic malarial poisoning often produce symptoms closely resembling Raynaud's disease, and the malarial infection may even cause a gangrene, according to Petit and Verneuil. The milder forms of *digiti mortui* occur in the paroxysms of hysteria and in neurasthenia.

Raynaud's disease shows some curious alliances. For example, local asphyxia of the extremities is one of the most marked features in one of the types of scleroderma. Dr. Barlow had a case in which the paroxysms of local asphyxia alternated with paroxysms of hæmaturia. Dr. Hutchinson cites a case in which iridoplegia was associated with local syncope, asphyxia, and gangrene of the ears. In a case reported by Weiss the patient had attacks of temporary aphasia, and in a case of Southey's there was an involvement of one of the joints. Various skin disorders, such as urticaria, erythema nodosum, and eczema may alternate with or accompany the disorder.

The morbid anatomy of this disease is unknown. No definite organic changes have been found in the central or peripheral nervous system. It can only be supposed that the vascular neuro-mechanism is in an unstable and over-irritable condition. The result is, that there are paroxysmal contractions of the blood-vessels of the extremities. It is a kind of epilepsy of the sympathetic.

Bearing in mind that uræmia, malaria, syphilis, hysteria, and neurasthenia are often present in this disease, treatment must be directed accordingly. Raynaud speaks highly of the value of the galvanic current. Nitro-glycerine and tonics are also indicated.

AN INFINITESIMAL ORGANISM.

In order to give the student of micro-organisms an idea of the extent to which such a path of research may lead him, there should be set before him the investigations recently made by Rev. Dr. Dallinger, president of the English Microscopical Society, as disclosed in a lecture entitled "The Latest Work among the Least and Lowest Forms of Life," given by him at the Firth College, Sheffield, England. In it he described the result of three years' close study with the minutest forms of life. He stated that he has now microscopic lenses which only five years ago were declared by mathematicians to be impossible of accomplishment. By means of these he demonstrated to his audience shells in a piece of chalk of which it would take four million to make an ounce. In a drop of water he could show a desmid which measured only one millionth of a cubic inch; but this was a giant compared to the smallest organism known, of which within the last few months he has made the discovery and found that the flagellum or motor fibre of this infinitesimal entity is two hundred and four millionth seven hundred thousandth of an English inch. One is awe-struck at such a discovery as this, and it is a question as to which should incite an admiring amazement the most, the minuteness of the organism or the mighty mind that can comprehend it and mathematically demonstrate it. Such a great discovery as this, the smallest known organism, will settle any restless feeling of a scientific Alexander, if such can exist, by showing him that he need not for a long time to come sigh for new worlds to conquer.

MEDICINE IN THE FUTURE.

The late Dr. Austin Flint[1] was appointed to read a paper before the British Medical Association at its meeting in 1886. The manuscript was prepared, but the hand which wrote it is at rest, and the voice which was to have pronounced it is hushed. To those who now read it, the last writing from a busy and powerful pen, it comes with the force of farewell words.

"The meditations of a medical practitioner," he says, "whose retrospections extend over half a century, may naturally be expected to revert to the past." . . . "If our retrospections extend over half a century it is worth while to inquire, How will the present appear in a retrospective view at the end of the next fifty years?" From such a mountain of observation he looked forward as well as backward, and predicted that the history of medicine will have a steady acceleration in progress; that knowledge with reference to anatomy, histology, and

[1] Medicine in the Future, by Austin Flint, Sr., M.D. Published by D. Appleton & Co[illegible].

chemistry will advance; that our senses will be aided and augmented; that hearing will be vastly improved by means of microphonic stethoscopes; that a judicious blood-letting will be revived, and the lancet will again find a place which it lost through over-use; that bacterial etiology will be established and revolutionize the treatment of certain diseases; that the little understood functions of spleen and liver, the thyroid body, the lymphatic glands, the supra-renal capsules offer problems which will form "a vast and fruitful field for future clinical researches."

The paper closes with a word in regard to the medical press, the teachings of text-books and colleges, and the physician of the future is referred to with pleasantry, and that gentleman is gently admonished that if he specializes too much he may bring about a professional demoralization.

The delightfully expressed optimistic views would greatly cheer one inclined to regard the future of medicine gloomily; but there are few such. It is none the less pleasant to have hopes confirmed by a horoscope so skilfully cast.

THE SUPERFICIAL AREA OF THE AIR-CELLS.

THE respiratory organs of mammals present a remarkable example of nature's skill in adapting a mechanism to a special use. The animal system, above all things, must absorb oxygen and must do it very actively. Every day about twelve thousand quarts of air must be laboriously sucked into the human lungs in order to furnish the tissue with its indispensable gas. Nature kindly provides that this be done automatically with very little conscious effort. In order to allow opportunity for the oxygen and blood to mingle, the lungs are made practically to consist of an enormous superficial area of thin, flattened cells with an extremely rich plexus of blood-vessels on the under surface. The total number of pulmonary air-cells has been estimated to be one thousand seven hundred millions, and the actual surface they present to the inhaled air was estimated by Kuess to be two hundred square meters. Recently, Marc See (*Bulletin de l'Acad. de Méd.*) has reported estimates which give a different result. The total area, he says, is about fifty four times that of the cutaneous surface of the body, or eighty-one square meters. The plexus of vessels on the other side of this surface is so rich as to form almost a completely closed surface of blood, the total area being about one-fourth less than that of the epithelial surface. By a peculiar arrangement the blood in these capillaries travels more rapidly than in the systemic capillaries, and is less subject to variations due to nervous influence. The whole blood of the body surges through these passages three times every minute, and in the twenty-four hours about twenty thousand litres of blood are passed through the respiratory organs and brought in contact with the air.

THE EDITOR OF THE BRITISH MEDICAL JOURNAL, Mr. Ernest Hart, was urgently pressed to contest a seat for Parliament as a Gladstonian Liberal. We regret to learn that his health was such that he was positively forbidden to undertake the contest.

News of the Week.

DR. DANIEL LEWIS.—At the Semi-centennial Commencement of the Alfred University, New York, the degree of Ph.D. was conferred on our distinguished townsman, Dr. Daniel Lewis.

COCAINE IN GYNECOLOGY.—By some oversight the proof of Dr. Johnston's article did not reach him in time, and consequently he lost the opportunity of making some corrections in the same.

MORE ABOUT THE SWINDLING "DOCTOR."—We have received several letters from prominent medical men in this city complaining that they have been duped by the swindler who was exposed in our issue of July 10th. They have, however, only themselves to blame. The moral is, "Never trust a stranger when he wants to borrow money." Any man away from home can get money by telegraphing to his friends there. The law of accidents usually provides against the simultaneously disastrous concatenation of circumstances of "a sick wife, starving child, unpaid board, the cashing of a check after banking hours, and the hurry to catch the last train homeward!"

UNWISE FRIENDS often do a cause more harm than violent enemies. What could be more foolish than the following remarks of one Dr. Anna Kingsford: Dr. Kingsford "proceeded to give her reasons for thinking that the work of M. Pasteur would eventually give the death-blow to vaccination, and open the eyes of the people of Europe to this abominable theory of attempting to cure disease by means of disease. So far from supporting vaccination by his theory, M. Pasteur was doing his utmost to put an end to it, and for that, though he knew it not, she thanked him."

DR. THOMAS R. FRENCH, of Brooklyn, has been appointed to the full Professorship of Laryngology in the Long Island College Hospital.

THE AMERICAN RHINOLOGICAL ASSOCIATION will hold its fourth annual meeting at St. Louis, Mo., on October 6th next.

MEETINGS OF NATIONAL ASSOCIATIONS.—During the past week the American Neurological Association held its annual meeting at Long Branch, and the American Ophthalmological and Otological Associations met at New London.

DR. JOHN C. DALTON received the degree of LL.D. from Princeton College at its last commencement.

A NIGHT PHARMACEUTICAL SERVICE.—The Municipal Council of Paris has established a night pharmaceutical service. Poor patients after applying to the police station for a night-service doctor get a prescription and go to a night service druggist.

FAILURE OF HYPNOTISM IN LABOR.—Dr. Porak (*Nouv. Arch. d'Obst. and Gyn.*) reports another case in which a hysterical woman was hypnotized at intervals during her labor. In the later stages, however, when the pains became very severe, it was found impossible to put her in a hypnotic sleep.

Surgeon-General Robert Murray, of the United States Army, will be sixty-two years of age in August of the present year, when he will be placed on the retired list.

A Postgraduate School is to be organized in Edinburgh, and another, possibly, in Glasgow.

Sims Memorial Fund.—The following additional subscriptions have been received since our last acknowledgment: Æsculapian Society of the Wabash Valley, Ill., $20; R. Ludlam, M.D., Chicago, Ill., $10; D. S. Smith, M.D., Chicago, Ill., $10; Central Kentucky Medical Association, $5; J. S. Crane, M.D., New York, $5.

Perhaps a New Disease?—A daily paper announces the death of G—— S—— from "acute thesis."

Improvident Medical Men.—Our London correspondent, in speaking of the approaching jubilee banquet of the "British Medical Benevolent Fund," draws attention to the lamentable lack of providence exhibited by too many medical men. The warning is needed. The poor parish doctor who dies and leaves his family destitute is to be pitied. But what shall be said of eminent men in consulting practice who do the same? Yet, within the last few years, two distinguished London physicians have done so. They both lived at the West End and kept up expensive establishments, of which, at their decease, their widows were only too glad to dispose. Their families were, to say the least, left very badly off, and in one case a fund was started for their benefit. Neither of these physicians could perhaps have anticipated his untimely death, as both were men of good physique and robust health, and both had only attained early middle age.

One of the best known medical benevolent organizations is the "British Medical Benevolent Fund," which has for its president the late President of the Royal College of Physicians, Sir George Burrows, Bart. It is just completing its fiftieth year. It affords pecuniary relief to distressed medical men, and their widows or orphans. It also grants annuities to the aged or disabled among them. The extent of its operations may be judged of from the fact that in these various ways it disburses annually about £3,000.

Another very useful body is the "Society for the Relief of Widows and Orphans of Medical Men." Sir George Burrows is also the president of this society. Unlike the "British Medical Benevolent Fund," its benefits are restricted to its own subscribers. It is at once a provident and a benevolent society. Subscribers of two guineas a year are eligible for election as members, and having become such the continuance of this small yearly subscription entitles their families to participate in the benefits of the society at their death, should they unfortunately be left needy. It differs from a system of assurance because the benefits of the society are only conferred upon the indigent. The annual sum distributed is nearly as great as that paid away by the "British Medical Benevolent Fund." The society was founded in 1788, and is thus approaching its centenary. Since its foundation it has distributed a sum considerably over £100,000.

No inconsiderable amount of benevolence is also exercised by the "Royal Medical Benevolent College, Epsom." This was founded in 1831. It provides an asylum and pensions for duly qualified medical men (and their widows) who are in reduced circumstances, and a school for the sons of medical men. There are fifty pensioners, each of whom receives £21 a year. Pensioners must be medical men (or their widows), who are not less than sixty years of age, and whose annual income does not exceed £60. Of the fifty pensioners, twenty-four are resident, and each one is provided with three furnished rooms and an allowance of coal; the rest are non-resident. The school receives fifty foundation scholars, the sons of medical men, who are educated and entirely maintained at the cost of the institution. One hundred and seventy paying scholars are also received. The school is an excellent one, and the science teaching especially good. Many of the science "scholars" and "exhibitioners" at the various hospitals come from Epsom College, and owe much of their success to the careful instruction there received. The annual meeting of this excellent institution was held last week, and was presided over by Sir Joseph Fayrer, who spoke warmly in favor of the institution. Sir Joseph Fayrer is a distinguished retired Indian medical officer. His name will be imperishably associated with the history of the Indian Mutiny, he having been Residency Surgeon at Lucknow during the siege.

Reports of Societies.

THE AMERICAN OTOLOGICAL SOCIETY.

Nineteenth Annual Meeting, held at the Pequot House, New London, Conn., July 20, 1886.

The Society was called to order by the President, Dr. J. S. Prout, of Brooklyn.

Dr. S. Sexton, of New York, read the first paper, which was entitled

ACUTE AND CHRONIC PURULENT INFLAMMATIONS OF THE MIDDLE-EAR TRACT AND THEIR COMPLICATIONS.

It was based on the records of over two thousand cases, which were divisible into three classes: acute purulent inflammation of the middle-ear, acute catarrhal inflammation of the middle-ear, and chronic purulent inflammation. The consideration of acute catarrhal inflammation was included in that of acute purulent inflammation, since in the beginning the conditions were probably the same, although not always going on to suppuration. Out of this series of cases one hundred and thirty-one were selected on account of their gravity. Of this number there were twelve deaths.

In no disease is a knowledge of regional anatomy more important than in those of the middle-ear.

He then gave a *résumé* of the anatomy of the temporal bone.

The symptoms were next referred to. Brain symptoms, such as headache, vertigo, pain, delirium, nausea, and vomiting may occur in consequence of middle-ear disease without lesion of the cerebral structure.

The prognosis of purulent inflammation of the middle-ear is favorable when suitable treatment is adopted, both as regards life and the preservation of hearing. Out of twenty thousand cases of ear disease, where the patient has been seen at the beginning of the attack, no fatal case has occurred.

In regard to treatment the speaker recommended incision of the drum-head. [illegible] of the mastoid

process has been recommended by some authorities. Dr. Sexton took up a consideration of the indications which have been regarded as calling for the application of the trephine, and held that they were insufficient. From his experience he was led to believe that drainage could be best maintained through the natural channel.

The speaker also described

A NEW OPERATION FOR THE RADICAL CURE OF CHRONIC PURULENT INFLAMMATION OF THE MIDDLE-EAR TRACT.

Since describing a form of chronic purulent inflammation of the attic, in a paper read before the Society last year, it had occurred to him that something might be done with these cases by means of an operation. It seems especially desirable to cure these cases when the ear remains simply a reservoir for purulent matter liable at all times to infect the system. It is found that in the greater number of these cases the remaining portion of the conducting mechanism no longer serves to aid in the transmission of sound, but acts rather as an obstruction to drainage. Where the membrana flaccida and a portion of the ossicular chain only remain, the former often becomes thickened and everted, forming with the altered mucous membrane a pouch for the retention of putrescent matters which may slowly escape. Where granulation tissue or polypoid growths are present in the attic or antrum, the escape of secretions is still further interfered with. This produces long-continued and great irritation.

The author had observed that in a number of cases where the transmitting mechanism had been lost a spontaneous cure followed, and it occurred to him that the curative action of nature might be imitated with advantage. Where drainage from the attic and antrum is interrupted, a cure can only be assured by an operation permanently clearing the passage outward from the tympanum.

Last year the operation was tried on a long-standing case of otorrhœa due to chronic purulent inflammation of the attic. In order to avoid the danger of using an ordinary lamp in connection with the administration of ether, an electric light was used. The operation has since then been fully performed in several cases.

The first step of the procedure is to separate the membrana flaccida from the edge of the auditory plate and to remove any portion of the membrana vibrans adherent to the auditory ring. If the malleus and incus remain *in situ* it is well to divide the tendon of the tensor tympani muscle, when present, where it leaves the handle just behind the short process and below the chorda tympani. The chorda tympani when remaining is then divided where it enters the tympanum at the pyramid and also at its exit into the canal of Huguier. The long process of the malleus, being also received into the glenoid fissure by means of this short oblique canal, along with the chorda, may be more or less detached at the same time. The detached tissues and ossicles should now be removed with the forceps. It will frequently be found that the incus, having been displaced, still remains. It may be removed with the attic scraper, which is to be introduced from below and passed up along the inner wall of the tympanum, when the distal extremity may be carried over the incus or malleus, if the latter bone remains, and by traction the ossicles can be detached. Polypoid masses, granulation tissue, and the products of inflammation may now be removed with the cutting curette or cutting forceps, and the parts dressed with a four per cent. solution of cocaine to relieve pain. There is usually free bleeding during the operation, often sufficient to protract it and increase its difficulties.

The effect of injury or destruction of the chorda tympani nearly always manifests itself in some way, but had never in his experience been a matter of serious import. Disturbances of taste sometimes follow the operation, but they gradually disappear and leave the sense of taste unaffected.

The drum should be kept well cleansed, and light dressings of boracic acid applied until healing takes place. The salicylic acid powder may be applied as freely as can be borne. In some cases this is irritating at first, but tolerance is soon established. It may, then, be kept up until the parts cease to discharge.

In the cure resulting from this treatment, a dermic transformation of the tympanum takes place, but mucus may occasionally gain admission from the Eustachian tube during recurrent head catarrh or on blowing the nose. This should be frequently removed with cotton-wool, and, if necessary, the drying applications renewed for a time.

Where the incuso-stapedial connection remained he would not hesitate to perform this operation, unless a very considerable portion of the membrana vibrans was present.

The instruments employed, and some of the diseased ossicles removed, were exhibited. A number of photographs were shown.

DR. AGNEW thought that, where the inflammation involves the mastoid cells, some portion of the external wall of the mastoid should be removed. The trephine does not expose a sufficient area of the cancellated tissue of the mastoid. He did not see how the new operation which had been described would be of service in these cases.

DR. SEXTON remarked that the new operation was recommended only in chronic cases.

DR. H. KNAPP, of New York, said the upper tympanic pneumatic cells resemble to a certain degree the frontal sinuses. These have a direct natural drainage through the infundibulum into the nose. When this is closed by disease, the lateral part of the sinus over the orbit dilates, and the cavity is more easily reached, and more effective drainage is obtained by opening the sinus from the orbit. In a like manner we obtain in most cases easier and more effective drainage of the supra-tympanic cells by opening the mastoid cells with which they communicate.

The next paper was by DR. A. H. BUCK, of New York, on

PAINLESS AND ONLY SLIGHTLY PAINFUL ULCERATION OF THE MEMBRANA TYMPANI, PROBABLY OF A TUBERCULAR NATURE.

The speaker stated that the recognition of the early stages of tubercular disease of the drum-membrane was important, and the object of the paper was to call attention to the features by which this could be recognized. Three cases had been seen by the author, and were described.

Tinnitus and slight impairment of hearing were the first symptoms noticed. In two of the cases, which were examined at an early period, there was slight redness and swelling at the upper part of the membrana tympani and of the skin covering the bony wall. In a short time the infiltration extended into the entire posterior superior quadrant. The membrane became bulging, and at the most prominent point a perforation established itself.

In the incipient stage the distinguishing features are the tendency to localization in the upper posterior portion of the membrana tympani, the marked insignificance of the pain or even its entire absence, and the intolerance to all but the simplest local measures.

DR. SEXTON stated that he had seen many cases of catarrhal inflammation of the middle ear in phthisical subjects. The tendency of the structures of the ear to break down in advanced phthisis is very great.

DR. E. GRUENING, of New York, had seen a number of cases in which he was led to infer that the ulceration of the drum-head was due to tuberculosis. In one case, that of a young man, only one ear was affected. There was very little purulent discharge. There were two openings showing that this was not the result of perforation from accumulation. It appeared to be a melting down process. In another case, there were multiple openings.

These were in the membrana tympani proper. These cases improved under treatment, but the openings remained.

Dr. C. R. Agnew had seen a number of cases in which he considered the origin tuberculosis. In a considerable number of these cases the main lesion has been in the drum-head below the extremity of the handle of the malleus. He described the case of a young man who had phthisis at the apices of both lungs, and who, after a short period of tinnitus, found that he whistled through his ear. In the ear complained of an opening, looking as though it had been removed by a punch, was found. Within a few days the same thing occurred in the other ear.

Dr. J. A. Andrews, of New York, had examined a large number of cases, and some with a great deal of care, but had never found the bacillus. Twice in cases of advanced tuberculosis he had seen, on examining the drum-membrane, little white, glistening points, about the size of a pin-head, not secreting at all, and in one case with no congestion. In both cases the spots disappeared in a few days, and within twenty-four hours there was a little, clean punched-out opening in the drum-membrane. This occurred without any discharge. It seemed to him that he was dealing with isolated tubercles in the tissue of the drum-membrane. One of these cases died a few months later from the general disease.

Certain Technical Details Relating to Operations on the Mastoid Process.

Dr. A. H. Buck, of New York, read a paper with the above title. He referred to the objections which had been made to the drill. It has been stated that there is danger of plunging the drill into the lateral sinus or even into the brain. He had, however, found no tendency for the drill to go astray. It had been said that the opening made was too small, but any sized drill might be made. He used a drill one-fourth of an inch in diameter until the antrum was reached, and finished the operation with a smaller drill. This gives a sufficient opening for drainage. Where there is a large sequestrum it is necessary to make a larger opening.

After the use of the drill pyæmia and septic fever are rare. With a knowledge of the part to be operated upon the drill may be used with perfect safety. It can be guided perfectly by resting the fingers on the bone. The conical shape of the drill also enables the operator to tell when its point has entered a cavity.

The objections to the use of the chisel were next taken up. When this is used the wound in the adjacent soft parts must be larger, and the opening in the bone is more extensive, leading to a depressed cicatrix. More time is required in the operation, and it is not free from danger. These objections are, however, trifling, if the results of the operation are found to be more satisfactory than those following the use of the drill. A study of the statistics of both methods seems to show that there is nothing to warrant the statement that chisels and gouges are to be greatly preferred to drills in establishing openings into the mastoid process.

In operating with the drill, after making the opening, he cuts out a little canal for the escape of the discharges, for the opening made by the drill is covered by the flap when it comes into position. For the first four or five days after the operation the wound is irrigated once a day with a bichloride solution, 1 to 2,000.

Dr. Buck said that in his earlier operations, he applied the drill a short distance in front of the vertical line. His present plan is different. A straight vertical incision, three inches long, is made; by this means he exposed the mastoid process where it curves into the meatus. The drill is then applied to the first flat surface. The only difficulty is in establishing the final communication between the canal and the antrum.

Dr. J. Orne Green advocated the use of the drill. He makes a small opening at first, and [illegible] what he finds. Some cases require a large opening, and in such cases the gouge and chisel will come into play. The dental engine is very applicable in some of these cases. He uses a modification of the engine, which may be screwed to a table, it is turned by a handle, and no skill is required, as in the engine worked with the treadle. Used in this way, I have found the engine of great service. The burrs can be used with the greatest delicacy.

Dr. H. Knapp, of New York, favored the use of the chisel. In his first operations he used a drill, but had abandoned it. With the chisel you can at every step observe the condition of the tissue which you are cutting, and you have a perfectly smooth surface, rendering it easier to cleanse the wound. It is also very easy to manage the chisel.

Dr. H. D. Noyes, of New York, thought that there was much less danger in the use of the chisel than of the drill. There is often great differences in the anatomical relations of the parts. The lateral sinus is not always found in the same place. With the drill there is danger of perforating the wall of the sinus or of some important vein. With the chisel or the gouge you explore the part layer by layer, and ascertain how the parts are situated. This is a strong argument in favor of this instrument.

Dr. J. A. Andrews, of New York, believed that the chisel is the better instrument and can be used with more caution than the drill. He believes that a collection of pus should always be given free vent, and therefore makes a large opening.

Dr. E. Gruening, of New York, had formerly used the drill, and in acute cases the results were all that could be desired. The drill was, however, not applicable to all cases, and he had since used the chisel. A small opening may be made with the chisel. What can be done with the drill can be done with the chisel.

Dr. A. H. Buck, of New York, in closing the discussion, said he was not in antagonism with the chisel in those cases where a large portion of bone is to be removed. He left those out of consideration in his paper. Where a large mass is to be removed, it can not be removed with the drill. The two instruments cannot come into conflict.

A communication with reference to the organization of a

Congress of American Physicians and Surgeons.

was presented and referred to a committee consisting of Dr. C. R. Agnew, Dr. J. H. Knapp, and Dr. John Green, to consider and report at the evening session.

The Morning Session was then adjourned.

Evening Session.

The first paper was on a

Fatal Termination of a Case of Sclerosing Mastoiditis after Chiselling of the Bone,

by Dr. H. Knapp, of New York.

A man, aged fifty, had extensive suppuration in both ears after scarlet fever in childhood. The right ear became totally deaf and the left, very hard of hearing, became deaf (hearing reduced to a quantitative perception of sound) by a recent attack of dizziness. Dr. Knapp found both tympanic membranes absent, the cavities sclerosed in both, pale in the right but congested in the left ear. Behind the left ear was found a cavity fully an inch deep, lined with immovable skin, the result of former exfoliation of bone. Three weeks later facial paralysis on the left side occurred. It disappeared in two weeks under steaming and large doses of iodide of potassium. Two weeks later, the patient suffered with constant intense headache and nausea. The mastoid was opened to the depth of half an inch by chiselling. The bone was

compact and in the depth very vascular. During the first two days the patient was sleepy, could not be aroused on the third, and died comatose on the fifth. No autopsy was allowed. Death was due to traumatic meningitis.

In regard to opening the bone in sclerosing mastoiditis, the prognosis is good when the sclerosis is the result of catarrhal or plastic inflammation, but bad when it is the consequence of old caries or necrosis. There are cases on the border line, and even when the prognosis is bad, the indications may be strong. The operation will rescue a certain number of the otherwise fatal cases.

Dr. O. D. Pomeroy, of New York, read a paper on

A CASE OF ABSCESS OF THE MASTOID CELLS WHERE THE CHIEF INDICATION FOR OPERATION WAS ELEVATION OF TEMPERATURE.

A. S——, aged twenty, fairly robust, had a violent attack of otitis of the right ear, which came on January 30, 1886. The following morning there was free discharge. On February 1st he entered the hospital, when a large perforation was found; a poultice and warm douches were ordered. By February 4th the membrane looked almost normal. There was some pain in the occiput and a temperature of 103.6° F. Ten grains of quinine with twenty grains of iodide of potassium, to be repeated in three hours, was ordered. This was followed by a reduction of two degrees in the temperature. The following day the temperature again went up, and it was apparent that a purulent process was going on. There was no swelling over the mastoid, and the pain was no greater than might be expected from a neuralgic condition.

After consultation it was decided to open the mastoid process. A drill was introduced, and from four to six drops of pus evacuated. After the operation the patient continued to improve until he was discharged cured.

Dr. Charles H. Burnett, of Philadelphia, gave the following account of

TWO CASES OF CHRONIC PURULENT INFLAMMATION OF THE ATTIC OF THE TYMPANUM, WITH PERFORATION OF THE MEMBRANA FLACCIDA, TREATED WITH PEROXIDE OF HYDROGEN.

In the first case no application had had the same good effect as the peroxide of hydrogen. Every other medicament had seemed to irritate rather than heal the inflamed mucous membrane. In the second case the discharge, which had been very chronic, was promptly checked by the use of the peroxide of hydrogen.

The chemical formula of this drug is H_2O_2, and by its affinity for albuminous matters, especially those of pus, it seeks every particle of this matter in a cavity like the middle ear, and thoroughly cleans the parts. The union with pus is shown by a copious foam, which boils out of the external ear. When the foaming ceases and the peroxide returns clear the diseased cavity has been thoroughly cleansed. In many cases this seems sufficient to effect a cure. Where there is a perforation in the membrana flaccida, the application is made by means of the tympanic syringe, the long and slender nozzle of which is introduced through the perforation at the attic of the tympanum. The peroxide is used undiluted.

A paper with the following title,

IN THE PHYSIOLOGY OF HEARING IS THERE AN OVERLAPPING OF EACH AUDITORY FIELD, THE SAME AS IN BINOCULAR VISION?

was read by Dr. William S. Little, of Philadelphia.

Cases of one-sided deafness afford the opportunity of mapping out the auditory field for one ear, and it is found, with the watch at two feet from the ear, the tick can be heard about ten or fifteen degrees across the median line of the head. This gives more scope to hear sounds produced on the side of the head opposite the good ear. The tuning-fork is not heard even up to the median line on the side of the ear tested. The watch has been used in making the observations. If the field of one ear reaches beyond the median line to about ten degrees, we have, when both ears are normal, an overlapping of each field to the extent of fully ten degrees on either side of the median line in front, above, and behind the head. Each ear hears sounds in this area of twenty degrees, outside of this area each ear hears singly. By means of this there is no need to turn each ear toward the source of sounds which reach the individual; the direction of sound is best found in this way for safety in walking and maintaining the erect position. Sudden loss of hearing on one side puts the sufferer to great annoyance, as the ability to determine the direction of sounds is in a measure lost, the patient often looking in the wrong place when called. It is fully as perplexing, if not more so, than in a case of sudden loss of sight in one eye, making seeing dependent on one organ of vision.

The attempt to restore hearing should be directed not only to obtain hearing in a line directly in front of the ear, but also to increase the area of hearing in the affected ear or in both affected ears, till it reaches, if possible, the coalescence seen in normal ears.

The literature of the subject of acoution and otology does not give any information on this point; too close a comparison between the eye and the ear cannot be made. The auditory and optic nerves respond to very different media. The auditory nerve has no commissure or decussation of fibres like the optic, and has a less central position in the cerebrum than the auditory.

A paper on "Two Cases of Ear Disease Due to Traumatism," by Dr. Gorham Bacon, of New York, was read by title.

The Society then went into Executive Session.

The proposition with reference to the organization of a Congress of American Physicians and Surgeons was discussed, and a committee of conference was appointed, consisting of Drs. C. R. Agnew, New York; H. Knapp, New York; John Green, St. Louis; W. H. Carmalt, New Haven; and George Strawbridge, Philadelphia.

The officers for the ensuing year are as follows:

President—Dr. J. S. Prout, of Brooklyn.

Vice-President—Dr. Samuel Sexton, of New York.

Secretary and Treasurer—Dr. J. J. B. Vermyne, New Bedford, Mass.

Committee on Membership—Drs. Gorham Bacon, W. S. Little, and E. W. Bartlett.

The following were

ELECTED TO MEMBERSHIP:

Dr. J. B. Emerson, of New York; Dr. J. O. Tansley, of New York; Dr. J. L. Minor, of New York; Dr. Henry L. Morse, of Boston; Dr. Huntington Richards, of New York; and Dr. T. Y. Sutphen, of Newark, N. J.

The Society then adjourned.

Pasteur's Record.—M. Graucher, Pasteur's assistant, in a recent lecture, said: "Of 1,335 persons who were inoculated to June 21st, he found that of 96 patients who belonged to the first or experimental category—namely, of those in whom the existence of rabies was indisputable—there was only one death, or a mortality of 1.04 per 100, or, in round numbers, 10 per 1,000; and of 644 persons of the second or clinical category, 3 succumbed to rabies, or 0.46 per 100 of the mortality, or 5 per 1,000 in round numbers. In comparing these statistics with those of the department of the Seine, it will be seen that the average mortality from hydrophobia has been reduced from 160 per 1,000 to 7.5 per 1,000. These figures apply only to those bitten by mad dogs. As regards the 48 persons bitten by mad wolves before April 22d, there were 4 deaths; but a calculation based upon eight documents communicated to M. Pasteur indicates a mortality of 82 per 100 after the bites of mad wolves. A paper published by Professor Brouardel, in the 'Dictionnaire Encyclopédique des Sciences Médicales,' on rabies, gives a mortality proportion of 67 per 100. Thus it may be seen that the difference between the two results is considerable."

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 12, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. WALTER MENDELSON presented a specimen of

LARGE RETRO-PERITONEAL SARCOMA, WITH SECONDARY DEPOSITS IN THE KIDNEYS AND LIVER.

I. S——, aged fifty-seven years, merchant, single, German. One sister died of cancer. Family history otherwise good. Habits temperate. No syphilis, rheumatism, or gout. Had always enjoyed good health until present illness, for which he consulted me first on February 15, 1886. He then complained of great constipation, almost complete anorexia, insomnia, and very great lassitude and weakness. From his friends Dr. M. learned, later, that for the past two or three months he had been observed to have emaciated and run down generally.

Remedies to relieve the anorexia and constipation were prescribed, and a few days later the patient's urine was examined and was found to contain a trace of albumen and a few hyaline, finely granular, and wavy casts. The quantity passed was, if anything, a little less than normal, and contained three per cent. of urea.

Physical examination of the heart, lungs, and liver gave negative results, and as no abdominal pain or discomfort was complained of, the abdomen received only a cursory examination.

The patient's urine had been analyzed a year previous and found normal.

In view of the results of the present analysis a diagnosis of chronic or subacute diffuse nephritis was made, and treatment of the symptoms on that basis was pursued, under which the patient's general condition improved slightly.

On March 10th microscopical examination of the urinary sediment showed for the first time a large number of red blood-corpuscles. They were neither discolored nor deformed, as blood coming from the kidney is apt to be, and it was thought at the time that a hemorrhage in the urinary passages themselves had occurred, although there was no history of pain, such as the passage of a calculus would produce.

On March 14th the patient first complained of pain over the right ilium, and said that for the past three days he had passed urine "the color of porter." Examination showed considerable cutaneous dysæsthesia at the location just indicated, but no pain on deep pressure. Percussion revealed an ill-defined area of dulness, and deep palpation was met by a marked sense of resistance, but no well-defined tumor could be felt.

As the patient's general strength had been steadily declining he was advised to go to bed, and in the afternoon a specimen of urine for examination was obtained. It was of an opaque, light-reddish-chocolate color, acid, of a specific gravity of 1.022, and contained a large amount of albumen. The sediment consisted of amorphous urates, mingled with great quantities of red blood-corpuscles, all of which were discolored and most of them misshapen. There were also numerous blood-casts, and casts containing rounded masses of a granular, dark-red material, which he took to be free hæmatin resulting from the decomposition of the hæmoglobin of the red corpuscles. There was also much of this material floating free in the urine.

Malignant disease of the kidney being suspected, and the patient feeling very weak, rest in bed was ordered, and on the following day Dr. William H. Draper saw the case in consultation with him. In addition to the ill-defined tumor on the left side, a mass could be felt in the right lumbar region. It was hard, indistinctly movable, and about the shape and size of a kidney, projecting as far forward as the axillary line. Manipulation caused no pain. At the time this mass was thought to be the kidney itself, either enlarged, or displaced by some growth.

A few days later Dr. Sands saw the case, and agreed with the diagnosis of malignant renal tumor which had been made, but advised against any operative interference—very wisely, as the sequel showed.

During the next ten days little change occurred. At first a good deal of dark blood was passed; the urine then became entirely clear again. Although constantly examined, no epithelial elements referable to a neoplasm could be discovered in it.

On March 24th blood suddenly reappeared again in the urine. The hemorrhage must have been very considerable, for long, bright-red clots, eighteen inches and more in length, and about the diameter of a goose-quill, were passed very frequently. They would present themselves at the meatus, and could then be pulled out without breaking.

The question arose: Whence this sudden hemorrhage? At first it seemed, from the length and diameter of the clots, as though they were formed in the ureters, but later he concluded that secondary deposits had occurred in the bladder (though rectal examination proved negative) giving rise to the hemorrhage. The clots, he conceived, were formed by the contracting bladder forcing the jelly-like coagulum collected at its fundus through the urethra, thus moulding the clot into shape, just as lead-pipe is made by forcing the semi-fluid metal by hydraulic pressure through a suitable opening.

As long as the coagulum was only of jelly-like consistency the patient had but little trouble in emptying his bladder, and suffered no pain. As soon, however, as it grew firm, urination became exceedingly painful. Violent tenesmus occurred, and during the act of straining small, firm, grayish-red clots would be expelled with great force, each followed by a gush of urine. Sometimes a change of position was sufficient to cause an occluding mass to roll away, leaving the entrance to the urethra free. The clotted masses expelled were quite firm and partly discolored, being made up often of two or more layers of different colors, from blood deposited at different times. The urine was not ammoniacal. Washing out the bladder had finally to be resorted to, which was rendered rather difficult as, owing to an old stricture, a No. 9 American catheter was the largest that could be introduced. Although antiseptic precautions were used—a solution of mercuric bichloride, 1 to 6,000, was used for injecting—the urine became faintly ammoniacal; a condition, however, which passed away spontaneously when the catheter was no longer necessary, owing to all the old clots having been washed away and no new ones forming.

At this time Dr. L. B. Bangs saw the patient in consultation with him.

On March 30th clear urine was passed again, and the urine remained more or less clear until April 10th, when not more than a drachm was passed during the day. In it were found, for the first time, numerous large, round, and tailed epithelial cells, presumably from some neoplasm. At the same time not the slightest desire to urinate nor feeling of fulness in the bladder existed.

As he could pass a catheter only with difficulty, owing to the tightness of the stricture, he again requested the services of Dr. Bangs, who conclusively demonstrated that the anuria was one of suppression and not retention—at least as far as the bladder was concerned—by injecting water into the bladder and observing that all that went in flowed out again. He found the capacity reduced to from two to three ounces. The patient showed no signs of uræmia, but, on the contrary, seemed at this time brighter than usual.

This condition of anuria lasted until his death, which occurred five days later, during which time not more than about four ounces of dark, bloody urine was passed,

containing many of the large nucleated, granular epithelial cells noted before. All sorts of measures for stimulating the kidneys to action were in the meanwhile tried, since at the time it was thought that the suppression was a functional and not a mechanical one, as autopsy showed it to be.

Already, on the day following the beginning of the anuria, the patient began to complain of great itching of the skin. On the third day he was, at times, a little flighty in his mind, and inclined to doze a great deal; and when awake was very apathetic. Twitching of the limbs also set in and soon became very marked, both during waking and sleeping. By the fourth day following, the apathy had greatly increased and the patient lay with mouth partly open, eyeballs fixed and staring, and limbs twitching in a semi-conscious state; and yet at no time—even up to within an hour of his death—did he absolutely lose consciousness, for on being roused he recognized his friends and seemed perfectly aware of his approaching end.

Autopsy was performed seventeen hours after death. Rigor mortis moderate; emaciation not marked; color of skin yellowish; slight œdema of skin of back. Head was not examined. Heart normal. Lungs showed hepatization from hypostatic congestion to the depth of about one inch on posterior aspects; slight general œdema; small quantity of fluid in each pleural cavity. Abdomen: fat of omentum very yellow. Intestines distended with gas; much fat in mesentery; no enlargement of mesenteric glands. Stomach greatly distended; otherwise normal. Liver not enlarged; contained about half a dozen yellowish-white nodules, varying from size of a pea to a hickory-nut; gall-bladder full. Spleen large, but shrivelled-looking; otherwise normal.

Behind the peritoneum lay a huge cushion-shaped tumor, extending above to within three inches of the diaphragm, below to the brim of the pelvis, and on either side as far as the outer borders of the kidneys. Over the vertebral column this mass was about four inches in thickness, and completely enveloped the aorta (which was very atheromatous) and other large vessels. The surface of this mass was nodulated, and, on cutting into it, several places were found where softening had occurred. He estimated its weight to have been about six to eight pounds.

The kidneys lay partly imbedded in the tumor. Right kidney: On section, bloody urine gushed out with much force as soon as the pelvis was reached, and the ureter was found plugged by a grayish-red coagulum. The pelvis and calices were much dilated and filled with bloody, grumous masses. The parenchyma was thinned, the cortex pale, and in the papillæ there were numerous hemorrhagic, softened, and broken-down areas—evidently degenerated secondary deposits. Left kidney: Same as the right, except that in the upper portion there was a firm white nodule the size of a small pea. The pelvis and calices were dilated, and contained some clear urine. The kidney was removed, together with a large mass of the neoplasm in which it lay imbedded, and on cutting through this mass the ureter was severed, as became evident by a sudden spurt of clear urine, showing that compression of the ureter by the tumor had occurred lower down. The bladder was empty, and was the seat of no pathological alterations.

Microscopical examination of the new growth showed it to consist of a round and spindle-celled sarcoma. The sarcomatous growth had invaded the outer and middle coats of the aorta. The kidneys were in a condition of diffuse nephritis.

The case seemed to present to him the following special points of interest: Large size of the tumor, together with its rapid growth. Confirmation of the original diagnosis by examination of the urinary sediment. Occurrence of what seemed to be suppression of urine, but which was in reality retention, caused by bilateral occlusion of the ureters, from two separate causes, however—the right being plugged by a coagulum, the left being closed by pressure. It might also be noted that, with the exception of the liver and kidneys, the sarcomatous growth was limited to the retroperitoneal lymph-nodes. Not even the mesenteric nodes—as far as could be ascertained—though lying in such close proximity, were involved; a circumstance which might be explained by the fact that the general course of the lymph-current here is in a direction away from the mesenteric toward the retroperitoneal nodes.

Dr. Prudden remarked that retroperitoneal tumors were interesting because of the difficulty in classifying them, as it was not always easy to say whether a given specimen should be called sarcoma or carcinoma. He asked Dr. Mendelson as to the condition of the wall of the abdominal aorta.

Dr. Mendelson said that the adventitia and the media were involved, but the intima was unaffected. In the other case mentioned the neoplasm had entered the lumen of the vein, but there was no evidence of metastatic tumors.

DILATATION AND FATTY DEGENERATION OF THE HEART—BLOOD-CHANGES OF PERNICIOUS MALARIAL FEVER.

Dr. Putnam-Jacobi presented the heart removed from the body of a child, aged five years, who died at the infirmary. The child had been living in a state of great poverty, and the visiting-physician was called to see it on account of a very severe epistaxis. The child when first visited was completely exsanguinated. It was also stated that he had been perfectly well up to two years ago, when he had measles, and from that time on he had not been very well. At three years of age he had scarlet fever, and a few months afterward he had a profuse epistaxis, one which was almost as exhausting as the last, and between these attacks there had been several mild bleedings from the nose. The pulse was 150, and the temperature 101° F. in the rectum. There was evidence also of marked dilatation of the heart, the apex beating at a finger's breadth to the left of the nipple line, and there was a distinct systolic murmur with its maximum intensity at the apex. It had been supposed, and she rather accepted the diagnosis, that there was mitral insufficiency, with some dilatation of the heart in consequence, and that the epistaxis had been that which occurs sometimes with this cardiac lesion, but it was evident at the second visit that this explanation did not satisfy the case. The child did not seem to recover at all, notwithstanding it received a full supply of food and some stimulants. Dr. Jacobi then concluded, without any history of rheumatism and nothing to cause endocarditis except scarlet fever, that the dilatation had developed since the occurrence of the epistaxis, or in consequence of some cause to which the hemorrhage itself was due.

It was a question whether it might not be due to an intense form of malarial poisoning, producing a rapid alteration in the constitution of the blood, accompanied with profuse hemorrhage, as described by Italian writers. The blood was not examined.

Autopsy.—No normal fluid in the pericardium. The heart extended vertically from the first intercostal space to the lower border of the *sixth* rib, and transversely from the right border of the sternum to a line a finger's breadth beyond the left nipple line. Its transverse diameter was 10 ctm.; the left ventricle was markedly dilated; the right to a less degree. A clot extended into the vena cava almost its entire length. There was a certain amount of clot in the mitral valve, and the clot in the right ventricle extended into the pulmonary artery. The muscular tissue of the heart was extremely pale, especially over the right ventricle; that of the left was very much redder. There were broad white patches along the line of the blood-vessels, and there was a patch of fat at the apex of the heart. The endocardium of the left ventricle was streaked with yellowish-white lines, most marked

upon the septum and papillary muscles. In the right ventricle there was dilatation, but no such streaking of the endocardium. The tricuspid valves were normal. There was a very slight roughening about the base of the pulmonary valves.

The *liver* was of normal size, rather pale, and dotted with pale yellowish specks. The *kidneys* were white, the capsule non-adherent, and the lower portion the seat of hypostatic congestion. On section, white bands were found extending down from the cortex to the papillæ. On microscopical examination the nucles of the heart were found to be in the condition of partial fatty degeneration; in no section were all the fibres granular, but lying between normal fibres could be seen four or five in which the striations had disappeared entirely and had been replaced by fine granules. The nuclei of the sarcolemma were stained on the fibres which were preserved, and on some of those in which the striations were lost.

The kidneys also showed a mixture of fatty degeneration with normal tissue, some tubules showing the epithelia normal and others presenting well-marked fatty change. In both liver and kidneys the tissue was considerably infiltrated with red blood-corpuscles.

In connection with the specimens, Dr. Putnam-Jacobi exhibited illustrations of certain bodies formed in the blood, and described by Tommasi-Crudeli, in his article in the first volume of the proceedings of the last International Medical Congress, as belonging to certain forms of malarial fever. In the present case the question arose whether the affection was one of malarial poisoning, described by Crudeli, or was one of hæmophilia.

Dr. Mendelson asked if the aorta was abnormally small.

Dr. Putnam-Jacobi said that such a condition was not noticed.

Dr. Mendelson said that cases had been reported in which the blood-vessels were too small to carry sufficient blood to meet the needs of the body, and in these cases hemorrhages occurred very frequently.

Dr. Putnam-Jacobi said that those were the conditions in cases of pernicious anæmia.

Dr. Mendelson said that they had been noticed without pernicious anæmia, and he referred to the case of a tall, thin young man who was taken ill very suddenly, became unconscious, and died in about ten minutes. Post-mortem revealed hemorrhage into the brain. The aorta was found to be uncommonly small, and all the blood-vessels were proportionately small and thin.

Dr. Putnam-Jacobi said that the effect of such abnormal smallness of the blood-vessels could scarcely be felt during childhood, but it would be during adolescence, when the arteries were elongating and the tension of the arterial system was rising, that the effect of the condition alluded to would be felt first; in the little child it would scarcely have any effect.

Dr Mendelson said that he thought it might be interesting to know whether this might not be a case occurring in a child.

Dr. Prudden then exhibited, under the microscope, a section of brain-tissue which he received from Dr. Councilman, who had described certain indeterminate bodies found in cases of pernicious malarial fever.

Dr. J. Lewis Smith presented a lung with the bronchial glands, just removed from the body of an infant, eight months old, that had had a slight hacking cough for some time. There was no marked acceleration of either respiration or pulse. The temperature was, for a day or two before death, 102¼° F. The autopsy showed

ENLARGED AND CHEESY BRONCHIAL GLANDS.

It was one of those cases, therefore, which might be fairly called *bronchial phthisis*, but there was no softening of the glands. It was the condition which in infants soon terminated in general miliary tuberculosis. Dr. Smith thought that the mistake was frequently made of regarding cases in which enlarged bronchial glands obstructed free return of blood from the brain, and consequently gave rise to an effusion of serum into the ventricles, as cases of tubercular meningitis. In such cases there would be marked cerebral symptoms, but without vomiting, sighing respiration, or elevation of temperature, the condition of affairs he had seen in a case recently.

The specimen was referred to the Committee on Microscopy to be examined for the tubercle bacillus in the enlarged and cheesy bronchial glands.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

[From our Special Correspondent.]

THE OPHTHALMOLOGICAL SOCIETY—INTERSTITIAL KERATITIS IN ACQUIRED SYPHILIS—THE EXAMINATIONS OF THE COLLEGE OF PHYSICIANS—MEDICAL CANDIDATES FOR PARLIAMENT—THE ELECTION OF DIRECT REPRESENTATIVES ON THE MEDICAL COUNCIL—THE ELECTIONS IN THEATRES OF THE HOSPITAL OF NEW YORK

[illegible]

The concluding meeting of the Ophthalmological Society for this season was held on this day week. A number of interesting cases and drawings were exhibited. Dr. Brailey showed drawings from a case of monocular iritis in a child. He considered it to be tubercular in nature, and Mr. Hutchinson remarked that the presence of enlarged cervical glands was in favor of this view. Dr. Brailey also showed a case of interstitial keratitis, which he regarded as tubercular in origin.

Dr. M. J. Symons gave the history of a case in which changes had occurred in both corneæ of a man, aged twenty-nine, who was the subject of acquired syphilis. When he came under treatment there was thinning, bulging, and opacity over limited areas of both corneæ, without any disturbance of the epithelium. The iris was partially adherent in both eyes. The other ocular tissues appeared to be healthy. Iodide of potassium affected but slight improvement. Mr. Hutchinson observed that the corneal changes had occurred in the tertiary period, but he was not certain that they were really due to the syphilis. He asked whether any members had seen corneal changes in acquired syphilis. This inquiry elicited somewhat unexpected testimony. Mr. Nettleship, Mr. McHardy, and Mr. Lang all referred to cases they had seen of interstitial keratitis occurring in patients suffering from acquired syphilis. In one of Mr. Lang's cases the disease occurred twelve years after infection. In response to a query from Dr. Angel Money as to the latest age at which interstitial keratitis of congenital syphilitic origin could occur, Mr. Hutchinson said he had seen several cases as late as thirty-six years of age; Mr. Nettleship mentioned a case he had seen in which the patient was between thirty and forty; and Mr. Adams Frost, one in a woman thirty-nine years of age.

At the conclusion of the meeting, Mr. Hutchinson, in giving up the presidential chair, gave a short valedictory address. He referred to the satisfactory progress which had been made during the three years which have elapsed since he became president. He suggested tobacco amblyopia and amblyopia potatorum as suitable subjects for investigation. Alluding to Mr. Nettleship's case of progressive failure of sight in a woman, without any other symptoms, he asked what was the meaning of this temporary extinction of a special sense? Was it allied to the temporary blindness of megrim? The assumption that such cases were due to retro-ocular neuritis required careful investigation.

The re-election of Mr. Savory as President of the College of Surgeons has come as a surprise to most outside the Council; so has the appointment of two new vice-presidents, viz., Mr. Hutchinson and Sir Joseph Lister. The latter appointments will probably lead the way for a complete abolition of the old vicious rule of election by seniority. Mr. Savory's re-election is the more noteworthy as it is unprecedented. The Presidency of the College of Surgeons has always been an annual office, unlike that of the College of Physicians, where, although the election is annual, the term of office has usually extended to five years, and sometimes to more. Sir William Jenner's re-election for a sixth year was, therefore, although unusual, not wholly without precedent. Mr. Savory's is so, and probably indicates the firm resolve of the College to pursue the policy taken up when the two Colleges agreed to combine for examination purposes, which policy was further emphasized by their jointly undertaking the erection of a hall for examination and other purposes. This hall, of which the Queen laid the foundation-stone early in the year, is now rapidly approaching completion and is already a goodly structure looking down on the Thames.

The election now in progress is not wholly without medical interest. No less a personage than Dr. Balthazar Foster, President of the Council of the British Medical Association, has been defeated at Chester, which he represented in the late Parliament. Dr. Foster's defeat is, doubtless, due to his acceptance of Mr. Gladstone's Home Rule scheme. Dr. Alfred Carpenter has tried another constituency at this election, but is again unsuccessful. Mr. Ernest Hart apparently had enough of the fray last time, and has judged it most prudent not to make a further bid for parliamentary honors. Surgeon-Major Evatt came forward at Woolwich as a Gladstonite, but was rejected. On the other hand, Dr. Farquharson has been successful in retaining his seat in Aberdeenshire in spite of his conversion to Home Rule.

In January next another election will take place—one of much less importance, but still not without interest to our own profession—I mean the election, by the medical practitioners of the three kingdoms, of five gentlemen to represent them in the General Medical Council. Of these direct representatives three are to be elected by the practioners of England and Wales. Conjecture is already busy as to who these are to be.

I find I was a little too liberal in attributing charitable feelings to theatre-goers. The sum raised for the Hospital Sunday Fund by the collecting boxes placed in theatres only amounts to just over a hundred pounds—a very paltry sum, considering what Londoners spend in amusements.

THE AFTER-TREATMENT IN CATARACT AND IRIDECTOMY OPERATIONS.

To the Editor of The Medical Record.

SIR: I clip the following from your journal of July 10, 1886:

"A REVOLUTION IN THE AFTER-TREATMENT OF CATARACT AND IRIDECTOMY OPERATIONS.

"We believe that it is only ophthalmic surgeons who, after operating, submit their patients to the horrors of the dungeon, obliging them, in the language of the contemporaneous drama,

"'To lie in solemn silence in a dark, damp dock.'

But there have now arisen certain gentlemen who have the boldness to decry this practice as unnecessary, and even hurtful. At the St. Louis meeting of the American Medical Association, Dr. Michel advocated the plan of using a light bandage to the eyes after cataract operations and iridectomies, and allowing the patients to be in a lighted room, where friends can come and read to them. Dr. Michel's plan was not favorably received at St. Louis, but it has been tried by Dr. Chisolm, of Baltimore, who reports fourteen cataracts and four iridectomies treated in this way. The method in detail is simply this: After the removal of a cataract or the performance of an iridectomy, the eyes if a cataract, the eye if an iridectomy, is closed in its normal position and a bit of isinglass plaster, about two and a half inches long by one inch wide, is then rendered flaccid by immersion in some germicide fluid and is neatly applied to the surface of the closed lids. When dried this forms a close, firm band. The patient is then allowed the full liberty of his room. In every case thus far operated upon by Dr. Chisolm the results have been uniformly good, and he has consequently abandoned the old method."

In 1869, seventeen years ago, I read a paper before the American Ophthalmological Society, under the title of "A Method of Dressing Eyes after Cataract Extractions and other Ophthalmic Operations requiring Rest by Exclusion of Light." In that paper I argued against heavy bandages, and showed how, in my experience, it was possible to give eyes rest after capital ophthalmic operations, by closing the eyelids with strips of isinglass plaster and a partial black silk mask. In that paper the following statements, among others of like import, were made, viz.: "That it is a clinical desideratum to be able to treat a case of ophthalmic surgery in a well-lighted room without admitting light to the wounded organ." Then speaking further of the method of dressing I say: "Such a dressing makes it easy to surround old and feeble subjects with an atmosphere chemically fitted by direct light for purposes of respiration, and thus to quicken the vital forces and lessen the dangers which spring from delayed or perverted reparative processes. It (light) favors regular and easy care of the patient, and the performance of such offices as may pertain to his comfort or safety. It (light) permits, at proper times, such entertainment as may tend to give pleasant occupation to the mind and banish the apprehension and dread which always exist to a greater or less degree, in the case of those who are served in the dark by groping or stumbling attendants." "There should be fresh air, influenced by the presence of sunlight, for the patient to breathe."

In 1868 the Brooklyn Eye and Ear Hospital was opened. In its wards there was provided as much light as may be found in any general hospital. In 1869 the Manhattan Eye and Ear Hospital was opened in New York. Its wards always have been light and airy.

For more than twenty years the writer has taught in the College of Physicians and Surgeons, and elsewhere, the doctrine of the value of light in the wards of an ophthalmic hospital.

C. R. AGNEW, M.D.

ICE-CREAM POISONING—VANILLISM.

To the Editor of The Medical Record.

SIR: In your issue of this date you refer to the numerous cases of ice-cream poisoning which have been recently reported, and notably to the Michigan case, in which one hundred and forty-three persons exhibited symptoms of irritant poisoning from eating ice-cream. The *Evening Post* of the same date contains a report from Charleston, Ill., giving an account of the poisoning of fifty persons from the same cause. In addition to these veritable epidemics of ice-cream poisoning, we hear almost every day of individuals or entire families having been poisoned by eating ice-cream, pies, and other alimentary preparations.

The symptoms in all these cases are essentially the same, viz.: Burning, colicky pains, vomiting, purging, great prostration, sometimes convulsions, rarely, however, terminating fatally. The symptoms are essentially those of acute gastro-intestinal irritation, closely resembling those of cholerine, and suggesting the action of an acrid metallic poison as the exciting cause. It is a note-

worthy fact, however, that the most careful clinical analysis of the offending food has always failed to detect the presence of arsenic, copper, tin, or other metallic poisons. Professor Bartley, chemist of the Brooklyn Board of Health, has suggested that poisoning from eating ice-cream and pastry may be due to the poor grade of gelatine used, and its subsequent rapid decomposition. Professor Vaughan, who has analyzed specimens of the Michigan cream, claims to have solved the etiological mystery by the discovery of a new poison, which he terms tyrotoxicin, and which he asserts is due to the decomposition of milk kept in unclean vessels. The conditions for its generation were, however, not present in the recent New Jersey cases of poisoning, since, according to the testimony, the cans containing the milk and those used in the preparation of the cream had been carefully washed and scoured; besides, the occurrence of numerous cases of poisoning from eating pies, pastries, and simple farinaceous puddings, cooked in porcelain vessels, cannot be explained upon the theory of Professor Vaughan's somewhat hypothetical substance.

It is a matter of surprise to me that in the explanation of these toxic phenomena, a possible, and in my opinion, an exceedingly probable cause, has been entirely overlooked by these observers. I refer to the poisonous properties of the flavoring extract. It is, to say the least, a pertinent and suggestive fact that in all the cases of poisoning above mentioned vanilla has been the flavoring extract employed.

Some time ago, while investigating the incidental effects of drugs upon the skin, I came across a number of references, in French and German literature, to the local irritant action of the vanilla bean upon the skin. Precisely analogous effects are produced upon the mucous membranes, besides a train of neurotic symptoms. These toxic phenomena have been grouped by French authorities under the general term "Vanillism."

In preparing vanilla for market, the vanilla-pods are classified according to their size and quality, the quality depending upon the greater or less abundance of a substance which exudes from the pod and crystallizes upon the surface in the shape of white, frost-like needles. In order to prevent the dissemination of these crystals, the pods are frequently covered with a protective coating of the oil of the cashew nut. Cardol, or the oil of the cashew, is a most powerful irritant, simple contact with the skin causing vesicular, erysipelatous, and other cutaneous eruptions.

The workmen employed in cleaning, picking over, and assorting the vanilla-pods according to their quality, are liable to various toxic accidents, and are often compelled to change their vocation on this account. The irritant effects upon the skin are first manifest in an itching of the hands, face, and other exposed parts. The skin becomes swollen and the seat of an exceedingly pruriginous papular erruption, more or less extended, and which is followed by desquamation. It is often accompanied by blepharitis, coryza, and other signs of irritation of the mucous membranes.

The nervous symptoms are headache, vertigo, lassitude, muscular pains, great prostration, vesical irritation, and sometimes genesic excitement.

Various theories have been suggested as to the nature of the irritant principle: Schroff attributed the toxic accidents to the cardol with which the pods are coated. Rosenthal thought it was because the pods were gathered when green, as it is well known that the juice of the unripe fruit is an active irritant. According to Paget, a certain class of vanilla-pods, called *Vanilons*, which are of poor quality and entirely unfit for alimentary use, are responsible for these accidents. By others it is claimed that the irritating effects are due to the presence of a particular parasite, an acarus, which infests the pods.

In Europe the vanilla used in flavoring ices, pastries, etc., has been long recognized as a prolific source of poisoning. Over thirty years ago Orfila reported cases of poisoning from eating vanilla ices. Since then numerous cases of similar nature have been reported in Berlin, Vienna, and various cities of Europe. In the endeavor to trace the cause of these toxic accidents, the most elaborate chemical investigation proved the absence of any metallic irritant, and identified the vanilla, used in the flavoring, as the vehicle of the poison.

To this it may be objected that a substitute for the vanilla bean is often used in the manufacture of cheap ice-cream. Artificial "vanillin," as it is termed, is made from coniferin, found in the sap of the pine. In the manufacture of this extract, bichromate of potassium, an extremely irritating substance, is largely employed. It is hardly probable that the process of purification is so perfect as to remove all traces of this agent.

The object of this communication is not to cast discredit upon Professor Vaughan's alleged discovery, but rather to direct the attention of your readers to what I conceive to be the most plausible explanation of the causation of ice-cream poisoning.

PRINCE A. MORROW, M.D.

[illegible]

LAPAROTOMY IN GUNSHOT WOUNDS.

[illegible]

SIR: In your issue of July 10th appears a letter from Dr. Robert Tilley, claiming for Professor C. T. Parkes, of Chicago, priority in showing that laparotomy should be performed in penetrating abdominal wounds.

The experiments of Professor Parkes' work were upon dogs, and under conditions widely differing from those with which the surgeon has to contend in the human: these experiments were referred to by Dr. W. T. Bull, when reporting his first successful case. In the *New York Medical Journal* of February 14, 1885, he says: "The propriety of exploring the abdomen for gunshot wounds has been amply discussed by many surgeons, both here and abroad—Otis, Sims, Gross, Dugus, McGuire, Kinloch, and Parkes in this country; Legouest, in France, and Nussbaum in Germany, have urgently advocated operative interference."

These writers, however, were unable to adduce a single successful case, and it remained for Dr. Bull to clearly demonstrate the now generally acknowledged fact, that with perfect antiseptic precautions and the most thorough attention to detail, laparotomy may be successfully employed in penetrating wounds of the abdomen, and should be so employed in all suitable cases.

That the "chaotic" ideas of *The Lancet* are not altogether entertained abroad is shown by the fact that in "A Manual of Surgery," edited by Mr. Frederick Treves, of London, and published during the present year, full credit in this respect is accorded to Dr. Bull.

During the winter of 1883–84, Dr. Bull advised the house staff of the Chambers Street Hospital, on which I was at that time serving, to watch for a case of penetrating gunshot wound, stating his conviction that laparotomy was indicated in such cases. This was prior to the publication of Professor Parkes' experiments.

CHARLES A. POWERS, M.D.

IS THERE AIR WITHOUT MICROBES?

[illegible]

SIR: In an editorial entitled "Opposition to Theories of Microbial Infections," in your issue of June 12, 1886, you quote, with comments that amount almost to a declaration of neutrality, the following among other sentences from a paper on cataract operations by Dr. B. I. Baldwin, of Alabama: "There is bread that hath no leaven, and air as well without germs." If this statement means anything, it must mean that there is air with which we ordinarily come in contact that is free from germs. It would be totally irrelevant to the subject if it

referred to the air above the clouds, of which it is probably true.

What are the facts regarding the existence of germs in the air?

Tyndall's experiments in the Royal Institution are too well known to require detailed description. Infusions of nutrient substances were exposed in open test-tubes in the air of a room, with the uniform result that germs were deposited from the air, and the fluids rendered rapidly opaque by their proliferation. By a calculation based upon the space occupied by each tube and the time required for infection, Tyndall estimates about seven thousand germs in each cubic foot of space in the room; but he adds: "This, moreover, would only be a fraction—probably a small fraction—of the germs really present in the air. In his presidential address to the British Association at Liverpool, Professor Huxley ventured the statement that myriads of germs are floating in our atmosphere. Certain experimenters have rashly ridiculed this statement. In view of the foregoing calculations it, however, expresses the soberest fact."

Everyone who has practised culture experiments knows how difficult it is to avoid the introduction of germs into test-tubes, flasks, etc., if they are exposed but for a moment to superimposed strata of air, thus allowing the particulate matter, which is composed largely of germs, to gravitate into it.

It may be objected that these experiments were made in the laboratory of the Royal Institution, where repeated experimentation had polluted the air. This objection, fully anticipated by Tyndall, is fairly answered by the repetition of these experiments with precisely similar results by Mr. Darwin in his study at Down, in Sir John Lubbock's study, and at the Kew Gardens.

But if "there is air without germs," where must we go to find it? Certainly not in any atmosphere where surgical procedures are likely to transpire. The ordinary conditions of social life and relations are such that *their atmosphere is never free from germs.* Professor Miguel, in his investigations at the Observatoire de Montsouris, near Paris, has, indeed, failed to find germs at a height of six to twelve thousand feet. But, descending to lower levels, he finds them gradually increasing until, in the atmosphere of Paris, he estimates about two thousand germs to the cubic foot. There is no reason to believe that the atmosphere of populous districts has a cubic foot of air free from germs; while there is evidence, abundant and irrefutable, proving their uniform presence in immense numbers wherever sickness and accidents and surgical operations are likely to occur. Perhaps there is air without germs, but Dr. Baldwin's cases will have to move out of Alabama or go up in a balloon to find it. Alabama may have bread without leaven, but it can be safely assumed that it has no air within one hundred feet of *terra firma* without germs.

The pernicious effects of air upon accident and operation wounds has been fully recognized for three centuries. During the sixteenth century it was recognized by Ambrose Paré, Jean Andre Delacroix, Wurtz, Fallopius, and others; in the seventeenth century by Wiseman, and others; in the eighteenth century by Belloste, Parmanus, Anel, Boerhaave, Bell, Hugh Munro, James Latta, and most completely of all by Abernethy (1793). It is proper to state that these views were opposed by John Hunter and John Bell. It would be impossible within proper space to refer to the works of those who, in the present century, have aided in establishing the fact that the ingress of ordinary air to wounds is always fraught with a danger which varies in degree and kind with the conditions of the atmosphere. Our knowledge of atmospheric conditions and of wound processes now enables us to positively affirm that these dangers are exclusively dependent upon the kind of germinal matter which the air contains. It is certain that if it contains none, its access to a wound, at proper temperature, can do no possible harm. It is also equally certain that if there is any germinal matter in the air, its introduction into wounds may vary from the slightest disturbance to the death of the patient.

Were it not for the introduction of these germs all wounds would heal without suppuration; for we must now accept the dictions that *without microbes there can be no pus.* Whatever doubt there may have been about this question seems to have been removed by the recent prize essay of George Klemperer, an undergraduate of Berlin University. He has shown with apparent conclusiveness that chemical irritants may produce "coagulation necrosis," but cannot cause suppuration. As editorially remarked in the "Annals of Surgery," "it is not likely that the maxim that micro-organisms are the cause of all suppuration will be again called in question in future."

No amount of witticism or ridicule will explain away or alter the rôle of these organisms. An appeal to the "all-wise and ever-merciful Maker" in such a relation, is the merest bathos, and unworthy a scientific discussion. It would be just as rational to argue the non-existence of cataract, glaucoma, or yellow fever, because they are not consonant with somebody's conception of the "all-wise and ever-merciful Maker."

Of course, it is not claimed that all germs are pathogenic. But it is claimed that whether the germs in a particular stratum of air which comes in contact with a wound are pathogenic or not can only be answered with a certain degree of probability, unless culture experiments have given to the question a definite solution. The morbid processes which they excite in wounds are very decisive "culture experiments," which ought, hereafter, to be called *culture crimes.* The only safety is in protecting wounds from contact with the air, unless strained of floating matter, or purified by chemicals. Cleanliness *is* the great desideratum. Asepsis is the object of anti-sepsis; and if it can be obtained without the use of chemical irritants, so much the better. But to deny the existence of germs in the floating matter of the air—germs which it is possible may have been wafted from pyæmic abscesses, or scarlatinal desquamations—is to deny facts which are as definitely established as the composition of water, and are much easier of demonstration.

The brilliant results obtained by Mr. Lawson Tait and others show what is possible by a strict and scientific regard for cleanliness. The comparative rarity of wound infection, and the invariable infection of dead nutrient matter, proves that there is something in living structures which resists germ development. But this resistance is not by any means universal. Mr. Tait himself says: "What condition of the system it is which is favorable to operations is almost unknown. . . . I am perfectly certain that apparent perfect health is by no means a certain indication of a power of resistance to those conditions, whatever they be, which result in so-called septic poisoning."

In view of this uncertainty, and the further uncertainty regarding the specific nature of the germs in any given stratum of air, and in view of the clinical fact, established by almost universal experience, that access to a wound is injurious, is it not safer, nay more, is not our imperative duty to prevent, so far as possible, the introduction of germinal matter from the air into wounds?

Respectfully, G. W. McCaskey.

Fort Wayne, Ind., June 28, 1886.

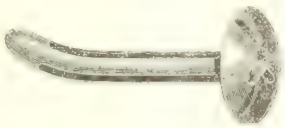
Dr. Cutter's Dictionary.—A German-Japanese medical dictionary has just been published in Tokio. It was compiled by Dr. Shigu, a government examiner in medicine, and Messrs. Take and Shibata, officers of the Sanitary Bureau. The work contains 1,400 German terms, with definitions in Japanese, and it is stated in the preface that it is based upon the "Dictionary of German Terms used in Medicine" compiled by Dr. George R. Cutter of this city.

New Instruments.

A MODIFIED INTRA-UTERINE PESSARY.

BY H. L. BOLDT, M.D.,

THE accompanying cut represents a pessary made for me by Messrs. J. Reynders & Co. It will be seen that it has three deep grooves, which connect with sufficiently large openings in the cup at the base, thereby allowing



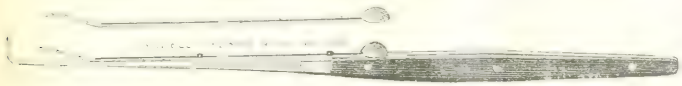
for free drainage from the entire body of the uterus, the stems heretofore in use permitting drainage only from a circumscribed portion, either at the fundus or on one side, if precaution was taken at all to secure it. The upper third of the stem is slightly curved, to facilitate its introduction, but there is also a set of straight pessaries made, or the curved one can be straightened in the usual way, if it is preferable to use a straight instrument in the case. The sizes are different. I have had the set made in four, thickness and length of stem variable. A small tampon of carbolated absorbent cotton placed against the cup, which has its concavity directed toward the uterus, is sufficient to keep the instrument *in situ*. The stem can be removed at intervals to suit the operator. The slight amount of extra trouble which the cleaning of the grooves gives, is, I think, amply repaid by the thorough drainage.

A MODIFED SIMS TENACULUM.

BY R. C. M. PAGE, M.D.,

NEW YORK.

FROM the fact that Sims' uterine tenaculum in the hands of most surgeons easily slips out of tissue, thus prolonging an operation unnecessarily in many instances, various tissue-forceps, double tenacula, and the like have been devised. But they are all more or less clumsy or difficult to manipulate. Perry's barbed tenaculum is rendered almost useless owing to the difficulty and inconvenience of withdrawing it. The instrument I now de-



sire to place before the profession is Sims' tenaculum, with a slide on it which prevents it from slipping, and is especially useful in operations on vaginal tissue. It possesses the advantages of simplicity and convenience.

1 West Thirty-third Street, March 1, 1886.

MEDICAL PRACTICE IN NEW ZEALAND.—Dr. Withers, of the *Weekly Medical Review*, of Laurence, New Zealand, writes that in New Zealand, with a population of 600,000, there are about three hundred duly qualified medical practitioners, being at the rate of one to every 2,000 of the population. Up to the present time there have been several local medical societies, but a strong movement is now on foot for the union of all these into one great medical association. By doing this, considerable influence can be brought to bear on the House of Representatives to promote legislation on matters affecting the profession; and other matters, such as the repression of quackery, will be in responsible hands.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 10 to July 17, 1886.

GIBSON, JOHN B., Major and Surgeon. Granted leave of absence for three months, to take effect about August 1st. S. O. 158, A. G. O., July 10, 1886.

BARNETT, RICHARDS, Captain and Assistant Surgeon. Leave of absence extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 15, 1886.

GARDNER, EDWIN F., Captain and Assistant Surgeon. Granted leave of absence for two months. S. O. 158, A. G. O., July 10, 1886.

OWEN, WILLIAM O., JR., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Schuyler, New York Harbor. S. O. 84, Division of the Atlantic, July 15, 1886.

Official List of Changes in the Medical Corps of the United States Navy, for the week ending July 17, 1886.

WENTWORTH, A. R., Assistant Surgeon. Detached from the U. S. S. Brooklyn, and wait orders.

NORT, OLIVER D., Assistant Surgeon. Detached from the U. S. S. Minnesota, and to the U. S. S. Brooklyn.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 17, 1886:

Typhoid fever		
Scarlet fever		
Cerebro-spinal meningitis		

THE RESUSCITATION OF INFANTS BORN ASPHYXIATED.—Dr. E. T. Blackwell, of Cedarville, N. J., referring to the Schultz method of resuscitating the new-born child, writes that he has practised for many years a somewhat similar plan, the following description of which was published in the *Medical and Surgical Reporter*. The method consisted in tossing the child, with a quick motion, the placenta being still attached. The rapid movement causes the arms to fly up, lifting the chest-walls, and causing the infant to take in air by a sudden sob. The method may appear rude, but it has succeeded in many apparently desperate cases. It has the merit of instant applicability with very quick results, and experience with it has led the author to regard it as an unfailing means of insuring the recovery of newly born infants, apparently dying from asphyxia. In the procedure the head, neck, and shoulders are supported in the palm of one hand, while the buttocks rest in the other. The tossing may be repeated at suitable intervals as long as seems necessary.

THE DANGERS OF PROGNOSIS.—A tailor in Vienna having been told by his physician that he was suffering from an incurable disease, drew a pistol and fired two shots at his medical adviser, and then killed himself. The physician was not severely wounded, and has now recovered.

THE INJURIOUS EFFECT OF THE BANDAGE AFTER LABOR.—Dr. Wm. B. Lyman, of Wilson, Wis., regards the bandage applied after labor as a fruitful cause of subinvolution of the uterus. The weight of the organ, after delivery, is two pounds or more, and this should normally be reduced to a few ounces within a few weeks, the greater part of the change taking place during the second week. In order, he says, that this change may progress perfectly the organ should have the freest possible circulation, and this is only obtained by the perfect rest of the patient in the recumbent position, all abnormal pressure over the organ being avoided. Nature does what she can by relaxing the abdominal parietes, and distending the intestines with gas, so as to cover the uterus with an air-cushion, and thus relieve the organ from undue pressure during contraction of the abdominal muscles. Under these conditions there is free and uninterrupted circulation through the blood-vessels and lymphatics of the uterus and its appendages. But the bandage, Dr. Lyman maintains, exerts constant pressure on the organ, confining it rigidly against the walls of the false pelvis, and when a pad is also applied, the uterus is more or less impacted in the brim of the pelvis, the ligaments are stretched, and malpositions and passive congestion result. Experience has taught him, he says, that a bandage does not add to the comfort of the patient, and he believes that it should be discarded, except in certain cases where its application is clearly indicated.

OVARIOTOMY IN RUSSIA.—Dr. V. Matveyeff has collected the statistics of all the reported cases of ovariotomy performed in Russia up to the present time (*Russkaya Medetsina*, June 1, 1886). The first laparotomy was performed by Vanzetti, in Kharkoff, in 1848, but the patient died. The first successful ovariotomy was reported by Professor Krassovski, in 1862. The total number of cases was 696, of which 213, or 30.4 per cent. died. It is to be regretted that the author does not give the proportion of successful cases year by year, as in this way only is it possible to judge of the progress made.

MULTIPLE TÆNIA.—Dr. Gurfinkel writes, in the *Vratch*, that he had a patient to whom he gave extract of male fern with the result of causing the expulsion of one hundred and two tape-worms. The pieces, placed end to end, measured two hundred and thirty-eight feet. Twelve distinct heads were found.

PRIORITY IN INVENTION OF THE PNEUMATIC CABINET.—Dr. Henry B. Lathrop, of Los Angeles, Cal., writes: "The papers read by various gentlemen before the Climatological Association induce me to say from the shores of the Pacific that some, at least, of our thunder is being stolen. Early in the fall of 1884 Dr. Edward C. Folsom, of Santa Monica, made, or rather had made, at great expense, a pneumatic cabinet. The coldness of the profession and the ridicule heaped upon the theories advanced caused Dr. Folsom to abandon the investigations he had begun. From him, in January, 1885, I purchased the cabinet, and have been experimenting with it ever since. For my pains I was sent to a sort of professional Coventry, and mildly held up before the community as violating the unwritten laws of ethics. So far had this thing gone that I myself felt quite 'quacky,' when, taking up a recent copy of THE RECORD, I find myself no quack, but a pioneer in the pneumatic treatment of disease. While Dr. Folsom and myself deserve probably the priority of invention and use in this country of the cabinet for treating disease, the wider range of observation enjoyed by the gentlemen who have already written on the subject make their conclusions more valuable than any we could advance. Still, if we deserve it, we would like to claim for ourselves priority of observation. I am sorry that a close corporation has been formed for the manufacture and rental of the cabinets. Mine having been an accomplished fact before the company was started, I shall continue to use it whenever and however I please for the benefit of science and of my fellow-creatures." [We fear our correspondent's claim to priority is not well founded. By referring to THE RECORD of January 17, 1885, he will find cases there reported of patients treated in the cabinet as early as in September, 1883.—ED.]

GLEET AND STRICTURE.—In a paper on the treatment of gleet, in the *Albany Medical Annals*, Dr. O. D. Ball says that the more cases of this nature that he sees the more is he convinced that the statement of Otis that "all cases of gleet are dependent upon strictures, either of large or small calibre," is wrong. A fair proportion of these cases, he says, have no stricture, and he mentions the case of a man with an old chronic specific urethritis whose urethra admitted a No. 36 French sound with as much ease as the ordinary canal will a No. 15.

A LOW TEMPERATURE.—Dr. C. W. Suckling reports in *The Lancet* the case of a woman with myxœdema who was comatose some time before death. The pulse was 36; the respirations 12 per minute. The temperature could not be taken with the ordinary clinical thermometers, which were not graduated below 95°, the mercury not rising to within an inch of the first mark on the glass. A thermometer used for taking the temperature of baths was separated from its iron frame, on which was the graduation, and the bulb, was placed under the tongue for half an hour, the level of the mercury being marked on the stem with ink. The thermometer was again placed in its frame, and the registration was 76.5°. The next day the pulse was imperceptible at the wrist, the heart-beats being 20 per minute. The temperature, taken the same way as the day before, was 70°. During the day it was taken several times, and varied from 66° to 70°. The patient died the same night. The bath thermometer, immersed in warm water, at the end of three minutes registered 90°, a clinical thermometer 98.5°, so that the figures given represented, with perhaps the difference of a degree or two, the actual temperature in the mouth, which is one of the lowest ever recorded during life.

A CLINICAL PICTURE OF A BAD DISEASE.—A writer in one of our esteemed contemporaries in the Southwest breaks loose, and gives expression to his views rather unconventionally as follows: "Dengue is a viviparous, homogeneous, amphibious hermaphrodite from the head of 'Bitter Creek,' close to 'Wild-cat Run.' It is indigenous in Austin and spontaneous in Dallas—among hogs, dogs, cats, and other non-office seekers. It is contra-indicated in all cases where a fellow expects to engage in a prize-fight or make a 'crap.' It is bilateral, having an inside and an outside. It has no symptoms—it strikes a fellow on his way from church or in a saloon, and paralyzes him to the end of his hair, and then feels out for 'other worlds to conquer.' Its pathology is confined mostly to the whole body, skin, and mouth. It destroys a man's pugnacity and plants instead thereof humility, and a third-class case of rheumatic-gout-small-pox-fits-inflew-endways and chloroformmorbus. Those who have not had their pegs knocked from under them by this fiendish short-rib searcher, say they think they have 'had a touch of it.' To all such we wish to say: Wait till it 'touches' you up in earnest, and then you will say in the words of Horace Greeley, 'I have *wilted*.'"

EXTRA-UTERINE PREGNANCY OF SEVEN YEARS' DURATION.—Dr. John Homans reports, in the *Boston Medical and Surgical Journal* of May 20, 1886, a case of extra-uterine pregnancy, dating back seven years. Laparotomy was performed, and a tumor was discovered which contained four or five pints of a fluid resembling pus, but which was composed of a fatty granular detritus, but no pus-cells. At the bottom of this sac were found all the bones of a full-term fœtus, completely macerated and separated. The patient died about four hours after the operation.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

EXCISION OF THE KNEE-JOINT.

TOGETHER WITH A REPORT OF FIFTY HUNDRED AND TWENTY-NINE CASES TREATED ACCORDING TO MODERN ANTISEPTIC METHODS, AND OF A CASE OF RESECTION OF THE HAMSTRING TENDONS, TO PREVENT RELAPSE IN CHILDREN.

BY A. M. PHELPS, M.D.,

[illegible]

IN 1879 I performed a complete excision, in a case nine years of age, for destructive caries-disease of the knee-joint. The case came into my hands after the limb had become somewhat flexed, and sinuses had formed upon the outer and inner sides of the knee. I proceeded to open the joint for the purpose of exploration and establishing drainage, but found extensive disease. The entire articular surfaces of the bones were in a necrotic condition. I at once extended my incision from the inner condyle to the outer, and below the patella, describing a curve, and freely opened the joint. After sawing away the articular surface of each bone in such a manner as to allow them to come together in a slightly flexed position, and removing the patella, together with all diseased tissue in and about the joint, and excising the old sinuses, I wired the bones together and dressed the leg with plaster-of-Paris applied over the dressing, and slung it up in order to keep the part at perfect rest. Before the plaster-of-Paris became hard a large opening was cut, through which the subsequent dressings were made. The case progressed favorably and recovered, being discharged at the end of four months. Eight months subsequently the patient returned, and I found that the leg was flexed at an angle of forty-five degrees. The patient suffered some pain at the point of excision during locomotion. Upon an attempt to straighten the leg pain was produced, and also severe reflex spasm of the hamstring tendons. I at once etherized the patient, *resected the hamstring tendons* through small open wounds, and attempted to straighten the limb, but failed. I then made an incision directly across the front of the joint and sawed out a wedge-shaped piece of bone, sufficiently large to admit of straightening the limb; the leg was placed in a *perfectly straight position*, the bones wired and dressed as before. There was some shock, and fever following, which subsided after a few days. From this time the case went on to recovery, and at the end of three months was discharged, well, with one inch of shortening. A posterior splint was worn for six months. I have learned by letter that the case has never relapsed. The relapse, Mr. President, occurring in this case—which to me at that time was somewhat novel—and my observations since of several cases of this kind in the hospitals of Europe—and which, I learned from European surgeons, is by no means uncommon—induced me to accept your kind invitation to present here, at this meeting, a paper on excision of the knee-joint. Why did the case relapse? A glance at the drawing (Fig 1) will, I think, furnish a solution of the question.

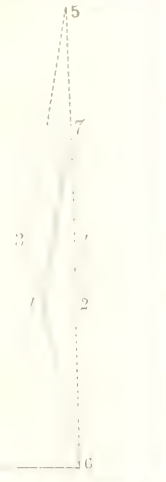


FIG. 1. [illegible] slightly [illegible] angle at 1. [illegible] acting upon this point when the limb is flexed, may produce flexion by gradual [illegible] tion causes reflex contraction of the ham[illegible] the tendons [illegible] the body and the reflex contraction of the hamstrings causes the relapse. The re[illegible] at 3.

The second case, in a boy aged ten years, was one of chronic suppurative inflammation of the knee-joint. One year before he received a blow upon the knee which produced a subacute inflammation, which gradually destroyed the joint. The leg was flexed at an angle of forty-five degrees, and the capsule was distended with fluid. An exploratory incision was made just above the inner condyle. Upon introducing the finger the ends of the bones were found denuded of cartilage and the joint filled with a gelatinous material. After a thorough washing, so as to expose the parts, I found the bone so extensively diseased that an excision of the entire joint seemed to promise the best result. The incision, as already described, was made. With a saw the articular surfaces were removed in such a manner as to allow the bones to be approximated in a straight line. After the removal of all diseased tissue the hamstring tendons to the extent of an inch and a half were resected through small open wounds. The bones were wired and the limb dressed the same way as in the previous case. A small amount of suppuration occurred in the soft parts. The recovery was perfect, and after three months the patient was discharged with bony union. The limb has never relapsed, and is as useful as a stiff limb can be with three-fourths of an inch shortening.

CASE III.—Aged sixteen years, chronic disease, subluxation, and necrosis of the head of the femur; possesses no special point of interest. The steps, as already given, with the exception of dressing, were taken; the case recovered and was discharged at the end of three months with a good limb; no pus or fever occurring after the operation.

CASE IV.—Aged twenty years, chronic inflammation from injury ten years previous. The leg was flexed and the joint filled with a cheesy substance. Crepitation could be distinctly felt and heard. An exploratory examination by incision revealed the fact that extensive disease of the bones was present. Amputation or excision was to be decided upon. An incision beginning at the inner condyle, and carried directly over the centre of the patella, which was sawn through, after Volkmann, to the external condyle, exposed the joint most perfectly. Not only was there extensive bone disease, as seen in those specimens which were removed, but the entire capsule was thickened and infiltrated. With curved scissors and forceps all diseased tissues, including the capsule of the joint, were removed. The joint-surface of the patella was also scraped off. The bones and the patella were now

[1] Read before the New York State Medical Society, [illegible]

wired, which nicely coaptated them, and the wound closed. Large drainage-tubes were inserted. Permanent dressings were applied, consisting of sublimated gauze and wood-wool bags, extending from the foot to the body, and over all the plaster-of-Paris bandage. The leg was slung up. At the first dressing, seven days later, the wound had entirely healed, except at the point of drainage. The drainage-tubes were removed and the leg again dressed as before. Three weeks later, at the second dressing, the wound was found perfectly healed. At the end of two months the patient was out on crutches. Four months from the time of the operation he walked on the leg. In this case there was no rise of temperature above 100° F.; pulse never above 90; no pus or pain, and the wound united by primary union as in the preceding case.

Case V.—Aged thirteen years; male; suffering from chronic inflammation of the knee-joint for six years. Leg flexed at an angle of forty-five degrees. The joint was found filled with fungus and there was extensive disease of the bones. I proceeded to perform an operation according to Neuber, of Kiel, Germany, and which, I believe, has not heretofore been resorted to in this country (see Figs. 2 and 3). An incision, extending from the outer con-

Fig. 2.

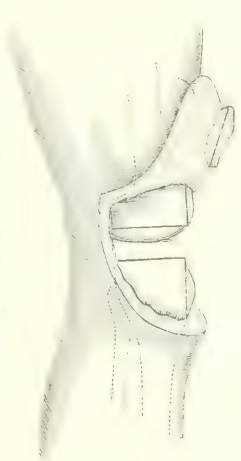


Fig. 3.

dyle, underneath the patella to the inner condyle, brought the joint into view. The heads of the femur and tibia were sawed square, parallel with the joint surfaces. The posterior projecting portions of the condyles were also removed. The patella was now joined at its under surfaces and securely nailed to the front of the tibia and femur with strong steel nails. A wire was also inserted on each side, from tibia to femur, to more securely hold the bones. The case was dressed the same as the preceding. I neglected to say that the hamstrings were resected, and all disease removed from in and about the joint. The case developed no fever or pus, and but little pain, and healed perfectly under the dressings in three weeks. Patient walks well with a perfectly straight leg.

Cases VI. and VII.—Male, twenty-one years of age; female, twenty years of age; both chronic inflammation of the knee-joint, of several years' standing, with extensive bone disease, were resected before the class in Mary Fletcher Hospital, University of Vermont. Fenwick operation was performed. The cutting of the bones constitutes the distinguishing feature (see Fig. 3). The cases were dressed similarly to the preceding case, and healed perfectly under two dressings, in three weeks, without pus or fever above 101°, and with no considerable degree of pain. Discharged from the hospital in seven weeks, cured.

Case VIII.—Female, aged nineteen, extensive fungous disease of joint, with osteitis of the head of femur. The joint was opened for exploration and washing out, but the disease was found to be so extensive that immediate excision or amputation was decided upon. Excision was performed before the class in the amphitheatre of the above-named hospital. The excessive administration of ether caused death, which took place soon after the completion of the operation. The operation of Dr. Fenwick was performed. The microscope revealed the presence of pus in the cancellated structure of the bone.

The favorable course in Cases III., IV., V., VI., and VII., was due to the perfect coaptation of the bony and soft parts, good drainage, and antiseptic dressings which did not require constant change; thus allowing the parts to remain at perfect rest, and at the same time, by the method of their application, exercising equal pressure, which regulated the circulation, preventing swelling, and obliterated cavities or pockets which might have existed when the soft parts were brought together. In addition to all this the carrying out from the beginning to the completion of the operation, and at the subsequent dressings, the most scrupulous details of modern antiseptic methods.

Want of time compels me to thus briefly report these eight cases, with nine operations.

The end sought in all operations of excision of the knee-joint should be:

1st. To remove all diseased tissue, including the capsule of the joint.

2d. To make the incisions in such a manner as to furnish easy access to every part of the joint and furnish perfect drainage.

3d. To restore all tissues to their normal position without leaving cavities.

4th. To get perfect drainage.

5th. To insure absolute immobility of parts after the operation.

6th. In children, after *resection of the flexor tendons, placing the limb straight and utilizing the patella when practicable, to prevent relapse.*

The operations which are preferable and meet these indications best are Volkmann's, Fenwick's, and Neuber's.

If these requirements are carefully followed out, and if all diseased tissue is removed, including the capsule of the joint, the surgeon will have to deal simply with compound fracture, and the mortality from the operation ought not to be greater than from accidental compound fracture of the femur which has been carefully wired and dressed according to the light which surgery of the nineteenth century sheds. The peculiar advantage of sawing the

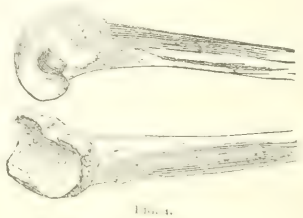


Fig. 4.

bones after Fenwick's method keeps them in position, even if a slight subsequent flexion occurs, as the head of the femur fits the socket-head of the tibia similarly to a hinged joint. Should flexions occur in cases where the bone is cut squarely across, a cavity would be left on the anterior side, making a pocket for the accumulation of secretions between the ends of the bones, which would be quite likely to prevent bony union or defeat the object of the operation by long-continued suppuration. The extreme difficulty, however, of cutting the bones to fit perfectly, without leaving cavities between their surfaces, after Fenwick's method, is quite apparent, as curves are more difficult to make than angles.

TABLE I.

Reference.	Operator.	Patient.	[illegible]	[illegible]	Disease.	[illegible]
[illegible]	[illegible]	Female, 20.	Retention of patella.	[illegible]	[illegible]	[illegible]
[illegible] 1885, viii., 252.	Webb.	[illegible]	Complete.	[illegible]	Purulent synovitis; ascites.	Bone wired.
[illegible]	[illegible]	Male, 45.	Complete.	little limp.	[illegible]	Wire suture and splint.
St. [illegible] Med., 1889, viii., 532.	Causon.	Male, 27.	Complete.	[illegible] later.	[illegible] hernity.	[illegible]
Australian Med. Jour., [illegible]	Fitzgerald.	Female, 40.	Complete.	[illegible]	[illegible]	[illegible]
[illegible] ii., 268.	[illegible]	Male, 40.	Of cartilage.	well without crutch.	Chronic arthritis five years; anchylosis.	[illegible]
British Med. Jour., 1879.	[illegible]	[illegible]	Complete.	[illegible]	Chronic arthritis.	[illegible]
British Med. Jour., 1883, ii., 860.	Campbell.	Female, 35.	[illegible]	[illegible]	[illegible] ages.	[illegible]
[illegible]	Briddon.	Male, 5.	[illegible]	[illegible]	Tubercular arthritis.	Catgut for bone.
St. [illegible]	Ladley.	[illegible]	[illegible]	[illegible]	[illegible]	Tenotomy of hamstring.
St. [illegible] 1885, xlix., 79.	Lister.	[illegible]	[illegible]	[illegible]	[illegible] years.	[illegible]
[illegible] zette, 1884, ii., 321.	Parker.	Male, 6½.	[illegible]	tion; amputation.	Chronic arthritis.	[illegible]
[illegible]	Boeckel.	Male, 2.	[illegible]	Useful limb.	[illegible]	[illegible]
[illegible] viii., 319.	Cazin.	[illegible]	[illegible]	[illegible] no patella.	Osteo-arthritis.	Gutta-percha apparatus.
[illegible]	[illegible]	Female, 7.	[illegible]	Death from tubercular meningitis.	[illegible] standing.	[illegible]
[illegible]	[illegible]	Male, 7.	[illegible]	[illegible] strong, with movement to	Chronic arthritis; anchylosis.	Watson splint.
Lancet, 1881, ii., 910.	[illegible]	[illegible]	[illegible]	short; walks well without	Chronic arthritis; sinuses.	Wire for bones.
Lancet, 1880, ii., 379.	Barber.	[illegible]	[illegible]	union eight weeks after	Chronic arthritis.	Back splint.
Lancet, 1879, i., 517.	Moore.	Female, 14.	Complete.	straight and stiff.	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	Complete.	Walks with crutches; seven	Caries in condyles.	Plaster-of-Paris splint.
[illegible]	Ripley.	Male, 28.	[illegible]	shortening.	Chronic arthritis for three	Wire for bones.
Chicago Med. Jour., 1883, xlvi., 471.	[illegible]	[illegible]	[illegible]	[illegible]	Chronic arthritis.	pension.
Med. Press and Circular, 1880, i., 85.	[illegible]	Male, 18.	[illegible] patella [illegible]	days later.	Chronic arthritis.	Box splint.
[illegible]	Bennett.	[illegible]	Complete.	[illegible]	[illegible]	Plaster-of-Paris splint.
Kansas City Med. Jour., 1884, v., 48.	[illegible]	Male.	Complete.	[illegible] fourths inch shortening.	[illegible] tibia.	Plaster-of-Paris splint.
Am. Jour. Med. Sciences, October, 1884.	Fuller.	Male, 16.	Complete.	Healed by primary union; one dressing.	Tubercular arthritis; three	Steel nails for bone ends.
[illegible] 1882, ii., 167.	Wallace.	Male, 33.	Complete.	Slightly movable joint, walks with trifling limp.	[illegible]	Posterior splint.
Med. and Surg. Reporter, [illegible]	Schenck.	[illegible]	Complete.	Doing well a week later.	Tubercular arthritis.	[illegible]
Glasgow Med. Jour., 1880, xiv., 423.	[illegible]	Female, 9.	Complete.	three months later.	[illegible]	[illegible]
Australian Med. Jour., [illegible]	Drew.	Male.	[illegible]	[illegible]	[illegible]	Hays' splint.
Arch. Med. Belges, 1881, [illegible]	Leroy.	[illegible]	[illegible]	high shoe.	[illegible]	[illegible]
Indian Med. Jour., 1880, xv., 185.	Mahendra Nathalidedar.	[illegible]	Complete, patella not removed.	[illegible]	[illegible]	[illegible]
Indian Med. Jour., 1881, xvi., 309.	Shah.	[illegible]	Complete.	eighty days.	[illegible] cause.	[illegible]
[illegible]	Weir.	[illegible]	Complete.	[illegible]	Tubercular arthritis.	[illegible]
[illegible] xviii., 564.	Preetorius.	Female, 9.	Volkmann's	[illegible]	Fungous arthritis.	[illegible]
[illegible] Record.	Morris, R. T.	[illegible]	Complete.	Healed under one dressing; walks well.	[illegible] losis.	[illegible]

In Volkmann's and Neuber's methods the patella plays the important part of holding the bones in perfect coaptation; in Neuber's, it forms a splice of the bones; while in Volkmann's, by the action of the quadriceps muscle and its immediate union to the surface of the femur and tibia which has been prepared for it, the patella performs the same function. In children the patella, if not extensively diseased, should be thus utilized. This, in connection with placing the limb in a perfectly straight position, and the resection of the hamstring tendons, will, I believe, prevent the disastrous relapses so frequently occurring in subjects under fourteen years of age. A posterior splint should also be worn for one year or more.

Tenotomy of the hamstring tendons has been frequently performed to allow the straightening of the limb before the operation, otherwise a greater amount of bone would be sacrificed. But as to resection of all the flexor tendons to prevent their subsequent action in producing relapse in children, I am not aware of its ever having been done prior to the four cases which I here report. After an excision, the leg, so far as the knee-joint is concerned, becomes a crutch, and, were all muscles and tendons which act upon it removed, the power of locomotion would not be affected. Therefore a resection of one or two inches of the hamstring tendons, through two small incisions, when done antiseptically, adds nothing to the danger of the operation.

The mortality from excision of the knee-joint, as compiled by Culbertson, from all sources in private practice is: Under five years of age, 38.9 per cent.; between five and ten years, 16.2 per cent.; between ten and fifteen years, 17.2 per cent.; between fif-

teen and twenty years, 30.1 per cent.; between twenty and twenty-five years, 39.4 per cent.; between twenty-five and thirty years, 37 per cent.; between thirty and forty years, 41.5 per cent.; over forty years, 52.6 per cent.; an average in all cases of 29.8 per cent. These figures show the most favorable age to be between five and ten. But there is more danger of relapse,-non-bony union, and permanent shortening from cutting into the epiphyseal line at that age. Puberty is the most favorable age. From the same compilation the mortality from gunshot wounds is 75 per cent.; other injuries, 39 per cent.; disease, 31 per cent.; deformity, 13 per cent. The mortality from military amputations is: In the lower third of thigh, 50 per cent.; hospital amputations, 35 to 57 per cent.; amputations for disease, 22 per cent. Edwards' plates of military excisions show a mortality without excision of 80 per cent.; with excision, 80 per cent.; amputation, 73 per cent., being 7 per cent. in favor of amputation in gunshot wounds.

These statistics are made up from foreign wars and our late rebellion. If the above statistics are correct, and modern methods of operating and dressing were followed, clearly excision of the knee-joint should be abandoned in military surgery and also in gunshot wounds in which the bones of the joint are extensively comminuted. But these compilations were made in 1877, from cases many of which were operated upon prior to the advent of the more scientific antiseptic methods of to-day.

In Culbertson's tables (see "Prize Essay," 1876), 684 cases of excision of the knee-joint for disease, injury, and deformity are reported. I find 51 deaths from pyæmia, and septicæmia, 31 from exhaustion, 6 from erysipelas, 3 from hectica, 2 from phlebitis, 4 from secondary hemorrhage, and 1 from acute suppuration, a large majority of which are due to wound infections—a death-rate from all causes of 14.47 per cent.; from pyæmia and septicæmia alone of 7.45 per cent.

A glance at the tables appended, which have been carefully compiled from sources known to be rigidly antiseptic, and all since 1878, will furnish a key to the large per cent. of mortality prior to that date. In 329 operations are found 31 deaths—a mortality of 9.42 per cent. Excluding 21 cases of deaths from phthisis and other diseases not dependent upon the operation, gives a mortality of only 3.03 per cent. In 329 cases there are only 3 cases of septicæmia and 1 of pyæmia. Add to 9.42 per cent. the 14.47 per cent. death-rate from Culbertson's tables from wound-infection gives 23.89 per cent., which is nearly the exact rate furnished in his tables as the mortality following excision of the knee-joint. The reduction of mortality from 29.8 per cent. to 9.42 per cent. is sufficient evidence, I think, to convince the profession of the efficacy of modern antiseptic methods, and this has been mainly due to the prevention of wound infection, as I have already shown. Deducting the 21 cases of death not due to the operation reduces the mortality to 3.03 per cent. (see Table II.). The same 684 cases show, by Culbertson's tables, 77 amputations, or 11.25 per cent.; in the 329 cases reported in this paper 19, or 5.77 per cent.

I will state that the class of diseases, and the causes for which excision has been performed, vary but little in Culbertson's compilation and those of this paper. In his 684 cases are to be found less than a dozen cases of excision for recent injury. Another noticeable fact is, that in the table of Culbertson of "Excision for Deformities" there are 53 cases with no amputations, but 7 deaths—5 from sepsis, 1 from pleuro-pneumonia, and 1 from tetanus. The amputations are reserved for the operations performed upon already diseased or suppurating joints, but the mortality being about thirteen per cent. is still very much larger than the present mortality furnished from operations upon already diseased or suppurating joints, and, as stated by Culbertson, the per cent. is in one class of cases 29.8, the other 13. Wound-infection then was quite common, and difficult to do away with, when suppurative processes were already found in joints; now they are easily managed.

TABLE II.—*Showing Mortality of Cases of each Operator.*

Reference.	Operator.	Number.	Deaths.	Recoveries.	Subsequent amputations.	Per cent. mortality.
International Encyc. of Surgery, vol. iv., 5, 18.	Ashhurst, Jr.	26	2	24	..	..
International Encyc. of Surgery, vol. iv., p. 4.	Lyman,	28	1	27	2	..
Transactions Eighth Int. Congress, Copenhagen.	Schede.	30	4	26		..
New York Med. Jour.,	Briggs, A. M.	8	1	7	.	.
D. Zeit. f. Chir.,	Wood,	3		3		..
D. Zeit. f. Chir., 389.	Reeves,	8	1	8	1	..
Chicago Archives,	Bradford,	4		4		..
Bull. et Mem. Soc. de Chir. d. Paris, 1879, 461.	Duplay,	6		6	..	..
Trans. Ind. Med. Soc., 1879, xxix., 108.	Bergman,	3		3	.	.
Hospitals-Tidende, R., 221	H.	4	.	4		..
Hospitals-Tidende, 1879, 2 R., 441.	Sam. H.	30	7	23	..	..
Lancet, 1883, i., 101.	Gould and Bird	2	.	2	.	..
Rev. de Chir., 1883, iii., 352 and 394.	Duke,	2		2	.	..
Deutsch. Zeit. für Chir., xxii., 145.	Mayo,	32	9	23	2	..
New York Med. Jour., xxxv., 441.	M. Barney,	1		1		..
Med. and Surg. Rep., xlv., 4.						..
Edinburgh Med. Jour., xxx., 1085.	Spence,	2	..	2	.	..
Med. Times and Gazette, 1881, ii., 272.	Page,	5		5	.	..
Liverpool M. C. Jour., 1883, 3.						
New York Med. Jour., xxxv., 321.	Page,	6	.	6		..
Annales de Chir. et d'Orth., 1883, 3.						
Lancet, 1881, ii., 705.	Rickard,	3		3		..
Hospitals-Tidende, R., 241	Hansen,	3		3		
Dublin Monthly Jour., 1882, 3d., lxxiv., 326.	Stokes,	4		3	1	..
Dublin Monthly Jour., lxxxi., 342.	Coppinger,	3	.	3	.	..
Nashville Med. Journ., xv., 742.	Allen,	3	.	3		.
Lancet, 1884, ii., 143.	Mansell,	6	1	5	1	
Chicago Med. Jour., 1884, xlix.,	Lenker,	3		3		
Lancet, 1881, ii., 910; 1885, i., 4.	Bland,	2	.	2	..	.
Med. Press and Circular, 1882, xxxiv.,	Norton,	2		2		..
Pester Med. Ch. Presse, 1882, xviii., 35; Centr. f. Kr. Ch., Hrsg. v. Wittelshöfer, 1882, 2.	Polya,	3		3	1	.
Report from books of Roosevelt Hospital to NEW YORK MEDICAL RECORD, by Dr. Silver, House Surgeon.	Sands, H. B.	8	1	7	1	
Report in the New York MEDICAL RECORD, by Dr. Coe.	Forster, A. G.	10	1	9	2	..
British Medical Jour., 1882, ii., 824.	Wright, G. A.	17	2	15	4	
From table in Medical Chronicle, 1886, different operators.	....	38	1	34	4	.
Mil. Hist. U. S. Wounds in the late War, Plates.	Plates	20	..	..		
Total	.....	325	31	297	19	9.42
Deduct those in patients already diseased, namely: bone disease, 1; pulmonary disease, 1; general disease, 1; wounded,	....	21				
Leaving as result of operations, deaths	.....	10	.	.		3.03

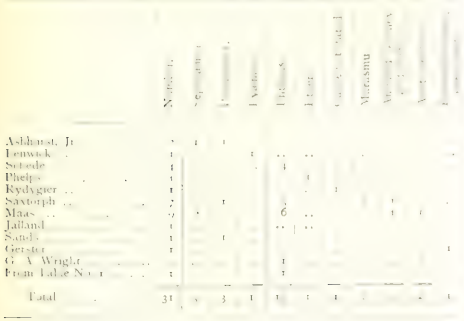
* Per cent. of amputations following excision, 5.77.

Cases for excision of the knee-joint should be carefully selected. In children under eight years of age it should never be resorted to, except in cases of destruction of the entire joint, and not until after other means have failed. It is better at this age to excise through exploratory openings such portions of bone and tissue as are found diseased, using the gouge-scoop and chisel thoroughly, establishing perfect drainage, fixation, and extension. Chronic diseases with deformity, either purulent or non-purulent, not yielding to the ordinary methods of treatment, are suitable cases at any age. Extensive suppuration, burrowing of pus, with many sinuses distributed about the joint, and extensive necrosis, making it difficult, uncertain, or impossible to remove all diseased tissue, are cases more suitable for amputation. Deformities from long-standing arthritis, with but little bone disease, limited to the articulations, are very favorable cases for excision. Anchylosis in bad position, compound luxation, and subluxations from long standing joint diseases should be excised.

Many cases of joint disease among the poor, which might by long treatment be cured, if the patients could spare time from their work, should be excised, because they are then restored soon to health; when, if the opera-

tion were not performed, amputation would quite likely be demanded in after-years, owing to frequent relapses.

TABLE III.—*Showing Cause of Death.*



I desire to acknowledge the invaluable assistance of Dr. Robert T. Morris, of New York, in furnishing to me the statistics of cases which he translated from foreign journals for publication in this paper.

A REVOLUTION COMPLETE IN THE AFTER-TREATMENT OF CATARACT OPERATIONS.

BY JULIAN J. CHISOLM, M.D.,

LATE SURGEON, U.S.A.

RECENT experiences at the Presbyterian Eye and Ear Charity Hospital of Baltimore City tend to show that needless and annoying restraint is practised upon cataract patients by surgeons who adhere to the time-honored method of bandaging, over compresses, eyes recently operated upon for the extraction of opaque lenses, or for the removal of pieces of iris, as in iridectomies. At the meeting of the National Medical Association in St. Louis, I was conversing with Dr. Charles E. Michel, of that city, on the comfort which cocaine gave to eye surgeons, when he mentioned that its introduction, and the discarding of general anæsthetics, with the accompanying vomiting, had enabled him to modify the eye-dressings even to the entire abandonment of the historic eye bandage. He had substituted for it a piece of gold-beater's skin for securing the eyelids, and found it an ample dressing. He also treated cataract patients no longer in dark rooms.

To me, accustomed to follow in the universally trodden path, and of applying over each eye a piece of soft cloth, then a mass of raw cotton as an elastic pad, then a well-secured bandage for obtaining and insuring (?) uniform and continued pressure, this was a startling innovation. It impressed me to such an extent that at the afternoon meeting of the Ophthalmological Section, a large attendance being present, I related my conversation of the morning, and asked if anyone had had any experience with adhesive straps and light rooms for the after-treatment of cataract cases. The voice of the Section was one of warning, that such an innovation would be fraught with great danger, and that we had better adhere to the course which had been shown by ophthalmic surgeons in all parts of the world to be a successful method of dressing. With compresses, bandages, and restraint in bed, in dark rooms, thousands of blind cataract patients had been made to see, and that, therefore, we had better not disturb so well-established and so successful a method. In discussing the subject I used in argument that because millions of women, in all parts of the world, after confinement, had been surrounded by an abdominal band, called a supporter, and had survived it, this had not deterred modern obstetricians from discarding what in most cases they knew to be more an abominable than an abdominal support; and that possibly modern eye surgeons would have to discard eye bandages for similar reasons.

Having a large amount of eye material at my disposal I promised the Ophthalmological Section that I would test this mode of dressing cataract cases at once, and would promptly report my experiments, if successful, so that through it eye patients might escape the annoyances to which they are now universally exposed.

My experiences by the new method of dressing have been so markedly satisfactory as to warrant me in discarding forever the stereotyped cataract compresses and bandages from the Presbyterian Eye Hospital. From this time forth a piece of white isinglass plaster will be my sole dressing for cataract and iridectomy patients, to the comfortable exclusion of all water applications.

Here is the detail of dressings and treatment which I now pursue in cataract cases. All cataract extractions are made under a four per cent. solution of cocaine. A few drops in the eye, the patient lying on the back, so as to retain the drops in contact with the cornea, will in ten minutes give all the immunity from pain desired. This solution has always served me well. Since the introduction of cocaine into surgical practice, now eighteen months, 182 operations for cataract extraction, besides a number of needle operations for soft and capsular cataract, have been performed at the Presbyterian Eye and Ear Charity Hospital under its painless influences. I perform Graefe's modified linear incision without conjunctival flap, which, with the exception of the puncture and counter-puncture, places the incision entirely in the clear cornea. The iris is seized at its pupillary border, from the centre of the corneal opening, and when well drawn out is divided, so that one clip of the scissors usually perfects the iridectomy. This course insures a small, well-shaped pupil. The capsule is opened in its upper front portion, and the lens is pushed out by stroking the cornea upward with a rubber spoon. Should I find the capsule thickened, after clearing away all lens detritus, I pass into the anterior chamber Mathieu's iris forceps and remove by traction the whole capsule. This leaves a beautifully clear pupil. The surface of the eye is then washed with an antiseptic fluid—1 part of the biniodide of mercury to 20,000 of water is what I am now using—a four-grain solution of atropia is put on the cornea, and the lids are closed, after testing vision by counting fingers. I then take a piece of isinglass plaster, about an inch and a half wide and two and a half inches long. It is dipped in the antiseptic liquid, which happens to be conveniently at hand, and when it becomes thoroughly flaccid it is evenly laid over the closed eye from brow to cheek, gently pressing it in at all points by means of a rubber spoon, so as to make it adapt itself thoroughly to the whole surface of the eyelids. Both eyes are closed in this manner if for cataract extraction, only the affected eye if the operation be an iridectomy. In a very few minutes the plaster is dry enough to insure the perfect and permanent closing of the lids.

In the Presbyterian Eye Hospital I have a number of private rooms, so that I can concentrate nearly all of my operations, both for ward patients and private patients, in this building. All operations are performed in the operating-room, on the second floor, on account of the perfect light which I can always secure in it. From the operating-table all patients walk to their rooms, often ascending two flights of stairs to reach them. When put to bed the only instruction given is not to touch the eyes. No restraint is required as to the movements of patients. They are allowed to lie on back or side, as they may find it most agreeable. Operations at the hospital are always performed between two and four o'clock in the afternoon. Patients usually restrict their supper to a cup of tea and some light bread. From the first breakfast there is no restriction put on diet. Patients are allowed to eat anything which they know will agree with them. If any restlessness or nervousness be

exhibited at bedtime, the patient is given a sleeping draught of ten grains of hydrate of chloral and twenty grains of bromide of potassium. It is not often found necessary to continue this mixture after the first night. Each patient has a bell placed on a small table near the bed and within easy reach, so that they may summon a nurse if one is needed for any purpose. Frequent visits are paid to the room by the nurse, and also by the resident physician, but the constant presence of a nurse is never required. Patients are allowed to get out of bed on calls of nature, and sit up in bed to take their meals. The private rooms and wards of the hospital are all curtained with blue shades. These are drawn down to exclude sunlight, but at no time do they make the room so dark that reading may not be indulged in by friends of the sick.

The straps are examined day by day. If they remain firmly adherent and the patient has no pain, the straps are not disturbed. If they become detached they are removed and new ones applied. On the third, fourth, and fifth day a few drops of the atropine solution are put near the edge of the plaster at the inner canthus. The solution works its way along the lashes, and some of it is felt in the eye. Not enough is put on to displace the adhesive strap.

After the second day the patients are at liberty to sit up out of bed, if they desire it. In this regard they can follow their own inclination. If the case has progressed satisfactorily the straps are removed from both eyes on the sixth day. In many cases I have done this as early as the fifth day, without any disturbance of any kind following. As the light has never been excluded from the sick-room during the strapping period, the removal of the diaphanous adhesive straps and the opening of the eyes require no change as regards light. When the eyes are now examined, and the light of the room is sufficient for this purpose without artificial means, one is at once struck with the very small degree of hyperæmia present, and the absence of photophobia and lachrymation. From the very beginning the patient stands the moderate light with no discomfort and with little weeping. When light is not excluded the eye rapidly gains strength, and in a very few days the patient can enjoy the freedom of the house without restraint. In two weeks from the day of operation, as a rule, and in some cases as early as the tenth day, patients are ready to return to their homes, using smoked glasses as a precaution against the sunlight of the street only, but not in the house.

From my recent experiences in treating eyes by this new method, and looking back from this standpoint upon my thirty years' of experience in eye surgery, I am forced to the conclusion that much of the discomfort which patients experience after cataract operations can be truly charged to the surgical dressings and restraining treatment.

In the first place, can any kind of compress and retaining bandage be applied to a recently opened cornea which will at all times, and under the varying positions of the patient's head, while lying in bed, keep up an equable pressure on the eyeball? Grant that the pressure of the ball of elastic raw cotton, which is the most easily adapted of all compresses, when gently secured by the retaining band, is uniform over the entire surface of the lids as the patient leaves the operating-table, the moment the head presses upon the pillow, and especially when the head is moved from one side to the other by the restlessness of patients, a drawing of the bandage is a necessary consequence, making the lid-pressure irregular and disturbing the corneal wound. This has ever been so, regardless of the great variety of head-bands used, and must ever continue under the commonly used methods of dressing. If we recognize the tonicity of the orbicular palpebral muscle, acting upon the thoroughly moulded tarsal cartilage, as the proper eye-splint, and the natural means of securing uniform pressure, then why should we not use it? Retain the eyelids closed by means of a light adhesive strap, an appliance which will not under any condition or at any time change the direction or degree of this tonic support, and we have truly found the means of sustaining the proper adaptation of the edges of the corneal wound for promoting speedy and perfect union. The theory of this is perfectly rational, and experience with this method of dressing eyes after cataract extractions will substantiate its efficacy.

The next point of great and grave importance is the supposed need of darkness for the successful treatment of cataract operations. This has been so earnestly pressed upon us by all authorities and by our own confirmed habits that we are all wedded to the practice. It is a revolution, indeed, to break out of this deeply worn rut in which ophthalmic surgeons in every part of the world are working.

The golden rule for successful surgery is to disturb the natural processes as little as possible, and not excite an irritable condition of the system which might be the starting-point for other and more serious disturbances.

We must all acknowledge that the every-day and all-day exposure of the eyes to light prior to cataract operations, and then the sudden transition to utter darkness of closed eyes, with pads and bandages, in dark rooms, is very positive. Treat healthy eyes in a similar manner, and keep it up for a week, as we do our cataract patients after operation, and what would be the result? When in summer we go from our moderately shaded offices into the noonday sun our healthy, strong eyes feel very unpleasantly the transition, and, as we have all personally experienced, we know it takes some minutes before the discomfort passes off. When we go from a dark room into strong light the effect on the eyes is very disagreeable. If, after one week's incarceration in a dark cell, one is suddenly turned out into the street at midday, the acquired photophobia and hyperæmia would cause pain and weeping, and possibly bring on more serious congestion with destructive inflammation. Yet in a measure this is what we are all doing for our cataract patients. We incarcerate them in utter darkness, and after keeping them there for a given number of days expect good to come from this very unphysiological and unreasonable proceeding. When the bandages are removed, even in a very dark room, the eyes feel sensitive and weep. We expect this, and are never disappointed in finding it, but we have failed to appreciate why it is always so.

When we remove the opaque lens from a patient's eye, with the strong light needful for operation shining directly on his face, he does not complain of the extraordinary brilliancy, because the transition is not excessive. The eye, still smarting under the surgical manipulation, and made irritable by the wounds necessarily inflicted, is not annoyed by the strong light to which it is accustomed. When the patient's eyes are now closed the lids will shut out quite as much light as did the opaque lens, and therefore it replaces the condition which had existed without annoyance for several months prior to the operation, and during which the clouded eye was not inconvenienced by light.

I can readily look back to my early experiences in surgical work when the professional world deemed it necessary in cataract cases, as well as in every other surgery, to prepare the patient weeks in advance by diet, purgatives, and annoying restraints of all kinds, thereby establishing an irritability which led to the very troubles we were so anxious to avoid. These accidents were induced by the professional and well-meaning interferences with a natural and wholesome state. At the present time none of us will hesitate to operate upon a matured cataract a few minutes after the patient enters for the first time the hospital dispensary, with his stomach full of the very recently enjoyed dinner. He feels well generally, and we leave him so, and this for his future good and our credit as modern surgeons. This is a very positive advance from a former surgery. Now let us take another very great jump for our patients' good, and our credit as

modern eye surgeon. I leave out cataract patients in a condition as little disturbed as possible from the state just prior to the operation for extraction. Close the eyelids, when closed, a sufficient protection to the cornea, a substitute for the lens removed, and retain the eyelids closed by as light an adhesive covering as you can find. Any light-colored isinglass admits light freely, and when thoroughly wetted will adjust itself snugly to every part of the lid surface, and when dry will hold on firmly. As patients up to this time have not excluded daylight from their places of abode, let us be careful to surround them with the same degree of light as that in which they have been living. Let the chamber, therefore, be pleasantly lighted and not heavily curtained. The luxury of this treatment to a patient, who, in a former experience, has had his head enveloped by bandages is truly enjoyable, and the friends in attendance about him will certainly appreciate the comfortable surroundings.

I have never seen anything to commend in the annoying restraints imposed by some surgeons on their cataract patients. I know that some are so fearful of jolts and the displacement of the eye-contents that they insist on operating upon patients in the beds in which they expect them to remain, so that the contents of the eye operated upon may not be disturbed by any movements of the body. I have experienced too much inconvenience from bed operations and defective light to continue this bad method, which I have long since discarded. The luxury of an operating-table of proper construction and height, placed where the full light of a large window will fall directly on the face of the patient, will enable the surgeon, placed at his ease, to manipulate so much more skilfully that the patient will therefrom derive much more advantage than he can possibly lose in going from the operating-table to the bed. When in bed, the petty annoyances inflicted by an over-careful surgeon are enough to start a whole train of nervous symptoms in the patient. Here are some of the orders which I have heard given: First, You must lie on your back, and on no condition turn on either side. Now and then a patient bolder than the rest will expostulate, with the statement that they have never been able to sleep upon their backs. The order becomes then the more imperative: You now must, or you will jeopardize the success of the operation. Second order, You must keep quiet and not talk to any one, conversation will excite you. Third order, You must eat nothing for twenty-four hours, for the use of the jaws in chewing food will be very detrimental by interfering with the quiet of the eye; you can have liquid food, but no solid food. Fourth order, You must not sit up in bed to take food during the first few days of treatment, but lying quietly on your back, must suck up the fluid nourishment by a tube. Fifth order, Under no condition must you get out of bed; for all calls of nature the bed-pan must be used, the patient lying down on his back. Sixth order refers to the fact that the eyes must not be touched, and therefore, for fear that an accident might happen during sleep, a band is secured to each wrist and tied loosely behind the back of the recumbent patient, or, as the arms lie on each side of the body, the free end of the night-shirt sleeve is sewed to the body of the shirt as a surety against any accidental movement.

My cataract extractions now number considerably over one thousand, and I take great pleasure in saying that these restrictions, which I have heard given to the patients of others, I have never practised, and yet my per cent. of successes are fully as good as those of my over-cautious surgical friends.

I desire to make the days of confining treatment pass by with as little annoyance to the patient as possible. When put to bed, patients are allowed to lie in any position which comfort induces them to take; to converse when they please; to get out of bed for all calls of nature; to sit up when taking food, and to eat whatever they know from experience will not disagree with them. After the second day they may sit up, if the bed is found irksome. When the adhesive straps are removed, on the sixth day, the freedom of the room is allowed. In a very few days afterward the chamber-door is thrown open, and the patient has the liberty of the house.

The following cases, recently operated upon and treated by the light dressings, and not in dark rooms, will illustrate the new and very much improved method of treating cataract cases:

Case I. Mr. McD——, [illegible], in failing health, has been blind in the left eye for over one year, and is losing sight in the right. Examination discovered a fully matured cataract, with good light perception, in the left eye, and striations in the right lens. Left opaque lens removed under cocaine, May 10, 1886. Operation smooth, leaving a clear pupil. Both eyes closed by isinglass plaster; patient walked from the operating table to the contiguous ward, and was there put to bed.

Second day.—Patient had been awakened at night by some pain in the eye, but now feels very comfortable. Straps adhering well, with no moisture about them. No treatment suggested by her condition.

Third day.—Has had no pain since the last visit. Is not inconvenienced by the light of the ward, in which the windows are screened by blue shades. Adhesive straps firmly adherent. No treatment.

Fourth day.—Feels perfectly comfortable, even when the shade was raised from the window to obtain a more perfect examination of the condition of the plasters. A drop of the one per cent. atropia solution was put near the inner canthus, and was soon felt in the eye under the adhesive strap, which was not disturbed. No treatment beyond the application of the eye-drop. Patient was allowed to get up if she desired to do so.

Fifth day.—Found the patient dressed and sitting up. She was in every way comfortable. The adhesive straps were so dry, indicating no eye irritation whatever, that I ventured to remove them without moistening them. The eyes opened at once, and bore the examination and the light of the room without any lachrymation. I was astonished at the small degree of hyperæmia. The appearance of the conjunctiva was as I had seen it in the most successful cases three weeks after extraction. A drop of atropia was applied, and the eyes left without further treatment or protection. No smoked glasses.

Sixth day.—The patient had suffered no inconvenience whatever from the exposure of yesterday and to-day. Eyes not watering. The light of the room well borne.

Seventh to fourteenth days were all repetitions of each other. The operated eye acquired strength, so that by the end of the second week she could go about the house and look out the open window into the sunny street. On this day she was dismissed from the hospital, with instructions to wear a smoked glass when out of doors, but not while in the house.

This was my first case of cataract extraction treated in a light room with a transparent eye-retentive dressing, and the experiment delighted me in the rapidity of the convalescence and the perfect results secured.

Case II.—Joseph R——, aged sixty-one. Left eye operated upon for cataract six years since; pupil so drawn up by the corneal cicatrix that he can only count fingers with this eye. The right eye has still useful vision.

May 10th.—Under cocaine a large iridectomy downward was made. This eye was closed by the broad adhesive strip; the other good eye being left open. He jumped from the table with a jolt, not intended, and walked unaided to the third-story ward. This case was treated throughout as a peripatetic, with the exception of keeping him in bed the day of operation. On the day after the operation I found him dressed, and walking about the ward. He had suffered some pain in the night, but at the time of visit (2 P.M.) felt perfectly com-

fortable. Atropia drops were ordered to be applied daily without removing the dressing.

Fifth day.—Finding the patient going in and out of the ward without any inconvenience whatever, I removed the strap, leaving the eye free, and without smoked glasses. In the conjunctiva there was very little injection, and there was no lachrymation.

This patient could have been discharged from the hospital at the end of the first week, as he stood the ordinary light of the house without annoyance. He was kept a few days longer for inspection, and was discharged on the twelfth day, putting on smoked glasses for the first time when he went out into the sunlight.

Case III.—Anna S——, aged sixty; double glaucoma with tension + 2; sight steadily deteriorating; counts fingers at four feet; deeply cupped disks; has an old corneal cloud in each eye which necessitated a downward iridectomy in the left, and upward in the right eye. These operations were performed May 11th, and both eyes were closed with adhesive plaster; patient walked up to the fourth story and was put to bed.

Second day.—Patient had pain during the night, but was now comfortable. Straps adhering well.

Third day.—No pain; being cloudy, the patient was not inconvenienced by the light of the room with shades lifted from the windows.

Fourth day.—Patient perfectly comfortable; no treatment.

Sixth day.—Adhesive straps removed. Patient not inconvenienced by the light of the room with shades down. Eyes show very little hyperæmia.

The continued convalescence in this patient was steady, and she was discharged from the hospital on the eighteenth day without the necessity of using smoked glasses at any time.

Case IV.—John D——, aged fifty. In pulling up a piece of carpet had his left eye perforated by the point of a tack, which entered near the lower corneal margin, perforated the iris, and must have injured the lens, because it slowly became cataractous after the injury. The lens shows plainly striations as an indication of its slow clouding. He has good light perception, and no pain in it. The appearance of the lens is rather from an idiopathic than from a traumatic origin.

May 13th.—Smooth extraction was made under cocaine, and both eyes were closed by adhesive straps. The patient walked up from the operating-room to his chamber in the fourth story, and was put to bed.

Second day.—Found the patient dressed, and sitting on his bed. He had had no pain whatever during the night, and had felt so very well that he saw no reason why he should remain in bed. No treatment.

Third day.—Patient has been up all day, feeling perfectly well; adhesive plasters dry, showing no eye irritation. No treatment.

Fourth day.—Patient continues well. A drop of atropia put at the inner canthus.

Fifth day.—Straps found loose from both eyes. Had suffered no inconvenience. Straps were moistened and reapplied. No treatment.

Sixth day.—Both straps were finally removed, and eye inspected. Very little redness was seen, and no watering during the examination. Eyes left open, unprotected, in the comfortable and moderate light of the chamber.

Eighth day.—As the patient could stand the light of the house without discomfort, he was allowed by the resident physician to go out at midday to a neighboring barber-shop to be shaved, using as a protection smoked glass.

Ninth day.—No inconvenience nor discomfort from the unusual exposure of yesterday.

Fourteenth day.—Patient discharged to-day with a strong, excellent eye. There is some capsular deposits, but in the centre of this is a clear, sharply defined opening, through which excellent vision is obtained. In going out of the hospital he was advised to use smoked glass on the street.

He called at my office five days after he left the hospital. He had on no smoked glasses, and said that he had not put on any on leaving the hospital, as he did not feel the want of them, and had suffered no inconvenience from the sunlight of the street.

Case V.—Laura W——, aged forty, has been blind more or less for twenty years. One year since she had a cataractous lens removed successfully from the right eye. Although she can get about with this eye, vision is very imperfect, owing to a very pronounced conicity of the cornea. In the left eye the conicity is by no means so marked. The lens in this eye is opaque and white, with good light perception, but no choroidal reflex upon ophthalmic examination. The lens of this eye was removed, under the anæsthetic effects of cocaine, on May 13th. After all the lens substance had been forced out by pressure, a thickened capsule remained, which was drawn out by forceps, leaving a brilliant, clear pupil. Both eyes were closed by isinglass plaster, atropia drops having been previously instilled. She walked from the operating-room to her bed in the fourth story.

Second day.—Complained of much pain during the night, and still has some. The adhesive straps are not wetted, showing but little lachrymation, and are, therefore, not disturbed.

Third day.—Patient has passed a good night, and all pain has disappeared.

Fourth day.—Patient very comfortable and straps well adherent; a few drops of atropia were put near the inner canthus.

Sixth day.—Patient having had no trouble the straps were removed; the eye was found strong for moderate light, and with very little hyperæmia.

Tenth day.—Patient is moving about the house with no inconvenience from light; she has a clear pupil and excellent vision.

Eighteenth day.—Patient returned to her distant home to-day, having had a perfect result from the cataract extraction. She was advised to use smoked glasses for out-of-doors, and not for the house; but as she can face the sunlight of the window she does not seem to think the protection necessary.

Case VI.—Mrs. B——, aged fifty; cataract fully formed in right eye; forming in left; general health good; had cataract extracted to-day, May 15th, under cocaine. The operation was painless and smooth, leaving clear pupil and the ready counting of fingers. Atropia, four-grain solution, was instilled, and both eyes were strapped. She walked to her room on the same floor as the operating-room, and was put to bed.

Second day.—Has had no pain, and is perfectly comfortable.

Third and fourth days were duplicates of the second, painless and comfortable. An atropia drop was used each day without disturbing the straps, allowing it to be sucked along the lashes by capillary action.

Fifth day.—The patient having had no pain whatever from the day of operation, I anticipated the removal of the dressings by one day, and removed the straps. The exposure of the light of the chamber caused no uneasiness or lachrymation; there was very little conjunctival injection, and objects could be very readily recognized.

Sixth day.—No trouble; patient walks about the room without inconvenience.

Ninth day.—Patient suffers so little inconvenience that she has the freedom of the house without glasses.

Twelfth day.—With $2\frac{1}{2}$ + lens patient reads brilliant type.

Fifteenth day.—Patient returned to her home using a pair of light blue glasses as her sole protection from strong light.

Case VII.—Miss O——, aged sixty-two, was born with small zonal cataracts, and therefore has never en-

joyed good sight. They have been slowly developing, so that for twenty-three years she has not been able to read the largest book-type. Now she counts fingers with each eye at four feet. On ophthalmoscopic examination choroidal reflex is seen in each eye. The deposit in the lens seems chiefly at the central region, with some clear substance in the anterior and marginal layers. She had travelled five hundred miles, and was very anxious to be operated upon, yet the cataracts were not sufficiently matured. She accepted the proposition and the risk of having one of them ripened by being needled under cocaine, on May 15th. This eye alone was closed by adhesive plaster, after being well soaked with an atropia solution.

Second day.—No trouble whatever from the corneal and lens puncture of yesterday; applied the atropia solution.

Third day.—Removed the plaster; eye not reddened, but the effect of needle-puncture upon the lens very perceptible; pupil well dilated from atropia.

Fourth day.—Lens ripe for extraction. Operation on this left eye was smooth, and fingers were readily counted after the extraction; atropia applied, and both eyes strapped; patient walked from operating-table to fourth story, and was put to bed.

Fifth day from needle operation, and second day after extraction.—Patient had some pain in the night, but the eye feels easy now; straps not moistened from any lachrymation; atropia drop put at inner canthus

Third day of extraction.—Patient very comfortable; the light of the room is sufficient to allow her sister to read to her and write for her; no treatment.

Fourth day.—A duplicate of yesterday; no discomfort of any kind, and no treatment required beyond the atropia drop.

Fifth day.—Patient so perfectly comfortable, and adhesive straps so dry and undisturbed, that I ventured to remove them. I adjusted the curtain of the room to exclude a little of the light, not that the light was complained of, but on account of my own timidity, as the eye had undergone two operations at a short interval.

Sixth day.—Patient had some pain in the night, and found the eyelids glued up this morning; they were washed open with warm water. Since awaking they have given no pain, yet there is a slight tendency to lachrymation; the one per cent. of atropia was applied, but the light of the room was not reduced.

Seventh day.—Eye strong, no more watering nor discomfort. Patient moves about her room with freedom.

Tenth day.—The eye looked so remarkably well today, so free from congestion, that I tested vision, and found that with a lens she could read the title-page of a book, the first letters she has seen for twenty-three years. The ordinary light of the room when the shade was run up caused no inconvenience.

Thirteenth day.—Patient ready for dismissal. With cataract glasses and without the protection of smoked glasses she can look into the sunny street and read signs on the opposite houses. There is no congestion of any kind in the eye operated upon. The appearance of the conjunctiva is as white in this eye as in the other, which has not been disturbed. In each it is perfectly normal.

Case VIII.—M. G——, aged eighty-eight, and very feeble, has had cataracts in each eye fully matured for some time. He is anxious to see again and has sought my advice. I recommended an operation because there was no risk to life, and if the operation failed he could be no worse off than at present. May 19th, under cocaine, the lens was removed from the right eye, both were closed by adhesive strips, and the patient walked to his bed in the fourth story. As he was very feeble, and had been annoyed by a bad cough for one year, he was kept in bed till the sixth day. Each day he reported no trouble, no eye uneasiness of any kind, and the clean straps well adherent to the lids were an endorsement of his statements. His cough was controlled by ipecac and opium.

Sixth day.—When the straps were taken off he saw my face at once, in evidence that the operation had been successful. The eye was not injected to any extent, and as there had been no mattering, the lashes were not glued together to interfere with immediate opening. Atropia solution applied.

Seventh day.—The eye caused him some uneasiness last night, and is watering a little to-day. Atropia drops were ordered, but no diminution of the light in his chamber. His vision was clearer, notwithstanding the discomfort of the preceding night.

Eighth day.—The lids of both eyes show some slight hyperæmia and some sticking together this morning; both eyes equally affected and with slight conjunctivitis.

Fourteenth day.—Patient left the hospital to-day with good sight. There is still some little conjunctivitis in each, quite as much in the eye not operated upon as in the one from which the lens was removed. It gives him but very little inconvenience. He was advised to put on smoked glasses for the street.

Case IX.—Elizabeth S——, aged fifty-one, had had cataract extracted from the left eye six months since. Cataract forming in the right. Good vision was prevented in the eye from which the lens was removed by the presence of a thickened capsule. The pupil was free, and expanded well under atropia. May 20th, under cocaine I opened the cornea from above, and with Mathieu's iris forceps extracted all the capsule. It came out *en masse* and left a brilliant pupil. Atropia was applied, and both eyes closed by isinglass plaster. She walked to her bed in the fourth story of the hospital.

Second day.—Had had some pain during the night but was now free. Straps dry and adhering.

Third day.—Very comfortable; atropia drop.

Fourth day.—Found the straps curling up. Removed them and applied fresh ones, also used the atropia drop.

Fifth day.—Removed isinglass plasters from each eye. The eye shows no irritation from the shaded light of the room; atropia instillation.

Sixth day.—Eye strong, no pain, very little injection.

Eighth day.—Patient has the freedom of the house, and goes about without inconvenience and without smoked glasses, and she is ready to leave the hospital.

During the months of May and June, 21 cataract extractions and 4 iridectomies have been treated by this new method at the Presbyterian Eye and Ear Charity Hospital of Baltimore. The progress of all these cases has been so satisfactory that I have every reason to expect a continuance of these good results. From my experience, I think that I can confidently say that I will not again have use for compresses, bandages, and dark rooms, as elements of treatment in cataract extraction.

Extract of Calabar Bean in Epilepsy.—Dr. Rusche recommends the exhibition of calabar bean in epilepsy and allied affections, and says he has found it to render great service in cases in which the bromides and atropine have been ineffectual (*Deutsche Medicinal-Zeitung*, May 10, 1886). He notes the curious circumstance that better results are obtained by alternately increasing and diminishing doses than when the same quantity is given continuously. The drug is to be given in the following preparation: Extract of calabar bean, 7½ grains; spirits of sulphuric ether, 75 minims; peppermint-water, 5 drachms. Dose: 5 to 10 drops for children, 8 to 15 drops for adults, three times a day. The smaller dose is commenced with the first day, and one drop added each day until the maximum is obtained, and then the quantity is diminished by a drop each day until the minimum is reached. The writer reports a number of cases in which excellent results were obtained.

Professor von Arlt, the well-known ophthalmologist of Vienna, recently fell in the street and sustained a fracture of the left humerus.

Clinical Department.

TWO CASES OF SPASMODIC STRICTURE OF THE URETHRA RELIEVED BY FREE MEATOTOMY.

HOBART CHEESMAN, A.M., M.D., New York, Clinical Assistant for Venereal Diseases at the New York Post-Graduate School and Hospital, sends us the following: "The following two cases of spasmodic stricture of the urethra seem to me excellent examples of a class of strictures supposed to be due to reflex irritation. In these particular cases the reflex evidently had its origin in the irritation caused by a too narrow meatus urinarius. Why a meatus of a size which in many persons is seen to exist without causing irritation or exciting any symptoms, should occasionally, in an individual, give rise to very evident and serious symptoms, is a problem which had better be left to the tender care of more profound intellects. That such is the case experience supplies abundant proof. It should not, however, be inferred from this that every patient suffering from deep spasmodic stricture, and who has a smallish meatus, will be cured by incising it freely. There are reflexes arising from various well-known sources, other than the meatus, capable of producing the same result. A small meatus, when encountered in such cases, should be treated with only as much respect, and as great consideration, as a full and critical examination of all the facts in evidence justify. Therefore I may not be understood to advocate by these cases meatotomy for every case that presents with a meatus too small to admit the passage of a number 32 or 34 F. bougie à boule. But what is aimed at is to call attention to the fact that, perhaps oftener than is generally admitted, the free incision of a smallest meatus—and that, too, even when there has been no inflammatory process at work to cause unnatural narrowing of it—will remove grave and, may be, persistent symptoms as by magic. I think this is well shown in the following cases, which are presented, not as being unique, but as being remarkably good illustrations of the type.

"CASE I.—H. M——, American, aged twenty, theological student, July 15th. Has had various nervous symptoms for ten days, such as pricking sensation over the surface of the body, and cold and blue extremities, and for thirty-six hours has been unable to pass his urine, while at stool even; but it has been drawn by an elastic catheter. For three or four days has had diarrhœa and occasional vomiting. Denies having had any venereal disease. Examination shows a rather small meatus urinarius, admitting snugly through it No. 23 F. steel sound, which also passes readily into the bladder, but it is moderately hugged in the deep portion of the urethra. The urine is drawn with a 20 F. gum elastic catheter. Examination of the urine shows nothing abnormal except a little albumen. The diarrhœa and vomiting being speedily controlled, treatment was directed to the nervous symptoms and the retention of urine. A spinal ice-bag soon restored the circulation to the extremities, and under bromide and quinine as a tonic the other nervous symptoms abated; but the retention of urine continued unaffected, although all the usual means of relief were employed. On July 26th, eleven days after my first attendance, not a drop of urine having passed his urethra, even when at stool, except per catheterem, I incised the meatus so as to admit the passage through it of No. 30 F. bougie-à-boule. No. 28 F. bougie-à-boule could then be passed down to the triangular ligament, and withdrawn without detecting stricture.

"The next day the patient passed urine while at stool, but was unable to start the stream at other times until on the 29th, when he passed it freely and regularly, and continued to do so unimpeded thereafter. On September 28th, two months later, he was still suffering intermittently from the nervous symptoms, but had had no further difficulty in passing urine. I have not seen him since that date.

"CASE II.—S. W——, American, aged fifty-eight, marketman. Seen for the first time on October 3d. Had gonorrhœa several times, the last attack occurring over twenty-five years ago. Treated each time by injections. Ever since the last attack has suffered more or less from frequent micturition, and the stream has been small; never suffered much pain. For the year past has had to get up at night every two hours to urinate, and during much of this period the act has been accomplished only after much straining, and by driblets. This is his present condition. Examination of urine shows nothing abnormal, except a moderate amount of mucus.

"Examination of the urethra on October 11th: Meatus admits snugly No. 22 F. steel sound, which is arrested at six inches. No. 18 F. is arrested at seven inches. After many futile efforts to cause an instrument to enter the bladder, finally a fine whalebone was made to enter by being passed down by the side of a No. 4 F. elastic bougie. On the 14th, and a third time on the 16th, the same trials were made to enter the bladder, but with no better success; the same fine whalebone being the only instrument that could be made to enter, although the attempt was made by two surgeons besides myself. No. 18 F. steel sound was resisted at six inches, but could be urged on an inch deeper, where it was firmly grasped and effectually arrested. The meatus was then cut (on October 16th), so as to admit the passage of No. 34 F. steel sound. No. 18 F. steel sound then passed, with very little urging, through the deep stricture and entered the bladder, followed, in course, by Nos. 22, 24, and 27 F. No further trial was then made. The next day Nos. 27 and 29 F. steel sound passed easily, and entered the bladder; the patient declared that he had got up but twice during the past night to urinate. It had been his custom to get up five or six times. October 27th, Nos. 27 and 30 F. sounds passed easily, but some resiliency of the deep urethra persists, as shown by its continuing to grasp the sound slightly. The patient continues, since the operation, to pass his water about every four hours. On October 28th, after holding it three hours, it was passed in my presence. The stream started freely, was full and strong, and uninterrupted; in other words, a perfectly normal one. He remained under observation for six weeks after this date, but had no more trouble in passing his urine. Since then I have not seen him."

A CASE OF RUMINATION.

DR. W. A. HUBBARD, of Bloomfield, N. Y., writes: "In a recent editorial in THE RECORD on 'Rumination in Man,' you say that it 'is not unlikely that the affection may be beneficial rather than otherwise to its subjects, and the food, if not subjected to a second mastication and admixture with saliva, might put too great a tax on the stomach and thus excite gastric troubles.' I take from my note-book the history of the following case, which is not only an addition to the small number of recorded cases of the kind, but also a verification of your conjecture relative to the gastric disturbance that might occur in case of its suppression: D. L——, farmer, aged thirty-five, of Irish descent, consulted me in April, 1885, for, as he expressed it, the restoration of his 'lost cud.' He had contracted the habit at a time beyond his recollection, and had had no intermission in its practice until one month previously, when it had suddenly ceased and was immediately followed by dyspeptic symptoms. He had constant nausea, although vomiting he found to be impossible. It had been his habit to swallow his food hurriedly, with as little mastication as possible, and retire from his family or associates, after which the process of regurgitation immediately began and continued for twenty or thirty minutes. This retirement was necessary for the perfect digestion of the food. He had been an enormous eater, and his health had been perfect until the

sudden stop in this peculiar physiological process occurred. I informed him that his request was undoubtedly unique, and suggested the thorough mastication of his food previous to deglutition; but this, owing to habit and forgetfulness, seems impossible, and he still continues dyspeptic, despite the usual remedies given to aid digestion, and lives in the expectation that his habit will return as suddenly as it left him."

A CASE OF HYDROMETRIA.

Dr. E. J. Cowden, of North Warren, Pa., reports the following case: On December 4th he was called to see a young lady, single, aged nineteen, who had always enjoyed good health up to that time. She began to menstruate at thirteen, and had been regular, her last period having been on November 1st. She took a severe cold in the latter part of this month, and was found to be suffering from the usual symptoms of suppression. Various emmenagogues, including permanganate of potassium, were given from time to time without effect. In the latter part of February it was noticed that the abdomen was gradually increasing in size, and this continued until she began to attract the attention of the neighbors. Dr. Cowden made a careful examination, but could detect nothing that would warrant a diagnosis of pregnancy. The womb was large and distinct fluctuation could be obtained on palpation, but no passive movements could be felt, neither could ballottement be elicited. There had been no morning-sickness, and the breasts were not changed. The patient was also examined by Dr. John Curwin, who confirmed the writer's negative diagnosis, and by one of the most prominent surgeons of Northwestern Pennsylvania, who pronounced the case one of pregnancy at about the sixth month. From this time the patient lost flesh very rapidly, and the abdomen continued to enlarge. Dr. Cowden again made an examination, but could detect nothing but fluid. On June 13th, as the patient arose in the morning, there was a gush of colorless fluid nearly filling the chamber-vessel. A slight flow continued until the second morning following, when about nine quarts of the same colorless fluid came away in a torrent. The uterus rapidly descended into the pelvic cavity, and the patient's health is now gradually improving and recovery is hoped for.

TREATMENT OF ASPHYXIA OF THE NEWBORN.

Dr. J. C. Roberts, of Pulaski, Tenn., writes that he was struck with the description given by Dr. L. N. Sharp, in The Record of July 3d, of his method of resuscitating asphyxiated infants; and, while yielding to Dr. Sharp the priority of publication, he desires to add his own testimony as to the value of the procedure. He was called one night in consultation with his brother to a case of twin labor. The first child had been born some two or three hours, but the second was presenting by the shoulder and a loop of the funis had fallen down. As there was no perceptible pulsation in the cord, the heart-sounds could not be heard, and the movements of the child had ceased, it was supposed that it was dead. The woman was brought under the influence of chloroform, turning was performed, and the child delivered with the forceps. The ordinary methods of resuscitation were employed, but the child gave only one or two spasmodic gasps and then apparently died. Dr. Roberts continues: "The thought struck me that, as we had used chloroform, I would as a last effort employ the treatment for threatened death from this anæsthetic. I seized the child by the feet and suspended it perpendicularly, and, to my astonishment, as soon as the blood gravitated to the head, which was made apparent by the change of color in the face, the child at once gasped. The second gasp was followed by a loud and continued crying, and the life was saved. Since that time I have resorted to the same plan in several cases of asphyxia of the newborn, with immediate and happy results."

A WANDERING TAPEWORM.

Dr. W. Davidson Bidwell, of Leavenworth, Kan., writes that a short time since a lady from the country brought him her boy, three years of age, with the account that he had passed several pieces of tapeworm during the past two months, and had become feverish and sickly. At bedtime a dose of castor-oil was given the boy, and the next morning fifteen minims of oleoresin of male fern in five-minim capsules, at intervals of one hour, another dose of oil being given in the afternoon. That evening the child passed a very long worm. A piece about a yard long became detached from the rest, and this piece, which tapered nearly to a point at one end, moved off, pointed end first, across the floor some six feet, and had climbed up the smooth side of the wall a distance of two and a half feet before it was discovered. The rest of the worm was noticed to wriggle some, but did not attempt to crawl away. During the two months that the child was passing portions of tapeworm large numbers of pinworms were noticed almost daily in the evacuations. Dr. Bidwell asks whether such motions of a tapeworm outside of the body are often observed, and also whether it is common for the two kinds of worms to be associated?

ABORTIVE TREATMENT OF MAMMARY ABSCESS.

Dr. Llewellyn Eliot, of Washington, D. C., sends us the following: "About fifteen years ago I witnessed the beneficial effects of the free application of spirits of turpentine to abscesses and whitlows in their early stages. The result in each case in which such applications were employed was a drying up and disappearance of all traces of inflammatory or suppurative processes. From the earliest years of my professional life this has been a routine treatment with me, and, arguing from analogy, it has been adopted in cases of mammary abscess when seen in its incipiency. The only disadvantage attending this treatment is the odor of the turpentine, which is of no importance when contrasted with the intense pain, sleepless nights, and suffering accompanying suppuration of the gland.

"If, upon the discovery of a drawing pain upon suckling, or a tender, hard spot in any part of the gland, the part be bathed with the spirits of turpentine, and then covered with a cloth, rag, or piece of flannel saturated with the same, we may, as a rule, look for the disappearance of the hardness, the tenderness, and all other uneasiness attending this troublesome affection, in the course of two or, at the most, three days. During the course of such a treatment the child may be nursed from the affected breast, but not as frequently as from the well one. It is hardly necessary to say that all traces of turpentine should be washed away before such nursing. The amount of milk secreted has never appeared lessened in the cases observed, nor have any of the ill results of the continued use of turpentine followed either in the mother or in the child.

"Whether this manner of dealing with this affection be in general use or not cannot be said, still there is no mention of it in many of the recent text-books on obstetrics. It is not claimed to be infallible, but its application will be attended with no bad results even if it be unsuccessful. Strapping, pressure, rest, applications of belladonna and soap-liniment, and the continuous application of an ice-bag, are among the various modes of treatment employed, but my faith now centres around the application of turpentine as an abortive of mammary abscess."

Progress of Medical Science.

Ulcerative Endocarditis.—In an elaborate study of ulcerative endocarditis, in the July number of *The American Journal of the Medical Sciences*, Dr. Byrom Bramwell records fourteen cases in all of which the aortic valve was affected, either alone or in combination, the mitral in six, and the tricuspid in one. In two of the three cases in which well-marked acute croupous pneumonia was present, he detected micrococci in the exudation filling the air-cells of the lung, but he failed to satisfy himself that they were identical with the micrococci in the cardiac vegetations. The frequent association of acute croupous pneumonia with ulcerative endocarditis is a point of great interest, but Dr. Bramwell's observations on this point have not been sufficiently extensive to enable him to form a satisfactory judgment; but his pathological experience clearly shows that during certain seasons acute croupous pneumonia and ulcerative endocarditis are apt to prevail. The detection of micrococci in the inflamed cerebral meninges, and in the vessels and substance of the cerebral cortex, and the presence of disseminated patches of cerebritis and acute cerebral softening, are very interesting; and afford a satisfactory explanation of the nervous symptoms which are so prominent in some cases of the disease. Mr. A. W. Hare, in response to Dr. Bramwell's request, undertook an experimental investigation to determine the relationship of ulcerative endocarditis to other infective conditions. The results which he obtained, and which are detailed in the paper, are, for the most part, negative.

The Treatment of Freckles.—The following procedure is recommended by Dr. Halkin: The skin being washed and dried is put on the stretch with two fingers of the left hand, and a drop of carbolic acid is applied exactly over the patch. When it dries the operation is completed. The skin becomes white, and the slight sensation of burning disappears in a few minutes. The thin crust which forms after the cauterization should not be disturbed; it detaches itself spontaneously in eight or ten days, leaving a rosy coloration, which is soon replaced by the normal color of the skin.—*American Practitioner and News*

The Function of the Recurrent Laryngeal Nerve.—The mode of action of this nerve, supplying muscles so important in their use, both phonatory and respiratory, and yet so opposed in their action, is a much mooted point upon which Dr. Frank Donaldson, Jr., endeavors to throw additional light, in an experimental paper in *The American Journal of the Medical Sciences* for July, 1886. The recurrent laryngeal nerve supplies all the intrinsic muscles of the larynx, with the exception of the crico-thyroid, and it is chiefly a motor nerve. It is a physiological fact that the internal thyro-arytenoids, the lateral crico-arytenoids, and the transverse arytenoids are the adductor (the phonatory) muscles of the larynx, and that the posterior crico-arytenoids are the abductor (the respiratory) muscles of that organ, and all these muscles receive their nerve supply from the recurrent laryngeal. This nerve, then, must contain two sets of fibres, which innervate muscles of separate and distinct functions. How, and under what circumstances, does the constrictor or respiratory function of this nerve assert itself, is the important question to be answered. As the result of his experimentation and study, Dr. Donaldson explains the innervation of the larynx somewhat as follows: Breathing is an involuntary act, though the diaphragm and all the other muscles employed in respiration are voluntary muscles; and though respiration may be modified within very wide limits by the will, yet we habitually breathe without the intervention of the will. The larynx is an essential part of the respiratory apparatus, and is immediately connected with, and must receive impulses from, the respiratory centre in the medulla, and its respiratory function is the most important; for the purpose of preserving life the glottis must be kept open, and so we find that the cords, even in normal breathing, at each inspiration are pulled slightly away from their apparently normal position between extreme abduction and extreme adduction. The fact that in deep narcosis the cords are pulled widely apart, would seem to show that stronger stimuli than usual are proceeding from the respiratory centre to the abductor muscles; for in all deep narcosis the tendency is toward dyspnœa, and always in this condition normal respiratory muscles are called into greater play. The constrictors of the larynx are apparently always in a state of partial tonic contraction, and ready for use at any moment; and the respiratory function of the larynx being for the moment in abeyance, the protective or constrictor function of that organ asserts itself. Again, it is well known that great changes can be brought about in the respiratory movements by the will; while, on the other hand, the respiratory centre is the one most frequently affected by nervous impulses from various quarters. He thinks that his experiments support the supposition that both the respiratory and constrictor (or protective) functions of the glottis are governed by those laws which govern the rest of the respiratory apparatus. The larynx, being part of the general respiratory apparatus, its inspiratory and expiratory (constricting) functions are under the same nerve control as the rest of the organs concerned in inspiration, and under no circumstances are these functions suspended. There seems to be a similarity between the nerve fibres of the recurrent and those of the pneumogastric; the two sets of fibres of the recurrent supply opposite sets of muscles, and may be likened to the two kinds of nerve fibres composing the pneumogastric—the one answering to less, the other to stronger stimuli.

Connection Between Scarlet Fever and Heart Disease.—The following are the conclusions formulated by Dr. Henry Ashby, in a lecture on this subject published in *The Lancet* of May 22, 1886: 1. In uncomplicated cases of scarlet fever, lesions of the heart are very rare. 2. Endocarditis is quite exceptional in scarlatinal synovitis; pericarditis occurs more frequently. 3. Acute or subacute rheumatism occasionally supervenes during convalescence from scarlet fever; an attack of scarlet fever may also be the exciting cause of a relapse; in such attacks peri-endocarditis is frequent. 4. Peri-endocarditis occasionally occurs in scarlatinal pyæmia. 5. Dilatation without valvular disease very frequently occurs in scarlatinal nephritis; peri-endocarditis and embolism are by no means uncommon.

Paraplegia and Anæsthesia of the Legs.—At a recent meeting of the Midland Medical Society, Dr. Suckling read a paper on certain forms of paralysis and their treatment by faith-cure. He showed a woman who had been sent to him suffering from paraplegia and anæsthesia of the legs, following a fall five months previously. She was of the neurotic type; cheerful, intelligent, energetic, industrious, and eager to get well. After being informed that the application of electricity would cure her, faradization was employed, resulting in recovery.

Incarcerated Umbilical Hernia.—Although umbilical hernia is not an affair of rare occurrence, the incarceration of the intestine in this situation is very uncommon. Dr. F. J. Zielewicz reports, in the *Centralblatt für Chirurgie* of June 5, 1886, the case of a child, eight months old, well nourished and healthy, who was noticed to have a small umbilical hernia shortly after birth. This was treated by a bandage applied by the midwife. One day, while the child was crying, the hernial tumor suddenly increased in size. The mother was unable to replace the intestine; the child refused to eat; could pass nothing at stool, and began to sink rapidly. The next

day the little patient vomited several times, and the abdomen grew very hard and tense. The tumor was the size of a pigeon's egg, of a bluish color, and was irreducible. Herniotomy was performed, the skin over the tumor was incised, and the gut was released only after three incisions had been made in the borders of the ring. The edges of the skin, together with the hernial sac, were brought together and held in apposition by a number of close sutures, and the wound was dressed antiseptically. The child made a rapid recovery, and the hernia was radically cured. Another case is reported by Dr. Emerich Thoman, in the *Allgemeine Wiener Medizinische Zeitung*, No. 20, 1886. The patient, a married woman, forty-two years of age, had noticed a prominence of the umbilicus since the birth of her last child, twelve years before. One day, after exposure in a cold rain, she had a chill, but being very hungry ate heartly of solid food. Soon after she began to suffer from colicky pains, nausea, vomiting, and chilliness. These symptoms increased in intensity for four days, during which time there had been no movement from the bowlels. The writer first saw the patient at this time, and found a small umbilical hernia, the parts about the ring being swollen and inflamed. He succeeded in reducing the hernia by gentle taxis, and the patient immediately expressed herself as greatly relieved. Shortly afterward the bowels acted, the symptoms of strangulation subsided, and the woman felt a desire for food, and slept for the first time in four days. There was still, however, considerable inflammation in the neighborhood of the ring, and the patient was ordered to keep perfectly quiet in bed, and to take none but liquid food. She felt so well, however, that she disobeyed these injunctions and got up to wash and go to stool. Almost immediately symptoms of severe general peritonitis set in, the patient went into a collapse and died within a few hours. Dr. Thoman believed that the peritonitis was caused by perforation. The inflammation occurring during the period of incarceration of the hernia had given rise to adhesions, and the intestine being softened the movements of the patient had caused the rupture of the walls of the gut, and gas and fecal matters then escaped into the peritoneal cavity.

Myriapods in the Intestine.—Dr. Rooms reports the case of a boy, eleven years of age, who suffered from nervousness, a feeling of peculiar and painful movements in the abdomen, became very pale, and acquired a dislike to milk and fatty articles of diet. A dose of some ordinary anthelmintic caused the expulsion of some ascarides, but no improvement in the symptoms followed. The boy was much better in the winter, but the same symptoms made their appearance again the following summer. The same thing occurred the next year. One day the patient chanced to take, fasting, some juniper-juice with wormwood, and soon after discovered some live myriapods in the stools. A decoction of artemisia was now given as a medicine, and a number of the myriapods were expelled, and the boy became much better. The following summer the same symptoms reappeared. After a double dose of wormwood numbers of the myriapods were expelled at stool, and by vomiting, and from that time the boy remained well. Professor Plateau diagnosed the myriapod as *Iulus Londiniensis*, which sometimes lives in the intestine as a pseudo-parasite, its presence there coming probably from the eating of raw fruit.—*Centralblatt für klinische Medicin*, June 5, 1886.

A Rare Case of Hydrocele.—Dr. C. A. Dethlefsen reports the following case in the *Hospitals-Tidende* of June 9, 1886. He was consulted in November, 1882, by a man, thirty-four years of age, suffering from a hydrocele! The affection had begun twenty years before, without any apparent cause, by the appearance of a swelling in the left half of the scrotum. Some years later, while he was riding on a horse, considerable pressure being made on the tumor, he suddenly felt a sharp tearing pain shooting upward in the direction of the left inguinal canal; this soon subsided, however, and gave him no further trouble. The tumor then began to grow larger, and some time later a swelling was noticed in the abdomen. The latter caused him considerable inconvenience, and sometimes prevented him from working. He was treated for some time with external applications of iodine, but without success, the tumors in the scrotum and the abdomen both continuing to increase in size. Examination showed the left half of the scrotum distended by a smooth, translucent tumor, the size of a child's head, tapering upward into the inguinal canal. The abdomen was distended, and a hard, smooth tumor, reaching up an inch above the umbilicus, could be felt on palpation. The size and shape of the swelling suggested a gravid uterus at the seventh month. Percussion on the scrotum was followed by an impulse communicated to the hand placed over the abdominal tumor. The scrotal sac was laid open and a drainage-tube, about twelve inches in length, was passed up to the fundus of the abdominal sac. The latter was then washed out every few days with carbolized water, and gradually contracted until at the end of six or seven weeks it could be felt as a hard tumor, the size of a large hen's egg, lying against, and plugging up the internal inguinal ring. A few months later the patient again presented himself with a scrotal hernia. This could be reduced with great ease, and examination revealed the fact that the plug had disappeared from the entrance of the canal. In the scrotum, however, could be felt a rather firm mass, which the author supposed to be the shrivelled remains of the original sac, driven down by the hernia through the canal. A truss was applied, and the patient was dismissed in good condition. It would appear that the fluid was first effused within the tunica vaginalis testis, and the tumor, having attained a large size, had forced a passage, like a reversed, hernia, through the inguinal canal into the abdomen, where there was room for a further enormous development.

The Open Treatment of Abdominal Tumors with Fluid Contents.—Although a large proportion of abdominal and pelvic tumors with fluid contents are now curable by means of extirpation, there yet remain some which are not amenable to this mode of treatment. Among these are suppurating tumors of the mesentery; hæmatocele, resulting from pelvic peritonitis; cysts of the spleen, liver, and pancreas; dropsy of the gall-bladder, etc. Formerly such tumors were punctured, the cannula being left *in situ*. Dr. Péan claims (*Gazette des Hôpitaux*, No. 33, 1886) to have been the first to make a large incision into the sac and thoroughly empty it, thus promoting rapid healing and preventing septic infection. A free incision is made in the skin, the sac of the tumor is drawn out as far as may be, and, if possible, attached to the opening; the sac is then incised, emptied, disinfected, and a drainage-tube is inserted. In the last twenty-one years the writer has performed this operation fifty-seven times, and his experience has led him to regard it as the safest mode of treatment for such fluid tumors as cannot be extirpated, and far preferable to simple tapping and drainage.

Removal of a Sliver from the Eye by Suction.—Dr. R. E. Curran writes as follows in the *Southern California Practitioner* for May, 1886: A friend applied for relief the other day with "something in his eye," which amateur efforts had failed to find or remove. Reflected light showed a foreign body on the cornea, and a magnifying glass revealed the fact that a splinter of steel had penetrated the conjunctiva obliquely, and was entirely covered. Attempts to remove it with the spud were unsuccessful, and there was danger of perforating the cornea; but while applying solution of cocaine with dropping-tube the idea of *suction* was suggested, and covering the wound with the mouth of the dropping-tube, and with a gentle reverse motion of the bulb, I was happily successful in the first effort.

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THE OUTCOME OF THE DISCUSSION BEFORE THE ACADEMY OF MEDICINE OF PARIS.

WE noticed in these columns some time ago the discussion which was then being carried on in the Paris Academy of Medicine, concerning the relationship of microorganisms to disease. The discussion is now closed, after having dragged along for upward of three months, and, as is usual in such contests, the participants occupy nearly the same position that they did at the outset. M. Peter and his followers regard the microbes of all shapes and sizes as innocent parasites, incapable of setting up diseased action in any of the tissues, while his opponents, who were largely in the majority, still hold to the new theories of the etiology of disease, and are in no way shaken in their belief by the arguments of their adversaries.

But while in the main the discussion was fruitless, except as it led to perhaps a rather clearer and fuller statement of the doctrines of leucomaines and microbes than we have yet had, it has nevertheless resulted in the development of a new theory, that of microzymes. The theory may be characterized as an attempt to reconcile the two antagonistic doctrines by a compromise. M. Béchamp was the engineer who endeavored to construct this *via media* over which the two armies, reunited under a common flag, might be made to pass. But we question whether this truce can be brought about.

The new theory, briefly stated, is as follows: Every cell, of whatever kind it may be, whether blood-corpuscle or epithelial cell, is made up of minute granules, as they appear under the microscope, which, while constituting the cell, or a part of it, are really independent entities. They are not destroyed with the cell, but remain and become developed and assume new forms and new characteristics, according to the varying circumstances under which they may chance to be placed. These developed forms are the microbes, and to the same forms in their chrysalis state, if we may be allowed the expression (the granules of which the cells are composed), M. Béchamp gives the name of microzymes. It depends entirely upon the conditions under which these granules begin their independent existence whether they become virulent or innocuous. When growing in certain media they are harmless, while at the same time they preserve their characteristics to such an extent as to enable them to make a sufficient impression upon their host to render him impervious to the attacks of their more dangerous cousins. In this way the author explains the principle of protective inoculations against disease. But the same microzymes, under other less favorable conditions, may assume most dangerous forms and become the direct exciting cause of morbid action.

This theory, like almost all theories when ably presented, possesses a certain fascination. It seems to fit, as it were, into various lacunæ which the other theories have left unfilled. But it has very weak points, and these, obviously, are the premises. The author must first prove to us that there are such things as microzymes, and then that they are capable of development into microbes. A committee has been appointed by the Academy of Medicine to examine into M. Béchamp's methods of research, and to settle the question of the existence of the mycrozyme, if it can. We shall do well to wait and learn what the committee has to say before we assume that these minute granules are the germs of pathological microorganisms.

THE TREATMENT OF ERYSIPELAS.

MANY and various are the methods which have from time to time been vaunted as specifics, or at least as invaluable aids, in the treatment of erysipelas. Of all these the antiseptic methods have found most favor in recent times. External applications of tar and of carbolic acid, subcutaneous injections of carbolic acid, and multiple incisions and scarifications, designed to permit of ready access of the antiseptic remedies to the diseased parts, may be mentioned as the most direct methods. Other and less disagreeable means of exhibiting antiseptics are through the stomach.

In the *Centralblatt für Chirurgie*, No. 19, 1886, Dr. Haberkorn speaks very highly of the internal administration of benzoate of sodium. He thinks this drug has been abandoned too rashly after the disappointment following its use in pulmonary phthisis, and believes that it is a very useful remedy in infectious diseases, more especially the exanthemata. He employs it in erysipelas in doses of from four to five drachms per diem, given in mucilaginous suspension or in seltzer water. In nearly every case in which the drug was so used the temperature fell to the normal within forty-eight hours, and a corresponding improvement was noted in the other symptoms. No local applications were used at any time.

The number of cases thus treated was upward of fifty, and none resulted fatally. In two cases in which improvement was at first slow, a very favorable change occurred after the dose was increased. The patients do not manifest any aversion to taking the benzoate of sodium, and Dr. Haberkorn urges his hearers most strongly to make trial of a means so simple and yet, as he believes, so effectual.

THE TREATMENT OF WHOOPING-COUGH.

WHOOPING-COUGH is ordinarily regarded as a very troublesome disease, and one whose duration is seldom materially influenced by treatment. But if we can rely upon various reports which have recently appeared in the current literature, these views must be modified very considerably. We propose to review, briefly, a few of

these different methods which have been so highly commended by their originator, leaving it to our readers to try one or more of them as they see fit.

Dr. Kohlmetz writes in the *Deutsche Medicinal-Zeitung* of June 14, 1886, that an epidemic of whooping-cough in his neighborhood has given him an opportunity to try many of the new methods, but he has found only one to give good results. He uses a solution of quinine, four parts, dilute sulphuric acid, two parts, and distilled water, two hundred parts. He fills a glass syringe (size not stated) with this solution, and injects it forcibly against the posterior wall of the pharynx, the mouth being held open and the tongue, if necessary, depressed with a spatula. Some of the solution may be spattered into the larynx, but the greater part is either swallowed or spit out, and it is difficult to account for the excellent results which the author claims to have obtained. The application is made every two hours during the first three days, and every three hours after this time, and a cure, or a very marked improvement, is obtained in from three to eight days.

In the *Centralblatt für klinische Medicin*, of June 12, 1886, Dr. J. Bachem speaks very highly of insufflations of quinine into the nostrils. He employs muriate of quinine, three parts, rubbed up with gum acacia one part, and blows about three grains of the mixture into each nostril once or twice in the twenty-four hours. In a child who had been coughing for two weeks, having from ten to twelve attacks during the day, and six to eight at night, at the end of a few days the attacks were reduced to four or five in the twenty-four hours, and a cure was obtained in three weeks. Other cases are cited in which the results were almost equally favorable. An acorn-shaped tip is attached to the insufflator, in order to insure the delivery of the powder and to prevent any loss.

We find in *El Sentido Catolico en las Ciencias Médicas*, of June 12, 1886, a reference from some other journal of the results obtained by Dr. Michael by nasal insufflations of various powders. He employed quinine, pure or mixed with benzoic acid in the proportion of one part to three—tannic acid, boracic acid, salicylic acid, iodoform, cocaine, bicarbonate of soda, and marble-dust. Of these substances good results were obtained only with quinine, benzoic acid, tannic acid, and marble-dust. The success obtained with the last-named powder would seem to imply that the curative value of insufflation is largely dependent upon mechanical causes. In eight cases a cure was obtained in three days; in six cases, in eight days, and in six other cases a marked diminution in the severity of the symptoms was observed, though the duration of the disease was not apparently influenced.

At a recent meeting of the Société Medico-Pratique of Paris (*Concours Médical*, June 12, 1886) Dr. P. Guerder stated that he had also had excellent results from nasal insufflations. He had tried benzoic acid, as used by Dr. Michael, but had been more successful with a fine powder of equal parts of boracic acid and roasted coffee. In recent cases he was able to obtain a radical cure in from eight to fifteen days, and even after the disease had become firmly established the number of attacks was reduced, after from two to six days of treatment, from fifteen or twenty to four or five in the twenty-four hours, and a like improvement was noted in the other symptoms. The insufflations were practised morning and evening.

In the fasciculus for June, 1886, of the *Rivista Clinica e Terapeutica*, appears a communication from Dr. P. Sertoli, in which inhalations of iodoform and oil of turpentine are recommended very warmly for the cure of pertussis. The writer states that he found the number of the attacks to be lessened and their severity to be diminished soon after the inhalations were begun, and the duration of the disease was also shortened, a complete cure being obtained within less than twenty days.

We have previously referred to the results obtained by Dr. Moncorvo, of Brazil, with resorcine, and very recently also to the success claimed from the employment of narceine by M. Laborde and others. These are by no means all the methods which have been brought to the notice of the profession with the endorsement of their advocates, but they will suffice to show either that pertussis is far from being the intractable disease which it has hitherto been supposed to be, or else that it is very variable in its duration and course, sometimes subsiding spontaneously whatever form of treatment be adopted.

THE VESICULAR MURMUR.

Despite the fact that auscultation of the chest has been practised for over seventy years, there are many things about it which are still obscure. This is especially the case with regard to the causation of certain chest sounds. To ascertain the cause of the normal vesicular murmur would seem at first thought to be one of the simplest problems in the study. But the greater part of the discussion has occurred upon this very question. It was formerly taught that the murmur was due to the transit of the air through the bronchial tubes; to the unfolding of the lungs upon themselves in inspiration and the exit of the air from the lobules in expiration. Then arose authorities ascribing it to the transmission of the glottic sounds by the lung-tissue. Finally, this view was displaced by that of the so-called "fluid vein," which has held its own ever since. The latter may be explained by saying that whenever a jet of fluid, either liquid or gaseous, passes from a smaller to a larger orifice, a blowing sound is produced and is due to the fluid vein, that is, the form taken by the fluid in transit. This fact accounts for both cardiac and pulmonary murmurs.

In a paper recently read by Dr. Joseph Coats, before one of the London clinical societies, some interesting data are furnished concerning the subject under consideration. Dr. Coats had the privilege of observing a patient of Dr. Newman's. The latter had removed the larynx from the patient for some malignant disease, and the man was wearing a tracheal tube, curving forward and being of very nearly the same calibre as the trachea. From the convex side of this tube a smaller one extended up into the pharynx. The patient could thus breathe with the pharyngeal tube alone open, the tracheal tube alone open, or with the tracheal tube partially closed by a stopper, through which passed a much narrower tube, so that breathing was carried on through the latter, the pharyngeal tube being closed. It must be premised that the glottis presents the conditions for the fluid vein in both divisions of the respiratory act, viz., a

passage from a smaller to a larger tube. We consequently have a double blowing sound. Similar physical conditions obtain at the remote portions of the respiratory tract, where the ultimate bronchioles suddenly open into the somewhat wider air spaces. The vesicular murmur is due to the fluid vein existing in inspiration at this point. The sound is most easily propagated in the direction in which the vein is moving. We should not, therefore, *expect* to hear the expiratory glottic sound over the trachea, but its audibility there is probably due to the false cords and base of the epiglottis. These form a sort of lip, or rim, which causes a propagation of the sound backward, that is, down the trachea. A similar illustration is seen in those cases of aortic regurgitation where the diastolic murmur is heard over the aorta itself.

In Dr. Newman's case the glottic murmurs should have disappeared, in order to be consistent with the theory advanced by Bergeon and Chauveau as a result of their experiments performed in 1877. In a horse with hepatization at the base of one lung, where bronchial breathing was heard, the trachea was incised below the glottis, and the wound held widely open. The bronchial breathing immediately disappeared over the hepatized area. It will be seen that the patient, while breathing through the tracheal tube, presented physical conditions analogous to those in the animal in the above experiment. In both the glottis was eliminated, so far as any participation in breathing was concerned. Contrary to expectation, however, Dr. Coats found that there was a loud expiratory sound heard at some distance from the patient's body, and it was propagated down the trachea and the bronchi. In the suprasternal notch and over the trachea there was a loud, blowing expiratory murmur, and a feeble inspiratory murmur. At the root of the lung, behind, the difference in intensity between expiration and inspiration was much less marked. The former was nearly as loud as the latter. The former was blowing, the latter vesicular. The equalization in intensity was probably due to inspiration, being reinforced by the normal vesicular murmur. This would indicate, says Dr. Coats, that the vesicular murmur arose in the pulmonary parenchyma. This conclusion was confirmed by auscultation of areas where we normally get a good respiratory sound. In the supra-axillary region, for instance, inspiration was distinct and prolonged, but expiration was scarcely audible. The expiratory sound, although freely conducted to those portions of the chest-wall in contact with the root of the lung, was dampened by the pulmonary parenchyma. Hence it was inaudible at the pulmonary periphery.

When the tracheal tube was plugged, and the patient breathed through the pharyngeal tube alone, the sounds were nearly natural. Inspiration was loud, with expiration nearly equal in intensity and duration. Vesicular breathing was heard all over the chest, except at the root of the lung behind, where bronchial breathing was heard as is natural.

In the third case, where the tracheal tube was partially closed by a stopper carrying a smaller tube, the condition for a fluid vein was present at the internal orifice during inspiration, and at the external during expiration. Over the trachea inspiration was much louder than expiration. The sound from the inner orifice was better carried than that from the outer. Here the result was the converse of the first case, where the tracheal tube was wide open.

Dr. Coats' conclusions are as follows: First, sounds produced at the glottis and larynx are freely conducted by the dense tissues comprising the trachea and the bronchi. They are thus audible whenever these structures are so placed as to carry sounds to the surface of the chest. They may thus be conveyed in a direction contrary to the current of air. Second, the vesicular murmur is generated in the periphery of the lungs. In all the above experiments its character remained unchanged. Even while a loud expiratory sound was heard at the base of the lungs behind, it was not communicated over them generally. The presence at the anatomical site of the glottis of any arrangement causing a fluid vein seems to have no agency in the production of the vesicular murmur.

THE UTILITY OF LIME PHOSPHATES.

The person who shows that a particular drug is of no value in therapeutics does a service to science, much more, perhaps, than by introducing a new remedy. M. E. Logeais, in the *Bulletin de Thérapeutique*, aims to prove that the phosphates, and particularly the lime salts, are useless drugs. This seems at first very much like flying in the face of a wise Providence, established pharmaceutical interests, and sound therapeutical principles. The use of the phosphates in rachitis, defective bone nutrition, and all forms of functional nerve troubles is very common, and has received the support of eminent authorities.

M. Logeais, however, quotes the experiments of Lehmann, Heiden, and Veiske, who claim to have demonstrated that the phosphates of lime added to the food are not absorbed, but are excreted in their entirety in the dejections. Dujardin-Beaumetz is quoted as saying that this salt has no action whatever, while Destage states, as a result of careful analyses of urine, that neither the phosphates of lime nor phosphoric acid is absorbed.

To this may be added the statement of Nothnagel and Rossbach: "Never, as far as we know, has a case of rickets been cured by the administration of lime." "Everywhere there is a lack of trustworthy and extensive observations," as to its utility.

All the forms of lime salts used in practice are, according to M. Logeais, precipitated and made insoluble as soon as they pass the stomach. They are, therefore, taken up, if at all, in the stomach alone, and the amount absorbed here is very small.

The practical conclusion that lime salts of all kinds are therapeutically useless, is one which deserves the attention of the many physicians who are constantly prescribing them in various conditions.

THE TREATMENT OF RHUS POISONING.

A timely article upon the treatment of rhus-poisoning appears in a recent issue of the *Journal of Cutaneous and Venereal Diseases*. The poisonous principle of *Rhus toxicodendron* (poison-oak) and of *Rhus venenata* (poison-ivy) resides in a volatile acid known as toxicodendric acid. The disease resulting is known technically as

dermatitis venenata. It is a curious fact that this poison is utterly inert with many persons, and, consequently, for the production of the dermatitis there must be some individual predisposition. So far as we can learn, dermatologists have not yet learned what makes up this curious and unfortunate predisposition. The plant is more active apparently in the spring and fall, and according to some authorities California is particularly rich in it. Even in standard works, there is a singular confusion as to the two plants which give rise to the toxicodendric acid. The poison-oak, or *Rhus toxicodendron*, is a rare plant, while the poison-ivy, or *Rhus venenata*, is comparatively common. Webster's Dictionary is incorrect on this point.

The disease which the poison produces is a dermatitis which runs a natural course of from one to six weeks, averaging perhaps two weeks. Its occasional very mild and brief course has led to the announcement of many specifics for rhus-poisoning. Specifics, however, do not in reality exist, and the most that can be done is to palliate the symptoms, and perhaps shorten the period of the inflammation.

The remedies most highly recommended by the editor of the *Journal* are the following solutions: ℞. Sodii hyposulphitis, ʒ j.; glycerinæ, ʒ ss.; aq., ad ʒ viij. M. Apply with compresses frequently renewed. When lotions cannot be continuously used the following powder is freely applied: ℞. Pulv. zinci oxid., ʒ ij.; bismuth subnitrat., ʒ j.; amyli, ʒ v. M. In later stages the following ointment may be given: ℞. Pulv. zinci oxid., amyli, āā ʒ ij.; vaseline, ʒ iv. M.

Another treatment highly recommended is the frequent application of black wash, followed at night by the following ointment: ℞. Acid. carbolic., gr. x–xx.; ung. aq. rosæ, ʒ j.; hydrarg. chlorid. mite, gr. x. M.

Both Dr. Hardaway, of St. Louis, and Dr. Van Harlingen, of Philadelphia, recommend highly a solution of sulphate of zinc, gr. ij. to O j. A mixture of fluid extract of grindelia robusta, ʒ ij. to ʒ j. of water is said to be very effective. Cloths are to be wetted with this, and then kept on the parts until they are nearly dry. Grindelia is generally believed to be the most efficient of the vegetable remedies, although Dr. Hyde, of Chicago, speaks enthusiastically of an ointment made by incorporating a decoction of the inner back of the American spice-bush (*Benzoin odoriferus*) with cold cream.

A writer in the *Philadelphia Medical Times* has recently recommended a saturated solution of oxalic acid painted on the part. No internal treatment seems to be indicated, unless it be a laxative.

It has been shown that if two persons are poisoned by the same plant, and treated in the same way, the inflammation in one case may subside rapidly, while in the other it may run a long course. This is a sufficient comment on all ordinary claims for specifics.

THE GEOGRAPHY OF THE TONGUE.

In a recent number of *The Medical World* is given a map of the tongue, which is to guide the practitioner in his explorations into the various parts of the economy of his patient. Say, for instance, that he wishes to know how it fares with the "right lung from the epiglottis to the ends of the bronchioles." Let him look into the northwest corner of the tongue (the root is to the [illegible], and the right side is to the west), and there, occupying a large territory, he will find how is the lay of this land. South of this are "the alveoli and lung tissue." In the extreme southwest, and about as small as the State of Rhode Island in comparison with the other States, is the pleura, occupying a little triangle to the right of the tip. The left side of the tongue is platted out with the respiratory passages of the left side in a corresponding manner. The alimentary canal occupies the central belt, with the exception of the tip of the tongue, which is given to the kidneys. The regions mapped out follow each other from north to south in this order: "Alimentary region from pharynx to pylorus of stomach," a very large section; then comes the duodenum, next the liver, a regular little New Jersey joining a small Delaware of pancreas, after which comes respectively the small and large intestine.

The projector of this remarkable scheme, Dr. C. C. Benton, of Baltimore, states that "this map of the tongue, with its localized seats of relationship to the various organs of the body, places before the observer at a glance the derangements, if any, which affect any of these organs." He also states that he gives us but the outline of a more elaborate system which he has developed. He recommends this to the youthful members of the profession as a stimulating scheme, which will lead them to construct for themselves a complete and reliable method of diagnosis by means of the tongue.

News of the Week.

Trouble between a Board of Managers and the Medical Board.—The daily papers have given some attention to the troubles which have arisen in connection with the Riverside Hospital at Yonkers. It seems that Dr. E. M. Hermance, after serving for six years as Visiting Physician to the Hospital, resigned. In accordance with custom and precedent, the Medical Board sent his name to the Board of Managers for appointment as Consulting Physician. The Managers accepted the resignation, but refused to make the appointment requested, because one of the Managers had made charges against him. After much delay the Medical Board succeeded in getting the charges investigated, and Dr. Hermance was fully exonerated. Still he was denied the appointment; so the whole Medical Board, consisting of Drs. Reinfelder, Upham, Swift, Benedict, Browne, Moffat, Harrington, and Seabury, resigned. Dr. Hermance has brought a suit for $20,000 damages against one of the Board of Managers. Public opinion seems to be entirely on the side of the physicians, and deservedly so. The whole amount of the affair appears to be that some of the Managers desired to show their personal feeling against one of the doctors and their authority over all of them.

The Rag Question Settled.—Acting Secretary Fairchild has issued the following instructions to customs officers in regard to the importation of old rags: "All old rags imported into the United States in vessels which have passed local quarantine at the port of importation, will be admitted to entry in the same manner as

other imported commodities, that is to say, without requiring special permits from the health officers as to their landing. The fact that the vessel has passed quarantine will be considered as sufficient evidence that her entire cargo is free from infection."

THE CHOLERA IN JAPAN.—Since the first appearance of the cholera in Japan this year, and up to June 20th, there have been 10,276 cases of the disease, 7,803 of which have been fatal. The average death-rate per 100 has been 75.93. The total number of cholera cases which occurred throughout the country, from August 23d to November 30th, last year, was 11,927, of which 7,152 proved fatal, the death-rate being 59.96.—*San Francisco Chronicle.*

A LONDON SURGEON'S FAMILY INOCULATED FOR HYDROPHOBIA.—I have seen many frivolous cases at the Rue d'Ulm. Pasteur was right to treat them seriously, since rabies on the brain may, and often does, cause death. The whole family of an eminent London surgeon went through a course of inoculations because they had been licked on the hands and faces by a dog of which ugly suspicions were entertained. They comprised a grown-up young lady, two young men and their wives, and a couple of misses in their early teens. I could not help hoping, when I saw them, that the starchy-looking stuff which Dr. Grancher injected into their flesh was of the bread-pill nature.—*Fortnightly Review.*

FANCY-BRED RABIES.—An English writer, Crawford, is authority for the statement that an American named Stephens, to test his theory that hydrophobia is fancy-bred in man, never loses a chance of getting bitten by a mad dog. He has been wounded by canine teeth forty-seven times, and a German named Fischer, who is his disciple, nineteen times. As there is certainly such a disease as simulated rabies, I should advise some society for the diffusion of useful knowledge to scatter broadcast the small volume on "Le préjugé de la Rage," by Fangère Dubourg, and what was written on this subject by such lights of science as Bouley, Brechet, Tardieu, Majendie, Bondin, Vernois, Sausen, Renault, Donnat, Baron Portal, and Dupuy.

COMPULSORY INOCULATION FOR DOGS.—A serious danger underlies the run upon the laboratory of the Rue d'Ulm. It is compulsory inoculation for dogs. Such compulsion was mooted about a year ago by the opportunist section of the Paris press, and by M. Paul Bert in the lobby of the Chamber. He wanted to give the Van Amburg of the microbes the whilom imperial seat of Villeneuve l'Etang, near St. Cloud, for an experimenting place on dogs, and eventually for a central institute for obligatory canine inoculation. This scheme was actively put forward by M. Bert in a committee-room of the Chamber in the presence of a deputy, who repeated to me what was said, and who set his face against the proposal, which he foresaw speculators would take up. There are four millions of dogs in France. The inoculation fee on each, if rated at a franc, would be four millions of francs. My friend argued he could prove from Pasteur that all the evil potency of a wild virus is latent in a tame one. Measles tamed by frequency of occurrence in old countries will decimate red Indians and South Sea Islanders, to whose organizations they are new, and if taken from them by a European will act with intense virulence. The best preventive for rabies would be in the exclusion of dogs from cities, in carefully teaching them not to eat at waysides, and in keeping tainted meat out of their way. This view prevailed over M. Bert's, because the proprietors of villas near Villeneuve l'Etang got up a movement against the château being turned into a Pasteur Institute. It may be assumed that were rabies "laid" by inoculation, and dogs still kept in unhealthy conditions and allowed to feed on offal reeking with septic organisms, that nature would show resentment in some new disease as bad or worse than the known one.—*Fortnightly Review.*

THE SUPRA-PUBIC OPERATION FOR STONE.—Sir Henry Thompson says that he does not do lithotrity when the stone weighs over two ounces. In such cases he invariably does the supra-pubic lithotomy. He has given up almost entirely the perineal operation. In the supra-pubic operation he divides the skin, supra-superficial fascia, etc., with a knife, and all the remaining tissues, including the walls of the bladder, with his finger-nails, thus avoiding hemorrhage. He does not close the opening in the bladder after removing the stone, but introduces a drainage-tube for forty-eight hours, keeping the patient on his side. Sir Henry's chief reasons for preferring the supra-pubic operation to the perineal are the almost entire absence of hemorrhage and the greater facility of removing the stone. The supra-pubic is coming pretty generally into favor here. Mr. Buckstone Brown tells me that he quite frequently does lithotrity in children.—Cor. *Amer. Practitioner.*

OVARIOTOMY AND SPECIALISTS.—Mr. Knowsley Thornton is still a warm advocate of the spray. He tells me that, now that ovariotomy is becoming so very common as to be performed by all surgeons, the specialists do not get near so many cases, and so they are paying more attention to hysterectomy and oöphorectomy.—Cor. *Amer. Practitioner.*

PONDEROUS BREASTS.—A correspondent of *The Lancet* calls up the following delicate point in casuistry: "I have a patient who suffers from great pain round the waist, and in the breasts almost constantly, due to the size of her breasts, which are unusually large. She complains that they make her life a burden to her, and constantly entreats me to amputate them. Would this be justifiable? Their weight produces a constant dragging pain from the clavicle downward, and from the back and sides forward, relieved when the weight of the breast is supported. Is there any known means of causing the breasts to contract by the application of any drug? If their weight and size could be greatly reduced it would be a boon. If any of your readers can from experience of a similar case suggest a trustworthy line of treatment I shall be most grateful."

ORGANIZATION OF INDIA-RUBBER.—M. Professor Van Lair, of Liège, announces to the Académie de Médecine the curious fact that a tube of caoutchouc placed between the two ends of a cut nerve becomes vascularized, the nerve-fibres prolong themselves into it, and finally the two ends of the nerve units, the caoutchouc disappearing.

Obituary.

ALFRED S. PURDY, A.M., M.D.,

NEW YORK.

ANOTHER of New York's oldest and most esteemed physicians has gone, in the person of Dr. Alfred S. Purdy, who died suddenly of pneumonia on the 23d inst. Dr. Purdy had been in his ordinary health up to a short time before his illness.

He was born in 1808, in this city, of which he has been a constant resident, and in which he practised his profession for fifty-five years. He fitted for Columbia College, but did not enter upon a collegiate course, determining to study surgery. He entered the office of Dr. Alexander H. Stevens, and afterward studied at the College of Physicians and Surgeons, from which he graduated in 1834. He then opened an office, and moved up town, as the city spread its limits, to his home on Madison Avenue.

In the early days of his professional life Dr. Purdy was Assistant Surgeon at Bellevue Hospital, and was also connected with the New York Dispensary. Dr. Purdy's life has been one of steady attention to his profession. He was a general practitioner, though in the past few years he has paid much attention to the study of puerperal insanity. He received the degree of A.M. from Wesleyan University.

Dr. Purdy was one of the founders of St. Paul's Methodist Episcopal Church of New York, of which he was a trustee at the time of his death. He was also a member of the Medical Society of the County of New York, of the Academy of Medicine, and of the Pathological Society.

Reviews and Notices.

STUDIES IN PATHOLOGICAL ANATOMY. By FRANCIS DELAFIELD, M.D., Professor of Pathology and Practical Medicine, College Physicians and Surgeons. Vol. II. Part 2. New York: William Wood & Co., 56 & 58 Lafayette Place. June, 1886.

THIS part contains thirty-five pages of text, upon which are described the lesions of chronic phthisis and a special lesion of lobar pneumonia. These are illustrated with twenty-seven plates.

The author is one of the most concise and comprehensive writers in the medical profession. His language is simple, his style is laconic, and at no time does he become ornate; but there is a directness of expression which points to positive opinions based upon personal investigation.

It has already been said of former fasciculi of this work, and we are ready to repeat the statement, that "the fidelity of these illustrations is beyond praise, while their execution in the different methods makes them specimens of high art." Still further, in viewing the admirable presentation of microscopical appearances, we are privileged to sit, as it were, beside the master, and almost view the specimens with his eye.

In the light of the most recent advancements in pulmonary pathology, it is interesting to notice that Dr. Delafield makes the unqualified statement that "the one essential feature of chronic phthisis is the presence of tubercular inflammation; without this there is no phthisis. Such a tubercular inflammation is not only an essential, but also a primary, part of chronic phthisis; it exists from the very commencement of the disease." "The tubercle bacilli are regularly found associated with the lesions of chronic phthisis."

The pages on lobar pneumonia constitute an appendix in which the author describes pneumonia occurring in adults, and running an *acute* course, and yet after death the air-spaces were found to contain organized new connective tissue. The special interest in the lesions exists in the fact that the author has observed it in *acute* cases. In this respect the observation is new.

All students in pathology will be highly interested in the continuation of Dr. Delafield's great work, which exhibits the care and elegance uniformly displayed by his publishers.

DISEASES OF THE SPINAL CORD. By BYROM BRAMWELL, M.D., F.R.C.P. Edinburgh. Fifty-three Colored Plates and one hundred and two fine Wood Engravings. Second Edition. Pp. 298. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

THE publishers have done no small service in making Bramwell's superb work accessible to the general practitioner. Its merits are already widely known. It has been translated into German, French, and Russian, and has received the highest encomiums from critics on every side. The book is thoroughly scientific in method, and represents the most recent knowledge in spinal cord pathology. The subject is handled also with great clearness and conciseness, and is enriched with a most lavish display of colored illustrations in normal and pathological histology.

The present edition contains some changes in arrangement—a chapter on concussion of the spinal cord (which is not very good), and an appendix on pseudo-hypertrophic paralysis.

The criticisms to be made on Bramwell's book are that he has presented the pathology in a more systematic and positive way than facts will justify.

There is not very much said with regard to the art of treating spinal diseases.

The publishers have very perfectly reproduced the cuts and colored illustrations of the original work.

INSANITY AND ITS TREATMENT. Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. FIELDING BLANDFORD, M.D. Oxon. Third Edition. Together with Types of Insanity, an Illustrated Guide in the Phasical Diagnosis of Mental Disease. By ALLAN MCLANE HAMILTON, M.D. Pp. 379. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

DR. BLANDFORD'S book consists of twenty lectures, originally delivered at St. George's Hospital some ten years ago. These were well received, and have been regarded as furnishing a standard and trustworthy treatise. The book before us is the third edition, which the author has revised in the light of recent contributions to mental science.

We regard Dr. Blandford's treatise as one that will prove eminently helpful to the general practitioner. It is not long, and it does not go extensively into minutiæ. The specialist will read it with interest to learn the author's views, but it will not instruct him greatly.

Dr. Hamilton's "Types" have already been commented upon and commended in these columns.

VORLESUNGEN ÜBER PHARMAKOLOGIE. Ausgearbeitet für Studirende. Von DR. C. BINZ. III. Abtheilung (Schluss). Verlag von AUGUST HIRSCHWALD. Berlin, 1886. Lectures on Pharmacology for Physicians and Students. Third (and final) volume.

THE present, concluding, volume of this valuable series begins with the forty-second lecture, and covers the subjects of bismuth, silver, mercury, the antiseptics, salicylic acid, the antipyretics, fermentative acids, free acids, evacuant drugs, emollients, and counter-irritants. One cannot praise too highly these lectures of Dr. Binz. Though, strictly speaking, pharmacological, they, in reality, give much in practical therapeutics, and, as a whole, will furnish the physician a solid basis for using drugs intelligently in practice.

URINARY AND RENAL DISEASES. Illustrated by numerous Cases and Engravings. By WILLIAM ROBERTS, M.D., F.R.S., F.R.C.P., Professor of Medicine at the Victoria University; assisted by ROBERT MAGUIRE, M.D., M.R.C.P., Physician to Out-patients, St. Mary's Hospital, London. Fourth edition. Philadelphia: Lea Brothers & Co. 1885.

A PRACTICAL TREATISE ON DISEASES OF THE KIDNEYS AND URINARY DERANGEMENTS. By CHARLES H. RALFE, M.A., M.D., F.R.C.P., etc. Philadelphia: P. Blakiston, Son & Co. 1885.

THE PATHOLOGY AND TREATMENT OF STRICTURE OF THE URETHRA AND URINARY FISTULÆ. By SIR HENRY THOMPSON, F.R.C.S., M.B. Lond., etc. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1885.

HARN-ANALYSE FÜR PRAKTISCHE AERZTE. Von DR. S. LAACHE. Leipzig: F. C. W. Vogel. 1885.

NEW works on diseases of the genito-urinary apparatus, or at least new editions of old ones, are cropping up with such numerical vigor as to suggest one of two possibilities—either the afflictions of which they treat are on the increase, or else there is a growing demand, on the part of the profession, to know all that is knowable up to the most recent results of elaborate research pertaining to a topic that is as complicated as it is interesting. We are inclined to believe that the latter possibility represents the true state of affairs. Probably the view is gaining ground that many hitherto obscure derangements in some way depend upon morbid conditions of the genito-urinary organs. Furthermore, there exists already a widespread belief, and a very just one it is, too, that more may be learned from a systematic examination of the urine than has yet become the undisputed and common intellectual property of the medical profession.

The list of works given above by no means represents all that has found its way into the print of book-form on the subject of these disorders, even within the period of a twelvemonth. Nevertheless, it includes some of the most important publications, and we regret that it will be impossible to do more than quite briefly examine the four volumes before us. The design of Dr. Roberts' volume, of six hundred and twenty-eight pages, is to give an account of the organic diseases of the kidney, and of those diseases and disorders of which the chief characteristic is some alteration of the urine. The author has divided his work into three parts. The first is devoted to a consideration of the physical and chemical properties of the urine in health and disease, and includes two excellent chapters on urinary deposits. Part II. treats of those diseases which are chiefly characterized by some alteration in the composition of the urine, *i.e.*, diabetes, gravel, chyluria, and so forth. The organic diseases of the kidneys naturally come next, and receive in the third part that amount of painstaking attention to which their gravity and frequency so justly entitles them. Malpositions of the kidneys, cancer, tubercle, parasites, and other rare affections are treated analytically, but yet with sufficient fulness to include all the information which the practitioner is likely to desire concerning them. On the whole, it must be said that the value of this treatise as a guide-book to the physician in daily practice can hardly be overstated. That it is fully up to the level of our present knowledge is a fact reflecting great credit upon Dr. Roberts, who has a wide reputation as a busy practitioner.

Dr. Ralfe's treatise has for its object the presentation of a "clear, concise, and systematic account of urinary pathology and therapetics, based upon the latest ascertained facts, and supported by the best authorities." The work is a readable one, but, as compared with Dr. Roberts' volume, it is too evidently a careful compilation of the opinions of various authorities, rather than the result of wide personal experience, to make one wish to consult it by preference. Nevertheless the information contained in its pages is trustworthy, and there is no reason to doubt that the book will find favor with those who like a somewhat condensed style, and who prefer facts to theories.

Sir Henry Thompson's well-known monograph appears in its fourth edition, a somewhat reduced modification of the previous one. Illustrative cases are entirely removed from the present issue, since the author holds them no longer necessary to substantiate his personal views. The eminent writer's methods of treatment are familiar to the reading public, and we have merely to add that, barring some slight details, they are those universally practised both in England and our own country. Possibly, however, the American surgeon uses the conical steel sound rather more frequently than appears to be entirely prudent and advantageous. At least, Sir Henry favors the soft bougie, in many cases where we would not hesitate to employ the harder instrument.

Concerning Dr. Laache's work on urinary analysis there is nothing to say, except that it is a trustworthy guide to this important department of medical investigation. The English reader, being liberally supplied with equally good works, written in his own language, will scarcely care to provide himself with a work that does not differ materially from Tyson and similar practical manuals.

THE MEDICAL REGISTER FOR 1886. WILLIAM T. WHITE, M.D., editor. New York: Putnams.

THIS, the twenty-fourth volume of this publication, is a reproduction of its predecessors as to general appearance and scope of its contents. It contains the names of nearly seven thousand physicians, as follows: New York, 2,884; New Jersey, 824; Connecticut, 527. An increase over last year of 190.

In the New York City list 1,926 are registered; an increase of 24. Brooklyn has on its list 639; an increase of 41. Of the total number 154 are serving in the various hospitals and asylums.

The statistics in regard to the various societies and institutions are commendably accurate.

A PECULIAR ACCIDENT FOLLOWING AN OPERATION FOR HYDROCELE.—MM. Boursier and Loumeau relate the following case in the *Journal de Médecine de Bordeaux*, of June 20, 1886. A strong, healthy man, aged forty-four, of good antecedents and presenting no history, hereditary or personal, of nervous troubles, entered hospital on account of a hydrocele. There was nothing peculiar to note about the hydrocele, which occupied the right side of the scrotum, and upon which it was decided to operate by evacuation of the fluid and injection of dilute tincture of iodine. Immediately upon the injection of the first few drops the patient complained of pain in the cord and groin, and of cramps in the right forearm. The hand was seen to be slightly flexed toward the ulnar side, the little- and ring-fingers were completely flexed, while the middle-finger and index had their two terminal phalanges extended on the first, this one being flexed on the metacarpus; the thumb was flexed and drawn toward the other fingers. In a short time the same convulsive movement took place in the left hand. There were neither convulsions nor syncope, but the painful contractions persisted for some minutes and then gave way, the index and middle-finger becoming completely flexed, the hand also being flexed on the forearm. On a question being addressed to the patient it was found that he could not articulate, the muscles supplied by the hypoglossal being also contracted. The latter soon disappeared, but the contractions in the forearms and hands persisted for nearly an hour. The authors regarded the spasms as of reflex origin, but were unable to explain their localization to the muscles supplied by the median, ulnar, and hypoglossal nerves.

Reports of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held at Long Branch, July 21, 22, and 23, 1886.

WEDNESDAY, JULY 21ST—FIRST DAY—MORNING SESSION.

THE Association met at the Howland House, and was called to order, at 11 A.M., by the President, DR. BURT G. WILDER, of Ithaca, N. Y.

ADDRESS OF THE RETIRING PRESIDENT.

In view of the fact that he delivered a somewhat extended address upon a general subject last year, Professor Wilder confined his remarks to the brief discussion of what he believed to be a new fact, namely

THE ACCURATE COLLOCATION OF ANSIFORM AND FETAL CEREBRAL FISSURES IN THE HUMAN FŒTUS.

In three alcoholic fœtuses in the museum of Cornell University, estimated to be from three to seven months advanced, the lambdoidal suture directly overlies a short but deep fissure, which has seldom been noticed, has been hitherto misinterpreted, and may be called the *lambdoidal fissure*. A photograph and drawing of one case were submitted. The fissure is very distinct and deep, but has no ental correlative in the specimen examined. Bischoff and Huxley have regarded the fissure itself as temporary in man, though persistent in apes. Professor Wilder believed the fissure itself to persist in man also, but to lose its relation with the suture in the last two months of fœtal life. He mentioned the probability that the coronal suture is similarly related with the precentral fissure, and closed his remarks with an enumeration of several questions that arise in connection with the subject, and with suggestions as to making use of fœtal brains by careful exposure, preservation, photographing, etc.

DR. WILDER then introduced the President-elect, DR. CHARLES K. MILLS, of Philadelphia.

THE TREASURER'S REPORT

showed a balance in the treasury of $114.55.

ELECTION OF NEW MEMBERS.

The Council recommended the following candidates, who were elected by a ballot cast by the Secretary, DR. R. W. AMIDON, of New York: Drs. F. X. Dercum and James H. Lloyd, of Philadelphia; B. Sachs, J. Rudisch, and E. D. Fisher, of New York.

THE PRESIDENT'S INAUGURAL ADDRESS.

DR. MILLS then delivered his inaugural address, in which he made brief reference to the scientific work done by the members of the Association, and published in systems of medicine, encyclopædias, and medical journals. He made special reference to the organization of the Congress of American Physicians and Surgeons, and said that he was personally in favor of the Association becoming an integral part of the Congress, and that he hoped that the Association would take the steps necessary to effect such a consolidation.

Dr. Mills thought that some changes in the plan of the Congress would be advantageous; for example, that the Congress should meet every two years instead of annually; that some arrangement should be made by which the national organizations composing the Congress should in rotation receive the office of President; and that general sessions should be held mornings, and each society have its own sessions in the afternoon.

After these preliminary remarks the President proceeded to the subject proper of his paper, which consisted in a demonstration of the anatomical peculiarities of several brains, which he had collected. The first was the brain of a monomaniac; the second, that of Taylor, a criminal, the subject of delusional insanity; two others, the brains of murderers, and lastly the brain of a Chinaman and that of a feeble-minded person. His purpose was to call attention to aberrations in development, and in general terms they were such as allied them to the simian brain. The peculiarities related to bulk, simplicity of convolutions and fissures, atypical asymmetry, confluence of fissures, etc., and they indicated a low order of human beings. In only the specimen presented had he ever observed complete confluence of the fissures of Sylvius and Rolando.

The paper was discussed by Drs. B. G. Wilder, of Ithaca; L. C. Gray, of Brooklyn; F. X. Dercum, of Philadelphia; Joseph Jastrow, of Johns Hopkins (by invitation); W. R. Birdsall and B. Sachs, of New York, and the discussion was closed by Dr. Mills.

The Association then adjourned to meet at 3 P. M.

AFTERNOON SESSION.

The Association was called to order by THE PRESIDENT.

DR. L. C. GRAY, of Brooklyn, read a paper in which he gave the history of

A CASE OF LESION OF BOTH TEMPORAL LOBES, PRODUCING GENERAL LOSS OF MEMORY, ALMOST WORD DEAFNESS AND WITHOUT DEAFNESS.

The patient was a man forty-three years of age, single, and an American, who gave an indirect history of syphilis. The mental faculties, other than loss of memory, were intact. He had convulsions, remained comatose thirty-six hours, and then died. The autopsy showed a normal skull and normal dura mater, lepto-meningitis of both the right and the left temporal convolutions, extending around the fissure of Sylvius, involving the gyrus marginalis and the bases of the ascending frontal and parietal convolutions. Besides, there were minute hemorrhages and chronic endarteritis.

The case was in accord with one reported in 1884, by C. Westphal, the details of which Dr. Gray gave.

The paper was discussed by Dr. Philip Zenner, of Cincinnati.

DR. V. P. GIBNEY, of New York, then read the history of

A CASE OF PSEUDO-HYPERTROPHIC PARALYSIS,

from which microscopical sections had been prepared by DR. R. W. AMIDON, of New York, who demonstrated the changes that had taken place. This consisted in a marked paucity of motor-cells in the anterior horns, particularly in the lumbar and dorsal regions, and those which remained had only few processes and took the staining agents poorly.

Dr. Gibney raised the question as to whether there was any cord lesion distinctive of this affection, or was it simply an interstitial myelitis; also, whether the later stages of this disease were distinguishable by clinical features from each other or from progressive muscular atrophy.

The communication gave rise to discussion participated in by Drs. G. W. Jacoby and B. Sachs, of New York; Philip Zenner, of Cincinnati; L. C. Gray, of Brooklyn; F. X. Dercum, the President, and J. H. Lloyd, of Philadelphia; R. W. Amidon and G. M. Hammond, of New York; the general tenor of which was to doubt the existence of a spinal lesion, and that the two diseases were closely allied, if not identical.

DR. SARAH J. MCNUTT, of New York, then read a paper in which she reported

THE CASE OF AN INFANT WITH MULTIPLE TUMORS OF THE CEREBRUM, PROBABLY OF SPECIFIC ORIGIN.

The autopsy was made by Dr. T. E. Satterthwaite, and the microscopical examination was made by Dr. W. H. Porter and Dr. W. A. Shufeld, of New York.

Dr. G. Belton Massey, of Philadelphia, then read a paper

ON THE CAUSE OF ELECTROTONUS AND OF THE NORMAL FORMULA OF POLAR REACTIONS.

After referring to the greater action of the cathode in both electrotonus and electro-contraction, the reader drew preliminary attention to the laws of current distribution within large conductors, and exhibited drawings of the potential planes and lines of flow modelled from the results of actual measurements within tubs of salt-water by Professor W. G. Adams, of England. These measurements showed that the potential of either sign gradually lessened from the electrode toward the middle of the body, where it was zero. A nerve placed anywhere between an electrode and the middle of the body would, therefore, be bathed in the polarity of that electrode, with no other polarity in the immediate neighborhood, as held by Erb, De Watteville, and others. This theory of Erb—first advanced by Helmholtz—of a *peripolar* region of opposite polarity in the immediate neighborhood of each pole, is consequently opposed to the proven laws of physics.

In explaining the admitted fact of the greater action of the cathode some other theory must be adopted. The reader thought that the proper explanation lay in the correction of a misconception in physics: the direction of the current is probably the reverse of that now held, being from the cathode to the anode. Such an assumption would require a radical change of ideas as to which was the real positive pole, or pole of raised level, but would not interfere with the laws of electricity in any way. Its adoption would make both electrotonus and electro-contractility rational and comprehensible, for catelectrotonus would then be due to a raised potential in a nerve, and anelectrotonus to a depressed potential. Cathodic closure produces greatest contraction because it is the application of electric energy to the nerve, and anodic opening comes next because it is a backward rush of normal potential. Many facts in physics make it probable that this direction of currents is the true one, while it effectually disposes of the contradictory terms involved in still calling the pole most positive in its action on the body the "negative pole."

The paper gave rise to discussion, participated in by several members, after which the Association adjourned to meet at 10.30 A.M., Thursday.

Thursday, July 22d—Second Day—Morning Session.

The Association was called to order by The President, and the first paper was

THE REPORT OF THE COMMITTEE ON DOSAGE OF ELECTRICITY

appointed at the last annual meeting, and consisting of Drs. George W. Jacoby, W. R. Birdsall, and R. W. Amidon, of New York.

The Committee reported that special rules applicable to all cases for the use of the current strength, or for the length of time to be devoted to each application of electricity, did not exist, and, in the nature of things, could not be formulated; that all conclusions arrived at by any special investigator or series of investigators—no matter with what mathematical accuracy these conclusions be expressed—could only be arrived at empirically, and were dependent upon private experience and personal views. Therapeutic experience is too weak a foundation upon which to build an edifice of such magnitude as electrical dosage.

The Committee, however, recommended the employment of all possible accuracy, in concordance with present scientific knowledge, in the application of electricity. It advocated the use of the measures adopted by the International Electrical Congress of 1881; also the use of an accurate galvanometer divided according to the system. Furthermore, the Committee recommended the adopton of electrodes of certain diameters, with their square distinctly marked upon them in square centimetres (Erb's normal electrodes).

It was also recommended that a system of expressing the current used, in accordance with these facts, be adopted, and that a fraction be always used of which the numerator represented the number of milliampères employed, and the denominator the number of square centimetres contained in the electrodes.

The report was discussed by Drs. L. C. Gray, of Brooklyn; J. H. Lloyd, of Philadelphia; L. Weber, of New York; G. Belton Massey, of Philadelphia, and the discussion was closed by Dr. Jacoby.

Dr. R. W. Amidon, of New York, Secretary, presented a photograph of a

MICROCEPHALIC GIRL,

fifteen years of age, who had three sisters in the same condition, and which had been received from Professor A. Forel, of Zurich, Associate Member; the father and mother were normal.

The next paper was by Dr. Burt G. Wilder, of Ithaca, and entitled

NOTES ON THE BRAIN.

FIRST—ADDITIONAL CASE OF INDEPENDENCE OF THE PAROCCIPITAL FISSURE.

In his recent paper on the paroccipital fissure Professor Wilder stated that, among forty-three reliable specimens and figures accessible to him, the paroccipital is continuous with the parietal in twenty-one, and independent in twenty-two. The brain of a negro child at birth, lately prepared by him, had the two fissures wholly independent on the right, and barely united by a shallow junction on the left.

SECOND—AN ENTAL CORRELATIVE OF THE OCCIPITAL FISSURE IN THE EARLY FŒTUS.

In a fœtus, estimated to be about six or seven months old, as shown in an accompanying photograph and figure, opposite the occipital fissure there was a distinct ental ridge, so that the entire thickness of the wall was there folded. A similar ridge is figured by Tiedemann, but not named or described. Without further observations it cannot be determined whether it disappears in the adult, or persists as the more or less distinct elevation known as the *bulbus cornu posterioris* or *eminentia splenialis*. Even if transitory, it adds another to the list of "total fissures," including the calcarine, hippocampal, collateral, and sylvian.

THIRD—THE FŒTAL EXTENSION OF THE PROPLEXUS TO THE END OF THE POSTCORNU.

This is the case in a fœtus estimated to be seven months old. The postcornual extension is apparently in process of atrophy. There were indications of a like extension into the precornu. These extensions might be expected in view of the great volume of the plexus at a still earlier stage.

FOURTH—POINTS ILLUSTRATED BY THE TRANSECTION OF A FŒTAL BRAIN.

Six points of morphological interest were noted, most of them indicating that the thalami increase in width as development proceeds, so that in the adult human brain they form, or seem to form, part of the floor of the procœles or lateral ventricles, which is not the case in other mammals, excepting, perhaps, the primates.

The communication was discussed by Drs. Gray, Mills, and Wilder.

The President announced the reception of

THE BRAIN OF A NEW-BORN NEGRO CHILD

from Dr. Formad, of Philadelphia.

Dr. L. Weber, of New York, then read a paper

ON THE PSYCHO-NEUROTIC MELODY WHICH ACCOMPANY AND OFTEN MASK LATENT PULMONARY DISEASE.

It was a daily observation that there was a special condition of the mind associated with pulmonary tuberculosis. Frequently it consisted in a peculiar, cheerful hopeful condition, which seemed to be strongly out of harmony with the unmistakable signs of the advancing fatal disease by which it was accompanied.

But there was also a state of marked mental depression which had been noticed in intimate association with the disease.

The peculiar hopefulness was most frequently seen in the acute form of phthisis, and it was often so irrational and persistent as to amount to an insane delusion. In the last stage of such cases the emotional exaltation was often extreme, and actual delirium not unfrequent. The opposite mental condition was met with in chronic phthisis, more especially in that form which had been called latent. All through the course of the disease there was depression and distrustfulness, although the symptoms were neither so depressing nor so obvious as in the acute forms. The mental symptoms sometimes preceded the physical signs, and were such as languor and depression mingled with waywardness, rather characteristic of the initial stage, and usually accompanied by general functional debility. In many cases the physical signs of pulmonary phthisis were apt to be overlooked; in others they escaped observation for years, although repeated and careful examination may have been made by careful observers.

Again, when the mind was much affected the symptomatic cough and expectoration and dyspnœa were often absent; and that was the case sometimes when physical exploration revealed the existence of quite large excavations present in advanced phthisis. Occasionally fits of considerable excitability and excitement might vary the picture. There was a general disinclination to enter into any kind of amusement or continuous work, and even if it was overcome, there was no interest manifested in the employment. This condition might be called a mixture of subacute mania and dementia. If there was any single tendency that characterized the mental state in these cases it was *to be suspicious*.

Dr. Weber related illustrative cases occurring in women. The treatment should be very largely hygienic and dietetic.

The paper was discussed by Drs. L. C. Gray, of Brooklyn, R. L. Parsons, of Sing Sing, and J. Van Bibber, of Baltimore, who mentioned cases illustrating the phenomena described by the author of the paper, and the discussion was closed by Dr. Weber.

Dr. Philip Zenner, of Cincinnati, O., presented a patient who was the subject of

AUCTIONEER'S CRAMP.

It belonged to the group of cases which were termed professional neuroses, of which "writer's cramp" was the most common and the best type. The patient had worked in his occupation to an extreme degree, and all at once he discovered that something was the matter with his mouth as he cried a sale. The muscle chiefly affected was the orbicularis oris, and particularly the left part. The man was forty-five years of age, with good family history, and had always been in excellent health. There was no evidence of further disease of the nervous system. As he said, "Five, five, five," etc., as in crying a sale, for example, there was considerable muscular spasm about the mouth, accompanied by a sense of exhaustion.

Dr. Zenner said that the diagnosis of professional neurosis was based upon the fact of excessive use of affected muscles in the patient's occupation, and the fact of the spasm being excited by the direct exercise of those muscles, which were the basis of all professional neuroses. It was possible that there was a neuritis present, as had been found in various cases of writer's cramp, but the evidence of its presence in this case was not strong.

The case gave rise to considerable discussion, participated in by the President; Dr. Gray, of Brooklyn; Dr. Weber, of New York, and the discussion was closed by Dr. Zenner. The question of diagnosis was the chief point at issue.

The Secretary read a communication received from

acknowledging his high appreciation of the honor conferred upon him by being elected to Corresponding Membership at the last annual meeting. [It will be remembered that Professor Gudden lost his life at the time the mad King Ludwig committed suicide.]

The Association then adjourned, to meet at 3 P.M.

Dr. Burt G. Wilder, of Ithaca, exhibited

SEVEN MONTHS AGO.

The frog was in excellent health, could change his position, balance himself, execute the retrograde movement, wink with one eye, would not open his mouth voluntarily, but did not know any better than to attempt to do two things at the same time, the reverse of each other; for example, try to swallow one end of the minnow, and with his foot endeavor to scratch the other end of the fish out of his mouth.

Remarks were made by Drs. Gray, of Brooklyn; Sachs, of New York; Jastrow, of Baltimore, and Zenner, of Cincinnati.

Dr. C. L. Dana, of New York, then read a paper on

in which he reported two original cases. The object of his paper was to report these somewhat unique cases, presenting the symptoms of tabes dorsalis; next to show that arsenical paralysis, like those from diphtheritic poison and alcohol, presented two types: 1, What might be called the mixed or ordinary form; 2, the ataxic form; and finally, to show that the ordinary teachings that arsenical paralysis was due to a diffuse myelitis was incorrect, and that these paralyses were really the result of multiple neuritis. His conclusions were:

First.—That a disease resembling locomotor ataxia may be caused by arsenic given indiscriminately, absorbed from wall-papers, or taken in single large doses.

Second.—That arsenical paralysis of this type and arsenical paralysis of other types are not due to a diffuse myelitis, as has been taught, but to multiple neuritis.

Third.—The arsenical paralysis, like those from diphtheria, alcohol, and probably other infectious diseases and poisons, are of two types: (1) The ordinary mixed motor and sensory paralysis, the motor troubles and atrophy being marked; and (2) the pseudo-tabetic form, in which there is no pronounced motor paralysis, but marked sensory troubles, and especially ataxia.

The paper was discussed by the President, and Dr. Sinkler, of Philadelphia; Dr. Jacoby, of New York, and Dr. Sachs, of New York, and the discussion was closed by Dr. Dana.

The general result of the discussion seemed to be that various parts of the body might be involved by these poisons, and that it could not be safely accepted that the lesions produced were exclusively either a myelitis or a neuritis, but with the evidence rather in favor of neuritis as against myelitis.

Dr. Wharton Sinkler, of Philadelphia, then read a paper on

THE TREATMENT OF PAINLESS FACIAL SPASM.

The treatment of tic non-douloureux was unsatisfactory, and, according to Erb, one of the most thankless

problems of medical practice. All authorities agreed that therapeutic measures were of but little use in the treatment of this annoying affection. Various drugs had been spoken of favorably in its treatment, but he had not been able to find reports showing that any cases had been cured for a length of time by any single remedy. Surgical measures had, therefore, become necessary to afford relief. Dr. Sinkler then mentioned the various operations which had been resorted to, such as section and resection of nerves, etc. (In the case which he reported resection of the infraorbital nerve did not produce any permanent relief.)

The possibility of stretching the facial nerve naturally suggested itself, after other nerves had been stretched with good results, and the operation was first performed by Baum for the relief of facial spasm in 1878. The patient was cured for eight or nine months, and then had a slight relapse, but after two years she was comparatively free from the disorder. There have been since Baum's operation twenty others, the last being the case which Dr. Sinkler reported, and in which the patient, a woman forty-nine years of age, came under observation first in the summer of 1883. She received a great variety of treatment without much relief, until the facial nerve was stretched by his colleague, Dr. W. W. Keen, in April, 1886.

Dr. Sinkler then quoted from Dr. Keen's table, which showed that there had been 21 cases of tic convulsif in which the facial nerve has been stretched with the following results: complete relief in 5. In Dr. Sinkler's case there had been no return except the trifling twitching of the lower fibres of the orbicularis. In 14 cases complete relief, in 3 lasted only one week, and after that time in 1 of them the improvement lasted for two years, and in the other there was no improvement.

In 5 cases complete relief lasted from three weeks to four months; of these 4 continued improved, and 1 was finally not any better than before the operation.

In 6 cases there was absolute relief from four months to one year; of these, improvement continued in 3, and there was no improvement in 3.

Of the whole number (21) there were but 6 in which it was reported that there were no relapses and the condition as bad as before the operation. There was but 1 case in which there was not complete relief for a longer or shorter period. It was true that none of these cases were under observation long enough to make a thorough test of the value of the operation, but no one means had given relief in so large a proportion of cases.

Dr. Sinkler was inclined to believe that in his case the disease was of peripheral origin, from the fact that she had two attacks of chorea in early life, and also the influence which the menstrual periods exerted upon the facial spasm.

The paper was discussed by the President, Dr. Massey, of Philadelphia, and Dr. Dana, of New York, who regarded statistics as extremely fallacious.

Dr. E. D. Fisher, of New York, then read his inaugural thesis, which was entitled

REMARKS ON EPILEPSY.

The object of the paper was to show the central character of epilepsy, and to place it among organic diseases, rather than functional disorders—a chronic disease of the cortex, with progressive decline toward insanity, belonging to the class of cases called general paresis.

Dr. B. Sachs, of New York, then read his inaugural thesis, entitled

INTRACEREBRAL HEMORRHAGE IN THE YOUNG.

After referring to the increased attention neurologists were paying to the cerebral accidents of children, the writer recorded his conviction that intracerebral hemorrhage was more frequent than it was generally supposed to be, and that many cases of this sort were commonly classified under the head of meningeal hemorrhage.

Dr. Sachs then reported two cases of intracerebral hemorrhage, one in a boy two and a half years old, and the other in a young man of nineteen years. The history of the first case was given in full, in order to place the diagnosis on a firm basis. The child had typical right hemiplegia with aphasia, without coma or convulsions, at the time of onset. The onset was slow, aphasia setting in first, paralysis of the arm and leg some hours later. The recovery was typical of that which takes place in many cases of adult hemiplegia from apoplexy. The reasons were given why the writer held that in this case the apoplectic attack was due to hemorrhage rather than to embolism or thrombosis. As regards the differential diagnosis between meningeal and intracerebral hemorrhage the lack of convulsions seemed to be of unusual significance. In meningeal hemorrhage convulsions are invariably present, so their absence might argue, other things being equal, in favor of intracerebral hemorrhage. The second case was that of a young man who had had two apoplectic attacks exactly one year apart. The histories of these attacks were very similar to the one given in the first case. Using these cases as a basis, the author of the paper entered upon a discussion of the changes in the walls of cerebral arteries, permitting an effusion of blood into the brain substance. Autopsies on this condition in the young are very scarce, but there was good reason for supposing (reference was made to some recently reported cases of Dr. Osler) that miliary aneurisms occurred in young children, and that fatty degeneration of the cerebral arteries (permitting transudation of blood through the vessel-walls, Recklinghausen) was a not infrequent condition.

The paper was discussed by the President, Dr. Lloyd, of Philadelphia; Dr. Zenner, of Cincinnati; Dr. S. J. McNutt, and Dr. Amidon, of New York, and the discussion was closed by Dr. Sachs.

The Association then adjourned, to meet on Friday morning.

Friday, July 23d—Third Day.

The Association was called to order by The President.

Dr. Burt G. Wilder, of Ithaca, presented the first scientific subject, which consisted in

AN EXHIBITION OF THE MEDISECTED ALINJECTED HEAD OF A MURDERER.

The features of the brain, which was thus hardened and exposed *in situ*, are to be discussed at a future meeting in comparison with another murderer's brain; the specimen was shown in illustration of the value of the method of *continuous arterial alinjection*, which has been applied to other heads, to brains, and to entire bodies (children, a chimpanzee, etc.) in the anatomical laboratory of Cornell University. The main features of the method are: (*a*) the reception of the head within twenty-four hours; (*b*) preliminary washing out of the vessels with chloral (to which, perhaps, weak alcohol might be preferable); (*c*) continuous alinjection for a week; (*d*) continuity secured by a pressure of eighty millimetres of mercury, which was reduced to forty millimetres when the flow became somewhat free; (*e*) gradual increase of the alcohol from sixty-five to ninety-four per cent; (*f*) maintenance of a low temperate (8° to 11° C.); (*g*) accurate division of the head with a fine saw acting in a mitre-box; (*h*) the small cost. The injected alcohol represented 41.5 litres of ninety-five per cent., but about two-thirds was regained; so at $3 per gallon it would cost $11, and at 75 cents (free of tax) only $3.

Dr. James H. Lloyd, of Philadelphia, then read his inaugural thesis entitled

MORAL INSANITY: A PLEA FOR A MORE EXACT CEREBRAL PATHOLOGY.

It was substantially an argument against the use of the term or the existence *per se* of the condition now called *moral insanity*. He would not object to classification and believed that differences must be recognized, but

regarded "moral insanity," so-called, as a disease of the unit, the brain. Moral insanity proceeds upon an abstraction, just such as Locke warns his readers to avoid. It teaches that there is a moral "faculty" in the sense of a distinct agent, which has its own powers, and its own diseases, and which may remain undeveloped in a "mind" otherwise healthy, or may become diseased without at all affecting the health of the other "faculties." It is nearer the truth to say that the whole brain-act of an insane man is wrong—judgment, emotion, memory, and will. To say, for instance, that a man's intellect is sound, and his will diseased, is a sophism, which has more sound than reason.

The discussion was participated in by PROFESSOR JASTROW, of Johns Hopkins, the PRESIDENT, and DR. GRAY, of Brooklyn, all of whom thought it difficult to get rid of the term, and, furthermore, that there were cases to which no other term could be applied that would so well express the peculiar mental condition indicated.

DR. RALPH L. PARSONS, of Sing Sing, felt certain of the existence of moral insanity, but, at the same time, believed firmly that in *all* forms of insanity, with which he was acquainted, all the mental faculties were more or less involved.

The discussion was closed by Dr. Lloyd.

The inaugural thesis of DR. J. RUDISCH, of New York, was read by DR. GEORGE W. [illegible], of New York, and consisted in the description of

A NEW PORTABLE GALVANIC BATTERY,

accompanied by demonstrations of the efficiency of the apparatus. The essential practical features were, that it was essentially a dry battery, if desired; that the carbon and zinc were separated by a stout piece of asbestos paper, which increased the internal resistance of the cell, facilitated the escape of the hydrogen bubbles, and enabled the battery to be used without a trough. The exciting fluid was a solution of sal ammoniac (1 to 4).

The inaugural thesis of F. X. DERCUM, of Philadelphia, was read by title: "Facts and Deductions bearing on the Action of the Nervous System."

AMENDMENTS TO THE BY-LAWS AND CONSTITUTION.

By DR. R. W. AMIDON, of New York: "The officers shall enter upon their duties immediately after the adjournment of the annual meeting at which they are elected."

By DR. C. K. MILLS, of Philadelphia: "Two Vice-Presidents instead of one Vice-President."

By DR. G. W. JACOBY, of New York: "They (officers) shall be nominated by the Association on the *second* day of the annual meeting" (instead of the first day).

"There shall be two sorts of members, namely active members—not exceeding at any one time one hundred in number" (instead of fifty as at present).

RESOLUTIONS.

DR. L. C. GRAY, of Brooklyn, introduced a resolution endorsing the proposition of the proposed "Congress of American Physicians and Surgeons," and moved that a committee of conference of five be appointed by the president. The resolution and the motion were adopted.

THE PRESIDENT appointed Drs. L. C. Gray, of Brooklyn; J. Van Bibber, of Baltimore; W. Sinkler, of Philadelphia; E. C. Seguin, of New York, and Philip Zenner, of Cincinnati.

OFFICERS FOR THE ENSUING YEAR.

President—L. C. Gray, M.D., of Brooklyn.
Vice-President—John Van Bibber, M.D., of Baltimore.
Secretary and Treasurer—G. M. Hammond, M.D., of New York.
Councillors—B. Sachs, M.D., of New York, and Wharton Sinkler, M.D., of Philadelphia.

The Association adjourned to meet in June, 1887, on the date and at the place to be designated by the Council.

[illegible] THE [illegible]

Burt G. Wilder, of Ithaca; L. C. Gray, of Brooklyn; Philip Zenner, of Cincinnati; John Van Bibber, of Baltimore; R. L. Parsons, of Sing Sing; C. K. Mills, W. Sinkler, G. B. Massey, J. H. Lloyd, and F. X. Dercum, of Philadelphia; R. W. Amidon, G. M. Hammond, V. P. Gibney, G. W. Jacoby, S. J. McNutt, C. L. Dana, L. Weber, W. R. Birdsall, E. D. Fisher, and B. Sachs, of New York.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 9, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. H. MARION SIMS presented, in behalf of a candidate, a specimen of

[illegible] TISSUE OF THE [illegible]

DR. T. MITCHELL PRUDDEN presented specimens which illustrated

TRAUMATIC PERINEPHRITIC ABSCESS, FOLLOWED BY [illegible] NEPHRITIS: NO CONSECUTIVE ABSCESSES OF KIDNEY, SPLEEN, AND LUNG.

A man about thirty years of age was kicked in the left side by a horse three years ago. A perinephritic abscess shortly afterward developed and was opened. A permanent fistula remained, which at times was uncared for, and continued to discharge more or less pus. Patient developed cough with purulent expectoration, and fancied that, after the wound was washed with carbolic acid, on coughing he could taste the latter. He was in hospital suffering from an uncontrollable diarrhœa, had considerable amount of pus in the urine, and finally died from exhaustion.

Autopsy.—Brain not examined. Omentum besprinkled with small gray tubercles. Heart normal. Lungs: Right emphysematous, congested, and œdematous, with few scattered gray tubercles. Left pleural cavity contained about one hundred cubic centimetres yellowish turbid serum and a considerable quantity of fresh fibrin; upper lobe contained a few scattered tubercles; the lower lobe was irregularly solidified, white and smooth in the denser areas. Microscopical examination of this lobe showed interstitial and intra-alveolar pneumonia, with commencing organization of the contents of the air-vesicles. At the base of the left lung was an abscess about three centimetres in diameter, communicating with a small subcutaneous abscess between the eleventh and twelfth ribs, and also through the diaphragm, with an abdominal abscess behind the spleen in the abdominal cavity. Right kidney large; capsule adherent; cortex thick, mottled gray and red, translucent; markings obscure; microscopical—chronic diffuse nephritis; waxy. Ureter slightly dilated. Left kidney: Capsule very thick and surrounded by a dense mass of connective tissue, binding it firmly to adjacent parts. A fistulous opening from the back led directly into a series of ramifying cavities which occupied about three-fourths of the entire organ. These cavities were partly filled with a purulent detritus, their sides were rough, and their walls composed of yellowish, friable, cheesy material. Between these cavities were irregular bands of translucent connective tissue. Microscopically, the walls of the cavities are seen to be composed of tubercle tissue, cheesy material, and connective tissue in a condition of suppurative inflammation. Very little kidney tissue remains. At the upper end of the organ these cavities were in direct communication with a post-peritoneal abscess cavity, which involved about one-fifth of the moderately

enlarged waxy spleen, and communicated, as above described, with the abscess of the lung. Ureter not dilated, and apparently normal. The liver was large and waxy. The villi of the small intestine were in a moderate degree waxy. The mesenteric glands, as well as the lymph glands about the left kidney, were very large and red. The mucous membrane of the bladder was thickened, and covered with a very thick, tenacious layer of mucopus.

Dr. Prudden remarked that the absence of any old cheesy or tubercular lesion than that in the kidney, and the fact that this had been exposed through the fistula to the external world for three years, would suggest the probability that this was primarily a case of local infection through the kidney, becoming general later, as evidenced by the fresh tubercles elsewhere.

Dr. Eugene Hodenpyl presented specimens from a case of

LEUCÆMIA

with the following history: The patient states that up to eight months ago he was in perfect health. At that time he received an injury to the left hand, which was followed by inflammation and abscess of the forearm, which, being opened, resulted in an indolent ulcer. Six months ago, without known cause, an abscess formed in the left thigh. It also resulted in an indolent ulcer. Three months ago patient noticed for the first time a change in the color of his skin, and that he was gradually losing his strength. His appetite began to fail, and he became troubled with frequent attacks of diarrhœa. Two months ago he noticed a swelling in the epigastrium, which was somewhat tender. At the same time anasarca of the feet and ankles developed, which gradually extended upward. For the past six weeks he has been greatly troubled with a cough and dyspnœa, which made it difficult for him to obtain sleep. On account of the dyspnœa he was able to take food only in small quantities. Patient says he has had no hemorrhages.

On admission patient was fairly well nourished. Skin of a peculiar dirty yellowish-white color. The mucous membranes are almost bloodless. The superficial glands throughout the body are enlarged and very hard. The tonsils were hypertrophied, and on the surface of the left one were three small cicatrices, and also one on the uvula. Lungs showed evidences of a chronic bronchitis. Area of heart-dulness increased. A systolic murmur at the apex and a loud anæmic bruit were heard with the first sound at the base. Liver enlarged and painful on pressure. Area of splenic dulness increased and pressure over it caused pain. No fluid was detected in the abdominal cavity. Blood examined two days before death was of acid reaction, and contained a very large increase in the number of white blood-cells. Pulse, 120, and feeble; respiration, 23; temperature, 101.6°, and while in the hospital it varied between 99° and 102°. The patient complained mostly of the dyspnœa. During the night of May 23d there was quite violent delirium, but in the morning patient was rational but very much exhausted, and in the afternoon of May 24th he died.

Autopsy, sixteen hours after death. Rigor mortis not at all marked. Body well nourished. Skin was of a peculiar dirty white color. Brain not examined. Small amount of clear serum in both pleural cavities, and there was fresh fibrin on both pulmonary pleuræ. Both lungs presented the lesions of chronic bronchitis and the pneumonia of heart disease. The pericardial sack contained eight ounces of clear serum. Heart was hypertrophied and dilated, and the cardiac muscle was paler than was normal; its cavities were distended by a large amount of decolorized blood-clots; the mitral valves were thickened. Liver enlarged and fatty. Spleen was enlarged to about three times its normal size. Its surface showed several points of an old perisplenitis. It was soft, and its cut surface, besides showing numerous spots of lighter color than the surrounding spleen tissue, also presented several large, somewhat irregular, masses of a light-red color. Kidneys were enlarged and very pale; on the surfaces were small hemorrhagic spots, and numerous masses of dense, almost white, tissue were scattered throughout the parenchyma. The lymphatic nodes throughout the body were enlarged and very hard. Cross-section through the sternum showed the marrow to be of a red color, and an apparent increase of the medullary space.

The specimen had been examined by Dr. T. Mitchell Prudden, who had made the following report: "Microscopical examination of the spleen shows a considerable degree of acute hyperplasia, chiefly involving the pulp. The kidney shows a moderate amount of chronic diffuse nephritis with circumscribed nodules, formed by an infiltration of the interstitial tissue with leucocytes. In some places the infiltration is moderate in amount, while in others it is so extensive as to have led to the nearly complete destruction of the enclosed tubules."

MULTIPLE STRICTURES OF THE ŒSOPHAGUS—GASTROSTOMY.

Dr. A. Jacobi presented specimens removed from the body of a man, forty-three years of age, a native of Ireland, and a laborer, who, in August, 1885, drank some spirits of ammonia by mistake. He vomited quickly, and for three days had great pain. Since then he has had gradually increasing difficulty of swallowing, especially solids, the dysphagia being more marked at some times than at others. A short time ago he was sounded with bougies, and he says that a small one was passed. For the past four months he has had pain in his right side about the region of the seventh rib, which has been especially severe when he has coughed, or has used his diaphragm forcibly. The patient has lost much flesh. He denies syphilis, gonorrhœa, and rheumatism, but has a well-marked alcohol habit.

On the day after admission to the hospital, May 5, 1886, numerous efforts were made to pass bougies, but they failed. The smallest bougie passed two or three strictures, but became fixed at another considerably nearer the stomach. On May 8th efforts were made to pass still smaller bougies, but they failed, and on May 10th Dr. Jacobi performed gastrostomy. The abdomen was opened with a rather long incision, but it was found necessary to prolong it downward on account of the relatively large size of the liver, until it was finally about three and a half inches in length. The stomach was not opened, but was stitched to the abdominal wall with a large number of stitches to facilitate adhesive inflammation. The proposition was to open the stomach when it had become completely adherent to the abdominal walls, and then treat the strictures of the œsophagus from below.

The shock of the operation was very profound, and lasted three hours. The patient died of exhaustion, May 13th, at 11.35 P.M.

The autopsy was made by Dr. T. Mitchell Prudden, who makes the following report:

Body much emaciated; slight rigor mortis. An incision in left abdominal wall, parallel with free border of ribs, about ten centimetres long, closed, except at its lower end, by sutures; no fluid peritoneal exudation; surface of small intestine presents scattered patches of dull lustre, and the same, with a very little fibrinous exudation on surface of stomach and abdominal parietes, near the incision; abdominal wall firmly and completely adherent to surface of stomach around opening; omentum dull lustre, with greatly congested blood-vessels; mesenteric glands moderately enlarged; blood vessels congested. Heart: About fifty cubic centimetres; slightly turbid, yellowish fluid in pericardial sac; moderate chronic thickening of the aortic and mitral valves, with general slight opacity of the endocardium; a small fibrinous clot, about two millimetres in diameter, adherent to one of the aortic cusps. Lungs: Pleural cavities empty; both lungs show the lesions of emphysema and chronic

bronchitis; both lower lobes contain numerous scattered areas of broncho-pneumonia, and both present irregular patches of fresh fibrinous exudation on pleural surfaces. Spleen: Small; trabeculæ unusually distinct. Kidneys: Small; capsule thick and adherent; cortex thin; markings obscure; cut surface slightly rough. Liver: Small; appears normal. Intestines: Considerable congestion of mucous membrane; otherwise normal. Stomach: Shows much tenacious mucus; irregular pigmentation of the mucous membrane; no evidence of inflammatory reaction about the opening internally. Tongue and epiglottis appear normal. Œsophagus has a normal diameter for 10 ctm. from the tip of the epiglottis. It then narrows for 1.5 ctm. to a circumference of 2.2 ctm., then gradually widens. Just below this first constriction are two small openings leading into a submucous pocket of about one centimetre in area. Below this point the whole œsophageal mucous membrane is irregularly thickened, and presents a very uneven surface.

At 20 ctm. from the tip of epiglottis is another dense constriction about one centimetre long, having a circumference of about 1.2 centimetre. The tube now again widens to a circumference of about three centimetres, the mucous membrane being beset with fibrous cords, patches, and longitudinal thickenings.

At about twenty five centimetres from the tip of the epiglottis are two openings leading sideways into a five centimetres long, irregular-walled, suppurating cavity, which harbors a couple of fragments of egg-shell.

At thirty centimetres below the tip of the epiglottis the œsophagus rather suddenly contracts, leaving an opening of about three millimetres in diameter. This constriction is about two millimetres long, and below it the œsophagus widens out into the stomach.

The above-mentioned submucous suppurating cavity passes behind the last constriction and opens into the stomach below it.

The anatomical diagnosis is, accordingly, chronic and excessive œsophageal stricture, gastrotomy, commencing acute peritonitis, chronic endocarditis, chronic bronchitis, emphysema, broncho-pneumonia, acute pleurisy, chronic diffuse nephritis, chronic interstitial splenitis, chronic gastritis.

The case illustrated the danger of using œsophageal bougies, however carefully they might be employed. A few years ago Dr. Jacobi presented to the Society a specimen removed from the body of a child, a few years of age, who had swallowed lye. The baby seemed to be doing fairly well, but all at once it died. A bougie had been introduced almost every day, and the child swallowed whiskey and milk quite well. One day pleurisy was diagnosticated.

The post-mortem revealed the fact that the bougie had broken through the mucous membrane, leaving an incomplete fistula which increased in size and finally perforated into the right pleural cavity, where, with the intense pleurisy, was found half a pint of the mixture of milk and whiskey.

Dr. H. Knapp presented

AN EYEBALL AFFECTED WITH CHOROIDO-CYCLITIS, PROBABLY CONGENITAL,

which he removed the day before from a woman thirty-seven years of age.

When she was six weeks old her parents noticed two black patches in the upper ciliary region. She could never see with that eye, but it gave her no trouble until three months ago, when the other eye became weak in sight and intolerant of light. This irritation having continued, the blind eye was removed. Before the operation it showed a dull and small cornea, two black elevations in the upper ciliary region, and an enlarged, irregular, and immovable pupil. Behind the transparent lens brownish masses projected into the vitreous, and were distinguishable from tumors only by their ill-defined superficies.

The globe was opened immediately after the enucleation. The vitreous was bloody and perfectly watery. The retina in the posterior half was so thin and firmly adherent to the highly atrophied choroid that only one blood-vessel betrayed its presence. The optic disk showed a marked glaucomatous excavation. The section of the optic nerve outside the eye was reddish. The subvaginal space was enlarged, and its soft trabecular tissue reddish and abundant. From the thickened and irregular ciliary region a thick pseudo-membrane stretched unbroken transversely through the globe. When it was incised serous liquid escaped. This condition is not rare in old degenerative processes of the eyeball.

The most remarkable feature of the case lies in the waking up of sympathetic irritations by a congenitally diseased eye after a quietude of thirty-seven years, during which time the morbid process, though steadily advancing, had caused no discomfort whatever.

Dr. Frank Ferguson presented fresh specimens which illustrated

[illegible]

They were removed from the body of a man, forty years of age, a native of Germany, who was admitted into the House of Relief, May 25, 1886.

According to the history obtained, for the last two days he had complained of rheumatism, and on the day of his admission, of pain in his stomach, for the relief of which he obtained medicine in a drug store. Soon afterward he was found unconscious and an ambulance was called. The patient was found in a comatose condition, the pupils finely contracted (nearly pin-point). Breathing full, very slow (fourteen per minute), and stertorous. Conjunctiva was insensitive, and it was impossible to arouse him. The patient was searched for the medicine, but it was not found. He was taken to the hospital as quickly as possible. Hypodermatic injection of tr. belladonna, ♏viij., was given, and cups applied to chest.

The patient was closely watched, but there was little improvement, and at 2.30 P.M., May 25th, he died.

He was three hours in the hospital. He had no elevation of temperature. He had no paralysis. His urine was not examined, and regarding him simply as a case of opium-poisoning his heart-sounds were not listened to. His pulse was forty to the minute.

Autopsy, twenty-four hours after death. The inspection of the body presented nothing unusual. The heart was large; there were long, thick, and broad vegetations attached to the cusps of the aortic valve. There was an ulcer one-eighth of an inch in diameter on the ventricular surface of the anterior segment of the mitral valve. The other valves were normal. There was no thickening or retraction of the affected cusps. The wall of the left ventricle was hypertrophied, the cavity dilated, muscular tissue soft and flabby, fibres granular, but no well-marked fatty degeneration. The lungs were intensely œdematous, and moderately congested. There was an infarction in the spleen, white in color, whose base was one and one-fourth inch in diameter; the apex of the infarction was directed toward the hilium of the organ. The kidneys showed signs of chronic diffuse nephritis; the cortices were thin, surfaces granular; there were cysts in cortices, and these organs were smaller than normal. The small blood-vessels showed marked thickening of their walls. There was increase in the fibrous tissue of the liver, with considerable fatty degeneration in the periphery of the lobules. Brain: The convolutions, especially those over the left parietal region, were markedly flattened. There was a large hemorrhage in the floor of the left lateral ventricle. There was recently coagulated blood in the lateral, third, and fourth ventricles. There was hemorrhage in the meshes of the pia-mater, and beneath this membrane, around the medulla, and on either side of the pons. The vessels at the base seemed normal.

The case was interesting to him, particularly, on account of the difficulty of diagnosis which arose between it and uræmic coma and alcoholism.

Dr. H. C. Coe said that the case reminded him of one of uræmic convulsions, in which he gave one-sixth of a grain of morphine hypodermatically, and about fifteen minutes afterward the patient became comatose, presented the appearance of one suffering from opium-poisoning, and died at the end of thirty-six hours. Before death, however, unmistakable signs of cerebral hemorrhage developed, and the autopsy revealed hemorrhage into the pons.

Dr. John C. Peters read a communication

ON GANGRENE,

received from Dr. Middleton Goldsmith, of Rutland, Vt., which was accepted and voted to be published with the proceedings, after which the Society went into executive session.

Correspondence.

ANTIPYRETICS IN FEVERS.

To the Editor of The Medical Record.

Sir: I am in the position of Dr. Fisher in last week's issue of The Record. *I* do not wish to "beard the lion in his den," but your denunciation, in the closing sentence of your editorial of May 22d, of antipyretics in continued fevers, should not pass without some protest against it. Clinical practical facts that will benefit our patients are what we are all after, and are much more convincing than any theoretical reasoning. And I believe careful bedside observation will prove to every practitioner that antipyretics are of the most undoubted benefit in continued fevers. A case of typhoid fever which I have just been attending will illustrate what I wish to say better than any argument that could be used. Therefore I wish to bring out one point in connection with the use of antipyretics, and at the same time urge upon the profession the use of, especially, antipyrin in controlling temperature. My patient (a man of extreme nervous temperament) ran a course of twenty-one days' duration. The evening temperature at the end of the first week was 103.5°. When the evening rise came he would commence tossing and turning in bed, constantly complaining because he could not sleep, and in this manner the nights would pass, and morning would find him completely exhausted. Sponging the surface and the list of hypnotics in full doses were all tried in vain. The thought came, reduce his temperature more thoroughly than can be done by sponging, and possibly he will sleep. Consequently, each evening, two fifteen-grain doses of antipyrin, at four-hour intervals, were given, reducing the temperature to 100.5°, and my patient obtaining from seven to eight hours' sleep, only waking to take his nourishment.

This was repeated each evening as long as necessary. From the time the antipyrin was commenced the case assumed a different aspect; the sleep seemed to rest and refresh my patient, and what promised in the outset to be a case difficult to manage seemed robbed of its severity and power to harm, it going on very pleasantly to a successful issue.

After reviewing my case carefully, I cannot help but feel that the antipyrin proved of inestimable benefit, and that your denunciation of antipyretics in continued fevers is a step in the wrong direction.

Very respectfully,

H. P. Chace, M.D.

[illegible], N. Y.

New York Doctors.—A correspondent of *The Medical Summary* says that "it is a great mistake to suppose that New York physicians are loafers. They are all workers—*every time.*"

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 18 to July 24, 1886.

Perin, Colonel Glover, Assistant Surgeon-General. Leave of absence extended one month. S. O. 165, A. G. O., July 19, 1886.

Gardner, Major William H., Surgeon. Granted four months' leave, to take effect August 10th, or as soon thereafter as this services can be spared. S. O. 165, A. G. O., July 19, 1886.

De Witt, Major Calvin, Surgeon. Assigned to duty at Fort Sully, Dak. S. O. 66, Department of Dakota, July 14, 1886.

Dickson, Captain John M., Assistant Surgeon. Ordered from Alcatraz Island, Cal., to Fort Mason, Cal. S. O. 56, Department of California. July 8, 1886.

Cochran, Captain John J., Assistant Surgeon. Ordered from Fort Mason, Cal., to Presidio of San Francisco. S. O. 56, Department of California, July 8, 1886.

Gibson, Captain R. J., Assistant Surgeon. Ordered from Fort Winfield Scott, Cal., to Alcatraz Island, Cal., on return from leave of absence. S. O. 56, Department of California, July 8, 1886.

Kane, Captain J. J., Assistant Surgeon. Ordered from Fort Ringgold, Tex., to Fort Hancock, Tex. S. O. 85, Department of Texas, July 13, 1886.

Carter, Captain William F., Assistant Surgeon. Ordered from Fort Concho, Tex., to Fort Ringgold, Tex. S. O. 85, Department of Texas, July 13, 1886.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 24, 1886:

	Cases.	Deaths.
[illegible]	0	0
Typhoid fever	2	0
[illegible]	24	5
Cerebro-spinal menin[illegible]	2	2
[illegible]	35	13
[illegible]	80	45
[illegible]	1	0

Photographing the Womb.—A Swiss physician has described a method of dilating the uterus by means of tents, so that by means of a mirror a perfect view may be obtained of the interior of the organ. Not content, however, with a simple view, he is unselfish enough to desire to obtain photographs of the uterine interior in various diseases of the organ. *La Riforma Medica*, in commenting on this project, thinks the future of woman is sad indeed, if now her womb must not only be felt of, sounded, and measured, but photographed as well.

To Disguise the Taste of Quinine.—Honey is recommended by a writer in *The Lancet* as one of the best disguises of the taste of quinine, and especially valuable to this end when administering the drug to children. The dose should be placed in the centre of a teaspoonful of honey.

A Strange Tampon.—A writer in the *Deutsche Medicinal Zeitung* states that he was called to see a peasant woman in the country, who was suffering from hemorrhage from the genital organs. When he arrived he found her vagina filled with fresh horse manure, and the external genitals plastered over with the same material. The patient insisted that she wanted only some medicine, and would not permit the removal of the tampon. She shortly afterward had an attack of septicæmia.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

THE TREATMENT OF HÆMORRHOIDS.

BY CHARLES B. KELSEY, M.D.,

NEW YORK.

THERE are, unfortunately, few diseases in which, as in hæmorrhoids, the surgeon is able to assure the patient in every case that he can positively be cured; and a definite and radical cure should always be the object of treatment, unless there is some very positive contraindication against anything approaching a surgical operation. There may be such serious and advanced organic disease in some other organ that even a comparatively trivial operation is not to be considered; but this is very rare. In such a case the patient must be content with palliative measures.

There seems to be a very wide-spread idea among the laity, for which they are generally prompt to give some medical authority, that when a patient has hæmorrhoids he had better bear the ills he has, lest, by being cured, he should incur worse ones. I have never been able to detect the slightest foundation of fact for this notion, and unless the patient is absolutely so far gone toward the grave that it is better to let him die in peace, unless so old and feeble that he cannot bear the least pain or shock, I always advise that he be radically cured of at least this one distressing and exhausting trouble.

The object of treatment is not only to cure, but accomplish this in the shortest time, and with the least suffering compatible with safety, and on this point the surgeon, and not the patient, must be the judge. There is, perhaps, no other disease on which the public consider themselves so well informed as this. They will not only diagnosticate their own condition, but, from newspaper advertisements, and the stories of their friends, they will decide upon their own method of treatment, and then give some chosen physician the opportunity to carry it out, if he is willing, according to their ideas.

Before undertaking any plan of treatment it will now generally have to be explained to the patient. So many "systems" have been advertised in this country; so much has been seen in the daily papers about cure "without knife, ligature, or caustic," and so much has actually been accomplished by the seemingly simple method of carbolic acid injections, that the practitioner will often find himself confronted with this ultimatum by his possible patient: "If you can cure me without an operation, all right; if not, I do not care to be treated." It may be possible and best to do as the patient desires, and cure him without what he considers an operation; but the relation between physician and patient should not be reversed by allowing the latter to dictate his own treatment.

That this is not a trifling matter the practitioners in our smaller cities and towns all know. Every few days they complain that they cannot treat their patients by operation on account of the competition of some quack who uses carbolic acid. For their benefit I have pretty thoroughly explained this method of treatment, and I shall speak of it again now. It is a good thing, but it is not always the best thing by any means, and the educated man, who has many ways at his control, will in the end get better results than the one who advertises his hypodermatic syringe and frequently does not know a hæmorrhoid from a cancer.

Before describing in detail some of the many methods of treating this affection, and discussing the relative merits of each, it will be necessary to distinguish with great clearness between the different varieties of the affection itself. There is no plan of treatment equally adapted to all cases, because hardly any two cases are alike; and the differences may be simple in degree or in kind.

The old division of hæmorrhoids into external and internal is useful, but is in many ways unsatisfactory. There are many varieties both of external and internal, and there is a distinct class which can scarcely be included in either, and which I have been in the habit of speaking of as intermediate.

Beginning with one form of the external trouble, the patient will give a history something like the following: He or she is in good health, and until a day or two past has never had any symptoms of rectal trouble. Quite suddenly, while about the usual occupations of the day, a sense of pain, just at the verge of the anus, is experienced, which steadily grows worse, until it becomes very troublesome. An examination is made by the sufferer, and a small, soft tumor is felt, which is very tender, and which disappears on pressure, but immediately reappears when the pressure is removed. It can be pushed within the sphincter, and the act gives relief, but it is down again in a moment.

After a few hours and some handling the patient is unable to sit with comfort; but the affair is so trivial that he does not care to go to bed, and so keeps around on his feet, and very likely applies Pond's Extract. After going to bed he feels better, and next morning imagines he is nearly well: but after an hour or two the pain is

worse than ever, and the tumor is larger, harder, and more sensitive than on the day before.

If an examination now be made an external hæmorrhoid of one variety will be found—such as is shown in Fig. 1.

The tumor will vary in size from a pea to a large grape, and is composed solely of blood clot. A small external hæmorrhoidal vein has ruptured, and blood has been extravasated in the delicate subcutaneous connective tissue. The blood shows black under the tightly stretched skin, and the pain is due to the tension.

There are two ways of treating such a tumor. The first and best is to lay it freely open and turn out the clot from its bed. The bistoury should be sharp-pointed and delicate, the tumor should be transfixed from the anal surface outward, and the incision should be in the line of the radiating folds. After such an incision the pain will almost instantly disappear. A little styptic cotton should be placed between the cut surfaces, a large towel folded into a pad applied to the part, and the patient told to sit upon a hard chair, with the compress under him, for fifteen minutes till there is no longer any oozing of blood. The subsequent treatment consists only in bathing with cold water two or three times a day, and the cut will be healed in three or four days.

This operation is so trivial and the relief so immediate that it is generally safe to perform it without any previous explanation to the sufferer; but should it not be permitted another plan must be followed. A cathartic containing podophyllin (pil. podophyllin co.) should be given at once, to secure two or three free actions of the bowels, the patient put upon his back on the bed or sofa, and a rubber ice-bag filled with finely powdered ice placed against the part, and kept there till the pain subsides. Cold usually gives great and immediate relief, but should it not, a poultice may be substituted. Under this plan of treatment the patient will probably be relieved in two or three days, so as to be able to get around with comfort, provided the clot is to be absorbed. In some cases, however, suppuration will occur, and in about a week from the time the swelling first appeared it will open spontaneously and discharge a few drops of pus, to the great relief of the patient. As soon as it becomes evident that this is to be the course of events, poultices should be applied and continued.

This form of hæmorrhoid is comparatively trivial, but it often causes great pain and confines the patient to the house for several days, and the suffering is often increased by improper attempts at treatment. Instead of being freely cut, they are often punctured with a needle by the patient. The result is the escape of a few drops of bloody serum, relief for an hour or more, and then renewed suffering, from the bruising and squeezing which usually attends this attempt at surgery. I have seen them leeched by physicians, with the result of starting a slight bleeding which continued for several days, without, however, giving any relief. They are not infrequently injected with carbolic acid by those who have heard of this method of treating hæmorrhoids, and it is only by great good luck that suppuration can be avoided after this has been done.

Those who have once been troubled with this form of hæmorrhoids are very liable to repeated attacks. The veins are delicate and feebly supported, and a little unusual strain upon them is sufficient to produce an extravasation. This may happen after a constipated passage, an interference with the perfect discharge of the hepatic functions, or from a cause too slight to attract the notice of the patient. The preventive treatment of this, and in fact of all other varieties, consists in the maintenance of as perfect a state of the general health as possible, perfect regularity in the action of the bowels, without straining, and the daily use of cold-water ablutions to the parts. Tobacco and alcohol must both be used in moderation if at all, over-eating must be avoided, and if a careful regulation of the diet will not suffice to produce a regular, daily, natural action of the bowels, a slight laxative must be taken daily. One who is in the habit of having a passage each morning may easily bring on an acute "attack of piles" in a few hours by going to business without taking time to attend to this function, and may be able to relieve it by an enema or a glass of mineral water almost as quickly.

All patients with any tendency toward hæmorrhoids should use cold water to the parts freely, at least once a day. In the morning before dressing, after the daily movement, or at night before retiring it is well to sit on the edge of the bath-tub, turn on the cold water, and with a large sponge apply it freely. The parts should not be rubbed either with the sponge or in drying with the towel; but the sponge full of water should be placed against the parts, and gently pressed out fifteen or twenty times. This is the best tonic, astringent, and anodyne of which I have any knowledge, and its habitual use would prevent a very considerable portion of all hæmorrhoidal difficulties.

The next variety of external hæmorrhoid differs in every respect from the last except in its position. This one contains few blood-vessels, and is composed almost entirely of skin and connective tissue. It is, in fact, a pendulous tag of skin attached to the margin of the anus as shown in Fig. 2.

Fig. 2.

Under ordinary circumstances it is not painful, and therefore the surgeon is not often consulted about it, except when it has begun to cause trouble. These tags of skin and connective tissue (often improperly called condylomata) assume many different shapes and sizes. They are often mere pendulous excrescences like the one shown in the bottom of the figure, nearly an inch long, and no larger than a crow-quill, and almost devoid of sensibility, having just sufficient blood-supply to support nutrition. Again, they are attached by a broad base, and two or three of them are joined at their bases, partly surrounding the circumference of the anus, but they still have little sensibility or vascularity. Sometimes one will be found which has become quite large and has an attachment nearly an inch long. Many of them are excoriated on the anal surface, and hence give rise to considerable serous discharge.

The origin of these tumors should be well understood. When found at the anus, in connection with a stricture of the rectum, they are supposed to indicate syphilis as the cause of the stricture. I have no faith in such a statement. To me they indicate nothing but a continued irritation of the outlet of the rectum. They are, according to my experience, as frequent in cancerous as in syphilitic stricture, and often as well developed when there is no serious rectal disease. The hæmorrhoid shown in the last figure, if allowed to run its own course, will make one of these tags. The blood-clot will gradually be absorbed, but not till it has caused a certain amount of inflammatory exudation and hypertrophy of the skin, which will ultimately show itself in the form of a cutaneous excrescence.

Again, this form of tumor is certainly indicative of

more serious disease within the rectum, and should always lead to careful examination. A prolonged sero-purulent discharge from the bowel is amply sufficient by its continued irritation to produce these tumors, but they will often be found without rectal disease, and with no history to account for their gradual formation.

It is safe to say that the surgeon will seldom be consulted for these tumors alone when they are quiescent—that is, when they are not acutely inflamed, and therefore cause no pain. But they are liable to become inflamed on very slight provocation. The same causes which will produce the last variety will cause acute inflammation and suppuration in this. Then the patient presents himself with much the same symptoms as in the last case, except that the pain has been more protracted, because the patient is more accustomed to the annoyance of the tumors and is slower to seek relief. The patient will come with the history that he has had piles for a long time, that they never go back, that generally they cause little annoyance, but for a week back he has had great pain, there has been considerable swelling, and he is unable to sit down with any comfort. An examination will reveal a hard, tender, somewhat œdematous mass of tissue just at the verge of the anus. Its attached base may surround nearly one-third of the anus and may be fully half an inch thick. It cannot be forced above the sphincter, or, at least, cannot be made to remain there. There may be two or three of these tumors. The outer surface is composed of skin, and the inner is smooth and shining, being composed in part of finer skin and in part of the mucous membrane in which the skin ends at the anus. It is plainly a connective-tissue tumor, having its attachment outside of the rectum, and not one composed of blood-vessels covered by the mucous membrane of the rectum.

It is necessary to be thus particular in the description of this form of hæmorrhoid because of the painful errors often seen in its treatment. It never, when uninflamed, belonged within the canal, and it naturally cannot be made to stay there by any amount of force when it is swollen to three times its usual size. It is not a vascular tumor to any extent, and therefore the leeching and scarifications often resorted to never give any relief, while the force used at attempted reductions, sometimes under ether, invariably makes matters worse. If allowed to take its own course it will seldom suppurate, but will gradually subside, and in a couple of weeks the pain will in great measure have disappeared, the tumor always, however, remaining somewhat larger than before the attack.

The treatment of this variety is essentially the same as last, although the cutting to be done is more considerable. It is particularly in this class of cases that cocaine may be used to the best advantage. If the base of the tumor be small, five drops of a four per cent. solution should be injected into it, and when it is no longer sensitive it may be seized with forceps and snipped off with strong scissors. There will be some bleeding, but generally only a little, and styptic cotton, with a compress and bandage, left on for a quarter of an hour will stop it. When the base is larger, say an inch or more in length, cocaine must be used at two or three points, and I prefer the clamp and cautery to the scissors. No after-dressing will then be necessary except cold water, or possibly a poultice to relieve pain. If the tumor be small, the patient will generally be free from pain and able to attend to his business on the following day. If it be larger, and the clamp has been used, it is better to keep him in bed for several days, with cold compresses or poultices to the wounds.

These operations are best performed when the tumors are quiescent and not acutely inflamed, as the pain will then be much less and the recovery much more speedy. But, unfortunately for the patient, he seldom wants anything done till he has had a good deal of suffering, and the doctor is seldom consulted, except during an attack of inflammation. Under such circumstances nothing is gained by waiting for the attack to subside, although the operator must allow for the infiltrated condition of the parts, and not remove enough skin to cause subsequent stricture.

One of the most extensive cases of this form of trouble I have ever seen is shown in Fig. 3. The patient was

under the care of Dr. Hemingway, of this city, with whom I operated in consultation. The man had had hæmorrhoids for years. About a week before I saw him he had been drinking hard, and had ended his spree with a heavy dose of cathartic pills. On waking in the morning he found his piles much worse than before, and entirely irreducible. On examination two hard, œdematous, intensely painful masses were found, forming a complete ridge around the anus, each about the size and shape of the thumb, and meeting in front and behind. They were covered externally by skin, and internally by the smooth, glistening mucous membrane of the verge of the anus. The finger introduced between them passed readily into the healthy rectum, but there was no sphincteric contraction appreciable.

On account of the extent of the disease the patient was treated for four days with absolute rest in bed, poultices, and anodyne applications, but without causing any decrease in the size of the tumors. He was then etherized, and the masses removed with the clamp and cautery. On account of their size, which was too great to permit of grasping the entire base in the clamp, each one was divided at the middle down to the margin of the anus, and clamped off in two sections—the cautery thus being used four times. After this the anus itself was burned through posteriorly and on each side, to cause future contraction of the orifice, for from the very dilated state of the anus and loss of power in the sphincter, there was reason to fear future prolapse after the hæmorrhoids were cured. The patient made a good recovery, with a tight sphincter.

I mention this case as an illustration of the proper method of treatment, though the condition was much more serious than will often be seen.

Supposing now that the patient declines operation, the case must be treated as follows: Absolute rest in bed, laxatives daily to keep the bowels free, an ointment of equal parts of extract of opium and extract of belladonna, with sufficient vaseline to render it soft kept constantly and freely smeared over the parts, and hot poultices constantly applied. By this means the inflammation will gradually subside, and in an ordinary case the patient will be around in a week or ten days. There is nothing else to be done. Attempts at reduction always do harm, and can by no possibility do good, and the same applies to leeching, scarification, and incision. Injections of carbolic acid will cause suppuration, and failing this, can only make the patient's condition more unendurable.

There is still another form of hæmorrhoid which is seldom or never described by writers, but which is still very frequent, and which generally puzzles the practitioner as

to its proper treatment. It may exist alone or in connection with other forms of the disease, and the surgeon, as a rule, will only be consulted about it by the better class of the community, who are in the habit of seeking advice early in the course of any trouble. It consists in a varicose condition of the veins just within and at the margin of the anus. Under ordinary conditions there is no tumor and no bleeding, but, when the patient strains, the veins in this locality swell up, are distinctly visible through the skin, and form a tumor of considerable size, but not well defined or limited, and having no pedicle. The tumor may be lateral or posterior, and there may be several of them. As soon as the straining stops the tumor subsides and disappears.

I have been called upon to treat this condition, existing without other disease, oftener, perhaps, in physicians and in very nervous patients than in any other class; though it is not infrequently united with other hæmorrhoidal tumors for which any patient may seek advice. As a rule, I think, when there is no other trouble it is better to treat it by cold applications and regulation of the bowels, as already described, than by a surgical operation. If, however, the patient be under ether for a more severe operation, it is generally easy to include enough of these tumors in the clamp or ligature to cure them at the same time. As there is no distinct mass to be removed, I never advise a cutting operation for these alone, and thus far have confined myself to one of two methods—the injection of carbolic acid and electrolysis. There seems to be little to choose between them; and yet, if preference is to be accorded to either, it is probably to the latter, on the ground that it is not likely to produce a slough.

If carbolic acid injections be used, the strength of the solution should not exceed ten per cent. of the pure acid. This will generally cause a smarting sensation for a few moments and no further trouble, while a thirty-three or fifty per cent. solution thrown into one of these veins, showing as a black line under the skin, will cause it to immediately change to a whitish hue, and a few days later the patient will appear with an ulcer of considerable size, which will take some weeks to heal. The idea is to produce induration without sloughing, and to be sure of doing this the injection must be weak and repeated several times at intervals.

Electrolysis is not generally very painful in its application, nor is the subsequent suffering very severe.

In the use of the electrolysis a current should be secured sufficient to cause coagulation in the white of an egg in a glass. The positive electrode should be a fine cambric needle, introduced into the centre of the tumor. A sponge over the buttock or sacrum answers for the negative. Cocaine may first be injected into the tumor with advantage, and the positive needle should be introduced and separated from surrounding parts before the negative is applied. The current should be passed for at least ten minutes, and after a short time the cautery action at the point where the needle pierces the tumor will be plainly visible. There will be some pain at the time of the operation, and perhaps considerable on the following day, but after this the tumor will be found considerably reduced in size.

Coming now to those hæmorrhoids which arise within the rectum, and not from the outer margin of the anus, we will first consider the capillary variety. In this there is often no appreciable tumor, but rather a strawberry-like surface, slightly raised above the surrounding level, about half an inch in diameter, and bleeding very freely, often *per saltum* on the slightest provocation.

The following case, seen by me with Dr. Watson, of Jersey City, will illustrate this form of disease and the appropriate treatment:

The patient, a lady, thirty-five years of age, had been married fifteen years, and ever since marriage had been troubled with occasional profuse rectal bleeding. As much as half a pint of arterial blood is said to have passed at a time. There had never been any protrusion, and the blood was passed, not with the stool, but some time after by itself. Frequent rectal examinations by the finger had failed to detect anything abnormal, and arrangements had been made for complete dilatation and examination under ether. Before doing this the usual inspection of the parts was made by gently pulling down and opening out the folds of the anus, and just within it was detected the bright red, slightly raised mass of blood-vessels, which, to my mind, was sufficient explanation of the history. Without making a complete examination of the whole rectum, it was decided first to cure this, and two thorough applications of strong nitric acid, Dr. Watson tells me, entirely stopped the hemorrhage.

This is the only form of hæmorrhoid in which applications of nitric acid will be likely to result in permanent cure, and in this it works so well that it is hardly worth while to try other things. If the application be made thoroughly to the whole surface, a single one will be all that is necessary, in most cases, to entirely cure the disease.

The only other cases in which I use nitric acid are those of well-marked internal hæmorrhoids which bleed freely at stool when protruded, and in which for any reason it is unadvisable to attempt a radical cure. By touching the surface of these tumors with strong acid the bleeding may cease entirely for a considerable time, and the tumors may even diminish in size.

There are cases of internal hæmorrhoids in which no cautious surgeon cares to operate, but they are not frequent. Operative treatment is almost invariably successful and the risks are very slight, while palliative treatment is exceedingly unsatisfactory in its results. Age alone seldom contraindicates an operation, but advanced organic disease of any sort may do so. It is not well, as a rule, to operate for hæmorrhoids which are due to pregnancy, until some weeks after delivery, when the uterus has returned to nearly its normal size. Again, I have grown a little cautious about submitting patients from the country to severe operations, involving protracted confinement to bed in New York during the hot months, and prefer to have the operation performed at some of the neighboring seaside hotels, where cool nights can be assured. With a strong patient in good condition this is not a matter of much importance, but with one, say seventy years of age, the operator must take every advantage if he wishes to avoid anxiety. In the vast majority of cases, however, it is safe to undertake a radical cure by one method or another, and in the few cases where this is not considered best the patient can generally be made more or less comfortable by palliative measures.

In my own practice ointments and suppositories have very little place in treating internal hæmorrhoids, and rectal supporters have none at all. The line of treatment has already been alluded to. Perfect daily regularity in the movement of the bowels and the free use of cold water applications are worthy of the greatest reliance. The latter will be found a much more effective astringent than either tannin or iron.

It is sometimes necessary to treat a patient with internal hæmorrhoids for the complication of strangulation when he is unwilling to submit to anything looking toward radical cure. His piles, owing to some accident, some nervous strain, or irregularity in living, are down, have been down a day or two, and no manipulation on his part will put them back. Examination shows them to be exquisitely sensitive, engorged, and possibly even gangrenous, and the sphincter grasps them with a power which cannot be overcome. This extremity may be the doctor's opportunity, and many a patient is willing to be radically cured after forty-eight hours of such suffering, who has always been too timid before. Under such circumstances nothing is to be feared from an operation, and nothing to be gained by delay. The patient should be etherized, and the tumors removed with the clamp and cautery. The cure will be as rapid as under ordinary circum-

stances. Should, however, the patient still object to radical treatment, the following is the best course of procedure. Place him on his face, with a hard pillow under the pelvis, smear the whole mass and the right hand freely with olive oil, cover the tumors completely with the fingers, and make gentle and firm pressure on the whole mass at once till a part of it slips up the bowel. If a single tumor will give place the others will soon follow.

This is not a matter of half an hour but of one minute. If it does not succeed at the first attempt, it probably will not at all; and the next step is to give ether to the point of primary anæsthesia and forcibly reduce the mass. With ether internal hæmorrhoids can always be reduced when strangulated by a tight sphincter. Should the patient object to this, there is nothing to do but leave him in bed with ice to the parts, and the ointment of opium and belladonna freely applied. The tumors may slough at one or two points even without the ice, and the ice must not be pushed too far on this account; but sloughing under these circumstances is one of nature's means toward a partial cure. Generally after a couple of days' rest in bed the patient will be able to reduce the tumors for himself.

We come now, naturally, to the question of the best way of radically curing internal hæmorrhoids. Of all the methods known to surgery it is unnecessary to deal with more than three—the ligature, the clamp and cautery, and the injection of carbolic acid. These are not enumerated in the order of merit, for no one method is equally adapted to all cases, and the operator will get the most satisfactory results who learns to choose wisely between them in each case as it presents itself.

The question resolves itself very readily to this, and the patient may choose. If he is willing to rest in his room for a few days and take ether, he may be entirely cured by a single operation, without more than a couple of hours' discomfort after coming out of the ether, and perhaps without even that. If, on the other hand, he prefers a treatment of indefinite duration, attended, probably, by a great deal more pain in the end, but for which it will not be necessary to take ether or be confined to the house (probably), he may be equally cured by that. The cure will be equally satisfactory to the patient for a time in either case, but more satisfactory to the operator in the former, because he is sure the disease cannot return, as it may, in a measure, after the treatment by injections.

Between the operation by ligature, and that by clamp and cautery, each practitioner must choose for himself. As far as safety goes, they are about on a par. There is no obvious reason why one should be more dangerous than the other, and an equal number of cases of each would probably prove that neither has much advantage in this regard. Either one may also be relied upon for a certain cure in every case when properly performed. But outside of these two points the operation with the clamp and cautery will give the greater satisfaction to the patient, and hence to the surgeon. Their relative advantages are to be judged from several standards. First, in the amount of pain the patient has to endure after the operation. In the ligature this is often protracted and severe. I have known it to be almost incessant, demanding the constant exhibition of morphine for a week, and the presence of the ligature surrounding more or less living tissue, and probably nerve-filaments, has been to me an all-sufficient explanation. It may be taken as a rule, that a ligature around any tissue within the grasp of the sphincter, no matter how thoroughly the skin may have been cut through before its application, or how tightly it may have been drawn, will give pain, and in this operation one or more ligatures almost always are within the grasp of the muscle. If they are fairly above the sphincters they will be less troublesome, but their presence has seemed to me to account for spasm of the levator, which is about as painful. No matter, however, to what the pain is due, its presence has been a very positive fact in many of my own cases; whereas with the clamp and cautery exactly the opposite has come to be the rule. In this there is no foreign body to act as a source of irritation and muscular spasm. The pedicle is first crushed and then cauterized to a dead and insensitive mass, and all that is left within the rectum is a charred stump. Patients tell me again and again that after the immediate effects of the operation have passed off, that is, in a couple of hours, they felt only a sense of soreness; that, in fact, they are more comfortable after the operation than they usually are after a movement of the bowels, and on the day following they are generally perfectly comfortable, so much so that they begin to want to know why they must stay in bed. Seldom with Smith's operation (that with the clamp) is it necessary to give any morphine except the suppository placed in the rectum immediately after the operation. I can only say that this has not been my own experience with Allingham's operation (that with the ligature), and I refer to exactly parallel cases as to the amount and situation of the tumors removed. The ligature is generally the means employed in New York, and the experience of nurses who have attended such cases and are called upon to care for a patient, after the clamp operation, is often amusing. In the former they will have plenty to do, in the latter nothing.

Again, after the ligature there is very apt to be retention of urine; with the clamp almost never; and this is in itself a great advantage. There is also much less constitutional disturbance after the latter than the former. Not infrequently a male patient will enjoy his cigar after breakfast on the day following the operation, which is a fair test of his general condition.

Another point of great importance to the patient is the length of time he is to be confined to his room and bed, and here again the advantage is in favor of the clamp. Very exceptionally does this method keep the patient confined after the tenth day, and in my last operation the man returned to his home in a distant city on the eighth, with perfect comfort, having then been down to his meals in the hotel for two days before, and about his room since the second day after. In the case preceding that, the lady sat up on the day following, amused herself with the dress-maker after the third day, and left for a pleasure trip on the tenth, assuring me that *at no time* since the operation had she suffered as much discomfort as she usually suffered every day before. In comparison with this it is only necessary to remember that the ligatures do not generally all come away before the tenth day, and that up to this time the patient usually manifests but little desire to be about.

These, in brief, are the advantages of the clamp. Now a few words as to the details of the two operations. Both may be done painlessly with cocaine, but where the operation is extensive, and much tissue is to be removed, it will not generally be found entirely satisfactory. The free nerve-supply of the anus and the difficulty of bringing all the nerves into contact with the solution are the probable explanations of the frequent disappointments attending the use of the drug in operations on this part. Where a single circumscribed tumor is to be removed, it will generally act with perfect satisfaction, because it can be placed exactly where it is needed. Where the whole circumference of the anus, and the rectum for a considerable extent, is implicated, and where it is necessary to dilate the sphincter thoroughly, I have more than once been disappointed in its use, some parts being insensitive, and others by no means so; and this after crowding a four per cent. solution injected hypodermatically at every point which was to be operated upon, to the extent of producing decided constitutional symptoms. In any extensive operation by either method, ether will be likely to be more satisfactory. In some cases, where the pedicle of the tumor is well above the sphincter, and no skin at the margin of the anus is involved, the operation may be done without any anæsthetic; but this applies rather to

cases where a single tumor only is to be removed; and does away with the chance to thoroughly stretch the sphincter, which is always to be recommended.

In both operations the bowels should be moved two or three times on the morning of the day of operation, by a laxative taken before going to bed the night before, and the rectum should be washed out by an enema an hour before operating.

After neither operation should the bowels be confined more than fifty-six hours, and the first movement should be rendered easy by a repetition of the laxative on the night before. This is contrary to the general practice and is a great improvement, as is easily proved by a few trials of the two plans. If the bowels are confined till the tenth day, great pain will be the invariable result of the first motion. The fæces have become hard and voluminous, and the parts are not yet healed. Great straining and suffering are the necessary consequences. Moreover, nothing is gained. The wounds heal no more quickly for the constipation, if as quickly, and the idea that the passages may in some way cause them harm is not founded in fact. By the other plan an easy, natural motion is secured on the third day, which is attended by little or no pain; the rectum is thoroughly cleansed, not only of fæces but of blood and discharges, in the most natural and effectual way; there is less danger of absorption of offensive matter, and the patient, if one of regular habits, feels much better in every way. After the first motion a gentle laxative should be given every night, for ten days longer, to secure one easy, natural passage daily.

After the operation the patient may usually consult his or her own appetite as regards diet. Nothing reasonable need be denied—another point gained by getting the bowels into regular working order.

It is not advisable to allow too much freedom of exercise till the wounds are entirely healed, lest granulation and cicatrization should be delayed. The difficulty with the clamp operation, however, will be to keep the patients from active motion. Ten days of rest will generally be all-sufficient, after which comparative quiet should be observed for another week.

Only a few words will be necessary regarding the details of the operations, so well are they generally understood. Everyone has his favorite instruments, and for my own work I have somewhat, though not to any great extent, modified those of Smith. The clamp which I use has no ivory guards, has a saw edge on both blades, and has handles which give much greater power than the scissor-like rings of his instrument.

Fig. 1.

With this handle the screw pressure is not necessary. The tumor is isolated with long-handled, tooth-sharp hook-forceps, the clamp is applied and held firmly in the left hand, the tissue to be removed is cut off with curved scissors, and Paquelin's cautery applied to the stump, all in this order and very rapidly. The pressure to the clamp being applied only by the hand, can easily be released to test the efficacy of the cauterization, without the use of the other hand to release the screw, and can as easily be renewed, if necessary, without laying down the cautery iron.

The most delicate point in the operation is to decide just how much tissue to include in the clamp, and this can only be learned by experience. If too little be removed the anus may be left surrounded by unsightly tags, which will be a source of future annoyance; and if too much, an undue amount of contraction may result. After the clamp is in place the part must not be cut off too close to it, but a good stump should be left for the action of the cautery. This should be thoroughly applied over the entire cut surface at a reddish-black heat. The clamp may then be loosened a little, and if any bleeding point appears on the charred surface it must be tightened again, and the cautery reapplied to the bleeding point till the clamp can be removed and the surface remain perfectly dry. The clamp while in place will stop all hemorrhage, but it does not crush the vessels, and they will bleed again as soon as it is removed, unless their mouths be thoroughly closed by the cautery. A grain of opium and half a grain of belladonna, in suppository, should be introduced after the operation, and no dressing will be necessary unless there be some oozing of blood from the points where the scissors have been used in the skin to make a groove for the clamp. Then a pad and bandage may be applied for a few hours, after which all that will be necessary is a little absorbent cotton smeared with vaseline.

The method of carbolic-acid injections can only accomplish by repeated operations what the clamp and cautery does by a single one. Each injection is a surgical operation, and may cause greater pain and longer confinement by its effect upon a single hæmorrhoid than the operation with the clamp will entail in effecting a radical cure of the disease. I do not mean to say that this will be the case, only it may be, and the operator must be prepared for it. This is in itself a great objection. It prevents the surgeon from giving any positive prognosis as to the time necessary for a cure, or as to the amount of trouble, pain, and confinement the patient will have to endure. All he can promise is a cure in the end, and one which, if things go well, will be very satisfactory, in that it involves nothing that the patient considers a surgical operation, and no confinement to the house. He cannot, however, promise that things will go well.

Perhaps this point may be illustrated more clearly by the report of three or four typical cases.

A maiden lady, aged forty, very nervous, and in feeble health, is suffering from four hæmorrhoids. They spring from above the sphincter, come down and bleed at stool, are easily replaced, are distinct each from the other, do not involve the margin of the anus, and are not larger than so many cherries. The case is favorable for injections, and one of fifteen per cent. carbolic acid is made, causing a smart pain at the moment, which soon passes away. Four days later she says she had considerable soreness for a couple of days after the first injection, but does not complain, and a fifty per cent. solution is placed in another tumor. On the next visit she gives the same story, but finds herself decidedly better as to the size of the protrusion and the bleeding, and is much encouraged. Another tumor is brought down and injected exactly as the last, but the immediate pain is more severe. At the next visit her physician tells me he had a good deal of trouble after the last operation; was sent for in the evening and had to give several opium suppositories during that night and the following day. The patient was in bed for three days, but is all right again now. She herself says that the pain has not yet entirely disappeared, and is anxious to know if she must have as much suffering during the remainder of the treatment. It is decided not to make an injection at that visit, but after a few days more it is done. The patient this time is nervous and timid, and a suppository is given at the time. There is pain for a day or two, not as bad as the last, and the case is cured. Ten days later she is entirely satisfied with the result; there is no longer any bleeding or protrusion, and she is so glad she "didn't have to undergo any surgical operation."

This is an average favorable case of a mild form of the trouble. The patient, family, and family physician are all delighted with carbolic acid, but a little thought brings out the following facts: She was under treatment

six weeks, and most of that time, though it might not perhaps have been necessary, she remained in the house. During this time she was in bed and suffering pain at least one week. She took considerable quantities of opium and bella-donna. On the whole, she gained nothing by this treatment over that with the clamp, except that she did not take ether and was spared what she greatly feared, a surgical operation. But this, in such a case, is an advantage not to be despised by the laity, no matter how it may appear to the surgeon. It is, in fact, exactly on this inborn dread of an operation that the whole treatment by injections has been built up and still flourishes; and it is often surprising how well satisfied a patient will be to endure a great deal of unnecessary suffering, if by it he or she can escape the knife.

I have given this case as an average successful one. Many will do better, and as many more will do worse. A strong man will have more pain and not lose a day from his business; another will complain only of pain for a couple of hours after the operation; but as far as my experience goes, all suffer in a greater or less degree at some time during the treatment.

Let us take now another case. A man of about sixty has had hæmorrhoids for twenty years. He is of sedentary habits and nervous, but with no other disease than the tumors. An examination shows a very advanced case of long-standing trouble. The tumors can be divided into four chief ones—one posterior, one anterior, and one on each side; but two of these are as large as hen's eggs, and the others only a trifle smaller. They spring from above the sphincter, and are entirely covered by mucous membrane; the sphincter is so relaxed that they protrude with the slightest exertion, and the patient has worn a rectal supporter for years.

It is a beautiful case for the clamp, and fit for that only; but at the outset I am met fairly by the not infrequent obstacle—"no operation." Argument is useless; he has heard of carbolic acid; in fact, his physician has sent him to me for that treatment, and it is that or nothing. Unwillingly I consent.

An injection of thirty-three per cent. is made posteriorly, and with the usual caution and instruction the patient goes home. Two days later he returns. He has had pain—yes, considerable; but he does not mind the pain as long as he can get well. Another injection of the same strength on the left side.

It is four days before he again appears, and they have been passed mostly in bed, and he has used several suppositories, but he is now better, and "if it is no worse than this he can stand it." The tumor injected last time is much smaller, but the posterior one, which was first attacked, is not much benefited, and five drops of pure acid are placed in its centre.

Three days later he reports that he is beginning to be better, that there is less protrusion at stool, and he has left off his supporter. The last injection has not caused a slough, but a hard inflammatory induration in the centre of the tumor. Another five drops of pure acid are injected into the same mass at a little distance from the hard spot, and he then tells me that ever since his last visit he has had considerable difficulty in passing water, which is high-colored and diminished in amount.

Four days later, says he had no very severe pain after the last application, and straining at stool fails to bring down either of the tumors which have been operated upon. Another injection of pure acid into the anterior tumor, the largest of them all. Three days later he reminds me that he is in a great hurry to go away on business, and is anxious to have treatment crowded more rapidly. Had no pain at all after last injection, and fears I did not get it in. The injection has again caused a hard lump of inflammatory induration, but no slough, and a decrease of about one-third in the size of the mass. There is still more work to be done on the first one, and another five drops of pure acid are injected into it, causing no pain at the time, or after, as he tells me two days later.

Thus far all had gone well, and three of the tumors had been treated without accident. An injection of pure acid was made into the last one, that on the right side. Three days later I am sent for to come to him. Before this he has come to me, but he has been in bed ever since the last injection; the urine has been very scanty and passed with difficulty; there is an enlarged and painful gland in the right groin; and a painful swelling at the verge of the anus on the right side, circumscribed, the size of an almond. Eleven days later, the patient being still confined in bed, the abscess at the margin of the anus was opened and a drachm or so of pus evacuated. A couple of days later it was found to have also opened spontaneously on the mucous side of the swelling, just within the sphincter. Ten days later this was healed. The patient had then been under treatment just forty days. He was much better; the tumors were all considerably reduced in size, they still protruded at stool, but went back spontaneously, and he promised to report again in a few days. He never did.

This may be put down as a bad case. The only other one I ever have had came to me, by a strange coincidence, on the same morning, and the two between them cost me a summer's vacation. It is only fair to the method to say, however, that while treating this last one, I was carrying another gentleman, two years older, through the same process, whose tumors were, if possible, even more voluminous, and who was entirely and satisfactorily cured by six injections during fourteen days. He was a man of hardier constitution and greater nerve.

In my other bad case an injection of the acid into a small tumor, just within the sphincter, was followed by a severe ischio-rectal abscess, lymphangitis running up the rectum, and enlarged glands in both groins. After the rather diffuse phlegmon had limited itself, the usual operation for large abscess in this region was performed; but the incision had to be carried into the bowel, and the patient only recovered after weeks of treatment.

Out of many hundred injections of carbolic acid this is my only really unfortunate case, the others have been satisfactory in doing what they were intended to do, and, perhaps, this is no greater a proportion than could fairly be counted on in any surgical procedure. The method can hardly be considered a dangerous one, or else it would more often be heard from in the hands of the ignorant pretenders who succeed in living by practising it. As to the details of its application, I have already said enough in former communications; we are now more especially interested in its comparative advantages and disadvantages.

In the first place, there is no doubt that by using it with sufficient thoroughness a cure can be obtained in every case. But, on the other hand, a hæmorrhoid which has simply been deprived of a part of its vascular supply, and, in consequence, has become so small and hard that it neither bleeds nor protrudes, is not as radically cured as one which has been entirely removed, nor has the surgeon the same confidence that it will never recur. Where ulceration and sloughing are produced by the injections the case is different, for then there is an actual loss of tissue, accomplishing the same end as the clamp or ligature.

When a slough is produced the patient will have more pain, and often will be confined in the house a longer time than after the clamp operation. A single slough will do this, and yet several may be produced in a single case before the cure is complete.

These ulcers heal spontaneously as a rule, but not as quickly as do the wounds made by the clamp and cautery or the ligature.

It is impossible to tell in any given case whether an ulcer will be produced or not; and as the amount of pain and the length of the treatment depend almost entirely upon this point, it is equally impossible to give the patient anything but an approximate guess as to these things. This will be found [illegible] of a great

practical objection, for the matter of time is often very important. With the clamp the patient may be safely assured that he need not remain in the city more than ten days or a fortnight at most; with injections no such assurance can be given. Sloughs are certainly, as far as my experience goes, almost entirely independent of the strength of the solution or the dissolving medium, and I have experimented with every strength from ten per cent. to pure acid, and with various media. Sperm oil is supposed to be less irritating than glycerine, but I have not found it so, and it is much less agreeable to handle. Neither does pure almond oil seem to possess any advantage. As seen in one of the cases reported in full, pure acid failed again and again to set up a slough, and yet a ten per cent. solution of the acid will do it not infrequently, and so will the pure. The stronger injections cause no more immediate pain than the weak, and the subsequent pain, when no slough is produced, is not generally very prolonged. The most frequent report is that it began two or three hours after the injection, and was pretty severe for a few hours, then passed away. Sometimes it does not come at all.

There is another complication that I dread more than sloughing, though the latter can hardly be called a complication, and that is small marginal abscesses, such as is described in the second case. This will appear within two or three days as a painful tumor just at the verge of the anus, distinctly circumscribed, not much larger than a large grape, projecting sharply from the surface; and it is really an external cutaneous hæmorrhoid caused by the irritation of the work going on in the rectum above, and it will almost invariably suppurate. This means about ten days of sharp pain, worse than that caused by the injection of internal tumors, even when they slough, and it requires a good deal of nerve for a patient to keep about under these circumstances. It should be poulticed and incised as soon as pus is formed. If allowed to discharge itself it will break frequently on both cutaneous and mucous surfaces, and a small bridge of tissue will be left between the two openings, which should be made into one with knife or scissors. This is not serious—nor is it pleasant. When the patient is well he forgets it and is satisfied; and yet it was the last straw that cost me my patient in the second case.

This form of trouble is due to irritation higher up, but if hæmorrhoids at the verge of the anus, covered with skin on the outer aspect, be injected, they will also suppurate in the same way.

There is one more objection to this method which I cannot but think is more theoretical than practical. It is claimed that starting an inflammatory process in a tumor still connected with the general circulation, and with no precautions to limit the process, is in itself dangerous and liable to set up phlebitis or cause embolus. This, of course, may happen, but as a matter of fact it does not, any more than it does in the somewhat analogous operation upon nævi of the scalp with the hot needle. An injection of pure carbolic acid, or even of fifty per cent., destroys whatever it touches in the animal tissues, and the extent of the process very quickly limits itself. Even fifteen per cent. placed in a large vein at the anus causes instant coagulation, entirely stopping the circulation, and a ligature around the vessel could hardly do more.

To sum up, now, with regard to this method. In many cases it will give perfect satisfaction, and the patient avoids the operation which he fears. It is best adapted to small or medium-sized tumors which are distinctly pedunculated and spring from the rectum above the sphincters. In cases involving the margin of the anus and implicating the skin it will greatly reduce the size of the tumors, but it does not give as perfect a result as an operation by which the redundant tissue is actually taken away. In cases of extensive disease it will effect a cure, but the process is liable to be attended by more suffering in the aggregate, and to take much more time than either the ligature or the clamp.

There is an exaggerated idea in the minds of many practitioners regarding the harmlessness and freedom from accident of this plan of treatment. One of them related to me, not long since, how by invitation he spent half a day in the office of a celebrated travelling rectal specialist, who received his medical training in the dry-goods business, and watched him inject hæmorrhoids with a secret remedy. The patients came in from all directions, and the story was invariably the same—no pain at any time, no complications or accidents, nothing but the most perfect satisfaction and cure. The explanation is probably that the dissatisfied ones did not return. At all events, surgeons of repute in this country and abroad cannot boast of such eminent success.

Since cocaine became known I have tried many experiments in treating hæmorrhoids by various methods. One has been to snare them off with a small écraseur and silk salmon line, which is strong enough to cut through any tissue except bone, taking them one at a time, and doing it in my office. Many times I have ligated large tumors without feeling it necessary to inform the patient. Unfortunately the clamp and cautery cannot be used without the patient's knowledge. Sometimes I have thrown around a temporary ligature, and after drawing it lightly have injected carbolic acid, and after several minutes have taken the ligature away. Once or twice I have crushed the tumors. But all these methods of treating hæmorrhoids piecemeal are more or less unsatisfactory, and can only be recommended as substitutes for the better operation with the clamp.

After all has been said, I can only add that the most satisfactory cases of hæmorrhoids, of moderate or great severity, which come to my notice, are those in which the patient says at the outset, "Cure me as you think best." In them I use the clamp and cautery. They seldom cause a moment's uneasiness, and the result is always very gratifying.

The Madison, 25 Madison Ave., Madison Square.

THE CLOSURE OF CLEFT OF THE HARD AND SOFT PALATE, AT A SINGLE OPERATION, WITH A BRIEF REPORT OF A RECENT CASE.

By W. R. WHITEHEAD, M.D. (University of Paris), Denver, Col.

Ex-Resident [illegible] Medical Society; late Demonstrator of Anatomy in the [illegible] Department of the University of Denver and of the [illegible] University [illegible], Ex-Resident [illegible].

It is in fact largely from a sense of duty that I write this article, as the defender of a very useful operation for cleft palate, which, in my opinion, has been neglected, and which should be better understood and more extensively known, and which in more skilful hands than my own, and with less experience, would produce equally as good results, if not better.

It is useless to deny that the operation for cleft palate is a most delicate, difficult, and complicated one; but, notwithstanding, its exact and successful performance is within the reach of any intelligent and painstaking surgeon, once that the proper method be adopted and thoroughly understood. If some eminent surgeons have not met with desirable success, it is, I believe, because they have not given that careful attention and time to its study that possibly has distinguished their efforts in other directions. It should never be lost sight of that there are some fundamental facts underlying success in this operation, as in others, which cannot be ignored or lightly passed over, and one of these is that the muscles should be completely cut, and herein is where I find Dr. George Arthur so radically in error, and who does not tell us that he has ever attempted on the living subject the operation which he proposes by such profuse illustration.[1]

[1] See Medical [illegible], [illegible] review.

He proposes to combine mechanical and surgical methods to obtain better articulation. The mechanical method I shall not discuss, because I have disposed of that elsewhere (see Am[illegible] Journal of Syphilis). This mechanical method is an expensive and most unsatisfactory makeshift, especially in a growing child, and which should be entirely superseded by the permanent obturation of the cleft with the patient's own flesh by the proper surgical method.

Dr. Arthur's operation appears to be utterly impracticable, and if the mechanical part of his treatment depends on his operation, it must completely fail. He says: "The first step in the treatment is to unite the two halves of the uvula and soft palate as completely as possible. This may be done," he observes, "by freshening their edges and securing them together with sutures, preferably the perforated-shot suture." Now, he says nothing about first cutting the palate muscles to keep them quiet, and thus prevent by their constant action the sutures from cutting out in twenty-four hours, or in less time, and which they will inevitably do. But, continues Dr. Arthur: "If the cleft is too wide for this to be done without undue tension of the parts, small portions of the posterior and internal borders of the free edges of the palatine processes, large enough only to furnish secure support for a silver wire to be passed through perforations drilled through their centres for the purpose, may be cut off with a fine, sharp chisel under the mucous membrane, which should be completely separated from their inferior surfaces with the periosteum, or fractured off after suitable guiding perforations have been made, as shown in Fig. 1" (see his article cited). "These fragments," he remarks, "should be brought close enough together with a strong wire to relieve the wound of tension." These little square pieces of bone, which the doctor proposes to detach and denude of the periosteum on their under surfaces, would be deprived of most, if not all, of their blood-supply, and inevitably necrose. Besides, what is this done for? Simply with the theoretical idea that these pieces of bone will give support to the muscles of the velum. He tells us further on that no attempt is made to close the hard palate, this being left to the dentist. In view of the successful and striking cases which I exhibited to large numbers of surgeons and physicians in New York City, some years ago, before the old New York Medical Library and Journal Association, it is somewhat surprising to me that my modification and improvement of Langenbeck's operation for muco-periosteal uranoplasty should be so little remembered and understood, and hence I feel that this paper is not without some value. Besides, while in common with most people I am mistrustful of too much self-assertion, for which surgeons, more than physicians, are somewhat noted; yet there are occasions when too much modesty ceases to be a virtue, and I certainly feel now that I am not too self-asserting when I claim, what facts fully support me in saying, notwithstanding my limited experience of only about one dozen cases of successful closure of the hard and soft palate at a single operation, this exceeds the recorded cases of anyone in the United States, and, indeed, I believe of any three surgeons in this country. Why this is the case for so valuable and useful an operation space will not permit me now to discuss.

Further on in his article Dr. Arthur goes on to say: "If the above proceeding fails to relieve all tension on the wound, incisions, partly or entirely severing the tensors and levators, as recommended by Langenbeck, may be made (Fig. 1, *a*, *a*)." See Dr. Arthur's article cited, and in his Fig. 1, at *a*, *a*, opposite the first two molar teeth, marks which show cuts for the *supposed* section of the tensors and levators of the palate. Certainly Langenbeck must have been badly misrepresented, or the drawings are very much wrong, or Dr. Arthur is considerably out of the way in his anatomy of the palate muscles. However, I cannot believe this last, because he discusses very intelligently the action of the superior constrictor of the pharynx. But the importance of this last muscle in its action, I believe, has been generally much exaggerated as regards its useful effects on the velum palati after an operation for cleft palate.

Below I give a very brief report of a case of cleft palate which I closed on the day that I read Dr. Arthur's article—that is, on the 24th of last February. The case was of a little boy, named Harry Ashton, of Denver, three years old, and the dimensions of the cleft are shown in the accompanying kaolatype, Fig. 1.

The cleft was completely closed at a single operation, and now, on the ninth day, Dr. Dougan being present, the union is complete throughout the entire length; but I shall not remove the soft silver-wire sutures, of perfectly pure silver, until about the fourteenth day, and then allow the side-cuts to heal up. Afterward I shall operate on the lip, which is also fissured. The same method that I have so fully described elsewhere was here repeated. I was assisted by Drs. Dougan, Carlin, and Durbin, of Denver, and also most ably aided by Dr. Norman, an excellent dentist, of Denver, who lent me a dental chair, and which I always prefer to use in this operation when possible. I used my gag, and during the entire period of the operation it was retained in the boy's mouth, who was fully etherized most of the time. (See woodcuts of my gag, at *a* and *b*, Fig. 3.)

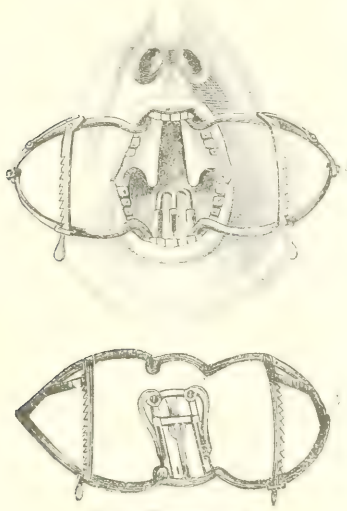
On the ninth day after this operation, and at which time this report was written, it was not thought necessary, as affecting the result of the operation, to notice a little mishap which occurred during the operation, and which was the accidental detachment, with the periosteal elevator, of the anterior part of one of the flaps. Perfect and firm union had already occurred the entire length of the sutured flaps; but subsequently retraction of the detached flap near the front part of the former cleft, and near the incisor teeth, left an opening at one of the side-cuts of the size represented at Fig. 2.

Fig. 2.

I attempted, some weeks afterward, when I operated on the harelip, to close this small opening; but the extreme friability of the thick, vascular, muco-periosteal tissue of the palatine vault at this young age, made the flap on one side tear or break across like wet blotting-paper, and I desisted from the operation. With the cleft nearly closed, and the lip now in natural shape, the result is good; besides, the speech is improved. This little mishap, while it prevented the operation on the palate from being a perfectly complete success, yet adds greatly to the interest of this operation as a part of its history, briefly summed up in the following practical experience: If the attempt is made to close by operation a hole in the palatine vault of a child, this can only be done under the same conditions as the closure of an extensive cleft; [illegible] *on the stitches*. Even in an adult, in whom the periosteum of the palatine vault is tough and resisting, the cutting of the palate muscles is one of the essential steps necessary to facilitate the approximation of the pared edges of the loosened tissues surrounding an acquired opening, or defect of the palatine vault, as the result of scrofula, syphilis, or gunshot wound. The limits of this article will not permit of a more elaborate explanation.

In regards to gags I shall digress a moment to say that in a work on operative surgery, by L. A. Stimson, M.D., my gag is represented as T. Smith's gag. As Smith's gag may under some circumstances, as when the front teeth are defective or absent, be preferably used to mine, I here give a representation of it, and more especially that mine may not be mistaken for Smith's,

which, indeed, it does not resemble in the least. Fig. 4 shows a kaolatype of Smith's gag. For general purposes, however, I much prefer my own gag.



In this last case, as in all I have operated on, the muscles were thoroughly divided, the side-cuts made, but not so far back as shown in the figure, the periosteum partially detached, the edges carefully pared, and sutures

Fig. 4.—T. Smith's Gag.

passed and twisted up as represented in Fig. 5, which I have had copied, one-half size, from my report on "Cleft Palate," read before the American Medical Association of 1869.

I confidently anticipate a reproduction of bone in the newly formed palatine vault of this little boy, as I have heretofore obtained in young subjects. Indeed it may not be amiss if I refer to the cases of Miss S——, aged fifteen, and of Maria D——, aged seven, cited in the above-mentioned report, and in which cases the evidence of new bone, as attested by Dr. Charles K. Briddon, of New York, and myself, was strikingly manifest. It is astonishing to me the incredulity and opposition with which this operation has met, from the time I presented my first successful case up to the last one, only the other day. The parents of the little boy, Harry Ashton, were told by a Denver physician that the operation was unsuitable before the fourteenth year, and that he ran a danger of his life, etc. Dr. Dougan, however, urged the mother to have me do the operation, and kindly aided me in its performance. If the readers of THE RECORD will refer to the January number of *The American Journal of the Medical Sciences* for 1872, they will see that of two cases reported at that time the first was of a little boy, not quite three years of age, sent to me by the late Professor Charles A. Budd, of New York, and that he bore the operation well, and reacted better than any of my older cases.

It is but justice to myself to say that in nearly all of my cases the success has been complete, as regards union of the parts the entire length of the previously fissured palate, and that in every case the speech has been improved. But I, as others, have been particularly struck with the tightness occasionally of the newly formed palate, and which permits of more or less nasal tone, while, however, rendering the articulation more distinct, which distinct articulation is of the greatest advantage. By referring to the July number of *The American Journal of the Medical Sciences* of 1871, there will be observed the report of the case of an adult, J. C——, aged thirty-five years, the exact dimensions of whose palate, on account of its size, I here show, preferably to others. (See Fig. 6.)

Fig. 6.

I closed this extensive cleft, and on the fourteenth day removed the sutures, the union being complete and firm throughout the entire length of the previous cleft. The late Dr. James L. Little, and Dr. Nathan Bozeman, of New York, with others, were present at this operation. I also cite this case because it was an adult of thirty-five years of age, in marked contrast as to age and the lessened chances as to improvement in speech, to the little boy of less than three years of age. This adult patient, to quote from the journal above cited, was shown to about forty medical gentlemen at the New York Medical Library and Journal Association rooms, and called forth considerable comment about his speech, which was generally admitted to be quite satisfactory, and was an improvement on what it was before. "He was requested to read aloud, to pronounce the letters of the alphabet, and to count. It was explained to the gentlemen present that an operation would be attempted to lengthen the palate." To quote this case briefly, I should say that the operation to lengthen the palate, and which was a purely dissecting-room procedure of my device, proved a failure, and came near compromising seriously the good result that I had already obtained. However, there was, I thought, one or two letters pronounced with less nasal tone after this operation.

AN ARTIFICIAL HEEL BY GRAFTING. At a meeting of the Academy, M. Berger presented a patient in whom he was able to make an artificial heel by means of a large lump taken from the opposite leg. The graft succeeded completely, and the heel is now perfectly restored, but sensation has not yet appeared.

Clinical Department.

CONGENITAL MALFORMATION OF THE EXTERNAL EAR.

Dr. T. R. Williams, of Beechtree, Pa., writes [illegible]ds. T——, of this place, gave birth a few days ago to a female child who had a deformity of the left external ear. The cartilaginous portion was entirely wanting, and the soft parts were in a very rudimentary condition, except the tragus, or what I took to be it, which seemed to have about its usual development. The external auditory meatus was completely obliterated, not even a trace of any opening showing. Whether this condition obtains throughout the entire canal I cannot say, as I made no operation to ascertain this. The child weighed about nine pounds, and was otherwise perfectly developed. I would add that not long since I delivered a member of this same family of a child with hare-lip. I closed the fissure by an operation, using the hydrochlorate of cocaine successfully as a local anæsthetic."

PERITYPHILITIC ABSCESS — INCISION AND DRAINAGE—RECOVERY.

Dr. F. J. Adams, Assistant Surgeon United States Army, of Fort Assinaboine, Mont. Terr., reports the following case: A private, twenty-four years of age, after some premonitory symptoms of general malaise, was taken with cramps in the abdomen, accompanied with slight fever. He received morphine for the pain, but the fever continued, ranging from 100° in the morning to 103° in the evening. On the tenth day there was considerable tympanites, with tenderness in the right side of the abdomen from Poupart's ligament to the false ribs; there was some doughy swelling, but no distinct tumor, and no signs of fluctuation could be detected. During the next four days the difference between morning and evening temperature was on the average 3°, and the general symptoms indicated the formation of pus, though no fluctuation could be detected. On the evening of this day the needle of a hypodermatic syringe was inserted above the crest of the ilium, but no pus was found. The following morning an aspirator needle was thrust into the right side a little above the crest of the ilium and about two and one-half inches posterior to the anterior superior spine, downward and backward deep into the iliac fossa, and through it some very offensive pus was withdrawn. The patient was then etherized and an incision was made about an inch above, and parallel to, the crest of the ilium.

The muscles of this region were healthy in appearance but the transversalis fascia was somewhat thickened, and upon being freely incised there escaped at least one pint of thin ichorous pus of strong fecal odor. The cavity was explored with the finger, but no foreign body could be detected. After the cavity of the abscess had been thoroughly washed out with a solution of carbolic acid, a drainage-tube was inserted and the wound dressed with iodoform and oakum. The following morning the temperature had fallen from 102⅗° F. to 98° F. The cavity was each day washed out with a carbolized solution and the patient did fairly well until the seventh day, when the temperature rose to 101⅗° F., and although there was free discharge from the tube, the symptoms for four days following indicated the retention of pus. Accordingly, he was again etherized, the opening was enlarged, and upon exploration with the finger a pocket of pus was discovered extending farther down into the iliac fossa. Free exit was given and a rubber tube of one-half inch calibre inserted into the cavity for drainage. Each day a soft catheter was introduced through this tube and the abscess-cavity well washed with carbolized solution. The progress of the case from this time was good, and at the end of a month the wound had entirely healed.

Dr. Adams continues: "In the treatment of this case, it is now evident that the exploration with the aspirator needle should have been made as early as the tenth day instead of the fourteenth, or when the great difference between morning and evening temperature occurred, which, with other obscure constitutional symptoms, indicated the probable formation of pus. It was found that the largest size drainage-tube furnished by the Medical Department of the Army was much too small for the purpose of thorough drainage, and a stiff rubber tube, one-half inch calibre, was used, and proved to be entirely unirritating and was extremely effective, the improvement of the patient being constant from the time it was first inserted. I am of the opinion that had such a one been introduced from the first the necessity for a second operation would not have occurred."

SOME ADDITIONAL STATISTICS OF INTUBATION OF THE LARYNX.

Dr. F. E. Waxham, of Chicago, read a paper on "Intubation of the Larynx as a Substitute for Tracheotomy in the Treatment of Diphtheritic Laryngitis, with a Report of 83 Cases," at a meeting of the Chicago Medical Society on June 21st. The author referred to the various modifications that had been made in the instruments during the past year. First, the enlargement of the heads of the tubes to prevent slipping into the trachea; second, the addition of a shoulder to prevent their expulsion; and third, the construction of the tubes with thinner walls, giving greater breathing space and a better opportunity for the expulsion of false membrane. After exhibiting a feeding-bottle and trachea-forceps, the author presented statistics of 306 cases of tracheotomy performed in Chicago, with 58 recoveries, or 18.95 per cent. In 138 cases the ages were given; the average being five years and one month. In contrast to these statistics he gave the result of 83 cases of intubation performed in Chicago, with 23 recoveries, or 27.71 per cent.; the average age being three years and seven months. Eleven cases with 3 recoveries were under two years of age, one being an infant of fourteen months, another of eighteen months, and the other twenty months. Twenty-eight cases with 8 recoveries were under three years; 14 cases with 3 recoveries between three and four years; 15 cases with 6 recoveries between four and five years; 9 cases with 4 recoveries between five and six years; and 10 cases with 2 recoveries between seven and eleven years. Many of these cases were young nursing infants, and many were referred to him because they were too young, or because the cases were too unfavorable to warrant tracheotomy.

A CURATIVE OF EPITHELIOMA.

Dr. D. Tod Gilliam, of Columbus, O., writes: "I desire to call attention to the use of salicylic acid and cocaine as a curative for epithelioma. It so happened, not long since, that I had a small epithelial growth to remove from the face, and resorted to a 20-grain solution of cocaine as a local anæsthetic. After the lapse of some minutes I was surprised to find the diseased parts not only exsanguined, as is usually the case after the use of cocaine, but extremely friable and crumbly. I saturated a good-sized pledget of absorbent cotton with the cocaine and reapplied it, leaving it on for about thirty minutes. At the expiration of that time the diseased mass fell away with the slightest touch of the curette, leaving a healthy-looking surface which has healed kindly. This, I dare say, was not an epithelioma in the sense of being malignant, but was undoubtedly epithelial in character, and has suggested to me the feasibility of using cocaine in the former class of cases. I was the more surprised at the change produced, inasmuch as the usual effect of cocaine is to produce a condensation of tissues, and the bloodless

condition may, for aught I know, depend largely on this condensation. But the fact remains and we cannot gainsay facts. I would suggest as a preliminary to the use of cocaine that the horny layer of epithelium on the surface be softened by the appication of salicylic acid, as we all know from experience that cocaine will not penetrate keratinic substance. In the absence of any case to demonstrate this treatment on, and as, unlike Bill Nye with the comet, I have not almost discovered one, I put this forward hoping that some one will give it a trial. I am not unmindful of the fact that Dr. Shrady and his *confrères* used cocaine in the case of General Grant, or that the drug has now for a long time been in daily use for similar cases, but possibly not of the strength, quantity, and for length of time here indicated."

RADICAL CURE OF HERNIA BY A BUBO.

Dr. F. B. Streeter, of Glens Falls, N. Y., reports the following case: "H——, aged thirty-five years, Irish-American, canal-boat captain by occupation, while loading his boat in the summer of 1882 sustained a severe strain which resulted in a direct inguinal hernia of the left side. It was easily reduced and retained by a truss. In the summer of 1883 he again consulted me, this time for a bubo on the same side. After a long period of extensive inflammation with suppuration, during which he was unable to wear a truss, he recovered from his bubo, and from his hernia as well. Up to the present time his hernia has not recurred, although he is engaged in the heaviest labor. A suitable case presenting itself, I propose to try the effect of vaccination, although I hardly expect to gain results equal to those obtained by the 'bubo' treatment."

A DEVICE INTENDED TO FACILITATE APPLICATION TO THE POSTERIOR NARES OR LARYNX.

Dr. Howard Smith, of the United States Army, writes: "In making applications to the posterior nares or larnyx with the hand-atomizer, a practical difficulty is the inability to control the velum, or tongue, or to use the mirror while both hands are employed in working the instrument. In order to free one hand, I employ a simple device which I have not seen mentioned. The rubber tubing of the atomizer is lengthened to about five feet, so that the bulk can lie on the floor under the foot of the operator, close to the patient's chair. The operator holds the bottle and directs the spray with one hand, employs the other with the palate-hook, tongue-depresser or mirror, while he presses the bulb firmly and rapidly with his foot, producing a finer and stronger spray than when the hand is used. The application of the same device to the various powder-blowers is equally advantageous."

Iodoform in Phthisis.—The administration of iodoform in phthisis and other diseases of the lungs is becoming the regular treatment of these affections. Two Italian professors have made it a special study, and the conclusions they have arrived at are very favorable to the employment of the agent. Professor Chiaramelli, during four years at the Hospital of the Incurables, tried iodoform on a large scale, and found that it lessened the fever, modified the expectoration in its chemical qualities, and thus hindered putrefaction. In cases of caseous pneumonia, the learned professor said he thought that, given at an early hour, it would have a happy influence on the disease. M. Verneuil, who has already used iodoform dissolved in ether, in injections for cold abscesses, has given it also in phthisis, at the dose of two grains twice a day, suspended in ether and enveloped in capsules. Dr. Huchard associates it with creosote (one grain of each).

Progress of Medical Science.

Treatment of Pruritus Ani.—M. Grellety recommends for the relief of simple, non-symptomatic pruritus ani, frequent sitz-baths, ano-perineal douches, or bathing of the parts several times a day with warm water containing boracic acid (one part per one hundred) in solution. During the night starch poultices may be applied, or an ointment, composed of one part of oxide of zinc to five parts of vaseline, may be used. If these means are ineffectual recourse must be had to tents, saturated first with belladonna ointment, and then with a five per cent. ointment of cocaine, introduced within the anus. The food should be simple and bland, and alcoholic beverages should be eschewed.—*Le Moniteur Thérapeutique*, June 7, 1886.

Potassium Nitrate in Acute Rheumatism.—Dr. Grinevitski writes in the *Russkaya Meditsina* of April 20, 1886, concerning a method of treatment of acute rheumatism which he has employed for more than twenty years, with great success. He gives two drachms of potassium nitrate every two hours in a tablespoonful of raspberry syrup. At the same time he applies, night and morning, an ointment composed of extract of aconite, one drachm; ointment of gray oxide of mercury, two drachms; oil of hyoscyamus, one ounce. He says that he was usually able to arrest the disease within one or two weeks, and when treatment was begun early enough he seldom saw the disease invade other articulations than the one originally attacked.

Treatment of Facial Neuralgia.—Dr. de Coninck recommends the application of a one per cent. solution of cocaine hydrochlorate to the deeper portion of the external auditory canal, by means of a camel's-hair pencil, or a dropper. It is not necessary to use a solution of greater strength than this. The writer affirms that the pain, however intense it may be, will disappear at once, and should it return, it may be again relieved by the same means.—*Le Moniteur Thérapeutique*, June 7, 1886.

Hereditary Malformations of the Hands and Feet.—Some curious cases of malformations of the hands and feet, transmitted through several generations, have recently been reported in the *British Medical Journal*. The first series was reported by Mr. Henry A. Fotherby, in the number for May 22, 1886. The patient, J. A——, had a deformity of the hands and feet. In the upper extremity the apparent abnormalities began below the carpus, where only four metacarpal bones could be traced, the fourth and fifth bearing the little and ring fingers; the fingers were closely webbed together, though each had the normal number of phalanges; the missing metacarpal bone was, as far as could be determined, the third. Muscular movements were considerable and permitted of firm apposition of the webbed digits to the fleshy nodule covering the head of the first metacarpal bone. In the feet was found an abnormality, the exact similitude of which had existed in almost every deformed member of the family for five generations. The deviation from the normal seemed to begin immediately below the tarsus, where the metatarsus on each foot bifurcated to form two truncated, cone-like masses; the outer mass, which was the more slender and tapering, supported at its apex the little toe; the inner, and more solid, the great toe. It was impossible to estimate the number of metatarsal bones entering into each cone, as they appeared to be blended together, especially toward their distal extremities. In the internal lay a large ovoid gap. An almost exactly similar condition of things existed in the patient's married sister, whose child was also greatly deformed. The deformities had existed through five generations. Of the first and second generations, as far as known, one individual in each was deformed; of the

third generation there were two; of the fourth, to which the patient belonged, nine out of twelve [illegible] were deformed; of the fifth, children belonging to [illegible] in the fifth generation, six presented the peculiar malformations. In the same journal, under date of June 12, 1886, Mr. William Anderson relates another remarkable series, the deformities having been transmitted through four generations, affecting twenty-four out of thirty-six members of the family, and showing a tendency to increase in the later scions. The children of the undeformed subjects were all normally developed. The typical deformity was a pincer-like shape of the hands and feet. This predominated throughout the first three generations, except in the last member of the third, who had no thumb; and in the fourth generation the great toe also disappeared in two cases. The error of development was always limited to the digits and metacarpal bones, except in the fourth generation, where there were indications that some elements of the distal row of carpal or tarsal bones were imperfectly formed. The lesion was usually symmetrical. The morbid features were not confined to a mere suppression of parts. Syndactylism, compensatory hypertrophy, distortion of articulations, and multiplication of parts were also present. The manipulative power retained in the deformed parts was surprising, considering the degree and nature of the mutilation. The selection of the subjects for attack or exemption seemed to be quite capricious; neither sex nor order of seniority appeared to influence the manifestation; males and females were affected alike, and the defect was handed down as readily by the latter as the former.

The Prevention of General Tuberculosis by Removal of Local Affections.—In an article on this subject in the *Archives Générales de Médecine* for April and May, 1886, Dr. A. Marfon broaches the theory that tuberculosis belongs to that class of infectious diseases—among which are syphilis, scarlatina, etc.—in which one attack confers immunity against others, as a rule, and he therefore argues that all accessible local tubercular affections should be removed as speedily as possible. He has collected a number of observations of individuals, presenting evidences of cured tubercular adenitis, living for many years as nurses in hospitals, and surrounded by phthisical patients, who never betrayed any symptoms of subsequent tubercular infection. He has also examined a number of persons who had been cured of lupus, and never found any symptoms of pulmonary disease. He believes that scrofulous adenitis occurring in childhood confers immunity against tuberculosis, while a similar affection, first appearing in adult life, is usually accompanied by tubercular disease in the lungs. He says it is very rare to find patients suffering from pulmonary phthisis who have any marks upon them pointing to a previous adenitis or lupus, and he regards the latter affections as caused by an attenuated form of tuberculous virus. Auto-inoculation he regards as very exceptionable, and is consequently in favor of removal by operation, wherever practicable, of local forms of the disease.

Tremulous Paresis of the Heart.—There is no symptom more commonly found in the subjects of chronic alcoholism than tremors in certain muscles, more especially those of the extremities, and, less frequently, of the lips or tongue. There is at the same time a certain diminution, though not abolition, of power. It is well known that alcohol exercises an injurious influence upon the heart, causing at times myositis and fatty degeneration; but the following case, occurring in the service of M. Peter in l'Hôpital de la Charité (*Gazette des Hôpitaux*, June 12, 1886), is interesting as showing that the heart may also be the seat of functional disturbances, excited by this cause, characterized by weakened contractions and tremor. The patient, a man, aged thirty-five, had always been engaged in occupations requiring a considerable exercise of muscular force, and had also been addicted for a long time to the abuse of alcoholic liquors. He had had several attacks of gonorrhœa and gonorrhœal rheumatism. He was received into hospital suffering from delirium tremens. After recovering from this attack he was seen to have tremor of the hands, and on auscultation the heart-sounds were found to be weak, poorly accentuated, and flabby (*un peu flou*). A sphygmographic tracing showed a very short ascending line, indicating a weak heart, and the descending line was wavy and broken throughout its whole extent by a series of minute oscillations. The same characteristics were observed in tracings taken some days later, after complete recovery from the acute attack, showing that the tremor was a permanent condition and not to be regarded as a mere symptom accompanying the delirium tremens.

[illegible] reports a case of herpes zoster affecting the parts supplied by the terminal filaments of the median nerve in each hand. The eruption was accompanied by hyperidrosis of the same parts, trophic disturbances of the skin and nails of the fingers supplied by the median nerve, and by thumb clonus. The latter consisted in a trembling of the thumb, caused by sharp palmar flexion, which lasted ordinarily for fifteen to twenty seconds, but which ceased upon extension of the member. The zoster reappeared at intervals.—*Centralblatt für klinische* [illegible]. May 15, 1886.

The Connection between Scarlet Fever and Heart Disease.—Dr. Henry Ashby has made a study of 900 cases of scarlet fever which have been treated at the Children's Hospital, Manchester, during the past five years (*The Lancet*). The question is raised as to the part played by the virus of scarlet fever in exciting or predisposing to an attack of rheumatism. The commonest form of joint-affection which complicates scarlet fever in children is of a form of synovitis, but it is very rarely accompanied by endocarditis. These attacks differ in many ways from acute or subacute rheumatism—they are more fugitive in character, rarely recurring or returning to a joint when once it has left, and exhibiting an especial tendency to attack the synovial membranes on the backs and palms of the hands, finger-joints, soles of the feet, and cervical vertebræ. The attacks mostly take place from the seventh to the ninth day of the fever. Apart from synovitis, attacks undistinguishable from true rheumatism are liable to occur at the end of the third or during the fourth week, much at the same time as nephritis is liable to supervene. This post-scarlatinal rheumatism is commoner in young adults than in children, and in these attacks endocarditis is by no means uncommon. Cases recovering from rheumatic fever, and then attacked with scarlet fever, often suffer from a relapse of the rheumatism; but in what way the poison of scarlet fever determines the relapse in these cases the author cannot say definitely. Nephritis following scarlet fever is a not infrequent cause of cardiac lesions. A certain amount of dilatation of the left ventricle, with more or less compensatory hypertrophy, occurs in most cases of scarlatinal nephritis of any severity. Both endocarditis and pericarditis may take place, and occasionally embolism occurs. Occasionally pyæmia complicates scarlet fever, and then periendocarditis often accompanies the attack, which is generally fatal. No doubt in some cases of scarlet fever there is some dilatation of the heart, but this does not amount to anything of consequence unless there be nephritis as well. In acute nephritis, however, dilatation may take place very quickly, and yet no murmur is detected; and, even when a murmur has been found, the author says he has seen no evidence at the post-mortem examination of endocarditis. This dilatation may be perfectly recovered from, but many cases end fatally.

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ICE-CREAM POISONING.

IN our issue of July 17th, when commenting upon the numerous cases of ice-cream poisoning reported this season, we referred to the fact that Professor Vaughan claimed to have discovered the *fons et origo* of the poisonous principle in a new "ptomaine" which he terms tyrotoxicon.

It will be remembered that samples of the noxious cream which played such sad havoc with the festal Michiganders were submitted to Professor Vaughan for analysis, and we now have in the report of the proceedings of the Michigan State Board of Health, July 13th, a detailed report upon "Tyrotoxicon—its Presence in Poisonous Ice-cream, its Development in Milk, and its Probable Relation to Cholera Infantum and Kindred Diseases."

We cannot too highly commend the energetic zeal displayed by Professor Vaughan in the execution of his task, and the promptitude of the secretary of the board in presenting to the profession the results of the investigation. Everything relating to the adulteration of food and food-poisons cannot fail to be of the highest possible interest and importance, both to the public, who are so nearly concerned, and to the profession, who stand in the relation of guardians of the public health.

We regret that the want of space forbids the publication of the entire report in our columns; we can give only a brief synopsis of its contents.

Professor Vaughan first alludes to the fact that about one year ago, after two years of close investigation, he succeeded in isolating from samples of cheese which had produced alarming symptoms in many persons a highly poisonous ptomaine, to which the name tyrotoxicon (cheese-poison) was given.

He then made numerous analyses of milk with the view of detecting the same poison. These tests were followed by negative results until the milk had been kept from three to six months; he then succeeded in getting the poison from one of the bottles. Ten drops of an aqueous solution of this poison placed in the mouth of a dog three weeks old caused, within a few minutes, frothing of the mouth, retching, and vomiting of a frothy fluid, and, after some hours, watery stools.

The facts of the Michigan ice-cream poisoning, as gathered from the testimony presented in the report, are briefly these: Eighteen persons were seriously affected by eating the cream. "The milk of which the cream was made was fresh and sweet morning's milk, with the cream of the milk of the night before from the same cows. The milk was kept in a cool, clean milk-cellar. The custard was made about noon that day, and immediately afterward the process of freezing was begun. The vessels were all thoroughly clean. There was no possibility of anything adhering to them, for they were scalded, wiped, and dried before being used. The only ingredients used were the milk, cream, eggs, best granulated sugar, and the flavoring. The lemon-cream was frozen first, then taken out and packed solid with ice and salt. The vanilla-cream was frozen in the same manner. The best Jennings extract, about the usual quantity, was employed, but not in excess. The cream was eaten in the evening by many people in the village. All of those who ate of the vanilla-cream were made sick, and none of those who ate of the lemon-cream suffered any inconvenience. The milk was the same in both, milked from the same cows the same morning that the cream was made, so that there was no difference in the custard used in making the vanilla-cream and the lemon-cream; but it turned out the one made people sick and the other did not."

The symptoms of poisoning in these cases are thus graphically described by Dr. Moffitt, one of the sufferers:

"About two hours after eating the cream everyone was taken with severe vomiting, and after from one to six hours later with purging. The vomit was of a soapy character, and the stools watery and frothy. There was some griping of the stomach and abdomen, with severe occipital headache, excruciating backache and 'bone pains all over, especially marked in the extremities. The vomiting lasted from two to three hours, then gradually subsided, and everybody felt stretchy and yawned in spite of all resistance. The throats of all were œdematous. One or two were stupefied; others were cold and experienced some muscular spasms. A numb feeling, with dizziness and momentary loss of consciousness, was complained of by some. Temperature was normal, and pulse from 90 to 120. Tongue dry and chapped. All were thirsty after the vomiting subsided, and called for cold water, which was allowed in small quantities with no bad results. After getting out no one of the victims was able to be in the hot sun for several days, and even yet (about ten days after the poisoning) the heat affects myself. I attended twelve persons, besides being sick myself, and all were affected in pretty much the same way. Several complain yet of inability to retain food on the stomach without distressing them. The man who made the cream took a teaspoonful of it, and he vomited the same as those who ate a whole dish, but not so often nor for so long a time. All are affected with an irresistible desire to sleep, which can scarcely be overcome."

The poisoning occurred on June 9th, and four days later, June 13th, Professor Vaughan received a sample for analysis. An aqueous solution of the filtrate was given to a kitten, and produced retching, vomiting, and watery stools. Other experiments were made later, with the production of a similar train of symptoms. Professor Vaughan is of the opinion that the poison is not connected in any way with the ordinary decomposition of milk. He regards it as a chemical body produced by

fermentation. He has not, as yet, been able to obtain the poison in quantities sufficient to enable him to make an ultimate analysis of it.

While Professor Vaughan deserves credit for the industry and painstaking care with which he conducted his investigations, further proof is needed before his theory of the causation of ice-cream poisoning can be accepted as final.

It is a matter of regret that his toxic substance is so indefinite a compound; he does not acquaint us with its physical properties, its chemical formula, or the reagents by which it may be recognized. His theory of its development in that portion of the ice-cream flavored by vanilla seems somewhat improbable. He says: "While the lemon-cream was being frozen, that part of the custard which was to be made into vanilla-cream continued to ferment, and before the freezing process was begun enough of the poison was generated to seriously affect those eating of it."

Since the freezing of cream is usually accomplished in from fifteen to thirty minutes, it seems hardly conceivable that fermentation should advance at such a rapid rate as to convert what a few moments before was an innocuous fluid into a highly poisonous compound.

Again, his theory does not explain the occurrence of poisoning, with the production of identical symptoms, from the use of other alimentary preparations, as pastries, puddings, etc., in which only a minimum quantity of milk is used.

In concluding his report, Professor Vaughan calls attention to the probable relation of tyrotoxicon to cholera infantum and kindred diseases. From the similarity of the symptoms of ice-cream poisoning to those of summer complaints, he argues identity of cause. While this may be important, if true, yet we think much harm may be done by the implied influence of the possible danger of feeding infants with milk. No doubt this will be seized upon by the venders of artificial foods for infants and utilized as a boom for their business.

DIPHTHERIA AND CROUP.

ALTHOUGH the mind of the profession is still divided as to the question of the identity of diphtheritic and true croup, whether we have to deal with one or with two distinct diseases, the majority of the most recent writers on the subject would seem, following Bretonneau, to incline to the belief that there is no practical difference between the affections described under these two names.

The author of the articles on "Croup" and "Diphtheria," in Quain's "Dictionary of Medicine," the late Sir John Rose Cormack, says that "membranous exudation is never a result of simple acute inflammation, or, in other words, there is no such disease as the croup of Home, Cheyne, West, and Sansom." Dr. Thomas J. Walker, in the article on "Diseases of the Larynx" in the same work, takes the same ground, and speaks of "that form of inflammation which is characterized by the formation of a false membrane in the larynx, namely, croup or laryngeal diphtheria." The writer of the article on "Diphtheria," in Wood's "Reference Handbook," Dr. Harold C. Ernst, says that "the question of the identity of the two processes, croup and diphtheria, from a pathological standpoint, may be considered to be settled in the affirmative, so far as to justify the assertion that true croup—membranous laryngitis—is one form of diphtheria." Dr. A. Jacobi, although the author of two separate articles on "Pseudo-membranous Laryngitis" and on "Diphtheria," in Pepper's "System of Medicine," makes no clear distinction between the two affections, and seems to regard membranous laryngitis as but one variety of diphtheria. In describing the former disease, he says that "as a rule the membrane makes its appearance in the pharynx first, from there to descend into the larynx. In other cases, the membrane is found in the bronchi and trachea first, and invades the larynx from below." Professor Steiner, also, in the article on "Croup," in "Ziemssen's Cyclopædia," writes that "the attempt to distinguish croup and diphtheria as two entirely distinct diseases has been unsuccessful, both from an anatomical and a clinical standpoint," and he himself evidently regards the two processes as identical. Dr. Morell Mackenzie argues strongly against the duality theory, and, in his monograph on "Diseases of the Larynx, Pharynx, and Trachea," writes: "Most physicians in this country [England] who have had the opportunity of studying the disease in the wards and in the dead-house now regard croup as a form of diphtheria. At an early period Dr. George Johnson maintained the identity of croup and diphtheria; and later, our great clinical teacher, Sir William Jenner, gave in his adhesion to this doctrine. The renowned Traube, of Germany, had previously accepted the unity theory."

On the other hand, the non-identity of diphtheritic and pseudo-membranous laryngitis has been affirmed by many authorities. Dr. George W. Gay, the author of the article on "Croup" in "The Reference Handbook," affirms his belief in the existence of two distinct forms of the affection, one of which is "an acute, non-contagious and non-infectious disease of the larynx, local in its nature, confined to the upper air-passages, not epidemic, characterized by the formation of false membrane," while the other "is an acute, contagious, infectious, and often epidemic affection, presenting a membranous deposit in the fauces, larynx, and other localities, accompanied by symptoms of blood-poisoning." He states, however, that the first form, primary croup, is at the present time of comparatively rare occurrence. Mr. William Squire, the author of the articles on "Croup" and "Diphtheria" in Reynolds' "System of Medicine," is also a firm advocate of the duality theory, and this opinion is shared in by Fordyce Barker, Austin Flint, Niemeyer, J. Lewis Smith, and others.

The arguments of the dualists have been again very clearly and forcibly stated by Dr. J. M. Clemens, of Louisville, in a paper read before the Medico-Chirurgical Society of that city, and published in the first number of *Progress* for July, 1886. The author seems to think that what he regards as the error of the upholders of the unity theory is to be explained by the fact that they wholly ignore the existence of a non-specific, non-contagious, idiopathic membranous croup, and he maintains that such a disease does certainly exist, and that it is perfectly distinct, and distinguishable from diphtheritic laryngitis. In support of his view he enumerates the points of dif-

ference between the two affections, which we reproduce in parallel columns for facility of comparison.

A prodromal stage of two or more days without hoarseness or cough; more or less profound constitutional disturbance; elevated temperature, which often subsides after the first onset of the disease, sometimes becoming subnormal, to rise again with the invasion of the larynx and trachea.	A sudden onset, or following within a few hours on exposure to cold and wet; little or no constitutional disturbance; elevated temperature, continuing till amendment is established.
Mottled or irregularly reddened fauces, often more conspicuous on one side than the other.	Uniformly pale-red or bright-red—never mottled—appearance of the fauces, which are conspicuously free from loose secretion.
Enlarged and painful lymphatic glands, particularly the submaxillary at the angle of the jaws.	There is never enlargement of the submaxillary lymphatics.
Exudation on the tonsils in the fauces, sometimes in the nares, on the lips, etc.	There is no exudation on the tonsils in the nares or fauces, except, possibly, in rare instances the intense inflammatory action having extended by sympathy of continuity to the territory immediately contiguous to the entrance to the glottis; by strongly depressing the tongue the upper border of the membrane may be seen.
Early appearance of albumen in the urine as a rule.	Albumen is never found in the urine.
A fetid breath of a sweetish, musty odor, similar to that in scarlatina.	The peculiarly fetid breath is never present.

In addition to the signs above enumerated the author adds that diphtheritic croup is a general disease of markedly asthenic character, while true, or pseudo-membranous croup, is a local affection of sthenic type.

The importance of this question is most certainly one which can hardly be overestimated. For it has a bearing not only on the therapeutic management but upon the prognosis and the prophylaxis as well. But, while in the abstract an error is always wrong and to be avoided if possible, yet, unless the physician can persuade himself absolutely that he has to do only with a local, non-contagious, membranous laryngitis, he would do well, in the present state of our knowledge, to regard every case of membranous croup as diphtheritic in character, and to take his precautions accordingly. If err we must, it is better to err on the safer side.

THE PENDJEH ULCER.

At the time of the threatened difficulties between Russia and England, in Afghanistan, the Russian troops, who had been massed in great numbers on the borders of that country, suffered from a peculiar affection resembling, and which probably was one of the varieties of, what is known under the various names of Aleppo evil, Delhi boil, Biskra button, etc. Dr. N. Suski, of the Russian army, observed a number of cases of the disease among the members of a Cossack regiment stationed at Merv, and reports them in *Vratch* of February 27, 1886.

The affection, he says, may be described as passing through three stages. It appears as a small red spot, which gradually increases in size and becomes raised in the centre. It is at first indurated, but soon breaks down and forms a rounded ulcer with irregular borders and sloughing base. In the second stage the ulcer increases in size, and others form in the neighborhood, and soon unite with the primary sore. The suppuration is profuse. At this time the cutaneous lymphatic vessels become irregularly enlarged, giving rise to little kernels beneath the healthy skin at a distance from the ulcer. The larger lymphatic glands do not, however, become implicated. The third period is that of cicatrization. After a variable period the ulcer assumes a healthy aspect, granulations form, and healing occurs under a scab. The cicatrix so formed has a rough, uneven appearance, somewhat similar to that following a burn. The ulcers may appear on any portion of the body, but seem to select by preference the face, neck, abdomen, wrists, and ankles. When occurring on other parts they arise usually from auto-inoculation.

Dr. Heidenreich, also of the Russian army, who made a careful study of the disease, is said to have found a special microbe, which he regarded as the causative agent. The results of treatment would seem also to support this idea, as it was found that sublimate solutions were most effectual in shortening the course and preventing the spread of the ulcerative process. The report of these investigations has not yet been published, but when it is, it will doubtless prove to be an important addition to our knowledge concerning the oriental sore, or Aleppo evil, the nature of which seems at present to be so obscure.

SLEEPING WITH THE HEAD LOW.

Few persons, we suppose, sleep without a pillow or a rest of some sort to elevate the head a little above the level of the body, and very few, if any, would think of habitually going to rest with the feet raised higher than the head. Yet if we are to believe the writer of an article in Pflüger's *Archiv*, Nos. 7 and 8, 1886, the latter is the only rational and proper position during sleep. Dr. Meuli-Hilty is the advocate of this plan. He was engaged in studying the physiological effects of such a reversal of the normal position of the body, and found, among other results, that the circumference of the neck was increased nearly two inches, by reason, chiefly, of a swelling of the thyroid gland. He frequently fell asleep while in this position and occupied in his studies, and found that he always awoke earlier in the morning, felt greatly refreshed, and was capable of much better work during the day than after a night's rest taken in the usual way. He has now slept with his feet higher than his head for the past four years, and his experience leads him to commend the method most highly. He says in this way the brain receives a more plentiful blood-supply and is consequently better nourished, while there is no danger of so much blood passing to the cerebral structures as to cause congestion. This danger is obviated by the enlargement of the thyroid gland, which holds back a certain portion of the blood in its dilated vessels, and which also acts as a regulator of the cerebral circulation by exerting pressure upon the carotids, and thus diminishing their calibre. Another advantage which Dr. Meuli-Hilty claims for his method is that it is prophylactic against pulmonary phthisis. The apices of the lungs

being dependent, receive a more plentiful blood-supply, and are thus rendered stronger, and less liable to become the point of origin of tubercular disease. The writer's assertions may be correct, and his method may, as he claims, be the only rational one, but it is likely to be a long time before he can induce mankind to regard pillows as a useless and harmful part of the bed furniture.

News of the Week.

Ataxic Paraplegia has been given by Charcot as a form of chronic myelitis in which the lateral and posterior columns of the cord are both involved. The disease is characterized by ataxia and spastic paraplegia, and as the spastic symptoms often predominate, the name above given is not a very good one, and does not deserve adoption.

Lunacy in England.—The report of the Commissioners of Lunacy for 1885 shows that there are now 80,156 lunatics in Great Britain and Ireland, being a ratio to the population of 1 to 349. In the last year the number of lunatics has relatively decreased.

In Acute Suppuration the most important etiological factor, according to Dr. D. O. Krantsfield, is the presence of two forms of micro-organism—staphylococcus pyogenes and streptococcus pyogenes. These always exist when there is acute suppuration, but they may exist without causing suppuration.

Dr. Breisky has succeeded Professor Späth, of Vienna, who has retired from the chair of obstetrics.

A Public Disinfection Institute has been opened in Berlin under governmental direction. There are chambers capable of completely disinfecting the clothes of two hundred families daily. All conceivable apparatus for thorough disinfection are provided. Such an institution would find large opportunities for usefulness in this city.

Antipyrin as a Hæmostatic, in five per cent. solution, is said by Casati to be an efficient hæmostatic. It may be used both internally and externally.

In Defence of Homœopathy.—A London paper states that it is proposed to establish an association for the purpose of dispelling the ignorance that prevails regarding the homœopathic system. The title of the new organization will be the Homœopathic League, and its objects are, in the words of the prospectus, first, "to give a popular explanation of homœopathy, and to show that it is founded on reason, science, and experience; second, to defend homœopathy from the misrepresentations of its opponents, and to obtain fair treatment for it.

To Select a Site for a New Insane Asylum in Northern New York.—A commission—consisting of Hon. William P. Letchworth, Chairman, Buffalo; James Spencer, Esq., Secretary, Whitehall; Hon. C. C. B. Walker, Corning; Dr. Peter M. Wise, Willard; Dr. Joseph M. Cleaveland, Poughkeepsie—has been appointed by a recent act of the Legislature to locate an asylum for the insane in Northern New York, with "power to receive by gift or to contract for the purchase of such site for the location of said asylum, subject, however, to the approval of the next Legislature, to whom they shall report their action in the premises within ten days after the commencement of the session, together with plans and estimates for constructing buildings suitable to accommodate five hundred inmates. Such plans to admit of such further extension of the buildings as may be necessary to meet the future requirements of the State in providing for the insane." The commissioners present the following as essential points to be considered in the selection of a site for a hospital for the insane: A healthy locality; a tract of good land, embracing not less than five hundred to one thousand acres; easy access by railway, with facilities for side-track connections if desired; a bountiful and unlimited supply of pure, sweet water, the source, if practicable, to be sufficiently elevated to allow of distribution throughout the buildings by gravitation; the site should afford facilities for surface drainage, and for the easy and final disposal of sewage without danger of polluting waters that are used for drinking purposes; the ground about the buildings should be free from secret springs and submoisture. The commissioners purpose visiting the northern counties at an early day, due notice of which will be given beforehand. In the meantime, any inquiries, proposals, or communications in regard to sites may be addressed to James Spencer, Secretary, Whitehall, N. Y.

The Best Method of Measuring Albumen in urine, according to Dr. George Johnson, is by Esbach's tubes, as described in *The Lancet* of January 23, 1886. At present the tubes must be imported from London, or from MM. Brewer Frères, Paris.

The Poison-Ivy.—Dr. Fred. Sumner Smith, of West Hartford, Conn., says: "I wish to correct a statement in a recent issue of The Medical Record. You say, 'The poison-oak, or Rhus toxicodendron, is a rare plant, while the poison-ivy, or Rhus venenata, is comparatively common.' The poison-oak and poison-ivy are identical, and the botanical name is *Rhus toxicodendron*. The *Rhus venenata* is the poison-sumach, or dogwood. The poison-oak (or poison-ivy) is very common, while the poison-sumach is, fortunately, less common. I speak with confidence, from an abundant acquaintance, both personal and professional, with both of them." Dr. Edwin Barnes, of Pleasant Plains, N. Y., further says: "I cannot agree with the statement in a recent issue of The Medical Record, that there is no specific for rhus poisoning. Living as I do in a section of country where Rhus venenata and Rhus toxicodendron are very common, I have at least fifty cases a year, and have never known a case to last over five days when treated as follows. Internally I give the following: ℞. Sodæ sulphocarbolat., ℥ jss.; fl. ext. gelsem., ℥ j.; aquæ pur., ad f ℥ iv. M. Sig.: A teaspoonful every two hours. Locally, the patient bathes the eruption every two hours with a nearly saturated solution of hyposulphite of soda. This will cure any case of poisoning by Rhus venenata in three days; the Rhus toxicodendron is more virulent, but I have never, in twenty years, known it to last over five days when treated as above. The worst cases of rhus poisoning that I meet with are where, through care-

lessness, some sticks of Rhus toxicodendron get into the firewood and are burned, or where some one susceptible to the poison stands too near a brush-pile where Rhus toxicodendron is being burned. This susceptibility varies greatly. I have frequently chewed the leaves and bark of Rhus toxicodendron, have stripped the vines of Rhus venenata from the trees and fences, and yet members of my own family will be severely poisoned by simply standing too near to either of the poisonous woods."

Imprisoned for Malpractice.—A Berlin physician has been condemned to two months' imprisonment for malpractice. A woman had an abortion followed by menorrhagia. The physician chloroformed her, with the assistance of a midwife, scraped the uterus with a sharp spoon, and injected liq. ferri sesquichloride. The patient died of peritonitis, and on autopsy several holes in the uterus were found through which the injected fluid had passed into the abdominal cavity.

The So-called Revolution in the After-treatment of Cataract Extraction.—Dr. John B. Roberts, of Philadelphia, sends us the following: "I was interested a day or two ago in some remarks made in one of the current medical periodicals concerning the fear that French dentists have of the use of nitrous oxide as an anæsthetic. The irresistible conclusion was that the dental profession in that country did not know of, or did not heed, the teachings of the clinical experience of their American brothers. To-day I have in a similar way been forcibly struck by reading, in a recent issue of The Record, the notice of a revolution in the after-treatment of cataract extractions, which is called forth by my friend Dr. Chisolm, of Baltimore, having rejected the ordinary cotton and bandage for such cases. It is to me simply astonishing that none of those who heard the subject broached at the recent meeting of the American Medical Association were aware of the fact that here in Philadelphia a similar after-treatment has been adopted and earnestly advocated by Dr. R. J. Levis, for at least twelve years. I, of course, believe that they had forgotten or never heard of the fact As a pupil and assistant of Dr. Levis, at Wills Eye Hospital, Pennsylvania Hospital, and Jefferson Medical College, and in private practice, I know he has not used the cotton dressing since 1874. How long before that time he abandoned it I am unable to state. He simply stiffens the upper lid with two or three small superimposed semi-ellipses of rubber, adhesive plaster, or some similar tissue. Occasionally, though not often, he adds to this a narrow strip from the root of the nose to the malar bone. This dressing has been constantly taught by him to large clinical classes, and discussed years back, when he was connected with the Wills Eye Hospital, with the surgeons of that ophthalmic institution; but, so far as I know, no one follows his example here except Dr. H. Augustus Wilson, formerly eye-surgeon to St. Mary's Hospital, and myself. That it is far preferable to the cotton dressing I am fully convinced, and I never use any other after extraction of cataract or corneal operations. In a clinical lecture given by Dr. Levis in the winter of 1876–77, published in the *Medical and Surgical Reporter*, January 20, 1877, you will find this dressing accurately described. I send you a marked copy. It was described about the same time in the *New York Archives of Clinical Surgery*. As the article in the *Reporter* states, the case then subjected to operation was the five hundred and fourth done by Dr. Levis subsequent to the abandonment of the old flap operation; and, as he had previously recorded one hundred successive cases, with only two complete losses of vision, it may be presumed that his experience was sufficient to warrant his advocating a peculiar method of dressing. I am not able to say whether the hundred cases mentioned were all treated by the simple dressing. Many of his cases were formerly, and are still, treated in open wards, in which the patient is protected from light merely by a screen around the bed and closing of the shutters, or drawing down the curtain of the opposite window. In my little monograph on 'Surgical Delusions,' page 36, you will see 'the foolish practice of padding with cotton and tying up eyes that have been subjected to corneal operations and cataract extractions' described as a delusion needing frequent and loud-voiced condemnation. On page 179, 'Trans. Medical Society, State of Pennsylvania,' for 1884, the same topic is discussed. I call attention to these facts merely to show that new things are often older in principle than we think, and especially to emphasize and corroborate Dr. Chisolm's words, in the hope that the uncomfortable, irritating, and conjunctivitis-producing bandage may be discarded by every ophthalmic surgeon."

An Absurd Claim.—"Pittsburg is pre-eminently a homœopathic city, owing to the efforts of our distinguished Nashville friend, Dr. J. P. Dake, who, in 1856, treated three hundred cases of cholera without losing a single patient, while the 'old school' physicians were losing one half of theirs." So writes a correspondent of the *Physician's and Surgeon's Investigator*. But no one ever treated three hundred cases of genuine cholera without a death.

Compound Tincture of Capsicum.—A mixture which is compounded by M. Poulet has been much praised as a pain-killer. Its composition is: ℞. Tinct. capsici, 200.0; Liq. ammon, 100.5; Essentiæ thymi, Chloral hydrat, āā 10.5; Alcohol, sixty per cent., 1,000.0. M. The pepper, ammonia, and alcohol are digested together for a month, then chloral and thymol added. It is used externally as a liniment, either pure or diluted with oil; internally, in doses of ten to twenty drops. It is recommended for dysentery, enteritis, and rheumatism.

The Death of Dr. Moxon, of Guy's Hospital, London, is announced. He died suddenly of apoplexy or heart disease, on July 22d. The particulars have not yet reached us.

Cremation and the Catholic Church.—By a decree of the Roman Inquisition, dated May 19, 1886, and confirmed by the Pope, Catholics are forbidden to join cremation societies, or to order their own or the bodies of others to be cremated. His Holiness, in confirming the decree, condemns the "detestable abuse of cremating human bodies."

Professor Semmola, of Naples, has been raised to the dignity of Senator of Italy.

Thirteen Preventive Inoculations against Hydrophobia have been made in Vienna, by Dr. Chantemesse, assistant to Professor Albert.

The Daily Press and Medical Societies.—The Chicago Medical Society has a standing resolution under which reporters for the daily papers are excluded. The rule is practically inoperative, says *The Chicago Medical Examiner*, because the gist of the meetings get out when anything of note or interest to the public occurs. A motion to rescind the resolution, however, recently failed.

New Local Anæsthetic.—Dr. May claims that five to ten per cent. solution of brucine is an efficient local anæsthetic, especially useful in relieving pruritus. The same author has shown that hypodermatic injections of one to two or three grains of a solution of theine relieves the pains of neuralgia.

"Rectal Expression."—It has not been generally supposed that the rectum possesses any particular expression. If it had, we should say, in consideration of the average state of its contents, that it ought to make a very wry face. We learn from our exchanges, however, that the term "rectal expression," which has been widely used of late, refers to the process of insinuating two fingers into the rectum during the second stage of labor and pressing out the head.

Reviews and Notices.

Pocket Medical Formulary. Alphabetically Therapeutically. By Alexander Hazard, M.D., and Bernard M. Goldberg, M.D., revised and enlarged by Abraham S. Gerhard, M.D. Philadelphia: Published by Collins, Printer. 1886.

"The busy and hard-worked practitioner," to whom the "Pocket Medical Formulary" is dedicated, is expected to tuck away in his pocket this little book, which resembles a diary, and to look through its alphabetical list for a prescription to fit the case of which he has made a diagnosis and has not in mind the treatment he wishes to give. It has blank pages for the insertion of new formulæ which it is desirable to make a note of. Such an affair has the appearance of a cook-book and does not seem exactly a scientific method of practising medicine; nevertheless it is not without its use and value if only to find the varied compounded prescriptions of different authorities relative to a disease brought together in this compact form.

A Manual of the Diseases of the Skin. By Balmanno Squire, M.B. Lond. Pp. 194. Chicago: A. N. Marquis & Co. 1886.

Epitome of Diseases of the Skin. By Louis A. Duhring, M.D. Pp. 130. Philadelphia: J. B. Lippincott Co. 1886.

Both of these volumes are condensations of the knowledge of skin diseases into a very small compass, in order to supply pocket text-books for students. Dr. Squires follows the classification of Williams, that is according to the elementary lesion, as macules, vesicles, etc., while Dr. Duhring follows that of Hebra and Rokitansky, which, he explains, is based upon the anatomy of the skin, the pathology of the lesions, and, to a slight extent, upon their etiology.

Dr. Squires' book is rather more extensive, as its title of "Manual" would imply, than Dr. Duhring's "Epitome." Both are characterized by terseness of expression as well as clearness, and are valuable for the purpose for which they have been published.

Investigation into some Morbid Conditions. By William Russell, M.D., M.R.C.P. Edinburgh: Bell & Bradfute. 1886.

Dr. Russell has included in this volume his thesis which he presented for the degree of Doctor of Medicine in Edinburgh, for which he received the gold medal of the University, and the Cartwright prize essay entitled "The Heart in Debility." The whole forms an interesting and valuable contribution to the literature on the subject, and will be read and referred to with profit.

The Year-Book of Treatment for 1887. Published by Lea Brothers & Co. 1886.

To review a "year-book" is about as difficult a task for a reviewer as it would be to review a dictionary; nevertheless the reading furnished by such a work is of a most interesting nature. Here within small compass is given the net result, the practical outcome of the myriad medical writings of a year. The physician will find it useful to refer to in the same manner as he would use a dictionary.

The Medical Annual. By Dr. J. E. Taylor, F.L.S., F.G.S. London: Henry Kimpton. 1886.

The "Medical Annual" is a record and review of the year's progress in medicine, surgery, and science, more especially in Great Britain. To boil down the medical literature of the world for a year to two hundred and twenty-five pages of an ordinary volume bespeaks patient industry on the part of the editor, and meaty reading for him who peruses the work. The year, we are told, has not been fruitful in scientific discovery. The establishment of theory by the record of facts has characterized the research.

Space forbids entering into detail, even if one had the courage to undertake to still further compress what has already been compressed to well-nigh the uttermost limit, but the reader can judge how interesting a book must be which can give the latest scientific theory of how a Norwegian salmon can jump up waterfalls and the latest investigations of cerebral localization which will enable surgeons to trephine over the exact spot where the morbid process is situated in the brain.

How to Care for the Insane. A Manual for Attendants in Insane Asylums. By William D. Granger, M.D. Pp. 96. New York: G. P. Putnam's Sons. 1886.

Dr. Granger has written a clear, concise statement of the care of the insane, well calculated to inspire attendants to look properly after the condition, symptoms, and welfare of those under their charge.

The first three chapters of his book, entitled respectively "The Nervous System and Some of its Important Functions," "The Mind and Some of its Faculties," and "Insanity," illustrate the difficulty which one would encounter in preparing such strong meat to make it suitable pabulum for babes. A sentence or two will illustrate our meaning. "Many nerves are given off from the brain and cord and go practically everywhere." . . . "These nerves are white cords of different sizes. The one that goes to the leg, called the sciatic, is as large as the little finger." . . . "Our brains are very busy," etc. . . . "In common language we speak of the mind diseased. This is not strictly true, as it is the brain that is diseased, and, in consequence, we get disturbed mental action."

It is not until the doctor comes to giving practical directions, such as how to receive a patient, give him a bath, feed him, and make his bed, that he floats in smooth waters and becomes truly happy.

MANUAL OF DIFFERENTIAL MEDICAL DIAGNOSIS. By CONDICT W. CUTLER, M.D. New York: Published by G. P. Putnam's Sons. 1886.

LISTS of symptoms of the diseases which flesh is heir to, contrasted with each other, form at once the dryest and most interesting reading, if such a paradoxical statement is permissible, which can fall to the lot of a medical reader; but to the medical student who wishes to become conversant, and be prepared to pass the tribunal of an examination with them, these lists must be terrific. We cannot think that the student can compass the matter properly except by making his own tabulations; he will, however, find it greatly to his profit to study those of Dr. Cutler, which might serve him as a key to correct his own by, since they are models of thoroughness.

A MANUAL OF SURGERY. In Treatises by Various Authors. In 3 vols. Edited by FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, London Hospital, etc. 12mo. Philadelphia: Lea Brothers & Co.

THESE compactly arranged volumes are intended to give a concise view of the principles and practice of modern surgery, and are composed of short, well-written articles by a large number of leading surgeons of Great Britain. The various subjects are handled with rare judgment, and present the essential facts of clinical practice in a nutshell. It is a successful compromise between the epitome and the more elaborate treatise, and will doubtless serve its purpose in enabling the general practitioner and surgeon in recognizing the leading landmarks of the science. The number of authors is large, and the assignments, judging from the results, have been very judicious. The different volumes are divided into the following subjects, respectively: Vol. I., General Surgical Affections, the Blood-vessels, Nerves, and Skin; Vol. II., The Organs of Locomotion and Special Sense, the Respiratory Passages, Head, and Spine; Vol. III., The Thorax, Organs of Digestion, and Genito-urinary Organs. The editor is a gentleman who has an enviable reputation as a clinical teacher and writer, which in itself is a guarantee of the excellence of his own articles and of those of his co-laborers.

A TREATISE ON DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D., Surgeon-General United States Army (retired list), Professor Diseases of the Mind and Nervous System New York Post-Graduate Medical School and Hospital, etc. Eighth edition, 8vo, pp. 945. New York: D. Appleton & Co. 1886.

THE eighth edition of this work speaks for itself in the fact of its existence. The talented author has carefully revised the previous editions, elaborating many portions which subsequent experience and observation have made necessary. A section has also been added on certain obscure diseases of the nervous system, comprising Tetany, Thomsen's Disease, Miryachit, and kindred affections. These subjects are treated, like others in the work, with a master-hand and with the pen of a ready and entertaining writer. The author made his reputation long ago, and that he is able to maintain it his last effort will abundantly prove.

DICTIONARY OF PRACTICAL SURGERY. By Various Hospital Surgeons. Edited by CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, etc. In two vols. 8vo, pp. 1,854. Philadelphia: J. B. Lippincott Co. 1886.

AS its title indicates, this is essentially a surgical dictionary. It follows out the traditional plan. The subjects are selected with a view to their importance, are arranged alphabetically with such elaboration of practical parts as is in keeping with the limits and scope of such a work. Each of the various authors is duly credited at the end of his article. As a rule the descriptions are short and very judiciously condensed, and when necessary cross references are made. All the subjects are well worked up, and are abreast of the advanced thought of the day. They are treated of, as far as practicable, in the following order: Cause, pathology, symptoms and diagnosis, treatment and prognosis. As a whole the work fulfils its mission, and will be duly appreciated by the working practitioner who wishes to add new volumes to his reference series.

BRIGHT'S DISEASE AND ALLIED AFFECTIONS OF THE KIDNEYS. By CHARLES W. PURDY, M.D., Queen's University, Professor of Genito-Urinary and Renal Diseases in the Chicago Polyclinic, etc. 8vo., 288 pages, with 18 illustrations. Philadelphia: Lea Brothers & Co. 1886.

DR. PURDY has written a book which will reflect a fair degree of credit upon himself. His views are well-expressed, and are quite generally accepted by those who have reached the enviable position of authorities in this class of diseases. The illustrations can be duplicated without special difficulty by examining kidneys the seat of acute and chronic changes, as they are met with at the post-mortem table of any large hospital. We regard this as no small degree of praise; for the larger percentage of illustrations of these lesions are of a very inferior order. As a matter of uniformity the author has, in common with most writers, mixed classifications and synonyms somewhat, but, it may be said, not to the special detriment of the original design of the book. One term, however, has been introduced which is fairly open to criticism. "Cyanotic Induration of the Kidney," is the name given to the condition more commonly known as "the kidney of heart disease," or "chronic congestion," or "passive hyperæmia of the kidney." The author's description of the kidneys that belong to this group is sufficiently clear, and includes many of the points which have been already described; but we had not heretofore been made aware that the condition exhibited a blue color. "It is, in fact, a condition of passive or venous congestion of the kidneys," is the language of the author, and the title of his chapter would be materially improved by making it include the idea thus expressed, rather than the condition of cyanosis. The book is divided into nine chapters: 1, Albuminuria; 2, Uræmia; 3, Acute Nephritis; 4, Chronic Nephritis; 5, Cirrhosis of the Kidney; 6, Scarlatinal Nephritis; 7, Puerperal Nephritis; 8, Lardaceous Degeneration of the Kidneys; 9, Cyanotic Induration of the Kidney. It is printed with large type upon heavy paper, and has a bibliography and an index. Dr. Purdy's well-written papers on testing the urine for albumen have already made for him a good impression, which will not be erased by the present volume, that contains so many practical points concisely expressed.

THE INTERNATIONAL MEDICAL CONGRESS.—The Vienna correspondent of the *Weekly Medical Review* writes: "At Hamburg, at Leipzig, and here, I have interviewed quite a number of the principal men in the profession, as to their intention to visit Washington and attend the World's Medical Congress next year. Gentlemen of the American Medical Association, who lately met at St. Louis, you thought you disinfected that wound produced in your ranks by the discussion of the Code question. At least you put a plaster over it, bandaged it up, and all went away smiling; but let me tell you that I find here, by talking with the leading men, that your last operation has produced very little impression on the medical mind here. The general impression is that the leading minds in our profession are at loggerheads, and that sufficient harmony cannot be attained to make the Congress a success. Then, again, you have no idea of the repugnance that many of these men have to a long sea-voyage."

Reports of Societies.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-second Annual Meeting; held at the Hotel Allyn, New London, Conn., July 21 and 22, 1886.

WEDNESDAY, JULY 21st—FIRST DAY—MORNING SESSION.

THE meeting was called to order by the President, DR. WILLIAM F. NORRIS, of Philadelphia.

DR. Peters, of New York; DR. Hubbel, of Buffalo, DR. E. Fridenberg, of New York; and Dr. Cutter, of New York, were invited to take part in the proceedings of the Society.

DR. H. KNAPP, of New York, read a paper entitled

PYOGENIC MICRO-ORGANISMS, WITH DEMONSTRATIONS AND EXPERIMENTS.

Dr. H. Knapp made some general remarks with reference to the dependence of suppuration on certain kinds of micro-organisms—the pyogenic bacteria. He exhibited these bacteria in numerous test-tube specimens on agar-agar and also under the microscope. He showed two rabbits which he had operated on the day before, for cataract, in the presence of members of the Society. Extraction had been made on the left eyes with clean instruments, and on the right eyes with instruments contaminated with staphylococcus pyogenes aureus. The left eyes were free from secretion. The wound of one eye was in a doubtful, the other in a good condition; whereas the right eyes discharged matter profusely, and were in a state of intense destructive inflammation. He then operated on two other rabbits in the same way. The four rabbits were examined the next day. The right eyes in all were suppurating, the wounds of the left eyes in three of the rabbits were in good condition. In one of the first two rabbits it was suppurating. This eye had become infected from the right eye of the other rabbit. They had been kept in the same box, and the operator had found them with their heads in contact.

In reply to a question as to the best method of cleaning instruments, Dr. Knapp said that the use of antiseptic solutions had the disadvantage of dulling the edge of cutting instruments. His experiments had shown him that simple washing with water in the case of smooth instruments, followed by friction with a clean towel, renders them bacteriologically clean. Where an instrument has a groove, or is at all rough, it is much more difficult to clean. Instruments like forceps may be put in the antiseptic solution. It must be remembered that in the majority of operations a certain quantity of infecting material is required to produce any effect. Where there is a free escape of liquid from the wound the material is washed off, but where there is a sucking-in process the danger is much greater.

DR. HUBBEL, of Buffalo, asked Dr. Knapp if there were not certain conditions of the eye which would favor infection of the wound after operation.

DR. H. KNAPP, in reply, said that a lachrymal discharge, with a certain amount of conjunctivitis, furnishes a favorable soil for the growth of bacteria. In operating in such cases, the discharge should be completely removed. A certain quantity of the pathogenic bacteria is required to produce infection. He had pricked the cornea and covered the wound with an emulsion of the bacteria. In only one out of every four or five did abscess develop.

DR. J. A. ANDREWS, of New York, said that mere contact of the microbe with the wound is not always sufficient to produce suppuration, especially in the case of the cornea, where the discharge is liable to be washed off. Where the material has been introduced into the wound and kept there for a short time he had never seen a failure.

In the cleaning of instruments he uses simply clean water, which has been boiled for some time.

DR. C. S. BULL, of New York, gave

AN ANALYSIS OF [illegible] RETINITIS [illegible] DISEASE.

He included only those cases which he had examined and followed to their termination. All cases due to scarlatina or pregnancy were excluded. Out of 500 cases examined only 108 fulfilled these conditions. The ophthalmoscopic examinations were made by the author, and the urine was always examined.

The prognosis with reference to the duration of life is very unfavorable. Of the 113 cases, 86 have died—57 during the first year and 12 during the second; 17 were still living, but 14 of these were seen within the last six months.

DR. E. GRUENING, of New York, remarked that none of his cases have lived over two years after the diagnosis of retinitis albuminurica had been made out. In this class of cases, he included only those in which the typical stellate changes were seen in the maculæ of both eyes.

DR. B. E. FRYER, of Kansas City, stated that albumen is occasionally absent from the urine for a short time in these cases. In two such cases he had found albuminose during the time that albumen was wanting.

DR. DAVID WEBSTER, of New York, was confident that in rare instances these patients do recover their general health and may live indefinitely. Some years ago he examined the eyes of a clergyman and found the typical appearances of retinitis Brightii. He had been examined fifteen years previously by a competent observer, who found the same condition, and also found albumen and casts in the urine. I had the urine examined and found a slight trace of albumen.

DR. O. F. WADSWORTH, of Boston, said that where the retinitis albuminurica comes on during or immediately after pregnancy, he had seen the stellate spots in the maculæ entirely disappear. He had also seen typical stellate deposits in cerebral tumor, and in what was supposed to be meningitis, but in which there was no albuminuria.

DR. GEORGE C. HARLAN, of Philadelphia, read a paper on

THROMBOSIS AND [illegible] OF THE RETINAL VESSELS.

The patient was first seen June 5, 1886. There had been no trouble with the eyes until May 7th, when she noticed dimness of vision in the left eye. This increased during the day, and the following morning there was only light perception in this eye. She was examined two weeks later by a surgeon who pronounced the condition one of embolism. There was no suspicion of specific disease. There was no uterine trouble, and the heart-sounds were normal. The urine had a specific gravity of 1.009, contained some albumen, but no tube-casts were found. Examination of the eyes showed no light-perception in the left eye. The media were clear. There were hemorrhages scattered through the retina. Some were striated, extending in long streaks along the vessels. With one exception all the vessels of the retina were converted into white bands. The exception was a small artery having an independent origin. The vessels were of nearly normal size. Five or six weeks later the hemorrhages had been absorbed, but there were no other changes. In July she had a slight attack of paralysis on the left side, and examination of the urine showed some albumen and hyaline tube-casts. The rapid onset and the occurrence of blindness within a few hours seemed to exclude the possibility of disease of the vessels. Embolism would not account for the condition. The speaker suggested that the partial blindness for the first few hours was due to hemorrhage, and that the complete blindness coming on later was due to thrombosis. Thrombosis

of a whole series of vessels is, however, rare. Another possible explanation is that there had been for some time disease progressing in the outer walls of the vessels without giving rise to sufficient disturbance of vision to attract attention.

Dr. William S. Dennett, of New York, called attention to

A NEW TEST-TYPE.

A card was presented which was designed for the use of educational institutions. It contained one set of letters, and a statement of the exact distance at which these letters should be seen. The desire was expressed that this or some similar card should be placed on the wall of every school-room, in a conspicuous place, so that it should become of necessity a familiar object and a standard of measurement that would be remembered through life.

Dr. H. Derby, of Boston, read a paper on

THE POSSIBLE RETARDATION OF RETINITIS PIGMENTOSA.

In America the disease is exceedingly infrequent, and is as a rule considered incurable. In 1881 a boy, three years of age, was brought to him from Western Virginia. It was observed that toward night vision diminished. There was no history of blindness in the family. Five years later he came again, accompanied by his sister, seven years of age. Both children were night-blind and presented the evidences of retinitis pigmentosa. Under the use of the constant current there was improvement. A similar case of improvement under the use of the constant current, under the care of Dr. Standish, was reported.

The object of the paper was to invite discussion as to the use or non-use of such eyes for educational purposes, and as to the possibility of adopting measures for delaying the progress of the organic change.

A third case, that of G. W——, aged fourteen years, was described. He presented the typical appearances of retinitis pigmentosa. Non-use of the eyes and the application of the constant current was recommended. He was subsequently advised by others to use the eyes freely. In five years vision diminished from three-tenths to one-tenth. This rapid progress of the disease, it was thought, might have been aided by the use to which the eyes had been subjected.

Dr. William S. Little, of Philadelphia, had seen in one case of retinitis pigmentosa, occurring in a deaf-mute, decided improvement in vision under the use of the faradic current. The improvement continued.

Dr. L. Webster Fox, of Philadelphia, had employed the constant current with success. He had found that it was the negative pole that produces the good results, and that if there were no enlargement of the field after three applications, no improvement was to be expected.

Dr. George Strawbridge, of Philadelphia, remarked that he had tried the use of electricity in this affection thoroughly some ten years ago. He did not obtain benefit in a single instance. He recommended the occasional use of alteratives, as bichloride of mercury and iodide of potassium, looking on these cases as probably of syphilitic origin.

Dr. Samuel Theobald, of Baltimore, had seen temporary improvement from the use of phosphate of iron, quinia, and strychnia.

Dr. S. D. Risley, of Philadelphia, stated that by the hypodermatic use of strychnia he had secured improvement in the central sharpness of vision. As far as he knew, the benefit has never been permanent.

He related the case of a young man who consulted him with retinitis pigmentosa, with marked contraction of the field and asthenopia, principally due to hypermetropic astigmatism. To relieve the asthenopia a weak solution of eserine was ordered. Under its use vision decidedly improved.

Dr. O. F. Wadsworth, of Boston, referred to the case of a young man, twenty-four years of age, a divinity student, who was seen in 1873, presenting typical retinitis pigmentosa so far as the ophthalmoscopic appearances. He continued his work, and, eight years later, vision was about the same, but the visual field seemed to have decreased to a slight extent.

Dr. Edward Jackson, of Philadelphia, read a paper on

THE EQUIVALENCE OF CYLINDRICAL AND SPHERO CYLINDRICAL LENSES.

The committee to whom was referred the consideration of the proposition with reference to the organization of a congress of American physicians and surgeons reported the following resolutions, and recommended their adoption :

Resolved, That a committee of five be appointed by this Society, and be authorized to confer with committees from other medical societies with regard to the organization of a convention or congress of such societies, and report at the next meeting of this Society.

Resolved, That it is the sense of this Society that its welfare would be put in peril by any alliance or co-operation which would interfere with its autonomy or independent meeting.

These resolutions were adopted and the following committee subsequently appointed :

Drs. O. F. Wadsworth, of Boston ; C. B. Bull, of New York ; George C. Harlan, of Philadelphia ; Samuel Theobald, of Baltimore, and B. E. Fryer, of Kansas City.

Adjourned.

AFTERNOON SESSION.

The first paper of the afternoon session was

A REPORT OF 263 CASES OF CATARACT EXTRACTION, WITH PARTICULAR REFERENCE TO THE AFTER-TREATMENT,

by Dr. George Strawbridge, of Philadelphia.

The results had been as follows : Successful cases, 85.2 per cent. ; partial successes, 8.1 per cent., and failures, 6.7 per cent. Those cases were classed as failures in which fingers could not be counted at a distance of one or two feet. In twelve cases absolute loss of the eye occurred.

After the operation the eye was thoroughly cleansed, and for the past two years a solution of boracic acid (two per cent.) had been employed. The speaker's former plan had been, after applying a bandage, to put the patients to bed in a darkened room, keeping them in bed for four to six days. Two-thirds of the cases had been treated in this way. He had found this plan exceedingly debilitating in elderly individuals, and had gradually given up this plan, so that during the past six months the patients were, practically speaking, kept in bed only twenty-four hours. The room is as light as any ordinary room. If at the end of twenty-four hours everything is doing well, the patient is allowed to move about the room. No unsatisfactory result had followed this plan.

The speaker had employed in some cases cocaine. In one case in which a four per cent. solution was used, a violent inflammation began within twenty-four hours and resulted in total loss of the eye. Subsequently he had employed it without unpleasant results. His plan is to use a two per cent. solution, drop in one drop, wait a minute and drop in a second drop, and use only two drops.

He attaches much importance to stimulation after the operation. In elderly people the use of whiskey is begun a few hours after the operation.

Dr. H. Knapp, of New York, read a paper on

CATARACT EXTRACTION WITHOUT IRIDECTOMY.

He had performed this operation six times. Three of these had made ideal recoveries, with clear, central, movable pupil. The other three had more or less posterior synechia. Vision was fair, and could be rendered excellent by a simple needling if remaining insufficient.

He follows Panas in the performance of the operation : Large section along the upper margin of the cornea ; free laceration of the capsule ; expulsion of the cataract and

its remnants; reduction of the iris with a probe, if it did not occur spontaneously. Before the operation the eye is fully cocainized. After the expulsion of the lens, a small quantity of an antiseptic is injected into the anterior chamber, and eserine instilled into the conjunctival sac. The speaker believed that the chief advantage of this operation lies in the possibility of keeping the wound perfectly free from foreign substances, including portions of the lens, capsule, and iris.

Dr. David Webster, of New York, read a paper on

REPORT OF FIFTY CASES OF CATARACT EXTRACTION.

The results obtained were: Successes, 82 per cent.; partial successes, 12 per cent.; failures, 6 per cent.

Aseptic precautions were used in all the operations. The best vision obtained in any case was $\frac{20}{20}$. Dr. Webster advocated the extraction of both lenses at the same sitting in judiciously selected cases.

Dr. Webster also related the history of a case in which he had relieved the pain in a glaucoma absolutum by lacerating the infra-trochlear nerve (Badol's operation).

Dr. Henry D. Noyes, of New York, read a paper on

DEATH OF A PATIENT ON THE FIFTH DAY AFTER THE EXTRACTION OF A HARD CATARACT.

On Sunday morning the operation, which was perfectly satisfactory, was performed, and the patient suddenly died the following Friday morning. The only lesions found at the autopsy were dilatation of the heart and insufficiency of the valves of the left side. The death seems to have been due to heart-failure. Ten sections of the eyeball were exhibited. Inspection of the eye before death showed that the union was smooth and apparently perfect. What was particularly interesting was that the union appears to have taken place exclusively through the medium of the epithelial layer.

Dr. B. Joy Jeffries, of Boston, recommended that in cataract extractions cocaine be instilled into both eyes. This renders the eye quiet, and the patient can keep it open.

Dr. W. F. Mittendorf, of New York, thought that one reason bad results are obtained, was because the eye is left exposed to the air after the introduction of the cocaine solution. Recent observations show that the injurious action of cocaine is especially upon the epithelial layer, and in shutting off the supply of lymph fluid. The epithelium suffers very rapidly from lack of moisture, especially if the eye is kept open. It has been recommended to close the eye immediately after the introduction of cocaine. He employed a solution of the strength of one or two grains of cocaine to half an ounce of water.

Dr. Emil Greuning, of New York, had performed extraction without iridectomy in two cases. One was entirely successful, but in the other prolapse of the iris occurred.

Dr. H. D. Noyes, of New York, had performed extraction without iridectomy in six cases. In three of the six cases there was perfect union with a central circular pupil, and accurate vision. In one case intra-ocular hemorrhage came on twelve hours after operation. In two cases prolapse of the iris occurred. The prolapsed iris was excised, and in one case the result was entirely satisfactory. In the second case no satisfactory vision was obtained.

The speaker thought that the cases for this operation must be carefully selected. If the patient had but one eye he thought that he should operate on it with a preceding iridectomy, and not without. His belief was that a satisfactory result could be more certainly secured with iridectomy.

Dr. B. E. Fryer, of Kansas City, suggested the use of cocaine by inserting one drop every half hour until four or five drops have been used. In this way the iris becomes completely anæsthetized, and where we wish to perform iridectomy this is important.

The next paper was entitled

SOME MEDICO-LEGAL CASES,

by S. Joy Jeffries, M.D., of Boston.

Dr. Charles A. Oliver, of Philadelphia, exhibited and read a description of a new series of loose wools for the scientific detection of subnormal color-perception (color-blindness).

The following advantages are claimed for the series: That there are five tests; that the wools are loose and all of the colors of the same relative intensity; that each skein has its value expressed so that they can be employed by any intelligent layman; that accurate notings of color-changes can be made for future comparison, and proper verbal and written expression can be given; that by reason of the wools all being made of the same grade of manufacture, and all the colorings obtained from vegetable dies, no results can be gotten from the supplemental use of touch; and, finally, that a black surface is employed and no definite order of testing need be pursued.

Dr. William S. Dennett, of New York, exhibited a set of Holmgreen's worsteds, which had been made into spheres.

Adjourned until evening.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 1, 1886.

T. Mitchell Prudden, M.D., Vice-President, in the Chair.

Dr. W. Gill Wylie presented, on behalf of a candidate, a specimen of *chronic salpingitis with dilatation of the tubes and cystic ovaries.*

Dr. F. Ferguson presented mounted specimens of

FAT EMBOLI

removed from the lungs and organs of a man thirty-seven years of age, a native of Sweden and a sailor by occupation. On the 8th inst. he fell into the hold of a ship, a distance of twenty feet. He sustained a comminuted fracture of the lower third of his right thigh (not compound) and a compound comminuted fracture of the lower end of the right humerus. There were comminuted fractures of the rami of the pubes and ischium on the right side. There were no special injuries to the organs within the thorax and abdomen. There was a large quantity of blood beneath the pelvic peritoneum. The skull and brain were not injured.

He fell at 6.30 of the above date, and was admitted into New York Hospital shortly after the accident, where he died eight hours subsequently.

His pulse was irregular at times, and 75 to 80 a minute. His breathing was shallow and frequent and he suffered intense pain, especially from the injury of his right arm.

He was drowsy most of the time while in the hospital, but would readily arouse in answer to questions.

The lungs were anæmic; numerous sections of organs showed areas of capillaries filled with fat.

One of the sections was stained with osmic acid, the fat was seen colored black; the other section was mounted in three-fourths of one per cent. chloride of sodium solution.

[illegible]

Dr. W. Gill Wylie presented a series of specimens. One year ago he had reported to the Society twenty-five cases, in which he had operated for the removal of diseased tubes and ovaries. Since that time he had operated in twenty-eight cases, and in all except two recovery took place. The two fatal cases were complicated, one by acute abscess at the end of the tube and in the tissues around it, and the other by hæmatoma of the ovary, the contents of which were similar to retained menstrual

fluid, and so tarry in consistence that it was impossible to wash it away from the peritoneum, the sac having ruptured while being removed. Just how much this had to do with the fatal septicæmia which followed the operation Dr. Wylie was unable to say.

In more than one-half of the cases there was distinct pyo-salpinx; in the others the tubes contained a coffee-colored fluid; the ends of the tubes were closed and the ovaries were cystic, the cysts varying in size from that of a pea to that of an orange. Occasionally cystic degeneration of the ovaries was found without closure of the tubes, but usually in those cases it was associated with small imperfectly developed organs of generation. There was one specimen of *hæmato-salpinx*, a rare occurrence. Nearly all the cases gave a history of gonorrhœa. One specimen illustrated *fibroid degeneration of the ovary*, an exceedingly rare condition.

Dr. Amidon asked concerning the result of the operation in the cases of hystero-epilepsy.

Dr. Wylie said he had seen some of the cases operated upon a year ago, and in one patient no benefit had been afforded; but with that exception the results had been very satisfactory, more so, certainly, than he had expected. He recalled one case in which at the end of eight or nine months the patient regarded herself as entirely cured. In two cases the progress toward a cure was slow, until he dilated the uterus thoroughly, when the symptoms were removed entirely. Although some of the patients had had nervous symptoms for a few months after the operation, he had yet to see the patient, when the operation had been performed early, who had not been cured. In those cases in which the reflex attacks were associated more or less with menstruation or disorders of the internal generative organs the patients certainly were curable.

Dr. Putnam-Jacobi asked Dr. Wylie if he would remove the ovaries when there was no objective sign of disease of those organs.

Dr. Wylie said that he would not do so in very many cases. But if a young girl, who had to work for her living, was so afflicted that it became necessary for her to either be in her bed or to enter a hospital a certain portion of every month, he would not hesitate to open the abdomen and look at the ovaries, but if they were of normal size and showed no abnormal cyst, he would not remove them.

Dr. Putnam-Jacobi thought it worthy of mention, that in Charcot's latest work on hystero-epilepsy there was an entire absence of reference to uterine, ovarian, or any pelvic disease as causes of this nervous affection.

Dr. E. M. Cushier presented specimens of

MULTIPLE CARCINOMA

removed from the body of a woman twenty-six years of age, married, and the mother of three children, the youngest being one year of age. Her menses appeared at the age of fifteen; had always been irregular, painless, and she had menstruated irregularly since the birth of the last child. Three months ago the patient noticed a lump in the left side of her abdomen, which occasioned much pain. On entering the infirmary she was pale, cachectic, and feeble, and the abdominal tumor reached three fingers' breadth above the pubis, and to the left side. The enlargement was very sensitive, both to external pressure and pelvic examination. The position of the uterus could not be made out on account of the pain given by manipulation. Dr. Cushier decided that an exploratory incision was not admissible. The patient remained in the infirmary, failed gradually, complained of pain in the abdomen, and occasionally of stitching pains in the chest.

On May 10th she had a violent convulsion, which lasted fifteen minutes, and from which she passed into a half-unconscious condition. No further convulsion occurred, and the patient was merely apathetic.

On May 15th external strabismus of the left eye was noticed, and on the following day the pupil of the left eye was widely dilated, while that of the right eye was normal.

At no time was there any paralysis of either the face or the body. The patient remained semi-comatose, passed urine involuntarily, and died on May 17th.

The autopsy revealed a tumor closely adherent to the peritoneum and all the pelvic tissues, dark in color, parts of it soft, and the softened portions contained hemorrhagic spots. The uterus could be felt below and in front. The right fallopian tube remained intact, but the right ovary had undergone degeneration, and the mass had projected over to the left side, causing it to appear as if it was an enlargement of the left ovary. The left ovary was normal. A large nodule was found in the lower border of the liver. The kidneys contained two small nodules. The lungs were studded with nodules, varying in size, the largest being nearly three-fourths of an inch in diameter. The bronchial glands were enlarged, and these during life gave rise to marked hoarseness. The heart was normal. The brain was examined by Dr. Putnam-Jacobi, who would present the specimen.

Microscopical examination of the new growth in the ovary, the liver, the kidneys, and the lungs had been made, and the diagnosis was *medullary carcinoma*.

Dr. Putnam-Jacobi presented the brain, which contained a tumor that in its fresh state presented the appearance of carcinoma. It was situated in the posterior part of the second and third temporal convolutions of the left hemisphere, occupying nearly one-half of the second and about one-third of the third. The surrounding tissue was considerably œdematous. There was also a small nodule situated in the cuneus of the same hemisphere, in very nearly the locality which has recently been demonstrated to be the visual centre. There was another nodule at the posterior limit of the occipital gyrus.

Dr. Putnam-Jacobi regarded it as peculiar that the patient presented no cerebral symptoms until a few days before death, and that the convulsion was apparently not due to the tumor, but to another lesion occupying the opposite hemisphere, and consisting of a hemorrhage into the posterior gyrus, and encroaching upon the caudate nucleus of the right side of the brain.

The tumor occupied the region which has been said to give rise to blindness, and yet nothing of that kind was present during life. A remarkable circumstance was its latency, although the temporal lobe was where such tumors were most frequently found.

The meninges were normal.

Dr. Amidon asked if the cerebral tumor was vascular at the time the autopsy was made?

Dr. Putnam-Jacobi replied that it was excessively so.

Dr. Amidon remarked that a vascular tumor in this locality, one which might during life exert pressure, could have given rise to word-deafness, and he would ask if any hesitancy in speech or in answering questions was noticed, or any incoherence?

Dr. Cushier said that nothing of this kind was noticed. The patient merely was stupid, but answered readily.

Dr. Amidon said his faith in localization was so great that he should be inclined to think that something of the stupidity was word-deafness.

Dr. Ferguson asked how frequently secondary carcinomatous deposits were found in the brain.

Dr. Putnam-Jacobi thought that primary carcinoma of the brain was more frequent than secondary.

Dr. Ferguson said that he had seen only one case of primary carcinoma of the brain, and in that instance there were about a dozen small tumors, varying in size from a pin's head to a small pea, and they presented the ordinary features of the primary growth.

The specimen was referred to the Committee on Microscopy.

Dr. E. N. Liell presented a

DERMOID CYST OF THE OVARY

taken from a woman, sixty-nine years of age, [illegible] the mother of three children, and whose menopause occurred twenty years ago. She was perfectly well up to last March. At that time she noticed a gradual enlargement of her abdomen, with more or less of pain, increasing in severity in proportion to the increase in the size of abdomen, but thinking that it was nothing except tympanites, she did not consult a physician until one month ago, by whom she was referred to Dr. H. Marion Sims. At that time there was some œdema of the lower extremities. There was also more or less nausea and dyspnœa, produced by pressure of the tumor. All these symptoms gradually increased in severity up to the date of the operation, June 9th, which was performed by Dr. Sims, Dr. Liell assisting. The diagnosis was ovarian cyst, either dermoid or multilocular. The operation demonstrated it to be a dermoid tumor, weighing nearly seventy pounds, consisting of a gelatinous bloody fluid and a solid mass, with more or less of sloughing tissue and several large pieces of bone. The operation having been performed only three hours previously, the specimen had not been examined thoroughly for hair and teeth.

The pedicle was ligated with rubber, and according to the extra-peritoneal method. The specimen was interesting, especially with reference to its contents and the rapidity of its growth.

At seven o'clock the patient had rallied very well, her temperature being normal, and pulse 94.

The specimen was referred to the Committee on Microscopy.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

[illegible]

ABSCESS IN THE URETHRO-VAGINAL SEPTUM—THE UTERINE BRUIT—THE JUBILEE FESTIVAL OF THE BRITISH MEDICAL BENEVOLENT FUND—HOSPITAL SUNDAY AND SATURDAY—THE MEDICAL MANAGEMENT OF [illegible] SCHOOLS—THE POSTAL MICROSCOPICAL SOCIETY.

[illegible]

At the last meeting of the Obstetrical Society Dr. Herman, Obstetric Physician to the London Hospital, narrated the particulars of a case of chronic abscess of the female urethra which had come under his observation. The patient was forty-seven years of age and had suffered from dysuria, dyspareunia, and irritability of the bladder, the symptoms gradually increasing in severity. There was a tender swelling between the urethra and the vagina which burst and discharged pus into the urethra. The cavity was found to be about half the size of a walnut, and it soon contracted and healed after cauterization of its interior with nitrate of silver. Dr. Herman remarked that such an abscess might be either due to chronic congestion of the urethra or to suppuration of a cyst. He did not think his case was an example of the latter. The rarity of the affection was remarked on, Dr. Herman stating that he had only been able to find three cases on record. Dr. Matthews Duncan said he had seen many abscesses in the recto-vaginal septum, but remembered none in the urethro-vaginal septum. Dr. Gervis said he could only recall one case, and Mr. Knowsley Thornton said he had only seen a few cases of the kind.

Dr. Champneys, Obstetric Physician to St. George's Hospital, then read a paper embodying the results of a series of observations made by himself on the uterine, or, as it is sometimes termed, the placental *bruit* or *souffle*. He had heard it on the left side in thirty-three cases; on the right side in one. In five cases he had heard it after the expulsion of the placenta, but in these cases its point of greatest intensity had sunk down after delivery. A pulsating artery was felt in the vagina in five cases, but pressure on it affected the *bruit* in one case only. The author considered that the preponderance of left- over right-sided *bruits* confirmed the view that the *bruit* was produced in the arteries as they reached the uterus, or soon after, as, owing to the twisting of the uterus so that its anterior surface looked toward the right side, the left cornu was anterior to the right cornu.

Dr. Herman remarked that the variations in loudness of the murmur were of much importance in its identification. There was no kind of abdominal enlargement in which a murmur, having rhythmical variations in loudness, was heard, except that produced by uterine tumors. The presence of such a murmur, therefore, showed that the tumor was uterine, but did not give any further information as to its nature.

Dr. Amand Routh, Assistant Obstetric Physician to Charing Cross Hospital, referred to a case in which, by means of vaginal stethoscopy, the uterine *souffle* was proved to exist two or three weeks after the presumed death of the fœtus, which (labor having been induced for uncontrollable vomiting) was found to be mummified. In this case the *souffle* was inaudible over the abdomen, and Dr. A. Routh remarked that he had frequently heard the *souffle* through the vagina, by vaginal stethoscopy over the cervix uteri, when it was inaudible over the abdomen.

The Hospital Sunday Fund has produced about thirty-five thousand pounds. The jubilee festival of the British Medical Benevolent Fund has produced £3,500. Yet the former appealed for contributions to the population at large, and the latter only to a profession of some twenty-five thousand members. The result shows the truth of the old adage, that it is safer to apply to anyone for a favor who has previously granted you one than to a person who is indebted to you for previous favors. The medical profession already do gratuitous medical work in hospitals, dispensaries, and private practice to the total value of many thousand pounds annually, and yet, when appealed to, they can raise a very handsome sum for distribution among unfortunate brother-practitioners.

It would be putting a very moderate estimate upon the value of professional services to suggest that every medical man gives his professional services gratuitously to the value of two pounds annually. Yet, if this be accepted as a fair estimate, the entire profession does work for nothing to the extent of fifty thousand pounds a year, a sum which I very much doubt will be exceeded by the Hospital Sunday and Saturday Funds of this year put together. Yet some medical men are called grasping!

An animated correspondence has been recently going on in *The Times* respecting an outbreak of infectious disease at a public school. Amidst the wordy strife which has been carried on, it is possible to pick out certain very unpleasant facts. A schoolboy having gone home for a few days' holiday, informed his father that there had been cases of diphtheria in the school. His father had been informed of the occurrence of cases of measles in the school, but on finding that diphtheria was also prevalent he naturally felt alarmed. On the return of the boy to school he found that a death from diphtheria had occurred, and his father, on learning this, removed him from the school, although warned that if he did so he could not again send him to the school. What defence the head-master may be able to make to the charge brought against him remains to be seen. It may be noted that the medical attendant to the school is the son of the head-master, and the latter was, therefore, presumably kept informed of medical matters affecting the school. This renders the more inexcusable the deplorable neglect which seems to have occurred.

A very unostentatious, but withal very useful, little society is the Postal Microscopical Society. This has now been in working order for some years, and its work-

ing is intimately known to me. Its members send slides round for mutual studies at fortnightly intervals. A notebook accompanies the box of slides, and very full notes are frequently made on good specimens. The book and slide-box travel by Parcel Post for the small sum of threepence. A medical section exists, in which only anatomical and pathological specimens are circulated. The extent of the operations of the Society may be gauged when I mention that it has members beyond the United Kingdom and, out of an annual subscription of only ten shillings, supports a quarterly journal.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE FORMATION OF CRYSTALS IN THE ANIMAL ORGANISM —THE ACTION OF PELLETIERINE ON THE MOTOR NERVES OF THE EYE—THE TREATMENT OF DISEASES BY OPERATIVE MEASURES—RADICAL PROCEDURES FOR TRIVIAL AFFECTIONS—ONE UTERUS AND ONE KIDNEY LESS, AND TWO LUCKY PATIENTS.

PARIS, [illegible]

DR. GALIPPE stated, at a recent meeting of the Biological Society of Paris, that the existing theories for explaining the formation of crystals in the animal organism are not satisfactory, though he believes that micro-organisms have some influence on the formation of these salts. From researches made with dental tartar, Dr. Galippe has discovered that it always contains micro-organisms which, when sown and cultivated, are constantly attended with identical results. He concludes that probably these micro-organisms are factors in the formation of salivary calculi. In the centre of these calculi there is always some foreign body, such as a hair or a fish-bone. He does not believe that the foreign body is a centre of crystallization, but that micro-organisms are carried along with it into the salivary canal; there, by chemical action, they become agents in the formation of a deposit of mineral salt; hence the necessity for rinsing the mouth frequently, and particularly after meals, with an alkaline solution. Dr. Galippe also met with micro-organisms in biliary and vesical calculi.

Dr. Galezowski lately read a paper before the Paris Academy of Medicine on the action of pelletierine on the motor nerves of the eye. His researches were based on the ocular disturbance which occurs in subjects who absorb this substance, and who are affected with diplopia. The observation of this fact has induced Dr. Galezowski to prescribe pelletierine in cases of paralysis of the third and sixth pairs of nerves. Iodide of potassium and blisters failed where pelletierine cured. The preparation used was the syrup of pelletierine, in the proportion of one gramme to one hundred and twenty grammes of syrup. From three to six doses of a tablespoonful each were administered daily. But this substance being excessively dear, Dr. Galezowski proposes to meet this difficulty by administering it in subcutaneous injections.

The growing tendency in the profession to treat all diseases by surgical or operative measures is becoming more and more evident. In some cases they are no doubt justifiable, but in others they are very questionable. At the meeting of the Academy of Medicine last week, Dr. Gustave Richelot, son of the celebrated physician of that name, made a communication on a case of vaginal hysterectomy which he had performed on a young woman for the cure of retroversion of the uterus. Dr. Richelot had already more than once performed this operation for the cure of primary cancer of the body and neck of the womb, but whether he is justified in resorting to such a severe or radical measure in the case under notice time alone will tell. The case was that of a young woman, aged twenty-six, who was admitted into the Saint-Antoine Hospital about the beginning of April last. She was extremely anæmiated and emaciated, and her face was bony and of a waxy complexion. She suffered intense and continual pain in the pelvic region, which was aggravated at each menstrual period and attended with great difficulty in walking. On examination the uterus, which was slightly increased in size, was found in retroflexion, the body occupying the posterior vaginal cul-de-sac. The neck was in its normal position, and presented no lesions of any importance. The organ, in its *ensemble*, was sufficiently mobile, and nothing indicated that it was fixed by adhesions. With the author, it is difficult to understand how a simple uterine displacement, without any notable hypertrophy, without fibroma, without evident compression of the pelvic organs, could bring about such functional troubles and a general state of health so lamentable. And yet, without further consideration, Dr. Richelot decided upon removing the entire uterus, which radical operation he thought was necessary for the safety of the patient's life, as every attempt at permanently reducing the retroflexion had failed. The operation was performed on April 28th, and on June 3d the patient was reported as completely cured. The operation was attended with little or no hemorrhage, and no complication followed. Dr. Richelot attributed this remarkable success of the operation to the employment of a solution of the bichloride of mercury (1 to 1,000), with which he irrigated the vagina before and after the operation, and to the employment of a special kind of forceps, eight in number, applying continual pressure, and which, being of sufficient length, he left suspended from the wounded arteries for forty-eight hours.

After Dr. Richelot, Dr. Polaillon mounted the tribune and read a paper on an operation he had performed which was equally as radical as the preceding one, and under almost similar circumstances—that is, as far as the justifiableness or otherwise of the operation was concerned. The operation was nephrectomy, for the removal of a floating and painful kidney in a young woman who had been the subject of this infirmity for two years. As the author stated, the indication for removing a floating kidney is extremely rare, as the mobility of the kidney has ordinarily no influence on the health. It merely constitutes an inconvenience or annoyance more or less great, which may be remedied by a belt or other appropriate apparatus; and if the patient leads a sedentary life, he or she might reach the term of a natural career without any suffering. This immunity is not always enjoyed by the subjects of floating kidneys, and sometimes they suffer so much pain that they are obliged to lay up. Surgical intervention is indicated only when the pains are violent and rebellious to medical and orthopedic measures, and if the health is much affected, as was the case with the patient above referred to. After five months' observation in his own ward at La Pitié Hospital, Dr. Polaillon, finding no amendment in the state of health of the patient, decided upon removing the offending organ, which he did about two months ago. It was the right kidney, which was so mobile that it could be felt in almost every part of the abdomen, and could be seized between the fingers. Believing that he had to do with a kidney with a long pedicle, the operator practised a laparotomy on the median line, when he discovered that the organ moved in the loose connective tissue in the retro-peritoneal space. It was then necessary, in order to bring the kidney to view, to draw aside a portion of the small intestine. No untoward symptom supervened, and the patient was cured in a fortnight.

ACUTE POISONING FROM SARDINES.

[illegible] Jan. 1886.

SIR: A family living near this city purchased a box of sardines. A young lady of the family ate one or two on Sunday evening, and all through that night suffered from violent nausea, vomiting, colic, and finally diarrhœa. The cause of the trouble was not suspected, and two days later seven members of the family, including two servants and a child two and one-half years of age, ate from the

same box. Two or three hours after this they began to suffer from nausea and vomiting, followed in some cases by profuse painless watery discharges. One of the servants, a woman aged forty, was brought into a condition of collapse, and for a time there were even fears of her life. The little child only took one very small taste. She suffered, nevertheless, from nausea and vomiting for a few hours only. The effect of the poisoning was very prostrating, it being nearly a week before all had recovered strength. Very little actual pain was felt.

The sardines tasted well, and showed no signs of decomposition. They were supposed to be of the best quality.

I have had no opportunity of having the remaining fish examined, and write in hopes that some of your readers can tell me what was the matter. Was it ptomaines or tin? Yours, M. C.

New York City, July [illegible], 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 25 to July 31, 1886.

BROWN, JOSEPH B., Colonel and Surgeon. Retired from active service, July 26, 1886. S. O. 171, A. G. O., July 26, 1886.

GIBSON, J. R., Major and Surgeon. Ordered from Department of the East to Department of Missouri on expiration of leave of absence granted in S. O. 158 c. s., A. G. O. S. O. 168, A. G. O., July 22, 1886.

BENTLEY, EDWIN, Major and Surgeon. Ordered for duty as Post Surgeon at Fort Davis, Tex. S. O. 92, Department of Texas, July 22, 1886.

TAYLOR, M. K., Major and Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 77, Department of Missouri, July 24, 1886.

MIDDLETON, PASSMORE, Major and Surgeon. Ordered to Department of the East from Department of Missouri. S. O. 168, A. G. O., July 22, 1886.

GIRARD, JOSEPH B., Captain and Assistant Surgeon. Granted leave of absence for three months, with permission to go beyond sea. S. O. 170, A. G. O., July 24, 1886.

ROBINSON, SAMUEL Q., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon at Fort Brown, Tex. S. O. 92, Department of Texas, July 22, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended July 31, 1886.

LUMSDEN, G. P., Passed Assistant Surgeon. Ordered to duty at Marine Barracks, Washington, D. C., for the month of August.

CORDEIRO, F. J. B., Assistant Surgeon. Ordered to Receiving Ship Minnesota.

LAPAROTOMY FOR ACUTE SUPPURATIVE PERITONITIS.—At a meeting of the Zurich Medical Society, Professor Kroenlein reported three cases of laparotomy for acute diffuse purulent peritonitis. One of his patients, a lad aged seventeen, with perforation of the vermiform appendix, died from collapse two days after the operation. Another, a man aged sixty-one, with perforation of the small bowel and extreme collapse, survived only a few hours. But the third patient, aged eighteen, made a satisfactory recovery, though his state at the time of the operation was extremely grave.—*Brit. Med. Journ.*

Medical Items.

CONTAGIOUS DISEASES [illegible] WEEK [illegible]. The report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 31, 1886:

	Cases.	Deaths.
Typhus fever ..		
[illegible]		
Scarlet fever...		
[illegible]		
[illegible]		
Diphtheria		
Small-pox		

ICE-CREAM POISONING.—Dr. J. W. Kales, of Franklinville, N. Y., writes: "I have read with care your editorial and the letter of Dr. Morrow upon the above subject. Some four years ago I had considerable experience with the so-called victims of poisoned ice-cream and the lengthy legal investigation which followed. At that time I carefully searched all the available literature bearing upon the subject, and since have carefully watched the numerous reports of wholesale poisoning that have appeared in the press. The symptoms—acute gastro-intestinal irritation—are always the same. That there are in every hamlet men who will wilfully mingle poison in food I do not believe, nor do I believe that the extract is at fault. If vanillism is the cause, why do we not have cases caused by drinking soda-water? For vanilla is a popular flavor. Why do we not have cases at our fashionable hotels where cream is served? I do not wish to detract from any man's labors, but I do believe that the cause, or rather causes, of the poisoning can be attributed, not to poor gelatine, vanillism, coumarin, or tyrotoxcin, but to the manner in which the cream is partaken. Every law of digestion is violated at the so-called 'ice-cream' festival. Every fellow takes particular delight in gorging himself and his 'best girl,' not only with ice-cream, cake, candy, etc., but with every variety of indigestible substance. This process goes on for two or more hours, when outraged nature comes to the rescue and the indigestible matter is expelled with all the symptoms of acute gastro-intestinal irritation. It only excites the public because so large a company are sick, or poisoned if you wish, at the same time. Have we not seen isolated cases, presenting exactly the same symptoms, caused by eating oysters and other food and drinking ice-water? I have. What are the causes of cholera morbus, summer diarrhœa, etc.? Are they other than those of ice-cream poisoning? I say that they are the same. I have arrived at this conclusion after some experience and much study. If any person can convince me of error I trust that he will produce the proof. I am open to conviction."

A CURE FOR TOOTHACHE FROM DENTAL CARIES.—Dr. V. Gsell-Feltz, of St. Gallen, warmly recommends, in toothache from dental caries, the application of cotton-wool soaked in an oily fluid obtained by melting together five grammes of camphor, five grammes of chloral, and one gramme of cocaine. Relief is complete and lasting.

IN HÆMORRHOIDAL TUMORS five drops of a ten per cent. solution of phenic acid injected into the swelled veins almost immediately withers it up. Dr. Menière employs the following formula, which he esteems superior to the simple solution, as the pain, which otherwise is often severe, is greatly lessened: Glycerine, two drachms and a half; phenic acid, twenty drops; morphia, five grains.

WHAT can't be cured must be treated at the usual rates.

ANT VAGINITIS.—To the Obstetrical Society of New York, Dr. Gillette reported the case of a patient who applied to him complaining of irritation of the vulva and vagina, accompanied by profuse leucorrhœa. On examination the vulvo-vaginal mucous membrane was found to be much inflamed and bathed in pus. Vaginal injections were ordered, but the patient objected to them, saying that they always made her worse. A few days later she reported again, and said that she had discovered the cause of her trouble, viz.: Red ants had taken up their abode in her fountain-syringe, and every time she used the syringe the ants were poured into the vagina. Their bites undoubtedly caused the inflammation. He related the case merely to offer a new cause of vaginitis.

PAPER SPOONS FOR EYE-DROPS.—Dr. F. A. A. Smith writes to the *British Medical Journal:* "Most instruments used for placing drops on the eye have their disadvantages. They cost money; the hairs from brushes may be left behind, quills and glass-droppers are dangerous in inexperienced hands, bits of rag are dirty, etc. I have been for many years in the habit of directing patients to make their own droppers, by simply cutting a piece of clean paper in the form of a little spoon. These spoons are made in a few seconds, and are costless. A clean spoon may be used every time that drops are used. Being made of soft paper, no harm can be done to the eye."

COMPLIMENTARY TO WASHINGTON DOCTORS.—The Washington correspondent of a Western daily says: "Congressmen get queer letters sometimes. The other day a Western member showed me the following: 'Dear Sir: My children have been afflicted with the scabs all winter, and the medicine given them by the doctor here does not seem to do any good. I see by the papers that there are some very fine doctors in Washington connected with the Government, and if it does not cost too much I wish you would ask them what is good for the scabs and write me by return mail.'"

THE INTERNATIONAL MEDICAL CONGRESS.—A well-known American physician writes to us from Berlin, under date of June 30th, that he has lately come in contact with prominent members of the profession in that city, Bremen, Hamburg, Dresden, Munich, Vienna, and Breslau, and that everywhere the leading questions were: "What about the Congress of 1887? Will it be held? Will it be a success? Will you be there? How much reduction will there be in the passage rates? Is it to be managed by homœopaths? Have the dissensions which threatened to wreck the Congress been adjusted? Whom shall we meet whom we know?" etc. To these queries he felt it his duty to answer: "The Congress will surely be held. Whether it will be a success cannot now be foretold. I shall not be there. So far as I know there will be no reduction in fares to America. The homœopaths have nothing whatever to do with the Congress. The dissensions have not been adjusted in any sense whatever. You will be likely to meet chiefly men whom you do not know by name or fame, since the majority of the best-known men in the United States have withdrawn from the Congress because they do not approve of the way in which it is managed." "With but few exceptions," he adds, "I found very little inclination to incur the trouble and expense of a trip across under such discouraging auspices. My replies only corroborated previous impressions."—*New York Medical Journal.*

TRACHEOTOMY FOR HÆMOPTYSIS has, fortunately perhaps, never been performed but twice. The second and last case was that of a woman, thirty-four years of age, brought to Professor Wyss' clinic at Zurich with acute anæmia, caused by profuse hæmoptysis, and in whom, about four weeks later, within ten minutes after a fresh severe hemorrhage, tracheotomy was performed. About fifty cubic centimetres of arterial blood were then aspirated (with a catheter) through the wound. The procedure at once relieved the urgent inspiratory dyspnœa and deep cyanosis, and removed the unconscious state (all of which symptoms were ascribed solely to the presence of considerable quantities of blood in the bronchi and trachea). Four days later, however, the woman died from purulent mediastinitis, starting from the tracheal wound.

IODOL IN OCULAR DISEASES.—At the Société de Thérapeutique, M. Paul read a note on iodol in reference to ocular diseases. This body, which contains eighty-five per cent. of iodine, gave him great satisfaction in cases of chronic blepharitis and conjunctivitis. He uses the following formula, and considers it superior to yellow precipitate: Vaseline, iodol, āā 3 iij.

THE TREATMENT OF MASTITIS BY REST AND COMPRESSION.—We have received a letter addressed by Dr. Wm. H. Doughty, of Augusta, Ga., to Dr. J. A. Post, of Lansing, Mich., and sent by request of the latter gentleman to THE RECORD for publication. The writer, referring to Dr. Post's letter published in these columns under date of November 21, 1885, says: "I have just read your defence of the claim of Dr. Ranney, of your city, to priority and originality in the treatment of mastitis by rest and compression, and by the use of the many-tailed bandage. Allow me to throw a little light on the subject of this disputed claim. You trace Dr. Ranney's claim as far back as 1866. This practice has been taught and pursued in this locality for thirty or more years. In 1853 and 1854, when in attendance upon the lectures at the Medical College of Georgia, I was taught by the distinguished Professor of Surgery, the late L. A. Dugas, M.D., LL.D., to adopt and prefer this method of treatment, and, with few exceptions, have employed it ever since. I presume he was the originator of this simple and effective mode of managing this very serious trouble to lying-in women, and do not doubt that a careful examination of the files of the *Southern Medical and Surgical Journal*, then one of the most influential journals of the South, published in this city, and of which he was for many years one of its most distinguished editors, would reveal an editorial or communication on the subject. He not only recommended the many-tailed bandage as the best and simplest, but, almost in the words of Dr. Ranney, advised it 'for the treatment of congested and inflamed breasts, and for the prevention of the secretion of milk when, on account of a still-birth, or death of the child after delivery, or for any other reason, it became necessary to diminish the augmented activity of the circulation, the tendency to tumefaction, inflammation, and its results, or to arrest the secretion of milk in the mammæ.' More than this, he specified its negative advantages in retiring the inflamed organ from sight and officious manipulation and filthy applications of every kind by patient or nurse, as of no little importance. This mode of treatment is so familiar here as no longer to possess a feature of novelty; indeed, it is rather a matter of surprise that a claim to its discovery should be made in these latter years by any physician from any quarter of the country." . . .

A SIMPLE METHOD OF PRESERVING DEAD BODIES.—Dr. M. Kennedy, of Bartow, Fla., writes for information as to the best, simplest, and most ready method of preserving dead bodies. He says: "Many who die in this State are from remote sections of the country, and the relatives and friends are anxious that the bodies should be so prepared, embalmed, as to preserve them to be viewed at their former homes. In most instances the medical attendant is called on to perform this operation. The meagre information to be had on the subject, and the bungling manner in which I have seen the attempt made, has induced me to call on the profession, through THE RECORD, for more light concerning the matter." The writer also asks what might be considered a reasonable fee for such services.

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Original Articles.

MEDICINE IN THE UNITED STATES, AND ITS RELATIONS TO CO-OPERATIVE INVESTIGATION.[1]

BY JOHN S. BILLINGS, M.D., LL.D. [illegible].

MR. PRESIDENT, AND GENTLEMEN OF THE BRITISH MEDICAL ASSOCIATION: You all know that the representative of the American medical profession first selected by your Executive Committee to deliver the address in medicine to-day, was the late Dr. Austin Flint, Sr., of New York, whose death last March is, therefore, a great and direct loss to you as well as to America. Every English physician knows Dr. Flint by reputation and through his writings; but only those few of you who were so fortunate as to know him personally can fully appreciate the magnitude of the loss which the medical profession has sustained in his death.

This is not the time and place to attempt to pronounce a fitting eulogium upon him and his work, and I shall, therefore, only say that my deep personal sorrow for his removal is mingled with sympathy for the members of this Association, who have been thus deprived of the pleasure of hearing him state in person some of the results of his long and wide experience. The loss is not a total one, it is true, since he had, fortunately, completed his address on "The Medicine of the Future," which has been published, and has, no doubt, been read by all of you; but in this case the printed page is by no means a satisfactory substitute for the spoken word.

In accepting the request with which I have been honored by your Council, that I should attempt to take his vacant place on this occasion, it is with a full understanding of my inability to fill it that I stand before you. Nevertheless, when your President sent me this invitation, and urged its acceptance on the ground that I could thus at least show my appreciation of the brotherly feeling toward the American medical profession which prompted those who gave it, it was not proper or possible to decline or to make excuse, and I can, therefore, only return thanks for the honor, and ask that under the circumstances you will be lenient in judgment upon what I shall present to you.

The request came at a time when I was hard pressed by official duties, and had neither leisure nor opportunity to undertake any special research; hence, to avoid violating one of my favorite Scotch maxims, viz., "That which you do not know, tell that not to any one," it was necessary to select some subject to which I had already given consideration, and which at the same time would probably be of interest to English physicians.

Reflection on these restrictions soon brought the field of selection into narrow limits, almost into "a small intercept of space of one dimension," as a mathematician would say.

What is the significance of this invitation extended for the first time to a physician of another country, and that country the United States, to come to this annual gathering of the medical men of Great Britain and give the address in medicine?

Does it not mean recognition of the unity of medicine, of the utility of co-operation, of the fact that we have common interests, and that the time has come when it is desirable to hear from the outlying younger branch of the family with a view to mutual pleasure and profit in the future? So it seems to me; and I propose, therefore, to call your attention briefly to some points relating to the present condition and future prospects of medicine in the United States, and to the direction in which you may reasonably hope and expect from that country, in the future, the most useful co-operation in the improvement of medical science and art. I believe that these must be matters of interest you, and that I can perhaps make clear certain peculiarities which do not seem to be as generally understood on this side of the Atlantic as it is desirable that they should be to insure sound judgment upon some of the results observed.

In the first place, permit me to call your attention to the fact that it is hardly possible to make any statements with regard to medicine in, or the medical profession of, the United States as a whole, which shall be definite, and at the same time distinctive; that is, which will not apply almost equally well to medicine and the medical profession in other countries. This is due to the fact that there are great differences in the organization of the profession in different parts of America, so that what is true of one State would not be true of another; what is required as to fitness or qualification to practise in one place is not required in another; and the country covers so many parallels of latitude and meridians of longitude, making the conditions of life so diverse, and producing such differences in the prevailing diseases, that a man who is fairly qualified to practise in one section may be poorly fitted to treat the endemic diseases of another.

As in painting a picture it is best to locate and define the shadows first, and deal with the lights afterward, let us begin by considering some of the things that American physicians complain about; in other words, some of their supposed grievances. One of these is that the profession is overcrowded; that there are too many doctors, both *in esse* and *in posse*, and that this is due to too low a standard of education, and to the want of legal restrictions as to the qualifications which shall give a man the right to practise. The feelings of some of our physicians on this subject are in full accord with those of the good old New England deacon who told the village scapegrace seeking admission that "he thought the church was about full."

Now what is the number and distribution of medical men in America? Statistics gathered in 1883,[2] showed that in the United States and Canada there were 90,410 persons calling themselves physicians, being in the proportion of 1 to every 600 of population. In Canada alone there were 3,487 physicians, or 1 to 1,112 of population. If we take the figures of our last census, of 1880, the proportion of physicians reported is 1 to 589 of population, or 17 per 10,000. In England and Wales, by the census of 1881, the proportion of physicians is only 5.8 per 10,000, but these figures are not properly comparable with those of the United States, because they do not include unregistered persons. If the same classes were included that are counted in the United States report, I presume that the proportion would be about 9 per 10,000, or a little more [illegible] United States.

[1] The American Address in Medicine, delivered before the British Medical Association, Montreal, August [illegible], 1886.

In the United States the proportion to the population of those who call themselves physicians varies greatly in different localities; thus in Colorado there are 29.3; in Indiana, 25.2; in Oregon, 24.3; and in Arkansas, 23.5 per 10,000; while in New Mexico there are only 6.6; in South Carolina, 9.2; and in North Carolina, 9.7 per 10,000.[1]

It is not so easy to give satisfactory reasons for these differences; we can only say that they do not depend, to any great extent, upon local legislation. The proportion of physicians is generally lowest in the Southern States lying east of the Mississippi, and highest in those regions where immigration has recently been active. If we compare, by localities, the proportion of physicians to the population with that of clergymen and lawyers, we find some curious differences. It seems that the lawyers of the United States number 12.7, while in England and Wales they are 6.6 per 10,000, but that on the other hand the clergymen are 14.6 in England and 12.8 in the United States per 10,000 of population. In many instances it seems that where the lawyers are most numerous the supply of clergymen is smallest. I believe that a fair proportion of physicians to population is about 1 per 1,000, which is not far from the actual proportion in England, while the true proportion of practising physicians in the United States is about 1 in 750. We must admit, then, that there is at all events no scarcity of physicians in the United States, and, as we have over eighty medical schools at work, besides a fair proportion of medical immigrants, there is no immediate danger of any interruption to the supply.

Let us now consider the second head of the complaint, viz., that the standard of education is too low. There is ground for this, considered with reference to some localities, but not for others. I said a moment ago that a man might be fairly qualified for practice in one part of the country and yet find himself at a loss in another. This needs a little explanation, which I can, perhaps, give most easily in connection with a map of the United States, which I here show you. This map which was prepared for a very different purpose, indicates by different shades of color the relative proportion of deaths reported as due to malarial disease to the total number of deaths in different parts of the country for the census year 1879–80. You will note how comparatively light the tint is in the North and Northeast, and how dark the shades become in the South and in the Valley of the Mississippi, thus indicating the great differences which exist as to the prevalence and deadly effects of the malarial poison in different sections of the country. It is in some of these low bottom lands and swampy districts that we meet with cases of congestive chills and of malarial hæmaturia, cases in which the patient has been described as being "a mere appendage to a huge malarial entity, an incident of a miasmatic cataclysm." Furthermore, this strip of land bordering on the Gulf-coast is in the yellow fever zone, and has, heretofore, been repeatedly desolated by this pestilence.

Chart I.—Map of the United States, showing the [illegible] from malaria, [illegible] deaths in known causes, Census of 1880. [illegible]

As compared with the North and East, much of this malarious region is a thinly settled country, an almost purely agricultural country, and not a rich country. I need hardly tell you that the physician who has received his chief clinical instruction in the office of his preceptor in Vermont or New Hampshire, supplemented by distant glimpses of a few cases in hospital in Boston or New York, will find himself at a loss at first in dealing with the emergencies of daily practice in Arkansas and Mississippi. He will be subjected to influences which at times are dangerous to one who is not acclimated, and which tend to produce depression of spirits, want of energy, and bad health. He will not have free and constant access to scientific companionship, nor be stimulated by the influence of learned societies, and he cannot avail himself of the ordinary sources of amusement, education, and rest, such as art galleries, the drama,

[1] [illegible] which the proportion of persons calling themselves physicians to the population in the [illegible] indicated by different shades of color.

libraries, and museums, etc., which are found only in the cities. Moreover, the pecuniary reward which the practitioner in many of these places can reasonably hope for is comparatively small.

Taking all these things into consideration, it is clear that if a man after spending from six to eight years, and from £1,000 to £2,000 in acquiring such a general and professional education as it is now considered that a skilled physician should possess, then settles in such a region, with the prospect of an average income of from £150 to £200 per year, it is not from pecuniary motives alone. There are such men in such places, men who are not only highly educated and skilled practitioners, but who are also original investigators and thinkers. It was within the limits of this malarial shadow that the foundation of modern gynecology was laid by Marion Sims, of abdominal surgery by McDowell, Battey and Gross, of an important part of the physiology of the nervous system by Campbell. Nevertheless the rule holds good that malaria and science are antagonistic; the exceptions prove the rule.

Nor can the inducements for highly educated physicians to settle in thinly settled localities be made stronger by any form of penal or restrictive legislation. Any attempt to fix a standard of requirements or qualifications for practice which shall be the same for such rural districts and for the large cities and manufacturing towns, must result in the adoption of what competent judges would consider so low a standard as to be ridiculous and useless. The demands are widely different, and corresponding differences exist in the sources of supply, that is, in the medical schools.

There is a class of medical schools in the United States whose object is to give the minimum amount of instruction which will enable a man to commence the practice of medicine without much danger of making such serious and glaring blunders as will be readily detected by the public. There are other schools whose aim and object is to make fairly well trained practitioners; the general character of the instruction given in these being substantially the same as that given in your English hospital medical schools. The results of such a three years' graded course of instruction in medicine as these schools furnish depend upon the character of the material upon which they work; that is to say, upon the general preliminary education possessed by the student at the time of his matriculation. This is evidently too often defective, and only a few schools have thus far ventured to establish any standard of preliminary examination which at all approaches in its demands that which is required in England.

The proverb that it does not pay to give a $5,000 education to a $5 boy is clearly of American origin, and sums up a great deal of experience.

You have nineteen portals of entrance to the profession and have not found it easy to keep them all up to the standard. In America we have over eighty gates, a number of turnstiles, and a good deal of the ground is unenclosed common. Many of our physicians are more or less dissatisfied with this state of things and with the results thereof, and every year in some States efforts are made to secure legislation which it is supposed will protect the interests of the profession, though those who advocate such legislation are usually prudent enough to claim as their only motive a desire for the protection of the public.

Now, how does this free trade in medicine and the low standard of qualification, or no standard at all, required by law affect practitioners as individuals? To answer this we must divide the profession into several classes. In the first place, in all our cities, great and small, there is a large class of physicians who are as well educated and as thoroughly competent to practise their art as can be found in the world. They have studied both at home and abroad, have had extensive clinical training, are always supplied with the latest and best medical literature and the most improved instruments, and many of them are connected with hospitals and medical schools. Among them are found the majority of our writers and teachers, and the successful men are the survivors of a struggle in which there has been keen and incessant competition. These physicians, whose positions are fairly assured, and who, as a rule, have all the practice they desire, are not usually active leaders in movements to secure medical legislation, although they passively assent to such efforts, or at least do not oppose them; and their names may sometimes be found appended to memorials urging such legislation. They are clear-headed, shrewd, "practical" men, who know that their business interests are not specially injured by quacks and ignoramuses, rather the contrary in fact, for they are called on to repair the damage done by the quack to people who have more money than brains; and they are not inclined to risk the fate of the Mexican donkey who died of "*congojas agenas*," that is, "of other people's troubles."

Then there is another large class of honest, hard-working practitioners who rely more on what they call experience and common-sense than on book learning. Many of these have obtained assured positions of respectability and usefulness, and are comparatively indifferent to medical legislation so far as their own interests are concerned. Others, however, who are not so successful, feel the competition of the local herb doctor or of the travelling quack more keenly, and have more decided views about the importance of diplomas. Among these are the young men who have not yet acquired local fame, and who are apt to become very indignant over the doings of some charlatan in the neighborhood, or of some druggist who prescribes over his counter. These last are usually quite clear in their minds that the State ought to interfere and prevent injury to the health of the people.

I have known two unsuccessful physicians who finally abandoned practice, and who gave as a reason for their failure—one that "he did not know enough," and the other that "he had not the manners and tact which would inspire confidence in his patients;" but such frank-speaking men are rare.

Thus far, as a rule, the efforts which have been made to secure legislation upon medical matters in America have come from the profession itself, and have been chiefly urged and recommended by physicians. The general public, and even the educated public, has shown very little interest in the matter. It does not demand protection against ignorance, but intrusts the care of its health and the lives of those who are nearest and dearest to it to almost any one who announces himself as prepared to take charge of them. The number of those who profess to practise medicine in the United States and are not qualified to do so is undoubtedly large, though by no means so large as one might suppose after listening to the impassioned eloquence which is duly aired every year upon the subject. There are some advertising charlatans, and travelling quacks are occasionally to be met with, but they are rare.

The most rigid tests of qualification, in our profession, in the United States, are those required of candidates for admission into the medical departments of the army and navy. The standard established for these is about the same as that for the corresponding corps of the English army and navy; and of the candidates who apply from seventy to eighty per cent. are rejected.

Certainly we must admit that this percentage indicates an unsatisfactory state of things. But what evidence have we as to its results upon the health and life of the people? What shall we take as the measures of the difference of skill in physicians? The death-rate? If we compare the death-rate of the United States with those of other civilized countries, we find that it is as low as any with the exception of Sweden. Does a low death-rate mean better sanitary condition or more skill among

the doctors? For the last twenty years the death-rate has been diminishing in England; the average amount of life for each person here has been increased; but I observe that the sanitarians claim this as proof of the value and importance of their efforts, and that nothing is said about its being in any way due to increase in medical skill or to improvements in medical science. Evidently this test is not a convincing one. Almost the only matter in which figures seem to demonstrate the importance of superior medical education and skill is in the statistics of deaths due to childbirth and of the results of surgical operations.

The proportion of deaths from childbirth to the number of births is decidedly greater in the rural districts than in large cities, and among the colored than among the white population. If this difference were found only in the United States statistics it might be accounted for by the differences in the trustworthiness of the sources from which the data are derived; but we find similar differences in England, and we must admit that these are probably largely due to the fact that in cities labor cases receive more prompt and efficient professional care than they do in the country. I need hardly call your attention to the results of antiseptic surgery, or of modern abdominal surgery, as compared with those of twenty-five years ago. Here there can be no question as to the improvement. It is well to remember in this connection that whatever undue prolongation of disease or unnecessary mortality is due to want of skilled medical treatment occurs mainly among the wage-earners—the farmers, mechanics, salesmen, needlewomen, etc.—and not among the rich, nor yet among the very poor.

Now, seeing that really efficacious legislation with regard to medical education or to the practice of medicine must, like all efficacious legislation, be substantially in accord with public opinion, since it is impossible to continue to punish for any length of time that which public opinion does not condemn; and as the great mass of the people of the United States have not as yet had such evidence as they can understand, and which would thoroughly convince them that it is to their interest to suppress quackery, it follows that it is necessary to go slowly and to allow such evidence to accumulate.

To me it seems that the most important of the first steps to be taken in this direction is one which has already been taken in Great Britain—namely, the requirement that every death in the community shall be registered, and that in such registration satisfactory evidence shall be given as to the cause of death, sufficient at least to prove that such cause is what is known as a natural cause, that is, that it is not due to crime. When it is admitted that one of the duties of government is to provide for such registration, both in the interests of life and to secure the rights of property, it follows, necessarily, that those persons whose certificates as to the cause of death are to be accepted as satisfactory evidence that there has been no foul play, must present evidence that they are properly qualified to make such certificates. The principle is precisely the same as that which induces a government to provide for the examination of the medical men whom it employs in its army and navy.

So far as the art of medicine is concerned the demand has much, though by no means all, to do with regulating the quantity and quality of the supply; and there are few localities in the United States where the qualifications of the medical man are not fully up to the standard which the community is able to appreciate and is willing to pay for. In the natural order of things suffering and death are the remedies for ignorance, weakness, and vice, and the means of preventing the transmission of these characteristics to offspring. These remedies, though effectual, are drastic, and we do our best to avoid them, but perhaps it is well that the penalties cannot be done away with altogether.

The laws regulating the practice of medicine in the United States are all State laws. If we were to judge only from what may be found in the statute-books, assuming that all the laws contained therein are duly enforced, we should find that nearly two-thirds of the States have laws ostensibly regulating the practice of medicine within their borders. As a matter of fact, however, in over half the States which have laws on this subject no attempt is made to enforce them, and in almost all of them the possession of a diploma, no matter from what source derived, is all that is required.

Of the various methods which have been tried in different States to insure by law that physicians shall be properly qualified, I will call your attention to two which are of special interest.

The first is that of Alabama, the principle of which is to organize the whole medical profession of the State, and use it as the means of regulating the qualifications of practitioners and of caring for the public health. The Medical Society of the State of Alabama, with its branches the county medical societies, thus forms a part of the machinery of the government; it appoints boards of medical examiners, selects State and county sanitary officials, supervises the registration of vital statistics, the administration of quarantine, etc.—in short, it is the State Board of Health, and the county branches are the county boards of health.

In this State the possession of a diploma does not give the right to practise, it simply enables the owner to go before the examining board. The examinations before the County Board are partly in writing, and are subject to review by the State Board, which has in some instances publicly condemned the local examinations as not sufficient.

This system has now been in operation nine years, and has gradually been consolidated and improved by educating local boards, and getting all physicians interested in it, until it is now working fairly well. Much remains to be done, and it is too soon to predict results; at present the success of the system is largely due to the wisdom and energy of one man, who has given his whole time and labor to the work, and it remains to be seen whether the machine which he has built will work well without him.

The second system to which I will call your attention is that of the State of Illinois, which was commenced in 1877, or about the same time as that of Alabama.

In Illinois anyone who presents a diploma, or license to practise, from a legally chartered medical institution in good standing, is entitled to practise, and the State Board of Health is to decide as to what shall constitute "good standing." The Board of Health also examines all persons who do not possess satisfactory diplomas, and who nevertheless wish to practise in this State.

One of the greatest practical difficulties in the way of providing any system of State examinations in medicine in the United States is that public opinion will not support any law which can be supposed to condemn, or in any way to injure, homœopathic and eclectic practitioners or their schools, and hence any proposed law relating to medicine, or to the organization of State boards of health, which does not recognize the existence of these sects will, in many States, at all events, meet with enough opposition to defeat it. In Illinois this difficulty was surmounted by the arrangement that of the five physicians on the Board, one should be homœopathic and one eclectic. The Kansas law, passed last year, goes further in this direction, and provides that appointments must be so made that no school of medicine shall ever furnish a majority of the members of the Board. Much to the surprise of many, the Illinois plan has worked very well—there has been no quarrelling in the Board—and the homœopathic and eclectic members seem to have upheld quite as high a standard of qualification as their fellow-members. The results of the work in Illinois has been very good. A large number of ignorant charlatans were forced to leave the State.

The requirements of the Board as to what shall constitute a medical college in good standing have been raised, and it has thus caused improvement in the medical schools not only of Illinois but of other States. Moreover, the neighboring States have been stimulated to action, not only by the force of example, but because they received the men who had been driven out of Illinois, and found the accession an unpleasant one.

As in the case of Alabama, it is too soon to judge definitely of the results; and in Illinois, also, the satisfactory working of the system is largely due to one man, the Secretary and executive officer of the Board, who has given his entire time to the work. I do not, by any means, wish you to suppose, however, that I consider this as being a serious objection to this or any other plan, for in the building up of any organization, or the carrying out of any system, much must always depend upon some one man.

The relations of the United States Government to medical education and to the practice of medicine are indirect only, the regulation of these matters by law being part of the police power which, under the Constitution, is reserved exclusively to the individual States. The United States employs physicians in its Indian Department, in the Pension Department, in the Marine Hospital Service, and in the medical departments of the army and navy, and it has power to regulate the practice of medicine in those Territories which are not yet organized into States, and also in the District of Columbia; but thus far it has made no use of such power. The qualifications of physicians employed in the army and navy and in the Marine Hospital Service are determined by examinations made by boards of medical officers belonging to those services. The possession of a diploma from a respectable medical college is a prerequisite for such examination, but beyond this it does not count; that is to say, the examination is the same for the holders of all diplomas, and covers all branches of medicine. But while the relations of the general Government to medical education are thus indirect, they have of late years become of very considerable practical importance, and are now exerting much influence upon medical investigations and literature. This is being effected by the museums and libraries which are now being formed under the auspices of the Government at Washington, and also, to some extent, by certain special investigations undertaken by the Government in the interests of preventive medicine. Of these various agencies one of the most important is the library which has been formed at Washington, under the auspices of the Medical Department of the Army, in connection with the Army Medical Museum, both of these institutions being a part of the results of the late civil war. The museum was at first formed to illustrate military medicine and surgery, giving the results, primary and secondary, of injuries inflicted by modern weapons of warfare, and of the diseases of armies in the field; in which direction the collection is unrivalled in extent and completeness. Gradually its scope has been enlarged to include illustrations of anatomy, development, and all branches of pathology and therapeutics, so that it is fast becoming a museum covering the whole field of medical science. In like manner the library, which commenced in a collection of those books relating solely or especially to military medicine and surgery which were required in the compilation of the "Medical and Surgical History of the War," has expanded into a great medical library, which is now one of the best practical working collections of the kind in the world. These collections, then, no longer appertain exclusively, or chiefly, to the business of one department, but belong to the whole profession of the United States as a body; and the department which has charge of them is managing them from this point of view. The influence of the library in stimulating research, and upon the quality of medical literature, is already very perceptible, and is destined to increase with advancing years. I think I may also venture to claim that the utility of these collections, and especially of the library, is by no means confined to the medical profession of the United States, for the catalogues and indexes which are being issued in connection with them are of service to medical writers and teachers all over the world.

As regards investigations into the causes of disease, undertaken at the expense of the general Government, only a beginning has as yet been made; but it is sufficient to indicate future possibilities and probabilities. The main importance of the work of the National Board of Health, which was organized in 1879 under the stimulus of the great yellow fever epidemic of the previous year, was due to investigations upon the causes of yellow fever and diphtheria, the relations of soils and of water-supply to certain diseases, etc., investigations of the same general character as those which are being prosecuted under the auspices of the Local Government Board in this country, and of the Imperial Board of Health of Germany. It is true that, owing to circumstances which I cannot here explain, the work of the National Board of Health has been stopped; but there is every probability that it will be resumed, with perhaps some change of organization, at no distant day, and I need not dwell upon the vast importance to medical science of organized and systematic work in this direction. Similar investigations have been undertaken by State boards of health, and especially by the State Board of Health of Massachusetts, and the fact that governmental health departments are tending to work in this direction is significant as to future co-operation from such sources.

In this connection should be mentioned the National Museum of Hygiene, which has been formed under the direction of the Medical Department of the United States Navy, which is now one of the most instructive collections of the kind in the world, and has also connected with it an excellent library and a well-equipped laboratory.

Comparative and experimental pathology is also receiving attention from the Government, under the direction of the Department of Agriculture, which is doing some good work in the investigation of the diseases of our domestic animals. Our investigators are, fortunately, not hampered by antivivisection laws, and there is little danger that they ever will be, for though we have our due proportion of fanatics and seekers of notoriety who wish to emulate the British antis, their true motives are so well understood that they have little power to do mischief.

Of medical associations in the United States there are several classes. We have a few local societies, analogous to clubs in their organization, which own property in the form of buildings, libraries, etc., are somewhat conservative in their selection of members, and are only to be found in large cities. Of these the College of Physicians of Philadelphia is the oldest, and has the largest and best library and museum—it will celebrate the hundredth anniversary of its existence next year. In New York the Academy of Medicine, and in Boston the Medical Library Association, are of the same character, and, in general, each large city has a similar society, although as yet they have not become fully anchored and established by the acquisition of property. The second class includes local societies devoted to specialties, such as pathology, obstetrics, etc. These also are found only in large cities, and as yet are few in number. Four of them only have published "Transactions." Corresponding with these are national societies devoted to specialties, such as gynecology, ophthalmology, surgery, pathology, and clinical medicine, etc. These societies meet annually, elect their own members, exercising care in the selection, and publish valuable "Transactions."

Another class is composed of the county medical so-

cieties, which strive to include all regular practitioners residing in their precincts. From these are sent delegates who form the State medical societies and the American Medical Association. The mode of organization varies somewhat in the different States, but the representative principle prevails in all. Most of these societies publish "Transactions;" and the American Medical Association now has its "Journal," and with its work I know that you are all more or less familiar.

As to the condition of medical science and art in America, it partakes of the general progress, for the press now makes all discoveries the common property of the civilized world. The marked feature of the present epoch is the recent advance in knowledge as to the relations between micro-organisms and certain diseases, and the strong stimulus which this has given to preventive medicine. Sanitation is becoming fashionable, and if we may believe some of its votaries, it is a very simple matter to prolong the average lifetime to the scriptural "threescore years and ten." All that is necessary is that everything shall be clean, and every person virtuous.

Having learned to distinguish those diseases which can be prevented much more easily and certainly than they can be cured, we may turn them over to the sanitarian, who has his own battles to fight with ignorance and prejudice. If he succeeds, and so far as he succeeds, he will change, in certain respects, the work of the practitioner.

The lives which are saved from cholera and typhoid, from consumption and diphtheria, and from the acute specific diseases, will, at last, be weakened and destroyed in other ways. The work of the physician will not be lessened by preventive medicine, it will simply be required more for older persons and for another class of diseases. As sanitarians must depend upon practitioners for much of the information which is essential for their work, it follows that if preventive medicine is to become a working power it will bring the mass of the profession into closer relations with the State than its members have held heretofore. What these relations shall be is one of the most interesting, and, at the same time, one of the most difficult, of the many problems with which we, or our successors, must deal. I have referred to some experiments on this subject which are now being tried in America, where it is much easier to make such trials than it is in an older country hampered with vested interests.

Just at present, in this, as in a number of other things, our tendency is toward centralization, both in the several States and for the whole country, and it is not improbable that we may go far on this road in the future.

I come now to the consideration of the second part of my subject, namely, the direction or manner in which we have reason to hope that medicine will be developed in the United States, and the kind of co-operation which you may reasonably expect to receive from the medical profession of that country.

A marked feature of the present day, in medicine as in other things, is the tendency to specialization in study and in practice. But this very development of specialties, of increasing minuteness in the division of labor, increases the necessity for co-operation, and in fact tends to create what we may call the specialty of co-operation. Formerly a rifle, or a watch, was made by a single workman. No two instruments were exactly alike, each piece had its own individuality and was not interchangeable, and the cost of the whole was such as to put it beyond the reach of the multitude. Now, the work on these things is greatly subdivided, one man makes only one small wheel, or spring, or pinion, and another another, each doing his work according to a uniform pattern, rapidly, perfectly, and at comparatively small cost.

But, in addition to the workmen who make the individual parts, it is now necessary to have one person specially skilled in making drawings and preparing patterns, another to assemble the completed parts, and a third to test the whole after it has been put together. As the centrifugal force increases, the centripetal power must also increase.

In one sense medicine as we have it to-day, is the result of co-operation, not of deliberate, centrally planned and direct co-operation, but of natural selection from results produced by many men, often working at cross purposes and, therefore, wasting much energy, but nevertheless working, though blindly, to a common end. And it is safe to predict that in the future much of the best work will be done in the same way, by individual effort inspired by the love of science, by personal ambition, etc. But the results obtained in this way come slowly, and some things that we want can hardly be obtained by individual effort, even if we were willing to wait, hence we must look to organization for help.

This is an age of machinery, of exchanges, of corporations, for all these correspond to one and the same fundamental idea. Men make machines to do what the individual cannot do, and they make them not only of brass and iron, but of men, for such an obvious source of power to the man or men who can master the combination is not likely to be overlooked. One result of such organization is seen in our encyclopedic works on medicine, whether these be called dictionaries or handbooks; another in the great medical journals; another in associations which seek to wield political influence; another in the comparatively recent attempt at collective investigation of disease. With these may be classed also the attempts of government departments to make scientific investigations, to collect libraries and museums, to do things which require long continuity of effort on a definite plan in order to produce the best results.

And it is by the combination of all these, with the efforts of individual workers, that substantial advance and improvement are to be effected.

In this broader view of co-operation it is interesting to consider those fields of labor to which comparatively few physicians can devote themselves, because of want of time and opportunity, but whose proper working is, nevertheless, of the greatest importance to the practitioner.

One of these is experimental laboratory work, and in this direction the prospect of valuable contributions from America is now exceedingly good. Some of the wisest of our most wealthy men have shown their appreciation of the responsibilities which riches entail on their possessors by seeking new channels through which to benefit their fellow-men. While the old and well-known methods of endowing hospitals and charitable institutions are not neglected, there is apparent an increasing tendency to endeavor to promote the advancement of knowledge, and especially of such knowledge as tends to the mitigation of suffering and the improvement of the race, to furnish means for the investigation of disease, to provide laboratories, and to endow medical schools, and thus place them beyond the reach of the temptations and difficulties which must always exist when such schools are dependent upon the fees of students, and are, therefore, practically, commercial manufacturing establishments.

As illustrations of this tendency I may mention the bequest of £1,400,000 by Johns Hopkins to endow, in the city of Baltimore, a university and a hospital, of which the medical department is to be a special feature, to be provided with the best laboratory and other facilities for original investigation as well as for teaching; the gift of Mr. Carnegie to the Bellevue Hospital Medical School of New York, in the shape of a well-equipped pathological laboratory; the presentation by Mr. Vanderbilt, and members of his family, to the College of Physicians of New York, of £200,000, to provide for that school new buildings and clinics having the best means of teaching and research, and the endowment, by an unknown donor, of a laboratory for the University Medical College of New York with the sum of £20,000.

Last year, in his retiring address as President of the New York Academy of Medicine, Dr. Loomis referred to this tendency to regard wealth as a trust to be used for the benefit of humanity, and after sketching the requirements of the Academy on a scale which would require an endowment of at least a million of dollars, predicted that such an endowment would be furnished by wealthy citizens of the city. I believe that he was right, and that his prediction will become history.

As the class of men who have wealth, leisure, and knowledge becomes greater, there comes an ever-increasing demand, not only for the best medical skill, for the most expert practitioner, but also for exhaustive research in every direction which promises to furnish new means for the prevention or relief of suffering, and for warding off, as long as possible, the inevitable end; and hence there is little reason to doubt that the examples I have named will be followed by others in the near future. With such opportunities, and under such conditions and influences, the stimulus to the young and ambitious worker is strong; we have abundance of material of this kind upon which the process of natural selection can operate, and there is little reason to doubt that the result will be substantial and valuable contributions to physiology, pathology, and therapeutics.

I have already referred to some of the work which has been undertaken by the United States Government for the benefit of medicine and of the medical profession in the formation of a library and the providing of means of assistance in bibliographical research. There is another most important means of advancing medical and sanitary science which only a Government can furnish, and in which field of work England now stands pre-eminent—I refer to vital statistics. In this field the United States Government has thus far done but little, yet enough to show the great interest and value of what we have a right to hope will be done in the future by combining the work of the several States. This is one of the fields in which international co-operation is most desirable; it alone can furnish data sufficiently complete and reliable for a scientific consideration of the relations of disease to geographical and race distinctions.

Geographical pathology is a very old branch of medicine, as old, at least, as Hippocrates, whose treatise on airs, waters, and places is justly famous. Permit me to remind you of its opening clauses. "Whoever wishes to investigate medicine properly should proceed to consider the seasons of the year and what effects each of them produces, the winds, the qualities of the waters, the situation and exposure of the city, the character of the ground, and the mode of life of the inhabitants." Then, says the wise old Greek, "From these things he must proceed to investigate everything else."

There is a breadth of view in that last sentence which is particularly satisfactory. Since the days of Hippocrates there has accumulated a vast amount of literature relating to the supposed connection between the topographical peculiarities of different cities and countries, and the diseases which prevail in them; but when the books and essays which come under the heading of "Medical Topography" are examined it will be found that the topographical part is much more complete than the medical—which last is mainly confined to the consideration of malarial diseases, and is vague and indefinite with regard to their relative prevalence.

Much the larger part of our really valuable information on this subject has been obtained within the last twenty-five years, as Professor Hirsch points out in the preface to the recent edition of his very valuable "Handbook of Geographical and Historical Pathology," and while the contributions of the United States to this branch of medical science have been already important, I hope to be able to show you that they are probably destined to be of steadily increasing importance in the future. Considered as a body the opportunities of the medical profession of the United States for the study of the manifold influences which can cause, modify, or prevent disease,

are in some respects unequalled. As regards peculiarities of climate, soil, altitude, etc., the country is so large as to afford almost every variety of combination, so that nature may be said to be making a series of experiments, on a grand scale, upon the mass of humanity which is so rapidly increasing in the new world. Especially is this the case with regard to the problems of heredity as connected with the mysterious relations of certain forms of disease to race. America is at present the great mixing-bowl into which are pouring streams of human life from origins the most diverse, from regions the most remote. Black and white, red and yellow, long skulls and short skulls, Celt, Teuton, and Slav are being brought together under similar conditions of climate, food, and occupation, thus permitting of the comparison and study of the different effects, if such exist, which result from variations in parentage under conditions of exposure to the same causes of disease.

For a little time—a generation or two at least—the different streams remain pure, then there is more or less mingling, in some cases very little, in others very intimate, but always there is an opportunity for studying the races separately, as well as of investigating the results of their various mixtures.

To illustrate the possibilities in this direction I will call your attention to some peculiarities in the distribution of deaths from certain causes in different parts of the United States, and for this purpose I shall make use of the data from our last census, taken in 1880. We have no general and uniform system of registration of births and deaths. The larger cities and about half a dozen States have such a system; but for much the larger portion of the country the only means which we have for determining differences in amount or causes of mortality in different localities is through the census, which is taken once in ten years. The data thus obtained with regard to deaths are imperfect, because when these are collected, only at the end of the year, about thirty per cent. of the deaths are unrecorded; and they are inaccurate, because the reports of the causes of death are not furnished by persons competent to give reliable information with regard to them. Nevertheless, these data are the best that we have, and although for a large part of the country they do not give us the actual number of deaths from any cause or set of causes, they do furnish some interesting information with regard to the relative prevalence and importance of certain causes, and suggest questions and lines for future investigation, although they do not furnish definite and scientific answers.

Take, for instance, this map of the United States (Chart II.), upon which, by varying shades of color, is shown the proportion of deaths reported as due to cancer, as compared with the reported deaths from all causes. Cancer, using the term in its broadest sense, is a disease which seems to be gradually increasing in frequency among civilized nations, and, possibly, to have a tendency to increase with the advance of civilization.

In England and Wales the proportion of deaths from this cause seems to have nearly doubled within the last twenty-six years, and a similar rate of increase can be made out in certain parts of America. How far this increase is a real one, and how far it is due simply to improvement in diagnosis, is a question yet unanswered.

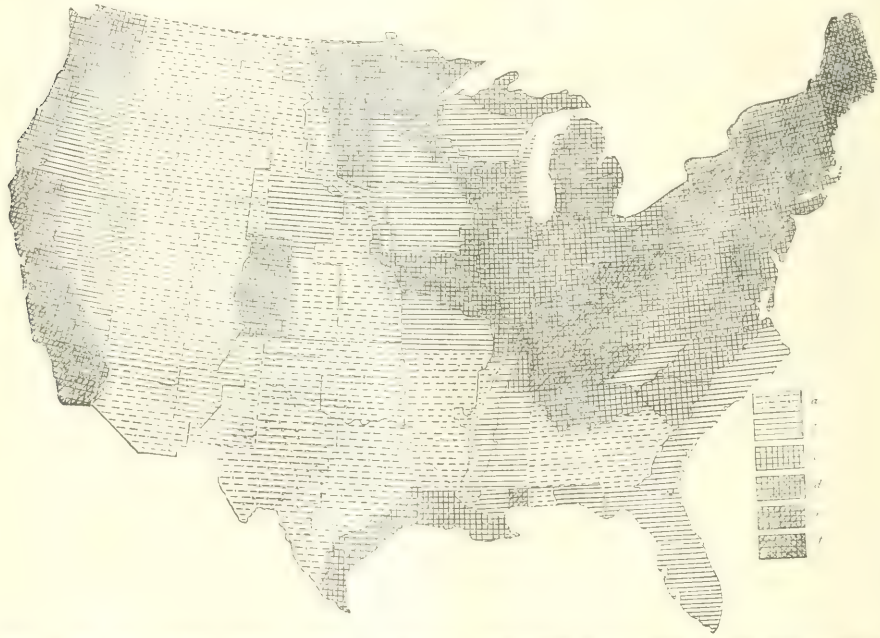

CHART III.—Map of the United States, showing the distribution [illegible] from consumption [illegible] compared with total deaths from known causes, Census of 1880.
a. Under [illegible] per 1,000. b. [illegible] per 1,000. c. [illegible] per 1,000. d. 12 and [illegible] per 1,000. e. [illegible] per 1,000. f. 17.5 and over per 1,000.

The mortality from cancer in the United States is proportionately greatest in the New England States, somewhat less so in New York and Pennsylvania, and it causes the least proportion of deaths in the Mississippi Valley and the South generally. The proportion of deaths from cancer in the United States is somewhat greater than it is in England; but it is not possible to make any accurate comparisons in this respect. Now why are the shades on this map so dark on the Northeast and so light in the South? In the first place, cancer is a disease the mortality from which steadily increases with advanced age, as you may see from this diagram. Hence, cancer causes a higher proportion of mortality in those localities which have the greatest proportion of population living at advanced ages, and in the United States

these localities are the New England States, as you will see by this map. One deduction from this, which may perhaps not have occurred to all of you, is that a large proportion of deaths from cancer indicates, to a certain extent, that the locality in which it occurs is a healthy and long-settled one, since it has probably a relatively large proportion of inhabitants, and especially females, of an advanced age. But another explanation of the peculiar shading of the cancer map is found in the relations of race to the tendency to death from this disease. The proportion of annual deaths from cancer per hundred thousand living population was, in round numbers, twenty-eight for the whites, and thirteen for the colored. That is to say, cancer is more than twice as prevalent among whites as it is among colored in the same localities, for these figures apply only to the South. On the other hand, cancer appears to cause a greater proportion of deaths in persons of Irish and German parentage than it does among the rest of the white population, the indications being that between the ages of fifteen and sixty-five the Germans are especially liable to cancer; more so than the Irish, and decidedly more so than the average white population. Now when we remember that the greater part of the colored population is in the South, and the greater part of the Irish and German population is in the North, we have another reason for the differences in mortality caused by this disease in the two sections.

Again, take this map, showing the distribution of the deaths from scarlet fever during the census year. You see that this also was most fatal in the North, and here again the influence of race comes in, because in the negro race the mortality from this disease appears to be very low. This disease has always been much rarer in the South than in the North, and the contrast was much stronger in former years than it is at present; but this cannot be explained solely, or even to any great extent, by difference of temperature, because scarlet fever has often been epidemic in the tropics, and, on the other hand, in many localities in temperate climates it is among the rarest of diseases.

Here is another map, showing the distribution of deaths reported as due to diphtheria during the year. Diphtheria is a disease which has been unusually prevalent in the northern portion of the United States for several years. During the census year it causes 2,374 deaths out of every 100,000 deaths from all causes, while in England, for the year 1880, the deaths from diphtheria were 532 per 100,000 deaths from all causes; that is to say, the comparative mortality from this disease in England was less than one-fourth that of the United States for the same period. Diphtheria, again, is essentially a disease of the North, but especially of the Northwest. It causes an excessive mortality in children of German parentage, sufficiently so to show that here again the influence of race comes into the problem, although, probably, only indirectly; that is to say, it is probable that it is the habits of a peculiar class of people which

Chart IV. Map of the United States [illegible]

favors the propagation of the disease rather than any physical peculiarities in the structure of their bodies.

Two more illustrations of the geographical distribution of disease in the United States may be of interest in this connection. The first is that of consumption, the second, of pneumonia.

Consumption is a vague term, and as used in the census no doubt includes many cases which were not true tubercular phthisis. It is reported as causing twelve per cent. of all the deaths, or more than any other single cause. In England and Wales, in 1880, it caused a little over nine per cent. of all the deaths. Such wholesale ratios are, however, of little interest or value. There are very great differences in the liability to this disease in different parts of the United States, as the map makes sufficiently evident, and it is from a study of the causes of these differences in the data derived from large masses of people, combined with clinical histories and experimental laboratory work, that we have good reason to hope to obtain knowledge, not only of the causes of

this disease, but of better methods of prevention and treatment than are now at our command. It causes a greater mortality among the Irish than in other white races, and, perhaps, a greater mortality among the colored than among the white.

Next to consumption, pneumonia is reported as causing the greatest number of deaths in the United States during the census year, giving a ratio of 8.3 per cent. of all deaths, as against 4.8 per cent. in England and Wales in 1880. Here, again, the local distribution of deaths is interesting, and the contrast between the map of consumption and that of pneumonia is very striking. Here, again, we find that race peculiarity is an important factor in the problem, the proportion of deaths from pneumonia among the colored being much greater than it is among the white.

I have elsewhere commented more fully than it is possible to do here upon these peculiarities of the distribution of certain causes of deaths in the United States.[1] In fact, my only object in calling your attention to the subject is to indicate the direction in which we may hope for good work hereafter, which indication is the chief, if not the only valuable result of the work already done. In the brief comments which I have made upon these maps you will have noticed the stress which I have laid upon race peculiarities. These race problems are simply problems of heredity taken in mass, and there is no need to urge upon an assemblage of medical practitioners the importance of considering family peculiarities in diagnosis, prognosis, and therapeutics. That the questions involved are difficult and complicated is true, but we are already possessed of more knowledge with regard to them than is commonly supposed.

In a lecture on "Life," delivered a few months ago, Professor Brookes, of the Johns Hopkins University, illustrated this as follows: "If I am placed, with my eyes bandaged, before a stone lying free on the surface and am told to kick it, and if I know at the same time the size, shape, and weight of the stone and the character of the surface, I can form a pretty accurate idea as to what the result upon the stone will be. While if the object to be kicked is a dog, and I am given precisely the same data, I cannot tell what will be the effect. But if I can see the dog, I can, in many cases, predict pretty accurately. If he is a bulldog, he will do one thing; if he is a Gordon setter, he will do another." And, in like manner, the old family doctor knows that when a particular disease appears in his neighborhood, he may expect to see it produce in one family convulsions, in another collapse, and, in a third, little or no danger or inconvenience.

This kind of knowledge is, however, at present mainly confined to individuals, it has not become a part of the world's knowledge; it is not defined; in other words, it is not scientific. To make it so is the work of the future, and in this work I hope that we shall be able to help you.

I have spoken to little purpose if I have failed to show you that there is a great deal of human nature in American physicians, and it is a kind of human nature with which you are tolerably familiar. It should be so, for we are of the same race—a race which, perhaps, as Emerson says, "sets a higher value on wealth, victory, and material superiority than other men, has less tranquillity, is less easily contented." Our ancestors were restless, fighters, freebooters, and from these ancestors we have the common inheritance of energy; of what *we* call "firmness," and our opponents unreasonable pigheaded stubbornness; of liking to manage our own affairs, and, at the same time, to exercise a little judicious supervision over those of our neighbors; of hatred of humbug and lying; and, in spite of our discontent, of a firm belief that our wives and children, habits, houses, modes of business, and of treating disease are, on the whole, better than those of any other people under the sun.

Privately, and between ourselves, we grumble and declare that the country and profession are going to the dogs—nay, we must do so, or we should not be of true English blood; but there is no need for me to tell you that these are only "growing pains," and not symptoms of progressive ataxy.

While we must consider the difficulties in the way of the improvement of the science and art of medicine, difficulties due to ignorance, to indolence, to conflict of interests, and to the eternal fitness of things, the existence of such difficulties is not a matter to be bemoaned and lamented over. These obstacles are the spice of life, the incentives to action, the source of some of the greatest pleasures which it is given to man to experience.

The child spending a happy hour with its new puzzle is a type of the scientific investigator. The naturalist who objected to the statement that this is a miserable world which it is well to be soon done with, on the ground that there are still many species of rhizopods which he had not examined and classified, is another type. On the ethical and sociological side the matter is summed up in Ruskin's aphorism, that "Fools were made that wise men may take care of them."

It is surely not without cause that there has been given to us this restless spirit of inquisitiveness, this desire to compass the heavens and the earth, this raging, infinite thirst for knowledge—it is the outcome of brain-training and natural selection for thousands and tens of thousands of years.

We are in a period of the world's history characterized by material prosperity, by increase of populations, by tendencies to uniformity, to the making of individuals of small account. According to the Swiss philosopher, Alphonse de Candolle, this is to last a thousand years or so, after which the pendulum will swing the other way, and there will follow a long period of diminution and separation of peoples, and of decadence.

Against that decay of nations we know of but one remedy, and that is increase of knowledge and of wisdom. And this increase must be in *our* knowledge, in the world's wisdom, and not merely in that of John, or Fritz, or Claude.

As each man has special opportunities and duties, if he can only recognize them, so it is with guilds, with professions, and with nations.

I have tried to indicate to you some of these opportunities which are presenting themselves to my colleagues, your brothers, in the lands beyond the sea, and I hope that I shall not be considered rash or vainglorious in saying that I believe they will so use those opportunities as to return compound interest for what they have received from the storehouse of our common inheritance. Force changes form and place, the stored energy of the soil of our plains and valleys has been coming here in the form of meat and grain, has appeared in muscle and brain and in a hundred other shapes, but none has been destroyed; our loss has been your gain, and in our turn we have received full and fair exchange.

It is our part now to remember that there are not two springs in the year, there are not two periods of youth abounding in energy and desire, or of manhood's strength and self-poise, in the life of any man or of any nation, and for us, as for those who have been before us, the Kanuri proverb holds true, "*Kaïa kitsia, tirgum kaze*"—The days being finished, there is no more medicine.

[illegible]

Sure Cure for Corns.—A man in Geneva advertised a certain cure for corns, full directions to be sent on receipt of one mark. Those who inclosed the proper amount received by return mail some doggerel verses advising amputation as an infallible preventive of further discomfort.

SOME POINTS IN UTERINE PATHOLOGY.

By J. C. OLIVER, M.D.,

THERE still appears to be a considerable amount of mystery connected with uterine pathology, in spite of all that has been done to elucidate this subject. Each gynecologist is expected to have his own theory concerning the causes of uterine displacements and the manner in which they operate. Each physician who claims any eminence in this specialty is expected to invent a pessary, forceps, or speculum, which he considers far superior to any other.

With these facts borne well in mind, we still have the temerity to advance a theory as to the causes of uterine displacements. We have been impressed with the fact that gynecologists have written all around this theory, but none whom we have read have distinctly and clearly pointed out what we shall endeavor to explain.

Professor Huxley points out the fact that nearly one-half the weight of the body is supplied by the muscles and their appurtenances. We are told that about one-fourth of the blood in the body is sent to the muscles, and also about one-fourth passes through the liver, and it is in these parts that the greatest changes in the blood takes place (Foster's "Physiology," p. 40).

A fact that has been almost universally received is that the uterus and appendages are very prone to congestion, mostly passive in its character. We propose going a little further back to inquire into the causes producing congestion. In order to accomplish anything in that line we shall have occasion to scrutinize the local conditions, and also conditions remote from the uterus.

The position we take upon this subject is, that the deficient development of muscular tissue and power among our females is the great underlying cause of uterine diseases of an inflammatory or mechanical nature.

As we have had occasion to mention previously, the congestion is venous or passive in its nature, and is due to some interference to the return flow of the blood, either located within the uterus or between the uterus and the heart.

It seems to me that the early life and habits of our girls is specially adapted to the production of troubles in after life. From their earliest years in life a large majority of our girls have a very strong prejudice against exercise in mostly any form. They prefer riding to walking; they do dance some; but so far as good, general muscular exercise is concerned, they never know exactly what it means. As a consequence of this life of inactivity and muscular idleness, the muscular tone of the entire system is very much lowered and impaired. Less blood than its fair proportion is sent to the muscular apparatus, and consequently any little exercise wearies them.

These pelvic derangements are not confined solely to the female portion of our community, but males suffer with what, to my mind, are similar conditions. Men leading a sedentary life, without the opportunity or inclination to exercise their muscles, are very subject, as we all know, to hæmorrhoids, constipation, etc.

The returning blood from the uterus and appendages passes through the pampiniform plexus, and thence to the inferior vena cava. A fact in regard to the anatomical peculiarities of these veins that should be borne in mind is that they are not supplied with valves, and consequently a backward pressure in these parts is encouraged. If the muscles are not active, the blood going to them is lessened in proportion to their inactivity; hence the blood that should be sent to the muscles must find its way into other channels. As it cannot be sent to the vascular apparatus, it must be sent in excess to the viscera. Now this excess of blood causes a congestion, and as the same conditions remain operative, the congestion becomes chronic in character, and thus we have developed hæmorrhoids, constipation, and uterine disorders.

This muscular atony produces another condition favorable to the development of [illegible], namely, the retentive powers of the abdominal muscles are impaired, and instead of having a firm, elastic, contractile abdominal wall, we have a weak and flabby tissue which scarcely deserves the name of muscle. After the distention of these walls by pregnancy they become still more relaxed, and never return to anything like the muscular tissue we might reasonably expect to find in that locality. I think we shall agree that this is a very important factor in the production of the conditions under consideration.

Another point that should not be overlooked in this connection is the very common union of bilious troubles with menorrhagia, hæmorrhoids, etc. We do not hold that these conditions are the cause of uterine troubles, but that they are produced by exactly the same cause that determines the disease above mentioned, namely, muscular atony. J. Milner Fothergill, M.D., in his book entitled "Diseases of Sedentary and Advanced Life," says: "Behind the liver lies the whole network of the portal venous system, with its myriads of venules, many of which inosculate with the branches belonging to the internal iliac vein. The uterine arteries are tortuous, and share in that capacity for adaptation for change of form, involving elongation, which is requisite for uterine growth in pregnancy. The arteries then are tortuous, while the vascular supply is, as a whole, large. The veins, too, are tortuous, and inosculate with each other freely. Consequently any interference with the blood-flow through the liver would react backward upon the whole vascular network of the pelvis, including alike the uterine plexuses and the hæmorrhoidal veins. From this would follow congestion of the whole area, alike of the uterus and the mucous lining of the bowel. The swollen veins of the mucous lining of the reproductive organs and the engorged uterine sinuses would set up both the excessive flow at the menstrual period and the leucorrhœa found during the interval. The venous turgescence of the rectal lining membrane would give either hæmorrhoids or a relaxed state of the rectal wall, which would either lead to prolapsus or produce folds of relaxed mucous membrane requiring removal by the knife. The addition of loaded bowels to this interrupted flow of venous blood would aggravate the condition" (pp. 45 and 46).

This hypothesis receives still further support from the fact that our muscular women are much less liable to uterine troubles than our less muscular, and consequently weaker, sisters. This is exemplified further by the fact that men who resort to active muscular exercise (I do not mean professional athletes) do not suffer from piles and other pelvic and intestinal disorders. Another statement from the authority above quoted is worthy of repetition: "The proportion of female troubles in England as compared to the United States is probably in inverse proportion to the extent of walking exercise taken by the females of the two countries. In America the ladies walk little, and uterine troubles are excessively common there; while in England the appeal to the gynecologist is much less common, especially among women who are much on their legs out-of-doors." We also would like to present the following sentence from the same book: "When the intrapelvic muscles are round and full there is little risk of uterine displacement."

We are told by physiologists that muscular action is one of the principal (if not the principal) causes of flow of blood in the veins. Another cause is the suction-force exerted by the thorax in respiration. These causes are possibly assisted by a contraction of the walls of the vessels themselves. This last force must of necessity be very limited in its action. The blood from all the viscera is, as we have seen, sluggish in its movement, and so there must exist a passive congestion of these parts. If any proof for this last statement is needed, it is furnished by the abdominal symptoms presented in these very

cases. Such women are almost invariably constipated, lack color in their faces, the tongue is coated more or less heavily, their minds are not capable of fixed attention for any length of time, they are easily depressed, and so we might enumerate a long list of symptoms referable to the condition of the abdominal and pelvic viscera.

With this condition as a starting point, we can readily see how the ordinarily accepted causes may occur and act as exciting causes. This hypothesis explains the reason of so frequent congestions of the uterus, lack of tone of uterine ligaments, weakening of natural supports of the uterus, and other causes "too numerous to mention."

As has been mentioned before, the suction-force exerted by respiration is a considerable factor in the production of venous circulation. This important function is more or less embarrassed by the use of corsets among the female population. This same article of dress interferes with the free action of the muscles of the trunk, chest, and diaphragm, and presses the abdominal contents downward toward the pelvic cavity, and thus becomes a factor in the production of displacements. Were the muscular system in better condition this factor would, in our opinion, become much less important in its bearings.

It is always admissible, in discussions of this character, to adduce therapeutic measures to support one's position, and, with this purpose in view, we wish to call attention for a short time to the action of massage in the treatment of this class of disorders. It has been demonstrated that massage of a muscle increases its resistance to the fatigue of exercise, and rapidly restores the muscle to a condition in which it can undergo even greater functional activity than it could primarily (Brunton's "Therapeutics," p. 128). He says: "Massage has a similar action to a very complete and perfect circulation through the muscle, in removing the waste products and restoring its power."

Now, if what has been said so far is true, what is the rational, and at the same time the most promising, plan of treatment to be adopted in these cases? Does it appear rational to use pessaries to support the uterus? Do pessaries ever cure a displaced uterus? Do we increase the power of a muscular organ by using splints? Is the substitution of an artificial for a natural support beneficial? It is claimed by some that the vagina acts as a support for the uterus; this statement is open to considerable doubt, but if we grant the truth of the assertion, why impair the elasticity of the vagina by the use of a pessary? The pessary, in order to be at all efficient, must have some other point of support than the vaginal wall, and the only available structures for such purposes are the bones of the pelvis. If the ends of the pessary rest upon the pelvic walls, they must produce a distention of the vagina, and will not this constant distention produce a lack of resiliency of the vagina?

The pessary is a foreign body, and the animal nature abhors a foreign body. This foreign body will, of necessity, cause an irritation or keep up an already existing irritation. Irritation produces congestion. Congestion produces hypersecretion; and thus we cause or assist the very condition we are striving to combat. These statements are incontrovertible, for who of us has not seen the irritation and ulceration produced solely by a pessary?

Professor Thomas, on page 401 of his work on gynecology, says: "The desideratum is an instrument which will not distend the vagina at the same time that it will support the uterus. Such instruments as sustain the vagina without distending it, and thus allow it to regain something of its former tone and elasticity, are those which should be, as far as possible, selected." We agree with these sentiments, but ask where shall we find such a pessary? The vagina is a closed canal, and any pessary must of necessity interfere with the natural arrangement of the parts.

As has been mentioned, the pessary must have a point of resistance in order to be at all effective, and the object of pressure below the uterus is to combat pressure from above; and by this means we have two forces opposed to each other, with the uterus as the central point. What could be a more certain way of producing a bending of the uterus than these very means? When it is borne in mind that the uterus is not a solid body, this action and reaction assume very respectable proportions. If it were a solid body, it would of course pass in the direction of least resistance.

The secretions from the uterus and vagina adhere to the pessary, and sooner or later undergo decomposition, and were the mere presence of a foreign body not sufficient to produce irritation, we have the presence of this decomposing secretion ready to turn the scale in favor of irritation.

Other objections may be urged against the use of pessaries, such as pressure upon the rectum, the mental concentration of the individual upon her generative organs, the liability of pessaries to change their position, the weakening of natural supports from enforced inactivity, etc.

Dr. E. C. Dudley says: "The various anteflexion and anteversion pessaries which have been devised for the purpose of propping up the corpus are almost useless. Their false reputation depends upon the relief which they frequently give to complicating prolapse, the symptoms of which have been wrongly attributed to anteversion and flexion" (Pepper's "System of Medicine," vol. iv., p. 181).

J. Mathews Duncan says: "Now, in the present great abundance of contorted bits of wood, metal, and vulcanite, and what not, called pessaries, my advice to you is Punch's advice to a young man contemplating marriage —'Don't.'" Further along in the same lecture he says: "They (pessaries) are always harborers of dirt, and always keep the mind watching the part. They are liable to decay, and if long used require to be renewed."

In the same article he says: "As a matter of fact, I find the majority of versions and flexions, as observed in practice and treated by pessaries, have their whole condition of displacement quite unaltered by the pessaries, even while in" (*British Times and Gazette*, vol. ii., pp. 769, 770. 1882).

The important question arises in all these cases, as to whether the uterine displacement is a primary condition or whether it is the secondary manifestation of a weakened and debilitated state of the general health. Whether, in other words, the general health is not so far deteriorated that any exciting cause of disease may serve to light up a condition which would never occur were the woman's constitutional condition good.

Pregnancy, as we all know, leaves many of our women with subinvolution, displacements, etc. This should not occur, according to physiological laws, and occurs but seldom in those women who are well developed muscularly.

With these facts borne in mind, it appears perfectly rational to direct our primary treatment to the constitutional condition, and consider the uterine displacements as entirely secondary in their importance.

The plan of treatment should assume about the following order: 1, Build up the general health; 2, increase the quality of the blood; 3, restore the retentive power of the abdomen; 4, divert blood to other parts than the generative tract; 5, increase the thoracic cavity; 6, increase tonicity of natural supports; 7, regulate the action of the bowels; and 8, remedy the displacement, if any exists at this time.

It has been demonstrated that the uterine ligaments contain muscular fibres, and muscular fibres, in order to be effective, should be possessed of good tonicity, and this tonicity is not present if the general muscular system is degenerated.

In these conditions, as in all diseases, we should first direct our attention to a prophylactic treatment. If our young girls were taught to exercise systematically in their

youth—to bring their muscular system up to as good a standard as boys of the same age possess; if they were taught that exercise is not unbecoming a lady; if they were given proper and systematic exercise, instead of being cooped up in a dark, illy-ventilated school-room for six hours, and given lessons sufficient to occupy their minds for six hours more—rendering it almost impossible to obtain time for exercise, we might have a race of girls of whom we could justly feel proud.

In our opinion the school-life of our girls sows the seed for many of the uterine diseases which make their appearance later in life. None of us can shut his eyes to the harvest that is reaped.

Would not the above-mentioned mode of procedure be of great service in building up the general health; in increasing the quantity and quality of the blood; in giving a good retentive power to the abdomen; in diverting blood to other parts; in enlarging the cavity of the chest; in adding tone to the natural supports; and will it not keep the bowels open, and all the secretions in a normal condition? The exercise will certainly improve the appetite and digestion, and must improve and increase nutrition. A large number of additional facts could be adduced in support of these opinions, but enough has been said to indicate their importance.

But we, as physicians, are seldom called upon before actual disease is present, and all the disagreeable symptoms and conditions are in actual operation. We are now called upon to remedy conditions which are the result of preceding negligence and apathy. Our present methods of treating these cases are notoriously inefficient, and are merely palliative. We seldom cure a case of uterine displacement.

The solution of this problem appears to lie in a judicious combination of massage, electricity, and active exercise. The results that have been obtained by massage certainly eclipse any successes by other methods. These results are, for the most part, permanent, and have the additional recommendation of being along the line indicated by nature.

In very many of these cases active exercise would be impracticable, as any exercise tires the patient, and they sooner or later seek comfort by remaining in bed all the time. They thus become confirmed invalids, solely due to a lack of vital force, and of necessity the energy is lacking.

For these confirmed invalids active exercise seems to be strongly contraindicated as a primary therapeutic measure; but not so with massage, for it is with this very class of cases that Weir Mitchell achieves such signal success. After a course of massage we think that active exercise might be used successfully to retain, and even improve upon the benefit obtained from massage; for it has been shown that massage of a muscle increases its resistance to the fatigue of exercise, and rapidly restores it to a condition in which it can undergo even greater functional activity than it could primarily. Brunton, upon page 128 of his work upon "Therapeutics," says: "Massage has a similar action to a very complete and perfect circulation through the muscle in removing the waste-products and restoring its power."

By means of exercise we increase the number and depth of respiratory movements, and also tend to enlarge the chest cavity, and it naturally follows that the suction-power of respiration is increased.

Douglas Graham, in his "Practical Treatise on Massage," points out the fact that the respiratory movements produce a sort of massage of the abdominal and pelvic organs by the to and fro movements of the diaphragm. Of course any increased activity and capability of the diaphragm would enhance its beneficial results upon these viscera.

This does not by any means exhaust what could be said upon this subject, but enough has been said, I think, to clearly prove that this method of treatment far outrivals anything we may expect from the use of pessaries, local applications, and tonic medicines. Of course the physician is called upon to make greater efforts, and to devote more time and attention to these cases than he does at present; but the knowledge of a work well done should be sufficient incentive to urge him to adopt those methods best calculated to give patients comfort and lasting relief.

As regards the permanency of cure, I cannot do better than to refer to the tables given by Douglas Graham, and collected from various sources. These results are certainly a great deal better than our usual results, and appear to give promise of permanent relief in a great many cases of uterine disease.

Dr. Weir Mitchell, in his book entitled "Fat and Blood," says: "I have been lately at some pains to learn the fate of many of my earlier cases, and can say with certainty that every case then treated was selected because all else had failed, and I find that relapses into the state they were in when brought to me have been very uncommon. A vast proportion have remained in useful health, and a small number have lost a part of their gains" (pages 161, 162).

EMBOLISM OF THE MEDULLA.

BY GEORGE A. SWASEY, M.D.

I THINK the following case presents clinical features of sufficient interest to warrant me in preparing a brief report of it. Cases of embolism and thrombosis of the medulla were once considered to be of exceedingly rare occurrence; but of late years quite a goodly number have been reported, and by recent writers they are referred to as not being so very uncommon. Cases which were formerly diagnosed as apoplexy of the medulla are now known to have been—some of them, at least—cases in which an obstruction had occurred at some point in one or more of the main arteries supplying this important nerve-centre. Duret, writing in 1873, clearly set forth the more important symptoms characteristic of these affections, and did much to elucidate the anatomy and physiology of the medulla, thereby rendering it more nearly possible to localize a lesion when once it had occurred. Later Duffin, Eichhorst, Lichtheim, Hurst, Senator, and others have either reported cases of embolism or thrombosis, or have contributed essays upon the subject.

The following case I saw, with Dr. C. D. Smith, of this city, in April, 1885: James D——, Irish, waiter, aged thirty-two, single. For several weeks previous to the present illness he had been out of employment, and for a month previous had been drinking freely; states that he had a chancre three years ago; family history unimportant. Upon April 9th he had used liquor, but went to bed that evening feeling as well as usual, and slept well through the night. Upon waking on the morning of the 10th he had lost the power of speech, was unable to swallow, and suffered pain in the region of the sternum. When walking he was dizzy, and staggered; complained of a ringing sound in his right ear; urine passed normally; bowels constipated. These constituted the symptoms upon the morning of the 10th, so far as they could be ascertained from the patient and his mother.

I saw the patient on the afternoon of the 10th. He was a short, "thick-set" man, with full face, which was somewhat flushed, and the eyes were injected, as is so common after hard drinking; pulse, 108, the calibre of the artery appearing small; temperature under tongue, $99\frac{4}{10}$° F.; heart and lungs normal; urine not examined at this time.

He walked slowly and somewhat hesitatingly, which was due to paresis of the lower extremities, and this was most marked upon the right side.

With eyes closed he could walk quite well, and could stand with his heels together without reeling. He was

able also to stand upon one foot, with eyes closed, but with much difficulty upon the right, owing to its weakened condition.

The power of flexion and extension of the leg upon the thigh was reduced upon both sides, the muscles of the right thigh being weaker than those of the left. Both upper extremities were paretic; but the degree to which muscular power was reduced was not accurately determined until a day or two later. The mind was clear, and had been since he awoke in the morning. He readily understood all that was said to him, and would try very hard to reply to questions; but the function of articulate speech was completely lost—aphonia paralytica. The patient was unable to swallow, the liquids flowing out of the mouth and into the larynx. Cough was thus excited, but not so readily as in health. I believe the laryngeal mucous membrane was anæsthetic. He could open his mouth about one-half the normal distance, but was unable to protrude the tongue, it remaining motionless in the floor of the mouth. The palatine arch was lessened, but symmetrical, and the mucous membrane covering it and the pharynx was anæsthetic. The facial nerve upon the right side was paretic, which was most marked in its lower fibres of distribution, the orbicularis oculi upon this side closing slowly, and the mouth was drawn somewhat to the left. The lower fibres of distribution of the left facial were paretic, but to a less degree than those of the right, the orbicularis oculi closing normally. The respirations were 22, slightly Cheyne-Stokes in character, and he would often gape, which would be full and prolonged. The pupils were somewhat dilated, contracting slowly to the light. Vision was not tested; but there was no complaint of its failure at the time, nor has there been since. There was a ringing sound in the right ear, and the hearing on this side was lessened.

The patient was put to bed and fed with milk by the stomach-tube. Bowels were opened with croton-oil, which was added to the milk. Milk was also given by the bowel, to which was added ext. ergot. and sod. brom.

April 16th.—Temperature, 98⅔°; pulse, 94; respirations, 16, at times stertorous. He still gapes a good deal, but somewhat less than for the past two days. The urine has been examined and found to contain neither albumen nor sugar. At this time the loss of muscular power in the forearms was more definitely noted. With the left hand he drove the needle of the dynamometer to 26°, and with the right to 20°. With my own hands I drive it to 110° with the right, and to 100° with the left. In persons in health whom I have tested I have found a difference of about ten degrees in the two hands. This patient was right-handed, and, while the muscular power was much reduced in both arms, that of the right showed a paretic condition greater than that of the left by 16°, assuming the above estimate as a standard.

The plantar reflexes were lessened. The left cremasteric was lessened, the right absent; abdominal absent; other (superficial) reflexes not tested; patellar-tendon reflexes exaggerated; left ulnar and radial reflexes present, right absent. Tactile sensibility: Right calf, 8°; left calf, 8°; back of right hand, 2°; back of left hand, $5\frac{6}{10}$°; right cheek, $1\frac{8}{10}$°; left, 7°. Sensibility to faradic current about normal; bladder normal; bowels constipated.

May 15th.—Improvement has been uninterrupted, so that now he can swallow quite well.

Says "ya" for yes, and while he can pronounce some words he cannot carry on conversation.

The paretic condition of the extremities has quite disappeared, the general sensibility has improved, and he can protrude the tongue a short distance.

June 15th.—Patient has walked across the city and visited his friends. The pharynx has nearly regained its function. He converses very well, though some words are pronounced indistinctly; can protrude tongue and purse his lips so as to whistle. The muscles supplied by the lower fibres of the facial have not regained their full power. Paresis of the right side has disappeared. I last saw this patient in July, *en route* to Boston to seek employment. His condition was much the same as in June. He promised to come and see me on his return. This man afterwards came to my office, December 21, 1885, and since the preceding was written, thus verifying his promise.

He tells me he has been running an elevator in a hotel in St. Louis, and has been well since he left here. He has gained in weight, and his general appearance is that of one in health. States that he has not used liquor. When conversing he speaks slowly, and some words are clipped, while the jaw is often drawn to the left. He says he cannot speak rapidly, "because the trouble seems to be in his lips and mouth," and one can see that the lips and tongue fail to perform the more delicate movements necessary to the distinct articulation of many words.

The tongue passes out of the mouth in a straight line. Previous to his sickness he was accustomed to sing a good deal, but now he cannot sing at all. He has no difficulty in swallowing if he exercises care, but if he eats hurriedly he gets choked. Examination shows palatine arch lessened on the right side, and while the levator palatine muscle contracts on the left side that upon the right side remains inactive.

He thinks he can talk better than when he went away in July, and feels much better generally. His mind has remained undisturbed. At times it troubles him to write, for "the letters all run together." Has no trouble with his hands in performing all ordinary duties. Tactile sensibility is about the same in both palms, and is about normal. Upon the back of the hands, right, 2°; left, 4°; dorsum of tongue, normal; right cheek, $1\frac{1}{6}$°; left cheek, $2\frac{2}{3}$°. With the right hand he drives the dynamometer to 65°; with the left to 58°. I can detect no difference in the muscular power of the thighs. The plantar reflexes are slightly exaggerated.

Patellar reflexes exaggerated, the left being more active than the right. When the tap is made upon the right tendon, a distinct contraction takes place in the muscles of the left thigh. No contraction takes place in the muscles of the right thigh when the left tendon is struck. Both radial reflexes normal, others not tested. Bowels constipated, and at times, when he tries to have them act they seem weak. If he laughs heartily, it is often difficult for him to retain his urine, and it will run away upon his clothing. At other times he has trouble to "start his water." States that he has lost all sexual desire, and could not have an erection if provocation presented. There is no evidence that trophic changes have occurred at any point.

In this case a disturbance occurred in the nervous centres, which was manifestly of a serious nature. Bulbar paralysis so pronounced, as well as being the most prominent feature in the case, can leave little or no doubt as to the seat of lesion. The attack having come on while the patient was asleep, it is uncertain to how great an extent the mental functions were disturbed; but I think it is fair to conclude, from the condition of the patient upon the 10th, and from the history of the case subsequently, that the cortical structures of the brain were at no time seriously disturbed. Assuming the lesion to have been in the medulla, its nature and exact seat is far more difficult to decide. The suddenness of the attack would lead one to consider that the lesion was either hemorrhagic or embolic. The age of the patient was against the supposition that it was hemorrhagic. In cases of hemorrhage [1] into the pons or medulla, the vessels, as a rule, are extensively atheromatous. Epileptoid convulsions [2] and apoplectic attacks are of more frequent occurrence in cases of hemorrhage than in those of embolism or thrombosis. The prognosis in cases of hemorrhage is necessarily very grave. There is only hope [3] in cases of limited hemorrhage, or where the

[illegible]

localization is very favorable, especially when it is far removed from the respiratory centre.

It is difficult to conceive of a hemorrhage which, while producing symptoms so pronounced, should cause no more serious disturbance of the functions of the vagus. Pressure of the effused blood upon the respiratory centre, beneath the floor of the fourth ventricle, is the immediate cause of death in these cases. While the functions of the vagus were interfered with, the disturbance was no more than we should look for in certain cases of embolism. Presuming the case to have been one of embolism, which of the vessels was occluded, and at what point did the obstruction occur?

This question cannot be answered satisfactorily in any given case, since it has been found that great variations take place in the distribution of the vessels to this part. Occlusion of the basilar[1] causes paralysis of all four extremities, and of both sides of the face, and usually a rapid death from asphyxia. An obstruction occurring at this point cannot be diagnosed from a hemorrhagic effusion. Obstruction of both vertebrals occasions symptoms similar to those in which the basilar is obstructed. Obstruction of one vertebral artery produces symptoms which assume, to some extent, the hemiplegic form. The lesion is more frequent in the left artery.

The hemiplegia may be on the same side as the lesion, or on the opposite side, depending upon the situation of the lesion, the point of origin of the anterior spinal artery, the completeness of the decussation of the anterior pyramids, and other circumstances. These symptoms may be upon both sides, but they are usually more pronounced upon the one side than upon the other.

Obliteration of the smaller branches of distribution in the medulla cannot be diagnosed during life. In the case above reported, I believe an embolic obstruction occurred in one of the vertebrals, but do not feel sure upon which side the lesion was situated. We read in Ross, second edition, vol. ii., p. 962, under an article upon "Syphilitic Periarteritis and Endarteritis:" "It would appear that distinct gummata may form in the walls of arteries, and either project from its external surface or into its lumen, and in the latter case may either obstruct the vessel completely or be washed off to be arrested as an embolus in one of the smaller branches."

It must be exceedingly rare for complete recovery to take place in these cases, since the arteries going to this part are so largely nutritive and form more or less definite vascular areas.

It is for this reason that secondary structural changes soon follow, which, in many cases, prove fatal. These changes are only averted when a free and prompt collateral circulation becomes established. In the present case it is hoped that a prolonged anti syphilitic treatment may restore the parts to a more healthy condition.

MORRHUOL.—The following is the method proposed by Chapoteant for extracting the active portion of cod-liver oil. The oil is first treated with a soda solution at a low temperature, in order to remove the free acids, and is then shaken up with ninety-per-cent. alcohol. It is then distilled, and the product is the active portion of the oil. Brown oil gives from 4.5 to 6 per cent., yellow from 2.5 to 3 per cent., and white from 1.5 to 2 per cent. of morrhuol. This is a nearly odorless fat, partially crystallized at ordinary temperatures, of a sharp, bitter, and aromatic taste. It is given in capsules of three minims each, corresponding to one and a quarter drachm of cod-liver oil. Children from six to eight years of age receive two, those from eight to twelve years, four, and adults, eight to ten, capsules daily. Lafage states that it may be given for a long time without exciting any digestive disturbances, and he recommends it in tuberculosis, chronic bronchitis, scrofula, and rachitis.—*Allgemeine Medicinische Central-Zeitung.*

Progress of Medical Science.

THE OIL OF EUCALYPTUS IN MALARIAL AFFECTIONS.—In a paper read before the Philadelphia County Medical Society (*Therapeutic Gazette*, June 15, 1886), Dr. J. H. Musser gives the results obtained by the administration of eucalyptus oil in a number of cases of intermittent fever and other malarial affections, and formulates the following conclusions based upon his observations: 1. The oil of eucalyptus is of decided value in about thirty-three and one-third per cent. of all cases of intermitting malarial fever. 2. It has no specific value in any one type of the disease. 3. The longer the duration of the disease, the less liable is it to do good. 4. Relapses are not prevented by it. 5. Its influence on the spleen has not been demonstrated. 6. A dose of ten drops four times daily has been a sufficient dose, but five drops every three hours would be of greater value possibly. 7. Good results are not attained as quickly as by large doses of quinine, but a good effect should be observed within five days at least.

EPILEPSY FROM DISEASED TEETH.—The literature of epilepsy contains some fifteen cases in which this disease was cured by the extraction of one or more teeth, but in none of these cases is it proven that the disease of the teeth was the direct cause of the attacks. The following case, recorded by Schwartzkopf, is apparently conclusive in this regard: The patient, a man aged twenty-seven, suffered severe pain in the right upper middle incisor, which was filled soon after. Thereupon appeared a swelling on the adjacent portion of the hard palate, which increased in size until it reached the soft palate, in which, soon after, a fistulous opening appeared. Every morning the patient expelled, by pressure with his finger, the purulent contents of the swelling, and was thereafter comparatively free from pain. The tooth, however, was loose, and somewhat painful when in use. Ten days after it was filled an epileptic attack occurred, which was repeated after several months. Gradually the attacks became more frequent, and in eighteen months after the first attack they occurred several times a week. The fistula remained during this entire period, and the patient used, under medical advice, bromides, atropine, and other remedies without result. The tooth was then extracted, whereupon the fistula healed, and the epileptic attacks have not returned, although the extraction occurred four years ago.—*The Practitioner*, June, 1886.

A POINT OF DIAGNOSIS IN RÖTHELN.—The extreme infectiousness, notwithstanding the comparative harmlessness, of German measles makes it very desirable to find early indications of its presence. Dr. James G. Glover writes, in *The Lancet*, that he has been struck in two or three cases with the fact that the earliest symptom to excite the notice of the patient has been a swollen gland in the neck at the back of the sterno-mastoid muscle. One young lady consulted him about such a gland of a considerable size, and without any obvious explanation in its neighborhood. Four days later the rash of Rötheln appeared and explained the mystery, and the single gland had become the usual chain on both sides of the neck. When the disease is prevalent, or already exists in a family, and a swollen cervical gland in a young person appears without obvious reason, it may be suspected, the writer maintains, that the disease is already in the system. The occurrence of cervical glandular enlargements is, of course, one of the commonest and most interesting notes of this least pyrexial of the eruptive diseases, and the early appearance of the symptom coincidently with the rash, or even a day before, as Dr. Goodhart describes in one case, is also known. But its appearance four or five days before the eruption seems worth noting for diagnostic purposes.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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WHAT CONSTITUTES COUNTER-PRESCRIBING.

A CASE has recently transpired, bearing on the question of counter-prescribing, which is of considerable interest to medical men, as showing the difficulty of defining in law what actually constitutes medical practice on one hand, and the selling of drugs with a recommendation on the other. A firm of druggists were prosecuted by the Medical Society of the County of New York for prescribing without a license. The facts, as presented in the brief of Mr. W. A. Purrington, counsel for the Society, are in substance as follows:

A laboring man ran a splinter in his foot while at work and went to a druggist on Ninth Avenue for relief. The latter very properly sent him to a doctor for suitable advice and treatment. The patient went as directed, but the doctor being out of his office, patient returned to work and told a fellow-workman (Grimes) of his ill success, and the druggist's refusal to pull out the splinter; then Grimes told him of the defendants and said they were "good for that sort of thing." He went to their shop, saw one of the proprietors, and told him of his visit to the doctor, when the patient was ridiculed for going to the doctor for such a thing, and was informed that the firm were good enough doctors for that, and recited their success in treating an injured woman. The druggist examined the foot with a probe, "advised festering instead of cutting," and applied a salve, charging for the remedy. On Friday the patient called again and then saw another partner of the same firm, whom he told of the first visit, and asked him to extract the splinter. On examination, the latter pronounced it not ripe enough and advised the salve to be put on thicker. On Monday the patient again called. The splinter was then projecting one-eighth of an inch, and the same druggist pulled it out with his tweezers. The patient went home and took to bed. On Tuesday he sent his wife to defendants to get something to relieve his suffering.

The wife testified that she also saw the prescriber and operator, and asked him if he remembered the young man with the splinter, said he was suffering great pain, and asked for something to relieve him. The druggist gave her a wash with directions to apply it every half-hour, saying that her husband probably had erysipelas. On Wednesday she called in a regular physician to attend her husband.

It would appear, then, that the defendants had the case under their care for a week, beginning with the treatment of a wound and ending with the diagnosis of erysipelas.

The defendants met these charges by denying that they applied salve by their own hands or advised treatment.

They say that on every occasion they refused to do anything for the foot, except when one of the firm, observing Hughes' "agony," as he termed it, pulled out the splinter, but mercifully gave no advice. Also that they had no instruments in the shop. The patient only testifies to the use of some sort of a "prod or probe, and probes and tweezers are common instruments in almost every house, and of use also in surgery."

The operator is positive that he gave Mrs. Hughes no instructions as to the use of the wash, because he sold it on Saturday night, *when business was brisk and he had little time to talk!* His attention being carefully called to this, he is as positive about it as about any other thing. And yet it was on Tuesday that he sold it; and his brother testifies that on Friday he had visited the patient after seeing Dr. Hugart, the physician in attendance.

The defendants also testified that the patient *asked for "a salve or something,"* and that the patient's wife picked out from several lotions named the one she wanted.

We have given the facts, pro and con, with some detail, as they bear on many important questions affecting the validity of the present medical law.

Mr. Purrington, the learned counsel of the County Society, presented every possible aspect of the case under the law, argued it with ability and force, but seemingly to no purpose, as the defendants were acquitted, obviously on the grounds of conflicting testimony, but clearly against reasonable probabilities as to intentions against the statute.

The case carries a lesson with it regarding the difficulties in the way of convicting counter-prescribers under the present law. It was ably shown by Mr. Purrington that the defendants voluntarily and culpably assumed the responsibility of medical and surgical advisers, and acted accordingly. Although they received no fee for the same, it did not matter, as professional advice, alas! is often given without pay. But behind it all is shown the usual motives of indirect gain, by being able to sell a medicine which they could not otherwise do. The defendants ingenuously deny any intent of wrong, but rather a desire to be humane in helping the man rather than themselves. With the ordinary jury this counts for a great deal. Hence the verdict. If this case is to be a precedent, the necessity for a more stringent medical law requires no argument.

THE BRITISH MEDICAL ASSOCIATION AND OUR CABLE REPORT.

THE British Medical Association which met this week at Brighton, England, was largely attended, and, as will be seen by our cable despatches, was fully up to its usual standard of scientific work. The addresses were well received, particularly the one on medicine, by our distinguished countryman, Dr. John S. Billings. This address, which we have the pleasure of presenting in full to our readers, will speak for itself. The work in the various sections was of a practical character and will be duly given to our readers when we receive the details by mail.

News of the Week.

The London Hospital Sunday Fund amounts this year to over one hundred and eighty thousand dollars, being $25,000 more than it was last year.

Professor Bouchard has been elected member of the Académie de Médecine.

The Prevention of Post-scarlatinal Nephritis is surely accomplished, according to Professor Jaccoud, by placing the patient on a milk diet from the beginning of the disease, and avoiding cold baths.

Enforcing the Medical Practice Act in Missouri.—The Missouri State Board of Health, following the example of that of Illinois, has passed the following resolution :

Resolved, That in future a percentage of graduates to matriculates of forty-five (45) or over will be grounds for refusal of registration of diploma and issuing of certificates to graduates of a school otherwise in good standing; provided, however, that before such action be taken, the said school, whose diploma is presented for registration, be notified, and an opportunity be given the faculty thereof for satisfactory explanation to the State Board of Health.

Death due to the Inhalation of Nitric Acid Fumes.—Dr. J. W. Stickler, of Orange, N. J., sends us the following interesting account : "Mr. Sinclair, of New Zealand, sent me an account of a very distressing disaster which occurred on board of the Manopouri. It seems that there had been put into the hold of the vessel a case of nitric acid. One of the bottles being broken, the acid escaped, filling the hold with its corroding fumes. Upon one of the hatches being removed the ship was thought to be on fire, and the hold therefore was deluged with water. The men who went below, however, discovered that what was regarded as smoke was in reality a far more irritating substance (nitric acid fumes), although at the time it did not cause a decided burning sensation in the throat or lungs. Within a few hours the men who had been thus exposed began to complain of serious illness, and in a very short time died. Three men sacrificed their lives in this manner. This sad accident is cited to call attention to the fatal consequence of carelessness in the stowage on shipboard of acids, the fumes of which are powerful enough to destroy life when introduced into the lungs by inhalation. In this instance there was gross carelessness on the part of the shippers in not properly marking the case containing the acid. It appears that this practice of shipping dangerous goods without notice of their character (so as to save cost) is a very common one, and the only wonder is that more accidents do not result from it. This sad accident also indicates the rapidity with which the fumes of nitric acid may destroy life when brought into contact with the pulmonary tissue, even when the symptoms immediately following its inhalation do not point to a fatal issue, as was the case in the instance above quoted.

The Michigan State Medical Society has donated $500 to the treasurer of the International Medical Congress.

Richmond County (N. Y.) Medical Society.—At the annual meeting of the Richmond County Medical Society, the following officers were elected for the ensuing year : President, F. U. Johnstone, of New Brighton ; Vice-President, Rudolph Mautner, of Stapleton ; Secretary-Treasurer, J. Walter Wood, of Port Richmond.

The Mississippi Valley Medical Association.—This Association, at its last meeting, did two things—one of which was very creditable ; the other not quite so much so. It elected the editor of the *Weekly Medical Review* its president, and it adopted the American Association's code of ethics. We are informed that it was understood, at the time of its organization, that the Association would attend only to scientific work, and not introduce the subject of medical ethics or medical politics. The results of its change of policy have already been the withdrawal of some members and the development of a quarrel.

Neuro-rheuma is the name Dr. W. Hale White wishes to be applied to nervous energy. It means "that which flows along a nerve."

The International Medical Congress.—*The Lancet* has an editorial annotation pleasantly urging that European physicians make a strong effort to visit the Congress next year.

Obituary.

FRANK HASTINGS HAMILTON, M.D., LL.D.,

For the past two years Dr. Hamilton was suffering from pulmonary phthisis. Although feeble for most of that period, he did not become seriously ill until two weeks ago, when his progressive exhaustion terminated his valuable and useful life on Wednesday, August 11th, at his residence in this city.

Dr. Hamilton was born in the little town of Wilmington, Vt., on September 10, 1813. When still a boy he entered the Medical Department of the University of Pennsylvania, from which he was graduated when he was only twenty years old. After his graduation he went back to his Vermont home for a time, but his ambition sought a wider field, and he made his way to Auburn, N. Y., where he settled down to practice. In a very short time he obtained a widespread reputation as an able young surgeon, and five years after he left college he was appointed Professor of Surgery in the Fairfield (N. Y.) Medical School. This place, for some reason of his own, he did not like, and embracing an opportunity offered a year later, he accepted a similar Professorship at the Geneva (N. Y.) Medical College. Here he remained for nearly four years, when, his ambition again getting the better of him, he gave up his chair and went to Buffalo to resume his practice as a surgeon.

It was in Buffalo that Dr. Hamilton met the late Dr. Austin Flint, and the two thereafter became friends for life. In 1846 they, associated with Dr. James Platt White, also of Buffalo, added to the University of Buffalo a medical department, which rapidly became one of the features of the institution. Dr. Hamilton became its Professor of Surgery. For fourteen years, from 1846 to 1860, he retained his position in the university, and then moved to Brooklyn. Hardly had he got fairly settled in his new home and become the first Professor of Surgery that the Long Island Hospital ever had, when he entered the army as surgeon,

and early in 1861 he was attached to the Thirty-first New York Regiment. He was successively promoted to the grade of Brigade Surgeon—the latter after the battle of Bull Run—Corps Surgeon under General Keyes, in 1862, and Medical Inspector of the United States Army, in 1863. Dr. Hamilton was one of the founders of Bellevue Hospital Medical College, and held its chair of surgery until 1875, when he resigned. He has been living and practising in this city since 1864.

Dr. Hamilton distinguished himself not only as a skilful surgeon, but as a prolific and leading writer on surgical subjects. His famous "Treatise on Fractures and Dislocations," published first in 1860, is justly regarded as the best book on that subject in existence. It has now run through seven editions, and has been translated into French and German. Among his other widely known works are "Prognosis in Fractures," "Treatise on Military Surgery," "Treatise on the Principles and Practice of Surgery," and "New Views on Provisional Callus." The book which Dr. Hamilton regarded with the greatest pride was his "Treatise on the Principles and Practice of Surgery," published in 1872 (the third edition was published a few weeks ago). After he had finished it he remarked one day to his daughter, "Well, now my life is completed."

Dr. Hamilton was also an inventor, and his work in this field has aided surgery very much. Among his inventions are a "bone drill" and an apparatus for broken jaws, and he invented or improved the apparatus for almost every fracture of long bones. One of the doctor's greatest achievements was the introducing of gutta-percha as a splint where irregular joint surfaces require support. He was the first to use gutta-percha as an "interdental splint," and in many practices, which other physicians have since adopted, he was the first to lead. He was a bold and original thinker, firm in his convictions and logical in his conclusions.

When President Garfield was shot, in July, 1881, Dr. Hamilton was honored as one of the consulting surgeons with Dr. Bliss. Until the President died, he, in connection with Drs. Bliss and Agnew, was almost constantly in attendance.

He was twice married—to Mary Virginia McMurran, of Virginia, in 1834, and to Mary Hart, of Oswego, in 1840. His last wife died just a year ago. He leaves two children—Colonel Theodore B. Hamilton and Mrs. Daniel Davis. His body will be privately interred in Sleepy Hollow this (Saturday) morning.

Dr. Hamilton, at the time of his death, held many positions. He was visiting and afterward consulting surgeon to Bellevue Hospital, consulting surgeon to St. Elizabeth's Hospital, to the Hospital for the Ruptured and Crippled, and to various city dispensaries. He was President of the Medical Society of the State of New York, President of the Medico-Legal Society, President of the Pathological Society, and member of many medical societies in New York City.

Reviews and Notices.

THE GENUINE WORKS OF HIPPOCRATES. Translated from the Greek, with a Preliminary Discourse and Annotations, by FRANCIS ADAMS, LL.D., Surgeon. In two volumes. Vol. I. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

THE learned and scholarly translator of the works of Hippocrates characterizes that author as "the highest exemplar of professional excellence which the world has ever seen." It is most fortunate that the profession of to-day is able, through the scholarship of Dr. Adams, to learn of the life and writings of this man. Dr. Adams' translation was made for the Sydenham Society, and it contains not only the translation of the genuine works but a preliminary account of Grecian medicine, of the physical philosophy of the ancients, and critical notes and explanations of the writings of Hippocrates. A study of the volumes cannot fail, therefore, to instruct and broaden the physician who reads them. The book should be constantly read; it is the Book of Genesis of the medical Bible.

THE PRINCIPLES AND PRACTICE OF SURGERY. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., late Professor of the Practice of Surgery, with Operations, and of Clinical Surgery, in Bellevue Hospital Medical College; Consulting Surgeon to Bellevue Hospital; to the Bureau of Surgical and Medical Relief for the Out-door Poor at Bellevue Hospital; to St. Elizabeth's Hospital, and to the Hospital for the Ruptured and Crippled; Fellow of the New York Academy of Medicine, etc. Third edition. Revised and corrected. New York: William Wood & Co. 1886.

THE appearance of the third edition of the late Dr. Hamilton's excellent treatise will be welcomed by many, not only of his former students, but also of others who were denied the privilege of hearing him in their student days, but who knew him by his writings. The interval of time which has elapsed since the second edition of this work was issued has been one fruitful in progress in surgery, and these advances have necessitated many changes and additions in order to bring the book up to the times. These alterations have, with one or two exceptions, been made in a satisfactory manner. As the author took pains to state, the work is in no sense an encyclopædia of surgery, but rather a concise text-book for students, dealing with all the subjects belonging properly and exclusively to surgery, and hence the reader must not expect to find any exhaustive presentation of the history or literature of surgical procedures or theories. We find little mention made of tuberculosis of bones or joints, and one who would turn to this book for instruction in antiseptic methods would be disappointed. The author was no partisan of the parasitic theory of disease, and apparently regarding antiseptic precautions, as practised almost universally in our day, of but little utility, he has dismissed their consideration with few words. But these are matters which, even yet, we venture to say, cannot be regarded as settled beyond the shadow of a doubt, and hence each one is at liberty to hold to his own opinions, even though he be in the minority. For those who desire to learn the views of one of the greatest of the conservative surgeons of the present day we can recommend no better work than the one before us.

HISTORY OF HOMŒOPATHY: ITS ORIGIN; ITS CONFLICTS. With an Appendix on the Present State of University Medicine. By WILHELM AMEKE, M.D., of Berlin. Translated by ALFRED E. DRYSDALE, M.B., of Cannes. Edited by R. E. DUDGEON, M.D. 8vo, pp. 445. London: Published for the British Homœopathic Society, by E. Gould & Son. 1885.

THIS work is an apology for homœopathy, and an attack upon "allopathy," so called. It is not a very good book looked at from a historical, or literary, or scientific stand-point. A great deal of indignant rhetoric is displayed over the persecutions of homœopathists, and we find much of just but oft-repeated criticisms on the fashions of therapeutics. What, as physicians, we should like to find in such a work as this would be a candid statement of what homœopathy has been, and what it really is at present, and also some demonstrations of its efficacy as a mode of treatment. Instead of this we only find tirades and eulogiums, which will please the confirmed adherents of homœopathy, but which can have no effect but weariness on other persons. As the spiritualist sits down to his *Banner of Light*, so the homœopathist can sit down to this work, sure of finding nothing but what will confirm his faith and make him wonder at the obstinacy and dulness of the skeptical world outside.

HANDBOOK OF PRACTICAL MEDICINE. By DR. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic at Zurich. Vol. I. Diseases of the Circulatory and Respiratory Apparatus. One hundred and three wood-engravings. Wood's Library of Standard Medical Authors. New York: William Wood & Co. 1886.

EVER since Niemeyer achieved such popularity in this country German works on general medicine have been received with interest and attention. The present work, though coming from Switzerland, is essentially German in its method and thoroughness, and we feel sure that it will be well appreciated here. Its author is widely known for his contributions to pathology, and the translation into English of this, his greatest work, should be a matter of congratulation.

The author's therapeutic suggestions will prove particularly interesting. The book is copiously illustrated, and is printed in the usual excellent style of the Standard Library.

JAHRESBERICHTE UBER DIE FORTSCHRITTE DER ANATOMIE UND PHYSIOLOGIE. Herausgegeben von DR. FR. HOFFMANN und DR. G. SCHWALBE. Dreizehnter Band. Literatur, 1884. II. Abtheilung, Physiologie mit Generalregister zu Band I.–X. Leipzig: F. C. W. Vogel. 1886.

THIS substantial volume of four hundred and eighty pages, besides the general index of ten volumes, presents a concise yet thorough review of the work done in physiology in 1884. Such books as these are exceedingly helpful to all interested in this special branch of the medical sciences.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING.

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

(DIRECT CABLE TO THE MEDICAL RECORD.)

TUESDAY, AUGUST 10, 1886—FIRST DAY.

President: W. T. EDWARDS, M.D., F.R.C.S., Physician to the Glamorgan and Monmouth Infirmary, Cardiff.

President-elect: WITHERS MOORE, M.D., F.R.C.P., Senior Physician to Sussex County Hospital, Brighton.

The fifty-fourth annual meeting of the British Medical Association was held at Brighton, and was called to order by the President, DR. W. T. EDWARDS, at 3 P.M., and after a reception of the Council of the Association by the Mayor of Brighton.

The minutes of the last meeting were adopted as read.

DR. EDWARDS, in a brief address thanking the members for the honor conferred on him as the recipient of the high office, and expressing gratification at the good work done by the Society during the past year, introduced the President-elect, DR. WITHERS MOORE, of Brighton.

DR. MOORE took the chair, and followed with an address of welcome to those present, expressing the hope that the meeting would be an enjoyable and profitable one to all concerned.

A vote of thanks was proposed by DR. EDWARD WATER, and seconded by DR. EDWARDS CHADWICK. Carried.

DR. BALTHAZAR FOSTER, President of the Council, moved that the report of Council and financial statement of the Association be adopted. After being seconded by DR. CARTER, of Liverpool, it was carried.

A lengthy discussion then ensued in regard to the admission of new members to the General Medical Council, which resulted in a necessary change in the by laws.

MR. JOHN DIX submitted a proposition in reference to the payment of travelling expenses of the representatives of branches to the meetings of the Council, and recommended that the present by-law on the subject be not altered.

Quite an acrimonious debate ensued, which was only terminated by referring the matter to the Council. The meeting then adjourned until evening.

DR. BALTHAZAR FOSTER, at the beginning of the evening session, introduced DR. N. S. DAVIS, of Chicago, a delegate to the Association, and President of the International Medical Congress.

DR. DAVIS responded in a few appropriate remarks, after which the President, DR. WITHERS MOORE, delivered his

ADDRESS: THE SCIENCE OF PRACTICE[illegible]

After some remarks upon the progress made in the general cultivation of the medical sciences, and the necessity of developing the special departments of practice, he considered, in some detail, the relations of practitioners to consultants. The latter were generally well understood. The object of counsel was mainly the division of responsibility in regard to the management of the case, and both family attendant and consultant should act in unison, with the sole purpose of benefiting the patient. Each party to the consultation had his respective duty to perform, and the line was so sharply drawn by custom that there was no real danger of transcending privileges on one side or the other. When the proper relations were maintained, upon the platform of gentlemanly behavior toward each other, the convictions of the patient and his friends were proportionately strengthened in the estimate of medicine as a science, and in renewed confidence in therapeutical resources.

THE HIGHER EDUCATION OF WOMEN

was his next topic. While on general principles higher education was always desirable, its application to women had comparatively narrow limits. It was not impossible, but its results were not desirable. Women were made for wives and mothers, and in their respective spheres could not be improved by a cultivation of intellectual power at the expense of the finer sympathies of their natures. Physically speaking they were unfitted for the extra strain, and their health, as a rule, suffered accordingly. He believed in Herbert Spencer's maxim, that a strong nation must consist of good animals. Strong and healthy women were of more importance to the rising generation than sickly intellectual female prodigies. Even if health was not broken down, if family duties were not interfered with, if wifely sympathies were not sacrificed, it remained yet to be demonstrated that woman in her so-called higher sphere was a necessary or

useful factor in the body politic. Society needed her help in other directions, and was jealous of her prerogative. In this connection he referred to the overpressure in female seminaries, and the consequent ruination of the constitution at a time when proper rest for the brain and nervous system was a primary consideration. He appropriately concluded his address by quoting from the tenth to the twentieth verse of the last chapter of Proverbs.

Dr. N. S. Davis in proposing a vote of thanks to the speaker remarked upon the influence of the high intellectual cultivation of American women. He believed that woman was abundantly able to occupy her own sphere. She was specially created for it, and should be satisfied with the exercise of these high and noble functions. When she attempted to go beyond them she must necessarily be a failure. She could no more compete with man in his sphere than could man in hers.

The motion was seconded by Mr. Quain, who was proud to own that he was a friend of the President of forty years' standing.

Mr. Marshall introduced a motion to the effect that the *British Medical Journal* should be considered the absolute property of the Association. This gave rise to a discussion bearing upon the methods of management of the journal, which was participated in by Dr. Balthazar Foster, Mr. Wheelhouse, and others, ending in a reference of the matter to the Council.

The meeting then adjourned until Wednesday.

Wednesday, August 11, 1886—Second Day.

The Association was called to order by Sir Balthazar Foster, President *pro tem.*

ADDRESS IN MEDICINE.

After the transaction of some miscellaneous business, Dr. John S. Billings, of Washington, D. C., delivered the address in medicine (see p. 170). The address was well received, and at its conclusion a vote of thanks was tendered by Sir Thomas Crawford. A discussion then followed bearing upon the election of members to the General Medical Council. It was finally decided by vote that the Association should not interfere in the premises.

MEETINGS OF SECTIONS.

The Sections on Medicine, Surgery, and Obstetrics, Therapeutics, and Otology convened this (Wednesday) afternoon.

THE SECTION ON MEDICINE

was presided over by Dr. W. H. Broadbent. Sir Andrew Clark introduced the subject for discussion, viz.:

CASES IN WHICH DISEASE OF THE VALVES OF THE HEART HAS BEEN KNOWN TO EXIST FOR UPWARDS OF FIFTY YEARS WITHOUT CAUSING SERIOUS SYMPTOMS.

He referred to several striking examples of such a condition, in which obstructive and regurgitative troubles were so well balanced by compensatory hypertrophy that the patients were in comparatively good health and many of them able to attend to exacting and arduous duties.

The subject was also discussed by Drs. S. Bristowe, Clifford Allbutt, D. J. Leech, and Bowles.

Dr. W. S. Playfair next read a paper on

SOME OBSERVATIONS ON WHAT IS CALLED NEURASTHENIA.

This was discussed by Drs. Hughlings Jackson and C. R. Drysdale.

THE SECTION ON SURGERY

was addressed, Wednesday afternoon, by its President, John Eric Erichsen, after which Sir Henry Thompson opened a discussion on

SUPRAPUBIC LITHOTOMY,

and was followed by Messrs. Reginald Harrison, of Liverpool, W. Cadge, T. R. Jessop, Barwell, Cousins, Surgeon-Major Kegan, Sir William MacCormac, Jacobson, Bruce, Clarke, and Hingston, of Canada.

THE SECTION ON OBSTETRICS

was called to order by the President, Dr. Alfred Meadows, of London, who delivered an address.

Dr. Robert Barnes, of London, introduced the subject

THE ALTERNATIVES TO CRANIOTOMY,

and was followed in the discussion by Drs. Madden, Neville, Alderson, Cameron, Thompson, Hough, Edis, Wright, Wilson, W. T. Lusk (New York), Galway, and Swaine.

Dr. T. Addis Emmet, of New York, read a paper entitled

CERTAIN MOOTED POINTS IN GYNECOLOGY,

after which Dr. Graily Hewitt gave the early history and etiology of uterine flexions and displacements. The latter was discussed by Drs. Bantock and Gordon.

SECTION ON THERAPEUTICS.

Dr. Thomas Lauder Brunton, of London, the President of the Therapeutical Section, addressed the latter at its opening session, after which Professor Leibrich, of Berlin, read a paper on a new fatty substance (lanolin), detailing its physical properties and therapeutical uses.

Dr. John V. Shoemaker, of Philadelphia, presented a paper on "Hamamelis Virginica," and Dr. E. Mackey one on "Resorcin in Gastric and Cutaneous Disorders."

Dr. Carter, of Liverpool, then opened the discussion on

ANTIPYRETICS,

and was followed by Dr. Leech, and others.

SECTION ON OTOLOGY.

Before the Section on Otology the following papers were read: "On Examination of Nasal Cavities from the Front," by Mr. E. C. Baber; "The Functions of the Nose in Health and Disease," by Dr. Greville MacDonald. Discussions on these papers were participated in by Drs. Erskine, Ellis, Baber, Grant, and Messrs. Spencer Watson and Lennox Browne.

After the adjournment of the sections, a garden party was given to the members by Sir Julian Goldsmid at St. Ann's Wells. This was numerously attended, as was also the conversazione in the evening, tendered by the President of the Association and the Southeastern Branch.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-second Annual Meeting, held at the Pequot House, New London, Conn., July 21 and 22, 1886.

Continued from p. 137.

WEDNESDAY, JULY 21ST—FIRST DAY—EVENING SESSION.

THE meeting was called to order by the President, Dr. WILLIAM F. NORRIS, of Philadelphia.

DR. J. A. ANDREWS, of New York, read a paper on

THE EFFECT OF THE ELECTRIC LIGHT UPON THE EYE.

The injurious effects of various forms of light upon the eye were first considered, and numerous instances cited showing the harmful effect of exposure of the eyes to bright sun-light, bright lamp-light, etc. Cases were given in which a short exposure to the arc-light was followed by swelling of the lids and conjunctivæ.

The electric light gives the maximum of light with the minimum of heat. So far, the only cases of injury to the eye from the electric light have resulted from exposure in close proximity to the intense light of the arc-light. The effect in these cases can be best explained as occurring through the sympathetic nervous system rather than as the result of mechanical or chemical influences. It is not established that exposure to bright light can produce a diffused iritis. No case of injury to the eye from the incandescent light has been reported. The incandescent light possesses advantages which are wanting in other forms of artificial light, the principal of which are its steadiness and the fact that its use does not contaminate the atmosphere. (The paper will be published in full in a future issue.)

DR. C. R. AGNEW, of New York, remarked that the incandescent electric light had been introduced into Columbia College reading-room, and that all who had made use of it have expressed great satisfaction with it.

DR. W. F. MITTENDORF, of New York, said that the conclusions of Dr. Andrews confirmed the results of his observations. The light is so perfect that it need not be approached close to the eye, and the efforts of accommodation are lessened. On account of its steadiness less work is thrown upon the iris than with the flickering light of the gas.

DR. WILLIAM S. LITTLE, of Philadelphia, described

A METHOD OF OVERCOMING DIPLOPIA WHEN PRISMS ARE NOT FULLY EFFECTIVE.

Double vision, especially in the lower field, is a source of danger in walking. This is the case even where prisms are worn, as the patient, by not holding the head forward, may look under the spectacle and thus see double. In order to prevent looking under the glass and seeing double in the lower field, the speaker had, in a case which he related, resorted to the following procedure. The sphero-cylinder correcting the diplopia of the right eye has been ground opaque for one-sixteenth of an inch above the horizontal plane, so as to obliterate sight in the lower field of vision in this eye. Then there has been attached to the lower portion of the frame the wire network used in protection glasses. This is carefully adjusted to fit close to the face, the perforations in the gauze having been stopped by painting. Vision is thus cut off below and under the spectacle. In this way, vision for the affected eye is only through the upper part of the myopic correction, and the necessity for a prism is done away with.

DR. W. F. MITTENDORF, of New York, read a paper on

TWO EPIDEMICS OF MOLLUSCUM CONTAGIOSUM.

The contagiousness of this affection has been a matter of much dispute. The two epidemics which had come under his notice had occurred in asylums for children. In the spring of 1885, a little girl having one or two small warts on the eyelid was admitted to one of these institutions. In a few weeks other children exhibited similar growths on the eyelids, in some cases spreading to the lips and to the nose. Within three months after the admission of the first case, twenty-seven children were more or less disfigured by this affection.

In the second institution as many as forty children were affected at one time.

As soon as attention was called to the condition, energetic treatment did away with it. Excision with scissors and touching the base with nitrate of silver proved most satisfactory. Unless excision is employed, the disease is apt to return.

DR. W. F. MITTENDORF, of New York, described a case of

MELANO-SARCOMA OF THE CONJUNCTIVA AND ORBITAL TISSUE.

The patient came under observation August 22, 1884. In April of that year a black spot appeared upon the lower part of the conjunctiva and was removed. When she came under observation two other tumors had appeared. They were about the size and shape of cucumber-seeds. Two or three spots, looking as though ink had been dropped on the eyeball, were also noted. The tumors were movable, and the conjunctiva surrounding them slightly congested. Otherwise the eyeball was normal and vision almost perfect. The growths did not affect the left eye, which was highly astigmatic. The patient was a strong, hearty woman, forty-six years of age, with no appearance of cachexia. There had been no injury to the eye, and the family history was good. The pre-aural glands and those of the neck were not enlarged. The tumors were removed and the wound in the conjunctiva brought together with sutures. Healing took place rapidly.

Four months later she returned with two growths starting from the lower portion and the outer canthus of the same eye. There was also a small flat growth on the cornea, not connected with the tumors. The tumors were again removed, and the patient returned to her home.

In the spring of 1886 she again made her appearance, with a small tumor the size of a cherry, which had developed at the seat of the former growths. The tumor, with a portion of the conjunctiva, was removed. A pre-aural gland and some glands in the neck were found slightly enlarged. The general health remained good.

Four or five weeks ago she again returned with another growth. The eyelids could not be separated. An incision was made, and the tumor removed.

Microscopical examination showed the growth to be a melano-sarcoma due to hemorrhage in the parenchyma. Pigment granules were also present.

DR. H. D. NOYES, of New York: In a case of melanotic sarcoma on which I operated some years ago, the disease has not returned.

DR. H. KNAPP, of New York, had operated on a number of these cases, but they have all, after a variable period, relapsed.

DR. B. E. FRYER, of Kansas City, read a paper on

THE USE OF HOT WATER IN SOME OF THE CORNEAL AND CONJUNCTIVAL INFLAMMATIONS.

The water should not be of a lower temperature than 140°, and as much higher as the patient can stand it. It may be used by fomentation applied to the closed eyelids. This is continued for half an hour at a time, and repeated every one, two, or three hours, day and night. It may also be applied by suspending a vessel above the patient, and allowing the water to escape through a tube, thus keeping up a continuous action of the hot water. In some cases the temperature may be raised almost to the boiling point. In some cases of purulent ophthalmia the hot water may be thrown into the conjunctival sac.

In purulent conjunctivitis this application cuts short the attack more quickly and safely than the use of ice-cold

water. In gonorrhœal ophthalmia it quickly lessens the swelling, and diminishes the occurrence of ulceration of the cornea. If ulceration has commenced it is less likely to progress, and the amount of cicatricial tissue is lessened. In catarrhal conjunctivitis and phlyctenular ophthalmia it is a good adjuvant. In acute and chronic keratitis it is useful. Its most marked effects are seen in corneal ulcer. The small amount of opaque tissue left is astonishing. The pain and photophobia are also diminished by the hot water.

Dr. William F. Norris, of Philadelphia, read a paper on

ASTHENOPIA AND THE CHANGES IN REFRACTION IN ADOLESCENT AND ADULT EYES.

The speaker first referred to the changes occurring in the shape of the eyeball at various periods of life. It is regarded by some as not necessary to correct slight errors of refraction, but the author considered their correction as of great importance when they produce asthenopia. By removing the trouble the congestion and softening of the eye is removed, and the lengthening of its visual axis is prevented. This congestion and softening were regarded as important factors in the production of astigmatism and conical cornea.

A number of cases of diminishing hypermetropia and of hypermetropia passing into myopia were described. Diminishing hypermetropia and increasing myopia are simply different stages in a process essentially the same. They are both the result of softening of the eyeball and slow distention in the direction of the visual axis. Careful correction under a mydriator in these cases is one of the best means of preventing their further progress. The enforced rest of the eye thus obtained is an important aid in diminishing the congestion.

Dr. E. Gruening, of New York, referred to an interesting group of cases in which the patient, on arising, has pain in the eyes, with photophobia, passing off in an hour or two. He was not able to fix on any object for any length of time. There is also lachrymation. These symptoms are usually associated evidence of nasal disease. All the affections due to nasal irritation are increased by the recumbent position, for this favors congestion of the erectile tissue of the nose. He has treated these patients by removing the nasal trouble, and in a series of two hundred cases, one hundred and fifty have been benefited, while the remaining fifty have passed from observation.

The meeting then adjourned.

Thursday, July 22d—Second Day—Morning Session.

The meeting was called to order at ten o'clock.

Dr. S. Theobald, of Baltimore, read a paper entitled

THE AMBLYOPIA OF SQUINTING EYES: IS IT A DETERMINING CAUSE OR A CONSEQUENCE OF THE SQUINT?

He criticised the view that the amblyopia exhibited by squinting eyes is a congenital defect, and argued in favor of the older view that the amblyopia is secondary to the squint and due to the mental suppression of the visual image formed in the squinting eye. He stated, in the first place, that it is a mistake to call this variety of amblyopia "amblyopia exanopsia," as the amblyopia is not due simply to want of use of the squinting eye, but to an active cerebral process which induces a much more rapid loss of vision. Schweigger and Alfred Graefe believe that squint is often due to a non-establishment after birth of retinal identity. If this were the case, as there would be, from the first, no stimulus to binocular fixation, the squint ought to develop in early infancy, whereas it is rarely met with then, but usually makes its appearance about the fourth or fifth year. They both also lay stress upon the fact that some squinting eyes (even when there is no alteration) retain good vision for years, while others, which have squinted but a short time, are highly amblyopic. These observations, however, do not conflict with the suppression theory, for, as the amblyopia doubtless develops during the forming stage of the squint, it is reasonable to suppose that, in some cases, it will have reached a high grade by the time the squint is fully established; while, on the other hand, a marked difference in the refraction of the two eyes (because then the diplopia will be less annoying) will explain the retention of vision in the squinting eye.

The most convincing argument, however, in favor of the suppression theory is that the peculiar regional characteristics which the amblyopia exhibits are of just such a nature as we should anticipate if this hypothesis be the correct one, but entirely inexplicable if we suppose the amblyopia to be a congenital defect.

Dr. H. D. Noyes, of New York, did not accept the conclusions presented in this paper. His objections were based upon an experience and careful observation for a number of years. It had been claimed that before the development of the squint such patients have had binocular vision. There is no proof of this, and the evidence is against it. Again, he had the records of a large number of cases of monocular amblyopia, presumably of congenital origin, without lesion demonstrable by the ophthalmoscope, which had had no squint, although there may or may not have heen hypermetropia. Binocular fixation after operation is not infrequent, but, according to his experience, binocular vision is obtained in only one-fifth of the cases. It is rare to find material improvement in an amblyopic eye after operation.

Dr. O. F. Wadsworth, of Boston, agreed with what Dr. Noyes had said. Ten years ago he convinced himself that the amblyopia of squinting eye was not due to disuse. He thought that after operation there is no decided improvement in vision. He had never been able to increase the vision to any extent after operation.

Dr. George C. Harlan, of Philadelphia, said that he had at times attempted to compel the patient to use the affected eye, by keeping the fixing eye under the influence of atropia for a long time, and in some cases he had succeeded in improving the vision in the amblyopic eye.

Dr. W. F. Mittendorf, of New York, said that, while in those cases where there is a central scotoma we cannot expect any improvement from an operation, yet there are cases in which vision is at once improved. He thought that this was to be explained by the removal of the undue pressure exerted by the internal and external recti muscles, which is different from that exerted by the superior and inferior recti. Taking away this pressure puts the eye in a more favorable condition, and we should expect better vision.

Dr. B. Alexander Randall, of Philadephia, reported

TWO CASES OF SEVERE TRAUMATISM OF THE EYE, WITH PARTIAL DISLOCATION OF THE LESSER CRYSTALLINE LENS.

In the first case there were three points of rupture of the sclera. The upper half of the lens was in the anterior chamber, in front of the iris, the lower half, apparently, being in nearly the normal position. The lens receded under rest in bed and other appropriate measures. The scleral rupture healed, and vision increased to about one-thirtieth of the normal. The injured eye shows little tendency to grow worse, although the lens is still luxated backward.

In the second patient, a boy aged twelve, the lens was less markedly luxated, but the ophthalmoscope showed two rents in the choroid, the larger a little outside of the macular region, the other close to the temporal margin of the optic disk. The case progressed to an excellent recovery. The appearances of the eye-ground were illustrated by colored sketches.

Dr. J. S. Prout, of Brooklyn, read a paper on

RADAL'S OPERATION—EXCISION OF THE INFRA-ORBITAL NERVE FOR THE RELIEF OF GLAUCOMA, WITH CASES.

In 1882-83, Badal, of Bordeaux, proposed the excision of the infra-trochlear nerve for the relief of glaucoma accompanied by pain. He selected this nerve because it is the direct extension of that branch of the ophthalmic, the nasal, from which the eyeball received its nervous supply. It emerges from the orbit just below the insertion of the pulley of the superior oblique muscle. It is readily reached by an incision along the margin of the orbit running from the pulley to the upper margin of the tendon of the orbicularis muscle. It is small, soft, and not easily recognized. It is to be stretched and torn by pulling directly forward. The *rationale* of the operation is not explained.

In severe cases, when a short delay may be fatal to the eye, Badal advises that the operation be combined with evacuation of the aqueous humor.

Dr. Prout had performed the operation nine times on five patients, which he reported. All were unpromising cases. In one there was for a time decided improvement of vision; in one there was temporary relief from moderate, and one from severe, pain. One was a case of glaucoma simplex, operated on without benefit; another a case of hemorrhagic glaucoma, not benefited. Others have reported much better results.

Dr. Prout drew the following conclusions: The operation has been shown to deserve further trial, especially in cases unfit for operations on the eyeball. It cannot make matters worse as to the eyes. Relief of pain, even if only temporary, is worth procuring at the cost of so slight an operation. It is important that cases be recorded, so that its value may be ascertained.

Dr. C. S. Bull, of New York, stated that where he had performed the operation for the relief of pain in glaucoma or ciliary neuralgia, while the relief was marked immediately after the operation, it was temporary only, and in every case returned.

Dr. H. Knapp, of New York, read a paper on

ADVANCEMENT OF TENON'S CAPSULE IN STRABISMUS.

The operation is performed by De Wecker in the following manner: A piece of conjunctiva, five millimetres long and ten millimetres high, is detached from the region of the insertion of the tendon, leaving a small band near the cornea. Tenon's capsule is now incised near the insertion of the tendon, and loosened alongside of and under the muscle. The capsule is then stitched forward by two sutures, entering through the conjunctiva to the capsule at the lower and upper edges of the muscle, and coming out in the conjunctiva above and below the cornea.

Dr. Knapp, during the last few months, had done the operation ten times. His operation differed from that above described in leaving a broader conjunctival flap and in using a third middle suture. The operation was performed in two cases of convergent strabismus due to paralysis of the external rectus, two cases in which former tenotomies had not overcome the difficulty, and in six cases of convergent strabismus of high degree, with considerable amblyopia. The results have all been quite good.

In none of the cases has there been any alarming reaction. Antiseptic precautions have been employed in all cases. The speaker preferred advancement of Tenon's capsule to simple advancement of the tendon, because the operation is simple and attended with less risk. His experience with limited advancement of Tenon's capsule has been quite encouraging.

Dr. J. S. Prout, of Brooklyn, read a paper on

NEW-FORMATION IN THE VITREOUS OF BOTH EYES.

In the right eye there is a body arching forward. There is no evidence of any relation to the papilla. The speaker thought that it was in all probability a remnant of the fœtal circulation of the vitreous. In the left eye there was a similar body. Drawings showing the appearance presented were exhibited.

Dr. Emil Grüening, of New York, reported

A CASE OF [illegible]

Dr. Edward Jackson, of Philadelphia, presented a lens series for the refraction ophthalmoscope.

Dr. John Green, of St. Louis, exhibited and described a new series of test-letters.

Dr. Charles A. Oliver, of Philadelphia, presented a set of metric test-letters and words for determining the amount and range of accommodation.

Dr. S. D. Risley, of Philadelphia, described

A CASE OF [illegible] ALBUMEN [illegible] INDUCED PREMATURE LABOR.

The patient, the wife of a physician, was seen when she was between the fourth and fifth months of pregnancy. She had suffered with headache and giddiness. The urine had been examined a week previously and no albumen found. At this time there was marked disturbance of vision. In a previous pregnancy she had had albuminuria, but no trouble with sight. In a second pregnancy there had been no trouble. The ophthalmoscope showed albuminuric retinitis of both eyes. The urine contained a large quantity of albumen. After consultation, the induction of abortion was advised.

Labor was induced, and she was delivered of a fœtus at five months. She then passed into an unconscious condition, in which she remained four days. There were no convulsions. As consciousness gradually returned, evidences of right-sided hemiplegia with aphasia were noted. The quantity of albumen gradually diminished, and six months later the lady was able to return to her ordinary duties. There were still some traces of aphasia, but vision was greatly improved.

Dr. B. Alexander Randall exhibited a modification of the Loring ophthalmoscope, which consisted in adding a series of cylinders.

Dr. J. A. Andrews, of New York, read a paper on

THE FREQUENT INSTILLATION OF A TWO-PER-CENT. SOLUTION OF NITRATE OF SILVER IN PURULENT OPHTHALMIA.

He had employed this method in twenty-five cases of gonorrhœal ophthalmia, and the eyes were seriously damaged in none of them. The cases were all severe, with much discharge, chemosis, and swelling of the lids. The applications were repeated usually three times a day; sometimes as often as five times per day. The use of the nitrate of silver is graduated to the amount of hyperæmia, and especially to the amount of swelling of the lids. If this be marked, instillations may be repeated frequently.

Dr. Russell Murdoch, of Baltimore, exhibited an impervious covering for the sponge in the administration of ether.

Dr. H. D. Noyes, of New York, read a paper on

MEASUREMENT OF ASTIGMATISM BY THE OPHTHALMOMETER OF JAVAL AND SCHIOTZ.

The following papers were read by title: "Burns o the Eye by Fulminate of Silver and Fulminate of Mercury," "Cases of Foreign Bodies in the Globe, including Two Cases of Spontaneous Extrusion."

OFFICERS ELECTED.

President—Dr. William F. Norris, of Philadelphia.

Vice-President—Dr. Haskel Derby, of Boston.

Secretary and Treasurer—Dr. C. [illegible] of Boston.

Corresponding Secretary—Dr. J. S. Prout, of Brooklyn.

The next meeting will be held at the Pequot House, New London, Conn., on the third Wednesday of July, 1887.

Adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 23, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIBNEY presented, in behalf of a candidate, specimens illustrating certain lesions of *club-foot.*

REPORT OF THE COMMITTEE ON MICROSCOPY.

DR. G. C. FREEBORN, from the *Committee on Microscopy*, reported that the *enlarged bronchial glands* presented by Dr. J. Lewis Smith contained tubercle bacilli well marked.

The brain specimen presented by Dr. Putnam-Jacobi at the last stated meeting revealed no evidence of carcinomatous growth.

The tumor presented by Dr. Wylie at the last stated meeting was a *calcified dermoid cyst.*

DR. H. MARION SIMS presented a rather rare specimen of

DOUBLE FIBROID OF THE OVARY,

which, when removed, weighed between five and six pounds. The patient was sixty-three years of age, was operated upon three weeks previously, and made a good recovery without any unfavorable symptoms. Change of life occurred eighteen years ago. She was the mother of one child, twenty-six years of age. In March last she first noticed a swelling in her abdomen, but supposed that it was due to wind in the bowels. It did not yield, however, to such domestic remedies as were used, and she consulted a physician in Summerville, N. J., who recognized a tumor, and referred her to Dr. Sims, who diagnosticated probable fibroid of the ovary, with ascites, and removed it by operation as already stated. The abdominal incision was about seven inches in length. The tumor was firmly adherent posteriorly in the cul-de-sac, and an unusual amount of force was required to break up the adhesions. The pedicle was long and rather broad; it was ligated with silk and dropped. A drainage-tube was introduced, which was removed on the second day, and from that the patient went on to recovery rapidly.

DR. RICHARD T. BANG presented a specimen of

SPINDLE-CELLED SARCOMA OF THE BREAST.

Mrs. T——, thirty years of age, and a native of the United States; has been married nearly five years, but has had neither children nor miscarriage. Family history perfectly good. The patient has always enjoyed excellent health, which has been but slightly impaired by the occurrence of this growth. About four years ago, without any known cause existing therefor, she noticed a small lump about the size of a hazel-nut in the upper and outer portion of the left mamma. This lump gave her absolutely no inconvenience, and it increased in size so slowly that at the end of three and a half years it was but slightly larger than an English walnut. At this time (in December, 1885) she received a severe blow on the breast by accidentally falling over a chair, and from this moment on, the tumor grew most rapidly, so that when I saw the patient for the first time, on May 6th last, I found fully two-thirds of the mammary gland involved by the growth. There was no retraction of the nipple, and only occasional slight pain was complained of. A solitary, very moderately enlarged gland (about the size of a cherry-pit), was found in the left axilla, and no cachexia or depreciation of the general health existed. The skin over the tumor was unbroken, and not implicated by the growth, and the tumor itself was freely movable and unattached to the pectoral muscles. The mass involved the upper and outer two-thirds of the breast, and was stony hard, solid, and heavy to the feel. Just above the nipple pretty deep-seated fluctuation was discovered, and a probable diagnosis of either cystic sarcoma or fibroma having been made, the patient was advised to have the entire gland extirpated. Dr. McBurney, who saw the case in consultation, concurred both in the diagnosis and in the advice given. On June 2d he accordingly, with the assistance of Dr. A. Blauvelt, performed the operation in the usual manner. Corrosive sublimate solution, 1 to 1,000, bone drainage-tubes, and catgut ligatures and sutures were employed, and the wound was dressed with iodoform, iodoform gauze, bichloride gauze, wood-wool, etc. This first dressing was allowed to remain on for ten days, and when it was removed the wound was found to be perfectly healed, excepting a small sinus at either end. Two more dressings have been applied, and this morning both sinuses were found perfectly and firmly healed, and the patient was discharged cured.

The temperature remained normal throughout the treatment.

On section the tumor was found to be made up of a dense, white, lobulated structure, in which was found a cyst which contained about three tablespoonfuls of a sanguineous fluid. The tumor had been examined by Dr. Frank Ferguson, who reported it to be a typical spindle-celled sarcoma.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

[From our Special Correspondent.]

THE TEMPERANCE CONGRESS—DR. RICHARDSON IN A NEW ROLE—DR. NORMAN KERR ON LEGISLATION FOR HABITUAL DRUNKARDS—MR. KNAGGS ON TRINIDAD—THE LONDON TEMPERANCE HOSPITAL—SMALL POX AND THE ARRANGEMENTS FOR ISOLATION—A CONVALESCENT HOSPITAL FOR LONDON—SOCIETY OF MEDICAL MEN QUALIFIED IN SANITARY SCIENCE—THE SOCIETY OF APOTHECARIES—THE EXODUS FROM LONDON.

LONDON, July 1, 1886.

THE event of the past week has been the British and Colonial Temperance Congress. The profession has not been unrepresented. Dr. Richardson turned up as usual, and on this occasion appeared in a new character, viz., that of an anti-tobacconist. It is to be hoped he will not stump the country on a crusade against nicotine—not but what plenty may be said against it—but the learned doctor is so enthusiastic when he does take up any cause that there is no knowing what he may do. Should he take up the subject, I trust he will not fail to denounce the increasing custom of smoking among mere boys. The number of youthful smokers to be seen in the streets of London is something appalling.

To return to the Congress. Dr. Norman Kerr, who seems to have an insatiable appetite for statistics and tables, read a paper on "Colonial Legislation for the Habitual Drunkard." He referred first to the laws on the subject in force in the United States, and said that the generous and thoughtful provision there made for the victims of the mightiest tyrant on earth put to shame our own disgraceful neglect of an urgent duty. Referring then to our own colonies, he said that they, too, put us to the blush. He then gave a brief *résumé* of the legislative enactments in force in Ontario, Quebec, Nova Scotia, New Brunswick, Manitoba, South Australia, and New Zealand, and pointed out that in these colonies compulsory and permanent laws were in force, whereas our own Habitual Drunkards Act was but permissive and only a temporary measure, its operation being limited to ten years.

Mr. Robert Knaggs (Port of Spain) read a paper on Trinidad, and referred to the number of lives which had been sacrificed there under the notion that alcohol was a necessary stimulant in a depressing tropical climate. In the last twenty-five years twenty-seven members of the medical board had died, and twelve of these owed their premature disease to free living in the matter of

alcoholic drink. Temperance had made some recent progress in the island, and Mr. Knaggs said he believed the drinking customs were being slowly undermined. The doctors were now far more cautious in giving alcohol to their patients, and particularly so in regard to taking it themselves.

After the Congress, the delegates present were invited to visit the London Temperance Hospital. First opened in 1873, it has been successively enlarged until at present one hundred and twenty patients can (as soon as funds permit) be accommodated in the new building in the Hampstead Road. Since the foundation of the hospital, 3,486 in-patients have been admitted, of whom only 183 have died. No alcohol is given unless specially prescribed, and it has been ordered in only a very few cases. In fifty-three cases of typhoid fever it was not given once. Out of the 53 typhoid cases in the ten years ending April 30, 1884, only 5 died, and but one of these was an abstainer. The medical staff are now preparing for publication a series of special tables, showing the results of the treatment of a number of acute diseases without alcohol.

The small-pox epidemic in London has virtually disappeared. One of the elements contributing to this desirable result has doubtless been the admirable arrangements for isolation made by the Metropolitan Asylums Board. Five land hospitals and one floating hospital are under the control of the board for the reception of small-pox cases. In connection with these are three ambulance stations, three steamers for conveying patients to the floating hospital at Purfleet, and two wharves from which they can be consigned from the ambulances to the steamers—a third wharf being now in course of construction. Where possible, patients are taken by steamer down to the floating hospital at Purfleet. During the severe epidemic of last year the river steamers carried 10,971 patients between London and Purfleet, about half of this number being convalescents returning from the floating hospital and convalescent camp. These, of course, are isolated from the patients. During the last epidemic the floating hospital (which consists of two ships for patients, and a third to accommodate the hospital staff) had at times as many as four hundred patients on board, more than a hundred sometimes going down the river in steamers in the course of the day. At present only ten patients are at Purfleet.

An executive committee, of which Sir J. Risdon Bennett, M.D., is chairman, has been formed to carry out a scheme for founding a convalescent hospital for London. This scheme was set on foot last year, and is now in a fair way of being realized. A special feature of the new institution is that medical and surgical treatment is to be provided for its inmates, and it will therefore differ very largely from the numerous convalescent homes, excellent institutions as many of the latter are in their way.

A society of medical men qualified in sanitary science has been formed, with Sir Joseph Fayrer as its president. The first annual meeting has just been held.

The Society of Apothecaries, which was shut out by the two colleges when they combined together for examination purposes, has now applied to join the combination, and the authorities at Blackfriars have pointed out that if not allowed to do so, they will be able, under the new medical act, to appoint assistant examiners and confer a statutory diploma. This would expose the two royal colleges to a very serious competition.

I must now pause and allow your Brighton representative to take up the tale; he will, no doubt, send you an account, not only of the Brighton meeting, but of Brighton itself, from a medical point of view. Everyone who can is now leaving town, and as next week the centre of medical life will be shifted to Brighton, I propose to resume the correspondence from London after the great gathering at Brighton has dispersed and my Brighton colleague bids me resume my pen again.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from [illegible], 1886.

MURRAY, ROBERT, Brigadier-General and Surgeon-General, U. S. A., retired, August 6, 1886.

BENTLEY, EDWIN, Major and Surgeon. Ordered from Department of Texas to Department of the East. S. O. 179, A. G. O., August 4, 1886.

APPEL, D. M., Captain and Assistant Surgeon. Ordered from Department of the East to Department of Texas. S. O. 179, A. G. O., August 4, 1886.

MIDDLETON, PASSMORE, Major and Surgeon. Granted leave of absence until September 10, 1886. S. O. 100, Division of the Atlantic, August 3, 1886.

WHITE, R. H., Captain and Assistant Surgeon. Ordered from Angel Island, Cal., to San Diego Barracks, Cal., relieving Captain Leonard Y. Lorings, Assistant Surgeon. S. O. 64, Department of California, July 28, 1886.

APPOINTMENT.

To be Assistant Surgeons with the rank of First Lieutenant, A. G. O., August 2, 1886:

HARRIS, HENRY S. T., January 5, 1886.
WOOD, LEONARD, January 5, 1886.
BANISTER, WILLIAM B., January 26, 1886.
MASON, CHARLES F., May 5, 1886.

PROMOTIONS.

To be Surgeons with the rank of Major, A. G. O., August 2, 1886:

BARTHOLF, JOHN H., Captain and Assistant Surgeon, January 4, 1886.

KIMBALL, JAMES P., Captain and Assistant Surgeon, January 24, 1886.

Official List of Changes in the Medical Corps of the United States Navy, from [illegible], 1886.

RUSH, CHARLES D., Passed Assistant Surgeon. Detached from the Receiving Ship Franklin and ordered to the U. S. S. Pinta.

WILLSON, W. G. G., Passed Assistant Surgeon. Detached from the U. S. S. Pinta, ordered home and await orders.

THERAPEUTIC NIHILISM AT VIENNA.—In 1877, during my trip from Paris here, I made the acquaintance of a very intelligent English attorney. He said, "You are going to Vienna to study?" I answered in the affirmative. "Well," he said, "I want your card, for I am going next year to America, and may need a physician, and I want a man who has studied at Vienna." I asked why. He replied, "This is the reason. The old school give large doses of medicine, homœopathists give small doses, but the Vienna school give none, and that is what suits me." He was not far from the truth. All the remedies that Professor Bamberger has prescribed this term could be counted on the fingers of both hands. No aconite; in fact, no arterial sedative; digitalis as a heart-tonic and diuretic; quinine only occasionally, where a very high temperature exists that does not yield at once to cold baths or sponging. His frequent use of calomel reminds one of his father's practice forty years ago. Cold baths are less frequently and persistently used than ten years ago. One hour and a half Bamberger often gives to the delineation of a single case, but of this time five minutes suffices for all he has to say as to its therapeutical management.—Vienna Cor. *Weekly Medical Review.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 7, 1886:

	Cases.	Deaths.
Typhus fever	2	1
Typhoid fever	29	3
Scarlet fever	11	1
Cerebro-spinal meningitis	3	3
Measles	15	—
Diphtheria	55	27
Small-pox	—	—

Why some Young Doctors go to Europe.—I asked a new graduate of one of our Western schools, where I know clinical advantages are at a minimum, to go with me to hear Bamberger. His first question to me was, "Doctor, what is your specialty?" My reply was internal medicine in its broadest sense, with all the gynecology I can find to mix in. His reply was, "Doctor, you make a great mistake; take some specialty, that is all the rage in America! I am after the throat, and when I get back to Indiana I shall expect to do a big business." What absurdity, when we consider the vast and intimate relation of the diseases of the throat and nose to other organs of the body, for a young man to take up such a specialty before he is a thorough physician in the widest acceptation of that term. He further told me he did not understand German, and had no idea of attempting to learn it; that he had spent some time in New York in a throat clinic, and he believed that the advantages there were far superior to what could be gotten in Vienna, but that a man must have the reputation of having studied in Vienna, or it was no go in a large town in America.—Vienna Cor. *Weekly Medical Review.*

The Association of American Physicians.—A Washington correspondent of the *Journal of the American Medical Association* charges that this new organization has been established in opposition to the American Medical Association, and with the design of absorbing or destroying it. He seems to be a little worried over the contrast which he says will be attempted to be made between the Association of American Physicians and the American Medical Association in the eyes of the medical world, and inquires, somewhat irrelevantly, whether the American Medical Association is "to be degraded by a set of men in its own ranks, in a profession which teaches and has always taught [and practised?] fraternity of feeling and good-will toward its fellows." A terrible prophecy is the peroration: "The day will come when such as seek to destroy the great temple of medicine in such ways—by caprice and whims and spitefulness—will wofully repent it, will abhor themselves sooner or later, and be ashamed of their associates who, with themselves, lifted a hand or voice to aid in such nefarious work."

Accuracy in Compounding Prescriptions.—The result of a curious but very important test as to the accuracy with which chemists, druggists, and others make up prescriptions committed to their care has recently been presented to one of the London vestries. Fifty prescriptions were sent out to ordinary druggists, to co-operative stores, to "doctors' shops," and to certain traders styling themselves drug companies. The mixtures made were afterward analyzed to find out how nearly they agreed with the prescriptions they represented; but in order to give a liberal margin for error, it was resolved not to put a black mark against anyone if the chief constituents were within ten per cent. of the amount ordered; in one instance it was fifty-seven per cent. in excess. The chemists and druggists came out best in this strange competition, as only six per cent. of their prescriptions had to be called in question. Next came the co-operative stores, with twenty per cent. of error; then the "doctors' shops," with fifty per cent.; and lastly the drug companies, who are credited, or rather discredited, with seventy per cent. of errors.—*Provincial Medical Journal.*

Effect of Mental Overwork upon the Teeth.—Among the hard-worked pupils of the Paris public schools the teeth become deteriorated in a few weeks after entry. The second dentition is often premature. These observations confirm the statements of Dr. J. L. Williams, who has given great attention to this subject. He has shown that any mental strain shows itself upon the teeth in a short time, both in increased decay as well as in increased sensibility of the dentine. Dr. D. M. Parker has reported that these same changes are always apparent in men who are in training for athletic trials.—*Boston Medical and Surgical Journal*, June 3, 1886.

Spontaneous Transformation of Morphine into Apomorphine.—A solution of hydrochlorate of morphine for subcutaneous injection (three per cent.) was ordered for a patient, and its injection was promptly followed by relief of the pain without any gastric symptoms whatever. Eleven months later the patient made use of the same solution; but this time the injections gave rise immediately to violent and uncontrollable vomiting. The solution was given to a well-known analyst at Paris for examination, and he ascertained that apomorphine was present, thus accounting for the sickness. He recommended in consequence that solutions of the salts of morphine should never be kept longer than four weeks, and that freshly prepared solutions should not be mixed with the old.—*British Medical Journal*, June 26, 1886.

Babies and Perambulators.—Several writers in the English medical press have recently called attention to the dangers to which infants are exposed when wheeled about in the ordinary way in their perambulators. It is stated that many diseases of the throat and chest are caused in this way, and the remedy proposed is that the children shall sit or lie facing their nurses. The back of the perambulator will thus protect the child from the wind, and at the same time it will be more directly under the eye of the nurse, whose view will not be obstructed by the wagon-top.

The Use of Ergot for illicit purposes has increased so much in Rome that the prefect has issued a circular to the syndics of the city and province, calling upon them to enforce the regulations as to the sale of the drug. It seems that the same medical prescription is unlawfully used for its purchase over and over again, in spite of a pontifical regulation still in force. Pharmacists and midwives are cautioned that if they violate the regulation they will be denounced to the judiciary authorities for criminal proceedings, and if convicted, the severest penalty will be imposed.—*Medical Press and Circular.*

Vaccination in Japan.—The Japanese do not appear to have lost any of their faith in the efficacy of vaccination for the small-pox. They have just enacted a very stringent law on the subject, for, besides ordinary vaccination in the first year of infancy, it provides for at least two subsequent revaccinations at intervals of from five to seven years, so that by the time a child has reached its fifteenth year it will have been vaccinated three times. During epidemics of small-pox, local authorities also have power, when they deem it necessary, to order the vaccination of all the inhabitants of their districts, irrespective of the vaccinations required by the law.—*Sanitary Record.*

Medical Education.—There are in the United States no fewer than 89 regular medical colleges, with about 10,000 medical students; 8 of these medical colleges have each from 300 to 600 students, and 7 of them have from 200 to 300 students.

A New Method of Taking the Temperature.—Filatoff recommends that the temperature in children should be taken by previously warming the thermometer and then observing the degree of heat, instead of the use, of the mercury. The thermometer bulb is placed in the axilla, and it is asserted that not more than two minutes are required for obtaining a very accurate record of the temperature.

A New Berlin Society.—An association has been formed in Berlin, of dentists who have received their scientific education and training in America. It is called the "German Association of Doctors in Dentistry Graduated in America," and has established a *Journal für Zahnheilkunde* which is to be the organ of the Society.

Confusion in the Treatment of Scarlet Fever.—Dr. J. M. Sooy, of Philadelphia, writes to show how the therapeutists of the regular and of the homœopathic schools have erred in their modes of administering belladonna in scarlet fever. Belladonna, he says, given in small doses produces dryness, paleness of the skin, and sometimes a bluish color of the mucous membranes. This anæmia is caused by the contraction of the arterioles, the agent being a stimulant to the vaso-motor system; but when belladona is given in larger doses it causes dilatation of the arteries and a fall of blood-pressure. This action is induced by an overstimulation of the vaso-motor nerves, and it is the secondary, and not the primary, action of the drug which gives to the superficial parts an appearance not unlike scarlatina. If now a small dose cause anæmia, it is evident that such a plan of treatment would reduce the inflammatory material. But this is not according to the laws of homœopathy, but of antagonism. If large doses should be given, there would be overstimulation of the vaso-motor system, and a condition not unlike the eruption of scarlatina would result. This would be according to the law of similars, but would not be productive of beneficial results. In regular practice belladonna has been abandoned in the treatment of scarlet fever, and has been proclaimed as worse than useless, because his deficient knowledge of therapeutics has led the physician into homœopathy; whereas the homœopathist still speaks in high terms of the many virtues of the drug, owing to the fact that he has followed ignorantly the law of antagonisms, and not the law of similars, and has, consequently, obtained good results.

A very Democratic Correspondent writes us: "I have long been a reader of The Record, and have noticed in its contributions and proceedings of the various societies the language almost invariably used by members of the profession. We were all taught in our younger days that in the United States there was no such a thing as classes among her citizens. Observe the allusions so often quoted: 'The upper, the middle, and lower class of patients.' It sounds too monarchical; the words should have no place in an American journal; but probably its English or imported, you know; or can it be possible the country has a class of Cæsars acting as physicians and surgeons?"

Hydronaphthol and Beta-naphthol.—Beta-naphthol was introduced by Kaposi in 1881 as a parasiticide in diseases of the skin, but was soon found to be a dangerous poison, even when applied externally, and its field of usefulness was consequently much restricted. Recently a new antiseptic agent, called hydronaphthol, has been brought to the notice of the profession by a firm in this city. It seems to be nearly related to beta-naphthol, although it differs from it by its melting-point, shape of crystallization, and reactions. It has been stated by Professor Jacobsen, of Berlin, that the two were identical, but Dr. Justus Wolff sends us a communication asserting that this is by no means the case. Samples of beta-naphthol, declared by Professor Jacobsen to be chemically pure, and of hydronaphthol, were obtained, and equal parts of each were given to two rabbits. The rabbit which had received the beta-naphthol died in a short time, but the one to which an equal quantity of hydronaphthol had been given did not seem to feel any effects at all and remained healthy and vigorous. Dr. G. R. Fowler reported in the *New York Medical Journal* a number of successful operations in which hydronaphthol had been employed as the only antiseptic, and in which no untoward effects had been observed, and none at all resembling those reported by others as resulting from the action of beta naphthol. Dr. Wolff concludes therefore that two chemical compounds, of which one is a deadly poison and the other not poisonous at all, are not identical in their composition or chemical constitution, and must be two distinct substances.

A Well-Proven Test.—Before commencing the autopsy, Dr. Crevenger recommends holding the hands over strong liquid ammonia, when the smarting which ensues will reveal all sensitive or abraded places that need a touch of caustic before beginning the examination.—*Weekly Medical Review*.

New Method of Preparing Fehling's Solution.—Schmiedeberg uses mannite in place of Rochelle salt in making Fehling's solution. He claims that the addition of mannite insures stability to the solution. His formula is as follows: Dissolve 34.632 gm. of crystallized copper sulphate in 200 c.c. of water; to this solution is added a solution of 15 gm. of very pure mannite in 100 c.c. of water and 480 c.c. of solution of caustic soda (1.145), and, lastly, sufficient water to make 1 litre.—*American Journal of Pharmacy*.

The Dead in the Morgue.—We do not think it right that a Chicago medical college should procure its anatomical material from the St. Louis "Potter's field."—*St. Louis Weekly Medical Review*.

The Watermelon.—Prof. [illegible] recommends the watermelon as a cheap but effective substitute for grapes in the treatment of chronic congestion of the liver, chronic intestinal catarrh, and similar affections.

New Metric Abbreviations.—The International Committee of Metric Weights and Measures has adopted the following system of abbreviations. Italics are employed, with the exponents 2 and 3 to denote square and cubic measure: Metre=*m*, decimetre=*dm*, centimetre=*cm*, millimetre=*mm*, kilometre=*km*. Metre square=m^2, metre cube=m^3, and so for the rest. Litre=*l*, decilitre=*dl*, etc. Kilogram=*kg*, dekagram=*dkg*, gram=*g*, decigram=*dg*, centigram=*cg*, milligram=*mg*.

The Manufacture of Skeletons.—A correspondent of the *Medical Press and Circular* describes what he saw in an establishment for the preparation of skeletons in Paris. He made the acquaintance of a female "bone-peeler" at one of the hospitals, and was conducted by her to the factory, situated in the outskirts of Paris. The building to which he was conducted was an immense wooden construction subdivided into a main *atelier* and out-houses. The larger room was occupied by a series of large cauldrons, the emanations from which were, even to one accustomed to the suave odor of the dissecting-room, nauseating in the extreme, and the blend formed with that of various crude antiseptics was more peculiar than fascinating. On stirring up the *soupe* contained in the cauldrons with a broomstick, a heterogeneous collection of limbs was seen, many of them having evidently been amputated. A grinning head, with glaucomatous eyes and fleshless lips, came to the surface now and again with a ghastly leer, which was at once lost in the froth which covered the seething liquid. The disarticulation of skulls is carried on separately, as it is a branch requiring greater skill and nicety in its manipulation. It is effected on the skulls of young adults or children by filling the emptied cranial cavity with dried peas, which are

then steeped in water, and in swelling compel the disjunction more delicately than could be done in any other way. After prolonged boiling the limbs are placed on a table and the adhering tissues carefully removed, each workman or workwoman having his or her own specialty. The bones are then bleached, the cheaper varieties simply by means of chloride of lime, the better ones in the sun, and they ultimately pass into the finishing-room, where they are assorted, and converted, as far as may be, into "articulated skeletons." It requires no small amount of ingenuity and knowledge of this particular department to be able to choose out of the miscellaneous collection of bones wherewithal to construct a skeleton which shall pass muster for that of a single individual, and only the best bones are so adapted, the remainder going to make up the disarticulated and half-skeletons which have to answer the purposes of study for the more economically disposed students. In another tank, awaiting treatment, were a number of infant bodies, varying from minus four months to plus several days. In the show-rooms they were arranged in a graduated scale (*échelle mortante*), from the diminutive little ex-mortal, whose height did not exceed four inches, to the adult baby measuring from eighteen to twenty, all being in the attitude known in the military world as that of "attention." These have a special value of their own, far greater in proportion to their size than that of their bigger brethren. The supply was obtained from the hospitals and dissecting-rooms and in part also from the various convict establishments.

A Novel Obstetrical Experiment.—Dr. Shustoff writes in *Russkaya Meditsina*, of April, 1886, that he was called to see a woman who had been in labor five days. The pains had begun well but had since ceased. Upon examination he saw something black protruding from the anus, and a little pulling brought to light a sausage over seventeen inches long and fourteen inches in circumference. The pains now began again, and the woman was soon delivered of a dead child. Dr. Shustoff found on inquiry that the sausage had been introduced on the recommendation of an old woman of the neighborhood, in order to insure the birth of the child by the normal passage. This was probably the old wife's best attempt at supporting the perineum.

Painless Cautery.—It is said that a saturated solution of nitric acid and muriate of cocaine makes a painless cautery. In our hands the solution causes some pain, but little. It is strange to contrast the effect of the cocaine applied previous to the application of the acids and when it is used combined with the acids. In the first case it will require four or five minutes to get its physiological effect, and in the last we have the instant effect of the cocaine.—*Alabama Medical and Surgical Journal.*

A Peculiar Form of Dropsy.—Dr. M. Pargamin writes, in the *Russkaya Meditsina* of April 27, 1886, that he was called to see a young woman who was said to have dropsy, which the brother thought she had caught from one of his fellow-workmen who was suffering from a similar affection. On examination, it was found that the woman was in labor, the child presenting by the arm. Dr. Pargamin turned and delivered, but the abdomen was still much distended, and it was not until two more infants appeared that the dropsy was definitely cured.

Righteous Indignation.—A writer in an exchange thus introduces some eloquent and forcible remarks on a case of abortion which had come to his knowledge: "The low muttering thunders of destruction and roaming blizzard of the birth-strangled babe have just swept over our sister city, Atlanta, and now begin to disturb the gentle zephyrs of the Magic City."

A Memorial Hospital in Albany.—Mrs. Leland Sanford has purchased a piece of land on Washington Avenue, Albany, adjoining the site of the old Lathrop mansion, and, it is stated, will erect on it a handsome and well-appointed hospital for old men and women, as a memorial of her parents.

Scarpalogy.—This is the latest science which has come to rival palmistry, and is the art of reading a man's character by the shoes he wears, or, rather, by the way in which he wears them. One of its exponents recounts, in a French journal, *La Graphologie*, some of the axioms of the art. If the heel and sole of the shoe are worn down evenly, the owner is a good business man, energetic and quick to decide. If the outer side is most worn, the wearer is fond of adventures; while, if the inner side is most used, he is of an irresolute and rather weak character. Other traits of character, both good and bad, are equally clearly and infallibly expressed by the under side of the shoes, and the writer claims that he can read a man's disposition better in this way than by his handwriting. His soul is, as it were, pictured by his sole.

Carbolic Acid in Whooping-cough.—Dr. W. T. Cory has recently recommended again carbolic acid in whooping-cough. Dr. C. W. Suckling (*British Medical Journal*) believes, from his experience with it in twenty-three cases, that it is almost a specific. He gives the glycerine of carbolic acid in mint-water.

Dr. George W. Dewey of Moberly District, Mo., thus forcibly descants on some of the delusions of the day: On Gynecological delusions, the first gynecologists we read of lived in Judæa early in the Christian era. They got stuck on a Uterine Polypus of twelve years' standing. They took all the money a poor woman had, but failed utterly to cure her.

> As yet the doctors had not come
> To use the duck-bill speculum,
> Nor douches up vaginas sent,
> Nor introduced sea-tangle tent.

. . . Every woman who enters the office of the gynecologist is informed she has a retroversion or an anteversion, or a prolapsion, or cervicitis, or a cellulitis, or laceration, or some other uterine malady, and that to make a correct diagnosis, and to apply treatment, she must at once assume the classic genupectoral or Sims position. No sooner done than she is defloured by a Sims duck-bill. Not only married women but young virgins must submit to this deflourment. Not long since I was called to see a beautiful girl of sixteen summers, in whose countenance one could behold the *ne plus ultra* of virgin health, who informed me that for a slight pain in her back she had the day before called in a young gynecologist, who very gravely informed her she had "womb disease," and that it would be necessary for him to examine her with a speculum. She called on me to know if such damnable procedure was necessary. I told her I would as soon think of raping her. I advised her to keep her maidenhead, that it was a priceless jewel, and that such an examination was wholly unnecessary, and was proposed solely to gratify the idle or lecherous curiosity of a fool. . . . But once in a practice of forty years have I deemed it necessary to make a vaginal examination of a maid, and then it was in consultation with my friend Dr. Martin. The patient was a blushing maid of sixteen summers—a blackberry blonde. Her ancestors came originally from Zanzibar. She had a vaginal discharge, and as there was some doubt about its nature and cause, we very hesitatingly proposed a vaginal examination, to which she with much reluctance finally consented. Our diagnosis was gonorrhœa! . . . Our daily papers are filled with cuts and advertisements gynecological. Every reading lady of fifteen is posted on flexures, prolapsions, and "female weakness." A bitter wail comes up from New England that the native population are becoming extinct. Syringes, sponges, and womb-veils will exterminate the descendants of the Mayflower. The quidnunctious Yankee woman is posted in gynecology. She never breeds. The next decade of aggressive gynecologists will demand a gynecological chair in our female colleges, the business of which will be to teach young ladies how to avoid conception.

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Original Articles.

SUPRA-PUBIC CYSTOTOMY; EXTRACTION OF LARGE CALCULI; CORROSIVE SUBLIMATE POISONING.

BY WILLIAM T. BELFIELD, M.D.,

GENITO-URINARY SURGEON TO THE COOK COUNTY HOSPITAL, CHICAGO.

MAY 29, 1886, I saw, in consultation, M. B——, seventy years of age, who for nine years had suffered from a cystitis of steadily increasing severity. Eight physicians in various parts of the country, who had successively treated him, had agreed that the cause of the cystitis was prostatic enlargement; several surgeons had sounded him for stone with negative result, the last examination having been made under chloroform last year.

The patient was found emaciated, feeble, practically bed-ridden; urinating by catheter every half-hour or oftener, day and night; complaining of constant pain, aggravated by bodily movement, above the symphysis, in the rectum, and especially around the navel. He had been long in the habit of using morphine; for over two years had been unable to empty the bladder, except by catheter. The prostate was much enlarged laterally as well as vertically, but was smooth and symmetrical; the urine contained much pus and some blood. These symptoms indicated a vesical calculus as well as prostatic enlargement; though I supposed, from the negative results of exploration by his former medical attendants, that the stone was probably small, and either encysted or ensconced below the projecting prostate. (In three cases I have, upon digital exploration of the bladder, found thus concealed small calculi, which the sound in my own and other hands had failed to detect.) The patient was so convinced, by previous examinations, of the absence of calculi that he refused permission to use the sound; but he was anxious to have an attempt made, at any risk, to relieve the prostatic obstruction, which he had been taught to regard as the cause of his agony.

June 7th, with the assistance of Drs. Miller, Schaefer, and Randell, I undertook supra-pubic cystotomy for the purpose of removing, by galvano-cautery, that portion of the prostate which I assumed projected into the bladder. As soon as the patient was etherized I, for the first time, introduced a sound; it immediately became apparent that the bladder contained a large calculus. Having injected into the bladder seven ounces (all it would hold) of boracic acid solution, I made the usual incision down to the bladder and upon the point of a sound which then emerged through the vesical wall. At this stage much difficulty was experienced and time expended in the effort to enlarge the incision, the greatly hypertrophied bladder clasping the sound most rigidly; finally the wound was enlarged by the finger-nail.

The finger in the bladder found a median prostatic tumor about one inch in breadth, and projecting nearly an inch into the vesical cavity; behind and below this lay a calculus of about the size and shape of a walnut; adherent to the fundus was a second stone, a triangular prism in shape, 1½ inch long and 1¼ inch broad. Several attempts to extract the first stone failed on account of its size; it was therefore crushed and the fragments removed. The second stone, after resisting efforts at crushing, was with much difficulty extracted entire. The patient was by this time so collapsed—having been under ether more than an hour—that I deemed it unwise to prolong the operation, and abandoned the removal of the prostatic projection, which could have been accomplished without great difficulty. A drainage-tube was inserted in the lower angle of the wound and a soft catheter in the urethra; as the edges of the wound had been much bruised by the extraction of the intact calculus, no sutures were inserted.

Next day the temperature was 100.5° (the highest observed) and pulse 108; on the third day the temperature was normal and so remained, with slight variations. The wound was irrigated once daily with a bichloride of mercury solution, one to one thousand, and the bladder washed with a boracic acid solution.

Progress was favorable until the eleventh day, when there began a severe diarrhœa with rectal pain and tenesmus. Under camphor and opium slight improvement was noted. Two days later patient complained of a strong metallic taste, and the stools were slightly tinged with blood. It was not until then that the probable significance of the symptoms—sublimate poisoning—occurred to me, and that the use of the solution was discontinued.

Diarrhœa persisted, and was now accompanied with severe pains in the rectum and abdomen; the pulse became more rapid and feeble, and the patient was evidently failing. A week later (about the twentieth day after operation) a decided improvement in both local and general symptoms began, and became so decided that strong hopes of ultimate recovery were again entertained. At the beginning of the fifth week, however, diarrhœa and abdominal pains again became severe; the patient, though never vomiting, resolutely refused food because of the nauseating metallic taste; he rapidly sank, and died July 13th, the thirty-sixth day after operation.

As no autopsy was permitted, I was enabled to make only a hasty examination of the abdominal contents and to secure the bladder and kidneys. The peritoneum was normal, free from all traces of inflammation recent or old; there was no suppuration in nor around the bladder. The vesical wall was about five-eighths of an inch thick; the mucous membrane healthy except for a few small ecchymoses; the kidneys and their pelves were normal; under the circumstances the intestinal canal could not be examined.

Although no other case of sublimate intoxication through irrigation of wounds has come under my observation, yet a perusal of reports in current literature leaves little room for doubt that such intoxication existed in the present case; in how far it contributed to the fatal result, and to what degree this termination was due to senile exhaustion, may be debatable questions. The factor which so often causes death after (perineal) operations on the hypertrophied bladder—cysto-pyelitis—was certainly absent.

The calculi weighed two ounces and six drachms.

612 OTERA HOUSE BLOCK.

DR. WHITESIDE HIME, who lately delivered an address on "Pasteur and Protective Inoculations against Zymotic Disease," at the Royal Institution, is reported to be suffering from a wound inflicted in performing a post-mortem examination upon a dog which had died from rabies. He has gone to Paris to place himself under the treatment of M. Pasteur.

TWENTY-ONE CASES OF "TOY-PISTOL" WOUNDS, WITH A NEW METHOD OF TREATMENT.

By CHARLES A. POWERS, M.D.,

SURGEON TO OUT-PATIENTS, CHAMBERS STREET HOSPITAL, NEW YORK.

DURING the month of July of every year the daily press chronicles the death of a varying number of children from wounds produced by the "toy-pistol;" two such deaths have come to my knowledge, the present year, from professional sources, and I have read of many more in the daily papers; and while the mortality doubtless forms but a small percentage of the entire number of cases, it is yet sufficiently great to attest the danger which attends this class of injuries, and to demonstrate the importance of special care in their treatment.

These wounds are inflicted at very short range, and may be produced by an ordinary pistol from which is fired a blank cartridge, usually of .22 calibre, or by a smaller weapon upon which a cap is exploded. In the former the wound is made by the wadding of the cartridge, in the latter a piece of the cap is blown into the tissues.

In the cases presented herewith no distinction is made regarding the weapon used, though in the majority of the cases the injury was due to a wad from a blank cartridge; in no case was a bullet the source of trouble.

In by far the greater number of cases the palm of the hand is the seat of injury, and this rationally accounts for the attendant mortality: a foreign body is lodged beneath the palmar fascia, and, as a septic focus, may rapidly occasion cellulitis, and, possibly, septicæmia or pyæmia. In the newspaper reports above mentioned tetanus was generally given as the cause of death; its danger in palmar wounds is too well recognized to need comment.

During the ten days immediately before and after July 4th of the present year, twenty-one patients sought treatment at the Out-patient Department of the Chambers Street Hospital for wounds produced by the "toy-pistol." One of these, a boy, twelve years of age, had received a wound of the hand between the index and middle fingers six days previously, and had been treated by a physician, though the method of treatment was not ascertained. When first seen the hand was the seat of diffuse cellulitis, greatly swollen, hot, painful, reddened, brawny, and œdematous; the wrist and forearm were commencing to swell, the epitrochlear and axillary lymphatics were enlarged and painful. The discharge from the wound was scanty and ill-conditioned. Constitutional symptoms were limited to anorexia, headache, and general muscular weakness.

He was etherized, the wound enlarged and explored to a depth of one inch and three-quarters, but at that time no foreign body could be found. Free incisions were made on both palmar and dorsal surfaces of the hand, and compresses wet with a two and a half per cent. solution of carbolic acid were applied, and frequently changed.

The original wound was stuffed with the wet gauze, and on the eighth day a large wad was discharged from it. The cellulitis quickly disappeared, the wounds gradually closed, and on the twenty-eighth day he was discharged with a perfect result.

The remaining twenty had been hurt but a short time before they came under observation. They were all males, and the average age was eleven years. In fourteen cases the wound was situated in the palm of the hand or in the cleft between adjacent fingers; in three cases a finger was the seat of injury; and in one each the upper eyelid, the abdominal wall, and the gluteal region. The wounds varied in depth from one quarter of an inch to two inches.

In all of these twenty cases the following plan of treatment was adopted and thoroughly carried out: The parts about the wound were well cleansed with a solution of the bichloride of mercury—one part in one thousand—a free incision made at the site of the wound, as nearly to its bottom as seemed practicable, foreign bodies removed if they could be found, the wound itself thoroughly washed out with the bichloride solution, and loosely packed and dressed with compresses wet in the same.

In most of the cases the sides of the wound were blown full of powder, and for the first few days the discharges were markedly blackened by this.

The dressings were changed daily, and at each time the wound was well syringed out with the sublimate solution, in some instances wads or pieces of cap being washed away. When the discharges assumed a healthy appearance, the wound was dressed with the balsam of Peru.

The wounds healed kindly, and, on an average, were completely closed in sixteen days. In one case—a deep wound between the thumb and index finger—there was moderate reaction in the surrounding tissues the first day; but this went down within twenty-four hours, and it was the only complication of any kind whatever. In no case was there septicæmia, tetanus, or even cellulitis, and in every case the result was in all respects perfect.

This, then, seems to me to be the proper, and, in fact, necessary way of treating these toy-pistol cases: Scrupulously to cleanse the surrounding parts with an antiseptic solution of sufficient strength, make an incision at the site of the wound of such extent and to such depth that the discharges may have free exit, wash the wound out antiseptically, drain it, and let it granulate up from the bottom.

Of course one would avoid the palmar arches, or other important structures. Pain is prevented by the injection of a few minims of a four per cent. solution of cocaine, and a small brush will be found useful in thoroughly cleansing the bottom of the wound.

It was noticeable that in most of the cases of palmar wound the hand was in the position of the *main en griffe* when the patient first presented himself, and it retained that position for one or two days. It must have been due to a reflex paralysis of the interossei muscles, for it was independent of any direct injury to the ulnar nerve.

REMOVAL OF THE UTERINE APPENDAGES.

NINE CONSECUTIVE CASES.

By MARY A. DIXON JONES, M.D.,

GYNECOLOGIST TO WOMAN'S HOSPITAL OF BROOKLYN, N. Y.

CASE I. *Fibromyomata; chronic salpingitis; enlarged and cystic ovaries.*—Y. D——, aged thirty-five; married thirteen years; two children, youngest seven years of age; no miscarriages. Menstruation commenced at the age of thirteen; menorrhagia. When eighteen years of age, menstrual more frequent, lasting longer terms, and accompanied with pain; sometimes only one week in the four was free from the flow. Her general health began to suffer, for which she was given various tonics.

I was called to see the patient March, 1885. She was then very anæmic, weak, and prostrated, and there was mental depression; pulse full, and a temperature varying from 99° to 99½° F. On examination I found two subperitoneal uterine fibroids; uterus measured four inches in width, and its hard, irregular surface left no doubt that there were intramural growths. The cervix was lacerated, perineum ruptured, and the uterus had a tendency to sink down into the lower part of the pelvis, thereby interfering, to some extent, with the functions of the rectum and bladder.

This condition of the uterus, with the accompanying hemorrhages, was no doubt the cause of her suffering and ill-health, and though fibromyomata may be regarded by some as harmless and seldom fatal,[1] yet the complications in this case would certainly lead to some disastrous re-

[1] "Relatively few of them are fatal." (Pepper's System of Medicine, vol. iv.).

sult.[1] Her cachectic appearance and the low grade of constitutional disturbance suggested the possibility of some inflammatory action, or even the possibility of carcinomatous or sarcomatous degeneration.[2]

But whatever were the conditions of the patient, she must be relieved if possible. Her system seemed now on the limits of its capability of endurance, the tumors were evidently increasing in size, and might at any time cause dangerous pressure or fatal hemorrhage. The question was, what was best to be done. Should we commence using ergot, with the vague hope of somehow having good results? Would the sub-serous tumors and the interstitial fibroids be favorably affected thereby? Could we be justified in placing her for months under the influence of ergot, risking the dangers of abscesses and ergotism? Would she live to stand the long and uncertain experiment? And were we not equally uncertain of any good result?[3]

Should we try the various "sorbefacients," iodides, bromides, and chlorides, which are said to have the power of removing these neoplasms?[4] I could not believe this would be of the least efficacy, and their long-continued use would only derange an already enfeebled stomach, and still more impoverish an already impoverished system.

Should we try electrolysis, piercing the tumors with long electrolytic needles? Such a proceeding in this case would be attended with grave and unusual dangers. Should we remove the sub-serous tumors, according to Schroeder's method of partial hysterectomy? The operation is extremely dangerous, and, even if successful, there would still be the interstitial fibroids, which probably were making most of the trouble. Enucleation and traction have had brilliant results in the hands of two of our eminent American gynecologists, yet, with our present advance in surgery and improved methods of operating, hysterectomy seemed less appalling and less hazardous, and would more fully meet all the indications in this case.[6]

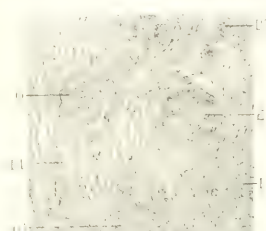
There was left for consideration either hysterectomy or removal of the uterine appendages. In the present state of the patient, a necessity for the former operation would be unfortunate, and the uterine appendages were so diseased that *their* removal was a necessity.[6]

I decided to do either hysterectomy or Tait's operation, as would be best for the patient. May 19, 1885, the patient was received into my private hospital, and on May 23d I performed the latter, assisted by Dr. C. C. Lee, Dr. C. N. Jones, Dr. S. King, and Dr. J. C. Minard. The condition of the uterus was well examined, and it was deemed advisable to remove only the appendages. There was considerable difficulty in securing a pedicle. The ovaries were three times their normal size, and projecting from each one was a cyst the size of a hen's egg. It seemed almost a question whether we were operating for cystic ovaries or for a fibroma.

The patient slept well the night after the operation; next day took some nourishment; sixth day ate solid food with relish. Temperature, 98⅗°; pulse, 70. Eighth day, stitches removed; abdominal wound entirely healed. On the twenty-fifth day after the operation she was discharged from the hospital well, and walked four blocks that morning without any discomfort. She has continued to grow strong, and has been in excellent health ever since, has gained in flesh, is active and vigorous, and says she has not been as comfortable or as well since she was a girl. The size of the tumors are gradually diminishing.

Macroscopical examination: The tubes are long and tortuous, the ovaries are enormously enlarged, and on their surface exhibit numerous cicatrices. On section the structure is dense and fibrous, and enclosing numerous cyst cavities.

Microscopical examination:[7] Both ovaries are in a state of chronic ovaritis. All the special ovarian tissue



[illegible] I, groups of inflammatory corpuscles of recent date [illegible] ovum, coarsely granular; E, ovum split up [illegible] O I, ovum split up [illegible] to epithelia and inflammatory corpuscles.

is replaced by dense fibrous connective tissue, coarse fibres interlacing. The left ovary in its cortical portion exhibits nests of inflammatory corpuscles, which shows that the morbid process in portions of the ovary is subacute. In the cortical substance of the ovary are still left a few small ova, and it is interesting to trace out under the microscope the manner in which the ova are destroyed. We could also see groups of epithelia, when an ovum had been split up into its constitutional elements; still other groups gave a cluster of partly epithelial and partly inflammatory corpuscles, which latter had arisen from the epithelia. Such inflammatory corpuscles mixed with those arising from the connective tissue and the smooth muscle-fibres, showed the formation of cicatricial fibrous connective tissue.

CASE II. *Chronic [illegible] ovary; salpingitis.*—Miss L. M——, single; thirty-five years of age. Menstruation commenced at the age of

[1] "Fatal results by no means infrequent" (Meadows' Brit. Gyn. Journal). "Uterine myoma is fatal in a much larger number of instances than is generally supposed" (Tait, Brit. Gyn. Journal). "The gravest [illegible] hemorrhages, mental depression and anxiety, and disturbance of the functions of nutrition and excretion, which usually drag the patient down to the grave" (Thomas, p. 654).

[2] "I have had several instances under observation where the tumor of a simple fibroid rapidly underwent the metamorphosis into sarcoma (Emmet, p. 545). "The weighty authority of Virchow is cast into the scale favoring the possibility of sarcomatous degeneration" (Thomas).

[3] "Much harm has resulted from the injurious use of ergot" (Emmet). Thomas says he has known many fatal cases of sloughing when the rigidly contracted os prevented a resort to surgical procedures. "The moment the treatment ceases the hemorrhages come back as violently as ever" (Lawson Tait).

[4] "It is not possible by therapeutical means to obtain a sensible diminution in the volume of a real fibrous tumor" (Scanzoni). "We have never obtained any sensible results from the internal exhibition of iodine" (Scanzoni). "Medical treatment is worse than useless, it is a mere waste of time; I would say, scarcely honest" (Meadows' Brit. Gyn. Journal). "I very much fear that no remedy exists that will exert any influence on the growth of these tumors, or cause their absorption" (West and Duncan). "We know of no means whereby they can be made to disappear short of a surgical operation" (Hewitt, op. cit., p. 569). "No such effect can be looked for with any confidence" (Thomas). "We are to-day ignorant of any means, other than extirpation, by which a hard fibroid can be removed from the uterine tissue" (Emmet, op. cit., p. 566). "I have never seen a single instance, nor an approach to one" (Tait, May 27, 1885). "The medical treatment of uterine fibroma is a myth" (Lawson Tait).

[5] "I have seen several deaths occur from it in this city" (Emmet). "The profession has not generally consented to the adoption of this measure as safe and efficacious" (Pepper's System of Medicine, p. 270, vol. iv.).

[6] "The results of enucleation (interstitial fibroids) are by no means encouraging. We class the operation among the most hazardous in surgery" (Diseases of Women, West and Duncan). "It really deserves, as far as I am concerned, the appellation of the word butchery" (Lawson Tait, Brit. Gyn. Journal). Emmet says: "In this city alone three deaths have occurred from perforation by the hand of three different operators when dexterity could not be questioned" (Op. cit., p. 607). Dr. More Madden, before the British Gynecological Society, speaks of the "*less heroic measures*, such as enucleation and removal by traction," and says: "I think the operation of enucleation, which is really a very simple operation, and which has been very successful in my practice, is preferable in suitable cases. By this operation I have removed not only large submucous fibro-myomas, but also interstitial, and in some instances partly sub-serous, tumors." One case he reports: "Uterus retroflexed, hollow of the sacrum occupied by a large globular interstitial tumor, as large as a fœtal head at the seventh month." The uterine cavity was laid open and the uncertain instruments were plunged in, pulling forth the tumor. "A large coil of intestines followed," as if to know whether he so unkindly knocked or no. The instruments were in the peritoneal cavity! Now able to see what was the injury, how to repair it, or how to clean the cavity. The patient was in collapse, but fortunately recovered. The second case he reports: "Uterus completely retroverted, a considerable-sized tumor was found bulging into the uterine cavity. The most prominent portion of the tumor was firmly grasped by the vulsellum and forcibly dragged down through the os, and as far as possible into the vagina; and the growth was thus cut away. In this way we had removed more than two-thirds of the growth when the patient became collapsed. On the second night after the operation she again became collapsed, sank and died." As I see it, a carefully and well-arranged hysterectomy is less dangerous, and gives a more intelligent chance of saving life. About the time of my operation, or just before, I had the pleasure of witnessing Dr. C. C. Lee perform hysterectomy, at the New York Woman's Hospital, for an immense cystic fibroid of the uterus. The operation progressed pleasantly, and the patient made an excellent recovery

[7] The microscopical examinations were made in Dr. Heitzman's laboratory, part of them by Dr. Mary D. Jones and part by Dr. C. N. D. Jones.

thirteen; severe pain the first time, and she has never passed a period since without great suffering, the pain always commencing three or four days before the flow. The flow now lasts four or five days, not as long as formerly, nor is the flow as great, but the pain is constant and unremitting, so severe at times she can neither walk nor stand. She also states that her first attack of serious illness was fifteen years ago, when she was taken with a hard aching pain in the left side of the pelvis, which increased gradually year by year, ofttimes preventing her from sleeping, and frequently so sharp and lancinating that she had to scream with the agony. For this suffering she consulted many physicians, and had a great variety of treatment; some prescribed fly-blisters to be repeatedly placed over the lower part of the abdomen, and leeching at intervals; some used pessaries which she said "always made her worse;" for nine months she was treated for "inflammation and misplacement," with no relief; a year she was treated for "ulceration," no better results; for five years she was treated for "uterine congestion." The next physician, after attending her for some time, said he could do nothing more, and relieved by hypodermatic injections of morphia. Her last physician treated her for valvular disease of the heart; said the uterus was misplaced and bound down by adhesions. He also attempted to introduce pessaries, which, as before, "gave great distress."

The patient first called to see me May 5, 1885. I found the uterus acutely anteflexed, not adherent, ovaries small, tender, and exceedingly sensitive. The patient was extremely nervous, hysterical, and her mental condition somewhat disturbed. Many of her friends said "she was not exactly right in her mind." But I considered all these abnormal nerve symptoms due to reflex irritation from the condition of the ovaries, and informed the patient that an operation for their removal might be necessary.

I did not see her again for more than a month, and on examination found the same conditions I had previously diagnosed. The patient informed me that she had made efforts to get into a hospital, but had not succeeded. First applied to the Homœopathic Hospital in New York, was examined by the visiting surgeon, but not admitted. Next applied to a hospital in Brooklyn; after a consultation of the staff, she was informed that she was incurable, and the hospital did not receive incurables." I told her I would admit her in to my private hospital, give her any necessary treatment, and perform for her any operation that might be necessary for her recovery. The next day, June 18th, she entered. I had her immediately put in bed, kept quiet, good nourishment. Massage twice daily, bowels freely open, hot douches daily, and the skin kept active by warm baths and rubbings.

June 25, 1885, I performed laparotomy, assisted by Professor Wylie and Dr. C. N. D. Jones. Dr. S. King gave the ether; the ovaries and tubes from each side were removed. The next day her temperature was 101°, pulse, 98. On the fifth day she asked for beefsteak and toast for breakfast, and on the eighth day the sutures were removed from the abdominal walls, when the wound was found entirely healed, and on August 1st she was discharged from the hospital apparently well.

Macroscopical appearance of specimens: Both tubes are dilated; the left at one portion is dilated into a sac 2 ctm. in diameter, and at the fimbriated extremity the lumen is obliterated by inflammation. Both ovaries are smaller than normal, and contain numerous small cysts.

Microscopical examination: Section from left ovary gave a rather startling appearance; there were numerous comparatively large alveoli, or closed places, filled with a tissue endothelial in nature; the alveoli were surrounded by and closed with coarse fibrous connective tissue, richly supplied with blood-vessels. This connective tissue penetrated the alveoli, remaining fibrous in character, and produced elevations which were surrounded by endothelial tissue. The boundary line between the connective tissue and the endothelium in most places was sharply marked, in other places the two tissues blended without any definite line of demarcation. The endothelial tissue consisted of globular and polyhedral corpuscles, mainly arranged in rows, and freely intermixed with dark brown fat- and pigment globules. The rows of corpuscles are in many places interrupted by light gaps, probably caused by a liquefaction of these corpuscles. This tumor we would have to term either an endothelioma or an alveolar sarcoma

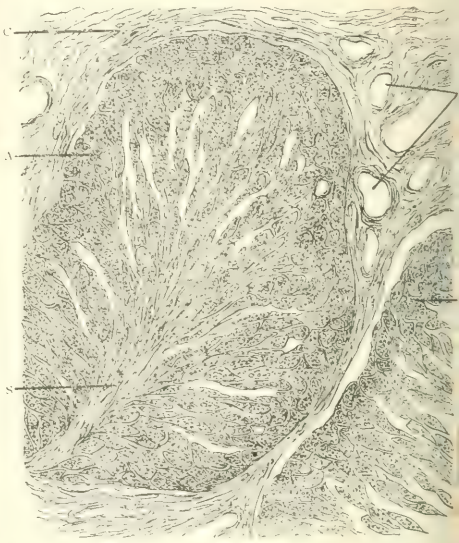


Fig. 3.—C, coarse fibrous connective tissue, with large blood-vessels; V, main venous in character; S, septum, or prolongation of connective tissue into a close space filled with globular and angular corpuscles in rows. Between the rows there are fat-globules and empty slits. A, cellular elements.

Right ovary contains cysts filled with an albuminous liquid. The arteries of the medullary portion are tortuous in a high degree, and their middle coat in a marked waxy degeneration; the stroma everywhere is transformed into dense interlacing connective tissue, the result of chronic ovaritis.

Many persons thought the patient could not survive the operation; but since it was performed she has been constantly gaining in strength and vigor. She looks well and her nerve conditions are improving. October 10, 1885, she called to see me, and said she had gone to church three times the previous Sunday—walking.

Case II. *Chronic pelvic peritonitis; pyo-salpinx ovaritis.*—H. J——, a frail little woman, aged twenty three years, weight seventy-five pounds, called to see me August 18, 1885. She has been married two years and eight months. Menstruation appeared at the age of twelve; no pain at first, but soon after she had dysmenorrhœa, which gradually grew more and more severe, and the menstrual flow more profuse, continuing eight or nine days. A year after marriage she gave birth to premature child, seven and one-half months, which lived only a few days. After childbirth she had a severe attack of septic peritonitis, which lasted eleven weeks; since which time she has not been able to go around constantly in bed, says the slightest exertion prostrates her, that she "suffers constantly with pain and soreness in the pelvis; sharp piercing pains darting and shooting up through the rectum, not a day that she does not feel these piercing pains, frequently many times during the day; that for seven years she has suffered thus, had ever

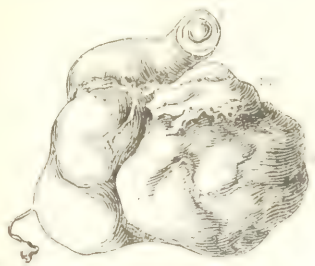
thing put on to draw the inflammation out:" now, she says, "she is willing to go through anything for the sake of being well." Her temperature and pulse were 99½ and 100 respectively.

I examined the pelvic organs, and found the cervix lacerated, excessive tenderness in the region of the ovaries, tubes enlarged and evidently fixed by firm adhesions.

At once, there seemed to be no other way of relieving her sufferings or curing her than by the removal of the uterine appendages. Still, while preparing her for the operation, I determined to see if treatment could not, according to the statement of some, cure her, and so supersede the necessity of an operation; for if anyone should be saved the dangers of an operation it was this frail, feeble little woman. One of our most distinguished gynecologists says some cases of tubal and ovarian disease can be cured by repeated applications of Churchill's tincture of iodine, hot douches, etc. I tried faithfully these, and, as I thought, all other recognized and approved means. The patient was in my private hospital, and everything was constantly done to improve her special and general condition. Her health grew better, and she seemed much improved in many respects, there was less peritoneal inflammation, the adhesions stretched and softened, yet, after all these three months of persistent and careful treatment there seemed to be just as much soreness and tenderness about the ovaries, the tubes seemed to be even more enlarged and prominent, the darting pains just as severe and frequent, the movement of the bowels just as painful, and the patient no more able to be out of bed. There was now as much necessity for the operation as there was three months previously. Her life was in peril without it. The patient was anxious and impatient for it to be performed; many times when other patients were to undergo operations she would wish it was her; often said, "she wanted her ovaries taken out." October 29th we commenced to prepare her especially for the operation, and on the 31st it was performed. I made the usual incision of two and one-half inches, the abdominal walls bled freely, and there was great difficulty in getting out the appendages on account of strong adhesions. Both tubes were firmly adherent by their extremities, and throughout their whole extent to the ovaries, and were very much dilated and filled with fluid. Their transparent attenuated walls seemed ready to burst. The pedicle on each side was firmly secured, appendages removed, and the peritoneal cavity washed out, but there was so much, and such continued oozing that a drainage-tube was put in. At 9.30 same evening, temperature 101°, pulse 130; fifth day, temperature 99½°, pulse 100. The tube was repeatedly washed out and the dressings changed, considerable bloody serum oozed out. On sixth day glass tube was removed and a small rubber tube inserted in its place. Eighth day, sutures removed; the patient seemed well, temperature and pulse almost normal, appetite good, and she *relieved of the pain* from which she had long suffered, yet the fistulous tract did not heal; there continued to be a small sinus from which constantly issued a slight discharge.

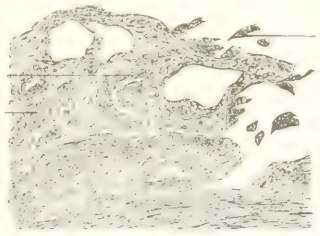
One day, some two months after the operation, as I was pressing the sides of this fistulous canal to see the quantity and nature of the discharge, there burst out a small white mass, which, upon examination, proved to be the ligature of one of the stumps—there was the Staffordshire knot exactly! The lower end of the drainage-tube had in some way become displaced toward the right side; probably in this way the ligature had become ejected and was consequently expelled. Soon after the passage of this ligature the fistulous tract healed, and there was no further trouble.[1]

May 20, 1886, her husband writes that she is feeling splendidly; that he could not have imagined that she ever could be as well. May 30th, she wrote: "Doctor, you have given me my life, and what is more, an interest in life."



tube firmly attached to the ovary.

Microscopical section of the left ovary revealed the presence of rather dense fibrous connective tissue, interlaced with small bundles of smooth muscle-fibres; follicles scanty. Ovary has the appearance of senile involution (M. I.). Microscopical section from the right ovary exhibits acute inflammation, arteries dilated and extremely tortuous (C). The tubes were in a state of chronic pyosalpingitis.



When we examine these structures we see how completely their physiological functions were destroyed. Even if we had aspirated the tubes, and so drawn off the pus, the ovaries were so diseased, the lining membrane of the tubes so changed, and there was such a desquamation of the epithelii, that there could not possibly have been any true functionating power. And the aspirating or opening and draining would have been as dangerous as the operation for removal, and there would still have been left the diseased structures to give trouble and distress, and be a cause of serious complications.

By this operation (Tait's) many cases can be restored to health who must otherwise suffer and die. I can now look back upon a practice of years, and remember many whom I could have cured if I had known of this operation at the time.

Case IV. *Chronic ovaritis; Abscess of left ovary; Pyo-salpingitis*—Mrs. D——, a delicate young woman, twenty-one years of age, married two years, no children; menstruation commenced at the age of thirteen, from the first it was accompanied with great pain, the pai commencing two or three days before the flow. After marriage dysmenorrhœa was much increased; she had an attack of gonorrhœa, which inflammation and infection extended through the tubes, causing inflammation so severe that she had to keep her bed the most of the time. When first seen by the writer she had been confined to her bed for some weeks, the whole pelvis was sore and tender, on each side of the uterus was a mass low down and extremely sensitive. In appearance the patient was small and imperfectly developed, there was no breadth or depth to the pelvis, and an apparent lack of

[1] Last October McBurney, of New York, performed the radical operation for hernia, using six silk ligatures; three remained two sinuses. On April 9th, in letting down he found the ligatures had not been absorbed. March 26, 1886, Dr. N. D. Jones performed same operation for an enormous hernia. A small fistula remained. May 20th the wound was opened in the line of the old cicatrix and the unabsorbed ligature removed, after which the wound healed rapidly.

vigor in every organ. She was removed to my private hospital, November 11, 1885, not able to sit up, had a quick, feeble pulse and a high temperature. She was placed immediately in bed, and had constant care day and night. By treatment the size of the mass was reduced, adhesions softened, and much of the sensitiveness relieved. The patient in every respect seemed in a very much better condition, had a good appetite, was able to be around, and was feeling comfortable. Some would have pronounced her "cured without an operation," but we knew the causes were still existing, ready to give trouble at any time.

The patient was very anxious that the diseased structures should be removed, though in some way she became fully impressed with the idea that she would not live. January 23, 1886, I performed the operation for the removal of the appendages, assisted by Dr. W. G. Wylie and Dr. C. N. D. Jones. Dr. Ingals administered the ether. The ovaries were large and adherent. Right ovary was first removed, it measured 2½ inches; the left one measured 3½ inches. In lifting the left ovary an abscess in the ovary burst, discharging a thick, greenish-yellow pus, some of which escaped into the peritoneal cavity. The cavity was well washed out, but the continual oozing from the broken adhesions made it necessary to put in a drainage-tube. For a long time after being placed in bed the patient seemed to be in a condition of extreme surgical shock, which lasted some hours. Her external surface was cold and clammy. Two attendants continued rubbing her for more than an hour before reaction was fully established. Her pulse continued to go up, and by next morning it was 170 per minute, and soon grew so rapid that it could not be counted; temperature, 101⅛°. By 11 P.M. the day after the operation her pulse was again 170 per minute; temperature, 101½°. Tube was washed out. On third day at 8.30 A.M. her pulse was 160; temperature, 100⅕°. Pancreatized milk was given by the rectum. Fourth day—pulse, 120; temperature, 101⅝°. Nausea and vomiting still continued; at 9 A.M. vomited dark fluid; gave seidlitz powders; washed out the tube, no vomiting after. Up to this time she had taken ten seidlitz powders. They had produced no operation on the bowels, yet in some way they seemed to have the power of destroying or carrying off the microbes, and so preventing any septicæmia.[1] From this time the patient began to improve rapidly, and Saturday morning, a week after the operation, she looked brighter, better, and stronger than she had looked for months. Seventh day the glass drainage-tube was removed and a small rubber tube inserted in its place, which was removed at the end of another week, and before the end of the third week the opening was entirely closed and the wound healed. Twenty-second day after the operation the patient left the hospital, rode three miles to another part of the city, stepped lightly from the carriage, ran up high steps to the front door, then up a high flight of stairs to the second floor; said "she felt perfectly well; had not a pain or an ache." March 2, 1886, she wrote: "I am feeling perfectly well, never felt better in my life; have an excellent appetite, and am gaining in flesh."

The cause of suffering was removed, which, if allowed to remain, would doubtless have caused her death before many months.

Macroscopical examination: Left ovary very much enlarged, upper surface exhibiting an opening with jagged edges, which led into a pus-cavity three centimetres in diameter, fimbriated extremity of Fallopian tube dilated into a pus-sack. A vertical section through the ovary exhibits two follicles, and in the centre an abscess cavity, with irregular walls. In its vicinity and toward the outer periphery the tissue is discolored, soft, and friable, indicative of beginning suppuration.

[1] On the slightest indication [illegible] promptly acting purgative, it matters not what (Tait, in British Medical Journal, May 15, 1886).

Microscopical examination: A section from the vicinity of the abscess exhibits a marked infiltration of the tissue with inflammatory corpuscles. Both the myxomatous and fibrous connective tissue are transformed into inflammatory corpuscles to a considerable extent. The smooth muscle-fibres likewise are transformed into such corpus-

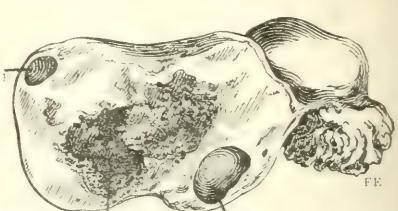


Fig. 1.—F, F, follicles; A, abscess cavity; FF, fimbriated extremity of Fallopian tube.

cles, and in many places rows of the corpuscles indicate their origin from smooth muscle-fibres. This transformation also invades the endothelium and the smooth muscle-fibres of the middle coat of the arteries, which near the apices appear to be completely destroyed. The cortical substance of the ovary not invaded by inflammation is of a marked myxomatous character.

The right ovary is in a condition of sub-acute inflammation. Portions of the medullary substance being transformed into dense fibrous connective tissue, other portions are crowded with inflammatory corpuscles.

Left Fallopian tube exhibits a marked inflammation and infiltration both in the mucosa and in the muscle-tissue. Right Fallopian tube is in a state of acute inflammation, both in the mucosa and muscle-coat.

Comparatively few cases of abscess of the ovaries are reported. In Scanzoni's work, p. 398, is recorded a case of abscess of the ovary; woman died suddenly from rupture of abscess into the peritoneal cavity. Emmet, in the last edition of his work, p. 651, says: "I have seen but one instance of this kind of ovary. A mass, the size of a hen's egg, was felt on left side. February 16th applications of pure carbolic acid was made to the fun-

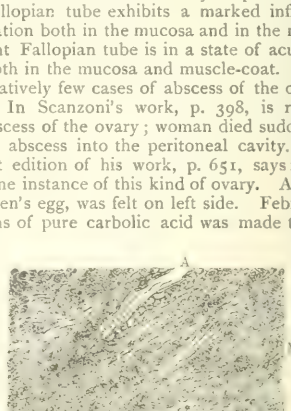


Fig. 2.—Superficial portion of [illegible] M, mass of inflammatory corpuscles originating from [illegible]; A, artery whose endothelial and muscle-coat toward the [illegible] completely transformed into inflammatory corpuscles; P, beginning formation [illegible].

dus daily by means of an applicator; 23d, sponge-tent introduced, canal dilated, granulations removed, and equal parts of carbolic acid and glycerine applied freely throughout the canal. March 25th, canal partially dilated to facilitate the application of carbolic acid. On 30th, when half awake, she turned suddenly in bed, when she felt something move inside of her, went into collapse, and died." From the autopsy, made five hours after death, the author says: "It was evident the ovary had long been the seat of an abscess."

Thomas, p. 667, quotes a similar case of collapse and death: "A blister had been applied on the hypogastrium, and opium given in large doses, five days after became collapsed and died. Autopsy eighteen hours after death; between the organs a great deal of puriform

serum; left ovary size of hen's egg; in its removal several ounces of pus escaped. No evidence of cellulitis."

Lawson Tait says, in his work on "Diseases of the Ovaries": "Abscess of the ovaries is a condition of extreme rarity, and in the majority of instances probably death occurs from the rupture of the abscess into the peritoneum. The only cases of abscesses of the ovary, in clinical experience of which I have been certain, are two." First case, op. cit., 61: "Left ovary contained two ounces of pus; both ovaries and tubes removed; patient recovered without a bad symptom." The second case, op. cit., 125: "Patient had suffered many years with great ovarian pain; much increased at the menstrual period; the left ovary contained two drachms of pus and appeared to be on the point of bursting into the abdominal cavity. Had it done so she doubtless would have died. Both appendages were removed, and she made a perfect recovery."

In the same work he quotes two cases that were reported in *The Lancet*, 1877. "One had an exploratory incision, patient died a few hours after; the other had an exploratory puncture, symptoms grew worse, and she died some months after." Tait remarks, "It is impossible to resist the conclusion that abdominal section, performed soon after the onset of serious symptoms, would have enabled the surgeon to have relieved his patient."

July, 1885, before the British Gynecological Society, Lawson Tait reported two cases of double pyo-salpinx together with abscess of right ovary. "The lives of both patients had been for months in jeopardy; the operations were of extreme difficulty; abscesses bursted; and very great care had to be taken in cleansing the peritoneum. The patients recovered" (*Brit. Gyn. Journal*).

April, 1886, Tait reports before the same Society another case of abscess of the ovary: "Operation extremely difficult and the hemorrhage severe" (*Brit. Med. Journal*, May 8, 1886).

Edis reported before the same society a successful operation for abscess of ovary.

As far as I have seen the reports, the only patients with abscess of the ovaries who have recovered are those for whom Tait's operation was performed.

Case V.—*Chronic ovaritis; pyo-salpingitis.*—Miss A. Y——, a young woman, twenty years of age, has suffered with constant pain in the pelvis for seven years, greatly increased at the menstrual periods, and at times extremely severe. But the most serious consideration in her case was the unhappy and abnormal manifestations of the nervous system, depression of spirits, and at times the contemplation of suicide. All of which symptoms I believed were largely due to reflex irritation from the thoroughly diseased condition of the ovaries and tubes. When first called to see her I found on examination uterus completely retroflexed and retroverted, both ovaries enlarged, sensitive, and dislocated down into the recto-uterine cul-de-sac. I made known to her her condition and the necessity for an operation. She at once accepted the idea and was impatient for the operation to be performed, frequently saying, "I want *both* ovaries and both tubes removed;" said that "for years she had suffered such distress and agonizing pain that she could stand it no longer."

She was by special and general treatment prepared for the operation. I removed the appendages from both sides of the uterus. She made an excellent recovery, and month by month she is growing stronger and more vigorous, her nervous system more and more normal, and she is enabled to enjoy life and attend to her ordinary duties.

Microscopical examination showed chronic ovaritis and pyo-salpingitis.

Case VI. *Hystero epilepsy; cirrhosis of the ovaries; salpingitis.*—Mrs. M. K——, aged thirty-six years. After the birth of the fourth child her health began to fail; great prostration, and suffering much with her back, constant pain and distress in the pelvis; and there was a history of gonorrhœal infection. The attacks of hystero-epilepsy were gradually growing more serious, her mind was becoming less active, and her perceptions more obtuse. Already her face had the dull, heavy expression of an epileptic. These epileptic attacks recurred at every monthly period; sometimes during the day she would have a continued succession of convulsions, with intervals of only a few minutes, struggling and throwing herself in all conceivable positions; frequently opisthotonus, and showing "le pied hysterique."

It was evident that these spasms or convulsions were caused by some internal irritation; and unless the cause was removed it was impossible for any medical treatment or appliances to help her, or prevent the recurrence of the spasms. Such cases usually tend to idiocy and death.

When I presented to her the hope of possibly relieving her by removing the diseased ovaries, she cordially accepted the idea, and on December 10, 1885, I performed the operation, in my private hospital, assisted by Dr. C. N. D. Jones. Dr. Cary gave the ether. Dr. J. L. Minard was present. The patient recovered well from the ether, and seemed scarcely sick during the whole convalescence from the operation; was up and around at the end of the second week. She has since done well in every respect, showing greatly improved nervous condition, and up to the present time, June 5th, has not had a return of the spasms, and the dull epileptic look is giving way to a more intelligent countenance.

Macroscopical examination: Ovaries small, hard, and nodular. When cut open they were markedly cirrhotic, composed entirely of coarse fibrous tissue, interlacing. Almost the whole gland-structure was replaced by cicatricial tissue. In the left ovary was seen the remains of only one follicle; in the right there were three, all of them located near the outer end of the ovary. The tubes were dilated into three cyst cavities and there were several small parovarian cysts.

Microscopical examination: Left ovary almost entirely transformed into dense fibrous connective tissue; no healthy gland-structure left. Right ovary, especially in its medullary portion shows, in some places, inflammatory infiltration, crowded with inflammatory corpuscles, while in other parts the ovarian tissue is transformed into dense fibrous connective tissue. The condition is sub-acute ovaritis. There is a marked dilatation and tortuosity of the blood-vessels, most of the arteries showing hyperplasia of the middle coat with marked waxy degeneration. The tubes are in a condition of well-pronounced salpingitis, both in the mucous and muscular portion. The tubal arteries show hyperplasia of the muscle-coat.

I conceive that nothing else would have relieved the spasms. No amount of bromides or massage—nothing but the removal of these diseased organs—organs which had organically changed in structure, which could no longer perform their functions, and hence were a source of irritation.

Case VII. *Salpingitis; ovaritis.*—M. S——, twenty-six years of age; married six years; two children, the youngest fifteen months old. She complained of great pain in her back, in her pelvis, and down her thighs, and so much bearing down, heaviness, and distress that she could not rest night or day; could not attend to her duties; was always tormented with this constant suffering. She had done everything to find relief. The cervix had been twice sewed up, the perineum had been restored, and lately the patient had spent seven months in a hospital, and the womb had been treated *ad nauseam*. Still her sufferings were just as great, as constant, and as continued. On examination I found the uterus completely retroverted, lips of the cervix gaping wide apart and covered with hard cicatricial tissue, the ovaries very tender and dislocated down into Douglas' cul-de-sac.

She entered my private hospital January 20, 1886. I sewed up the lacerated cervix for the third time, in hopes possibly of relieving some of her nervous symptoms, and as a little recreation to her while she should be prepared

for the more serious operation. Such was her nervous excitability that she had to be chained by some thought. I informed her that this operation would not relieve the great distress, and eight days after she pretty clearly informed me of the same fact; but the operation was an entire success, the wayward walls of the cervix were brought into perfect and easy coaptation, and there they will stay, a specimen of good workmanship! Wound healed by first intention.

The operation for the removal of the appendages took place February 10th. Present, Dr. C. N. D. Jones and Dr. Ingalls. Before the operation the husband informed me that "the desire for a family was nothing compared to the distress of seeing her constantly suffer." I know the mild-mannered man had groaned under her tantrums, and felt that he could not live with her and her two ovaries, too. The appendages were removed from both sides. The ovaries were atrophied, and had evidently been the seat of long-standing inflammation. Third day after the operation the patient was singing, and said she felt well enough to get up. As days passed on she perceived she was free from the old distress that had followed her for years. At the end of sixteen days she was discharged from the hospital, well.

I saw the patient May 6th. She was the picture of health; happy, cheerful, and active in her household duties; said she felt perfectly well, had no pain or distress.

Many suppose this operation renders a woman sterile, but we must bear in mind that she is already completely sterilized by disease. The operation takes away the cause of suffering, and enables the patient to lead a life of usefulness and activity, instead of suffering long years of invalidism.

Macroscopical examinations of specimens: Both tubes present an anomalous appearance. Each is lifted from the central portion outward, having two distinct sets of fimbriæ; the lumina of the twin tubes remain separate to the point at which they were severed from the uterus, and probably continued so until they communicated with the uterine cavity. The walls of the tube are much thickened, together with the meso-salpinx; in the latter there are numerous small cysts. The ovaries are small and atrophied. Nearly the whole portion of the left ovary is occupied by a large cyst.

Microscopical examination: Both ovaries are in a state of acute and subacute ovaritis, groups of inflammatory corpuscles mainly in the cortical portion. The arteries of the left ovary are in a state of waxy degeneration, and the stroma contains a large number of amylaceous corpuscles. Both tubes are in a state of acute salpingitis; both in the mucosa and muscle-coat there are groups of inflammatory corpuscles.

Case VIII. *Salpingitis; ovaritis; ovarian hæmatoma.*—Miss L. S——, aged twenty-three, has been suffering with pain in the pelvis for the last five years, very much increased at the menstrual period. Menstruation commenced at the age of thirteen. She suffered agonies, not only during the period, but for three or four days before; and for the last two years has been unable to attend to her ordinary duties.

She called to see me February 20th. On examination I found the uterus anteflexed and bound down by adhesions, and a large inflammatory mass low down on each side of the uterus. By treatment the conditions were very much ameliorated, and on March 27th she entered my private hospital, and on the 31st I performed the operation for removing the uterine appendages, assisted by Dr. C. N. D. Jones. Dr. Ingalls administered the ether. The abdominal walls bled profusely, and there was great difficulty in getting out the ovaries on account of dense and firm adhesions and extreme shortening of the broad ligament. She recovered nicely, with no drawback except unusual nausea and vomiting, probably due to chronic dyspepsia and an enlarged liver.

Macroscopical examination: The right ovary on one surface presents a ragged opening leading into a cavity three centimetres in diameter, which contains a large clot of blood, and is therefore the seat of a *hæmatoma saccatum.* The other portion is in a state of cystic degeneration.

In the left ovary there is *not the least vestige of normal ovarian tissue,* nor is there a single graafian follicle, or normal corpus lutea; the whole is occupied by an infinite number of small cysts, the larger of which is about one centimetre in diameter.

In the right ovary, stroma transformed into fibrous connective tissue to some extent, other portions occupied by inflammatory corpuscles; sub-acute ovaritis; waxy degeneration of the arteries; corpora amylacea.

Case IX. *Ovaritis; abscess of right ovary; chronic salpingitis; endo-arteritis (syphilitic?).*—M. B——, twenty-four years of age, unmarried. Menstruated at fifteen; before the appearance of menstrualin was subject to attacks of dizziness. The last five years she has suffered with almost constant pain in the pelvis, very much in creased at the menstrual periods, and for the last three years the intense pain has commenced a week before the flow, and continued during the period, being so sharp and severe that she has had to keep her bed lately most of the time.

She was sent Febraury 10, 1886, by one of the consultants to the Woman's Hospital clinic. On examination I found the whole pelvis exceedingly tender, the slightest pressure from the outside causing pain; the uterus was acutely anteflexed and the appendages drawn up by adhesive inflammation. While in the Woman's Hospital she was treated, the uterus dilated, etc., but the menstrual pain continued just as severe, and her sufferings just as constant. April 3d she was admitted into my private hospital, and on the 6th I removed the uterine appendages. There was great difficulty in the operation, on account of many and firm adhesions, and during the operation an abscess in the right ovary burst. The peritoneum was carefully washed out and the patient made an excellent recovery, and is now relieved of that almost constant pain and suffering which was exhausting her strength and making an invalid of an otherwise healthy woman.

Macroscopical examination: The ovaries and tubes are much enlarged; in the right ovary there is a large cavity, 1.5 ctm. in diameter, the contents of which escaped during removal. In the left ovary, at the distal extremity, there is a cystic protuberance, which, on section, is found to contain a grumous fluid, which being placed under the microscope shows pus-cells and débris.

Microscopical examination: Left ovary—The whole stroma is transformed into fibrous connective tissue, the bundles of which are freely interlacing. Some portions of the tissue are in a state of high waxy degeneration. The arteries in the middle coat are also in a state of waxy degeneration, the calibres of which are much narrowed, or nearly obliterated, owing to an outgrowth of the endothelia, which is the characteristic feature of chronic endo-arteritis. The tissue is crowded with amylaceous corpuscles. Diagnosis, chronic ovaritis; waxy degeneration of the newly formed connective tissue and of the arteries; corpora amylacea.

Right ovary contained a small abscess, with characteristic appearances.

Left Fallopian tube—The epithelium is preserved to a large extent, but is mostly destitute of cilia. The connective tissue is slightly augmented and of a delicate fibrous structure, in some portions with a waxy gloss, in other portions crowded with inflammatory corpuscles, also slightly waxy. Most of the arteries in their middle coats are enlarged and in a high degree of waxy degeneration. The calibre of some arteries is crowded with inflammatory corpuscles, a feature of endoarteritis. Both in the epithelial and connective-tissue layers numerous highly refractory structureless corpuscles are scattered—so-called corpora amylacea.

Right tube—The features clearly resemble those of the left; arteries dilated and tortuous; waxy degeneration; corpora amylacea.

Each of these patients had metrostaxis, and no appearance of menstruation since.

The microscopical examination of the appendages shows that each patient had *ovaritis* in some stage; some of them probably commenced menstrual life with ovarian congestion. The first case had hyperæmia of the ovaries when very young, which soon passed into acute ovaritis, then into a more chronic condition, then into cystic degeneration. The second case, an unmarried woman, suffered for years with acute and chronic ovaritis, long before the sarcoma was developed. The fifth case, also a young unmarried woman, had for years an inflammatory condition of the ovaries. The third case had evidence of acute and chronic ovaritis long before the complications of puerperal peritonitis. The fourth case, a young married woman of twenty-two, probably had ovaritis for nearly half of her life. The ovaries of Case VI. show in some portions chronic ovaritis, in others subacute, and in other portions a cirrhosed condition, which was the outcome of long-standing inflammation. In the seventh case the ovaries were cirrhotic and atrophied. The eighth and ninth cases, both single women, had ovaries organically diseased; in one there is not the least trace of normal ovarian tissue left, while in the other the whole stroma is transformed into fibrous connective tissue.

McBurney is often quoted as having said, "That it would be difficult to point out a single well-authenticated case of acute ovaritis out of the condition of pregnancy." The same idea seems to be repeated in most of our standard gynecological works. "The ovary is seldom the seat of inflammation except as the result of childbirth" (Emmet). "Acute inflammation of an unimpregnated ovary is of such rare occurrence that no case has come under my care" (West and Duncan). "Acute inflammation and abscess of the ovary is a condition rarely met with in practice" (Hewitt). "We have had but a single opportunity of studying non-puerpural acute ovaritis upon the cadaver" (Scanzoni). "Acute ovaritis is quite rare, except as a complication of peritonitis and cellulitis" (Thomas). The first-named author further says: "In attacks of peritonitis and cellulitis the ovary may have been only scorched in the general conflagration;" that "the ovary is scantily supplied with nerves, and the pain that is so frequently experienced in the neighborhood of the ovaries has no direct connection with the ovaries." So even our classical "ovarian irritation" is a delusion! Bennett says: "In nineteen cases out of twenty in which the ovarian region is the seat of a dull, aching pain, and apparently tender and swollen, there is no actual ovarian disease; the symptoms are almost invariably the result of some uterine lesion." Another English writer says: "In many cases the symptoms are purely neuralgic in character, independent of any local lesion;" that "pain is the patient's ailment," —"just like the back-ache which bears so large a part among the minor ills of women; and any treatment that directs the patient's attention to the seat of suffering is apt to perpetuate the evil instead of removing it." "Pain is the patient's ailment!"—thus this eminent author speaks of this formidable disease, which is so little understood. Yet it remains just as much a fact that there are unnumbered instances of both acute and chronic ovaritis, a countless number of women suffering years of martyrdom from disease of the organs, wearing out their lives, and the cause of suffering, never recognized, remains a secret which the grave finally covers, unless, perhaps, discovered at some post-mortem, and then not very much to the advantage of the patient. Scanzoni tells of a woman who died of pneumonia; at the autopsy it was discovered that "the ovaries were enlarged, effusion into the follicles, and in the parenchyma small abscesses of various sizes, all containing sanious pus." These conditions were not suspected before death. West and Duncan tell of a similar case. A woman died of bronchitis and emphysema; at the autopsy "the appendages were found matted together by firm adhesions, one ovary atrophied and the other enlarged by a cyst filled with grumous blood." The medical attendant imagined no trouble in this direction. The same author gives other similar cases. Hennig states that out of *eighty-one* post-mortems, a diseased condition of the ovaries was found in *fifty-three*, not only showing how frequent is the disease, but how infrequently it is recognized. Another author states that out of *sixty-six* post-mortems, in *twenty-one* the ovaries presented changes due to inflammatory action. In Dr. Wylie's clinic at the Polyclinic one-twelfth of the cases were diagnosed as having tubal and ovarian disease. Two years ago, Martin, of Berlin, reported that he found one in fifteen with diseased tubes. So other uterine clinics may show as many or more of these diseases if the diagnosis is as accurately made. Martin says, "The diagnosis receives too little attention;" probably not all are diagnosed.

But, whether recognized or not, there are still many cases of ovaritis, acute and chronic, from whatever cause they may be produced. If by septic poison, this septic poison may originate from other conditions of the system than the puerperium or from peritoneal inflammation. In a large majority of instances I believe *the ovary is infected by the unhealthy secretions from the uterine cavity*, which find their way through the Fallopian tubes to the ovary.[1] The ovary is more liable to, or in more danger of, this septic poison from the circumstance that, when an ovule escapes, there is left behind a funnel-shaped cavity, as if to invite or drink in the poison. The only wonder is that the ovary is not more frequently infected and diseased. The infection of the ovary from this cause is rendered yet more easy by any fusion or flexion of the uterus. In cases of flexion, especially, the uterine secretions to some extent almost necessarily find exit through the tubes, so infecting both tubes and ovaries.

The normal position of the uterus and its appendages is the most favorable for avoiding these possible dangers, which is also helped by the anatomical structure of the tubes, the longitudinal and circular fibres producing the peristaltic action which tends to force the secretions back into the uterus. Also the ciliated epithelii of the tubes aid in preventing fluids from passing into the peritoneal cavity; these millions of cilia may blow along the microscopical egg to its possible resting-place, also "hinder the contact of the spermatozoa with the ovum until the latter has reached the cavity suited for its maturation." Yet another *important function* of these ciliated epithelii is to *prevent fluids and noxious secretions from reaching the pelvic viscera*,[2] just as the cilia of the breathing organs hinder dust and dirt and other contaminations from reaching the lungs. I have watched the cilia in the living oyster, like millions of flashing diamonds, producing such currents in the water as bring necessary food to the inert mollusk. In the Fallopian tubes the cilia are no less effective, nor is their function less important. But young women, by a universal custom, push down, bind, or displace the uterus and its appendages, the *cilia can no longer do their duty*, the contagion finds an easy entrance, then commences a course of disease continuing and lingering for years.

I have a patient—a magnificently developed young woman—eighteen years of age. She should be the very picture of health, but her blanched lips, pale and agonized face, tell a different story. She says for years she has had such an *aching*, from which she is never free. When a little girl of fourteen she often leaned her head upon the desk and said, "What is it?" On examination I found the uterus completely retroverted, the fundus reached the lowest point in the pelvis, and was bound down by inflammatory adhesions; left broad ligament shortened and thickened; organs enlarged, extremely

[1] I [illegible] who died of [illegible] puriform pus, which was continued along the whole tract of the Fallopian tubes."

[2] It has lately been demonstrated that the epithelii in the uterus are ciliated, which further helps in this wonderful work.

tender, and dislocated low down into the retro-uterine cul-de-sac. Her vital organs were compressed and pushed out of position, and this displacement allowed the noxious secretions of the uterus to pass readily out through the tubes, and so infect the ovary, causing disease and enlargement, which last favored the dislocation. Another young lady called to see me, same age, and equally well developed—a pupil in one of our fashionable schools. She had a small, anteflexed uterus, and back of it the ovaries and tubes bound up in one mass of peritoneal inflammation, which inflammation was doubtless caused by the unhealthful and catarrhal secretions passing from the uterus through the tubes. A young lady, twenty years of age, called at my office. She had been treated for anteflexion. So extreme was her suffering during menstruation she had to keep her bed. But her trouble was *beyond* the flexion—probably *caused by it*.

There are many such cases, young women suffering from more or less disease of the appendages. They may put on their bright attire, their cheeks are flushed, they look well,' yet the cause of suffering is there. We see proofs of the frequency of these conditions in the number of married women who are incapable of bearing children. Marion Sims says, "Every eighth marriage is sterile." One woman whom I was called to see had been married ten years; no children. She had been much treated for dyspepsia, but for years had suffered pain and distress in the pelvis; a mass of disease was in the region of the appendages, and *there* was the trouble and there was the cause of her sterility, all resulting from infectious discharges. A young married woman called to see me; no children. Tubes swollen and adherent, derived from unhealthful uterine discharges. But in this case the discharges were *gonorrhœal;* more serious, more quickly infecting, and most disastrous of all! So young, so lovely, and her life so blighted! Sad that mothers, daughters, reared so tenderly, should be exposed to such a *vile danger*.

About the same time I was sent to see another patient. Found the appendages wrapped in a mass of inflammation, from septic poison from the puerperal state. Laying both hands upon the pelvis, she said, "Such a misery!" She had been suffering from it since the birth of her last child, eight years ago. Now she is confined to her bed most of the time, yet during these years she has been treated by various reputable physicians and surgeons for "womb disease." "When will we learn that all the ills of womanhood are not due to inflammation of the neck of the womb?" Many are treated for "womb disease," when the trouble is with the ovaries and tubes; probably the appendages are more frequently diseased than is the uterus. Meigs said, more than forty years ago, "Disease of the Fallopian tubes is many times unsuspected, when it is the cause of disease treated under another name."

But there are many other causes or conditions that are constantly operating to produce disease of the ovaries or of the uterine appendages; cold feet and extremities and imperfectly clad limbs tend to, and must necessarily produce, some form of congestion. Some of the most serious forms of pelvic congestion, or inflammation, result from a disturbance of the peripheral circulation. It should not be supposed that women are able to stand more exposure than the opposite sex, yet many of them go out with one thickness of muslin around their lower limbs, when the opposite sex will be found to have double and treble thicknesses of woollen goods. As one writer says, "Only fools and beggars take cold." No doubt this one cause, unbalancing the circulation, has produced many instances of disease of these important structures. There is a chill, symptoms of fever, and the trouble has commenced, more serious if during the period of menstruating. Scanzoni says, "We must seek the causes of ovaritis in some disorder of menstruation;" but *ovaritis will cause these "disorders."*

Another cause of frequent disease of these organs is nervous excitement during the developing period of life, exhausting the vitality when nature needs all the vital resources for maturing and growth. One of the saddest instances of this was a woman, twenty-five years of age, broken down with tubal and ovarian disease; her strength was used up—she had lived in a whirl of dissipation and mental excitement.

In the daily habits of young women there are many causes of ill-health, all having the tendency to react upon the condition of these vital organs. And when we think of the fine organization and exquisite structure of the ovaries, their important and complex functions, that they are performing the highest physical function[1]—perpetuating the race, elaborating that growth that by differentiation will develop into the most complex animal organization—and that while performing these important functions there is a certain amount of physiological hyperæmia, is it any wonder, especially when we consider the thousand untoward circumstances of woman's daily life, that these exquisitely delicate organs, while performing these complicated functions, repeated every month, should take on morbid conditions—that this physiological hyperæmia should be changed into unphysiological hyperæmia, congestion and inflammation? As they have a fine organization, they are apt to suffer more seriously.

During the function of ovulation young women should as much as possible rest in bed, just as for every one rest after a meal is promotive of good digestion, and the digestive process will go on more healthfully. And as there is no physiological function higher or more important than ovulation, so the more reason women should rest, especially when we consider the miserably inherited bodies which many of our American women possess, bodies that are poorly cared for, and have very little vitality. When we consider this, more especially is there need for rest during this period. But, let it be understood, there are many magnificently constituted women who can go forty or fifty years, severely taxed all the time, never resting during menstruation, yet never experiencing the least trouble, distress, or sensation in the performance of the ovarian function; just as there are a countless number of men, for as many years, amid their business activities, who never think of their stomachs or have any trouble therewith, while there are millions of others who have as many diseased peptic glands as there are diseased follicles in as many ovaries.

I have spoken of the *causes* of these diseases, and incidentally of their *prevention;* now a word as to their *cure*. How can these diseased conditions be relieved? Our standard English gynecological author, speaking of the pain in the region of the ovaries, says: "It is very hard to cure; leeches do not relieve, blisters sometimes afford ease, chloroform applied to the site generally gives temporary relief, so may camphor liniment, extract of belladonna," etc.; then adds: "I have never been able to trace the permanent cessation of suffering to the unaided use of any local means."

For the second patient mentioned, with anteflexion of the uterus and inflammatory masses on each side, probably much may be done: the adhesions may be softened, the peritoneal inflammation reduced, acute salpingitis relieved. But after all this is done there yet may be found an ovary that is more than "scorched in the general conflagration."

The patient who has enlarged and adherent tubes—shall we aspirate, run the risk of wounding vital structures and poisoning them with septic material, or shall we first open the abdomen to be sure it is hydro-salpinx, and if it is, then aspirate?

The enlarged tubes of the patient with gonorrhœal in-

[1] "All the facts of comparative anatomy indicate that the female organism is in advance of the male" "Within the ovary there is ceaseless activity, changes as subtle and eluding as the vital principle itself" (Coe).

fection are without doubt filled with pus, even the fimbriated extremities are possibly distended into pus-sacs and closely agglutinated to a diseased ovary, the cilia desquamated, and the lining membrane changed. Can such organs be restored to health, or to their normal function?

How shall we help the last-named case with enlarged tubes and ovaries diseased from septic material of the puerperal state? She has grown gradually worse under the varied treatment of many physicians.

In the young woman with dislocated ovaries, the first patient mentioned, treatment has removed lymph-like adhesions which bound down the uterus; but how are the ovaries to be held in position? By broad-brimmed pessaries? Who has succeeded? Where are the pessaries that will hold them in position? The patient is on the eve of a brilliant marriage. Shall we leave the ovaries to "give her the chance of some future baby"[1]—leave the woman with the certainty of future trouble, the possibility of being permanently invalided? Even if the ovaries are healthy, the tubes may be so changed in structure, or so misplaced by adhesions or some shortening, that they "cannot acquire their periodic relations to the ovary," any one of which conditions will be a cause of sterility. Shall we resort to Imlach's suspensory operation, oöphorraphy,[2] by which the ovary is stitched up to the infundibulo-pelvic ligament? An ovary so displaced and so sensitive is doubtless very much diseased, and from the history of the case we would judge the ovaries had been long and profoundly diseased, and consequently must have undergone certain organic changes, and where would be the good of stitching them up? Lawson Tait, who is the best authority on this subject said: "When there is really chronic inflammatory disease of the ovary, no such operation can be expected to be successful." Soon after the report of Imlach's operation appeared in the *British Gynecological Journal*, Dr. Paul Mundé, of New York, sent me the following note in reply to a letter of inquiry I had sent him: "I should feel doubtful whether in reality such an accurate anatomical adaptation could be secured as to facilitate or permit conception as Imlach intends. It seems a considerable danger to incur, merely to retain in *approximately* normal position a prolapsed and perhaps an already diseased ovary."

If we leave the ovaries as they are, it is leaving the patient with a source of misery and suffering, probably in time may compromise her life; or, if she marries, she will not only be sterile, but unable to submit to the marital relations.

Were she a dispensary patient, a young girl who by labor had to earn her own bread, and for whom it did not count much whether she had children or no, to save all future trouble and suffering, to enable her to be a useful member of society, to enable her to do her daily work, and to prolong her life I would at once advise the removal of the uterine appendages. And, after all, what better can be done for this patient? Bantock said (November 11, 1885) "he knew of no remedies which had the slightest effect upon a diseased ovary." Lawson Tait said, the same date, "his own experience was that an ovary once inflamed and adherent, the disease was practically incurable save by removal (*British Gynecological Journal*, p. 383).

But lately there is a great hue and cry about the possible future baby. They do not stop to think of the countless number of women who are barren and childless for years from various forms of uterine disease—"a drop may stop a dynasty." When women are suffering from hopelessly diseased tubes and ovaries they must not be "unsexed," they must continue years in torment and misery and inability for any kind of employment or avocation, because perhaps in the diseased ovary there may be a healthy follicle, which may contain a healthy ovum, which may find its way through a possibly diseased tube, and *possibly* find other favorable conditions—like Mrs. Toodles who purchased a door-plate on which was cut the name of Thompson, because she might have a daughter, she might grow up, and might marry a man by that name. Removing diseased uterine appendages is not unsexing a woman, it is restoring her from helpless invalidism to all the possibilities and opportunities of life and labor. It is not taking away the possibility of her having children—that has already been done by disease—it is only removing a cause of suffering. In 1882 a young woman, twenty-seven years of age, was brought to me from Maine, married at fifteen, and again at twenty-two; no children. Uterus retroverted, bound down by firm adhesions, and the appendages wrapped up in a hopeless mass of disease. Thus she had been suffering for years. Hystero-epilepsy and other grave nerve-symptoms were developed. To relieve the constant pelvic pain, and possibly also to relieve some of the nerve-symptoms, I advised the removal of the uterine appendages, but was met by the objection, not only that a former medical attendant had advised a long course of treatment by bromides, etc., to cure her "nervous diseases," but mainly the objection to removing the uterine appendages was that she would be rendered sterile, that we would "take away her capabilities of having children!"

A few months, after I removed the uterine appendages, and below we have a representation of them. We see how completely all functional action must have been destroyed.

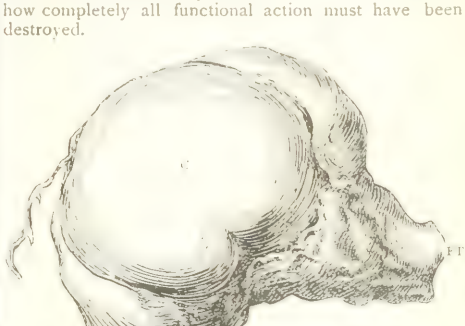


FIG. 3.—Ovary, posterior surface; FT, tube flattened out, closely adhering to cyst. Tube-walls extremely [illegible].

The right ovary is enlarged, containing a cyst. The fimbriæ have disappeared from the adherent tube, and its extremity is closely glued to the ovary. Only small remnants of ovarian stroma left, and under the microscope the remnants are found to be in a *thoroughly atrophic* condition, cirrhotic atrophy, mainly consisting of dense fibrous connective tissue, in which are many small amylaceous corpuscles. The free arteries that were left were in a state of waxy degeneration. Thus *all normal structure* was *utterly* destroyed, and any physiological function would have been entirely impossible.[1]

Winckel is quoted in a late number of the *Philadelphia Medical News* as saying: "The time is not far distant when the extirpation of the healthy ovaries for the cure of dysmenorrhœa, ovaralgia, epilepsy, hysteria, etc., will stop." But, Mr. Winckel and Mr. Rip Van Winkle, women with these conditions do not, as far as observation goes,

[1] Routh: British Gynecological Journal.

[2] The stitching up of the ovary was suggested to my mind when, three years ago, I read Tait's method of stitching up the uterus, and doubtless his [illegible] the whole field.

[1] This case was reported in the American [illegible] microscopical examination was [illegible] conclusions: "1. The operation should have been performed on the patient years before. 2. There was no other way to relieve her than by the operation. Soon after the publication of the article I received a letter from Lawson Tait, Birmingham, Eng., in which occurs the following sentence: "I agree with your conclusions concerning the case absolutely. The whole gist of modern abdominal surgery lies in an earnest and continuous plea for early interference. There can be no doubt that the only fear about such cases is that they are allowed to go on so long without operation."

have "healthy ovaries." I have never seen the ovaries removed in a single instance but they were more diseased than the symptoms had led me to suppose. Dysmenorrhœa may come from other causes, *but often* it results from a hopelessly diseased condition of the appendages. Incurable epilepsy may and has been helped by these surgical procedures. Hysteria may demand it, and ovaralgia is only an unmeaning word to sum up the suffering that may come from diseased ovaries and tubes; and these sufferings and this irritation may be so great as to render abnormal the mental conditions.[1]

There is no advance made in modern surgery that will do more good, save more lives, or relieve more suffering, or add more to the sum of human life or human happiness than this one operation, known as "Tait's operation." It will save more lives than ovariotomy, because more need it.

In 1847 the eminent and distinguished Charles D. Meigs, Professor of Midwifery and Diseases of Women in the Jefferson Medical College at Philadelphia, reported a death from Fallopian pregnancy. Twenty hours after death, when inspecting the abdominal cavity, he said, "What, alas, can we do in these cases? We could make an incision and clean away the coagula and the serum. But who is he bold enough to do so? Who is he astute enough to discriminate with so much clearness as to warrant him in the performance of gastrotomy for Fallopian pregnancy? There is no such wise and bold surgeon."

But there is, and this wise surgeon has led us out of this wilderness of doubt to the clear light of what is best to be done, and showed us how to do it successfully.

Clinical Department.

TREATMENT OF WHOOPING-COUGH.

Dr. E. W. Hedges, of Plainfield, N. J., writes: "In an editorial of July 31st you speak of various recent methods for the treatment of whooping-cough. One of these plans I have tried quite largely in my own practice, and with such gratifying results that I venture to send you a short account of it.

"The remedy used was resorcine in a two per cent. solution, as recommended by Dr. Moncorvo, of Brazil, and the method of applying it was by a hand-atomizer (Perkins), inhaling the spray for four or five minutes every three hours. In the case of adults, where the treatment was faithfully carried out, the results were uniformly successful, a cure being effected inside of nine days in every instance. With young children (two years and under) it was found impossible to use the spray, and even with older ones, where the treatment was intrusted to mothers or nurses, the cough was often modified rather than checked; but in every case, young or old, where the spray was properly applied a cure resulted.

"A few cases will illustrate the plan:

"Miss S——, aged nineteen, had coughed for six weeks, expectorated large quantities of mucus, and was waked up four or five times each night with paroxysms of coughing. After the first day's use of resorcine spray she slept through the night without waking, something she had not done before in weeks. The next day her cough was decidedly lessened, and after the third day it disappeared altogether. She continued the spray for a week longer, and had no return of the cough. In this case, as in all the others, no internal medication whatever was given.

"Mrs. A—— had been coughing three weeks. After one week's use of resorcine as above, the cough was completely checked and did not return.

"Miss O——, five years of age, began treatment as soon as it was certain she had whooping-cough—*i. e.*, in about two weeks after the cough began. Two applications daily for a week so far checked the cough that the mother did not think it necessary to bring her any longer to the office. A slight cough remained, however, which, upon the discontinuance of the spray, quickly grew worse and soon returned with its former violence.

"Another case illustrates this same tendency for a return of the cough unless it is first completely stopped.

"Mrs. M—— had coughed for over five weeks severely, with vomiting, profuse expectoration, and violent paroxysms. She noticed a marked improvement immediately after beginning treatment, and in four days was so nearly well that she thought it useless to do anything more. She stopped the spray, and the cough quickly returned, and on the seventh day, when she came to my office, the cough was nearly as bad as ever. The spray was ordered again to be persisted in, and I am expecting a report from her in a few days.

"Do not these cases render plausible the hypothesis that micrococci, by their presence along the upper air-tract, are the cause of whooping-cough, and that unless these are thoroughly destroyed by germicides those that remain rapidly multiply and bring on a train of symptoms as before?

"Certainly the treatment is a pleasant one, easily carried out when the patient is not too young, is inexpensive, and most efficient."

THE OPHTHALMOSCOPE IN THE HANDS OF THE GENERAL PRACTITIONER.

Neil J. Hepburn, M.D., Instructor in Ophthalmoscopy at the New York Polyclinic, sends us the following communication: "A few remarks on the use of the ophthalmoscope by the physician in general practice may not be out of place here. But before proceeding to that branch of our subject it may be as well to call attention to a still simpler mode of examining the transparent parts of the eye, known as 'oblique illumination.' To apply this method, the patient is seated in a darkened room with a light to the temporal side and somewhat forward of the plane of the eye to be examined. A convex lens of two or three inches focus is then held at its focal distance from the observed eye in such a position as to intercept and concentrate the rays of light falling upon the cornea. The observer is to be on the nasal side of the observed eye, in a position to receive the rays reflected from the illuminated surface. By causing the patient to look up and down, to the right and left, the whole cornea may be inspected. The normal cornea, when examined in this way, shows a faint silvery haze. If it appear as clear as under ordinary illumination, as occurs in rare instances, it is said to be an indication of strumous taint. If there are opacities they will appear more opaque and of a more pronounced whitish or yellowish tinge. By bringing the light by degrees more and more directly in front, and the concentrating lens a little closer to the observed eye, the iris, lens, and anterior portion of the vitreous may be explored. A second convex lens may be used between the eye and the observer to magnify the image.

"After completing the inspection by the above method, if we wish to see further into the interior of the eye we have recourse to the ophthalmoscope. There are two methods generally employed in using the instrument: the direct, which gives a greatly magnified picture of a small part of the fundus oculi, and the indirect, with larger field and a low magnifying power. Hence the 'indirect method,' though somewhat more difficult for the beginner, is better adapted for a general survey, while the 'direct' is more useful for the study of details.

"In the indirect method we employ the same lens used in oblique illumination, the light being reflected into the eye from the mirror of the ophthalmoscope. The source

[1] [illegible] reports [illegible] "[illegible] both mental and physical" (Medical News, December 27, 1884).

of illumination should be on the temporal side, and behind the plane, of the eye to be examined, the observer sitting in front and a little to the same side, at a distance of sixteen to twenty inches. The observer uses his right eye if the patient's right eye is under observation, and his left eye if the left eye is to be looked at. Now the patient is directed to look directly forward to bring the optic-nerve entrance into line, and the light thrown directly into the pupil. Then interpose the convex lens, held in the other hand, directly in front of the observed eye, and at a distance from it of one or two inches. The optic disk and a considerable portion of the fundus can then be seen. If the view be not clear, it may be necessary to turn on a plus or minus glass behind the mirror till the greatest distinctness possible is obtained, or to move the convex lens to one side or the other to bring the disk into view. By having the patient look up and down, to the right and left, the greater part of the fundus can be examined, and the position of opacities in the media determined by their parallax. By keeping the disk in view, and moving the condensing lens directly away from the eye toward the observer, a very good idea of the optical condition of the eye may be obtained. If the disk increase in apparent size as the lens recedes from it, the eye is myopic. If the image diminish on recession of the lens, there is hypermetropia. Increase in only one diameter denotes simple myopic astigmatism, as diminution in only one diameter signifies simple hypermetropic astigmatism. If the image of the disk increase or diminish all round, but more in one direction, there is compound astigmatism. If one diameter increases while the cross diameter diminishes, there is mixed astigmatism. If the disk take on grotesque changes in shape, and the vessels appear irregularly broken, you have irregular astigmatism. If there is no change in size or shape, the eye is emmetropic. The more rapid the change, the higher is the degree of error. The condensing lens must at no time be moved farther than its focal distance from the eye under inspection.

"In the direct method, the positions are relatively the same except that the condensing lens is dispensed with and the observer approaches his eye as near the observed eye as he can while keeping it illuminated. The beginner should look through any lens in the ophthalmoscopic disk which will give him a clear view of the fundus oculi, without regard to the refraction. When he has become more apt at getting a good view, he may, after correcting any error of refraction which may exist in his own eye, find the *weakest minus* or the *strongest plus* glass, with which he gets the clearest picture. The edge of the optic disk or the small retinal vessels near the macula are good points to look at for this purpose. Steady practice of this sort will enable the observer in time to relax his accommodation entirely, so that he can accurately determine the refraction in the observed eye in every case.

"It is essential in beginning the study of ophthalmoscopy, that the patient's pupil be dilated as widely as possible by a mydriatic, and in examining by the 'direct' method, the effect of atropine is much to be preferred, as it not only dilates the pupil but suspends the accommodation."

VERY SIMPLE.—A classification of insanity is given by Dr. John P. Gray, which for simplicity quite equals the famous classification of skin diseases into "eczema and not eczema." It is as follows: *Mania*, manifested by delusions of excitement, expansive ideas, exaggerations, self-consequence, incoherence, etc. *Melancholia*, manifested by delusions of depressing character, painful ideas, and apprehensions. *Dementia*, representing conditions of mental failure and feebleness of mental action. All cases of insanity come under these three heads. Cases may be acute, subacute, chronic, periodic, paroxysmal, but they are either mania, melancholia, or dementia.

AMBULANCES alter cases.

Progress of Medical Science.

REMOVAL OF CALLUS BY THE GALVANIC CURRENT.—Dr. Meyer, of Berlin, records the following case (*Deutsche Med. Wochenschrift*): A boy, thirteen years old, had sustained a fracture of the upper arm. After a plaster-of-Paris bandage had been applied, the arm was in three weeks so far healed that the lower and upper arms stood at an angle of 80°, the wrist being tightly drawn up, and the fingers lying without power of motion on the hand. Attempts had been made in vain to produce extension. When he was brought to Dr. Meyer, the latter discovered on the inner side of the elbow-joint a callus that occupied a third of the lower arm and had included the flexors of the fingers, thus depriving them of active and passive motion. On the application of the induction-current to the upper arm there was considerable movement in the muscles supplied by the radial nerve. When the ulnar nerve was brought under the influence of the current a slight movement of the abductor pollicis was observable, while irritation of the median produced a tingling sensation down into the hand. The galvanic treatment was as follows: The arm was laid on a conductor of the size of an octavo sheet, and a small electrode was applied, partly to the median nerve and partly to the callus. Frequent voltaic alternatives were employed. After sixty applications the boy could stretch out his arm fairly straight, and the place of the fracture could now be plainly felt on the inner side of the upper arm. After ninety applications the callus was reduced one-third, the active movement of the elbow-joint was nearly restored, and that of the wrist considerably improved. After one hundred and eighteen applications the muscles generally were in so good a condition that there could be no reasonable doubt about the perfect restoration of the use of the hand. This, Dr. Meyer thinks, shows that of all means the galvanic current is the most intensely sorbefacient.

NITRATE OF POTASSA AND MERCURIAL INUNCTIONS IN ACUTE RHEUMATISM.—In *The Russian Medicina*, Dr. Grinevitzky advocates the treatment of acute articular rheumatism by the internal use of nitrate of potash (two drachms daily, in solution with raspberry syrup), and by the inunction of a mercurial ointment. The author's formula is: ℞. Ol. hyoscyami, ʒj.; ung. hydrarg. cinerei, ʒij.; ext. aconiti, ʒj. M. To rub in the joints affected every morning and evening. Fever gradually abates; the pulse becomes less frequent; articular pain, swelling, and heat decrease. The patient recovers in one or two weeks, according to the severity of the disease and its duration before coming under treatment. When resorted to in the very beginning of the affection, the treatment prevents spreading of the latter to other joints, or, at any rate, mitigates any subsequent symptoms. The author's assertions are based on an experience of more than twenty years' duration. None of other old or new anti-rheumatic remedies can compete with nitrate of potassa, as the author says. Frictions alone only somewhat mitigate the symptoms, but do not cure the disease, while the salt alone acts well, though recovery then becomes more protracted than where the inunctions are employed simultaneously. In conclusion, Dr. Grinevitzky states that, for the sake of comparison, he tried to treat some cases of rheumatism by nitrate, carbonate, and subcarbonate of soda, and by carbonate and subcarbonate of potassa, but did not obtain from them any use whatever.

GONORRHŒAL RHEUMATISM.—Loeb is of opinion that gonorrhœa is only complicated by rheumatism in those cases in which the gonorrhœal process has attacked the hinder portions of the urethra; and in favor of this view he adduces the two facts, first, that the rheumatic symptoms never occur in the early stages of a gonorrhœa,

and, secondly, that in the great majority of cases the rheumatism is never seen at all during the first attack, but only after subsequent attacks, when the posterior parts of the urethra are almost certain to be involved. As to the disputed point, whether the rheumatism is to be considered as a disease *sui generis* or as merely an ordinary rheumatic inflammation of the joints predisposed by the gonorrhœal infection, he comes to the conclusion that *polyarthritis rheumatica* and gonorrhœal rheumatism are two perfectly distinct diseases, and he bases his conclusions on the following grounds: 1st. The difference in the relation of the fever to the local changes in the two diseases—in ordinary rheumatism the fever and the joint-affection generally running hand in hand, whereas in gonorrhœal rheumatism the fever is always slight and in most cases is almost, if not entirely, absent. 2d. The difference in duration of the two processes, the gonorrhœal rheumatism running a much longer course. 3d. Gonorrhœal rheumatism is much less erratic in its character than ordinary rheumatism. 4th. The frequent association of gonorrhœal rheumatism with inflammation in the eyes—this inflammation, according to him, occurring sometimes without contagion, and being simply another local expression of the gonorrhœal infection. 5th. The less frequent implication of the heart in gonorrhœal rheumatism. 6th. The greater tendency to inflammation of the sheaths of tendons and synovial sacs generally in gonorrhœal rheumatism. 7th, and lastly. The difference in behavior of the two processes toward the salicylates. Loeb thus considers gonorrhœal rheumatism as an infectious process, the seat of infection being the hinder parts of the urethra; and this view receives apparent support from the recent discovery of a specific organism in the gonorrhœal secretion, the gonococcus. Some doubt, however, still exists as to the specific character of this organism; and hence Loeb is more inclined to think that the cause of the infection will be found in non-specific organisms, examples of whose action in producing inflammation in joints we have, according to him, in the rheumatic affections of the joints which sometimes occur during the puerperium, also along with bronchiectasis, scarlet fever, and dysentery. As to the treatment, it is especially important as quickly as possible to cure the inflammation in the urethra, and especially of the hinder parts.—*Practitioner.*

Decortication of the Finger.—Under this title M. Thomas, of Tours, described a peculiar accident, the effects of which he was called upon to repair. A man who wore a plain ring on his finger was suspended by it from a railing, and the ring slipped off, carrying with it the entire skin of the finger from its root to the tip. The cutaneous envelope was immediately replaced under antiseptic precautions. The union was not complete, but all the integument covering the first phalanx and a part of the second was preserved.—*Journal de Médecine et de Chirurgie Pratiques*, June, 1886.

A Simple Method of Removing Wens.—In the *Northwestern Lancet*, July 15, 1886, Dr. Lauenstein's simple method of removing sebaceous cysts of the scalp is described. The skin over large wens of the scalp is often so thin that, in the commonly practised method of extirpation with a free incision over the convexity of the tumor, the sac is often ruptured in spite of all care, and through collapse of the walls of the sac the separation of the skin is rendered difficult and protracted in a disagreeable manner. This accident, unless it is a case of inflamed wen, may be avoided with certainty by a simple expedient, which has recommended itself to him on account of the rapidity of its execution, and which will be readily appreciated by those to whom it often happens to be pressed for time, or who, living in the country, are obliged to operate without skilled assistants. After shaving and cleaning the neighborhood of the wen, he makes a radial cut, about one inch long, through the skin where it is separated from the capsule of the wen, for instance, on the back of the head at the lowest point of the base of the tumor; through this slit he introduces the slender handle of the scalpel used, or a similar instrument, between the skin and sac, more or less deeply according to the size of the tumor. This is very easily accomplished, and he then makes several sweeping movements of the scalpel-handle to the right and left, thereby separating with ease the sac from the skin. The elasticity of the skin allows almost the whole circumference of the wen to be separated in this way in a few seconds. He then cuts, with one snip of the scissors, the skin over the crown of the tumor as far back as is necessary, and shells it out whole from its seat. There is often no bleeding, because of the division of the vessels of the sac by a blunt instrument. The rest of the treatment—sutures, drainage—is not affected by this procedure; nevertheless, he adds that any crushing or tearing of the edges of the wound is completely avoided.

A Rare Case of Aphasia.—Dr. Volland reports the following peculiar case: A strong, healthy boy, fifteen years of age, fell into the cellar of a house which was in the course of construction, receiving a wound over the right parietal bone. The periosteum was stripped from the bone for a considerable distance; but the bone was not broken, and there were no symptoms of fracture of the skull. After a period of unconsciousness lasting three days, the patient came to himself. There was no paralysis; but, while apparently understanding everything that was said, he was unable to speak. The only word which he used in all questions and answers was a stammering "anna," and the same word was the only thing legible that he could write; but it was found that he could count correctly and clearly, and could also add, subtract, multiply, and perform any numerical problems with ease. After about two weeks the patient began to learn a few words. He would first decipher a word here and there in reading, and soon was able to repeat the word after reading it. The wound, which was received in March, healed rapidly, and the following winter the boy went to school. Here he was able, only with the greatest difficulty, to speak or write a connected sentence, and was very backward in reading and writing, but in mathematics easily kept up with the brightest and most advanced of his schoolmates. Six years later there was still much difficulty in speaking, and he often forgot words when at all excited. Within the last year he has had occasional attacks of vertigo, so that he would have to take hold of some support to keep from falling. The general nutrition and bodily strength are excellent.—*Centralblatt für Klinische Medicin*, July 10, 1886.

The Diuretic Action of Watermelon.—Dr. Popoff has been experimenting with the inspissated fresh juice, or syrup, of this fruit, and has found that it possesses marked diuretic properties (*London Medical Record*, June 15, 1886). When animals received from fifty to one hundred grammes of the syrup (with food) in twenty-four hours, the daily quantity of urine was three or four times greater than under ordinary conditions; again, on intravenous injection of the syrup, the urine for several minutes flowed in a stream from a cannula tied into the ureter. In dogs, the internal administration of five hundred grammes at a time produces no effect, except powerful diuresis. Intravenous injection of one to two grammes of the syrup causes an immediate increase in the secretion of urine, the latter assuming a dark color, and containing sugar. This increase lasts for ten to sixty minutes, and is accompanied only by a slight fleeting decrease of the blood-pressure. On the injection of 0.25 to 0.5 gramme for each kilogramme, a considerable fall of the pressure and a great acceleration of the pulse rapidly follow. An intravenous injection of 3.0 grammes per kilogramme produces a further fall of the pressure and a fleeting increase, with a subsequent sudden enormous decrease in the frequency of the pulse, the animal dying from cardiac paralysis. As some special

experiments show, the quickening of the cardiac action is dependent upon the syrup acting on the peripheral ends of the vagi. In all cases, intravenous introduction of the syrup rapidly produced a strong sedative effect, "the animal remaining strikingly quiet, and giving no response to tactile or even pathic irritation." Another group of experiments showed that the diuretic action of melon-syrup was dependent mainly upon its direct influence on the renal tissue.

Treatment of Neurasthenia and Hysteria.—In a recent paper Dr. Burkart reports a number of cases of hysteria and neurasthenia, treated by Weir Mitchell's method of rest in bed, massage and faradization of the muscles, overfeeding, and isolation, and points out the circumstances under which this method may be expected to give good results. The first condition of success is that the patient shall have preserved a certain amount of will-power, and shall have a clear idea of what it is intended to accomplish by a strict carrying out of the method. As contra-indications he mentions an irritable condition of the brain as regards its psychical functions, marked hyperæsthesia of the abdominal sympathetic, and uncontrollable reflex vomiting. If, however, this form of vomiting be absent, the presence of dyspeptic symptoms indicates a proper subject for this method of treatment. The digestive powers are very quickly restored in hysterical patients, though neurasthenia gastrica requires more time for its correction. Cases of spinal irritation are also speedily relieved by Weir Mitchell's plan.—*St. Petersburger Medicinische Wochenschrift*, June 28, 1886.

The Etiology of Puerperal Cystitis.—In several cases of puerperal cystitis, Dr. Bumm reports that he found a diplococcus resembling closely the gonococcus, but distinguishable from it by staining and cultures. The cocci were disposed in little collections, often lying within or around a cell. This micro-organism is said by Doléris to be constant in the lochia, and it is supposed that it gains entrance into the bladder during catheterization. In experiments upon animals Bumm found that the injection of these microbes into the bladder was seldom followed by any inflammation unless the mucous membrane were injured. In the latter case a catarrh, with profuse purulent secretion, was excited. The marked suppuration attending puerperal cystitis was therefore supposed to be due to these diplococci from the lochial discharge. When no wound of the mucous membrane of the bladder was present, the micro organisms found no lodgment, and were washed away by the urine.—*Allgemeine Medicinische Central-Zeitung*, July 17, 1886.

Another Method of Artificial Respiration.—Mr. J. A. Francis describes the following method of artificial respiration in the *British Medical Journal*. The body of the patient is laid on the back, with clothes loosened, and the mouth and nose wiped; two bystanders pass their right hands under the body at the level of the waist, and grasp each other's hands, then raise the body until the tips of the fingers and the toes of the subject alone touch the ground; count fifteen rapidly; then lower the body flat to the ground, and press the elbows to the side hard; count fifteen again; then raise the body again for the same length of time; and so on, alternately raising and lowering. The head, arms, and legs are to be allowed to dangle down quite freely when the body is raised. The author alleges that this method is most successful, and it is so simple that anyone can perform it without any teaching.—*London Medical Record*, June 15, 1886.

Syphilis Aborted by Sulphur Baths and Mercurial Inunctions.—Dr. P. J. Kalashnikoff records the case of a soldier who was admitted with a characteristic induration on the penis at the site of a recently healed primary ulcer, and with a marked universal adenitis. After ten sulphur baths, the sclerosis became exulcerated. The ulcer did not yield to local medication. Under the influence of the inunction of gray mercurial ointment (ten frictions of one scruple each, and ten of half a drachm), and sulphur baths (fifty one), the ulcer rapidly healed, and sclerosis and adenitis disappeared. His skin and mucous membranes remained healthy. Not a single syphilitic symptom made its appearance subsequently (more than six months passed from his cure up to the date).—*London Medical Record*, June 15, 1886.

Radical Cure of Hydrocele by Carbolic Acid.—Dr. G. Buckston Browne reports in the *British Medical Journal* of June 26, 1886, a case of hydrocele cured by injection of carbolic acid after iodine had failed. He writes that a gentleman, twenty-three years of age, consulted him in the early part of April about a hydrocele, which had followed an attack of orchitis fourteen months before. He was going abroad, and urgently desired a radical cure. On April 13th, Dr. Browne tapped the hydrocele and drew off six ounces, and injected two drachms of tincture of iodine. Next day there was pain in the groin and loin, and the scrotum was tender and full. In four days so much fluid had re-collected in the tunica vaginalis that he tapped again, and drew off two ounces. In three days the same amount of fluid had again collected, and he then determined to give carbolic acid a trial, being encouraged to do so by the paper of Dr. Keyes in The Medical Record of February 20, 1886. On April 20th he tapped, and drew off two ounces, and then injected, with an ordinary hydrocele-syringe, sixty minims of pure carbolic acid, dilequesce l with five per cent. of glycerine. The patient was ignorant of what had been injected, but at once said he tasted carbolic acid. Next day the part was swollen, but not very tender. No fluid was ever again detected in the tunica vaginalis; and he left London in a week, and has remained well ever since. The cure was rapid, complete, and nearly painless.

Lactic Acid as a Caustic.—It will be remembered that Mosetig has recommended lactic acid as especially valuable for use as a caustic from the fact that it spared the healthy tissues. This claim would seem, however, to be disproven by Drs. Spitzer and Hermannn in some recent experiments. These observers publish eight cases of lupus and epithelioma treated with concentrated lactic acid as proposed by Mosetig, and state their conclusion as follows: 1, The pain produced by the cauterization with lactic acid is at least as great as that caused by any other caustic; 2, the patients prefer invariably any caustic to lactic acid; 3, the action of lactic acid resembles that of other caustics, but is less energetic; 4, healthy tissues are not spared any more by this than by any other caustic; 5, lactic acid has to be employed for a much longer time than chloride of zinc and other energetic caustics.

Chlorotic Fever.—Mollière was the first to call attention to the fact that a mild febrile condition is frequently present in chlorosis, and one of his pupils, Leclerc, has extended his observations and confirmed the statements of his teacher. In thirty cases of true chlorosis, in which the temperature was taken with the greatest care, the author noted oscillations ranging from 99.7° to 101.5° F. The fever assumed one of two forms, either a continued febricula without noticeable oscillations, or a febricula with exacerbations. But in the cases observed the slightest accident might occasion a very decided rise of temperature, the susceptibility of chlorotics resembling in this respect that of children. The duration of the fever varied within wide limits, and in general corresponded to the slowness with which the chlorosis disappeared. The frequency of chlorotic fever is a matter not yet determined, but the elevated temperature is not an invariable accompaniment of the chlorosis. No satisfactory explanation of this occurrence has yet been given, and the experimental researches of the author have as yet been without result.—*Rivista Clinica e Terapeutica*, June, 1886.

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RECENT CONTRIBUTIONS TO THE SUBJECT OF ANEURISMS OF THE HEART AND AORTA.

THE records show that about one death in every eight hundred, in this city, is due to aneurism. The very great majority of these deaths occur from aneurisms of the aorta. Although Crisp's statistics make popliteal aneurism second in frequency to that of the thoracic aorta, yet modern surgery has made death from this source comparatively infrequent. As not a few persons die with small or unrecognized aneurisms, it is safe to say that aneurismal disease is of tolerably frequent occurrence.

Of the numerous reports and papers upon aneurism that have been contributed of late, a majority are purely clinical. We leave it to our readers to judge of the interest and importance of such kind of work. The symptomatology of aneurism has been very thoroughly worked up, yet it is very true that the field is not entirely closed.

In the line of clinical study, Dr. Hobart A. Hare (MEDICAL RECORD, May 15, 1886) has reported a case of thoracic aneurism occurring in a girl only seventeen years old, and although the tumor bulged well up into the suprasternal notch, there was no dysphagia, dyspnœa, loss of voice, or dropsy. There was double aortic disease and enormous cardiac hypertrophy. In another case the patient was only twenty-eight. Here there was aneurism of the arch, with pressure on the trachea. The interesting point was that the pain, and even delirium, from which the patient suffered was relieved by hyoscyamine and increased by morphine.

A very rare case of aneurism of the hepatic artery (the eleventh on record) was shown to the London Clinical Society recently by Dr. R. Caton. The diagnosis was not made before death.

Equally rare are cases of aneurism of the splenic artery, of which Dr. F. Ch. Turner has shown a specimen ("Trans. of Lond. Path. Soc.," vol. 56). The disease occurred in a laboring-man, aged thirty-seven, who died suddenly from rupture of the sac.

Mr. Percy Kidd has shown to the London Pathological Society four specimens illustrating chronic cardiac aneurisms. In all cases the sac involved more or less of the interventricular septum, and, as is usually the case, was connected with the left ventricle. The cause of such aneurism is generally believed to be a chronic myocarditis, but these cases showed that one factor was the abnormal friction of endocardial surfaces upon each other.

Cardiac aneurisms are most frequently found at the apex of the left ventricle, and Dr. S. J. Sharkey has shown a specimen illustrating this ("Trans. of Path. Soc. of Lond.," vol. 56).

Acute aneurisms of the aortic and other valves are not infrequently caused by ulcerative endocarditis. Mr. Norman Moore reports a case illustrating this ("Trans. of Path. Soc. of Lond.," vol. 36).

An interesting illustration of a rare clinical variety of aneurism was exhibited by Dr. F. Ch. Turner to the London Pathological Society. The patient, a syphilitic man, died with symptoms of thoracic aneurism, a most notable feature being an œdema and lividity of the face and upper extremities. On post-mortem examination an aneurism of the ascending aorta, three inches and a half long, was found, communicating freely with the superior vena cava. Dr. Turner reported another curious case in which a thoracic aneurism had ulcerated through and finally burst into the œsophagus. At the autopsy the stomach was found full of blood. In still another case there was a dissecting aneurism of the arch of the aorta, which had perforated the pericardium. The patient died suddenly and it was found that the blood was diffused throughout the mediastinum and had also filled the pericardial sac.

Dr. F. de Haviland Hall (*Brit. Med. Journal*, December 19, 1885) reports a case of aneurism of the ascending and transverse portion of the arch of the aorta which is interesting, because no symptoms of aneurism were noted except those of pressure on the trachea and recurrent nerve. A malignant tumor was, therefore, diagnosticated. The symptoms were dyspnœa, cough, purulent expectoration, and paresis of the posterior crico-arytenoid muscles. On post-mortem examination an aneurism of the size of an orange was found, involving the posterior wall of the ascending arch and pressing on the left vagus and left recurrent.

Mr. T. G. Styan (*St. Bartholomew's Hosp. Reports*, xxi.) reports three cases of aortic aneurism, all of which had this peculiarity, that they ruptured into the left pleural cavity. In one of the cases the symptoms were those of biliary or intestinal colic and the presence of an aneurism was not made out during life.

Mr. Henry Morris ("Medico-Chirurg. Trans.," vol. lxviii.) reports a case of aneurism of the abdominal aorta, which caused gangrene of the right lower extremity, partly by embolism and partly by pressure on the inferior vena cava. The thigh was operated upon on account of the gangrene, but the patient died eight days later.

Dr. George B. Shattuck (*Boston Medical and Surgical Journal*, April 9, 1886) describes the case of a man, fifty-one years of age, who was brought to the hospital suffering from a pulsating tumor in the left lumbar region. He experienced intense pains; the tumor increased in size until it was as large as a water-melon. Death occurred, and at the autopsy an enormous false aneurism was found in the left flank, communicating with a true aneurism of the abdominal aorta.

In the line of diagnosis and prognosis Dr. A. A. Smith contributes two cases (MEDICAL RECORD, February 13,

1886), and shows that abdominal aneurisms may become protected by inflammatory connective-tissue deposits, the result of local peritonitis. In this way the tumor-wall may receive support, rupture be prevented, and life prolonged. The thickened matted mass, however, sometimes obscures the diagnosis.

As for treatment, a ligation of the innominate artery, successful for a time at least, for subclavian aneurism has recently been performed by Mr. Bennett May, of London.

Dr. Berend (*Deut. Med. Zeitung*, 1886, No. 1) records the results of his successful treatment of a case, diagnosticated as aneurism of the aorta, by iodide of potassium. The drug was given in ordinary doses for two months.

Dr. Black (*The Lancet*) adds another to the long list of cases in which aneurism of the thoracic aorta was treated unsuccessfully by galvano-puncture. Two isolated needles were introduced, and a current of nineteen cells, increased to thirty, was passed for an hour. Ten days later the operation was repeated, the current being passed for half an hour. Nine days after this the operation was repeated for a third time. After this the patient died, and at the autopsy no coagulum was found to have been formed in the sac.

The introduction into the sac of a hollow ivory needle through which a coil of wire is passed, and this connected with a galvanic battery, has been recently alluded to in this journal.

The treatment of abdominal aneurism by compression, as advocated by Mr. Holmes, receives poor encouragement from a case reported by J. R. Lunn and F. L. Benham ("Med. Chirur. Trans.," vol. lxviii). The patient, a man thirty-two years old, had a pulsating tumor in the abdomen five to six inches long, and six to seven inches wide. It was movable, and pressure on the aorta lessened the pulsation. A tourniquet was applied for four and three-quarter hours; the tumor pulsated less and became smaller and harder, but the patient died in three days. On post-mortem examination, it was found that a part of the jejunum had been compressed and was gangrenous.

In *The Lancet*, July 10, 1886, Mr. J. A. Kelly reports a case of simultaneous ligature of the right subclavian and right common carotid for aneurism of the ascending arch. The operation was successful and the symptoms were improved. A point of interest was that a good deal of the operation was done under cocaine.

DOES GOOD PLUMBING GUARANTEE A SANITARY DWELLING?

Dr. E. Noeggerath describes, in the *Journal of Obstetrics*, a microbe of extraordinary vitality which he obtained from uterine clots in a case of puerperal fever. The microbe was cultivated and its peculiar mode of growth noted. It was considered to be the cause of the fever:

"1. Because blood-clots expelled during the course of puerperal fever do contain, if any, the identical microbe which is found in abscesses developed in other parts of the body, *i.e.*, the specific cause of the fever in each individual case.

"2. Because this microbe belonged to the class of bacteria called saprogenes, with which corresponds the type of fever that I have attempted to describe.

"3. Because the patient was under its influence before and during confinement."

The fever in question, which was not fatal, was remittent, low, and prolonged. It was considered to be symptomatic of sapræmia, *i.e.*, of absorption of decomposed lymph and gases, not of a micro-organism itself, as in septicæmia and pyæmia. The labor was conducted upon the most careful antiseptic principles, the room, furniture, and clothing being thoroughly disinfected, and sublimate injections being made at intervals during parturition. Yet, despite it all, the microbe appeared and set up the putrefactive change which caused the fever. This microbe was found, among others, on the stopper of one of the wash-basins. Yet as regards the plumbing of the house Dr. Noeggerath says:

"Before and after the fever the present owner of the house had one of our best experts to examine the plumbing work, and he received the satisfactory assertion that it was the best that could be had in our day; and still the house was poisoned from the water-pipes.

"Consequently, a so-called good plumbing, from an engineering point of view, is no guarantee of a sanitary condition of a dwelling."

THE MICROBE OF RABIES.

The announcement of the discovery of the microbe of rabies, by Mr. G. F. Dowdeswell, of London, is made in terms which appear to us to be far from satisfactory.

In the first place, we can only express our astonishment that Mr. Dowdeswell has found so little difficulty in obtaining material for experiment—his language indicates that a large number of dogs with rabies was at his disposal. Now we know that one scientist in Berlin has been waiting in vain for a single case of undoubted hydrophobia for over three years, and that Dr. Billings, of this country, has not succeeded in obtaining, since his return from his visit to Pasteur, in Paris, a single specimen of a really hydrophobic dog, dead or alive, although reported cases of rabies have been of frequent occurrence. If we, therefore, express a doubt as to the genuineness of the material readily found in abundance by some experimentalists, the skepticism is pardonable.

Again, Fol made the same announcement with equal confidence in 1885. Now the microbe of rabies of Fol and that of Dowdeswell are not only not identical but opposite in character. Clearly one must be in error; which, if either, is in the right?

Dowdeswell takes much pains to state that his microbe will not take the stain of certain dyes, but omits for the present to state what stain it will take. Why make a mystery of it?

Dowdeswell cannot find his microbe in the salivating glands. Now we know that the microbe, if it exists at all, is certainly in the saliva of the dog, as that is the immediate medium of contagion to man. This fact casts a serious doubt upon the value of the Dowdeswell discovery.

Dowdeswell's microbe of rabies is said to be a micrococcus, not very minute, and of the usual form. They are spherical bacteria, and are usually found in cases of a contagious nature and virulent affections.

A NEW SKIN DISEASE.

For several years Western medical journals have contained articles upon a distressing form of skin disease known by the various names of "The Scratches," "Mange," "Prairie Itch," "Michigan Itch," etc. In a recent issue of the *Medical Age*, Dr. J. E. Clark gives a tolerably systematic account of it.

The disease, in most cases, is ushered in without any prodromata, the first symptoms being itching and a papular eruption. The papules are at first very minute. If not aborted they become vesicular in places, "the acuminated elevation of the cuticle giving way to the orbicular, which, with an accumulation of lymph, clear and colorless, marks the vesicular stage. In this stage the severe itching is attended with considerable superficial heat and tingling of the part. In some cases the local inflammation runs high, and the surrounding derma is of a bright scarlet color, with a feeling of tension in the part affected."

The eruption always occurs on a portion of the body covered with clothing, the hands and face never being affected. It favors the arms, chest, abdomen, and thighs, and is never general. Small sores sometimes result from scratching; they become covered, however, with a scab, which desquamates, and all trouble in that immediate part is removed.

Some physicians regard the disease clinically as eczema papulosum. Dr. J. E. Engstad, of Grand Forks, Dak., describes a vegetable parasite which he believes to be the cause of the disease. "This organism," he says, "is found in all the layers of the epidermis, but its chief seat is in the corium. The organisms belong to the class of cryptogamia. The fungi appear like flattened, short, or elongated cells, with a very slender and tapering projection from each end, binding from five to twenty together in a chain, or as an oval cell, with from four to twenty hooklets projecting from its sides. A good and powerful microscope (600–800) will bring them into view. Their diameter is from twenty to thirty micromillimetres, and the hooklets and tapering appendage measure from ten to thirty micromillimetres."

According to the above accounts the disease is a vegetable parasitic affection. It is slightly contagious, and may run a long course, lasting even years, and causing the greatest distress.

The remedies suggested are very numerous. Internal treatment does little or no good, according to most writers, though arsenic and mercury are recommended externally, or ointments of mercury and sulphur, naphthol soap, followed by inunction of sulphur ointment with petroleum, lotions of carbolic acid and hyposulphate of soda, and frequent baths are recommended. The thorough and persistent application to the skin of parasiticides seems to be the basis of all the successful methods of treatment suggested.

THE CHOLERA.

The epidemic of cholera in Italy this year has attracted little attention and appears to have excited no alarm. This is doubtless because of the general belief that the disease has spent its force. Parisian papers of this month express the view that the cholera, although still extending slowly in towns of Northeastern Italy, is showing signs of decline. It has disappeared from Naples, no cases are reported in Venice, and the disease does not seem to be attacking any place with a great degree of virulence In the week ending July 21st, the total number of cases reported was 717, with 328 deaths. In the subsequent week the figures were reduced to 199 cases and 83 deaths.

The cholera has reached Austria, but has so far only attacked a few places, viz., Fiume and Trieste, on the Adriatic coast. The number of cases reported is only one or two daily.

FURTHER INVESTIGATIONS REGARDING SCARLET FEVER AND COW'S MILK.

Some new contributions have been made to this subject by Dr. E. Klein. It will be remembered that a few months ago an epidemic of scarlet fever was traced to a dairy, the cows of which were suffering from a disease (vesication and ulceration) of the udder and teats. Dr. Klein inoculated calves with virus from these cows, and thus showed that the disorder was a transmissible one. He also found in the tissues and secretions a micrococcus, which he cultivated, the organism resembling in its growth a streptococcus. Inoculation of pure cultures causes death in some animals, with marked lesions of the peritoneum and kidneys, the latter organs looking like the kidneys in scarlatinal nephritis.

It is very evident that our English brethren have got hold of a very important subject for investigation, but it appears to us that Dr. Klein, with his streptococcus, is very much afloat. Certainly this cannot be the parasite of scarlatina, as the investigations of Fraenkel and Fraudenberg show.

ACUTE CARDIAC DILATATION.

Much has been written of late upon the subject of acute dilatation of the heart occurring in the course of febrile diseases. That such dilatation does very often occur, and that it may give rise to marked and even fatal symptoms, is admitted. Systematic writers upon cardiac diseases, however, have not yet called sufficient attention to this matter. In Brainwell's classical work, and in Dr. Osler's excellent article upon cardiac diseases in Pepper's "System of Medicine," the point is hardly alluded to. Eichhorst says more about it, and gives some interesting illustrations.

An English physician, Dr. G. Coates, has recently contributed to the subject in an article on "Temporary Dilatation of the Heart occurring during the Course of Acute Disease" (*The Practitioner*, July, 1886). Dr. Coates reports four cases of acute dilatation, occurring during the course of a fever following mumps, in pneumonia, and in rheumatic fever. In all cases the physical signs were very decidedly marked, but in only one case were there notable symptoms of cardiac weakness. Dr. Coates concludes that acute temporary dilatation does occur, that it may not give rise to any symptoms, and that it is due to simple stretching of the under-nourished muscle. Murmurs are sometimes, but not always, heard, and the second sound in two cases was reduplicated.

Dr. Oliver Wendell Holmes sails from Liverpool on August 24th.

News of the Week.

Laparotomy for Gunshot Wound of Intestine.—Dr. W. T. Bull, of this city, has again successfully performed laparotomy for gunshot wound of the abdomen. A sailor, aged twenty-five, was shot in the abdomen, August 12th, at 7.40 P.M., the ball entering two inches below and to the left of the umbilicus. He was taken to the Chambers Street Hospital in a cab. Two hours later the abdomen was opened, the wound having been first explored and found to be penetrating. There were no symptoms of any inter-abdominal injury, the pulse being 94, respiration 24, and temperature 98°. Much blood was found in the cavity, the small intestine was pierced in two places, the sigmoid flexure in one, and there was a wound of the sigmoid mesocolon, from which copious venous hemorrhage took place. The operation lasted one hour and a half, and was well borne by the patient. There have been no bad symptoms since; no vomiting, but slight pain and a moderate tympanites. The pulse has ranged between 90 and 110, temperature between 99° and 100°. This morning (the fifth day) there was a natural movement of the bowels. In short, the *only* untoward occurrence is the appearance to-day, August 17th, of a small mural abscess.

The Late Dr. Frank H. Hamilton.—At a meeting of members and officers of the Society of Medical Jurisprudence and State Medicine, held August 13, 1886, Judge Hull presiding, it was

Resolved, That in the death of Dr. Frank Hastings Hamilton, its President, the Society has lost one of its truest friends, wisest counsellors, and most distinguished members; that we tender to his bereaved family and surviving friends assurances of our profound grief and sincere condolence in their great affliction; that his loss falls with especial severity upon this Society, over which he has so ably and impartially presided, to which he has contributed so much that is valuable, and from whom it had hoped to receive so much in the future; a man whose life has been characterized by all the social and domestic refinements; whose public and professional career has now the highest applause not only wherever the English language is spoken, but in foreign lands as well; whose devotion to surgical science and the relief of human suffering has wrought for himself tablets of imperishable fame, achieving for him the distinction of being one of the most eminent surgeons of his age, and at the same time conferring lasting honor upon his country. G. W. Wells, M.D., *Secretary*.

After the adoption of these resolutions it was unanimously resolved to hold a memorial meeting in honor of Dr. Hamilton, at the hall of the Academy of Medicine, 12 West Thirty-first Street, on September 9, 1886, at 8 P.M.

American Social Science Association.—The General Meeting of this Association for 1886 will be held at Saratoga, N. Y., from September 6th to 10th, inclusive, opening at 8 P.M., September 6th, with an address by the President, Carroll D. Wright, of Boston. The Department of Education will meet on Tuesday, September 7th; the Health Department on Wednesday, September 8th; the Department of Jurisprudence on Thursday, September 9th; and the Social Economy Department on Friday, September 10th. Papers on scientific subjects will be read by Drs. Grace Peckham, Holbrook Curtis, Valentine Mott, Wallace Wood, T. Munson Coan, all of New York.

Possibly Suicide.—English journals say that there is, unfortunately, evidence to the effect that, in a moment of depression, Dr. Moxon administered poison to himself, a note to this effect, clearly written just before the fatal act, having been found among the papers on his table, the reason assigned for it being the insufferable torture experienced by him from an organic disease with which he was afflicted.

Dr. Pasteur.—Pasteur is a doctor at last, having been given a degree *honoris causa*.

The Sanitary Era is the title of a new weekly journal devoted to the subject of sanitation. It is edited by William C. Conant and published in this city.

Dr. R. P. Howard having resigned the position of Vice-President of the International Medical Congress, to be held in Washington next year, Dr. J. A. Grant, of Ottawa, has been appointed to the same office by the Executive Committee.

Billroth's Operations on the Stomach.—In the last five years Billroth has performed operations on the stomach in 32 cases, with 19 fatal results. Out of 15 gastrectomies for cancer, there were 7 recoveries.

The Kentucky School of Medicine had the misfortune to lose by fire, on June 10th, its entire premises and outfit. It has already secured a new and commodious building, however, and the work of turning out the much-needed new doctor will go on. It takes more than an ordinary conflagration to interfere with a real live American medical college.

The Iowa State Medical Society.—According to the *Iowa State Medical Reporter* the last meeting of this Society was a success socially, but hardly so in other respects. We are told that the scientific work was far below the capacity of its members, and that there appeared some evidences of lack of harmony among them. Iowa is a large State, with over three thousand physicians, and it ought to support a good society.

The Late Dr. Walter Moxon.—In a most appreciative sketch of the character of Dr. Moxon, Dr. Samuel Wilkes says: "It is impossible in a few lines to portray the character of so remarkable a man as the late Dr. Moxon. His was no ordinary mind, and I feel sure there is not anyone unfamiliar with his conversation and writings who could form any conception of its wonderful acuteness and depth. When I say his was no ordinary mind, I intend rather to convey the idea that Moxon could in no way be summarized as an eminent doctor or distinguished scientist. He was thus totally different from his late colleague, Fagge. The latter had a most orderly mind, of great acuteness, and threw aside everything he could not clearly bring to reasonable proof. Of such composition are most of our best scientific men—men whose methods of procedure are clear to all; and, if one

judge by results, in the complete overthrowing of old modes of thought, must be regarded as possessing the best minds of the age. Moxon was not one of these; and, in one sense, might be called superior, for he belonged to a class of persons whose mental processes are beyond analysis; he was essentially a genius; he could elaborate doctrines out of a brain which was always dealing with the most subtle problems. Just as the poet is born and not made, so it is with every genius. Moxon was thoroughly outside all that was commonplace, and, touched as he was with a spark of the celestial fire, he could pour out his thoughts with a brilliancy which often amazed his hearers. Even over his patients he discoursed in a manner entirely his own, and it is to be hoped that there are many of his old pupils who have preserved some of his highly acute and philosophic sayings. His intellect was of that high order that whatever he touched he needs must have advanced, and therefore all his contributions to medicine were of the most valuable kind. It is possible that he might have excelled still more at the Bar, or in literature become another Carlyle."

Is Pasteur also to Collapse?—The announcement is made of two more deaths of patients who had been bitten by mad dogs and then inoculated by Pasteur. Among fifty-four persons bitten by mad wolves and inoculated by Pasteur, fourteen have now died, which is about the ordinary percentage. It seems impossible not to conclude that the Pasteur virus is at least impotent against mad wolves.

Postmaster or Doctor.—An Alabama physician has retired from practice temporarily in order to become postmaster.

Regulating Medical Practice in Iowa.—The State Board of Examiners, says the *Iowa State Medical Reporter*, held their first session under the new law on July 9th. Ten per cent. of the physicians of the State presented diplomas or certificates of practice. Six presented themselves for examination. There is a good prospect of a satisfactory enforcement of the law.

American Dermatological Association. — The tenth annual meeting of this Association will be held at the Indian Harbor Hotel, Greenwich, Conn., August 25, 26, and 27, 1886.

The Association of American Physicians.—The extraordinary course of the *Journal of the American Medical Association* in attacking The Association of American Physicians and Pathologists has, we hope, received a check through the following letter, sent to the *Journal* by Dr. James Tyson, Secretary of the Washington meeting. He writes: "Referring to the communications in your issues of the 24th and 3d ult., with regard to 'The Association of American Physicians,' it was with extreme reluctance, and only after recalling the fact that published matter of this kind becomes the source of history—history which in this instance would be erroneous—that I decided to write briefly the actual history of the formation of the society. *First*, the organization was altogether independent of, and prior to, the idea of a Congress of American Physicians and Surgeons. The orginal suggestion came more than three years ago, *not* from Philadelphia or New York or Boston, but from Toronto, Canada. It was based upon the feeling that such a society had become almost necessary in view of the fact that all departments of medicine, except general medicine and pathology, were represented in special societies devoted to their interests. Further, it was long after the arrangements for organization were essentially completed that the idea of a Congress of American Physicians and Surgeons was formulated by the American Surgical Association. *Second*, the Association was not formed in antagonism to the American Medical Association, and it was a matter of serious solicitude with some of the founders lest such interpretation should be put upon its formation; but this was not considered sufficient reason for giving up a plan which promised so much for medicine and pathology. So far as I know, no member who is also a member of the American Medical Association has 'forsworn his allegiance' to the latter, as is alleged by your Philadelphia correspondent. *Third*, in selecting original members for the 'active list,' it was desired to secure men who had been and still are active in furthering the interests of medicine and pathology, either as practitioners, teachers, or writers. That this was accomplished with reasonable success, when it is remembered that a certain number of vacancies are maintained for the present, will, I think, be conceded by the unprejudiced observer. *Finally*, with regard to the name chosen, a moment's consideration should satisfy the critic that the use of any other 'article' than the 'definite' would produce a ludicrous and impossible title. Such a title would be '*An* Association of American Physicians,' '*An* American Gynecological Society,' '*An* American Ophthalmological Society,' etc."

A Fortunate University.—Since 1879 the University of Sydney has received donations exceeding a million of dollars. One bequest, known as the Challis bequest, is expected to realize £200,000. The Macleay Natural History collection, another recent gift, is valued at £25,000, and a sum of £6,000 has been promised for the endowment of a curatorship in connection with it. For the purpose of founding a library a donation of £30,000 was made.

Separate Licensing Boards in Canada.—The *Canada Medical and Surgical Journal* says: "The advisability of establishing a Central Examining Board has now been fully entertained both by the Governors of the College and also by the general meeting of the profession. It will, therefore, doubtless come into force as soon as the necessary legislation shall have been obtained. The proposed composition is such that all interests seem to be fairly represented. The total number will be twenty, more than would be required, except for the absolute necessity for a double set of examiners, English and French."

A Case of Graves' Disease, due to nasal hypertrophy, is reported by Professor Hack, of Freiburg. On destroying the diseased erectile tissue of the nose with a cautery, the eye and heart symptoms and stricture disappeared. Professor Hack thinks that Graves' disease may be a reflex neurosis.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING.

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

(DIRECT CABLE TO THE MEDICAL RECORD.)

(Continued from page 188.)

THURSDAY, AUGUST 12TH—THIRD DAY.

THE Association was called to order at 11 A.M. by the President, WITHERS MOORE, M.D., F.R.C.P., of Brighton, Surgeon to the Sussex County Hospital.

The first order of scientific business was the delivery of the

ADDRESS ON SURGERY,

by FREDERICK ABELL HUMPHRY, F.R.C.S., of Brighton, Surgeon to the Sussex County Hospital, who first referred to the mutual relation existing between medicine and surgery, shown in the fact that the one could not be practised successfully to the exclusion of the other; that the invasion of the field of surgery from a medical point of view is a necessity; that the invasion by the surgeon of fields heretofore regarded as exclusively medical has carried with it broader views with reference to the condition of the whole body. At one time the cranial cavity was looked upon as belonging wholly to the physician, and whenever its contents became involved in disease, save what was the result of direct violence, the physician was consulted. So it was with the thorax and abdomen. Only a few years have elapsed since it was regarded as chimerical to propose to explore the abdominal cavity by means now so freely practised by surgeons. The consequence was that physicians had so thoroughly familiarized themselves with the diseases of the contents of these three great cavities of the body that now it is doubtful if medicine has not done as much for surgery as surgery has done for medicine. That this mutual relation has been recognized has been shown by the fact that careful surgeons, in all cases surrounded by the least doubt, call to their aid the diagnostic ability of the skilled physician before applying the resources of their art.

The speaker then compared old with modern surgery, and here he was led to mention and to describe more or less in detail the advancements which had been made, not only in science, but in the application of its principles, aided by the marvellous discoveries of anæsthetics and the use of antiseptics.

As an illustration of an opportunity for further advancement, notwithstanding the great achievements already made, special reference was made to our present knowledge of visceral syphilis. Attention was then directed to the medical treatment of surgical cases. In many cases surgical operations failed to cure the patient because they were performed only as an aid to the physician, and the patients died because the surgeon failed to give them the medical treatment required to cure the disease that gave rise to the necessity for the operations.

In this respect provincial surgeons enjoyed advantages not vouchsafed to their apparently more highly favored brethren of the great metropolis; for, being general practitioners also, they were able to extend to their patients all the benefits which experience as physicians in private practice enabled them to impart.

The address was concluded by special reference to the advantages afforded by Brighton to scrofulous patients, and the benefit which surgical cases could obtain by reason of better nursing and the facilities for attending to the general system, hygienic and otherwise, than could heretofore be offered.

The address was listened to with marked attention throughout the entire delivery, and at its close Sir William MacCormac proposed a vote of thanks to Mr. Humphry, which was seconded by Mr. Wheelhouse, and heartily adopted by the Association.

AWARD OF PRIZES.

The gold medal for distinguished merit was presented to Dr. Edward Waters. This is the highest honor which the Association can bestow, and was awarded to Dr. Waters in recognition of his long, arduous, and at last successful labors in securing medical reforms.

The *Stewart* prize was awarded to Dr. Robert Cory, who had demonstrated on his own person the possibility of vaccinal syphilis.

The *Middlemore* prize was divided between Mr. Berry and Mr. Frost.

PRESENTATION OF AMERICAN DELEGATES.

NATHAN S. DAVIS, M.D., LL.D., of Chicago, President of the International Medical Congress, was presented to the Association, and spoke at some length with reference to Congressional matters. Sterling and most fitting were the words he used in memory of Gross and Flint, which drew from the sympathetic audience a hearty applause. He extended a cordial invitation to the members of the British medical profession to attend the forthcoming Congress.

DR. WILLIAM BRODIE, of Detroit, was introduced, and responded in a few well-timed remarks, which were received with cheers. Other delegates were introduced and spoke, and on motion by the President, seconded by Balthazar Foster, President of the Council, Dr. Davis and his colleagues received a vote of thanks for their unanimous expression of fraternal feeling toward the profession of the United Kingdom.

The Association then adjourned to meet on Friday, August 13th.

At 7 P.M. the General Association attended a public dinner—a sumptuous repast—followed by speech-making.

MEETINGS OF SECTIONS.

SECTION IN MEDICINE.

The Section met in the Music Room, and was called to order at 2 P.M. by the President, DR. H. BROADBENT, who delivered a short address, which was followed by the regular subject for discussion, entitled

ON THE EFFECTS PRODUCED BY GALL-STONES, WITH PARTICULAR REFERENCE TO SOME LESS KNOWN POINTS IN THEIR SYMPTOMATOLOGY.

W. Ord, M.D., F.R.C.P., of London, opened the discussion, which was continued by Dr. T. Churton, Professor Charcot, of Paris, France, and Dr. Sir Peter Eade.

The discussion pertained largely to some of those rare disturbances which are manifested by the nervous system.

GEORGE H. SAVAGE, M.D., then read a paper on

MENTAL SYMPTOMS WITH LOCOMOTOR ATAXY,

in which he referred to those peculiar mental aberrations sometimes seen in connection with chronic diseases affecting the nervous system, and which have been regarded as being close to the border-line of insanity.

C. H. RALFE, M.D., followed with a paper on

FUNCTIONAL ALBUMINURIA,

in which the arguments *pro* and *con* were lucidly set forth, leaving the hearer to conclude that the greatest safety for the patient consisted in giving him the full benefit of the doubt before deciding that his case does not present a serious aspect. That there were cases in which albuminuria was temporary had been fully demonstrated.

This paper was followed by one on

THE RELATIONSHIP OF UREA TO CERTAIN DISEASED PROCESSES,

by T. OLIVER, M.D., chiefly those affecting the digestive organs and the nervous system.

The Section then adjourned to meet on Friday.

SECTION IN SURGERY.

The Section was called to order by the President, JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., of London, and the first paper was on

HEPATIC PHLEBOTOMY AND PUNCTURE IN HYPERTROPHIC CONGESTIONS OF THE LIVER,

by GEORGE HARLEY, M.D., F.R.S. The operation was regarded as a feasible one under proper antiseptic precautions, and one likely to be attended by permanent benefit when successfully performed.

J. K. THORNTON, ESQ., then read a paper entitled

THE SURGERY OF THE LIVER,

in which all the known operations upon this organ were fully considered.

A. WILLETT, ESQ., followed with a paper on

CHOLECYSTOTOMY,

and HOWARD MARSH, ESQ., of London, reported

A CASE OF ABSCESS OF THE LIVER OPENED BY INCISION,

in which the patient made a good recovery.

LAWSON TAIT, ESQ., then read, for Dr. Mackay, of Huelva, a contribution to

THE SURGICAL TREATMENT OF GALL-STONES.

These papers were discussed together, and the discussion was participated in by a large number of members.

DR. FITCH OWEN, of Nova Scotia, read a paper on the use of

THE DOME-TROCAR

and associated instruments in paracentesis, aspiration, transfusion, ovariotomy, and tunnelling the enlarged prostate.

EDMUND OWEN, ESQ., followed with a paper on

PSOAS ABSCESS,

in which he discussed the questions when and where to evacuate it under antiseptic precautions.

WILLIAM ADAMS, ESQ., of London, read a paper

ON THE TREATMENT OF CONGENITAL DISPLACEMENT,

which is the so-called congenital dislocation of the hip-joint. His method is by long-continued recumbency and extension, and he exhibited his new extension couch.

The Section then adjourned to meet on Friday.

SECTION IN OBSTETRICS.

The Section was called to order by the President, ALFRED MEADOWS, M.D., of London. The first paper was read by W. T. LUSK, M.D., of New York, and entitled

THE PROPER MOMENT FOR THE PERFORMANCE OF GASTROTOMY IN ABDOMINAL PREGNANCY.

It was discussed by Mr. Lawson Tait, of Birmingham, Eng., Dr. H. P. C. Wilson, of Baltimore, Md., the President, T. R. Jessop, T. M. Dolan, A. W. Edis, and Dr. Lusk.

D. BERRY HART, M.D., then read a paper, in which he reported a successful case of

ABDOMINAL SECTION FOR RUPTURED FALLOPIAN TUBE FŒTATION.

It was accompanied by a microscopical examination of the part of the tube removed, which was especially interesting with reference to certain histological and pathological questions.

J. H. AVELING, M.D., reported a case of

EXTRA-UTERINE GESTATION ARRESTED BY ELECTRICITY.

The subject was discussed by C. J. Wright, M.R.C.S., of Leeds; W. Gill Wylie, M.D., of New York; Lawson Tait, Esq.; Drs. W. T. Lusk and H. T. Hanks, of New York, and several others.

DR. RANNEY, of Michigan, read a paper on the

TREATMENT OF MASTITIS,

which was discussed by several members, and was followed by a paper by DR. BEVERLEY, in which twenty cases of

EMMET'S OPERATION

were detailed. This gave rise to discussion, participated in by Drs. Gordon, Kelly, and Wylie, after which the Section adjourned to meet on Friday.

SECTION IN THERAPEUTICS AND PHARMACOLOGY.

The Section was called to order by the President, DR. T. LAUDER BRUNTON, of London, and PROSSER JAMES, M.D., of London, read a paper on

LOCAL ANÆSTHETICS.

This was followed by a discussion on

ANALGESICS,

which was opened by DR. SPENDER, of Bath, and continued by Brown-Séquard, of Paris, Liebreich, of Berlin, the President, and E. Mackey, M.D.

MORTIMER GRANVILLE, M.D., read a paper on

THE RELIEF OF PAIN BY MECHANICAL VIBRATION OR PERCUSSION,

which was followed by one on

THE THERAPEUTIC EFFECT OF COCAINE IN OPHTHALMIC PRACTICE,

by W. H. JESSOP, M.B.

Stephen MacKenzie, M.D., then read a paper on

THE VALUE OF CANNABIS INDICA IN CERTAIN CASES OF HEADACHE.

It was regarded as an efficient remedy, especially in some forms of migraine.

The Section then adjourned to meet on Friday.

Friday, August 13th—Fourth Day.

The Association convened at 10 A.M., and heard the

ADDRESS IN PUBLIC MEDICINE,

given by E. D. Mapother, M.D., Consulting Officer to the City of Dublin.

It related largely to the status of the medical profession in Ireland, and to its work. Epidemics and alcoholic diseases were of infrequent occurrence in that country. Among the humbler rural classes and the common middle classes the sick poor in Ireland were better cared for than in any other country—thanks to the Medical Charities Act. College hospitals for infectious diseases were needed. Provident dispensaries were unknown in Ireland, except a few in large towns. The county infirmaries were well managed, and there was no city in the world where so many hospitals existed in proportion to the population as in Dublin, where there were ten hospitals.

The speaker then referred to the two professional occupations suitable for women, namely, mechanical dentistry and dispensing medicines. With reference to allied sciences, there was no teaching of veterinary medicine in Ireland.

On motion by Richard Patrick B. Taaffe, M.D., of Brighton, seconded by Surgeon-General Moore, Dr. Mapother received the hearty thanks of the Association, for his able address.

CONCLUDING MEETING—HONORARY MEMBERS, ETC.

The concluding general meeting was held at 4 P.M., and at 8 P.M. a brilliant reception was given by the Mayor of Brighton.

At the concluding meeting Drs. N. S. Davis, of Chicago, John S. Billings, of Washington, J. A. Grant, of Ottawa, and Kingston, of Montreal, were elected honorary members.

After the reading of several reports from standing committees, on medical reform, parliamentary bills, scientific grants, collective investigation, etc., and the adoption of the usual votes of thanks to the President, citizens, etc., the Association adjourned.

The attendance during the annual meeting numbered nearly sixteen hundred.

On Saturday, August 14th, numerous excursions were given, and thus closed one of the most successful meetings in the history of the Association.

MEETINGS OF SECTIONS.

SECTION IN MEDICINE.

Dr. Radcliffe Crocker gave a demonstration

ON THE REMOVAL OF HAIR BY ELECTROLYSIS.

This was followed by a paper on

THE ETIOLOGY OF RHEUMATISM,

by A. Mantle, M.D., in which the author considered his subject from the bacterial standpoint, and exhibited specimens of the micro-organism he had found in rheumatism.

Dr. Haycraft then read a paper on

THE RELATION OF COAGULATION OF BLOOD TO DISEASE,

in which he made special reference to the more modern views concerning the exact factors in the process.

A paper on a cognate subject, and entitled

INADEQUATE TREATMENT OF ANÆMIA,

was read by Sir Dyce Duckworth.

Dr. Radcliffe Crocker also read a paper on

RECURRING ECZEMA,

which was followed by one

ON COMPRESSED AND RAREFIED AIR,

by A. Gamgee, M.D.

SECTION IN SURGERY.

Mr. Erichsen, President, called the Section to order at 11 A.M., and Victor Horsley, of London, read a paper on

THE ADVANCES IN THE SURGERY OF THE CENTRAL NERVOUS SYSTEM,

which he illustrated by means of photographs and the lime-light. The paper was one of the most interesting presented to the Association, and was discussed by Professor Charcot, of Paris, and J. Hughlings Jackson.

Bruce Clarke, Esq., and W. E. Steavenson, M.D., read papers on

THE EMPLOYMENT OF ELECTRICITY IN THE TREATMENT OF DISEASES OF THE URINARY ORGANS.

Reginald Harrison, Esq., of Liverpool, read a paper on

URETHRAL STRICTURE,

in which he set forth the advantages arising from the treatment by internal and external urethrotomy combined.

Noble Smith, Esq., read a paper on

OBSCURE DISEASE OF THE SPINE

pertaining to both bony and soft structures, and its relation to severe surgical injuries.

Sir William Stokes, of Dublin, followed with a paper on

ACUTE MYXŒDEMA OCCURRING SOON AFTER THE REMOVAL OF THE THYROID BODY.

Walter Whitehead, Esq., reported three hundred consecutive cases of

HÆMORRHOIDS CURED BY EXCISION,

thus exhibiting a remarkable surgical success.

S. Benton, Esq., read a paper on

FISTULA IN ANO,

in which he directed special attention to the horse-shoe variety, and its radical cure.

This was followed by a paper on

THE SURGICAL TREATMENT OF ACNE AND LUPUS,

by James Startin, Esq., who reviewed the methods by caustics, the use of the actual cautery, and by excision, puncture, etc.

THE SURGICAL TREATMENT OF CERTAIN TUMORS OF THE NECK,

was the title of a paper read by F. B. JESSETT, ESQ., after which the Section adjourned.

SECTION IN OBSTETRICS.

The subject for discussion was

REMOVAL OF THE UTERINE APPENDAGES.

The discussion was opened by Dr. Savage, of Birmingham, continued by Dr. More Madden, of Dublin, Dr. Imlach, of Liverpool, Mr. Lawson Tait, of Birmingham, and others. The tenor of the discussion was like that unto which reference can be made in nearly all the current medical periodicals of the day.

J. W. BALLANTYNE, M.B., of Edinburgh, exhibited

SPHYGMOGRAPHIC TRACINGS IN LABOR AND THE PUERPERIUM,

which was followed by a paper on

THE USE OF STEM PESSARIES,

by J. GORDON BLACK, M.D., of Harrogate.

DR. T. M. DOLAN then related several obstetric experiences, and made observations on the cases reported.

DR. A. W. EDIS read the last paper, which was entitled,

CASES ILLUSTRATING THE DIFFICULTIES OF DIAGNOSIS IN GYNECOLOGICAL PRACTICE.

Judging from the errors that have been made, all such cases are worthy of special consideration.

MISSISSIPPI VALLEY MEDICAL SOCIETY.

Twelfth Annual Session, held at Quincy, Ill., July 12, 1886.

THE above Society met on July 12th, DR. ARCHIBALD DIXON, of Henderson, Ky., President, in the chair; DR. E. B. MONTGOMERY, of Quincy, Secretary *pro tem.*

DR. H. M. LANE, of Carthage, Mo., read a paper on

YELLOW FEVER IN BRAZIL.

The Doctor had been on the ground, and related his own experience and observation in dealing with this disease by Freire's method. He gave in detail the manner of preparing the virus for inoculation, and recommended that this Society should memorialize Congress, asking the appointment of a committee to investigate this method, with a view to introducing it into this country.

DR. LOUIS BAUER, of St. Louis, presented a patient on whom he had performed laparotomy for symptoms of ileus. He found

AN ABSCESS IN THE LIVER,

from which he drew off a quart of pus, then opened more freely and washed out the cavity with an antiseptic fluid. A portion of the gall-bladder sloughed out, and the large intestine was perforated, but no constitutional disturbance resulted. The Doctor believed with Lawson Tait that laparotomy was frequently useful. Discussed by Drs. Beard, of Vincennes, Ind., and Bernays, of St. Louis.

DR. F. W. BEARD, of Vincennes, related a case where he had observed

SEMINAL EMISSIONS AT DEATH FROM HANGING.

DR. A. H OHMANN-DUMESNIL, of St. Louis, read a paper on

LUPUS ERYTHEMATOSUS

and reported a case. The patient was a farmer, aged fifty-two, who had always been in good health. The lupus involved the dorsum of the hand and arm, and occasioned no complaint on the part of the patient. He illustrated the pathology of the disease by several very fine microscopical specimens. As to treatment, he used a concentrated solution of lactic acid. Photographs of the case were also shown.

DR. ROBERT BARCLAY, of St. Louis, in a paper on

NOISES IN THE HEAD AND EARS,

devoted especial attention to the pathological conditions giving rise to them and their treatment.

The President, DR. ARCHIBALD DIXON, of Henderson, Ky., read a paper entitled

PERINEAL LACERATIONS.

He greatly favored Simon's method of repair.

DR. FRANK R. FRY, of St. Louis, read a paper on the "Etiology of Chorea." He advocated the neurotic theory and opposed the embolic. The exciting causes he thought to be various.

On motion of DR. DUDLEY S. REYNOLDS, of Louisville, the Society adopted the Code of Ethics of the American Medical Association.

DR. HENRY M. LYMAN, of Chicago, read a paper on the

DISCOVERY OF ANÆSTHETICS,

going thoroughly into the history of the subject.

DR. DUDLEY S. REYNOLDS, of Louisville, read a paper on

OPTICAL DEFECTS AND THEIR CORRECTION.

He exhibited an instrument for the measurement of the lenses. Its recommendation was simplicity.

DR. J. L. GRAY, of Chicago, showed a stomach-pump, with siphon attachment, which could be useful in introducing aliment or washing out the stomach.

DR. E. B. MONTGOMERY, of St. Louis, read a paper entitled

THE THERAPEUTICS OF HOT WATER.

He detailed its uses in a great variety of conditions.

This paper was extensively discussed.

DR. L. H. COHEN, of Quincy, read a paper on "Electro-Therapeutics."

DR. J. N. LOVE, of St. Louis, read a paper on

ARTIFICIAL ALIMENTATION,

in which he discussed especially the absorptive power of the rectum.

Officers were elected as follows:

President—I. N. Love, M.D., St. Louis.

First Vice-President—Joseph Robbins, M.D., Quincy.

Second Vice-President—Jacob L. Geiger, M.D., St. Joseph, Mo.

Third Vice-President—T. B. Harvey, M.D., Indianapolis.

Secretary—J. L. Gray, M.D., Chicago.

Treasurer—A. H. Ohmann-Dumesnil, M.D., St. Louis.

Assistant Secretary—Edward Alcorn, Houstonville, Ky.

DR. AMOS SAWYER, of Hillsboro, Ill., read a paper on

THE THERAPEUTICS OF SUBNITRATE OF BISMUTH AND ASCLEPIAS TUBEROSA.

The author opened with the assertion that acology had been inexcusably neglected in our Society proceedings. The author thought that one of the principal therapeutic effects of bismuth was its power to coagulate mucus. He had used the subnitrate of bismuth to coagulate the mucus in throat and nasal troubles.

In the tormina of dysentery, so distressing to the patient, the fluid extract of asclepias tuberosa, in teaspoonful doses, every two hours. A warm infusion of the fresh root also acts like a charm. In drachm doses every two hours it relieves the pain of acute muscular rheumatism in from six to eight hours; also the severe pains of pneumonia are relieved by it. Asclepias tuberosa is certainly a sudorific anodyne, and occasionally, through an idiosyncrasy, an emetic.

Dr. A. C. Bernays, of St. Louis, reported an operation for

LIGATING BOTH VERTEBRAL ARTERIES

in a case of epilepsy. The patient, a boy, aged twelve years, had had fits for seven years, sometimes over one hundred per day. Occasionally free intervals of several weeks. No hereditary encumbrance, no physical infirmities; well developed and tall for his age. Both arteries were tied. The ligature of the artery on the right side was very tedious, on account of venous hemorrhage from the perivertebral plexus, and on account of an abnormal course of the artery. It was but half the normal size, and skipped the sixth vertebra, running toward the median line to enter some vertebra higher up. This operation lasted about two hours. The left vertebral artery was tied, just as it entered the transverse process of the sixth cervical, in the usual way. It was somewhat larger than was suspected. Only ten minutes were required for this ligature. The incision was made to the outside of the external jugular vein, parallel to the rear border of the sterno-cleido-mastoid muscle, beginning half an inch above the clavicle, and extending 2.5 inches upward. The reporter made anatomical demonstration, and showed that the artery could be tied as it passes over the massa lateralis of the atlas, or even between any two vertebræ, after clipping out that part of the transverse process which corresponds to the head and neck of a rib with bone nippers. The essayist showed that the operation was not nearly so difficult and dangerous as would be supposed, judging from its anatomical relation and depth. The case did well; the wounds healed kindly, and there were no spasms since the operation up to the time at which the boy left the hospital for his home. The pulse ran up to 180, and the respirations to 58 per minute, immediately after the operation, and only returned toward the normal condition very slowly. The temperature was nearly normal on the second day. This remarkable height reached by pulse and respiration is a most interesting observation. It can be accounted for by the following reasoning, based on physiological facts: The medulla oblongata receives almost its entire blood-supply from the vertebral arteries. The pneumogastric nerve-centres are located in the medulla oblongata, near the calamus scriptorius. By cutting off the direct blood-supply the inhibitory centres are deprived of proper nourishment, and their action impaired. Therefore we can readily understand that the accelerating centres of the sympathetic held full sway until the collateral circulation was more or less perfectly established.

The reporter gave statistics in regard to the operation, which he thought was very much neglected in this country, in spite of the encouraging experiences of Alexander, of Liverpool, who had cured, or benefited, more than half of his cases.

The Doctor also showed a post-mortem specimen, a lady who had died from rupture of the cyst in

EXTRA-UTERINE PREGNANCY,

and consequent hemorrhage. The specimen showed a double uterus, with the fœtus in the left Fallopian tube.

A very enjoyable reception was given at the residence of Dr. R. W. McMahon.

The next meeting will be held at Crab Orchard Springs, Ky., the second Tuesday in July, 1887.

Roman Law and Medical Practice.—The Roman laws ordained, says Montesquieu, that physicians should be punished for neglect or unskilfulness. In treatment, if the physician was a person of any fortune or rank, he was condemned to deportation; but if he was of a low condition in society he was put to death, which was rather hard on the said physician of low condition.

A Cut in Time saves nine.

Correspondence.

LITHOLAPAXY IN BOSTON.

To the Editor of The Medical Record.

Sir: Under the heading "Operations for Stone in the Bladder" the Philadelphia *Medical News* of June 19th last, in an editorial, presents some views on the outlook for litholapaxy which are in a measure discouraging. The article states that "this method is practically applicable only to calculi of moderate size, and requires a degree of skill and experience on the part of the operator which cannot always be found. The consequence has been a more frequent return to cutting operations than was expected in view of the earliest achievements of litholapaxy." Since the introduction of Professor Bigelow's improvements in the method of crushing and evacuating stone in the bladder, no case has presented itself at the Massachusetts General Hospital which has, on account of the size or hardness of the stone, necessitated resort to a cutting operation. Practically the question of size is not to be considered, since any stone small enough to admit of some portion of its circumference being seized between the blades of the lithotrite can, providing it is not too hard, be successfully crushed and evacuated. The hardest form of calculus is that composed of oxalate of lime. In August last Dr. Beach removed, at the Massachusetts General Hospital, a stone of this character weighing 34.68 grammes. As is always done here when the urethral orifice is not up to the normal calibre of the remainder of the canal, the meatus was cut preparatory to the introduction of the largest-sized lithotrite. The stone was readily grasped, but only cracked after several attempts. Each fragment had to be crushed with the screw. Stones of this character are frequently considered as being beyond the scope of the lithotrite, and are removed by a cutting operation. The eight years during which Professor Bigelow's improvements have been in practice here have evidently not been enough to introduce them thoroughly elsewhere. The evidence which the clinic at the Massachusetts Hospital has thus far furnished would seem to show that litholapaxy must only be abandoned when a stone is diverticulated, or the urethra not sufficiently developed, as in children. Numerous cases are reported where enormous prostate hypertrophy prevented complete crushing, and the stones had to be cut for. Dittle and Bois each report a case where, owing to an anchylosed, strongly flexed, adducted, and inward rotated thigh, the lithotrite could not be used.

Boston.

THE TREATMENT OF IVY-POISONING.

To the Editor of The Medical Record.

Sir: In an editorial on the subject of rhus-poisoning, in The Record of July 31st, the statement is made that specifics for this affection do not in reality exist, and that the most that can be done is to palliate the symptoms, and, perhaps, shorten the period of the inflammation. I am convinced that in this you are mistaken, and that in bromine we have a specific which, when properly applied, will in every case cut short the attack within twenty-four to forty-eight hours after the first application.

I have used it now in nearly a hundred cases with this invariable result, and many of my medical friends have had the same experience, while I have yet to hear of a single unsuccessful trial. I have used it in cases of great severity, and also in cases which had long resisted treatment. Once during my service in the navy I was stationed where there were some five hundred recruits, who spent a good deal of their leisure time upon a tract of ground where the *rhus radicans* abounds, so that I had a number of new cases of poisoning each day. At this time an officer joined us who had been suffering for five weeks. The application cured him at once. Being un-

usually susceptible to the action of the poison and seeing the promptness of the cures daily effected, he conceived the idea that by having the whole skin affected and then cured, he might purchase immunity from future attacks. He therefore gathered the leaves of the plant, bruised them, and rubbed the juice upon the entire surface of the body. I saw him in about sixteen hours after the application. He was standing naked in the middle of the floor, unable to sit or lie, or bear any clothes to touch him. He was greatly swollen, especially about the genitals and face; his features were nearly obliterated, and his eyes were buried by the tumefaction. He was suffering greatly from pain and the discomfort of his condition. His temperature was elevated two degrees, and his pulse was 110°. I caused the application to be made at once to every part of the body. Relief was almost immediate. Pain and swelling began at once to subside, temperature became normal; in twenty-four hours he was able for duty; in forty-eight hours every trace of his experiment had vanished. Not a single vesicle formed. (This case was reported in 1883, before the Dakota Medical Association.)

I cannot but believe that my constant success in such a large number of cases spread over twelve years' practice and treated in the West Indies, the Pacific Islands, California, Dakota, and elsewhere, is due to the specific power of bromine. At all events my experience shows an extraordinary result, and seems to justify my once more urging the agent before your notice. It was first presented in THE RECORD of May 20, 1878. The formula used is:

℞. Bromi..... gtt. xv.
Ol. olivæ..... ℥ j.

M. S.—Apply freely to poisoned surface four times a day. Wash with warm water and castile soap twice a day.

The solution should always be fresh, as it deteriorates by evaporation even when cooked.

Respectfully yours,

S. A. BROWN, M.D.

SIOUX FALLS, DAK., August 4, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dermatitis Venenata—the inflammation produced by poison-oak or ivy, is claiming attention. It isn't infrequent with us; is most times obstinate, always annoying and painful. Have myself been a victim more than once, and know experimentally the exquisite torments of the affection, and the inefficacy of much of the treatment as well.

Was suffering from a particularly trying attack some years ago; both arms were well-nigh raw to the shoulders, and there is no adjective to qualify the torment I endured. Everything had failed me, and in my desperation I thought of mur. tinct. iron locally—my clearest idea being that the smart of the remedy might at least obscure that of the disease. In this I wasn't disappointed. I incautiously mopped both arms rapidly and thoroughly. For twenty or thirty minutes my sensations were varied and lively; after which, the disturbance subsiding, I decomposed the tinct. with a wash of soap and water, completing the treatment with a dressing of olive oil. Relief was immediate and complete, desquamation ensuing within a few days.

Have used the tinct. in numerous instances since, and with uniform results. More than one application has rarely been necessary, and when so, only I think because the first was not thorough. Within a few days my own son came home to me with both feet and ankles so inflamed from this poison as to practically disable him. It was of two weeks duration, the usual remedies giving no relief. One thorough application of the tinct. was all that was required.

In children, or nervous, susceptible patients, where the abrasions from inevitable scratching are extensive, it is well to advise them of the sharp, but transient, burning attending its use. Either so, or apply it gradually, giving time for accommodation of parts, etc. I use it full strength, and as we do iodine.

There is nothing *specific* in the action of the drug; nor do I use it empirically. This form of dermatitis differs from others of its class only in its source or origin—the rhus family being responsible here. The condition is one of inflammation of the derma, probably just the same as in traumatism, the application of heat, cold, etc., and characterized, in degree, by the usual *neber, caler, doler*, with intolerable itching as a harrassing climax. The usual local sedatives and mild astringents do not answer—their action is too superficial. Cauterants, of course, are out of the question. But something from the border-line between the two—from among the stronger astringents, of which the mur. tinct. is fairly typical—meets the demand, and accords with principle. The use of it, too, is free from the objection to carbolic acid (probably as efficient in equivalent strength) in that neither possible idiosyncrasy obtains, nor is there local or general trouble to be apprehended from its employment.

I think any patient thus racked may rather confidently expect prompt relief from the thorough use of the tinct. as above, in any stage. A little pluck to endure the stinging pain for a few minutes is the only prerequisite. Short acquaintance with the affection will render any change welcome. Very respectfully,

A. G. BROWNING, M.D.

MAYSVILLE, KY., August 12, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Spirits of turpentine applied, if possible, before the vesicles rupture, is an efficient application in rhus-poisoning. I am, sir, Very respectfully yours, etc.,

T. E. WILCOX, M.D.,
Assistant Surgeon U. S. Army.

WASHINGTON BARRACKS, D. C., August 6, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I was somewhat disappointed in readinng your editorial in THE RECORD of July 31st on "The Treatment of Rhus-Poisoning"—disappointed, because I expected to find, somewhere in the body of the article, something confirmatory of the virtues of a solution of the bichloride of mercury as a topical remedy in the therapy of this dermatitis.

I can assure you of the specific virtues of the bichloride in the treatment of rhus-poisoning. The poison-oak abounds in this section, and I have had repeated opportunities for making observations with various remedies, and have abandoned all, except a ten to twenty grain solution of corrosive sublimate, as it has proved to be a specific in my hands. I have kept no record of cases so treated, but can state most positively, that if applied on the second or third day of invasion, that a cure will follow as rapidly as a cure could be expected to obtain. In other words, the bichloride stops the inflammatory action at once, and resolution proceeds from thence to a complete relief. For purposes of safety, I sometimes repeat the application a second time, but in the large majority of cases, a single one suffices for a complete and immediate cure.

WILLIAM B. DAVIS, M.D.

GRAYSVINE, FARRAGUT COUNTY, TEN.

SOME FURTHER REMARKS ON THE DEATH-PENALTY AND METHOD OF INFLICTION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I was much interested in an article appearing in THE MEDICAL RECORD of July 24th, by Dr. Wooster Beach, of New York, in regard to the death-penalty and methods of infliction.

Dealing as it does with so serious a matter, it cannot be other than a question of extreme importance; a question of importance from various stand-points—popular, moral, medical, and legal; let me combine the last two, medico-legal. The first two can be passed by as being outside the pale of discussion in a purely medical journal, while the last two may be retained as presenting grounds for general remarks, since they so often are found hand in hand, especially in questions like the above.

In this country, as is well known, hanging is and has been for some time the method of inflicting the death-penalty, and although on many occasions it has been severely attacked, and at times has, as in Maine, Iowa, and Wisconsin, been abolished, yet only to be resumed, it now remains the accepted form of punishment, the chief reason of this being, no doubt, the wholesome dread which such a method of death holds over the heads of those who are tempted to commit such crimes as demand capital punishment. Now, so long as this fear actually exercises and brings about a marked decrease in the percentage of such crimes, no doubt this form of inflicting the death-penalty, or one equally efficacious, will be retained, however revolting such a death seems to the public mind, especially when accompanied by such awkward and disgusting blunders as we frequently see laid at the doors of those whose duty it is to inflict the death-penalty!—a seeming relic of barbarism, or a relic of barbaric customs prolonged into the nineteenth century!

Dr. Beach in his article has enumerated various other forms of death, some of which have long been used in other lands, as the guillotine in France, garroting in Spain, etc., but he speaks of one which I desire especially to refer to, viz., death by the use of an anæsthetic (chloroform or ether).

Now it is quite generally known, I apprehend, how easy and painless a death can be produced by the use of this powerful agent (chloroform), and right here it may be remarked how strange it is that individuals bent on self-destruction will adopt all sorts of horrible methods to accomplish their object, as cutting the throat, shooting, the use of violent poisons, and the very method we have been speaking of—hanging—rather than drop into oblivion by inhaling a few drops of chloroform from the midst of a cluster of heliotrope, as a famous novelist has graphically put it.

To return to the use of chloroform as a means of inflicting the death-penalty.

How often has the experimenter and physiologist, while eagerly at work in his laboratory, attempting to unfold some new truth or striving to clear up some not yet quite decided or fully understood question of function or action of organ or nerve, exclaimed, "Oh, if it were only possible for us to conduct our examinations on man himself!" But up to the present time he has sighed in vain, and has gone on doing the best he could, confining his researches to cat, dog, or monkey, being obliged to judge only by analogy or approximate similarity found existing in the ascending grades of animal life.

And now, without further introduction, comes my plan, and though it may seem very visionary at the present time, let it be remembered that "great oaks from little acorns grow."

Let every criminal sentenced to suffer the extreme penalty of the law be delivered over to our most accomplished experts in comparative anatomy and savants in medicine; have these gentlemen authorized to experiment as they shall see fit upon such criminals, only that all such experimentation shall be made in the presence of a committee of medico-legal officers chosen by the Government, whose duty it shall be to see that the full letter of the agreement be carried out, viz., that from the time the culprit passes into the hands of the scientists, until his death shall have taken place, he shall suffer no pain or distress, other than that incidental to passing under the influence of the anæsthetic, and after his death the remains shall be disposed of as in the case of hanging by the sheriff.

The wished-for insensibility shall be initiated by ether if thought proper, and the individual shall never be permitted to recover consciousness, or any condition approaching it, again; he shall be kept under the influence of the anæsthetic a sufficient length of time to insure the success of the experiment, or such length of time as those present shall think advisable, and then the anæsthetic shall be pushed to the extreme, and so bring to a close the life which was condemned because it took life.

What a splendid field of investigation and research, for denial or corroboration of those principles already supposed to be clearly understood, as well as the certainty of discovering new truths, would be opened to the medical profession, and through the profession to mankind in general!

To be sure, we could not make certain experiments on the body of the criminal while unconscious, and then allow him to recover, so that we could await the results, as in the case of animals; nevertheless, that a vast deal could be accomplished no one will deny.

Now, as regards the influence such a method of punishment would have on those tempted by one cause or another to render themselves liable to the death-penalty.

If we can judge at all by the horror which people in general have of vivisection, we should have no need of a death-penalty for a long while!

The would-be murderer, having in view only the knowledge of vivisection as held by the public mind, would not be very prone to run the risk of such a terrible ending should he be apprehended; and yet when a criminal did suffer death in the way above suggested, he really would be executed by the most painless method possible.

In this way two great things would be accomplished: 1st, There would be fewer murders by far; 2d, when one did occur, a compensation for the life that was lost might be found as a germ long hidden, its place of concealment being in the body of the assassin, a germ which in time to come would develop into a boon of priceless value to the sons of men.

J. B. Thornton, Jr., M.D.

Scarboro, Me.

WHAT CAN WE CURE?

To the Editor of The Medical Record.

When one takes up a new work on the practice of medicine and contrasts it with one written a century ago, he finds far more diagnosis and pathology, but less therapeutics. A more accurate account of the part played by drugs in the cure of disease has entombed a good many specifics. Whole classes of remedies are left out of modern therapeutics.

Others, while retaining a feeble existence, are destined to go sooner or later.

Lithontriptics to dissolve stone in the bladder are defunct; emmenagogues are in a decline; expectorants show evident weakness.

That any drug is possessed of power, *per se*, to produce the menstrual flow, has ceased to be believed by the profession.

Dr. Meigs called emmenagogues "hen-persuaders." A patented hen's nest was so constructed that the eggs would drop out of the nest so soon as layed, whereupon the hen would lay again. There was no end to the number of eggs that could be produced in this way.

Expectorants were believed to possess some inherent power of hunting for the lungs, and loosening adhesive mucus from the bronchial tubes. Some doctors still believe that squills, ipecac, and senega possess some power to get phlegm out of the lungs.

These so-called expectorants once had much reputation in the treatment of pneumonia.

They were supposed in some unknown way to get the exudation loosened and "spit up."

This is now a vain hope. There is not the slightest evidence that any known drug has any such special affinity for the lungs.

Some men are always in a fog in the treatment of pneumonia.

Most of the remedies in use for this malady have harmed the patient more than the disease.

> "Like blind men fighting in the dark,
> They never fail to miss the mark;
> When death doth fail, the doctor's sure
> To meekly stand and claim the cure."

The better class of physicians are not expecting honors from prescriptions. Flint was no drugger. Holmes is a medical sceptic. Bennett, before whom the dosers and druggers quail, says there are but four drugs known whose effects are unquestionably beneficial in particular diseases. They are: 1, Quinine in ague; 2, pitch ointment in psoriasis; 3, male shield fern in tape-worm; 4, sulphur ointment in scabies.

In the days of our ignorance we hoped to shorten the course of measles, scarlet fever, small-pox, and typhoid fever. To-day we count on our fingers to measure the day of crisis—of typical endings. Acute ophthalmia, superficial erysipelas, and sporadic flux are found to be self-limited. Nitrate of silver, sugar of lead, sulphate of iron, iodine, et cetera, have all lost their reputation for limiting the spread. Whatever is used, the spreading ends in three or four days. Acute ophthalmia ordinarily ends in fourteen days, doctored or undoctored. Collyriums have made seas of briny tears, but performed no cures.

The land rings with anthems sung to the doctors who have cured sporadix flux. The eclectic and the homœopath have divided honors with the regular physicians in the cures. Most of the patients go abruptly into convalescence on the fourth day. Even that endemic disease, gonorrhœa, which every ignorant and dishonest doctor will promise to cure in five days, Trousseau declares to be the despair of the physician.

Diday says syphilis is cured by the grace of God.

When we cut out the confessedly incurable and the self-limited complaints, we have not got much to work on. The specialist claims what is left. Drugs intelligently used, I doubt not, have often greatly assisted nature in her extremity.

Sulphate of quinine, while it is still prescribed by the routinist in typhoid fever, is eschewed by the more thoughtful men in the profession. Given day after day, to reduce a temperature which comes back day after day until the disease has run its course, was indeed very silly practice, to say nothing of its deleterious effect on the digestive and nervous systems.

"The United States Dispensatory" contains eighteen hundred closely written pages, giving the virtues of innumerable drugs. Yet alcohol and opium are of more value than all the others combined. Opium has assuaged more pain, soothed more sorrows, and saved more lives than all the remedies in the materia medica. Good doctors father no prescriptions, no specifics.

While Ringer is quoted as a believer in specific medication, while his book goes through semi-annual editions, his most vaunted remedies are for functional disorders. A good physician's highest hopes are realized when he has by opium assuaged pain, and by alcohol kept the heart wagging in the decline of some violent malady.

If we have been nature's adjunct in her extremity, we have filled our mission.

Alcohol, though slandered and vilified by fanatics, has saved millions from an untimely end. There seems to be some inexplicable affinity between alcohol and the human system. The higher the civilization the more apparent the affinity. Noah, who built the mammoth ship that saved the world, felt its soothing influence; while Solomon, the wisest of mankind, like Mohammed, interdicting wine, fell the victim of a more ravishing vice.

Noah's first thought, when his boat landed, was wine. He planted his vineyard before his corn or tobacco. The Bible says, "Give wine to him who is of sad heart, and strong drink to him who is ready to perish." But as this is not a dissertation on prohibition, æsthetics, psychology, or divinity, I will not pursue this thought further.

A doctor's faith in physic is the measure of his intellect. It is always in inverse proportion. Confidence in God and nature points to large comprehension.

When we look upon the countless millions who have lived their allotted time undoctored and undrugged, our faith in physic weakens. With all our knowledge, all our skill, we give out at threescore and ten. The divine appointment of death robs us of Utopian hope in drugs. Impossibility of proof of demonstration is at the bottom of endless controversy in medicine and divinity. We all agree about the multiplication-table. Truth is mightier than lore—than authority.

The strife between nature and art in the cure of disease has resulted in a victory for the former. Nature, unadvertised, has won a thousand trophies to one of art, whose seas of ink have been drained to prove one cure.

G. M. DEWEY, M.D.

KEYTESVILLE, Mo., August 1, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 8 to August 14, 1886.

STERNBERG, GEORGE M., Major and Surgeon. Granted leave of absence for fifteen days. S. O. 186, A. G. O., August 12, 1886.

WOLVERTON, WILLIAM D., Major and Surgeon. Granted one month's leave of absence, to commence on or about August 15, 1886. S. O. 104, Division of the Atlantic, August 7, 1886.

LORING, LEONARD Y., Captain and Assistant Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability, with permission to apply for an extension of two months. S. O. 59, Division of the Pacific, August 2, 1886.

ADAIR, GEORGE W., Captain and Assistant Surgeon. Ordered for duty as post surgeon at Fort Brady, Mich. S. O. 103, Division of the Atlantic, August 6, 1886.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 103, Division of the Atlantic, August 6, 1886.

MERRILL, JAMES C., Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Klamath, Ore. S. O. 130, Department of Colorado, July 30, 1886.

BENHAM, ROBERT B., Captain and Assistant Surgeon. Relieved from temporary duty at Fort Omaha, Neb., and ordered to Fort Bridger, Wyo. S. O. 97, Department of the Platte, August 5, 1886.

HOPKINS, W. E., First Lieutenant and Assistant Surgeon. Ordered from Fort Lowell, Arizona Terr., to Angel Island, Cal., for duty as post surgeon. S. O. 61, Division of the Pacific, August 6, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended August 14, 1886.

WALTON, THOMAS C., Surgeon. To remain on present duty until September 1, 1887.

WHITE, C. H., Surgeon. To remain on present duty until August 21, 1887.

RUSH, C. W., Passed Assistant Surgeon. Authorized to delay ten days, under orders to Sitka, Alaska.

LUMSDEN, G. P., Passed Assistant Surgeon. Ordered to Hospital, Mare Island, Cal.

BALDWIN, L. B., Passed Assistant Surgeon. Ordered to U. S. S. Ranger.

NEILSON, J. L., Surgeon. Detached from the U. S. S. Ranger, proceed home, and wait orders.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 30, No. 9 NEW YORK, AUGUST 28, 1886 Whole No. 825

Original Articles.

MANGANESE IN THE TREATMENT OF MENSTRUAL DISORDERS.[1]

BY THOMAS J. KEARNEY, M.D.,

NEW YORK.

My justification for presenting this paper is merely to relate three or four cases which, as far as they go, corroborate what has been claimed for the remedy, hoping, at the same time, to excite discussion of the subject, and thereby to elicit your experience not with manganese alone, but with the many remedies used in menstrual troubles. It was my intention, originally, to present a historical summary of what has been observed and written on the subject, but I find that this has been quite recently done in an able manner by Dr. C. E. Billington, of this city, in a paper which he read before the Section on Materia Medica and Therapeutics of the Academy of Medicine, and published in THE MEDICAL RECORD of March 6th of the present year.

Manganese is now the fashionable topic. I need not tell you that in medicine, as in society, one of the greatest motor forces is the tyrant fashion. This fact is patent at every turn one makes. You all remember that but a few years ago the most extravagant claims were made for condurango in the treatment of cancer; that eucalyptus was to supersede quinia in malaria; that the unfortunate male organ of generation (the portal through which is introduced so much of the misery that afflicts humanity) was made the prey of the surgeon's knife, with the assurance that through such procedure a revolution in the domain of neurology was to be effected. Now fashion has ceased her plague of the male sex, and is turning her attention with increased interest and renewed energy to our sisters. Behold the transformation in female anatomy and physiology that is being brought about under the new dispensation of gynecology in our day! What marvellous results, successful or otherwise, are being achieved! Some are inclined to think that ovarian surgery may be carried too far; that the propagation of the race may be seriously curtailed, if not arrested, unless, indeed, the physiologist discover some other than the old-fashioned method of conception.

But condurango, eucalyptus, and circumcision have been relegated to their proper sphere in therapeutics. It may be said that manganese is now usurping the place once occupied by the remedies to which I have above alluded, and that fashion, rather than real merit, is the cause of its popularity. I cannot deny that this is, to some extent, true—herein lies one of the dangers to be avoided; yet there are certain phases in its history which go to show that it is not to be classed with merely fashionable remedies. In the first place, manganese has not suddenly sprung into prominent notice, its acceptance has been slow, and its claims have been met with intelligent scepticism; in the second place, I think anyone who has examined the clinical evidences will acknowledge that it has a decided influence on the female generative organs in a certain class of cases.

In a very careful study of all I could find written on this subject, I have failed to find that anyone claims anything extraordinary for manganese. No prophecies of a revolutionizing character are assured through its agency. The earliest recorded case of amenorrhœa cured by manganese is reported by Dr. Henry Broadbent, in the "Proceedings of the Clinical Society of London for 1868-69," vol. ii., p. 122. It was a case of three months' standing, in which manganese chlor., gr. ij., with quin. sulph., gr. j., t.i.d., was given, with the effect of producing the menstrual flow in thirty-six days. I should state that Broadbent gave the remedy for its tonic effect alone, and with no view to the establishment of the menses directly. To Ringer and Murrell, however, we are indebted for first bringing manganese forward as an agent in amenorrhœa.

The credit of the first considerable contribution, in this country, to the study of manganese is due to Martin, of Chicago. He has employed the drug not in amenorrhœa alone, but in menorrhagia and metrorrhagia as well.

My experience has not been large enough to warrant me in holding decided views, yet I feel called upon to record what few cases I have had, and to discuss some questions of a general character in relation to menstrual disorders.

I began to use manganese in October, 1883, shortly after the appearance of Martin's first article. I have prescribed it in its different forms altogether in ten cases. In seven I used the permanganate of potash, but it became necessary to discontinue it after the first dose in consequence of the great irritability of the stomach it caused. The patients, in fact, became refractory, and would no longer submit to treatment because of what they considered the poisonous effects of the drug. They almost invariably experienced vomiting, and a sense as if a knife were being driven through the upper part of the chest, while some had, in addition to these symptoms, pretty bad abdominal pains and burnings. I have kept notes of three cases in which I have had very gratifying success, and which I will relate in the order in which I treated them.

CASE I.—Mary B——, aged twenty-six, single, U. S. Is a healthy, well-developed young woman, who, with some anxiety, consulted me in October, 1883. Stated that up to two months before she had always menstruated regularly. In the last two periods she had been irregular; menstrual flow coming on a week later, scanty in amount, and color each time becoming much lighter. I ordered potass. permanganat. in capsules, each containing two grains, one to be taken night and morning. Took one that night, and found that the flow came on very profusely in bed. Took no more, because the flow was greater than she thought normal. After this she continued regular until March 14, 1886, when she called on me, complaining that she was two weeks over her time. Having assured myself that she was not pregnant, I prescribed pills containing gr. ij. manganese binoxid., with directions to take two t.i.d. Courses came on profusely on the morning of the 17th, after having taken ten pills.

CASE II.—Annie F——, aged twenty, single, U. S. Is of delicate constitution. Has been under my care for the past three months for bronchitis, with circumscribed consolidation of both apices, during which time she has been taking cod-liver oil and iron. Called for advice and treatment, October 10, 1883. For the past eighteen months or two years menses have been irregular, sometimes too late, often too early, scanty, of pale color; is unwell for three days. Her general con-

[1] Read before the New York Medical Union, June 2, 1886.

dition now is good. Ordered potass. permanganat., gr. ij., in capsules, t.i.d. Took medicine for two days. Menses came on profusely. After taking first capsule felt pain, constriction, and burning of throat. This trouble was less after taking the other doses.

March 22, 1886: Has been quite regular since last note, which is more than two years and a half ago; quantity and quality normal.

Case III.—Mrs. A. K——, widow, aged twenty-six, U. S. Has always had excellent health, and has good family history. Has had one child. Menstruated first time at twelve years and six months; habit every three weeks, lasting five days, very profuse, with some pain; noticed that since birth of her child, which was five years ago, she began to grow very stout and at the same time to become irregular; is unwell only two or three hours, quantity small, and color pale; during her period has flashes of heat, dizziness, and headache; constipated; has enormous appetite, but no dyspepsia; she leads an indolent life, remaining indoors all the time and taking no exercise. She consulted me for these troubles in January, 1884. Ordered permanganate, gr. ij., t.i.d., in a goblet of water, for two or three days before the expected period; to take physical exercise, regulation of the diet and bowels. In the middle of the night, four or five days after this, and without having taken any medicine, she began to menstruate as usual, scantily. Took gr. ij. of permanganate next day three times, when flow became very abundant, so much so that she discontinued the medicine immediately; had to use eight or nine napkins.

February 15, 1884.—Took the medicine as ordered, yesterday, but had to discontinue it because of the stomach irritability it occasioned.

February 21st.—Patient returned to-day, and says that she afterward persevered with the medicine, but that the menstrual flow did not appear at all; head feels full and dizzy, otherwise well, as she has reduced a good deal in weight from the long walks she takes every day.

April 8th.—Expects to be unwell on the 9th or 10th; headache, fulness and throbbing of temples, and feeling as if she were going to bleed at nose. Ordered potass. permanganate in pill, gr. j., made up with paraffine, after each meal.

April 19th.—Patient did not begin to take her pills until to-day. Menstruation began immediately, and continued until the 22d, during which time she took fourteen grains in all; flow profuse.

May 10th.—Began to take pills of manganese binoxid., gr. ij., t.i.d., on the 8th inst.; became unwell that night, and still continues so. All disagreeable symptoms have disappeared.

September 23d (four months afterward).—Has been regular since last note; health excellent.

The subject of Case I. related to me the case of a young woman, with whom she worked, and to whom she gave one of the capsules of permanganate. This young woman had then (June, 1884) not menstruated for two months, and had been irregular for a year and a half. To use my informant's language, the medicine threw the patient into spasms and the menstrual flow came on in about half an hour. She complained also of distress at superior part of the sternum.

Certain reflections have been prompted by a consideration of these cases. In Case I., and in that of the girl to whom she gave the capsule, the menses came on after having taken but gr. ij. of the permanganate. No doubt you will ask yourselves, as I often have, was the menstrual flow produced by the remedy? I am inclined to think it was. Dr. Martin [1] and Dr. Billington [2] each relate a case in which the same result followed after small quantities of the drug—in the case of the former after gr. viij., and of the latter after six in twenty-four hours. Though these quantities are larger than mine, yet they must be considered small.

[1] Medical Record, September [illegible]
[2] Ibid., March [illegible], 1884.

Again, Case I. was not anæmic; she was well in all other respects and presented the appearance of perfect health. Whether or not the case at the time of the first treatment, in 1883 (on account of the small quantity taken), illustrates the efficacy of the pot. permanganate, I think the second treatment, in 1886, shows a result due to manganes. binoxid. The condition of Case II., though suffering to some extent from anæmia, had been much improved under iron and cod-liver oil. The reason I am particular to mention the presence or absence of anæmia is, because I am inclined to abstain from using remedies to promote menstruation when the anæmic state exists.

Case III. presented no signs of anæmia, though one would be led to think, from her habits, that she could be in no other condition. In fact, I considered her plethoric. This case corroborates Martin's experience with the drug in plethora, and also shows the necessity of persevering under what were, to me, discouraging circumstances, re-establishment of the menstrual molimen not having been effected until after five months of treatment.

In looking through the not very extensive literature of this subject, I noticed that with one or two exceptions the writers treat of the use of the remedy in amenorrhœa alone. Martin was the first to use it in menorrhagia and metrorrhagia as well. In his first communication (The Medical Record, September 29, 1883), he relates the cure of two cases of the former and one of the latter. In a paper read before the Chicago Medical Society, January 5, 1885, and reported in the New York *Medical Journal* for January 24th of the same year, he reports two cases of metrorrhagia and menorrhagia cured, and four severe cases of the same in the practice of Dr. D. F. Bradley, of Chicago, which were greatly benefited by manganese, when iron, ergot, gallic acid, mineral acids, astringents, and hot-water injections failed completely. Dr. T. G. Thomas, in a letter to Dr. Billington, dated February 9, 1886, claims the same results from manganese in these conditions.

At this juncture the question as to the mode of action of manganese presents itself. Again, is there any particular form of the drug which alone is efficacious in the disorders of menstruation? The permanganate of potash is the most commonly used of all the forms, but there is abundant evidence that other combinations are effective. In Broadbent's case the chloride was used. Ringer and Murrell and Thomas have had equally good results from manganese binoxid. as from the permanganate salt, and recently Martin has found the oleate a successful remedy when applied by inunction. Dr. R. Bartholow, in the *Medical News*, November 22, 1884, discusses this question and considers that the emmenagogue properties of potass. permanganate are due to the large quantity of oxygen it contains. The oxygen, according to him, is the chief factor. I cannot believe this to be so, since other forms of manganese have been at least as nearly effective as the permanganate. Cases I. and II. that I present, in which I used the binoxide as well as the permanganate, show this. I am inclined to think, however, that less of the permanganate is required to produce an emmenagogue effect.

Martin is the only one, as far as I know, who has attempted a theory of the mode of action. He says: "From my observations I have been led to consider manganese, in any form, a direct stimulant to the uterus and its appendages. It may exert its influence by acting as a direct vaso-motor nerve-stimulant to the vascular system of the parts, and in consequence of the improved circulation directly increase the tone and nutrition of the organs, or it may exert its whole force through stimulation of the sexual nerve-ganglia, or even, possibly, of the sexual *nerve-centres*, thereby bringing the organs to their normal state of action. At any rate, its action is prompt and direct. In bringing the uterus and appendages to a normal of menstrual tonicity, when lack of tone

is dependent on some previous depression of nutrition, manganese has certainly no equal." If I properly understand what is here meant, manganese should be placed in the category of those remedies called excito-motor, having the power to increase arterial tension, and with special action on the uterus.

It would resemble ergot, then, very closely in its action. Clinically, this seems so, since it is followed by equally good results in the opposite conditions, amenorrhœa and menorrhagia. It is not placed among the excito-motors by therapeutists however. Bartholow says that in small doses it diminishes the pulse-rate, lowers the action of the heart, and lessens blood-pressure. Heretofore it was always considered to be allied to such drugs as iron, zinc, nickel, etc., which tend to promote constructive metamorphosis, remedies decidedly slow in their action. As a regulator of the menses, it may be that a new property has been discovered in manganese. Further observations, however, are necessary before we are warranted in formulating a plausible theory as to its mode of action.

In speaking of the therapeutic action of this drug we are necessarily led to a consideration of the causes underlying the disorders of menstruation, and are admonished that the greatest care and intelligence should be exercised in selecting the cases in which remedies of this kind are to be used. I think you will agree with me that this is not always done; on the contrary, there are no complaints in which more unintelligent prescribing is prevalent than in the class of cases here referred to. There is no doubt that this is due to the fact that amenorrhœa and its opposite conditions are looked upon as diseases instead of mere symptoms. They are never primary in their origin, but are always dependent on unhealthy constitutional conditions or local organic disorders, either alone or combined. Trousseau says: "As long as these general troubles exist, we vainly try to recall the menses with drugs; the first condition of all is to re-establish equilibrium, and then the special excitant of the uterus becomes an important weight in the scale."

No doubt you are as much impressed with this statement as I, and may consider it unnecessary to quote it; but my memory is not so poor that I can forget how short a time ago it is since I came to recognize and understand its truth. The great danger in becoming too enthusiastic about new remedies is that a habit of superficial and one-sided observation is bred in us—therapeutics being advanced at the expense of pathology. Manganese will no doubt be found a very efficient remedy, but we must not fall into the error of believing it to be a specific. This indeed it is not, and few if any will be found to make such claim for it. I believe it is a drug which simply promotes constructive metamorphosis, acting like iron and its congeners, by supplying a natural and therefore necessary constituent to the blood. In addition to this it has, no doubt, some special action on the uterus, for how can we otherwise explain its effects in menorrhagia and metrorrhagia, where the promptness of its action is in marked contrast to the necessarily slow operation of general nerve and blood tonics?

In speaking of the treatment of amenorrhœa I want to particularly call your attention to some errors into which many have fallen. It is pretty generally believed, I think, that some peculiarly mysterious and deleterious influence is caused immediately and necessarily from the discontinuance of the menstrual flow. And again, it is thought by not a few that because the remedies used produce a flow of blood from the uterus, that menstruation is therefore established. To quote Trousseau again, where he speaks of the treatment of amenorrhœa: "A great many morbid states hold the function in check and simulate (so to speak) the part of pregnancy. How often a careless physician stumbles against such a contradiction. One of two things happens: either the emmenagogue succeeds or the morbid obstacle resists its action. Suppose the emmenagogue carries the day; it has forced the contradiction. Do you think your conquest legitimate? No. You have produced a uterine hemorrhage, but you have not re-established the menses."

. . . . . .

"The emmenagogue stimulants may cause fluxion of the womb, but they either cause uterine hemorrhages, which are not the menses, or if they restore the function legitimately, it is because the diathesis of the function (so to speak) pre-existed, and was only awaiting an auxiliary stimulus."

It is pretty generally believed now, that normal menstruation is always accompanied by ovulation. Suppose then, a depraved state of the blood or a condition of enervation exists which of necessity interferes to the extent of arresting ovulation, of what avail will our emmenagogue remedies be while this constitutional condition lasts? In anæmia, for instance, will we not do harm when we cause a uterine hemorrhage which can have no other effect than to increase the anæmia? Among the cases reported as having been successfully treated with manganese, I noticed many in which anæmia was considered the underlying cause. I say successfully treated, because they were so reported; but I am not altogether sure that the treatment was always successful. Very often there was nothing in the reports to show that the cases were observed for any time beyond that in which the menstrual flow was initiated. How are we to know, then, that the remedy caused anything but a temporary uterine hemorrhage, which, if an anæmic state obtained, rendered the patient's condition worse than before? In such a condition of things we are forcibly reminded of the good old times when resort to the lancet was so common in fevers. Instead of pyrexia being reduced by the venesection it was increased by the loss of blood; this cause of fever, however, being little understood or wholly ignored, phlebotomy was again utilized, to the destruction of the patient.

According to Ringer and Murrell, manganese is contra-indicated in cases of acute congestion and in general conditions of sthenic reaction. They also assert that abortion is not liable to result from ordinary doses, should pregnancy be overlooked in any case. For my own part, such has been the powerful effect of the permanganate salt in particular, in my hands, that I would hesitate long before giving the drug unless perfectly sure of the absence of this condition.

The Prevalence of Infanticide in China.—There is a missionary society in existence, with its headquarters in France, the object of which is the rescue of Chinese infants abandoned to die by their parents. Colonel Cheng-Ki-Tong, in a recent work, "Les Chinois Peints par Eux-mêmes," denied that such a custom prevailed, and held up to ridicule the children belonging to this society, who, he said, were beguiled into giving their pennies for the rescue of infants who did not need rescue. Dr. D. J. Macgowan, however, in a paper in the *China Review*, shows that this custom is prevalent in many parts of that country, to such an extent, indeed, that numerous asylums have been erected by charitable individuals among the Chinese themselves for the reception and care of these neglected infants. Female children are the only ones drowned, boys being needed to conduct ancestral worship. The parents are usually very willing for a little cash to sell their girls instead of destroying them.

A Large Fibrolipoma.—Dr. W. Stankiewicz reports the case of a patient who had a tumor in the lumbar region, which had been growing for fourteen years and was of such a size that it hung down to the knees. Its base was forty-four inches in circumference. It was removed by operation, and weighed, after extirpation, forty pounds. —*Centralblatt für Chirurgie*, May 15, 1886.

[1] Medical Record, September 25, 1886.

THE DETAILS OF THE OPERATION FOR REMOVAL OF MAMMARY CANCER.

By ROBERT T. MORRIS, M.D.,

NEW YORK.

In a standard work on surgery, published as late as 1882, the article on amputation of the breast contains the following information: "The integuments should be brought together and maintained *in situ* by plaster or some other means, according to the inclination of the surgeon. Compresses of lint should be adjusted along the edges of the wound to maintain the flaps and subjacent tissues in close apposition, but openings must be left at either extremity of the wound for the escape of discharges." The reviser of the article adds a word in reference to extensive removal of malignant neoplasms, and says that "healing by first intention under these conditions is, of course, often out of the question, and such wounds heal slowly by granulation." To find information of this character in a modern work on surgery is certainly exasperating to the practical surgeon of to-day; and perhaps a concise description of the operation, and of a sort of wound treatment which belongs to this part of our century, will be of value to ambitious operators who have nothing but standard works to depend upon for instruction.

The greater number of surgeons will prefer, I suppose, to have a description which figures a case in private practice at the house of the patient.

For an operating-table the kitchen-table will answer very well. It is placed in a good light, covered with a quilt and a sheet of rubber, and is tipped a little to one side in order to allow irrigating fluids and blood to run off into a basin placed below.

A smaller table is moved to a point conveniently near, and is furnished with the following instruments and materials:

First: A roast-beef platter filled with 1 to 30 carbolic-acid solution, and holding a pair of vulsellum forceps for lifting the breast; half a dozen retractors of different shapes and sizes for managing slippery tissues; a pair of large and a pair of small curved scissors for trimming away fascia, etc.; a pair of straight scissors for cutting dressings, and a couple of scalpels. A pair of mouse-tooth forceps for lifting small portions of diseased tissue will be found very handy.

Second: A quart bowl filled with 1 to 30 carbolic-acid solution, and holding eight or ten artery forceps.

Third: A saucer partially filled with alcohol, and containing four metres of No. 8 catgut, and one of No. 5, prepared according to Kocher's method;[1] a metre of No. 7 chromic catgut; a large needle, and a large absorbable bone drainage-tube.

Fourth: A saucer of 1 to 30 carbolic-acid solution containing two strips of sheet lead, each of which is about four inches long and an inch wide, and perforated at intervals of half an inch with an awl; several half-split BB shot, and a few strands of silkworm-gut.

Fifth: A bottle of Lister's protective oiled silk in 1 to 30 carbolic-acid solution.

Sixth: A bottle of iodoform.

Seventh: A razor and nail-brush, and a cake of soap.

Somewhere near the table hangs a common fountain syringe, containing two or three quarts of warm 1 to 2,000 bichloride of mercury solution.

A wash-bowl of 1 to 1,000 bichloride of mercury solution contains four towels and two sponges.

The etherized patient is now brought in and placed upon the table. The diseased breast, the axilla of that side, and the skin for several inches about are soaped, shaved clean, and then scrubbed with the nail-brush and washed with 1 to 1,000 bichloride solution.

The operator and his assistants wash their hands in soap-suds and then in 1 to 1,000 bichloride solution, and they do it thoroughly, too, if they appreciate the fact that a life has been placed at their disposal.

One of the assistants takes the straight scissors from the dish of 1 to 30 carbolic-acid solution, cuts one-fourth of a yard of bichloride gauze from the roll in the clean tin-can, musses the gauze into a fluffy handful, and puts it on a towel. He then pulls out of its cover half a pound of bichloride cotton, taking care that it does not hit his clothes, and lays it on the towel with the gauze. The towel is rolled up about its contents and stowed away until after the operation.

A towel is taken out of the bowl of 1 to 1,000 bichloride solution, wrung dry, and laid across the patient's chest just below the breast (the patient lying on her side). A second prepared towel covers the shoulder and arm, while the third towel is spread on the rubber sheet between the patient and the surgeon, in such a way that instruments, sponges, catgut, and hands will touch no unprepared thing.

One assistant holds the arm of the affected side above the patient's head, and the arm is to be kept in this position until the operation is finished. The surgeon having determined the outlines of the cancerous mass in the breast, carries an incision through the skin around it, and so far away from its margins that healthy tissues only are cut into. The distance from the diseased part at which the surgeon must cut will vary very much with the case, and this point is to be learned by experience only. If a cancerous tumor could be colored deep blue, we should probably find the deep-blue color running through the mass to the axillary lymphatics, and thence to the deep lymphatics of the neck. The muscles and fascia in the vicinity would be colored less and less deeply, until the hue gradually faded out and became lost in the tissues at several centimetres' distance. To eradicate this great nest of microbes, and prevent their heaping up morbid accumulations of cells in the near future, a pretty extensive operation is always required. It will not do to follow the lines of incision which are usually given in the text-books, and the operation must be done without much regard for the beauty of the flaps or the graceful curve of the line of incision. It is well, however, to make the first cut on the lower side of the tumor, so that blood from the higher incision will not obscure the field. A few rapidly made strokes with the scalpel now divide the subcutaneous fatty tissue, and then a pause is made in order to pick up and ligate bleeding vessels with No. 8 catgut. The breast is seized with vulsellum forceps by an assistant, and traction is made while the surgeon divides the fascia of the great pectoral muscle, and shells out the cancerous mass with its surrounding layers of fat. The fountain syringe is to be used at frequent intervals, until the whole operation has been completed. And the bichloride solution is thrown not only over the surface of the wound, but also over the skin in the vicinity.

The next step in the operation is to clear out the axillary lymphatic glands and vessels and the loose axillary fat and connective tissue. It makes little difference whether these tissues are badly diseased, or whether they show no sign of being implicated, they are to be cleanly removed at any rate. The incision for giving free entrance into the axillary region should extend from the wound already made, up along the inferior margin of the great pectoral muscle as far as to its point of insertion into the humerus. It is a pretty good plan to dissect directly down to the axillary vein when this has been done, because the vein is a first-class landmark and there will be less danger of cutting or tearing its coats. If this enormous vein should be opened accidentally, it must be closed by ligation of the portion about the wound, and not by ligation of the vessel in its whole circumference. It would seem as though the cephalic vein ought to be able to carry the return flow of blood from the arm, but a sufficient number of cases of gangrene of the arm following injury to the axillary vein have given

[1] The unprepared catgut is put into oil of juniper for forty-eight hours, and is then transferred to a bottle of turpentine and alcohol, in which it remains until wanted for use.

serious testimony, and we must keep a sharp eye on that vessel.

Before removing tissues from the axilla, it is best to hunt out the internal cutaneous, intercosto-humeral, and three thoracic nerves, and to free them from surrounding tissues. If they are evidently involved in the disease they had better be removed, but the patient will want them if they are found to be worth keeping. There is not often danger of cutting the other important nerves at the bottom of the wound accidentally.

The axillary glands and fat, and the fascia which holds the lymphatic vessels, are removed thoroughly. In one of my cases, in which the glands were not very extensively involved, the little lymphatic vessels were hard and knotty, and a branch an inch or so in length could be held out horizontally by one end, just like a tiny twig of samphire.

The lymphatics which extend up to the clavicle can ordinarily be removed without the necessity of dividing the pectoral muscles transversely, but sometimes this will have to be done when the fascia looks suspicious.

While removing the lymphatics from under the clavicle, the operator should remember that a gland lies hidden, like a little mouse, between the opposed margins of the deltoid and major pectoral muscles, and that it will very likely creep out and go to eating again as soon as the surgeon has passed. An incision an inch in length, through the skin over the clavicle, will usually give room for removing this gland. The cervical glands and vessels which we meet on our way to the thoracic duct, or to the right lymphatic duct, can be brought out through the same opening. The last step in the operation will be to remove the fascia from the anterior surface of the major pectoral muscle, and from over the ribs and serrated muscle if it is necessary to do so. If muscular tissue is anywhere involved, it must come out, and the incision must go a long way from the diseased part into healthy muscle. Hemorrhage is stopped at every point by ligating the cut vessels with No. 8 catgut.

In closing the wound, the well which has been made in the axilla will disappear if the arm be let half way down. The air being pressed out of the hole, atmospheric pressure will keep the tissues in apposition in that region afterward.

One or two or three principal interrupted sutures of chromic catgut or of silkworm-gut are now inserted through the skin flaps. If the flaps are not heavy, the chromic gut can be tied in the ordinary way. If the flaps are going to make considerable tension on the sutures, the ends of the gut instead of being tied are passed through the holes in the strips of lead which have been waiting in the carbolic-acid solution; and then the split shot are pinched on to the gut ends, so that the strips of lead will take most of the tension from the sutures which are to close the wound.

Silkworm-gut is to be used in the place of the chromic gut only when there is danger that fourteen days' time will not give sufficiently long support for the flaps. Chromic catgut will not last much longer than two weeks, but silkworm-gut does not become absorbed at all.

The margins of the flaps are next united as far as possible with interrupted sutures of large catgut, and then a continuous suture of the smallest catgut makes the neatest possible approximation of the edges. If the margins of the wound can be everywhere approximated, so much the better; but this point is not to be considered during the performance of the operation, because a large exposed space left to heal by granulation is much preferable to a prettily closed wound which covers cancer-impregnated tissues. Primary union will occur in both of the wounds; and the granulating patch which is left in the one case can easily be covered with skin grafts or with a piece of skin transplanted from the arm, if it is too large to heal without aid. After all of the sutures have been inserted and an opening for the drainage-tube has been made, the bone-tube is put in in such a way that the axilla will be well drained. At the time when the tube is inserted the patient's arm must be held rather near her side, in order to relax the muscular walls of the axilla. If this is not done the air will probably rush into the wound cavity again, and then the surgeon has to fuss with the wound for several minutes in order to get the air out.

The temptation to give a final flushing with bichloride solution through the open-mouthed, inviting-looking drainage-tube is sometimes hard to control; and the feeling is somewhat akin to the one which the operator has when he longs to give the wound a final wipe with the cleaning-up towel. It is not safe to flush the wound through the drainage-tube, because a good deal of the bichloride solution may remain back in the wound. The reason why bichloride of mercury is an unpopular antiseptic in some sections of the country is because a little gumption is required in order to use it properly.

A harelip pin stuck through one edge of the emerging end of the drainage-tube will sometimes be required in order to keep it from slipping in beneath the skin. I made this suggestion at an operation not long ago, and one of the bystanders took a pin out of his pocket-case, swashed it around in the carbolic-acid solution a couple of times, and then handed it to me for use. Was that pin ready for use? Not at all! it needed a bath in pure carbolic acid for several minutes first.

After the drainage-tube and sutures are satisfactorily arranged, some iodoform should be rubbed all over the skin in the region of the wound, and any exposed tissues should be well sprinkled with it.

A piece of Lister protective, just large enough to cover the sutures and the exposed tissues, is next taken out of its bottle of antiseptic solution and spread evenly in place, a hole being torn in it opposite the drainage-tube opening.

The bichloride gauze is taken out of the towel and placed over and around the protective; and the bichloride cotton covers everything beneath it. A strip of muslin eighteen inches wide, with a hole for the forearm of the wounded side, is now passed around the patient's chest and pinned snugly in place, so that the dressings will not slip and so that the arm is kept perfectly at rest. No particular after-treatment will be necessary until two or three weeks have passed; and if no space has been left to heal by granulation, the wound will be entirely well at the end of that time.

The patient can get out of bed as soon as she pleases after forty-eight hours have passed, and I seldom have to restrict the diet after that period of time.

The dressings are not to be changed until two or three weeks have passed, but if serum runs through the cotton, the bedclothes must be turned down so that drying can go on quickly.

The most difficult thing which the surgeon has to do in an operation of the sort above described is to give close attention to untrained assistants, in order to be sure that they violate no antiseptic rule. Without intending to do so, an assistant who is absorbed in the operation may lay a sponge or an instrument on the bare table or on a chair.

When, at the end of two or three weeks, the dressings are removed, it will be found that primary union has occurred, and that there is no pus in the dressings. I believe that there is almost never excuse for suppuration on the ground that the patient is too old or too young, or too sick or too robust, or too fat or too lean, or too rich or too poor, or too anything else that one can think of.

To suppose that suppuration, or septicæmia, or pyæmia, or erysipelas, or tetanus are liable to result from a large wound is nonsense, unless the operator happen to belong to one of the following groups:

1. Men who became successful surgeons in earlier times with old methods, but who are now too far advanced in years to take up the newer and better methods of to-day, and who delude themselves with the notion

that the details of an antiseptic operation resemble the "walking and the talking of the prestidigitator."

2. Men who have had no opportunity to learn scientific antiseptic methods of work.

3. Men who cannot learn scientific antiseptic methods of work.

As regards the probability of recurrence of the disease after removal of mammary cancer, it is extremely difficult to make a prognosis in any given case. Statistics are really worthless on this point, because authors are not in the habit of stating the exact extent to which their operations were carried; and the painstaking sort of work which we now do is of quite a recent date. If it is possible to remove tuberculous tissues completely in caries of the knee-joint, it seems as though we ought to be able to remove cancerous tissue completely in some cases of this disease.

We know that in the majority of instances the blood is infected, and that the disease will break out again at an early date.

I find that physicians living at a distance from the great medical centres are, as a rule, opposed to operation in cases of cancer. They say that the patient must endure the suffering of an operation without gaining very much by it. Here there is a great field for reform work, and so soon as physicians and patients awake to a full appreciation of the advantages given by a strictly antiseptic operation they will not hesitate about a decision in favor of the removal of cancerous neoplasms. The operation, when done according to methods which are fully up to the times, and on operable cases, will cause the patients no actual suffering; and the intervals of freedom from the disease which are thus given will be delightful periods for the poor victims.

I have no patients who are more grateful than my cancer patients, although to all of them I have said, "your disease will undoubtedly return."

SOME IMPROVED FORMS OF BURNERS FOR THE GALVANO-CAUSTIC TREATMENT OF NASAL AND POST-NASAL HYPERTROPHIES.

By FRANK B. EATON, M.D.,

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If we compare the surgical methods of treatment of nasal and post-nasal diseases in vogue in Europe with those employed by our own surgeons, we are struck with the fact that the latter are, in spite of their advanced position in other fields, rather in the rear in this, except, perhaps, in respect to one weapon—the cold snare.

A reference to the earlier contributions of such progressive workers as Baginsky,[1] Löwenberg,[2] Voltolini,[3] and Thudichum,[4] will show that another method of treatment—*the galvano-cautery*—has long been the more favored one in England and on the Continent. Thudichum, indeed (*loc. cit.*), employed the galvano-caustic snare for the removal of nasal polypi as long ago as 1864, and gradually the electrode has replaced the various cutting and tearing instruments among the majority of operators in the majority of cases. Issue may be taken with the above statement as to the backwardness of our surgeons in the treatment of nasal diseases. Let me not be misunderstood. In our great medical centres are surgeons as competent, advanced, and progressive in the treatment of nasal diseases as any abroad; but they have yet to produce treatises as comprehensive as that of Mackenzie, or manuals as practical as that of Woakes;[5] hence the average of information on these subjects among our surgeons at large, who, as a rule, read first the works and follow the methods of their countrymen, is less than that of foreign surgeons. In no way can I so well substantiate these assertions as by referring the reader to a posthumous paper of R. Schalle, of Hamburg, published in the "Archives of Otology" in 1882.[1] In this most practical and valuable series of observations were anticipated, by its author, before 1880, many of the surgical procedures in the nasal cavities, and especially those by galvano-cautery, with which the majority of our surgeons are only just becoming familiar. No doubt a prime factor in retarding the general employment of the galvano-cautery in this country, for the treatment of nasal troubles, has been that most ingenious and now familiar instrument—Jarvis' snare. In the skilled hands of its inventor it will accomplish, no doubt, all that can be accomplished by any form of cold snare; but I appeal to the experience of the majority of the surgeons who have used it whether it has not in the end disappointed their earlier expectations, particularly in cases of the smaller and sessile posterior hypertrophies of the turbinated bones. These the snare is "clever" enough to engage; but, alas! just when we are sure that the loop has begun to cut through the growth, it provokingly glides over the surface, slips off, and the wearied patient must submit to a renewed attempt. This not infrequently happens, too, with the larger hypertrophies.

I have succeeded in introducing needles through posterior hypertrophies, and thus snaring them off, by means of an ingenious little needle-director which Dr. Jarvis showed me, invented by himself, and which he kindly permitted me to have duplicated and put upon W. F. Ford's catalogue. Dr. Jarvis informed me, however, that from constant practice he is sufficiently expert to introduce needles through posterior hypertrophies unaided by any special instrument. Those who have attempted to transfix such growths will nevertheless, I think, agree with me that, even aided by his needle-director, this is generally extremely difficult to accomplish, especially in cases of small hypertrophies, and it is almost impossible to transfix any posterior hypertrophy at its base. Again, the removal of anterior hypertrophies by the snare has always been extremely painful, nor does cocaine avail to prevent it, and in this tedious mode of operation the suffering entailed is often bitterly referred to by the patient. It is not without reason, then, that the galvano-cautery has been preferred before the snare in many cases by surgeons long experienced in the treatment of diseases of the nasal cavities. There are, of course, cases in which the snare would be preferred, as, for instance, in marked hypertrophy of the pharyngeal tonsil and in most cases of polypi. But even in these cases the cautery finds its place, and should follow the snare in the after-treatment. It is clear that in some cases cutting-forceps, such as Dr. Löwenberg's post-nasal forceps, have advantages over all other instruments; but I maintain, in favor of the galvano-cautery, its superiority in respect to adaptability to the greatest variety of circumstances, as, for example, to adults or children, to use anteriorly or by way of the mouth, etc.

As to the comparative value of chemical cauterization, the testimony against this last method is so universally unfavorable that I need not consider it here. With all these objections in view to other methods, what proportion of our surgeons commonly make use of the galvano-cautery in diseases of the nares? Comparatively few; and it is the purpose of this article to account for this, and to describe a form of battery and improved burners which are within the reach of all surgeons, and useful in the hands of those of average skill.

In the first place, until lately the high price of the cautery batteries in the market, the difficulty of managing and keeping them in order, and the fact that they were unnecessarily large and powerful for use in nasal

[1] "On Acute and Chronic Inflammatory Diseases of the Nose, and some of their Methods of Treatment, a posthumous paper, by R. Schalle, Hamburg, Archives of Otology, vol. xi., p. 118.

diseases, has deterred many surgeons from purchasing them.

Many physicians possess but a limited knowledge of electric science; hence they imagine that it requires a large, powerful, and expensive battery to furnish a current sufficient to heat the nasal electrodes. This is an error. The size and number of plates are in proportion to the amount of platinum that must be rendered incandescent. A large electrode-écraseur, such as used, for instance, for amputating the cervix uteri, requires a powerful current, such as furnished by a number of plates of considerable size, and a correspondingly large amount of exciting fluid, these involving an expensive apparatus.

But the burners used in the nares are practically very small knives, or small wire snares, and a current sufficient to render them incandescent is readily derived from one large cell of two elements arranged for quantity. The battery which above all is suited for this purpose, as to convenience, efficiency, and economy, is that devised by Dr. Carl Seiler, of Philadelphia.[1] The one shown in the cut is that especially designed for use with nasal burners. It is thus described by Dr. Seiler:[2]

"This battery consists of a series of carbon and zinc plates connected for quantity, . . . mounted on a plate which is fastened near the top of the box, so that they hang from the interior of the box. Immediately beneath the plates is a hard-rubber cell containing the exciting fluid, mounted upon a platform which can be raised or lowered by means of a treadle projecting from the box. This treadle is jointed, so that by folding it up it can be placed inside of the box out of view and harm's way. When it is depressed, the platform with the cell rises, and the system of plates is immersed in the exciting fluid, whereby the current is established. The height to which the cell is raised determines the amount of current, and consequently the amount of heat in the platinum loop. . . . As the treadle is actuated by the foot of the operator,[3] it will be seen that he can control the amount of current during the operation without the aid of his hands or of an assistant, as is necessary in the case of the ordinary galvano-cautery batteries, and can regulate the temperature of the knife to a nicety. The rubber cell being large, contains a large amount of fluid, and as the plates are entirely out of the fluid when the platform is lowered, the liquid is not readily exhausted, so that the necessity of refilling the cell with fresh fluid does not occur very often; a point the advantage of which will be apparent to everyone who has ever used a battery with small cups which require refilling after each operation."

It would be difficult to say too much in praise of this battery, and of its advantages to the surgeon.

It cannot, however, be said that Dr. Seiler has been equally happy with the handle and burners which he has devised to accompany his battery;[4] nor are those of Dr. Shurley[5] free from serious imperfections. Their handles, in common with all those furnished by our instrument-makers, are far too large and clumsy for delicate manipulation. The nasal mucous membrane being one of the most sensitive of the body, every untoward movement of the surgeon's hand while directing instruments in the anterior nares inflicts considerable pain, and it is needless to state to those who have used the above handles (Dr. Seiler's is five and three-fourths inches long and weighs two and one-fourth ounces) that not only is unintentional pain often inflicted, but anything approaching delicate manipulation or complete control of the electrode is impossible; for these handles must, from their size and weight, be grasped; being too large and heavy to be lightly held by the fingers. As for the nasal electrodes or burners introduced by the above well-known surgeons, there is one singular defect common to all, and that is that their greater diameter (transverse), including that of the platinum knife, when fixed in the handle, is horizontal instead of being, as it should, vertical. The transverse diameter of the anterior nares being almost obliterated in many cases of hypertrophic catarrh, the disadvantage of this is obvious.

Another defect is that most of the burners employed in the anterior nares to destroy hypertrophied tissue of the turbinated bones are used as *knives*, to make incisions. Now the object of all cauterizations of these parts is to form *broad* cicatrices, which is to be accomplished rather by *searing* than by incising; and, besides, a seared wound does not bleed as does an incised one. Again, none of the electrodes now made, to my knowledge, are suited to destroy posterior hypertrophies of the turbinated bones, while those devised by D. Lincoln[1] for use in the post-nasal space are too long and bulky, and involve the use of a large handle.

Dr. Shurley's burner, for use in the same region, has not, I think, a sufficient incandescent surface, though it is very useful. Many of the electrodes now in use are covered with asbestos, vulcanized fibre, or other non-conducting material, which interferes with attempts to bend them to any great extent. The object of such coverings is to insulate the wires of the electrodes, and to protect the parts not to be burned. A suitable battery renders such coverings entirely unnecessary, as the platinum is quickly rendered incandescent, and the cauterization is accomplished before the copper wires leading to the platinum have time to become heated. Besides, these coverings increase the diameter of the electrode and obstruct the operator's view.

In the electrodes I have devised and tested in a great variety of pathological conditions of the nasal cavities, I have endeavored to do away, one by one, with the objectionable features above enumerated, and to adapt them to reach those parts of the nares hitherto entirely, or only with difficulty, accessible to the cautery. First of all, I discarded the large and clumsy handle and the circuit-closer, substituting for the former a small, light handle in one piece with the electrode, and for the latter the closing of the circuit by the foot, after the manner of Dr. Seiler, using for this purpose a battery of my own construction, though I prefer the one described above of Dr. Seiler. Each electrode, as seen in the cuts, has its own handle, measuring one and three-fourth inch in length, permitting it to be held lightly between the thumb and one, two, or three fingers. Their average weight is but one drachm and a half. The conducting-cords are attached directly to the electrode. A set of these burners, as devised by me, comprises eight pieces, to which I have given appropriate names.

The *lateral burner* (that for the right naris is shown in Fig. 3–A), perhaps the most generally useful of all, is jointly the device of Dr. R. G. Rex (formerly of this city, now of San Francisco) and myself. Notwithstanding its resemblance to that introduced by Löwenberg,[2] it materially differs from his, and was made and used by me before either Dr. Rex or myself knew of the latter's existence. The essential point of difference is the position of the platinum relative to the vertical diameter of the electrode. In Löwenberg's burner, in order to bring the platinum in contact with the tissue to be burned, it is necessary to turn the instrument upon its axis, and thus the greater diameter becomes parallel to the horizontal diameter of the naris, which, as pointed out above, is a practical disadvantage. The great advantage of my lateral burner is that, owing to the platinum arising from the distal end of the lower copper wire in a gradual

[1] Made by [illegible] St. [illegible]

[2] Handbook of the Diagnosis and Treatment of Diseases of the Throat [illegible] Pharynx. By Carl Seiler, M.D., etc. Second edition, p. 234.

[3] In order to shorten the conducting cords and thus relieve my burners of weight of [illegible] I suggested to the [illegible] and requested Mr. Flemming to connect the treadle by cords with another to be worked by the foot, the battery being placed, when in use, upon a table close to the [illegible]. This is the [illegible] battery.

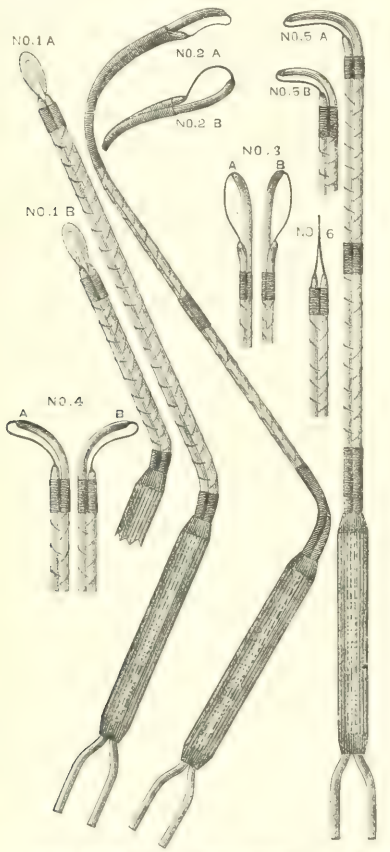
[4] Dr. [illegible] and I [illegible] [illegible] pp. [illegible]

[5] St. Louis Medical and Surgical Journal, January 5, 1886. [illegible] catalogue, fifth edition, p. [illegible]

[1] New [illegible] Louis Medical [illegible]

[2] [illegible]

curve, the plane of which is at a right angle with the vertical diameter of the electrode, and the diameter of the copper wires being only one and one-fourth millimetre, it is possible to destroy with it erectile or other hypertrophic tissue that is in actual contact with the septum or nasal floor opposite without burning the latter. This advantage I have found greatest in cases of hypertrophy of the tissue of the middle turbinated bone, which is often in contact with the septum.



Dr. F. E. Eaton's Naso-Pharyngeal Cautery Electrodes: 1–A, long spatula-burner, for hypertrophy of turbinated bones; 1–B, short spatula-burner, for anterior hypertrophy of turbinated bones; 2–A, lateral S burner, for growths on post-nasal space; 2–B, S burner, for growths on post-nasal roof; 3–N, lateral burner for right nostril, for hypertrophy of turbinated bones; 3–B, the same, for left nostril; 4–A, scythe-burner, for right nostril, for posterior hypertrophies of turbinated bones; 4–B, the same, for left nostril; 5–A, post-nasal scythe-burner, for growths in post-nasal space; 5–B, the same, of smaller size, for children; 6, pointed burner, for puncturing anterior hypertrophies.

The platinum of this and all the burners is No. 27 (English standard), which I have found to be of sufficient thickness to produce a searing effect, and to burn deeply.[1] Owing to the above-described curved shape of the platinum, it is possible, in some tolerant cases, by keeping it at a white temperature, and beginning the incision at the posterior end of the inferior turbinated bone and drawing it steadily forward, always aglow, to destroy the hypertrophied tissue upon the latter, throughout its length, in one sitting, for the curved platinum does not catch as long as it is kept glowing and steadily moving.

In Figs. 4–A, and 4–B, is shown my *scythe-burner* for the destruction of posterior hypertrophies of the *right* middle and inferior turbinated bones. A similar one, with the "scythe" turned to the right, is used in the left naris. It is not unlike the one described by Schalle,[2] who gave it its name; but the arrangement of the platinum is different, being carried on to form the end of the hook or "scythe," and being used for a different purpose. It is admirably adapted for destroying posterior hypertrophies of the turbinated bones, and with it I have successfully accomplished this, even when circumstances made it impossible to direct the burner by posterior rhinoscopy. In such cases I introduce it, scythe upward, from in front into the post-nasal space, then bring the handle to a vertical position (the scythe being at a right angle to the handle), draw the instrument forward directly in the line of the turbinated bone until the scythe hooks itself upon the hypertrophy (which, as in the case of the snare, is the only obstruction which checks its progress), and make the platinum glow. Of course it is better to direct the burner, especially in posterior hypertrophies of the middle turbinated bone, by the rhinoscope.

This burner I have also often used to produce absorption of large enchondromas of the septum, as the point of the scythe, when glowing, can be sunk deeply into the cartilaginous growth on its posterior, as well as its upper and outer surfaces. In some cases of polypi of the middle turbinated bone, which cannot be engaged in the snare, this scythe-burner can be passed behind the pedicle and the latter burned through.[2]

The *long* and *short spatula-burners* (Figs. 1–A and 1–B) differ only slightly from those generally used, as far as the shape of the platinum is concerned. They have the same general features, as to handle and proportions, with my other burners; but I have directed Mr. Flemming to bend the platinum longitudinally into a "furrow" shape. They are used to enlarge the wound made by the lateral burner, which is **V**-shaped, by passing them, when glowing, along its track. They are also useful for burning the anterior surface of the middle turbinated bone. For growths in the post-nasal space I use two forms of burners. One of these is an invention of my own, which I call the *S burner*[3] (Figs. 2–A and 2–B). The original feature of this burner, besides the handle, is the position of the platinum—a piece of curved No. 27 platinum-wire being placed upon the upper side, instead of the usual distal spatula-knife. The advantage of the wire over the knife I find to be not only that the wire is more easily brought in contact with the different parts of the roof of the pharynx, and, when glowing, passes readily through inequalities; but, being blunt, it does not catch in and lacerate the mucous membrane in its often unavoidable contact with it during its introduction, as is often the case with Dr. Seiler's electrode. It is so made as to be readily bent to any desired shape. Mr. Flemming also makes modified forms of this burner (not illustrated), with the platinum-wire turned to the right and left, after the manner of the lateral burner, which are very convenient for burning the hypertrophied salpingo-pharyngeal folds leading from the orifices of the Eustachian tubes to the fauces in many cases of postnasal catarrh.

In Figs. 5–A and 5–B, is shown Schalle's *long post-nasal scythe-burner*, to be introduced by way of the anterior nares. It is the same form of instrument described as follows by him, except that I employ copper wires of less thickness and prefer a smaller scythe for children. Schalle describes it thus:

"The latter (scythe-burners) consist of copper wires 2 mm. thick, one of which bends above in scythe form, continues transversely for 12 or 14 mm., according to circumstances, and then, being bent again, runs again in the direction of its first part; but at a distance of 2 mm. its course is continued in a platinum wire to which it is soldered, so as to return to its point of origin, where it

[1] Hemorrhage from erectile tissue is avoided by lifting the burner from the wound while incandescent, and by using cocaine beforehand.

[1] Archives of Otology, xi., p. 135.

[2] An interesting case of this kind is narrated by Schalle, Archives of Otology, vol. xi., p. 142.

[3] A term applied by German surgeons to the common double-curved post-pharyngeal electrode.

joins the second returning copper wire. When the instrument is applied behind the proliferation (pharyngeal tonsil), the platinum wire closely hugs the upper pharyngeal wall, and when rendered white-hot and drawn toward the nasal septum, it destroys the proliferation."[1] Concerning its use in the case of children, he says further: . . . "operation under digital direction is always preferable in children. In them I also introduce the scythe-burner through the nares, then bring it into its correct position by the finger of the other hand, introduced through the oral cavity, and make it glow. In using the scythe-burner, the action of which here is excellent, the point of the guiding-finger is protected from being burnt by the intervening space, so that we have the advantage of controlling the incandescent instrument by the palpating finger."[2]

In adult patients with quiet palate I prefer to use Jarvis' snare, with curved cannula from the mouth, in cases of hypertrophy of the pharyngeal tonsil where the growth is large enough to be engaged in the loop; but in sessile, small hypertrophies of this organ, I prefer, in adults, to use the above-described S burner. I have never yet experienced the disagreeable results produced by reflex irritation of the accessory nerve, following the use of burners in the post-nasal space referred to by Schalle,[3] though I have often freely burned hypertrophied tissue in all parts of this cavity; nor do I think this accident likely to follow cauterizations done under rhinoscopy, but only such blind, and I think unjustifiable, operations as performed by him, in some cases, unassisted by the mirror or palpating finger.[4] Fortunately, as is well known, the fauces are remarkably insensitive in many cases of serious post-nasal obstruction, and rhinoscopy is easy.

In conclusion, I would state that I have given due credit for all ideas and hints I have utilized in the construction of these burners. Schalle's burners, if indeed they were ever made for general use, I have never seen. The form and proportions of my burners have grown out of my own experience in treating chronic hypertrophic catarrh, most cases of which have come under my care complicated with acute and chronic catarrh of the middle ear, a form of aural disease which the moist climate of the Willamette Valley seems to render unusually common in Western Oregon.

In a future article I hope to give some useful hints upon the indications for the use of the galvano-cautery in nasal and post-nasal catarrh, complicated with aural disease, illustrated by appropriate cases.[5]

NOTE.—Since writing the above I have found it better to work with the battery placed upon the floor, instead of carrying out the plan of placing it upon a table. To obviate the weight and stiffness of the heavy conducting cord, I have directed Mr. Flemming to shorten it to thirty-five inches, and to continue it into two light cords to which the burner is attached. The dragging weight of the cord is avoided by simply supporting it by drooping it over the pipe of the condenser, or fixing by any device which may occur to the operator.

The *pointed burner* (No. 6) I devised to carry out the plan suggested by Dr. Henry Schweig (THE MEDICAL RECORD, vol. xxix., No. 26, p. 206), of puncturing anterior turbinated hypertrophies. This method I have tested and found effectual for destroying hypertrophies of the anterior third of the inferior turbinated bone. Naturally it is limited to these, as the point cannot be guided accurately farther back. The point is half an inch long, and is not represented of sufficient length in the cut.

PORTLAND, ORE.

THE new House of Commons only contains ten doctors.

[1] Loc. cit., p. 135. [2] Ibid., p. 136. [3] Loc. cit., p. 137. [4] Loc. cit., p. [illegible]
[5] The above-described burners are all made by Mr. Otto Flemming, [illegible] Street, Philadelphia.

Clinical Department.

THE EFFECT OF SEA-BATHING ON THE EAR.

DR. SEXTON'S AURAL CLINIC, NEW YORK EYE AND EAR INFIRMARY, reported by W. A. BARTLETT, M.D.

NUMEROUS patients come to the infirmary, during the out-door bathing season, with distressing pain and noises in the ear, usually of unaccountable origin until questioning about getting sea-water in their ears brings out the fact that they have been disporting themselves in the surf, swimming, or diving. Even then some are surprised or incredulous to learn that, in struggling in the boisterous waves, one may experience unheeded the dashing of a heavy breaker against the side of the head, coming with sufficient force to drive the irritating cold salt-water into the ear and bruise the drumhead by its impact, thus setting up inflammation, or to even rupture that delicate membrane outright. The contact of the briny fluid, which often holds in suspension quantities of sand and small marine shell, while lying in the outer ear against the drumhead, may also give rise to inflammatory trouble. But it is still more incomprehensible to the ordinary bather that the water, which sometimes enters the open mouth or nasal passages while he unguardedly exposes these back-door portals of the ear, so to speak, to an incoming wave, possesses sufficient momentum to force its way up the Eustachian tube to the middle ear. This is an accident to which he is also liable from strangulation while diving or playing in the water, and the ear-drum is much more liable to be seriously affected in this manner than when deluged by water from without.

Of seven acute cases, ranging in age from eleven to sixteen years, selected out of many recently treated at the infirmary, only one of them recalled any previous ear trouble. All of them were males. Women seldom disport themselves violently as bathers, but men and boys often behave most rudely, and frequently, from protracted sojourn in the water, come ashore much exhausted.

In four of these seven typical cases the ear had been injured by the entrance of water *via* the Eustachian tube, since it appeared that they had been strangled and had sniffed water up the nose, causing much coughing and sneezing. They had likewise experienced immediate discomfort in the ear.

In the other three cases the damage had been done by the entrance of water into the external auditory canal from without; and in one of these water may have entered from both directions.

Sometimes recovery takes place spontaneously at this stage, leaving slight or no trouble, but persons with nervous exhaustion, or run down from any cause, cannot always thus escape.

If the trouble, however, advances, as was the case in the patients above alluded to, following the uncomfortable feeling of "stuffiness" or "water in the ear" almost always described as being immediately experienced is more or less pain in the organ, and perhaps deafness; the latter, usually but slight, is generally disregarded when the pain is severe.

The urgency of the symptoms in these seven cases must have been very great, for most of them were obliged to leave off work sooner or later; three of them came for relief the day following the injury, two came the fourth day, one the fifth, and one the fourteenth day.

In five of the cases inflammation was almost entirely limited to the *attic of the tympanum and contiguous parts;* in these *there was no discharge from the ears* whatever escape of secretions there was took place through the Eustachian tube to the throat. In these cases characteristic appearances of the membrana flaccida gave evidence of the seat of the trouble; it was inflamed—in some instances distended as well. Where the process extended further the adjacent canal-walls

were tumefied, or even the seat of an incipient dissecting tympano-mastoid process. In some, mere exudation showed itself as larger or smaller cysts on the membra vibrans. Pent-up secretions were the cause of greatly increased pain, and autophonia, and sometimes of a feeling of "numbness;" and as the periosteal inflammation extended both internally and externally, the severity, of course, proportionately increased.

Prompt surgical treatment was employed in three of the cases, giving vent to secretions in the attic, and assuring future drainage. Two of the attic cases drained spontaneously, and did well without operative treatment. In all of them rest was advised, and local dressings and constitutional treatment adopted as required. In two of the seven cases the atrium was the principal seat of disease; one of them began to discharge in thirty-six hours, the other in two weeks, spontaneously.

It is usually these attic cases that show such a strong tendency to take on severe symptoms and involve the mastoidea; but when drainage is early secured, with proper constitutional and local treatment, the more severe may generally be prevented. Thus two of the attic cases were cured in two days, one in three days, one in fourteen days, and one in twenty-six days. The atrium cases were cured in eight and thirty-nine days, respectively—the latter being complicated with other troubles.

Persons may nearly always escape the injury to which the ears are liable in bathing by the observance of a few simple precautions. They should not expose the face or ear to incoming waves, especially such as are just "breaking" at the height of the head—*i.e.*, they should be on their guard not to be caught unawares. In floating upon the back water is liable to trickle in the canal of the ear, and in diving it also enters easily. Such a result may be prevented by wearing non-absorbent cotton or sheep's wool in the opening of the ear.

On coming out of the bath no time should be lost in wiping out any water that may remain in the canal, and drying the parts; this may safely be done by rolling a small bunch of the fibres of absorbent cotton-wool on the end of a "parlor" match, from which the ignitable portion has been burned. The cotton should project well over the end of the stick to protect it, and form a brush resembling those made of camel's hair. This brush may, with care or after proper instruction, be carried by the bather himself down into the ear for an inch, or until felt impinging on the drumhead; the use of one or more will remove all moisture, and probably prevent any further injury liable to occur from the presence of such an irritating fluid as sea-water.

QUININE IN THE TREATMENT OF WHOOPING-COUGH.

Dr. Ernest M. Lyon, of Newark, N. J., referring to a recent notice of the use of quinine in pertussis, writes:

"I have used it extensively and successfully in my own practice, as follows: ℞. Quiniæ bisulph., ʒ j.; elix. simplic. rub., U.S.P., ℥ jss. M. Sig.—Teaspoonful to a child aged five years and upward. I give it every three or four hours until cinchonism ensues, and keep the patient continuously under its influence, my guide for its administration being the frequency and severity of the paroxysms. By this means I feel assured that I have succeeded in favorably influencing the course of the disease, and shortening its duration in a majority of cases. I use the bisulphate because it seems to me it is better borne by the stomach, and in solution for the more accurate division of the doses. My experience has been that children do not object very strongly to the taste after taking it a few days. After each dose I give a lump of sugar saturated with lemon-juice, and always upon an empty stomach. I kept three of my own children cinchonized almost continually for nearly two weeks without any bad effects."

Progress of Medical Science.

Rheumatic Hyperpyrexia.—The sudden supervention of hyperpyrexia in the course of an attack of acute rheumatism, associated as it is with delirium and other nervous symptoms, constitutes a most formidable complication and one that requires very prompt treatment in order to avert a fatal issue. The symptoms of such a condition, which was usually supposed by the older writers to be a sudden metastasis of the rheumatic inflammation from the joints to the brain, are summarized by Dr. Henry Barnes in the *Edinburgh Medical Journal* for July, 1886, as follows: "There is great thirst, with a dry brown tongue; anxiety, restlessness, and insomnia; a dry burning skin, or more frequently profuse perspiration; often a miliary rash, the vesicles resting on an injected base, giving the skin a mottled appearance, sometimes mistaken for the rash of typhus; the joint pains may persist, or there may be a sudden cessation of them; there is acute delirium, followed by stupor, coma, and sometimes by convulsions. The temperature may rise from 104° to 110° or 112° in a few hours. The general condition of the patient resembles one suffering from typhus. Cardiac complications may be present or absent, but if present, are usually slight in character. As a rule, the degree of pyrexia in rheumatic fever bears some proportion to the number of joints affected and to the intensity of inflammation. In ordinary cases the temperature runs up to 102°, or even higher, on the first day, but there is no typical range. Evening exacerbations may bring it up to 103.5° or 104°. There are sometimes periods of intermission. The onset of complications is usually attended by a rise in the temperature, but this is never great unless the case turns out to be one of hyperpyrexia with delirium. The onset of grave symptoms is usually sudden. Dr. Wilson Fox collected twenty-one instances in which the temperature rose suddenly from 102° or 105° to 109°, 110°, and 111°, and where the duration from the date of the rise of temperature to death was in one case only two hours (103.5° to 109°); in another, four hours and a half (104.8° to 109°); in another, seven hours (105° to 110°); and in a fourth, eight hours (102.2° to 109.5°). In eleven cases the period varied from nine to sixteen hours. The symptoms may come on at any period of the disease, early in the case, when the articular inflammation is at its height, or when convalescence is established. The post-mortem appearances are similar to those found in typhus and other forms of blood-poisoning. There are no marked visceral lesions; there is rapid decomposition of the body; dark fluid blood; staining of the lining membrane of heart and large vessels; hypostatic congestion of lungs; a large soft spleen; granular degeneration of heart and voluntary muscles." Dr. Barnes relates the history of a case of this nature in which the good effects of prompt treatment are well illustrated. The patient was a girl, aged twenty, who was suffering from rheumatism involving a number of joints. The case progressed slowly, without anything worthy of special note, until the ninth day, when the temperature suddenly began to rise. As soon as it reached 106°, wet packing was commenced by means of a sheet wrung out of cold water. As the temperature did not fall rapidly, ice was added to the water, and lumps of ice were rubbed on the outside of the sheet. This had the effect of reducing the temperature within an hour to 99°. During the process of packing the patient became more conscious, and seemed to enjoy the cold pack very much. Toward the end, after nearly four hours in the pack, she felt rather uncomfortable and chilly. The temperature subsequently did not rise above 101.3°, and, with slight interruptions, the case progressed favorably, and the patient made a good recovery. As a practical result of his experience and studies, the author urges that in all cases of acute rheumatism, as soon as there is any indication of nervous

symptoms, and particularly in patients of a high degree of nervous susceptibility, a careful watch should be kept on the temperature, and it should be taken at frequent intervals. As soon as it shows a tendency to rise to the hyperpyrexia range, preparations should be made for the external application of cold. The dangerous symptoms may be sudden in their onset, and drug-treatment seems to fail to arrest them. The question as to what point the thermometer should reach before cold is applied is an important one, and the general condition of the patient will also have to be considered before coming to a decision; but in general Dr. Barnes recommends that it should not be allowed to rise above 105°, as the chances of success appear to be greater the earlier the cold-bath treatment is commenced. Of all means of applying cold, the graduated bath gradually cooled from 90° to 70° is the best, but as this is not always available, the cold pack, ice-bags, or cold affusion may be tried. Frequent testing of the patient's temperature is necessary during the process, and as soon as the reduction of temperature to 100° or 99° is effected, the treatment should be suspended, the patient should be placed in warm blankets, or otherwise dangerous symptoms of collapse may supervene.

The Use of Esmarch's Bandage in the Production of Anæsthesia.—M. Chandelux recommends the previous application of Esmarch's bandage when it is desired to produce local anæsthesia by means of the ether spray. He was led to make use of this procedure by the observations of M. Horand in 1867, who found that the difficulty of anæsthetizing a part bore a direct relation to its vascularity. The author claims the following advantages for his method: 1, anæsthesia is produced in from twenty to forty seconds, while by the ordinary method two minutes or more are required; 2, after the spray is discontinued the anæsthesia remains for about three minutes, since the parts are not warmed by the blood-current; 3, the operation—for example, the removal of an in-growing nail—is greatly facilitated by the absence of hemorrhage.—*Bulletin Général de Thérapeutique*, June 15, 1886.

Cure of a Lingual Ulcer by Galvanism.—Dr. Meyer has employed the galvanic current with success in the treatment of a very painful ulcer of the tongue which had existed nine years. The current employed was of sufficient strength to be felt without causing any pain. The positive pole was held in the hand while the negative pole was applied for thirty seconds to the most painful points. The pain was quieted for several hours after the first sitting. The treatment occupied about eighteen months, with two intervals of six weeks each. The total number of *séances* was one hundred and ninety. A perfect cure was reported to have been obtained.—*Journal de Médecine de Bruxelles*, June, 1886.

Hemi-rheumatism.—Dr. Casalis has recorded the results of the examination of a large number of cases of chronic rheumatism, and states that in a large proportion of them the articular manifestations were localized on one side of the body (*Journal de Médecine et de Chirurgie Pratiques*, June, 1886). This predilection for one side was so marked that he considered it to constitute a special variety of the disease, which he called hemi-rheumatism. These facts, he remarked, would seem to lend weight to the theory which has been suggested, that the central nervous system plays an important part in the production of chronic rheumatism.

Contusion of the Lung.—Dr. T. Piéchaud relates the following case: A man, about thirty years of age, who was driving a cart-load of pigs, came into violent collision with another vehicle and was thrown from his seat on to the pavement, with one of the animals falling on his chest. He experienced intense pain at the moment; this continued, together with great oppression at the chest and profuse frothy expectoration of blood. A minute examination failed to detect fracture of the ribs. No emphysema was discovered. About the middle of the right lung, posteriorly, there existed a tract of absolute dulness to the extent of several centimetres, with complete absence of respiratory murmur, and a marked tubular breathing. Above and below this zone air entered the lung freely, with a slight amount of crepitant *râles*. It was evident this zone of dulness from which the air was excluded corresponded with contusion and rapid sanguineous infiltration of the parenchyma of the lung. The progress of this case was favorable. Three days after admission to the hospital there was entire absence of fever, the pulse was calm, respiration normal, panophysis greatly diminished, and shortly wholly ceased. The symptoms, course, and result here obtained, when compared with those of inflammation or of laceration of the lung, leave no doubt that the lung in this instance had been only severely bruised. The patient was fortunate enough to escape the complications which commonly follow injuries to the chest. The only therapeutic measures adopted consisted of rest, astringent beverages, and opiates. Recovery complete.—*Provincial Medical Journal*, June 1, 1886.

Poisoning from Sorrel.—A curious case of poisoning is reported in the *Hospital Gazette* of June 19, 1886, the chemical features of which possess especial interest from a medical jurist's point of view. The victim of the accident was a boy five years of age, who gathered and ate a quantity of sorrel growing in the vicinity of his father's house. Subsequently the symptoms to be expected from the action of the poison contained in the leaves set in, and, to quench the thirst from which he suffered, the little fellow swallowed a quantity of soapy water which chanced to be within his reach. Death speedily ensued and, post-mortem, the stomach was found to contain oxalic acid in considerable amount. The action of the alkali in the soap swallowed had resulted in the production of soluble oxalate, by absorption of which the fatal event had been precipitated.

Chromic Acid in Granular Lids.—M. Darier states (*Revue Clinique d'Oculistique*, May, 1886) that, observing the good effects of applications of chromic acid to granulations of the pharynx and neck of the uterus, he determined to try it in granular inflammation of the conjunctiva. He takes a brush dipped in an aqueous solution of chromic acid crystals, and after having wiped away the tears covering the palpebral conjunctiva, touches lightly the affected points, but only these. In this way he obtains a desquamation of the epithelium, but never has to fear a deep eschar. The pain following the application is only temporary. The applications may be repeated daily, but M. Darier prefers to make them at several days' interval. He uses the chromic acid five or six times during the course of treatment, making applications in the intervals of glycerole of sulphate of copper. The effect of the latter is, he says, greatly enhanced when it is employed in this manner. He used chromic acid with good effect in a number of cases of old trachoma which had resisted every other mode of treatment.

A Two-pound Child.—Dr. S. L. Post reports in *Daniel's Texas Medical Journal* for June, 1886, that he delivered a woman, twenty-three years of age, and the mother of three children, of a fœtus weighing only two pounds. There were no pulsations in the cord, which was cold and atrophied and wholly detached from the placenta. After diligent work the child was made to breathe, and it is now as well as any infant. The woman menstruated regularly during her entire period of gestation, and during the last four weeks flooded so profusely that she was unable to attend to her domestic affairs.

Disinfectant for the Mouth.—Thymol, 5 grs.; benzoic acid, 3 ss.; tincture eucalyptus, 3 iij.; water, Oj.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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RECENT CONTRIBUTIONS TO ELECTRO-PHYSIOLOGY.

IN the Lumleian lectures, recently delivered in London by Dr. Stone, several of the problems of electro-physiology were dealt with, and some decidedly radical views were expressed. We have not space to enter critically into an analysis of Dr. Stone's opinions, but it may be said that many of them will not be received without considerable opposition.

The lecturer first showed that the discovery by Professor Hughes that the telephone can be used for the estimation of electrical currents may be utilized in electro-physiological studies. He next took up the question of the electrical resistance of the human body. By using large lead electrodes wetted with salt water the resistance of the skin was almost abolished, and Dr. Stone then found that the resistance of the other tissues was only about one thousand ohms, a much smaller amount than has previously been given.

We do not see, however, that Dr. Stone's discovery or correction is practically of any great moment, since, in fact, the skin resistance must always be taken into account.

The learned lecturer, indeed, seems even to think that the skin is not one of the tissues of the body. His experiments upon the resistance of the body in disease, however, are very interesting.

In dropsy it was found that the resistance was diminished; in one instance, as Dr. Stone ascertained, even to one-half. In six cases of hemiplegia, with contracture, the resistance was much less on the paralyzed side of the body. Again, in impregnations of the tissues by various metals the electrical resistance was much altered; mercury had a decided influence in diminishing it, as also had copper, while the influence of lead was but slight. Further studies in this direction are much to be desired.

In the passage of electricity through the body chemical decompositions take place, and electricity is developed and stored. One of the most striking of Dr. Stone's experiments were in this line, showing that the human body may be made a kind of storage battery. For example: In a case of old-standing sciatica, with wasting of the leg, and in two of diabetes, it was found that by charging the body with a moderate strength of constant current for half an hour a considerable discharge took place from the body, which might last for several hours. The first and largest discharge that occurs after the body has been charged is probably to be accounted for as a phenomenon of self-induction; but the less marked though longer discharge is most probably due to electrolysis.

Dr. Stone is very sceptical as to the correctness of present views regarding electrotonus; but while he apparently shows that these views do not express the exact truth with regard to the relations of electricity to nerve-function, he does not substitute any very clear explanation of what these electrotonic phenomena depend upon. We are quite willing to be shown what is wrong, but it would also be pleasant to learn what is right. A fact, not entirely new, is stated with regard to induced currents, viz., that the resistance of the human tissues to them was much less than to the constant current (600 ohms to 1,160). Dr. Stone also says that he has been able to measure the strength of induced currents. "The most available instruments for this purpose," says Dr. Blackwell, "are Hartmann's unifilar dynamometer, which Dr. Stone employed, and Kohlrausch's combined meter-bridge and induction-coil. When the resistance in the circuit through the human body, the Kohlrausch apparatus being employed, is balanced by an equal resistance through the bridge in derivation, the telephone (substituting the galvanometer) becomes silent."

THE FUNCTIONS OF THE TONSILS.

DR. R. HINGSTON FOX, in the July *Journal of Anatomy and Physiology*, discusses the functions of the tonsils and advances some interesting ideas in regard to them which to many will also be novel. These adenoid glands belong to the digestive and not to the respiratory function, the air respired through the nose passes through the pharynx posterior to them, they, when the mouth is closed, resting against the tongue and shut off from the pharynx. They are not, the writer contends, to lubricate the fauces and aid in deglutition as has been claimed. From their structure, which is similar to the solitary agminated glands in the intestine, he reasons that their function is absorbent. He announces his belief that "the function of the tonsil is connected with the stream of saliva which is poured over it, without cessation, day and night," absorbing from the saliva in the intervals of meals certain of its constituents which would be otherwise wasted. The adenoid tissue of which the tonsils are composed may be regarded as the birthplace of leucocytes. The materials, according to this theory, which might be wasted by the stomach, are intercepted by these glands, and made to minister to the growth of white cells.

He closes his article with this explanation of the atrophy of the tonsils which takes place in middle and later life:

"Adenoid tissue everywhere is more largely developed in childhood, when not only nutrition but growth has to be provided for, than it is afterward. And there is nothing surprising in the fact that these nurseries of young leucocytes (permit the fancy), planted here as it were by the river side and drawing their sustenance from the nutrient stream, should dwindle in later life when the demand for white cells has become much less."

The writer does not discuss the effects, if there are any, which the removal of tonsils in childhood, a not infrequent surgical operation, might occasion.

THE CURE OF TRAUMATIC TETANUS.

In a recent newspaper account of a case of traumatic tetanus cured by morphine and stimulants, the physician in attendance was reported, we hope incorrectly, as saying that it was "the only case of cure of traumatic tetanus in the history of the world." This statement, if it was made, was of course an absurdly wild one; but it is nevertheless true that traumatic tetanus is a very serious affection, and genuine cures are of sufficient rarity to deserve being reported in medical journals.

In *The Lancet* of June 12, 1886, Mr. William T. Jackman reports briefly a case of tetanus which recovered under the influence of the new hypnotic, urethran, in conjunction with chloral hydrate. The patient presented well-marked symptoms of tetanus, resulting from a crushing of a finger between two cog-wheels. The trismus was complete and opisthotonus was well marked. Severe paroxysms of pain, greatly exaggerated at night, were complained of. Chloral hydrate in twenty-grain doses every three hours was ordered, but had no other effect than to relieve the paroxysms of pain somewhat during the day. As no abatement of the symptoms was apparent after ten days of this treatment, it was resolved to discontinue the chloral at night and to substitute urethran in four-grain doses every two hours from 6 P.M. to 6 A.M. The first night of this treatment showed a marked decrease in the severity of the symptoms, and from this time the patient made a gradual and uninterrupted progress toward recovery.

A case of traumatic tetanus, cured by large doses of whiskey, was reported in The Record not long ago by Dr. Hobart Cheesman, of this city. But while, in the absence of other means, it would be proper to exhibit large amounts of stimulants, and the newspaper writer above referred to seems to have resorted largely to this agent, such a drug as urethran, if equally efficacious, would for many reasons be far preferable. In the case of Mr. Jackman the failure of the chloral hydrate to relieve the severe symptoms, and the noticeable improvement under the influence of urethran, would seem to point to the latter as likely to prove a very valuable drug in the treatment of tetanus, and would certainly warrant its further trial in this stubborn and dangerous disease.

LA PERLÈCHE; A NEW PARASITIC AFFECTION OF CHILDREN.

Under the above title, Dr. Justin Lemaistre, of Limoges (*Journ. de la Société de Méd. de Haute Vienne—Le Progr. Médical*) describes a peculiar skin affection very prevalent among the children in and about the city of Limoges, and probably in other provinces of France. Among 5,500 school-children examined, 312 were found affected, while in the village of Périgord over half had the disease. It is called by the peasants *perlèche*, because the sensation of dryness and smarting causes the patients to lick (*pourlécher*) their lips. It is also called *bridon*, because the commissures of the lips are cracked or excoriated so that they look as if bridled. It is at these points that the disease is chiefly located. The epithelium becomes blanched, macerated, and detached. Sometimes cracks are formed in the direction of the commissural fold. These may bleed and cause pain. The lesion recalls many of the objective appearances of certain mucous plaques. The disease is self limited, lasting only from fifteen days to a month as a rule; but it may reappear again and again, so that sometimes a child will suffer for a year. The disease is perfectly devoid of danger, and causes no constitutional symptoms. M. Lemaistre has clearly shown that it is contagious, and that the ordinary mode of contagion is by school-children drinking from the same cup.

Upon these cups, in the drinking-water, and upon the infected surface of the skin, M. Lemaistre discovered a micro-organism which he cultivated and called the *streptococcus plicatilis*. In the Pasteur flasks the organism develops with extraordinary rapidity. In examining the diseased skin microscopically, the microbes were found on the borders of the epithelial cells, which often became disintegrated and destroyed.

The microbe lives in stagnant water, wells, and springs, in the form of a micrococcus. When taken into buckets, pails, and unclean drinking vessels, it develops into little chains. In this form it is transferred to the lips, where it develops. The crucial experiment of testing whether this was actually the pathogenic organism of *perlèche*, by inoculating pure cultures was, unfortunately, not tried. So that Dr. Lemaistre's view that it is the cause of the disease does not amount to a demonstration. The *perlèche* is a disease of uncleanliness, and can easily be prevented. Its importance lies in the possibility of its being mistaken for syphilis, and in the annoyance and suffering it gives to children, who are not to blame that their parents and school officials are neglectful.

POISONS IN FOOD AND DRINK.

The current number of *The Forum*, a periodical which has already taken the first rank in publications of its class, contains an article on "Poisons in Food and Drink" by Dr. Cyrus Edson. Dr. Edson has won some reputation for his energetic prosecution of adulterators, and though his work has seemed at times somewhat sensational, he has undoubtedly done good service in the cause of public health. His opinions on the subject of adulterations are very positive.

Beginning with water, he asserts that not one well in a hundred contains water fit to drink. Ice, too, is a source of danger. The idea that in freezing the water purifies itself is a mistake, and, consequently, the ice-supply needs as much looking after as does the water in which it is drunk. The dangers of milk are two-fold. It may be contaminated by a disease, such as tuberculosis, affecting the cow, or diluted with infected water; or it may be skimmed and rendered innutritious by simple attenuation.

Not a week passes, we are told, but seizures are made in our public markets of carcasses of animals that have died from disease. Diseases which cause suppuration affect meat most injuriously. When it becomes known that an epidemic is raging in a certain section, unprincipled dealers

buy up the stock and convert it into beef, mutton, or pork, for the benefit, mainly, of the Knights of Labor and their dependents. Bob-veal, which is the meat of the calf under four weeks old, is innutritious and indigestible, yet it is not infrequently sent into the markets.

Everyone knows that candy is adulterated, but we are told that in making jellies the adulterator reaches the acme of his art. Most fruit-jellies sold to-day are a fraud, being composed of glucose, water, dried-apples, coloring and flavoring matter, and gelatine.

Canned meats and vegetables are, as a rule, safe, unless decomposition has taken place before the cans are closed. Sometimes, also, tinners make cans from tin-plate which contains lead.

Coffee and tea are often adulterated, or "fixed," so as to deceive the customer into believing that the article is better than it really is. The dangers from poisons in food and drink are two-fold, that from accidental contamination and that from deliberate adulteration. To remedy the first, the public must be educated in the rudiments, at least, of hygiene; to correct the second, we need wise laws with proper methods for enforcing them.

News of the Week.

THE DEATH OF DR. ELLSWORTH ELIOT HUNT.—Dr. Ellsworth Eliot Hunt, son of Dr. Ezra M. Hunt, of Metuchen, N. J., died of phthisis, at Pensacola, Fla., August 17th, aged thirty-one years. Dr. Hunt was a profound student and brilliant scholar. At Princeton, where he received his academic education, he was the first and only pupil who won by competitive examination the Steinke prize of $1,500 for languages. Subsequently he secured the fellowship in experimental sciences. He graduated third in his class at the College of Physicians and Surgeons in 1878, served as interne in Roosevelt Hospital, after which he repaired to Vienna to complete his studies. He was but a year and a half in practice when he was seized with pulmonary hemorrhage and was forced to repair to Florida, never to return.

A WONDERFUL OPERATION.—We learn by an account in a recent issue of the *New York World* that another rare and wonderful operation has been performed with brilliant results. This time it was a very painful cancer, situated in the dangerous locality of the breast. The skilful surgeon at the hospital was willing, however, to take all risks to save the life of the patient. The incisions were carefully and judiciously made "in the direction of the fibres of the great pectoral muscle," the slightest deviation of the blade inviting death. The knife was carried "around the diseased mass in such a manner as to include *every part of it*, the lower incision being made first." The pectoral muscle was "thoroughly exposed by the removal of its fibrous envelope." "Strict antiseptic precautions" were observed, and, *mirabile dictu*, the wound "healed by first intention," without any increase in the temperature. All this shows what advances are constantly being made in our noble art by bold and skilful surgeons. We hope, however, that success will not make some of our operators too bold. Who will be the first one to tackle "a wen?"

THE LATE DR. FRANK H. HAMILTON.—At the meeting of the Chicago Medical Society, August 16, 1886, the following were unanimously adopted:

Whereas, This Society has learned, with deep regret, of the death of Dr. Frank Hastings Hamilton, of New York, and,

Whereas, In his death the United States has lost one of its most distinguished surgeons, one of its ablest teachers, one of the purest patriots, and in his private life, one of the most amiable men;

Therefore, Be it resolved by this Society that we hereby give public testimonial to the many virtues of the deceased, and that we tender his family the assurance of the profound sympathy of this Society with them in the hour of their affliction, and that an engrossed copy of these resolutions be furnished them, and a copy spread upon the records.

L. H. MONTGOMERY, M.D., *Secretary*.

NEW CARDIAC TONICS are now appearing with almost menstrual regularity; and it is to be hoped that a climacteric will soon be reached. One of the latest, if not finest, under the name of nitrosalicylate of bismuth, has received the favorable notice of Professor Wagner, who has used it in his clinical practice at Buda-Pesth. It has the advantage, we are told, of being rapid in its action, and never cumulative in its effect. Its only disadvantage is that its effects pass away rapidly when its use is discontinued, and that some patients manifest an idiosyncrasy with regard to it.

PELLETIERINE IN OCULAR PARALYSIS.—Dr. Galeozowski is an ophthalmologist of Paris, the pronunciation of whose name produces a facial spasm, but who, despite his appellative defect, is frequently discovering very wonderful things. Lately he has obtained a curious and unlooked-for result in using pelletierine. Having observed that the muscles of the eye were contracted when pelletierine, or a decoction of pomegranate, was given as a vermifuge, he was led to try the action of the salt in paralysis of the muscles of the eye, supplied by the third and sixth pair of nerves. The results obtained were very satisfactory, paralysis of the branches of the nerves being either cured or much improved after three or six doses, even where, under previous treatment by other means for several months, no relief had been experienced.

THE TREATMENT OF ORCHITIS AND EPIDIDYMITIS found most successful by Mr. F. W. Loudes (*Lancet*) is to paint the affected part with a solution of nitrate of silver (℥ ij. to ℥ j.), with rest in bed, and support to the inflamed organ. One application is generally enough.

INSUFFLATION OF IODOFORM AFTER TRACHEOTOMY.—Dr. G. Shirres found, in two cases (*Lancet*), that the insufflation of ten grains of iodoform every four hours prevents the development and extension of the membrane.

THE BLACK LIST.—The number of institutions in this country whose medical diplomas are not recognized by various State Boards of Examiners is quite large, although fortunately some are now defunct. Here is the latest list: American Eclectic College, Cincinnati; American Health College, Cincinnati; American University of Pennsylvania (Buchanan), Philadelphia; Beach Medical

Institute, Indianapolis; Bellevue Medical College of Massachusetts; College of Physicians and Surgeons, Buffalo, N. Y.; College of Physicians and Surgeons, Milwaukee; Eclectic Medical College of Philadelphia; Edinburgh University, Chicago and St. Louis; Excelsior Medical College, Boston; Hygeo-Therapeutic College, Bergen Heights, N. J.; Hygeo-Therapeutic College, New York City; Joplin Medical College, Joplin, Mo.; Livingston University, Haddonfield, N. J.; Medical Department of the American University of Boston, Boston; New England University of Arts and Sciences, Boston; New England University of Arts and Sciences, Manchester, N. H.; Penn Medical University, Philadelphia; Philadelphia University of Medicine and Surgery, Philadelphia; Physio-Eclectic Medical College, and Physio-Medical College, Cincinnati; St. Louis Eclectic Medical College, St. Louis; St. Louis Homœopathic Medical College, St. Louis; Curtis Physio-Medical Institute, Marion, Ind.; American Anthropological University of St. Louis; Medical Department of Drake University, Des Moines, Ia.; and King Eclectic Medical College, Des Moines, Ia.

THE FRENCH SURGICAL CONGRESS.—The Second Session of the Congress is to be held at Paris this year, from October 18th to 24th. The opening meeting will be held on Monday, October 18th, in the School of Medicine. Four sittings will be occupied with several questions, and at least three with various papers. Communications should be sent to Dr. Pozzi, 10 Place Vendome. The special questions for discussion are: (1) Nature, Pathogenesis, and Treatment of Tetanus; (2) Nephrotomy and Nephrectomy; (3) Orthopædic Resections; (4) Operative Intervention in Irreducible Traumatic Dislocations.

Reviews and Notices.

PSYCHIATRY: A CLINICAL TREATISE ON DISEASES OF THE FORE-BRAIN, BASED UPON A STUDY OF ITS STRUCTURE, FUNCTIONS, AND NUTRITION. By THEODOR MEYNERT, M.D. Translated, under authority of the Author, by B. SACHS, M.D. Part I. The Anatomy, Physiology and Chemistry of the Brain. 8vo, pp. 285. New York and London: G. P. Putnam's Sons. 1885.

THE first two-thirds of the book is devoted to a description of the anatomy of the brain and cord, the remainder to a discussion of its physiology, nutrition, and to certain fundamental points in psychology. There is finally an appendix on the mechanism of expression.

The first chapter contains a very brief description of the development of the brain, and an account of the arrangement of the lobes, fissures, and convolutions. This is essentially the same as that usually given by other writers, but one will find besides much information in comparative anatomy. In the next chapter there is a description of the basal ganglia, and remarks on the general architecture of the brain. The author describes the course of the various fibres and commissures of the brain, and illustrates them with drawings of his torn preparations. To one who had the torn brains before him, the descriptions given by Meynert would not seem difficult, although he is the opposite of a lucid writer, frequently turning aside to discuss or comment upon some point bearing more or less indirectly on his main subject.

The minute anatomy of the cortex is given at some length with the familiar illustration of the five layers, which has gone the rounds of text-books for years.

After this point it must be admitted that the anatomical part of the book is not only difficult to follow, but in the descriptions of the course of fibres and connections and functions of the nuclei of the basal parts of the brain, and of the pons and medulla, the author is not always in harmony with the latest views of other eminent anatomists. This portion is nevertheless instructive to those who already know something of the subject.

The colored cross-section of the spinal cord is, we confess, quite beyond our powers of understanding or criticism.

An extremely instructive and suggestive portion of Meynert's work is that upon the physiology or physio-psychology of the brain. His discussion here is, to be sure, not systematic, and he seems quite incapable of continuously coherent literary expression. Meynert endeavors to explain all psychical processes through the interaction and association of cells, fibres, and end-organs. Every nerve-cell has the property of *sensitiveness*, which is developed in the fore-brain into sensation. Mental processes are the results of the associated activities of these cells, which form a surface upon which impressions of the external world are received.

Meynert is an idealist, and affirms that physiology can teach nothing else. The ego or personality is the aggregate of our memories, and is founded upon and depends upon the structure of our cortex. The will is practically an unknown quantity, but it is not free. Meynert is necessarily a disbeliever in freedom of the will, or rather, with modern psychologists, he discards the term.

The author gives no place to instinct in man. Every act, even that of the sucking child, is a conscious or reflex one.

"The avoidance of the greater pain is the determining motive of all human actions," is another of Meynert's deductions. The feeling of happiness is the result of a mental condition in which there has been excited innumerable actively working concepts, and in which there is an unrestricted flow of associations and a free expansion and running over of nerve impulses.

The cerebral cortex has two tasks—one the innervation of processes of thought and movements, the other the innervation of the vaso-constrictor muscles. When thought is active, vascular innervation is lessened and hyperæmia results, and *vice versa*.

Meynert's psychological suggestions, as we have already said, are valuable and suggestive, but it must be confessed that his views are nearly all old, and that the whole subject has been much better dealt with by Wundt and the modern English school.

The author gives a very interesting account of the nutrition of the brain.

The translator's share in this work cannot be too highly commended. He has performed a very difficult and arduous task in a manner beyond criticism.

The work is well and copiously illustrated.

SUBPREPUTIAL MEDICATION.—The *Medical World* claims advantages in the treatment of gonorrhœa by what is termed subpreputial medication. The method consists in rubbing up morphine and cocaine in lanolin (wool-fat), and inserting it under the prepuce after thorough cleansing. Dr. Taylor claims that this at once relieves all pain by producing complete numbness of the whole organ. He claims that the advantage of lanolin over other vehicles is the readiness with which it is absorbed. He applies sufficient of the mixture for the patient to have one fourth of a grain of cocaine at once; but we think in violent cases this might be increased to one grain or more, since the hypodermatic injection of one or two grains produces no serious results. This is a mode of treatment that leaves the erring Hebrew out of account.

THE Doctor who holdeth his peace impresseth his patient.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

REPORTS OF SECTIONS.

(Continued from page 227.)

SECTION ON SURGERY.

(Special for THE MEDICAL RECORD.)

WEDNESDAY, AUGUST 11, 1886—SECOND DAY.

MR. ERICHSEN'S ADDRESS ON THE TENDENCY OF MODERN SURGERY.

THE President of the Section, MR. ERICHSEN, Surgeon Extraordinary to the Queen, and Consulting Surgeon to University College Hospital, London, took the chair at 2 P.M., and delivered a presidential address which occupied rather more than half an hour in delivery. He took for his subject "The Tendency of Modern Surgery," by which he meant, he said, the lines that it would be most profitable to follow in the immediate future by those seeking to advance surgery beyond its present lines of undoubted excellence—not the lines that led to success in its teaching, and still less in its practice—but with the advance in all that related to the science and art of surgery. Had they, in fact, reached the final termination of the old routes, and must they follow, if not new, at least less well-explored tracks, if they wished to reach a uniformly higher level? Before answering these questions he would consider briefly the direction in which surgery had advanced since the introduction of anæsthetics into its practice. The discovery of anæsthetics, he reminded his hearers, had been made by an American dentist, working without scientific aid and without any thought of the far-reaching consequences of his discovery. From this epoch he roughly dated the "development of modern surgery." This advance had been in three distinct lines—first, and mainly, in the extension of the scope and in the improvement of the methods of operative surgery; secondly, in the precision, both as to exactitude of performance and certainty in the result of operations; thirdly, in the application of those methods of scientific research by which those sciences are advanced on which practical surgery is based. Dealing in detail with the first of these three, he remarked upon what he said would now be regarded as the horrors—both as regarded physical suffering and absence of sanitary precautions—of the præ-anæsthetic days. The scenes witnessed then the present generation of surgeons could hardly realize. The change that had come over the whole field of operative surgery was more than startling. Operations which Robert Liston—the boldest surgeon and the most skilful operator of his day—would have shrunk from attempting were now daily performed, and organs which were supposed by him to be forever safe from the knife, were now incised or extirpated as matters of ordinary routine practice.

Such had been the skill acquired in recent years that he (Mr. Erichsen) thought there could be little doubt that the final limit had been reached in the direction of all that is manipulative and mechanical, though within these limits there might be much of movement, of change, and of modification. Every artery in the human body accessible to the surgeon's scalpel had been tied, and they had reached the final limit in operations on the arterial system. Every limb had been long since amputated at its highest point; every large joint had been excised. Sculpture, architecture, painting attained their highest degrees of excellence years ago; surgery, he thought, was now in the same position. Turning to the advance in surgical precision, he said there was little left to be desired so far as exactitude of performance was concerned, while precision of result had been obtained as far at least as the wound was concerned. The rules laid down for most operations were so precise that the surgeon could hardly err, the more so as the use of anæsthetics, by rendering the patient insensible to all suffering, made it unnecessary to operate against time, a cause of much fatality in former days. The modern surgeon could assure his patient that there would be no suffering during the operation and no pain afterward, except when the wound was dressed, for any other could be averted by antiseptic dressings. Precision of result, so far as recovery was concerned, was less certain, but here also the gain had been immense, and death after an operation was now looked upon as a rare contingency. Coming next to the application to practical surgery of those methods of scientific research by which those sciences are advanced on which the practice of surgery is based, the speaker showed that the art of surgery had ever been in advance of the science, and that science had too often had to content itself with giving a rational explanation of the phenomena already determined by the art of surgery. What was termed "scientific surgery" was of comparatively modern origin, and dated from the days of John Hunter. Art was final, but science was illimitable. They had yet to learn much from that compound science, biology, in its application to the elucidation of surgical problems—that compound science of modern creation, into which physiology and histology, pathology, chemistry, and physics entered in equal proportions, which worked by means of experimental research; and this was the line of investigation which, he ventured to think, promised the greatest and most useful results to the cultivation of surgery in the future. The speaker concluded by instancing a few of the more important results that had already rewarded scientific research.

At the conclusion of the President's address, SIR HENRY THOMPSON read a paper, introducing

A DISCUSSION ON SUPRA-PUBIC LITHOTOMY.

He said it was a question of what operation was best to remove a stone of large size. Crushing was now considered the best—except for very large stones—but this was not so formerly. Lithotomy was then in vogue, and was attended with great mortality in cases where the calculi were large. Sir Henry Thompson said that at an early period of his career he had endeavored to find some other method than cutting. He gave a graphic description of the effects of removing large stones by perineal operation. After referring to eight deaths as occurring in twenty-five cases of lithotomy, he spoke of a series which were treated by crushing without any death occurring. Lithotomy acquired its repute under Cheselden, who operated mainly on young children and middle-aged adults with stones of medium size. To-day the situation was changed. The lateral operation was always difficult for large stones, and it was for those of exceptional size that the supra-pubic operation was designed. He enumerated

EIGHT ADVANTAGES AS ATTENDING IT.

1. There were no important structures in the line of the incision, or which could be injured by the forceps. 2. The space for manipulation was practically unlimited. 3. There was no danger from hemorrhage, as any which might occur could easily be stopped. 4. The incision was easier of performance, and the removal of the stone safe and easy. 5. The urine left the wound drier and safer. 6. Antiseptics could be used. 7. It was impossible to injure the sexual organs, or to produce recto-vesical, or vesico-vaginal, fistulæ. 8. It was better for large stones. There were but two possible dangers:

The peritoneum might be opened, or extravasation of urine might occurr. He would deal with the latter first. The risk of its taking place was small, and it could only occur from needless interference outside the bladder. No part outside should be approached save in the line of the incision. There was only one way in which it occurred. The stone sometimes emerged spontaneously, the bladder contracting around it. Only one who had met with such a complication knew what to do. In such cases manipulation with the staff might cause extravasation. It was interesting to note that John Douglas made a similar remark as to the use of the staff.

IN THE MODERN SUPRA-PUBIC OPERATION NO STAFF WAS NEEDED.

As to the danger of wounding the peritoneum, that was *nil*. He had never seen this happen, nor even heard of its happening; but even if it did occur, modern resources would enable us to deal with it. The modern method of raising the bladder had the advantage that it aided us in avoiding the peritoneum; but this was not the only benefit of the method.

AN ADVANTAGE OF THE SUPRA-PUBIC OPERATION WAS THAT WE COULD EXPLORE THE BLADDER WITH THE FINGER, NO PROSTATE INTERVENING.

To raise the bladder he used a rectal bag distended. He had never used or advised one containing more than twelve or fourteen ounces. He had lately used and advised a more elongated bag, slightly flattened from before backward. This was introduced as soon as the patient was under ether, and distended with two syringefuls of water from a syringe containing six ounces. The catheter was then passed, and the bladder slowly distended by injecting from six to twelve ounces of weak boracic lotion. It would then form a dull, rounded tumor above the pubes. The surgeon, standing on the left of the patient, then made the abdominal incision from below upward. A separator was used to keep the tissues apart. The stone was removed with the scoop and a finger, or by two fingers without the scoop. He did not advise closing the wound in the bladder completely at the time of the operation, as there would be some risk of forcing urine through the wound. There would be less danger of this in children. A catheter was passed into the bladder above the pubes, and left in from twelve to forty-eight hours.

A CATHETER IN THE URETHRA WAS UNNECESSARY,

and only a source of annoyance. Sir Henry Thompson said he had operated by the supra-pubic method on eleven patients; seven of these were old men. Three were cases in which the stones were very large, one being a stone of twelve ounces. One was a patient with a very large prostate, so large that the bladder could not be explored from the perineum. Sir Henry Thompson concluded by expressing a regret that he had not used the supra-pubic operation sooner, but it was a satisfaction to him to think that he had introduced it into this country soon after Taylor had employed it.

Mr. Reginald Harrison (Liverpool) showed a large stone removed by the supra-pubic method, and in the removal of which midwifery forceps had been employed. For the last twenty-five years he had used lateral lithotomy, he said, and chiefly in children, because he preferred the crushing operation for adults. The mortality in his cases had been only one in twelve, and he did not think better results could be obtained from the adoption of the supra-pubic operation until better evidence than that at present adduced had been brought forward in its favor. It was important to study the subject. He had never met with any serious difficulties in removing by the lateral operation stones weighing as much even as five ounces. Such difficulties as had occurred would not, he believed, have been removed by the adoption of the supra-pubic operation. If, either in lateral lithotomy or in operations on the prostate, the wound continued to bleed, he plugged it with an india-rubber plug exactly fitting it. He kept an assortment of these plugs of various sizes. He concluded by saying that he should be reluctant to abandon lateral lithotomy in favor of the supra-pubic operation, save in the case of stones of very large size.

Mr. Cadge (Norwich) suggested that a middle course between those just put forward might be preferable. He could not forget that Cheselden had tried the high operation, and relinquished it for the lateral one. He would not quote figures, as they were delusive in the absence of all particulars as to age, etc., of patients. He would, however, remark that as yet, so far as he believed,

THE SUPRA-PUBIC OPERATION HAD BEEN PERFORMED IN ONLY ABOUT ONE HUNDRED AND FIFTY CASES IN ALL.

Brodie, though, had a hundred cases of lithotrity before he published his monograph on the subject, which at once captured the profession. We should, he said, wait for further results of the method.

Mr. Jessop (Leeds) said he had only done the supra-pubic operation once. He described the case, and said that he found no difficulty with the operation.

Mr. Barwell said that in boys (and also in girls) the lateral operation presented certain difficulties which were removed by the supra-pubic operation, and the latter was extremely simple. While on this subject he wished also to refer to epicystotomy. There was no doubt that when we had to do with a tumor of the bladder the supra-pubic operation would enable us to remove it easily. He would join issue with Sir Henry Thompson as to

THE DESIRABILITY OF DISTENDING THE BLADDER,

because large stones mostly occurred in old persons with enlarged prostate, and by distending the bladder you also distended the membranous portion of the urethra. This was not always safe in old persons. He did not either approve of distending the rectum in all cases. Mr. Barwell then went on to speak of the relations of the bladder, and reminded his hearers that the peritoneum was not attached to it. As regarded the results of different methods of treatment, he did not think that a very decided numerical superiority could be claimed for any one. In performing the supra-pubic operation he thought it was desirable to sew up the abdominal wound, so as to prevent a ventral hernia just above the bladder.

Dr. Ward Cousins (Southsea) said that the supra-pubic operation had been resuscitated by the attention which had been paid to its details and the use which had been made of antiseptics. Its employment was desirable in cases of encysted stone, and also in cases of stone where the prostate was also enlarged. He described a case in which the patient suffered from stone, enlargement of the prostate, and the hip- and knee-joints on one side were quite stiff. He performed lateral lithotomy, but would certainly select the supra-pubic operation if dealing with such a case again. He thought lithotrity would prove the best for very small stones, and the supra-pubic operation the best for large ones. As to those of medium size the question was as to choosing the lateral or the supra-pubic operation. The former was safe, but was regarded as not being very easy. It was, however, easy if a very sharp knife were used and a straight direction into the bladder kept to. He did not approve of withdrawing the staff (the bladder and urethra being distended) before the bladder was reached by the operator. Such a plan might be safe enough in the hands of Mr. Cadge, but he did not think it a wise one for average operators. Dr. Cousins advocated the use of his (Dr. Cousins') straight staff, and said that with this he did not think the operator could go wrong. This statement caused some amusement.

Surgeon-Major Keegan showed some specimens, and referred to the shorter stay in hospital of children

after lithotrity. As to lithotomy in children, he said that Surgeon-Major Freer had cut one hundred and forty-three without losing one.

Sir William MacCormac said he saw Langenbeck perform the supra-pubic operation years ago in children, and point out its applicability to them. He agreed with Mr. Barwell that vesical and rectal distention were both needless. He referred to a case in which he had performed the supra-pubic operation. The operation was done antiseptically, and the skin wound was an inch and a half long. He removed a stone the size of a marble. He sewed up the wound in the bladder with catgut, then the abdominal wound, and closed the skin wound except leaving a catheter in. The skin wound healed completely in fourteen days.

Mr. Jacobson said we should discuss the operation not for the sake of beginners, but for the sake of those who frequently performed operations. He approved of the supra-pubic operation, as avoiding many dangers.

Mr. Bruce Clarke said he would only touch on two points. First, the use of the bag. He referred to a case (recently reported in *The Lancet*) in which Mr. Thomas Smith performed the supra-pubic operation at St. Bartholomew's Hospital. In this case he had had the advantage of assisting Mr. Smith. The stone could be distinctly felt, before the operation, by placing one finger in the rectum and another above the pubes. On distending the bladder no distention of the rectum was found to be necessary. The other point was as to the healing of the wound. He had seen four cases in which the wound did not heal easily. Was this because the drainage-tube was left in too long? If so, it would be an important point in the after-treatment to remove the drainage-tube in forty-eight hours, if possible.

Dr. Hingston (Montreal) said lithotrity, where it could be performed, was preferable. But it was not always possible to do lithotrity. Whether to crush or cut should be determined by the size of the urethra, and this was not always proportionate to the circumference of the flaccid penis, as had been supposed. The size of the urethra varied considerably, and each person was peculiar in this respect. He had introduced a No. 6 lithotrite into the bladder of a male child three years of age, and even in one aged only two. He preferred lateral lithotomy as the cutting operation whenever feasible. Sir Henry Thompson had placed the limits of the lateral operation at stones of three ounces. Mr. Reginald Harrison thought that stones weighing as much as five ounces might be dealt with by it. He (Dr. Hingston) thought size rather than weight should be considered; and size even was not the only feature, for we should

TAKE INTO CONSIDERATION THE DEPTH OF THE PERINEUM, OBESITY, ETC.

Taking, however, the weight as the standard, he thought that to place the limit at three ounces was to put it rather low, while to put it at five ounces was making it rather high. He had, though, removed a stone weighing more than five ounces by the lateral operation, but only with difficulty, the operation occupying forty minutes.

Sir Henry Thompson then replied. He repudiated the suggestion that Cheselden set aside the supra-pubic operation. Cheselden continued to perform it. There was something about the disuse of the supra-pubic operation that we had not yet got to the bottom of. He remarked that the supra-pubic operation was very suitable for children. Respecting the choice of different operations for different cases and the fixing of limits, he thought different operators would have different views and find different operations suit them. The personal equation came in surgery as in astronomy. Just as an astronomer knew that, of two observers at different stations, one would see a certain star one-sixteenth of a second before another, so no two surgeons would be exactly alike. He defended himself for bringing forward his cases. Although not numerous, he had deemed it right to do so to elicit opinion on the subject.

SECTION ON GENERAL MEDICINE.

Wednesday, August 11th—First Day.

Dr. Broadbent, of London, in the chair.

The proceedings were commenced by a paper by Sir Andrew Clark, of London, on

CASES WHERE DISEASE OF THE HEART HAD EXISTED UPWARD OF FIVE YEARS.

The opener of the debate said he was about to treat the subject from the personal point of view, and handed round a printed paper containing the history of 684 cases of heart disease that had come before his notice of late years. He could not exactly say that all the cases were thoroughly diagnosed; and no doubt in the short examination he was frequently obliged to give to a case, aortic bruit or mitral murmur might not always be clearly defined. Then again, as to the histories of the cases, patients were often inaccurate, and their reports must be taken *cum grano salis*. None of the murmurs in the list were merely occasional. When to these 684 cases he added the numerous out-of-door patients he saw of an afternoon, it might be imagined what a very large number of persons were going about with valvular disease, and looking very well indeed. Of these 684 cases no less than 272 consulted him for dyspepsia; 57 for rheumatism; 22 for gout; 44 for diseases of the nerves; and 17 for eczema, while only 4 were phthisical. One of the most striking cases of longevity connected with heart disease occurred in the person of the chaplain to the London Hospital, who, being about to marry many years ago, had been examined by the medical officer of an insurance company, and told that he had an incurable disease of the heart. The patient gave up his marriage intentions, and resigned the chaplaincy of the hospital, whereupon the committee granted him a retiring life pension. Fifty years afterward, being still in receipt of this pension, Sir Andrew Clark had to examine him, and found the same bruit present for which he had resigned his post so long ago. In another case, a patient he had seen sixteen years before had a double valvular bruit, but was now in good health after a visit to the West Indies. In another case, a lad was brought to him by his mother to see how his life could be made tolerable, and not with any hope to do him much good, but to know how long he might be expected to live. He had aortic systolic bruit, aortic mitral bruit added, and a large heart. He was, however, in good health, and Sir Andrew Clark advised that he should be sent to a private school. In due time the boy grew up and became a clergyman in Horton, and a most popular preacher, doing a great deal of parish work.

In a fourth case a gentleman came from Manchester to see a London physician, expecting to die soon. A loud mitral bruit was heard. There was no congestion at the base of the lung, and his other symptoms were good. He had a splendid business, but was prepared to live in poverty and quiet. He had been long affected with this murmur, and the advice given was that he should go on as usual with his business. In the fifth case cited, a patient sent for a doctor, and he told him he had disease of the heart. He was told not to go upstairs, and at once became ill through nervousness. He consulted another doctor, and he advised moderate exercise and plain living, so that at the age of eighty-five the patient was still alive and pretty strong. There was, however, another side to this question. A patient, a young girl, had mitral regurgitant disease, and her medical attendant permitted her to take violent exercise. In fourteen

days after the permission the child was carried off by ulcerative endocarditis. There were cases where—especially in childhood, but also in adult life—valvular bruit appeared for a time and disappeared. In the case of a patient brought to him by a practitioner in London, he had given the prognosis that the valvular bruit would disappear, and in a few years this took place. Again, in the case of the sister of the late Dr. Anstie, there were both aortic constriction and diastolic bruits. She was operated on, and in the course of six years subsequently no bruit could be heard. It was impossible not to have some impressions flowing from these facts, and these were that the retention of health was favored by attention to simple physiological laws. Patients must place themselves in the best condition to resist disease. The will must be cultivated to avoid worries, and to secure peace and cheerfulness. Hurry, worry, and disquiet were dangerous to patients with heart disease, and all sorts of irregularities should be avoided, such, especially, as excesses in eating and drinking. Kind mothers often did such patients great harm by wishing to feed them all day long. Over exertion and under-exertion should both be avoided, and the abuse of tea must be avoided. The abuse of tobacco was worst of all in heart disease. Failing strength of the ventricles was much to be dreaded. He concluded that hosts of persons in good health go on living with valvular disease of the heart.

Dr. Gairdner, of Glasgow, said he also would speak only of hard facts, and it was curious that twenty-five years ago he had published the history of many cases of heart disease where the patient had lived for many years in good health.

In the consideration of such cases, it was impossible for the consulting physician to work out the details of the patient's career. In his work on "Clinical Medicine" he had made the remark that auscultators were apt to give far too gloomy a prognosis in heart disease. In that work (p. 568) he had narrated the history of a medical man who discovered that he had mitral regurgitant disease. There was also aortic obstruction; but there was no alteration in the size of the heart, and the patient forgot his disease and lived for many years in good health. In 1881 he had sent to one of the medical journals the case of a man who had existed a lifetime with valvular murmur, and in middle age had had an attack of œdema of the lungs, but recovered, and was still alive and married to a second wife. He enjoyed very good health. In his third case, the patient had walked, in 1861, over the Highlands, although he was the possessor of an aortic-obstructive bruit. He died since that date. In his fourth case, a relative of Dr. Balfour, of Edinburgh, had a bruit, probably congenital in nature and arising from perforation of the septum. The chief interest in the case was that there was a loud murmur present. He was about to marry a second time, and was insured thirty years after the bruit was first detected. The patient died of cerebral symptoms, not clearly connected with the valvular disease. In 1862 he saw a boy with a probably congenital murmur and slight chorea. He grew up and married, and was now forty and in good health. Twenty-five years ago, in his book, he had said that valvular disease in young persons was more rapidly fatal than in adults, and, in reading this, Dr. Watson had differed with him. He now thought Sir T. Watson was right. In the sixth case he gave, a clergyman was told that he had valvular disease of the heart; but he was able to walk over the glaciers in Switzerland. That patient had aortic double-bruit lasting twenty years. In another case mentioned in his book (p 602) a patient with valvular murmur died of pneumonia, and the heart was found to be quite unaltered in form.

In another case of mitral stenosis, probably congenital, of old date, in a woman with a large family, she had lived on in good health, although often with great anxiety. In the last case he mentioned, the patient had mitral stenosis and hemiplegia, and a gentleman had recommended him for insurance; but he, Dr. Gairdner, knowing that that gentleman was consultant to a life office, had sent him thither for insurance again.

Dr. Clifford Allbutt said that the main causes of heart disease were within and without the heart, and this made much difference in the prognosis. Rheumatic fever came in early age, and a young heart would adapt itself much more easily to damage than an old one. In this he agreed with Dr. Gairdner's present opinion, who had sent him his book twenty years ago. He cited the case of a marble mason who had carried on his laborious trade for thirty years with a mitral regurgitant disease. Another gentleman with swelling of the legs was supposed to be in a dangerous position from valvular disease of the heart. He had, however, found that the swelling of the legs was due to another cause, and gave a good prognosis. The gentleman was still alive and well at the age of seventy-four. A Leeds inventor, who had enriched many capitalists by his inventions while he himself had remained poor and hard pressed for a living, had lived for ten years with valvular murmur in good health. The use of tobacco was often most hurtful in disease of the heart, and so was the abuse of tea; but still more dangerous than these was the use of alcohol. Tobacco evils were transient, and so were those of tea, but alcohol was permanent in its bad effects. The mere loudness of a murmur was of no importance.

THE NOISY MURMURS WERE NOT SO DANGEROUS IN THE WAY OF REGURGITATION AS THE MORE SILENT MURMURS.

The most important point in prognosis was the position of the heart's apex and the change made in the current of the blood. When the murmur was slight there was often the greatest danger. The mitral valves usually became diseased before the aortic. Hence aortic murmur meant double murmurs. Patients with heart disease might sometimes be insured.[a] Cases of aortic regurgitant, however, were in danger of sudden death. If mitral disease was known to be free from external complications, such a patient might be insured in an easy schedule without over-high premiums. The outcome of this debate was to prove very comforting, and to show that in all cases of organic disease the prognosis had hitherto been far too gloomy.

Dr. Bristowe cited the case of a lady who fifteen years ago had rheumatism; but, although she had a murmur, was quite in good health. The loudness of the murmur, he agreed, had nothing to do with the prognosis, and many people would lead a far more pleasant life if they did not know that they had such a disease. The late Dr. Murchison had aortic regurgitant disease. He consulted a friend as to whether he should give up practice, and he was advised not to do so. He lived seven years longer. He himself, Dr. Bristowe, if he had valvular disease of the heart, would far rather remain in ignorance of his illness.

Dr. Leach said he had notes of ten cases of interesting valvular disease of the heart. In one there was aortic stenosis after scarlet fever, in a boy, aged six, who was now, at the age of nineteen, quite well. A clergyman, aged thirty-three, had twelve years ago been found by him to be suffering from valvular disease of the heart. In this case he gave a good prognosis, as the tracing was nearly normal in character. Patients with valvular disease of the heart, he thought, should not be advised, as some German physician had lately done, to climb hills as a curative process. They should, however, take moderate exercise. It was, he said, dangerous to insure the life of a man with valvular disease of the heart.

Dr. Bowles (Folkestone) said that, as a member of the collective investigation committee, he could not but think that hæmic murmurs had a meaning. Twenty-seven years ago he saw a woman with valvular murmurs. He gave ten grains of Dover's powder, and the murmur disappeared. Temporary murmurs were of little impor-

tance. A gentleman, aged forty-two, had a temporary murmur. Some murmurs lasted for some time and then disappeared. In relation to aortic regurgitant, the danger in these cases had been rather exaggerated. He knew a lady who had lived with valvular heart disease no less than forty-six years; she eventually died of ulcerative endocarditis and femoral aneurism.

Sir Andrew Clark said he had never had anything to do with an insurance company, but sometimes had been asked his opinion on a doubtful case. He thought such lives were of good prognosis, if the murmur had lasted two years, and there was no hepatic or lung congestion, and the general health good. On these conditions he thought insurance companies might accept such a life. It was better, he agreed, not to tell a patient that he had heart disease. The public was accustomed to take a fault-finding attitude toward physicians, and often called in consultants merely to find fault with their medical man. Whenever, then, heart disease was diagnosed, a friend who was discrete should be intrusted with the information, for the credit of the physician.

NEURASTHENIA.

Dr. Playfair then read a paper on neurasthenia. He said that general physicians were always finding fault with obstetricians for constantly making vaginal examinations of these patients, and he was anxious to admit that this might be the case, and that there were cases of neurasthenia to which this advice was very applicable. This was a disease only of the richer classes, and only seen in private practice. The name was liable to be found fault with. It had been styled myosis inquieta. The neurasthenic patient was one who has broken down, and was as much in need of treatment as a patient with typhoid fever or with a broken leg. It was a clearly defined disease, and required very special treatment. The first case he would cite, and the photograph of which he sent round, was that of a lady forty-three years of age, who had collapsed and could not walk across the room. The disease had lasted three years, and was supposed to be cancer. In two months of careful treatment she was quite cured. In another case, a young lady, aged seventeen, broke down from overwork at school; but by treatment was soon put to rights again. In another case, a man, aged thirty-three, had been on a cattle ranch in the United States, and had what was considered "grass dyspepsia." His weight fell to eight stone, although his height was six feet. He was treated and got splendidly well. There had been a disease named spinal neurasthenia by Cheyne and Witt, but it was not this one. It was a disease of the nervous system and required a distinct treatment, which he had described at the Worcester meeting of the Association, and which was most important, as the tendency of modern medicine was rather, he thought, to diagnoses than toward therapeutics.

Dr. B. Hovell read a paper on the same subject, and cited the case of a lady with pains in her back and great nervous prostration, in whom the uterus was quite normally posited and normal in all its functions. There was no spinal disease. Under rest, tonics, and sea air she got well. A maiden lady, aged fifty-four, had intact hymen and great pain in sacrum, and was cured by similar treatment. Neurasthenia was only too common a disease in practice, and far more common than hysteria, of which he had seen very few cases.

Dr. Drysdale, of London, was sorry the authors had not repeated the details of the treatment, as the majority of practitioners were still in great perplexity as to what the clear diagnosis, and nature, and treatment of the disease was. He hoped, that in his reply Dr. Playfair might give a brief summary of the principal features of this special treatment.

Dr. Hughlings Jackson mentioned cases of this disease which had been greatly improved by the treatment of Dr. Playfair.

Thursday, August 12th—Second Day.

Dr. Broadbent, of London, read his introductory address to the Medical Section, under the title of

SOME INJURIOUS REMOTE EFFECTS OF TREATMENT.

Of course, he said, alcoholic prescriptions and the persistent use of opium were examples of what he meant. Even the bromides in medicinal doses produced acne and transient dementia. Cocaine already was beginning to have its list of victims, and symptoms resembling general paralysis were caused by it. Colchicum and veratria were of great service in gout, and it is necessary to prescribe them to give release from pain in many cases, but it was necessary that the system should afterward be cleared by the administration of alkalies. But the gouty man will go on taking these remedies over and over again, year after year. Diseases were often produced by such conduct in the patients, and high tension of blood in the arteries was a frequent result. Of this he gave cases. In 1885 a man consulted him with symptoms of high tension in the arteries, but whose urine was of good color and contained no albumen. He had ten ounces of blood taken from him. This patient had taken much colchicum for his gout. Painters in London, who were affected with lead-poisoning, also often were subject to gout, as Dr. Garrod has shown, and these men were accustomed to take a number of pills containing colchicum for years.

Diseases otherwise not dangerous were often

MADE FATAL BY LONG-CONTINUED USE OF SUCH DRUGS.

Thus gangrene of the lungs, a very uncommon disease, was comparatively frequent in persons with lead-poisoning who had treated themselves with much colchicum. The system of training called Banting, and which consisted in the eating of nitrogenous matters and abstinence from fats and from fluids, with a good deal of exercise superadded, was not dangerous; but patients often left out the last part and led sedentary lives. Glucosuria in old persons was almost always associated with tension of the arteries. The heart often suffered in such cases, and cures were effected at Vichy and Carlsbad on account of the lowering effect of the waters of these localities on the pulse-tension. The object of the physician ought to be to give happiness and comfort to his patient. There was another class of cases, that of nervous headache in young adults, produced either by irritation or by arrest of the catamenial flow. Such affections often disappeared in advancing years. Sometimes persons, as in France, were proud of their migraine. In many instances these headaches were the result of gastro-hepatic derangement, and careful feeding up and the judicious use of arsenic would effect a cure. He had such a case lately in a very hard-working man, and told him that an enema would relieve him, which it speedily did. One of the most dangerous modes of treatment of disease was to be seen in the case of the treatment of dyspepsia by very restricted diet. Patients often would bring themselves to the brink of starvation in order to soothe the pangs of dyspepsia. After many trials a medical adviser was at length called in, and he, too, was perhaps very stringent in his injunction against some particular kind of food. But dyspepsia was often due to neuralgia of the intestines, and was greatly increased by this same starvation diet. The patient went on taking less and less, until at last soups and biscuit are the whole of his diet. Such patients then become seriously ill and take to bed, when they recovered because enjoined to take a generous diet on account of the weak state which treatment for dyspepsia has brought them. In another series of cases of dyspepsia, cold produced great uneasiness in the intestines in patients when winter approached. Constipation was often one of the symptoms it produced. In such cases it was not the stomach that was in fault. Tonics and good food were indicated, and not low living at all, which did harm.

SOME OF THE EFFECTS OF GALL-STONE.

Dr. Ord inaugurated a discussion on the effects of gall-stones by reading a short paper on this subject. Gall-stones, he said, were often continuously found in patients on whom they caused no symptoms. Was it possible, then, that some persons went on all their lives passing such stones without being even conscious of doing so? Gall-stones of large size might pass into the intestine without any symptoms to the patient. In one case such a stone caused distention of the intestine, high up, and all the symptoms of obstruction. An incision was made in the abdomen, and the intestines gradually examined until a point was come to which was congested and high-colored. The patient died, and a large gall-stone was found a little higher up which had caused the obstruction. Gall-stones might exist without causing any jaundice. A clergyman's wife, a patient of his, had never had jaundice or pale stools. When he saw her, duodenal ulceration was diagnosed; she had a large biliary calculus. In the case of another lady, aged forty, pain in the epigastrium was complained of when she was fasting, and this pain lasted some days. The face was well-colored, and there was gastric catarrh and paroxysmal pains. On pressure on the region where the pain was felt a hard body was discovered, and she passed a very large gall-stone, and shortly afterward another. A gentleman, aged sixty, had biliary colic with jaundice and ague. The quantity of urine was increased, and he suffered much pain. His weight fell, and reached only ten stone from being a heavy man. Then a febrile state of the system supervened. The catarrhal state of the stomach was treated. He had glycosuria, and then passed a gall-stone, after which his nutrition improved rapidly, so that he regained his weight of fifteen stone. He had heard of this patient's death two days ago. A gentleman had attacks of fever, and salines were given. He then passed a calculus and the symptoms disappeared. Glycosuria was sometimes produced by the irritation of the liver caused by gall-stones. A laborer, aged seventy-four, was admitted into St. Thomas' Hospital with aortic obstructive disease and albuminuria. Soon after this jaundice supervened, and glycosuria, produced by the irritation of the liver. Gall-stones were frequently present in patients with malarious disease. Hemorrhage sometimes accompanied the passing of gall-stones through the duct.

Dr. Churton, of Leeds, read a paper on

NON-DIABETIC ACETONURIA.

A lady patient of his suffered recently from acetonuria, and her urine was frequently tested and gave the usual reactions of this condition. The patient had been married for some years and had been subject to frequent attacks of vomiting. She had pains in the right hypochondrium, and then jaundice ensued. Gall-stones were considered to be stopping up the cystic duct. The acetonuria was doubtless due to the irritation in the liver. A man, aged fifty-two, had stricture of the œsophagus, and his urine gave a purple tinge with tincture of steel. A lady with diabetes had also acetonuria and albumen in her urine. The presence of acetone in the urine, said Dr. Churton, was not by any means a fatal symptom; but it was not unlikely that the presence of acetone made the condition of the patient unsuited for operations.

Professor Charcot, of Paris, said that the temperature of the body in paroxysms of biliary colic might rise as high as 40° C. (104° F.). He had no theory to propound in this matter, and would readily adopt that put forward by Dr. Ord, that the fever was the result of nerve-irritation, or that of Dr. Murchison, that it was caused by the production of some chemical poison of the system in the liver. In matters of theory he was inclined often to adopt a little of all kinds. The facts were the main point in clinical medicine.

Sir Peter Eades said that modern practitioners had frequent opportunities of treating gall-stones, owing to the increasing sedentary character of the liver of civilized people.

At present we know that gall-stones might be in the cystic duct, the gall-bladder, or the duodenum, but in the actual state of science it was not possible to differentiate these various positions of the stone.

In future it would perhaps be possible to recognize in what part the calculus was lodged, and perhaps then surgical aid might be called in at an earlier date, and then a simple operation might save life. Our division of gall-stones was into mild cases, and dangerous ones in which the patient might be carried off. Most men had seen examples of both of these groups. Disordered state of the bile was caused, and secondary or tertiary disorders of the other abdominal viscera by sedentary habits. This was strikingly seen in the case of the patients in lunatic asylums who were very prone to having biliary calculus. The disease was occasionally hereditary. Cancer of the liver, too, was one of the causes of gall-stones. In young, nervous women, ovarian irritation might often simulate the symptoms of renal calculus. Renal colic, also, was occasionally caused by ulceration of the ducts. Diabetes occurred after the passage of gall-stones in a patient of his, a gentleman, who passed no less than one hundred and thirteen stones. A lady patient had a tumor of the gall-bladder, but lived for some time, and died of another disease. With regard to treatment for gall-stones, expectation was by no means always good treatment. Chloroform often gave great relief and, of course, also sub-cutaneous injections of morphia. The use of purgatives in such cases was, he thought, bad treatment. In some cases operation might be called for. For instance, a man he had seen became comatose and had acute jaundice arising from the presence of a small calculus in the cystic duct. He died, but might have got quite well had he been operated on.

Dr. Gairdner, of Glasgow, said that his experience had taught him that a possible mistake in diagnosis might occur in thinking that angina pectoris was present, when there were only gall-stones. In one case he had been so fortunate as to make this diagnosis, and it was soon confirmed by the presence of jaundice. Two years ago he had published in *The Lancet* a case where forty calculi had been found in the gall-bladder, although the patient had never had any symptom to indicate their presence. There was no jaundice in the history of the case.

Dr. Clifford Allbutt, of Leeds, said that attacks of biliary colic might occur without jaundice. It was often some weeks after the colic that the calculi were passed. He did not see that the angular form of the stone could have much to do with the occurrence of hemorrhage or other symptoms. Patients sometimes died from the shock caused by the passage of the stone. In the case of a lady who had consulted him for biliary colic he had given a favorable prognosis, but this was not justified as she died very shortly after from such shock. A curious case had been seen by him lately. A gentleman was thought to be hopelessly suffering from obstruction of the bowels, and had been seen by several consultants and given up. He asked to see an old medical friend, who came merely to please him, but was told that the man was nearly moribund. That gentleman passed his finger far up the patient's rectum and came upon something far up, against which he pushed. This had the effect, without his perceiving it, of dislocating a large biliary calculus which was shortly afterwards passed, and after copious stools the patient made a good recovery.

Dr. Savage, of London, read a paper on

MENTAL SYMPTOMS WITH LOCOMOTOR ATAXIA.

He mentioned the case of a patient, lately seen, who shortly after marriage developed ataxic symptoms and then became insane. He had formerly suffered from syphilis. In another case seen by him, a man had been ataxic for some years and then developed insane symptoms. With regard to prognosis in such cases his experi-

ence went to show that locomotor ataxy accompanied with mental symptoms was not more rapidly fatal than ordinary locomotor ataxy. The author created much hilarity by his vivid description of the quaint sayings of such insane patients with locomotor ataxy.

Dr. Ord having briefly replied, a paper was read by Dr. Ralfe on

FUNCTIONAL ALBUMINURIA.

He said that a large proportion of all recorded cases of this affection were seen in young persons. Intermittent albuminuria was not infrequent, and accompanied with increase of urea and bile-pigment. Hæmoglobinuria was the usual cause of it in young males who were also anæmic. The disease was apt to be associated with some amount of jaundice. In cases of hæmoglobinuria there was increase of urea in the urine. Functional albuminuria was only a symptom, and in many cases there was no chronic nephritis. In one case, lately seen, there were sixty ounces of urine passed daily with a specific gravity of 1,022. There was an increased quantity of urea and abundance of hæmoglobine. This disease was common enough, and existed with and without icteric symptoms. The essence of the disease consisted in irritation of the nerve-centres. Such patients had often some hereditary taint. The treatment should be careful and the diet good, but only slightly nitrogenous in character. The use of quinine and iron was indicated, and arsenic was often very useful.

Dr. C. R. Drysdale, of London, read a paper on

THE TREATMENT OF PHTHISIS.

He said it could hardly be alleged that consumption was a curable disease when it could be still said with truth that out of 1,000 deaths occurring in a highly civilized city like Paris every week, 200 were due to consumption and 20 or 30 more to other forms of tuberculosis; that is, between one-fourth and one-fifth of all Parisians die of it. Unfortunately, until two or three years ago there was no clear doctrine as to the nature of the disease. Personally, he had always clung to the views expounded by Laennec sixty-seven years ago, who had at that time clearly shown the unity of the disease and its specific character.

Villemin, in 1865, showed that the disease was also virulent and inoculable. Pasteur explained the meaning of virulent diseases, and lastly Koch, in 1832, put an end to the idea that consumption could be caused merely by debilitating influences, and showed that there is one cause without which the disease cannot exist, and that is the parasite bacillus tuberculosis. Henceforth, then, the therapeutics of phthisis must be sought for in the same direction as we seek for the remedies of syphilis and hydrophobia. That is to say, that antiphlogistics, cod-liver oil, and analeptics were clearly inadequate. Phthisis was due to a specific micro-organism always inoculable on animals, transmissible from the sick to the healthy by means of inhalation of the dried sputum, very frequently propagated by heredity, and, when it is localized in one organ, susceptible of cure without damaging the system. Lastly, so-called scrofulous affections are usually due to the same parasite as phthisis. It was necessary to be unanimous as to the nature of the disease, otherwise it was hopeless to suppose that any great advance could be made in its treatment. The real difficulty consisted in the explanation of the hereditary transmission of the disease. Phthisis was very unlike syphilis on this point, for while the latter disease appeared in hereditary form soon after the birth of the child, phthisis was very rarely seen in children under the age of two years. It was held, however, by some that scrofula in young children was frequently the way in which the transmission of the disease showed itself. The statistics of heredity in consumption were extremely various, ranging from eleven per cent., according to Louis, to fifty per cent., according to Cotton. He, Dr. Drysdale, would be inclined to put the figure even higher than fifty per cent. With regard to the cure of phthisis, it was now well known to all who had paid much attention to the subject that patients every now and then, after being distinctly tuberculous, experienced an arrest of the disease and had lived many years subsequently in satisfactory health and able to transact professional and other business. For many years past he had been in the habit of interrogating members of the medical profession as to the numbers of medical brethren they had known who had suffered in early life from well-ascertained phthisis and who had recovered.

He had heard of many such recoveries under the most varied circumstances. For example, some of the British physicians resident at the Riviera and practising successfully there, had, many years ago, been phthisical. M. Erard had informed him that this was the case with several physicians practising in Algiers. Physicians in Colorado and in the Swiss air-cure resorts narrate the same tale concerning their own cases. Professor Parkes, of Nettley, recovered from a severe attack of phthisis and lived for many years after in good health, although he was eventually carried off by the disease. One physician recovered after a voyage to India. The same facts, although much more rarely, were observed among members of the working-classes. It might therefore be said that phthisis is curable in a variety of circumstances far too numerous to mention. Nevertheless, both theory and experience had shown that the pure air of high mountain districts and of the ocean, both of which localities were free from the impurities existing in inland places and low levels, were the climates, *par excellence*, for the cure of tuberculosis. In a recent visit to Davos, he, Dr. Drysdale, had, by interrogating the inhabitants of the adjacent district, ascertained that consumption does not exist among the natives of the high valleys who reside there. In the district of Langwies, some hours distant from Davos, he was told that no case of phthisis ever occurred. This fact has been over and over again mentioned by Jourdanet with regard to Mexico and Bolivia, by Spengler with respect to the High Alps, and by several authors with regard to Colorado and the Rocky Mountains. To those who could afford it, therefore, and they were but few, a prolonged residence in the High Alps afforded the best chance of a cure. With regard to the more direct treatment of the disease, the prolonged use of small doses of mercury had been tried, but with no good results. He himself had experimented with iodine, but without much satisfaction. It was said, however, that that useful parasiticide had been of great service in the shape of iodoform given in two-grain doses twice or thrice daily. In a recent visit to Paris he had conversed on the subject of the treatment of phthisis with M. Grancher and M. Pasteur, and must confess to a hidden hope that the therapeutics of phthisis must be looked for in the direction of experiments upon animals. Unluckily phthisis is not like syphilis, a disease which can be taken but once; but fortunately it can be transmitted to animals, and may therefore prove to be among the viruses which may be mitigated, as hydrophobia has recently been.

On Friday, August 13th, a paper was read by Dr. A. Whittle, of Brighton, on

THE TREATMENT OF MELANCHOLIA AND INSOMNIA.

In this paper the author desired to call attention to the value of venesection in some cases of melancholia with great arterial tension. This remedy often produced excellent results. A young man, aged twenty, had all the symptoms of high arterial tension. He was well nourished, but had vertigo associated with local congestion of the arteries of the head and great intolerance of stimulants. In some similar cases the symptom of melancholy was very slight at first, but gradually increased and made the patient feel suicidal tendencies. The brain shared in the general arterial disturbance. In the treatment of such cases even neuralgia was not always a counterindication, if the bleeding of the patient had marked symptoms

of arterial tension. Leeching was a good form of depletion in fit cases. He cited the opinion of Dr. Broadbent, contained in some of his writings, to the effect that such treatment was sometimes of great value. He sometimes bled to sixteen ounces. Dr. Broadbent quite corroborated the views put forward by Dr. Whittle, for in fit cases he had found venesection of great service in lowering arterial tension. Some time ago he had prescribed large doses of calomel to a lady with such symptoms, and her daughter said that the mother of the patient had had the same symptoms and had been cured of them by purgatives of an active kind.

Dr. Drysdale, of London, agreed that in cases of that kind depletion of some kind was useful, but doubted the advisability of reviving the custom of venesection which had been so common in his early experience of the medical art. In London, at present, this practice had so completely gone into deseutude that many persons had never seen venesection practised. Chemists, too, sold few or no leeches. He preferred to trust to drastic purgatives in these cases of congestion and high arterial tension.

Dr. Mantle, of Durham, read a paper on

THE ETIOLOGY OF RHEUMATISM,

considered from a bacterial point of view. He mentioned that in the examination of several cases of rheumatic fever in young persons, he had found that minute bacteria were to be found in the blood, which he looked upon as the cause of the symptoms. In a case of gout a gentleman had asked him to examine his blood, and in that case he had found bacteria in the blood. He therefore was inclined to look upon rheumatism as caused by the introduction of such organisms into the blood, and this view of the matter was strengthened by the modern treatment of acute rheumatism. In a case of gonorrheal rheumatism, he had also found a microbe in the blood.

Dr. Drysdale, of London, said that ever since he had experienced the value of salicylic acid in the treatment of acute rheumatism he had been led to the views put forward by Dr. Mantle. Mercury and iodine had proved useful as germicides in syphilis, and salicylic acid and quinine were excellent germicides, so that he had come to the conclusion that rheumatism was a disease like ague, and was glad to hear that Dr. Mantle had seen what he had long believed to exist.

A Question of Diagnosis.—A medical student from a neighboring city writes: "A little incident occurred in this city which I desire to bring to your notice. The case is as follows: A man shot himself, the ball (22-calibre) entering the left submaxillary triangle, and probably taking a course upward, backward, and outward, for the patient complained of loss of hearing in the left ear. There was very little hemorrhage. This occurred about nine o'clock P.M. At four o'clock the next morning a physician was called, and after examining and probing the wound, declared the ball 'had severed the wind-pipe, and, striking the posterior wall of the throat (he probably meant the pharynx), had *fallen into the stomach*.' What I wish to ask is: 1, Is such a thing possible under these circumstances; 2, was there any chance of finding such a small bullet after the lapse of six or seven hours, swelling having taken place; and 3, would it not have been wiser to acknowledge the difficulty, or even impossibility, of finding the bullet under the circumstances?"

Anæsthetization during Sleep.—Dr. John S. Marshall writes to *The Lancet* that he succeeded in producing anæsthesia in a sleeping man by the A. C. E. mixture. The patient was a strong collier who was brought to the infirmary with a fractured thigh. Being worn out with pain, he fell asleep before his leg could be dressed. Dr. Marshall found him asleep, induced anæsthesia, and bandaged the thigh without awakening him.

Correspondence.

THE BRIGHTON MEETING.

BEFORE THE MEETING.

To-morrow will commence the Fifty-fourth Annual Meeting of the British Medical Association and the second of its annual meetings which have been held in this town. The former one took place in 1851 and the Association then numbered only as many hundreds (twelve) of members as it does now thousands. Brighton itself has also greatly changed during the past thirty-five years. For one thing, the population has nearly doubled. So has the number of houses. From what was originally but a small fishing village Brighton has grown to be one of the largest and most fashionable sea-side resorts in the kingdom, with a sea-frontage (including its western extension) of nearly four miles. The making of Brighton is popularly attributed to George the Fourth, who, when Prince of Wales, selected it as his marine residence, and built at a considerable expense the building known as the Pavilion, in which to-morrow's conference will be held. But I imagine that the proximity of Brighton to London has had quite as much to do with its advancement. It is only fifty miles, and since railroads have come in can be reached from the metropolis in but little over an hour. The excellent train-service tempts many city merchants to live here and go to and fro daily by train. Brighton, too, is a remarkably healthy place, though a casual visitor would be inclined to think the contrary must be the case, or so many doctors would not have been induced to settle here. The number of medical men who have pitched their tents here is indeed very large, even bearing in mind the teeming and ever-increasing population. In selecting Brighton as their place of abode, no doubt many of its medical residents have had in view their own health as well as that of their patients. There is generally a fresh sea-breeze to be had here, with plenty of sunshine lighting up the waves of what most visitors to Brighton call "a good bold sea." There is no shipping here, and the surrounding country is very bare. There is therefore some force in the satirical description of Brighton as presenting "a sea without ships, and a country without trees." The extent to which it is patronized by Londoners also caused it to be termed (by Thackeray) "London-super-Mare." Brighton flourishes, however, in spite of the gibes cast at it, and the number of palatial residences built upon its western shore furnishes an index to the extent to which it is patronized by the wealthier classes.

Some four years ago a great scare was created among Brightonians by the appearance in *The Lancet* of an article—or rather a series of articles, for the first one was very speedily followed by others—condemning the Brighton drainage. Here, as at most of our sea-side resorts, the sewage is conducted into the sea. It was asserted that the condition of the main sewer running along the Esplanade was far from satisfactory, that stagnation of sewage in it took place at certain states of the tide, and that sewer-air accumulated in it under pressure under a constant danger of being forced back into the houses. These allegations were denied by the Brighton authorities. Eminent sanitarians were appealed to on either side. The feeling in Brighton ran so high that the Town Council actually proposed to sue *The Lancet* for libel. Wiser counsels, however, prevailed and the law was not appealed to, but the local health authorities bestirred themselves to perfect as far as possible the system of sewerage. That the latter was so extremely bad as some thought could I think scarcely have been ever very seriously maintained when we consider the extraordinarily low death-rate of Brighton. The lat-

ter tended to show that—even granting that the Brighton sewerage was far from perfect in theory—at any rate it worked very well in practice. The ultimate result of the discussion has doubtless been beneficial, though Brighton undoubtedly suffered temporarily from the assault made upon its hygienic resources. I have heard the remark by a Brighton physician that the depression has been permanently felt, a view scarcely sustained by a glance at the crowded streets and Esplanade thronged with fashion.

To-morrow we meet in the Pavilion, a building interesting both in itself and in its associations. It was originally built by George the Fourth to serve as his marine royal residence. When built it was added to successively, then altered, and finally a good deal of it pulled down and rebuilt at an enormous cost. Concerning it Byron wrote:

> "Shut up—no, not the King, but the Pavilion,
> Or else 'twill cost us all another million."

After more than a million pounds had actually been spent upon it, it was finally abandoned as a royal residence and sold to the town for a twentieth of its cost. This was in 1850. It is now used partly as a museum and partly to hold various meetings in, for which its spacious rooms are well adapted. The building, as a whole, has rather a bizarre appearance, and has served as the butt of many wits. Externally, a mingled mass of minarets, cupolas, and turrets is seen; the whole of the interior is decorated in the Chinese style. A separate building, originally used as the Royal Stables, was in 1867, at a cost of £10,000, converted into an assembly room, now termed the Dome. The general meetings of the Association will be held in this building, and as it will hold nearly three thousand persons the accommodation will be more than ample for the scientists now *en route* for Brighton.

Although not actually the county town, Brighton is really the most important town in the county, and as such a few lines about its medical institutions, which are numerous, may interest even a transatlantic audience. Among these I must accord the place of honor to the Sussex County Hospital, as not only the largest and most important medical institution in Brighton, but also the oldest, having been founded in 1828. The building cost £10,000 originally, but numerous additions have been made to it from time to time. One wing of it was destroyed by fire in 1872, but this has since been restored. The hospital is situated at the extreme eastern end of the town, upon rising ground many feet above sea-level, and at some little distance from the sea, but commanding sea-views. At present it consists of a handsome building of four stories, with projecting wings, and more than fifty windows in front. There are about one hundred and seventy beds, and a large out-patient department. The wards are large and airy, some being about sixty feet long by about twenty feet wide, and with windows on three sides, thus securing thorough perflation. In some the centre was occupied by a large chimney-block, in which were placed two open fireplaces back to back, one thus serving to warm each half of the ward. Neatness and order seemed to be the rule throughout the hospital, and I was much struck with the business-like appearance of everything. From what I saw I should judge that a good deal of solid work is done within the four walls of the Sussex County Hospital. At the time of my visit several interesting cases were in the wards. One case made an impression on my mind not readily to be effaced. It was that of a young girl, of only sixteen years of age, who had been admitted for a tumor growing from the head of the humerus. This proved to be a myeloid sarcoma, and the limb was amputated through the shoulder-joint. There seemed for a time to be a fair promise of recovery, but the growth recurred in the stump, and had increased so rapidly that further interference was, at the time I saw her, obviously of no avail. The miserable expression of suffering and despair upon the countenance of the patient, as she sat up in bed with her eyes fixed upon the repulsive wound while it was being dressed, was most affecting even to a professional visitor. Other cases were more encouraging. I saw several cases of amputations and excisions which had done remarkably well. One was in an old woman, seventy-two years of age, who had had the right leg amputated in the lower third for an accident. Cellular inflammation had supervened and several collections of pus had had to be evacuated, but she was doing well when I saw her. A boy whose hip-joint was excised last autumn was getting about the ward on crutches, the limb which had been operated on being kept off the ground by a patten placed beneath the sound foot. He looked rosy and healthy, and there was not only a good deal of movement, owing to the formation of a false joint, but he was getting some control over the limb. Two would-be suicides were in one ward lying in adjoining beds. One had attempted to cut his throat, the other had favored oxalic acid, which he had swallowed to the extent (it was supposed) of an ounce and a half. Both were doing well.

Several eye cases were in the wards. One was of keratitis in a patient the subject of syphilis. Mercury had been administered to him, but without producing any effect. The dose was increased until he took three grains a day (each) of calomel and gray powder, besides having a drachm of mercurial ointment rubbed into him thrice daily. This produced a slight soreness of the gums and a mercurial erythematous rash suddenly appeared, but speedily subsided on the mercurial treatment being suspended for a couple of days. Another patient had had half her eye sliced away by a door latch, but was doing well. A cabman who had fallen off his box on to the wheel, with the result that a large section of his scalp was torn from its natural attachment and left hanging down over his eyes was progressing favorably, his temperature being normal and appetite good, although suppuration had occurred and drainage-tubes were still in. The impression produced upon my mind was that most operation cases did very well and wounds healed rapidly, and that, too, although the surgical staff are by no means unanimous in using antiseptics. Those of them who do use them seem generally to use carbolic acid as the antiseptic agent, and Lister's original system (spray, protective gauze-bandage, carbolic lotion) as the method of applying it. Among the cases I saw which had been treated without antiseptics was one of ovariotomy, which had been operated on nine days previously. Although peritonitis had ensued, with elevation of temperature, the patient had successfully battled through it, and was apparently on the highway to recovery. Total-abstinence principles did not seem much in favor at the hospital, for I understood that a good deal of alcohol was prescribed, though not as a mere matter of routine in every case.

I spent half an hour, not unprofitably, in visiting the hospital museum, which is located in an adjoining building. I saw here a remarkable specimen (skeleton) of mollities ossium, which was shown at the International Medical Congress in London in 1881. The specimen was rendered more interesting from the circumstance that not only the patient's history, but also that of his family, was given in the printed label affixed to the case. It appeared that the patient not only lived to nearly seventy, but also married and had several children, all of whom seem to have inherited the disease. One daughter is described as being constantly in the hospital with broken bones, and another died in early womanhood from the effects of the Cæsarean section. An interesting specimen was shown me of ante-flexion of the uterus, the existence of which has been denied. Only half the specimen is shown, the other half having been presented to the museum of St. Bartholomew's Hospital, London. I noted, also, in one glass case a series of sections of the ribs of insane persons, which were made some years

ago at a time when the frequent occurrence of fractured ribs among asylum patients was creating some comment. The preparations displayed certainly supported the view that the bones of lunatics acquire unusual fragility, for in all of them the compact bony structure had been almost wholly converted into cancellous bony tissue. Among the rarer specimens were also one of dislocation of one of the cervical vertebræ without any fracture, and a unique example of ureteric disease. Comparative anatomy was also not unrepresented. I observed a good series of equine vesical calculi, and a good many skeletons of various animals, including one of an apteryx, which, I was informed, had been presented from the Museum of the Royal College of Surgeons of England, by Professor Flower, in exchange for the head of a spotted New Zealander, of which the Sussex County Hospital was the fortunate possessor. The museum is altogether a worthy monument of the thirty years' labors of its indefatigable curator, Mr. N. P. Blaker.

Retracing my steps along the Eastern Road, I read with some amusement an inscription in a fly-proprietor's window informing me that "Mrs. Linsted's ointment cures all skin and eye diseases." This is placed almost within a stone's throw of the hospital gates. Farther on I pass the spacious Medical Mission Hall, at which out-patients are seen every morning.

I also paid a visit to a very useful institution, the Brighton and Hove Lying-in Institution, Hospital, and Dispensary for the Diseases of Women and Children. This is situated in West Street, only a few doors from the Esplanade, and commanding sea-views. The building is spacious and convenient. There is an extensive out-patient maternity department, but the wards of the hospital are open to receive cases of difficult labor. The wards were comparatively unoccupied at the time of my visit. I saw several cases of uterine displacement, one of cervical malignant disease, and one of pelvic cellulitis, in which an abscess had formed and burst externally near the umbilicus, leaving a very intractable sinus. Antiseptics are used in many cases, though not as a matter of rule-of-thumb in ordinary cases of delivery conducted at the patient's home. I learned that the number of cases of puerperal fever had lately been practically *nil*.

Passing up the steep ascent toward the railway station, I pass on my right an imposing edifice of classic type—the Sussex Eye Infirmary. Some ophthalmic cases of interest are to be shown here during the meeting, and a limited number of beds have been placed at the disposal of gentlemen bringing such patients from a distance, to accommodate them during their stay at Brighton. Such an arrangement will no doubt be very nice for the "interesting cases," who have travelled a good many miles, and very convenient and inexpensive for medical gentlemen bringing them, but what will the governors of the charity say to such a manner of disposing of their funds, admirable as it may be from a scientific stand-point? Adjoining the infirmary is, very appropriately, a depot for the sale of Moon's books for the blind. On the opposite side of the road is the Brighton Throat and Ear Dispensary which, albeit but an unpretentious structure externally, is manned by a staff of three surgeons, and has now been in existence for some years.

Deviating from the main road and making my way up a steep slope, a few minutes' walk brings me to the most ornamental medical institution in Brighton, the Alexandra Hospital for Sick Children. On my way I pass the old parish church, St. Nicholas', connected with which are many interesting mementos. One of these is the grave of Phœbe Hessel, of Stepney, who served many years in the Fifth Regiment of Foot as a private soldier, and received a bayonet wound in the arm at the battle of Fontenoy. Her sex was only accidentally discovered. She was pensioned by George IV., and died at Brighton in 1821, at the age of one hundred and eight years.

On arriving at the hospital I note that it is a structure of red brick, with terra-cotta dressings and mouldings, in the Queen Anne style, and stands in its own grounds of more than an acre. The site is elevated, and I may here parenthetically remark that Brighton is very hilly in parts. The hospital was started in a small way eighteen years ago, in the Western Road, and at first contained only two beds. It owes its life to the exertions of Dr. Taaffe, the present medical officer of health for Brighton, who was not only the founder but one of the active staff for many years, and under his auspices it reached its present degree of prosperity.

The present building was erected in 1880, and opened in 1881 by the Prince and Princess of Wales. On this occasion a gold key of the building was presented to the Prince of Wales by Dr. Taaffe, and the occasion was the first on which such a presentation was made. Golden trowels have frequently been presented when foundation-stones have been laid, but Brighton was the first to start the fashion of presenting a gold key; but having led the way, the precedent has always been followed since whenever a member of the royal family has opened a new building. The hospital contains four wards and can accommodate ninety patients. Nearly all have cross-ventilation and are warmed by central stoves, with flues running under the floors, which are concreted under the wooden flooring. Most of the wards are lined with artificial marble, thus rendering cleanliness easy and absorption of disease-germs impossible. There is a separate block in which out-patients are seen, and also a detached ward for isolating infectious cases. The total cost of the hospital was about twelve thousand pounds, an amount which cannot be deemed excessive, considering the size and beauty of the building and the excellence of the sanitary arrangements.

Brighton also boasts of a dental hospital, a homœopathic dispensary, and, at the extreme east of the town, on the cliff overlooking the sea, stands the Black Rock Convalescent Hospital.

ICE-CREAM POISONING.

To the Editor of The Medical Record.

Sir: In your issue of July 24th an article appears from the pen of Dr. P. A. Morrow, questioning the existence of tyrotoxicon in ice-cream, as lately reported by Dr. V. C. Vaughan, and assuming that the poisoning may be the so-called "vanillism" of the French authorities.

The remarkable coincidence of symptoms in cases of ice-cream poisoning seem to point to an identity between the poisons; this, on the one hand, might be considered a point in favor of "vanillism." If, however, we consider the small quantity of extract eaten with each dish of cream, either this extract, or the poisonous substance entering into it, must be ten times as active as strychnine, or the poison is due to something else. No doubt there are extracts unfit for use, from the fact of adulteration or the substitution of some inferior article resembling the true, but with a single teaspoonful to a gallon, or one to one and a half tablespoonful to five gallons of cream (figures given by an experienced confectioner), it is nonsensical to think of poisoning from such a source.

Assuming four to six ounces of cream to be given in each plate, there could not be more than two to three grains of an exceedingly dilute extract given to each person. Evidence is accumulating daily that there is a substance formed, of an alkaloidal nature, which is a most active poison. This substance is developed in milk, cream, meat, and various articles of food, and hot summer temperature, accompanied by certain atmospheric conditions, seems to favor this. The late case of poisoning from ice-cream in Coulterville, Ill., and the discovery of tyrotoxicon by Dr. Vaughan, confirm a theory I some time since advanced.

In the Coulterville case Dr. W. W. Kane has given the following as symptoms noted in the first patient:

"The patient was eight years of age, and when I saw her she was suffering with a slight chill which lasted perhaps fifteen minutes. The surface of her body was cold, circulation greatly depressed, pulse very rapid and al nost imperceptible at the wrist. . . . While in the chill, and I am told before the chill, there was violent emesis and frequent and exhaustive discharges from the bowels. The depression and cold surface was followed very quickly by a raging fever which reached 104½° F. The patient suffered throughout with a most distracting frontal headache, which seemed to be most excruciating over the superciliary ridges. Violent paroxysmal cramp-like pains in the stomach and bowels was also a very characteristic phenomenon.

"One of my patients, when asked to describe the nature of the pain, said it came on suddenly, the degree of intensity gradually increasing as the bowel seemed to twist upon itself in the manner of a corkscrew, and as the bowel slowly relaxed itself so likewise the pain gradually subsided. The vomiting was very persistent, but in all cases under my observation this distressing symptom subsided, while the violent purgation continued and proved to be the most stubborn and intractable manifestation of the disease.

"At first the ejecta from the stomach, which consisted of the contents of this viscus, were thrown off without great effort of the patient, with the exception of two, whose emetic efforts were violent from the onset, the matter vomited being curd-milk tough as dough.

"After the evacuation of the stomach of its contents nausea still persisted, and the emetic efforts, which were associated with great retching, brought forth a very little greenish serous discharge, evidently containing bile.

"The discharge from the bowels was at first the natural contents, which changed very quickly to a green discharge which resembled very much pounded green grass held together with a slimy sero-mucous fluid. The passages from the bowels followed each other in quick succession, as often as every ten minutes, and at first possessed a very fetid odor, but in a very short time after the onset the stools were entirely void of the least color. In only three or four cases out of twenty-five did I notice a small amount of blood in streaks intermingled with the stools. Menstruation occurred in one patient twenty-one years of age who had only menstruated two weeks previous, and who stated she had always been regular and menstruated every four weeks prior to this period."

I have given Dr. Kane's letter in full, as I shall allude to it later.

The first case of ice-cream poisoning which came to my notice was in the summer of 1883.

On July 25, 1883, in Joliet, Ill., two hundred people were poisoned from eating ice-cream at a picnic.

The symptoms in the cases were almost identically the same as given above. Some of the patients did not recover fully for a week or more.

The cream was made of the best materials—fresh cream, milk, eggs, and corn-starch—and frozen in new tin-lined copper cans. The greatest care was observed in making it. The milk and cream were thoroughly boiled, I was told, but stood a short time before freezing.

As soon as partaken of, or shortly thereafter, symptoms of poisoning were shown, some persons coming down more rapidly than others, and a few, I was told, escaping altogether.

What cream remained—about three ounces—was collected and submitted to me for examination, as well as a batter partly filled with the flavoring, vanilla.

It was thought the cause of the poisoning lay in some mineral poison in the vanilla, but as I examined it carefully I found no evidence to sustain this. Thereupon I took some ten or fifteen drops of the flavoring extract myself, and felt no serious effect from it.

There was no evidence of the smallest possible quantity of mineral poison existing in the cream.

Previous to the examination for mineral poisons I had treated the cream with absolute alcohol, slightly acidified with dilute sulphuric acid. This alcoholic extract I examined carefully, by a method similar to that employed by Dr. Vaughan.

I found no evidence whatever of any alkaloid poison of vegetable origin. I succeeded, however, in separating a small quantity of a crystalline substance which, like Selmi's ptomaines, gave a cherry-red color with concentrated sulphuric acid, and had a reducing effect upon potassium dichromate.

This substance produced a stinging, benumbing sensation, when touched to the tongue.

I succeeded in separating a few needle-like crystals, which could only be seen by the aid of a microscope.

Owing to the small quantity of material with which I had to work, the physiological tests desired could not be made. However, a small quantity of the extractive matter, carefully neutralized and extracted with chloroform, after the evaporation of the chloroform, was given a mouse with some cheese, and death ensued in a short time thereafter.

In my report, which was published at the time, I pronounced the cause of the poisoning as due to a peculiar *ptomaines* produced by the incipient decomposition of the cream, favored by the existing atmospheric conditions and the high summer temperature at that time.

I merely give this as another fact in proof of the announcement of Dr. Vaughan in regard to tyrotoxicon in ice-cream, for I believe the substance I isolated is the same thing. That tyrotoxicon is an actual and not a hypothetical substance has been conclusively proven by the splendid work of Dr. Vaughan, and that it may also be, and often is, formed in ice-cream, milk, and articles of food containing milk, is evident.

Some people delight in clinging to obsolete things, like the Mexicans to the rude agricultural implements of their forefathers, and these same people guffaw at every new discovery, like the eminent Frenchman at Franklin's lightning-rods. But anything as conclusively demonstrated as the existence of *ptomaines* must be accepted.

It appears that ptomaines are formed in many articles of food of animal origin, and that the hot, moist atmosphere of the summer favors this. It is notable that cases of ice-cream and food poisoning occur oftener in the summer than at any other time of the year. Hence too much care cannot be exercised in the selection, preparation, and preservation of articles of food during this season.

The poison produced in food is evidently the product of some form of bacteria, the spores of which must be formed in the atmosphere; hence such articles of food as are the proper media for the propagation of these organisms should not be too freely or too long exposed.

The process by which *ptomaines* are formed commences very soon; often the animal is killed, or the milk or article of food is exposed to the atmosphere, and if the substance is once formed it is not easily dispersed or destroyed by any process except further decomposition. We see that the poison is not a very stable substance, but it is a very active substance.

Cooking of food may suffice to kill the bacteria and their spores, but it will not always suffice to dispel or destroy the poisonous ptomaines.

Unfortunately there is no known method at the present time whereby the people can detect the presence of this poisonous substance. Under these circumstances poisonous articles may get into the hands of the dealer and may be disposed of in perfect good faith. It is the duty, however, of every dealer to observe the best known precautions to avoid all such unfortunate occurrences, and thereby protect his patrons as well as himself.

CHARLES B. GIBSON,
College of Physicians and Surgeons.

Chicago, August 14, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 15 to August 21, 1886.

MAGRUDER, DAVID L., Lieutenant-Colonel. Promoted to Surgeon with rank of Colonel, vice Brown, retired. July 26, 1886.

ALEXANDER, CHARLES T., Major. Promoted to Surgeon with rank of Lieutenant-Colonel, vice Magruder, promoted. July 26, 1886.

CRONKHITE, HENRY M., Captain and Assistant Surgeon. Promoted to Surgeon with rank of Major, vice Alexander, promoted. July 26, 1886.

WALKER, FREEMAN V., of Georgia. Appointed Assistant Surgeon, vice Cronkhite, promoted. July 27, 1886.

BAILY, J. C., Major and Surgeon. Granted one month's leave of absence. S. O. 111, Division of the Atlantic, August 17, 1886.

BENTLEY, E., Major and Surgeon. Granted one month's leave of absence, and at its expiration to report for duty as Post Surgeon at Little Rock, Ark. S. O. 113, Division of the Atlantic, August 18, 1886.

TREMAINE, W. S., Major and Surgeon. Sick leave further extended six months. S. O. 187, A. G. O., August 13, 1886.

LORING, L. Y., Captain and Assistant Surgeon. Leave of absence granted him in S. O. 59, August 2, 1886, Division of the Pacific, extended two months on Surgeon's certificate of disability. S. O. 189, A. G. O., August 16, 1886.

TAYLOR, B. D., Captain and Assistant Surgeon. When relieved by Surgeon Bentley, to proceed to Jackson Barracks, La., and report for duty as Post Surgeon. S. O. 113, C. S., Division of the Atlantic.

HOPKINS, WILLIAM E., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon at Angel Island, Cal. S. O. 61, Division of the Pacific, August 6, 1886.

BORDEN, WILLIAM C., Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Bridger, Wyo., during absence of Assistant Surgeon Crampton. S. O. 100, Department of the Platte, August 9, 1886.

WALES, PHILIP G., Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Columbia, and to report in person at Headquarters Division of the Pacific for further orders. S. O. 62, Division of the Pacific, August 9, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon at Plattsburg Barracks, N. Y. S. O. 113, Division of the Atlantic, August 18, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ended August 21, 1886.

STONE, E. P. Commissioned an Assistant Surgeon in the Navy, August 5, 1886.

WENTWORTH, A. R., Assistant Surgeon. Ordered to temporary duty, Navy Yard, League Island, Pa.

LIPPINCOTT, G. C., Passed Assistant Surgeon. Ordered to Annapolis, Md., for temporary duty, member Medical Examining Board.

Two heads with but a single thought—A consultation. Two hearts that beat as one—A mammalian.

New Instruments.

A URINAL FOR CASES OF VESICO-VAGINAL FISTULA.

By JOHN C. JAY, JR., M.D.,

ENDEAVORING to relieve the wretched condition of a patient, aged sixty, to whom cystotomy through the anterior vaginal wall had been done for the relief of cystitis, and in whose case it was not deemed expedient to close the fistula, owing to the pathological condition of the urine, I tried every kind of urinal for females that could be heard of, but they one and all failed, it being impossible to apply any apparatus to the vulva and maintain a tight joint.

It occurred to me to combine a urinal with a pessary. This idea, from the first trial, proved more or less successful. I had urinals attached to several kinds of pessaries, but that which gave the greatest, and I may say perfect, success was the elastic-ring pessary. One of these of the proper size was taken to the rubber manufactory, and upon it was built the urinal which is shown in the cut. There are no joints. There is no metal to corrode. A tube-compressor slipped upon the exit-tube gives the patient complete control.

This urinal has now been worn by my patient for four months, and during that time she has not wet the clothing or bed. In her case the ring-pressure has sufficed to maintain the weight of the urinal and the contained urine. At night, however, when a large amount of urine is allowed to collect, when about to rise she is careful to take the weight off the ring by supporting the bag with the hand until it is emptied. In a younger and more active person the weight of the urinal should be sustained by a knitted purse, surrounding the lower half of the urinal and attached by tapes to the waistband. My patient has several of these urinals, and a clean one is introduced every ten days. While in her daily sitz-bath she slips the nozzle of a syringe into the exit-tube and fills the urinal repeatedly with warm soap-suds, and thus maintains cleanliness of the apparatus and vagina.

17 WEST FORTY-SIXTH STREET.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau. Health Department, for the week ending August 21, 1886:

Typhus fever		
Typhoid fever		
Scarlet fever		
Cerebro-spinal meningitis		
Measles		
Diphtheria		
Small-pox		

AN ANATOMICAL INSTITUTE.—The municipal authorities of Nancy, France, have voted a sum of 3,000 francs, to be added to an appropriation of 500,000 francs by the government, for the creation of anatomical and chemical institutes in that city.

THE TREATMENT OF RHUS POISONING.—Dr. E. Mammen, of Bloomington, Ill., writes: "I have recently treated two cases of poisoning by *Rhus venenata*, on the following simple plan. A four per cent. solution of carbolic acid was used as a lotion, and afterward the following ointment: ℞. Acidi carbolici, gr. x.; acidi boracici pulv., ʒij.; vaseline, ℥j.; applied two or three times a day. The dermatitis subsided promptly. One case was quite severe. The hands, arms, penis, scrotum, and anterior parts of the abdomen were severely involved. The pain and irritation at once subsided under the application, and my patient was well in a few days."

A PHYSICIAN'S INTERESTS.—Dr. Syme says: "There are three ways you may try, there are three interests you have to consider, and it will depend upon the order in which you consider them how success will be measured out to you. The first interest is your own, and it may seem to you the greatest, while it is really the last. The second interest is truly greater, for it is the interest of your professional brothers; but the last is the greatest of all, for it is the interest of your patient, and with that is eternally related the interest of the art you practise."

OVARIOTOMY AND DISEASE OF THE FALLOPIAN TUBES. Dr. Mary Dixon Jones, of Brooklyn, writes: "Spencer Wells is often quoted as having said 'that in not one case among his one thousand ovariotomies had he perceived any sign of disease in the tubes.' Last Saturday, from a woman twenty years of age, I removed two ovarian cysts. The right ovary was converted into a cyst, the size of a small orange; the *tube* was very much hypertrophied, in a high state of congestion and inflammation, and was spread out flat upon the ovary, its posterior surface entirely adherent throughout its whole extent; apparently the tube was incorporated with the walls of the cyst. The left ovary was also converted into a cyst, not as large as the right, and to it was adherent, in a similar manner, the left Fallopian tube, which, like the right tube, was hypertrophied and in a condition of profound disease. Both tubes seemed entirely impervious. I have been more surprised at the observation of Sir Spencer Wells because all the cases I have had of Tait's operation, or of cystoma, while the ovaries were more or less profoundly affected, yet, in each case, the tubes were diseased, and in some, greater pathological changes had taken place in the tubes than in the ovaries. When we consider that the noxious material, or infecting element, must pass through the tubes to the ovaries, is it not reasonable to suppose that they, the tubes, should be first and most frequently affected, though their pathological structure may not show *ostensibly* so great organic changes as we may find in the ovaries? Again, when we think that much of the so-called cellulitis is really tubal disease, and then consider how very frequent is this supposed cellulitis, we may have some idea of the frequency of disease of the tubes, or salpingitis. The young woman from whom I removed the cystoma, three days ago (the patient is doing remarkably well; her temperature the morning before the operation was 99¾°, the day after the operation it was 100⅜°), has been married two years—no children. Externally she had all the appearance of health—good color, well developed, etc.—but since early menstrual life she has complained of great distress in the pelvis, at times very severe. No doubt she had repeated attacks of salpingitis, and these repeated attacks changed the structure of the tubes and caused the inflammatory adhesions to the ovary. There were many peritoneal adhesions, but they could not be severed; to have attempted to have severed the adhesions between the tubes and the ovaries would have been complete destruction of both structures. I must think that in many of Sir Spencer Wells' cases there were diseased tubes; but his mind was so directed to, and absorbed in, ovarian troubles as to gross results that he did not consider minor pathological conditions or microscopical changes. But Sir Spencer Wells does not say there were no diseased tubes in his one thousand ovariotomies, but with the modesty of a great scientific man he said, 'in not one of the cases did he *perceive* any sign of disease of the tubes.' Could his cases be reseen, and especially seen in the light of modern microscopical science, I believe it would be found that many had diseased tubes."

SYSTEM IN RECORDING THE RESULTS OF READING.—Dr. Enos T. Blackwell, of Cedarville, N. J., writes: "Every reader, however tenacious his memory, must often experience an inability to recall at will the special facts gathered in his examination of the periodical literature of the day. Particularly is this true of the busy physician, who snatches his information at detached periods, and while his mind is crowded with the details of his daily practice. If he has no settled plan of recording the data culled from many sources, his time will often be vainly spent in tracing the missing memoranda that he should be able to find and use in a moment. It is to afford aid in this regard that note-taking is resorted to; but this avails little, unless it be associated with some system of easy reference. The 'Index Rerum,' devised by Dr. Todd, fulfils this want exactly, and it is doubtless familiar to many physicians. As it cannot be denied that many remedies are used in an empirical way, it need not wound one's self-love to have at hand a well-arranged index of them, and of the diseases in which they have been successfully used by others. I make some extracts from my own gleanings to illustrate the proposition. We will suppose that a practitioner has a case of mammary engorgement, which threatens to become a breast abscess. Should he not feel fully armed to meet the trouble, he may consult his index for the treatment found effectual by others. On the page marked *Ae*, I find recorded the following: Abscess, mammary—adhesive plaster in, *M. and S. Reporter*, xli., 189; ice in, *Phil. Med. Times*, xii., 214; prevention by fomenting with ammon. carb. in hot water (℥j. to Oj.), *M. and S. Reporter*, liv., 153. Puerperal eclampsia is one of those terrible forms of disease which demands the instant adoption of bold and effective measures. If the physician has not a well-grounded faith in a method of treatment of his own, a few minutes' time avails to refresh his memory with the experience of others. My gatherings embrace the following notes, found on page *Ea*: Eclampsia, puerperal—pilocarpine in (¼ gr. hypodermically), *Phil. Med. Times*, ix., 404; chloroform in, *M. and S. Reporter*, xlii., 233; albuminous, veratrum and diuretics in, *ibid.*, xlii., 280; uræmic, jaborandi and benzoic acid in, *ibid.*, xlii., 821; septicæmic, phenic acid (hypodermically) in, *ibid.*, xlviii., 519; hot pack in (40° to 50° C.), *Med. Bulletin*, v., 107. In order to be sure to find at once what is sought, it is well to record the same data under different headings, *e.g.*, morning-sickness may be noted under the heading of vomiting. In this way the catalogue may be gone through, and something useful be found to meet almost any case that may present itself—information which is the record of researches well tested and found reliable; as also of those which are more recent, embodying the latest suggestions and discoveries of illustrious scientists and practical physicians of extended observation and experience."

HOMO CAUDATUS.—Dr. Elisseyeff reported the following case at the meeting of Russian physicians held in St. Petersburg in April (*Vratch*, No. 16, 1886). A woman, twenty-three years of age, consulted him on account of a projection in the coccygeal region, which had become very painful from the irritation of a bandage which she had used to prevent its growth. The tail was nearly two inches long and over half an inch broad, and was composed of two vertebral segments covered by fat and hairy integument.

CHRONIC DIARRHŒA is said to be speedily controlled in many cases by a saturated solution of common salt in cider vinegar, the dose being a teaspoonful three or four times a day.

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ERYTHANTHEMA SYPHILITICUM.

BY EDWARD FENNEL BRONSON, M.D.

PROFESSOR OF [illegible] IN THE NEW YORK [illegible]

A CASE of syphilis recently came under my care which presented features of extraordinary interest to me, not only in that the symptoms were of an unusual character, but in that they represented a phase of syphilitic symptomatology whose etiological bearings afford an interesting subject of study.

The case was the following:

B. G——, aged forty, born in Germany, farmer by trade, entered Charity Hospital, May 4, 1886, suffering with an acute inflammatory eruption of the face, hands, and feet. Upon the face a sharply circumscribed erythema covered nearly its entire area, and extended over the ears and somewhat upon the scalp and neck. The surface was thickly studded with a vesiculo-pustular eruption, which was especially abundant upon the forehead, cheeks, and chin. The vesico-pustules were pretty uniformly the size of peas. Both palms and the inner surfaces of the fingers were covered with a deep-red erythema, which was sharply limited at the borders. All the nails of both hands showed evidence of disease. They were lustreless, rough, rugose, striated, and split or jagged at the ends. One (the ring-finger of the right hand) showed some suppuration in its wall. Upon the soles were erythematous patches similar in color to those on the palms, but of more limited extent. There were three or four nummular spots on each foot, situated chiefly at the inner and central portions of the sole. The toe-nails were unaffected. Scattered over the thighs and legs were a number of small erythematous spots, in the centre of some of which were little pustules. When I first saw the patient, three days after his admission to the hospital, the face was much swollen, most of the pustules had collapsed, run together, and were converted into an exuding, whitish, somewhat elevated, diphtheroid surface, with a very copious, purulent, foul-smelling discharge; while upon the nape of the neck there had appeared a new eruption, similar to that at first observed upon the face. It was a large, sharply circumscribed patch of deep crimson erythema, with numerous white, pea-sized, globular, apparently superficial, vesico-pustules scattered over it. The appearance was like that of a burn or scald of the second grade. There was no marked infiltration of the skin, apparently, other than would accompany any superficial acute dermatitis. Upon the hands and fingers the eruption had become more dusky, almost livid in hue, and the horny layer of the epidermis had begun to be elevated in large, loose, thick lamellar sheets, still attached at the edges, and containing no fluid exudation beneath. Desquamation had not begun upon the feet, and did not for some weeks afterward. On various parts of the body, particularly on the thighs and anterior part of the body, was a disseminated, fine pustular eruption, situated about the hair follicles. At the bases of the pustules there was no noticeable infiltration. Here and there, especially upon the arms, were little dark-red erythematous spots, not raised above the *niveau*, and not perceptible to the touch. There were no lesions upon visible mucous membranes. Aside from general debility and marked anorexia there was little manifest disturbance of the general health. There was no pronounced fever. The eruptions all appeared to be of an irritative and decidedly inflammatory character. That upon the face and neck suggested [illegible]

On the palms and soles the eruption, while partaking of the erythematous character of that upon the head, wholly lacked its disposition to fluid exudation. At this stage of the disease the diagnosis was exceedingly obscure. Its multiform lesions suggested analogies with those peculiar eruptions that have been described by Bazin and Tilbury Fox under the name of *hydroa*, and by Duhring under the term *dermatitis herpetiformis*. The previous history of the case was not very satisfactory. The patient stated that the eruption on his face had existed for several weeks prior to entering the hospital, and that there had been recurrent attacks upon various parts of the body for the past six or seven months. He is married and has had twelve children, eight of which are living and all healthy, including the last born, which is two years of age. The wife shows no sign of disease. His former physician, Dr. Louis Fischer, whom I saw subsequently, informed me that he had treated the patient during the past two or three years for several attacks of eruption upon the skin. The first was a papular exanthem upon the body. This disappeared, and some months later there was a vesicular eruption about the anus, said to be of an herpetic character. It extended about two inches on either side of the anus. The efflorescences occurred in clusters. It gradually passed away and was followed, at various intervals, by other eruptions, either papular or pustular, on different parts of the body. These eruptions were regarded as syphilitic, and always yielded to antisyphilitic treatment. The last time Dr. Fischer saw the patient was about a month before the latter's admission to the hospital, when he was just recovering from an itchy pustular eruption on the scalp and forehead. It dried up with the formation of crusts and scales. Dr. Fischer had never observed any cutaneous affection of the hands or nails.

When I first saw the patient there was not a single lesion that could be regarded as clearly syphilitic. As the disease progressed, however, some important modifications were noted in its appearance. The diphtheroid patches upon the face continued to discharge purulent and very offensive matter in copious quantity for several days, during which time the face remained much swollen. Then, as the discharge became less and the swelling subsided, hyperplastic growths made their appearance. In ten days the secretion had become slight, but the affected regions of the face and neck were covered with prominent warty elevations. Upon the bearded parts they were uniformly distributed, mammillated or papilliform, and closely set together. The red prominences projecting above the purulent matter that occupied the sulci between them roughly suggested the appearance of raspberries and cream. On the forehead and upper parts of the cheeks the growths were smoother, and occurred in circumscribed, round, or oval patches of nummular size. Upon the back of the neck the warts, which were mostly discrete, whitish, and of about the size of large peas, but with flattened surfaces, resembled exactly *condylomata lata* as they occur about the genitals.

[1] Read before the American Dermatological Association, August [illegible]

They occupied only the central portions of the erythematous patch. These vegetating growths were produced within a week from the first appearance here of the pustular eruption. Those upon the neck lasted ten days or a fortnight and then rapidly disappeared, apparently under the influence of a local application of a solution of bichloride of mercury (grs. ij.: ℥ j.). The vegetations upon the face were more persistent. Surrounding the growths, especially upon the forehead, and also those on the back of the neck, the skin over the areas corresponding to the original erythema was of a dusky-red color, with somewhat of a coppery tint, with sharply defined borders, which gradually became more and more elevated and rounded with an increasing infiltration. In the third week following admission to the hospital two red eroded spots, with slightly grayish centres, appeared upon the lower lips. They were of about the size of peas, and looked as though they might be erosions left by ruptured bullæ. In the course of a week or ten days their bases had become so infiltrated as to produce an elevation of a line or two above the surface. They were not unlike mucous patches. In the mouth were no lesions whatever. The orifices of the nares were much occluded by the vegetations and thickening of the skin, so as to interfere with nasal respiration, producing an effect like snuffles in a syphilitic infant.

Certain changes were noted also in the eruption on the body. It became more papular in character, the papules gradually increasing in size. May 17th, "an abundant crop of small papules and pustules, each one occupying a follicle," was observed "on the back, especially in the scapular region." On the back of the shoulders and arms they occurred "in groups of fine papules closely clustered together, resembling a miliary syphilide both in arrangement and color." On the 25th there were a number of papular tubercles on the back and arms, some the size of peas and some even larger, while others were miliary. Some of the papules showed slight desquamation in the centre, where they were somewhat depressed, especially the larger ones, a few of which had little crusts in the centre with an elevated rim of infiltration outside. The pustules had all disappeared. May 31st, the eruptions were everywhere subsiding. The papules and tubercles that were upon the back had left brown pigment stains. June 7th, the condyloma-like growths had disappeared from the nape, leaving dark-colored spots, though the brownish-red discoloration, with its gyrate infiltrated borders, still remained both in this situation and upon the forehead. Upon the upper parts of the face the nummular hyperplastic growths were yet prominent, of irregular oval outlines, generally smooth, though somewhat lobulated, of a paler color than those lower down, and free from secretion. The epidermis over them appeared to be intact. Upon the bearded portions the growths had the mammillated appearance described above, with some purulent secretion. Here and there on the face, neck, and other regions were to be seen a few vesicular or vesiculo-pustular efflorescences. The palms had become smooth, desquamation having ceased, but were still red and without perceptible infiltration. The nails showed little change. The patient's general condition was fairly good. Two weeks later the patient insisted on going out and received his discharge, promising to come and see me at my office. During all this time, notwithstanding so many of the features of the disease were strongly indicative of syphilis, no antisyphilitic treatment was prescribed. The patient appeared to be doing quite well under tonics and regimen, and at the time he left the hospital all the cutaneous affections seemed to be making fair progress toward recovery.

June 18th, the patient came to my office with some relapsing efflorescences upon the face, especially on the forehead and cheeks, and mostly situated upon the hyperplastic growths which had not yet disappeared. The efflorescences were papular in character, of a pale red color, with a certain waxy look, and occurred in groups of curvilinear, crescentic, annular, or orbicular shape. The chin and lower part of the cheeks were still warty and looked congested, as though *the process were about to become more active.* Upon the palms, which remained red, were several circular defects in the horny layer of the epidermis, with a loose fringe of cuticle surrounding them, apparently the remains of syphilitic papules. A few days later the papules on the face had increased, and a pretty abundant papular eruption had reappeared upon the back. There were two places where large papules had been excised two or three weeks before, for the purpose of microscopic examination (which showed the usual infiltration with granulation-cells of syphilitic lesions). Little black crusts remained at these places, and each was surrounded by an elevated rim of infiltration. On the legs were a number of papules covered by silvery scales (psoriasis syphilitica). The patient looked feeble and anæmic, and complained of weakness. Daily mercurial inunctions were then for the first time ordered, and black wash as an application for the face. Five days later a decided improvement was noted, which continued rapid during the succeeding fortnight. The papular eruptions subsided, and also the vegetations; the latter, as they disappeared, left little pit-like depressions at the sites of the hair-follicles. Finally, only a few rough, horny spots were left here and there on the cheeks and chin, and they also soon vanished. There remained a dirty-brown staining of the skin over the forehead and nape for a considerable time after. July 26th, the patient was comparatively free from syphilitic manifestations. The hyperplastic growths had all gone, as well as the papular eruption, and the nails near their matrices appeared to be growing well. The patient complained of "piles," and on examination a fleshy excrescence was found projecting from the anus, of about the size of a large bean, and covered with a mass of filiform warts. Similar warts, occurring in little tufts, were scattered here and there over the margins of the anus. They were all apparently of the nature of condylomata acuminata, and yielded readily to treatment.

The vegetating lesions upon the face and neck in the above case did not correspond to any ordinary form of vegetating syphilide. In appearance, though not in their mode of development, they resembled the *condylomata* (both *lata* and *acuminata*) that occur in moist situations, as about the anus and genitals. They differed from the so-called *framboesia syphilitica* (*syphilis cutanea vegetans*) in that the latter is usually a product of more gradual growth and is generally preceded by ulcerative or other well-marked lesions of syphilis. In their manner of development they suggested the growths in the "herpes vegetans" of Auspitz,[1] and the "pemphigus vegetans" of Neumann.[2] In Alibert's description of the case of Georges Bartos I find some points of striking resemblance to the case detailed above, so far at least as the vegetating lesions are concerned, except that in the former the growth would seem to have been more exuberant. Alibert called the disease "mycosis framboisé." There are, doubtless, various diseases of the skin which may be attended with papillomatous or warty outgrowths. Under just what conditions they may arise is an inquiry upon which I shall not attempt to enter. To my present purpose this particular feature in the above case, namely, the production of vegetations, appears to me less important than the inflammatory affection that immediately preceded it. Was this affection a manifestation of the general syphilis from which the patient was presumed to be suffering? or was it merely an intercurrent affection?

That my patient had syphilis does not, it seems to me, admit of a doubt. Furthermore, the character and distribution of the lesions would indicate a syphilis of not long standing. Whether the first eruptions observed by Dr. Fischer were syphilitic or not, it is difficult to say. A

[1] Archiv für Derm. u. Syph., [illegible] p. 47.
[2] Vierteljahrssch. f. Derm. u. Syph., 1886, p. 157.

healthy child, two years of age, affords pretty good presumptive evidence that the disease was contracted at least not much over two years ago, corroborating the evidence of the local lesions. But, on the other hand, none of the symptoms presented by the patient when he was first seen by me, could be regarded as having any of the ordinary characters of syphilitic manifestations, unless it be the condition of the finger-nails, and even this might be taken for a keratosis due to some other than a specific cause. The inflammatory lesions of the head, hands, and feet were primarily erythematous, but with that polymorphous character which is expressed in the term *erythanthema*, as first employed by Auspitz. Erythanthema is a form of cutaneous eruption of which the fundamental condition or form of activity is an erythema, which, in its subsequent course, may be modified by a great variety of local efflorescences—vesicles, pustules, papules, wheals, or other so-called primary lesions. It embraces, but is a little more comprehensive than, the *erythema multiforme* of Hebra. It may be incidental to, or symptomatic of, various morbid conditions. When not obviously symptomatic of any clearly recognized systemic disease, it is called "idiopathic" or "essential," rather, it must be confessed, for the sake of convenience than with a view to absolute scientific precision. Sometimes the eruption is the expression of a general toxic condition, or again of a local nerve (neuritic) disturbance. May such an exanthem be a result of syphilis, and if so, in what sense? Is it a direct manifestation of the disease, in the same manner as are the commonly recognized syphilodermata, or is it only a secondary, an incidental and accidental effect of the syphilis?

That the erythanthema (for so I would characterize it) in G——'s case was in some manner due to the syphilis may, I think, be inferred from the fact that it was so intimately associated with an outbreak of manifestations which were undoubtedly syphilitic in character; and not only was it directly followed by such manifestations, but the preliminary erythematous exanthem was succeeded *in situ* by lesions which were pretty distinctly syphilitic. The vegetations upon the face and neck, except as they simulated (especially in the latter situation) condylomata lata, may have expressed only certain peculiarities in the nature of the irritation, or that of the tissues affected. But the fact that the erythanthema was followed by a general eruption of miliary and lenticular papules over the body, the occurrence of circumscribed coppery infiltrations in the erythematous patches themselves, together with the rapid way in which these later lesions, as well as the vegetations, yielded to the topical and internal use of mercurials, renders it to my mind extremely probable that between the preliminary erythanthema and the syphilis there was a definite etiological connection.

Moreover, the existence of such a connection gathers probability in view of certain other cases that may be cited. With some hesitation I refer, first of all, to the case of the syphilitic roseola. The precise etiological position of this exanthem has never been fully determined; whether it is of the same nature as the succeeding syphilides, or is merely an expression of reflex sympathetic irritation, and more nearly related to certain of the toxic exanthems. To be sure, in certain of the efflorescences granulation-cells have been found effused along the blood-vessels, but, if I mistake not, it was particularly in those lesions known as papulo-erythematous. At all events, this eruption differs entirely in its course and general characters from the papular syphilides which follow it. As in the case of the erythanthema above described, the erythematous or roseolous lesions may gradually be transformed into well-marked infiltrations, the erythematous efflorescences turning into syphilitic papules.

It is stated by Hebra that a universal erythema papulatum may occur as *prodromal exanthem* of *syphilis bullosa* and *ulcerosa*. Neumann reports the case of a man[1] whose back was covered with groups of syphilitic papules, who at the same time had repeated attacks of *erythema* iris of the palm. He had also observed erythema iris occur as the initial stage of syphilitic pemphigus neonatorum. The coincidence of erythema with syphilis had also been remarked by Danielssen and Lipp. According to Lipp, those cases of erythema that occurred in connection with syphilis were especially severe or long continued. Again, in hereditary syphilis it is not uncommon to see patches of erythema precede the eruption of frank characteristic efflorescences of syphilis. To this preliminary eruption the French have given the name *érythème précurseur*. In the palms and soles the eruption often consists of a diffuse, coppery redness, which is followed by desquamation in lamellæ, not unlike what occurred in G——'s case.

Mauriac has described, under the name *érythème noueux syphilitique*, certain eruptions occurring at an early stage of syphilis, of a circumscribed erythematous character, differing totally in their clinical appearance from the commonly recognized forms of syphilitic exanthemata, and bearing the closest resemblance to *erythema nodosum*. They are attended with localized pain, and occupy the usual seats of the disease they simulate. The frequency with which he has met with this form of eruption in syphilitic patients, and the fact that in the course of their resolution the efflorescences often form movable, subcutaneous tumors detached from the skin—as indicating a gumma-like infiltration undergoing resorption—are the reasons for Mauriac's regarding these affections as true products of syphilis. The same authority also describes subcutaneous infiltrated plaques, nodosities, and tumors of an indolent character, some of which after a time show fluctuation and then undergo resorption; others go on to rapid suppuration and ulcerate, and of these latter some show a markedly intractable and malignant character.[2]

Within the past eighteen months I have met with three cases of what might be termed syphilitic erythema nodosum, and with one of them were associated the characters of the malignant form described by Mauriac.

The first case was that of Henry G——, a young man twenty years of age, of delicate build and appearance, who entered Charity Hospital, April 12, 1886, with an indurated sore on the penis, a maculo-papular syphilide on the body, and angina. About a month later, in connection with a pustulo-crustaceous eruption of the face, and a papulo-pustular syphilide on the body, the patient began to complain of severe pain and swelling in the right foot. Later the swelling and pain disappeared from the foot and reappeared in the knee. These swellings, it is recorded, would often appear and completely disappear within an hour. On June 24th two or three deep-seated infiltrated nodules were observed on the outside of the legs, near the head of the fibula. They were about the size of filberts, of a rather bright red color, and, in general appearance, were not unlike the lesions of *erythema nodosum*. A few days later similar lesions began to appear in other situations on the lower extremities; two on the outer side of the right thigh, at about its middle; two on the left thigh, just behind the trochanter major; one at the middle and outer side of the left leg; one behind the right trochanter, and one just below the lower third and over the crest of the left tibia. These lesions were attended with but little pain. A few days after, and before the lesions had disappeared, the patient left the hospital.

The second case, Mary H——, aged twenty-three, was

admitted to Charity Hospital April 19, 1886. She had previously been an inmate a year before with chancre, followed by secondary syphilis. At the time of the last admission she had a papular syphilitic eruption, chiefly upon the face, and complained of much pain in the clavicles, sternum, and tibiæ, mostly at night. These pains continued severe in spite of treatment, and in June became very distressing, especially in the legs. The patient was anæmic and cachectic looking. An ulcerating lesion appeared upon the palpebral conjunctiva of the left eye, attended with considerable conjunctivitis. There appeared about this time two red, circumscribed swellings on the outer aspect of the left leg, just above the malleolus, which were exquisitely sensitive to the touch and the seat of intense pain, commencing in the latter part of the day and continuing a good portion of the night. They were not connected with the bone, but evidently involved the skin and subcutaneous tissue. The largest occupied about the area of an English walnut; the other was perhaps half as large. They did not disappear readily under treatment, either by mercurials or by the iodide of potassium, but continued for a fortnight or more, and then rather suddenly subsided, together with the pain. The latter, however, returned again, and was only relieved by rapidly passing a Paquelin cautery over the affected surface.

The third case was that of a female patient, fifty-two years of age, Minna S——, who came to me at the Polyclinic. I saw her first in November, 1885. She then had a universal, very abundant syphilide, made up of large lenticular papules. There was also some angina. The case was evidently a recent one. As to the origin and inception of the disease little could be learned. An examination of the genitals was not consented to. The patient stated that she had first noticed an eruption the month previous, when she applied to her family physician, who prescribed mercury. She was married, and the mother of several healthy children, but has borne none for a number of years. The husband was not examined. The patient's general condition was considerably affected by the disease, which had the marks of a severe type. The eruption, however, yielded pretty readily to mercurial inunctions. Later, deep ulcerations made their appearance low down in the fauces, on either side, but healed after thorough cauterization with nitric acid. Three or four months after the first visit the patient came complaining of very severe pains in the legs. On pushing down her stockings an eruption was displayed that at a glance could not be distinguished from the most typical *erythema nodosum*. In all there were five or six nodes; one large one (about the size of an English walnut) on the outer side, and at about the middle of the right leg; another just opposite, and one lower down on the inner side. On the left leg there was one at the lower third, on the outer and posterior aspect, and another prominent one on the inside, just back of the tibia. In size they varied from that of an English walnut to that of a filbert, were considerably elevated above the *niveau*, softish to the touch, and toward their centres of a violaceous hue, with deep-red color outside. Except for the unusual degree of pain and the very exquisite tenderness, the diagnosis *erythema nodosum* would doubtless have been made without hesitation. They proved rebellious to treatment, and remained stationary for about a fortnight, during which time the pains were distressing. Meantime a certain alteration in appearance was noted in one or two of the lesions. The centres became paler, of an ashy hue, as though ischæmic. No distinct fluctuation could be felt, but the extreme tenderness prevented thorough palpation. After a time ulceration took place, and deep, excavated, sinuous sores were produced, which were a month or two in healing. When last seen (July 10th) the patient was in a fair state of health, all manifestations of the disease having disappeared, excepting a slight ulcer, which had recently broken out again in the cicatrix of one of the old sores.

These cases of erythema nodosum, together with the other erythematoid eruptions previously referred to, serve to show that various forms of erythanthema may be associated with syphilis in such a manner as to imply some sort of etiological connection. Certain peculiar modifications in their form or clinical course usually distinguish them more or less from the corresponding simple eruptions, and this, together with the fact that they often coincide in their appearance with, or are closely followed by, manifestations that are unquestionably syphilitic, would indicate that they and these latter manifestations are both due to syphilis as a common cause. Admitting then, as I think we may, that between the syphilis and the symptoms we are discussing, the relation of cause and effect does exist, that it is not merely a case of accidental coincidence, are we justified in regarding these irregular manifestations as symptoms of syphilis in the same sense as the regular and more typical syphilodermata? But first we should define what is meant by "syphilodermata."

Loosely speaking, a syphiloderm, a cutaneous syphilide, may be defined as any cutaneous affection due to syphilis; but in a stricter, and, as I think, more proper sense, as well as in the very common acceptation of the term, it is a cutaneous affection which is pathognomonic of syphilis; an affection which only syphilis can produce. It is characterized, I believe, in every case by a peculiar modification of structure, and a special course of evolution and involution. Everywhere in all the specific eruptions we have neoplastic growth, a growth of the nature of the granulomata, in which the cells have but a brief life history, and their early decay is the cause of the varying phases in the course of each efflorescence which constitute one of its chief characteristics. From the initial lesion to the gummata the prime features in the pathology are essentially the same: a local focus of irritation attended with the production of granulation-cells destined to rapid decay. As the type of all syphilodermata, may be taken that commonest form which is intermediate between the initial sclerosis and the gumma, to wit, the syphilitic papule. Whatever has not the essential character of the papule is not, strictly speaking, a syphilide. In a word, the cardinal feature of all syphilodermata is the specific infiltration. Upon the amount and distribution of this infiltration, the rapidity of its development and involution, and the degree and phases of the inflammatory reaction that attends it, depend all the multitudinous forms that syphilodermata may assume.

But, as is well known, many cutaneous or other symptoms arise in the course of, and are in one way or another due to, syphilis, which cannot be included in the category of infiltrations. Some of these are almost constant and more or less characteristic, others are merely occasional and accidental. In some the etiology is obscure. Thus the so-called *pigmentary syphilide* (a term to which, however, I would take exception) may be sequellar to an antecedent roseolar or papular syphilide, or it may be the expression of some remote sympathetic irritation, perhaps in a manner analogous to that of the common cloasmata. In any event, it would scarcely be regarded in the same sense a direct manifestation of the disease as is the syphilitic papular exanthem. Again, the purpura which sometimes occurs in syphilitic patients, either in a simple form or as a hemorrhagic complication of a specific eruption, is a symptom in nowise pathognomonic, but is probably due to cachectic, toxic, or neurotic conditions, which may be incidental to the specific disease, but are not peculiar to it. Similarly with regard to the pallor that many syphilitic patients exhibit.

But we may go a step further in limiting the definition of the true syphilide. Wherever syphilitic infiltrations occur there is good reason to believe that at that point an accumulation of the *materies morbi* takes place. It is the lesions of the disease that most readily convey the contagion. Though the serum of the blood without doubt contains inoculable germs, and is capable of com-

municating the disease when brought in contact with surfaces denuded of their integument, it is in a less degree contagious than the secretions of a syphilitic efflorescence such as the initial sore, a mucous patch, or the matter from a syphilitic pustule, or ulcer. Thence the inference may be drawn that the common syphilodermata are the expression of a determination of the syphilitic virus to the surface, where they constitute in a degree isolated foci of the disease. What the cause of this determination to the surface may be is not known. It may be vaguely referred to an effort on the part of nature at elimination. That it is due to something more than a gradual process of filtration through the skin is evident from the intermittences in the occurrence of cutaneous symptoms, as well as from the arbitrary forms in which the efflorescences are distributed and arranged. This arrangement and distribution betoken a central, probably nervous, controlling influence, but more than that can only be conjecture.

Now, in the case of the affection or affections which I have ventured to group together under the term *erythanthema syphiliticum*, have we to do with irritative processes which are the direct effect of a determination of the *materies morbi* to the surface, the same as in the case of the common or true syphilodermata, or do they represent rather indirect and secondary effects of the disease, and so correspond in their mode of origin to the simple affections which they resemble? On the one hand, it is not difficult to conceive that a sudden elimination of the disease-poison through the skin might produce a dermatitis in the same way as the sudden elimination of mercury through the salivary glands gives rise to ptyalism, or as the escape of iodine or bromine through the sebaceous glands is supposed to produce an acne. Furthermore, the fact that the erythematous lesion may subsequently become the site of well-marked syphilitic infiltration (as in G——'s case, and possibly in the last-cited case of erythema nodosum), gives a certain plausibility to this view. The dermatitis then becomes the immediate, the subsequent cell-development the gradual, effect of one and the same cause. They are two phases only of one process.

But, on the other hand, is it not at least equally supposable that, during those periods of activity in syphilis which are ordinarily attended with specific manifestations upon the skin, there may arise a condition of general angioneurosis, or localized neuritic conditions, capable of provoking irritative eruptions upon the skin, which have no connection whatever with any process of cutaneous elimination? Nor does the fact that erythanthema may be followed by a true syphilitic infiltration *in situ* necessarily militate against this latter hypothesis. There are circumstances in the clinical history of syphilis that tend to show that a topical irritation in a syphilitic subject is capable of evoking a true syphilitic lesion. So far as traumatic irritation is concerned, the fact is well attested. It is well known that a traumatism, especially when there is protracted irritation, is liable in a syphilitic person to become the seat of a local syphilitic process. This fact was particularly demonstrated in the experiments of Tarnowsky.

It is true with regard to most pathological processes in the skin, such as eczema, acne, psoriasis, and the like, that when the subjects of them become syphilitic these processes are not necessarily, nor even commonly, modified materially by the syphilis. Their lesions do not necessarily become infiltrated. In fact, it often seems as though the pre-existent pathological process, having once preoccupied the ground at the affected points, monopolized it to the exclusion of any syphilitic or other extraneous process. With regard to many eruptions I believe this to be true. Eczema, so far as I know, is never modified by syphilis, except through the cachexia induced by the disease, which usually renders all intercurrent affections somewhat severer than they otherwise would be. That it may coexist as a complication with an irritated or inveterate syphilitic lesion is observed often enough, but the eczema always preserves its characters distinct, nor does it ever, as I believe, elicit a syphilitic infiltration. Whether acne efflorescences are especially liable to become the seats of specific lesions I am unable to answer. From my own experience I should say that syphilitic patients, with acne vulgaris, are little if any more liable to syphilodermata in the face than others. It is doubtful, again, if anyone ever saw the lesions of an iodine acne become infiltrated in a syphilitic subject. With regard to psoriasis opinions upon the point under consideration have long differed, some maintaining that it may be modified by syphilis, others that it is not. It is doubtless much more likely, in psoriatic patients who contract syphilis, that the syphilitic lesions should assume a psoriatic character during this period of desquamation, than for the pre-existent patches of psoriasis to become the seats of specific infiltration. Nevertheless, that the latter may sometimes actually be the case, appears from a case recently reported by Dornig,[1] in which groups of syphilitic papules corresponded exactly with the sites of lesions of psoriasis which had long preceded the occurrence of the syphilis. The psoriatic lesions were gradually transformed into syphilitic lesions. This one case, it seems to me, suffices to show that it is possible for a common pathological process to act as the exciting cause of a syphilitic infiltration in the same manner, if not to the same degree, as do traumatic processes. That the former act in this way only exceptionally must, I think, be admitted. It might accordingly be inferred that the syphilitic erythanthema would only rarely produce a true syphiloderm. But this is not certain. An exanthem that develops during the active stage of syphilis, or during one of its periods of recrudescence, and is, moreover, a more or less direct consequence of the syphilis, would be far more likely to be attended with a syphilitic process at the affected point than would an affection, wholly independent of the syphilis, that may occur in the intervals of exacerbation, or, indeed, may have been antecedent to the specific disease, and has, perhaps, impressed its own peculiar character upon the tissue affected, so as to render it in a measure insusceptible to any other modification.

From the above considerations I draw the following inferences:

First.—That certain forms of erythanthema arising in the course of syphilis may be regarded as products of the latter disease; more especially when they coincide with, or are directly followed by, an outbreak of typical syphilitic manifestations.

Second.—That in view of their resemblance to simple angioneurotic or neuritic affections of the skin, it is probable that they also correspond to the latter in their mode of origin; and, while doubtless due primarily to the syphilis, they are not pathognomonic of the latter disease, and probably not equivalent etiologically to true syphilodermata.

Third.—And, finally, that the syphilitic erythanthema may, through reflex irritation, and in the same manner as a local traumatism, become the seat of a characteristic syphilitic infiltration.

An Error in Diagnosis.—The following is vouched for by an exchange as an actual occurrence: "A young man, fresh from college, was sent by his father, an old practitioner, to attend a case of labor. On making an examination he found the os undilated. After waiting an hour he applied belladonna ointment and endeavored to make forcible dilatation. Another hour passed, but no dilatation. Being alarmed he went for his father, but before they returned the child was born. The father found the child's anus red and patulous, and besmeared with belladonna ointment. The young man had met with a breech presentation, and had mistaken the child's anus for an undilated os uteri."

THE ELECTRIC LIGHT AS AN ILLUMINATOR —THE EFFECT OF STRONG LIGHT ON THE EYE.[1]

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THAT the exposure of the eye to an excess of light may be attended with harmful effect is a fact attested by the cases recorded in ophthalmic literature; and this subject has assumed a fresh practical importance since the application of electricity to lighting purposes.

Mackenzie, Jäger, Arlt, Dufour, Haab, Emmert, Sulzer, Simeon Snell, and others have recorded cases in which either retinitis or scotoma, or other visual disturbances, have resulted from exposure of the eyes to bright light.

Among 12 cases reported by Jäger as having resulted from looking at an eclipse, 8 cases were without material change; in 4 cases there was choroiditis.

Arlt describes one case of chronic choroiditis produced by looking at the eclipse of July 28, 1851.[2]

Schirmer gives one case of positive central scotoma after blinding of retina by lamplight, the same having occurred before when the patient looked at the sun or glaring light. Ophthalmoscopic examination showed an "especially dark macula lutea;" otherwise the fundus was normal.[3]

Dufour[4] gives one case, evidently carefully observed. The whole macula lutea was taken up with a dark-brown pigmented spot, the centre of which formed a sharply defined yellowish-white patch. Vision was reduced to $\frac{1}{30}$ during twenty-two days; the macula region was wholly normal. Vision was improved to $\frac{1}{2}$.

Haab[5] relates one case of central scotoma produced by observing the eclipse of the sun.

Emmert[6] gives one case. Vision reduced to $\frac{2}{3}\frac{0}{0}$; fundus normal.

Simeon Snell (*Ophthalmic Review*, May, 1883, p. 141) records one case of retinitis, caused in a girl, aged twenty, by a "single flash from a sun reflector," in the hands of a boy. The eye was affected immediately; on the next day vision was = Jäger 20. In the neighborhood of the macula and optic disc there was cloudiness of retina. Perfect recovery.

D. Sulzer (*Klin. Monatsbl. f. Augenheilk.*, April, 1883, p. 129) relates four cases of retinal affection from direct observation of the eclipse of the sun of May 16, 1882. The symptoms were central scotoma, slight hyperæmia of the optic disc, exudative condition of the yellow spot, which, in one case, led to pigment degeneration in the region of the yellow spot.

H. R. Swanzy (*Ophthalmic Review*, May, 1883, p. 142) gives two cases of central amblyopia from exposure of the eye to the direct rays of the sun. There was in each case positive central scotoma, and metamorphosia, and a positive flickering after-image, which latter symptom continued four months after the exposure. There was no visible change in fundus. Vision (previously normal) was $\frac{6}{9}$ in right eye. Read with slightly excentric fixation with right eye, owing to central scotoma, although examination in the usual way for central scotoma, either with blackboard or perimeter, gave a negative result, the conclusion being that the defect was extremely small. But the patient declared that he saw Snellen's smallest type with difficulty, owing to the black spot which came just over the word he wished to look at. These cases are also interesting as having occurred in two individuals —a coachman and his employer—from the same cause at the same time.

Deutschmann (*Von Graefe's Archiv*, vol. xxviii., 1883, p. 241) records four cases of damage to the eye, caused by watching the eclipse of the sun on May 17th, 1882. Three of the patients had gazed at the sun with the naked eye; in the fourth case, a dark-blue glass had been used. Every one of the four had noticed, immediately after gazing at the sun, a dark or semi-blind patch in the middle of the field of vision, and in each a small positive scotoma was found on examination; scotoma not absolute in any of the cases. Gradual improvement occurred in all, but absolutely perfect vision was not recovered in any case. The ophthalmoscope showed corresponding changes in all, viz.: in the cases seen early, a small, bright-white spot at the centre of the macula lutea, and around this a blood-red ring shading off into the normal color; in the older case (four months), an appearance less easily distinguishable from that of the normal eye, and similar to that which the other cases presented when recovery was nearly complete.

Under the caption "Neuroses of the Visual Nerve-apparatus, caused by the Continuous Action of Bright Light," Mr. Reich (*Von Graefe's Archiv*, vol. xxvi., 1880, p. 135) described an epidemic of snow-blindness which occurred among a body of laborers engaged in clearing a way through masses of snow which obstructed the road between Passawaur and Mrleti, in the Caucasus. The rays of the sun, reflected from the vast stretches of snow on every side, produced an intense glare of light, which the unaccustomed eye could not support without the protection of dark glasses. A few of the sturdiest among the laborers were able to work with impunity, but the majority, and especially the weakly and anæmic, suffered severely in their eyes, in spite of various devices to protect them from the light. Among 70 strongly marked cases, 30 were so severe that the men were absolutely unable to continue their work or to find their way home. They were collected in a covered place, where Reich found them, on his arrival, prone on their faces, striving to hide their eyes from the light, and crying out from pain. Photophobia was present in all the cases. Hyperæmia of the conjunctiva, with more or less injection of the ciliary vessels, and even chemosis, was found in all the severe cases; those with chemosis complaining the most of pain. Cornea not affected in any case. The pain, generally of a cutting character, did not cease in darkness. Strong *contraction* of the *pupils* in all cases, except two, in which they were *dilated*, and in these two cases there seemed to be some degree of retinal anæsthesia and contraction of the visual field; the ophthalmoscope showed capillary hyperæmia of the optic discs and some over-fulness of the retinal arteries and veins; ciliary injection and chemosis were present in both cases, and the eyeball tension appeared to be somewhat increased. Recovery was gradual, but complete, in all cases. The author declared that the impairment of vision was not of the nature either of hemeralopia or nyctalopia, meaning by the latter the condition in which vision is persistently defective in ordinary light, but improved in diminished light. The conjunctival hyperæmia, which played a very unimportant part in the affection, is referred by the author to reflex dilatation of vessels through the action of light. W. C. Rockliffe (*Ophthalmic Review*, September, 1882, p. 308) records a case of acute conjunctivitis which he referred to the action of the *electric light*, the patient having been engaged in adjusting the carbon points of a Siemen's electric lamp of *three-thousand-candle power*, which he did without colored spectacles. The patient had noticed on other occasions that, on descending the ladder, after adjusting the carbon points, and a short expose, in close proximity to this very intense light, that he was unable to perceive the people on the street, but that this effect soon passed off. On a particular occasion, as his power of vision returned (in about fifteen minutes), there followed a rapidly increasing lachrymation, photophobia, pain, and swelling of the lids, the whole of these symptoms having been developed

[1] Read at the Twenty-second Annual Meeting of the [illegible] Medical Society, held at New London, Conn., June 1886.

[2] Krankheiten des Auges, Bd. [illegible], p. [illegible].

[3] Klin. Monatsbl. f. Augenheilk., 1871, p. [illegible].

[4] Recueil de la Société Médicale [illegible], by the same author, other cases of trouble to [illegible] at the eclipse of May 16 and 17, 1882.

[5] Correspondenzblatt für Schweizer Aertze, 1882, p. 383.

[6] Revue Médicale de la Suisse romande, 1882, p. 395.

in thirty minutes. Rockliffe describes the lids of both eyes as having been very hot, red, swollen, and brawny, and as being on a level with the superciliary ridge, the swelling extending some distance below the brow. The pain was most acute in and around the eye. The conjunctival vessels were exceedingly large, and the eyelids and the eyeballs were a brilliant scarlet. The cornea were clear. All of these symptoms yielded to a brisk purge and a lead lotion in forty-eight hours. His fellow-workman was similarly affected, but to a less degree.

A. Emrys-Jones (*Ophthalmic Review*, April, 1883, p. 106) records the case of a person engaged in experimental work with the arc electric light, which necessitated his gazing intently with the naked eye at the LIGHT, from a distance of a *few inches*. As there was no inconvenience at the time, and that the longer he looked the more accustomed his eye became to the light, he continued his observations for *twenty minutes*. The next morning he awoke with intense pain in the eyes, and profuse lachrymation and photophobia; also slight redness of the conjunctiva, but no swelling of the eyelids. A drop of atropine instilled into the eyes gave instant relief, and as soon as the physiological effects of the atropine had passed off the patient was able to resume his work. Jones also adds a description, written by the patient himself, who had a great deal to do with electric lighting, in which he speaks of the effect of the light on the eyes of persons engaged in working in close proximity to the light (*arc light*). In the worst cases, which generally arise from adjusting the lamp (*two-thousand-candle power*) while burning, without goggles or smoked glass, the distance of the eyes would average eighteen to twenty-four inches, and with weak eyes *one minute* will produce certain inflammation (?). He thinks that much depends on the nature of the light, as he found that either an excess of current, which produces a violet light, or a defect of current, which gives an orange light, is less injurious than the normal (white, tinged with a sky-blue) light. David Little (*Ophthalmic Review*, July, 1883, p. 197) speaks of a case of retinitis occurring in a gentleman, engaged in scientific experiments with the electric light, who had neglected, on one occasion, to put on his dark spectacles while thus operating; the box containing the electric light was suddenly opened, and the light fell upon his *right* eye. It was a great shock to him, and he was blinded for several minutes; his eyes were very intolerant of light for several days afterward, and he suffered a great deal from headache. Two months after the accident he consulted Dr. Little on account of a mist and dark specks before his *right* eye, which had existed since the accident. Vision of right eye = $\frac{20}{50}$; the vision of left eye was good, and the fundus was normal. There was haziness over the right optic disk and the retina immediately around it.

Eye-affections caused by lightning have been classed in the same category with those ocular disturbances caused by exposure of the eye to strong light, partly, perhaps, because in the older text-books the intense light of lightning was assumed to be the chief agent; but the intensity and duration of lightning are not sufficient, and the lesion so produced does not at all correspond with that produced by lightning, since the scotoma produced by exposure to bright light, as recorded in literature, has been of limited extent, instead of affecting the entire field as in the case of lightning. Moreover, it is impossible to ascribe to the action of light the associated nerve-lesions, or the structural changes in the choroid and lens, which obviously are caused by lightning. That light, under certain conditions, is capable of producing opacification of the crystalline lens—one of the prominent ocular lesions caused by lightning—has been demonstrated by Czerny, who showed that the direct rays of the sun, condensed by a lens, will produce in the eye of the rabbit an opacity of the crystalline lens in about a quarter of a minute, by coagulation of albumen; but this can hardly afford an adequate explanation of the production of cataract by lightning, for, apart from the less intense brilliancy of a lightning-flash as compared with concentrated sunlight, the duration of the former is much less than a quarter of a minute. Leber (*Von Graefe's Archiv*, vol. xxviii., p. 255), who has given a comprehensive analysis of all that is at present known of ocular injuries caused by lightning, rejects the idea of any mechanical production of the opacification of the lens, and attributes it to a "direct *physico-chemical action* of the electricity on the lens substance by which its albumen is coagulated;" but Leber does not refer this coagulation to heat alone, for it can readily be shown that a higher and more enduring degree of heat would be required than can reach the lens during the lightning-flash, nor was there any external sign of scorching of the eyes in those cases in which cataract was produced by lightning; hence Leber regards the coagulation of albumen to be a kind of catalytic action, as compared with the curdling of milk which occurs during a thunder-storm. Leber further suggests that this catalytic action is not confined to the lens, but would probably be discoverable as an opacity in many other structures, were they transparent. The opacity of the lens in these cases is said to be permanent, and the non-vascularity of the lens may furnish an adequate explanation of the permanence of the lesion in this body. This is certainly a reasonable hypothesis, but it does not necessarily exclude the probability of a mechanical injury to the lens, simply because the capsule of this body remains undisturbed, any more than the rupture of the choroid, and hemorrhage from the choroid and retina, and partial detachment of the retina, which are also known to occur from the shock without the patient being struck by the lightning, and without rupture of the external tissues. Thus we see intense light is not the chief agent in an electrical explosion in producing the eye-affliction.

There is another class of cases which may be considered in connection with this subject, viz., the opacity of the lens occurring among glass blowers, in whom the intense radiant heat to which their faces are exposed (148° Fahrenheit) seems to be the chief agent in producing this condition; but I have not found cataract so common among the glass-blowers whom I have examined—284 in all—4.5 per cent. showing lenticular opacities among 65 men under thirty-eight years of age, and twenty per cent. among those men who were over forty years of age. Meyhoffer (*Klin. Monatsblätter f. Augenheilk.*, February, 1886, p. 49) found among 506 glass-blowers just the double of my percentage among those men under forty years of age. I did not find any lesion of the fundus of the eye which could be referred to the occupation as a cause.

In the first class of cases of eye trouble alluded to above, as resulting from exposure of the eyes to direct sunlight, it appears that lesions are produced which are identical to those found by Deutschmann in the retina of rabbits when the direct rays of the sun, condensed by a concave mirror, and then rendered parallel by a convex lens, are caused to enter the dilated pupil. After exposure for only a few seconds the ophthalmoscope revealed a silvery-white patch surrounded by a dark-brown ring in the retina. The microscope showed that the material changes consisted in an actual disorganization of a limited area of the retina by coagulation of the albumen in its tissue, and beneath and around this a vascular reaction in the choroid, leading to hyperæmia, exudation, diapedesis of blood-corpuscles, and pigment disturbance. It will be observed by referring to the cases recorded by Arlt, Schirmer, Dufour, Haab, Emmert, and others, of visual disturbance caused by exposure of the eye to direct sunlight, that in the majority of instances there was no demonstrable lesion in the fundus oculi; nor is the evidence as to the causation quite satisfactory when such lesions have been found, the pre-existence of the lesion in the fundus not having been disproved; and yet the

similarity between the effects obtained by Deutschmann in his experiments (cited above) on rabbits and those observed in the human eye is presumptive evidence that the actual lesion in the latter case is also a destructive coagulation of albumen in a minute area of the fovea centralis, together with congestive or inflammatory changes beneath and around this spot, although the condensation of the light in the case of Deutschmann's rabbits and the dilatation of their pupils constitute an important difference in the conditions.

In order to ascertain whether the invisible heat-rays were concerned in producing the changes in the fundus found in the rabbit under exposure to direct sunlight, Deutschmann caused the pencil of light to pass through a stratum of water two decimeters thick before reaching the eye. The same effect as before was obtained, but required rather longer for their production; but, of course, the mere exclusion of the obscure heat-rays does not exclude *heat* as the essential cause of the mischief, for it can readily be shown that in the mixed radiation from a luminous object the light is capable of being converted into heat; therefore, that the light-rays also raise the temperature. The use of dark glass in Deutschmann's cases did not suffice to prevent the damage to the retina.

The spectroscope declares that the solar, gas-flame, and electric-light spectra have for their base a continuous strip or band of light—in the case of the gas-flame (the bright part) crossed by the sodium lines only; in that of the sun, by Fraunhofer dark lines; and of the electric (arc) light, by the bright line of carbon. The illuminating power of each of these sources of light is thus shown to be due to the incandescence of their several solid and gaseous constituents.

It is of practical importance to learn something about the relative effect of the different forms of artificial light on the human retina. All forms of artificial light contain, as compared with daylight, an excess of waves of long wave-length, *i.e.*, they are of a *yellowish* hue. In the electric light the short-wave rays predominate, *i.e.*, the violet rays. The ultra-violet region in the light of the electric arc is from six to eight times as long as the whole of the visible part of the spectrum.

Even the electric light looks yellow as compared with daylight, which latter, although generally called *white*, has been shown to be decidedly *bluish*; but, as far as mere *color* is concerned, the *electric light* approaches nearer to that of the *sun* than does the gas or lamp flame. But which has the more to do in producing evil effects on the eye after long and continuous work by artificial light—*color* or *heat?* Meyer gives the following proportionate constitution for three kinds of artificial light:

	Red.	Green.	Blue.	Violet.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Gas emits the greatest amount of heat; petroleum lies between gas and the electric light, which latter, from the fact that there are no gaseous products to radiate heat without light, taken together with the high temperature of the incandescent carbon, unite to give us the maximum of light with the minimum of heat. Those who have a great deal to do with the *arc electric light*, which is intensely brilliant, say that the injurious effect on the eye depends a great deal on the nature of the light, *i.e.*, a violet light, produced by an excess of current, or an orange light, given by a defect of current, is less injurious than the normal light—white, tinged with ashy blue—and that a fluctuating light is always more dangerous than a steady one.

Tyndall has shown that the value of the luminous radiation from the flame of oil, gas, and the electric light is as follows:

	Luminous.	Obscure.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

We have, therefore, with the *electric light*, the *maximum of light* with the *minimum of heat*. We have seen that in the electric light the short-wave rays predominate, *i.e.*, the *violet rays*, and that the *ultra-violet* region in the electric arc is from six to eight times as long as the whole of the visible part of the spectrum. We know that chemical action is more energetic in this part of the spectrum than in any other part, and that this action extends beyond the violet to the *ultra-violet rays*, and the properties of this part of the spectrum are very strikingly shown by the pronounced action exerted by the electric light in the growth of plant life.

Chardonnet (Vision des radiations ultra-violettes, Compt. Rend. hebd. des séances de l'Acad., No. 8) has recently made some interesting investigations on the absorption of ultra-violet rays by the media of the eye, particularly by the crystalline lens, this absorption not being done without fatiguing the eye, especially when it concerns the long and brilliant spectrum of the *electric arc*. But he found, on photographing the spectrum of the incandescent electric light, that the spectrum hardly passed beyond the visible spectrum; hence he inferred that this incandescent electric light saved the media before the retina the labor of absorbing and diffusing the ultra-violet spectra. I do not believe that we should attach much practical importance to this explanation. It is easy to convince one's self that the inconstant and unsteady intense glare of the *arc electric light*, only faintly modified by an *opal* or *ground-glass globe*, is extremely distressing to the eyes.

So far all the cases of injury to the eye from the electric light recorded in medical literature have resulted from exposure of the eye in close proximity to the *arc electric light*, and this has, in every instance, been of a very intense brilliancy, generally that used for street illuminating purposes—two-thousand-candle power—which may be actually fifteen-hundred-candle power. In many of these cases a pre-existent abnormal condition of the eye was not excluded; and if we compare the groups of cases so far recorded, the evidence seems to me to point more directly to a vaso-motor disturbance—*i.e.*, that we can best account for the condition by invocation of the sympathetic nervous system, rather than by assuming an actual mechanical or chemical injury. The severe pain and photophobia complained of would certainly be explained by the excessive stimulation of the whole retina, and, corresponding thereto, a general hyperæmia of the uveal tract; and these causes might naturally augment any pre-existing retinal or choroidal affection. At any rate, with regard to retinal changes it is not by any means established that simple dazzling by bright light can produce a progressive diffuse retinitis, such as has been claimed it has. However, the case of the late Professor of Physics at the University of Ghent, J. Plateau, who, in 1829, while trying to observe the effect of irritation of the retina, gazed steadily at the sun for twenty seconds, chronic irido-choroiditis having resulted (?), followed by total blindness in the course of fourteen years, is on record.

So far as I have been able to ascertain, no case of accident to the eye has been reported as having been caused by the *incandescent electric light*. Of the 1,100 persons whom I have examined and observed during the past year who work by day or by night for many hours by the *incandescent electric light* of *Edison's lamp*, there was not a single instance of injury to the eye; but, on the contrary, I was surprised to find that a considerable number of these persons, with a high degree of myopia and choroidal changes, were absolutely comfortable while working by this light, and they expressed themselves as having experienced a great improvement in the condition in their eyes since they had begun to work by the electric light (Edison lamp of twelve- to sixteen-candle power), always shaded from the eyes, the light being thrown down upon the work from a short elevation. Many persons among typesetters and copyists have told me that for-

merly, when gas was in use in the establishment in which they worked, they went home from their work with their eyes red, watering, and aching, and this was especially the case among short-sighted persons, but that they could work longer by the Edison light (the arc light distressing them), and without discomfort. Of course, every form of artificial light is more or less dazzling when the source of light casts its image on the retina. We certainly can avoid this dazzling in the gas or petroleum flame by means of an appropriate shade; but, in order to secure the requisite amount of illumination, we must either approach the light close to the head, and thereby expose the eyes to the undesirable radiant heat, or increase the illumination at a greater distance, and thereby make an increased demand upon the vital parts of the atmospheric air in the room, thus vitiating the latter, which is a very undesirable equivalent. The amount of heat radiated by the electric light is very unimportant; and when, after sunlight, we add to its unrivalled qualities as an illuminator the steadiness and absence of combustion from the *incandescent lamp of Edison*—there being, therefore, no consumption or vitiation of the atmospheric air induced by it—together with the practical clinical fact that it is a greater comfort for even persons with existing eye affections to work by this light than by any other artificial illuminator, we must, from a therapeutic point of view, concede to the incandescent electric light advantages not possessed by any other artificial means of illuminating; and anyone who has given the subject thoughtful consideration will at once see the great blessing which would come from introducing this kind of light into our *night-schools*, *theatres*, *public halls*, and those innumerable *counting-rooms* in this great city where large numbers of human beings work by artificial light during the entire day or night, the demand upon the atmospheric air by the individuals alone being, in the absence of adequate means of ventilation, and in the majority of instances very little ventilation at all, in these overcrowded places, terrible enough without the additional mischievous agent in vitiating the atmospheric air present in the many *gas flames*. The advantage of using the incandescent light in our ophthalmoscopic dark-chamber must be evident to every ophthalmic surgeon.

My conclusions are as follows:

The *arc electric light* is not so objectionable on account of its intense brilliancy, which can be modified by means of an opal or ground-glass shade or globe.

The gazing at the *arc lamp* for many seconds is attended with great risk to the eyes. The *arc light*, in its present state, should be positively rejected as unsuitable and actually harmful to the human eye, particularly on account of its unsteadiness.

The *incandescent light of Edison*, because of its steadiness, adequate power and composition, is safe, and occupies at present the first position as a means of artificial illumination. By its use the accommodation of the eye is less taxed than by other illuminators.

The light may advantageously be placed on the table in *front of* the person using it, but it should *never shine directly into the eye*, but always be *completely hidden* from the eyes by means of an opaque shade made of glass or tin, and the light be thrown down upon the work. For obvious reasons, it is further believed that the incandescent electric light is especially beneficial to hypermetropes and myopes.

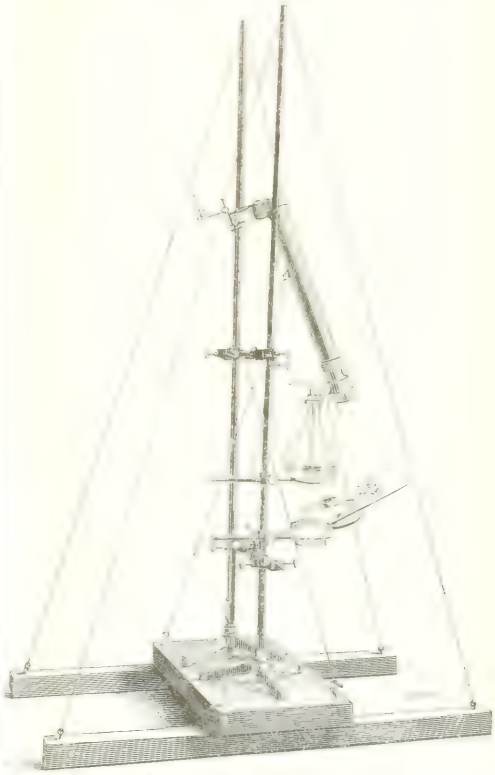
[illegible] West [illegible] Street.

THE GROPINGS OF MEDICINE.—A physician was once conversing with a prince who spoke of medicine as a science of guess-work. "But, sire," he said, "let us suppose that an Egyptian darkness were suddenly to come over the land. Would you not rather trust to a blind man to guide you to Paris than to one who might see in the light; to one who had learned to grope his way in the darkness than to another who would stumble and go astray the moment his clear sight was dimmed?"

A NEW APPARATUS FOR THE [illegible] CAPTIVE [illegible]

BY WILLIAM [illegible], M.D.

SINCE publishing in THE RECORD[1] a preliminary notice of work upon the application of instantaneous photography to the study of the movements of the heart and intestines, I have had constructed a special apparatus which is so great an improvement that it leaves little or nothing to be desired in accuracy and rapidity of movement. The apparatus was devised by Mr. R. D. Gray (the inventor of the ingenious "vest camera" and other photographic improvements) and by myself. I described what was required and suggested various modifications and improvements, but the mechanical details were worked out exclusively by him. To test the rapidity of the camera we photographed a "horse-timer" clock, with a dial marking quarter-seconds, and succeeded in



[illegible] [illegible] [illegible] Mr. [illegible]

taking five distinct photographs in half a second with *one* lens, which has never before been accomplished excepting by Professor Marey,[2] at the College de France, who has taken successive views of flying birds, falling balls, etc., with one lens at a very rapid rate. His camera was unknown to me until after mine was constructed, so that as a success in photography alone the work is interesting.

The camera consists of a circular brass box, 5½ inches in diameter and 1¼ inch deep, containing a circular vulcanite shutter with two apertures, behind which is placed a circular dry plate. Both plate and shutter are revolved in opposite directions to each other by a simple arrange-

[1] [illegible]

[2] M. [illegible]

ment of four cogged wheels moved by a single crank. The box is perforated at one side by a circular opening, 1¾ inch in diameter, from the margin of which projects at a right angle a long brass tube (Fig. 1), which carries the lens. In Fig. 2 the lid of the box has been removed, and the bottom of the box, with the wheels, springs, and partially closed shutter, is presented. The lid is double—that is, it is a flat box in itself. It contains nothing but the dry plate, supported at its centre upon a small brass disk, against which disk it is firmly pressed by a pivot attached to a spring fastened in the lid. The aperture in one side of this double lid, which corresponds with that seen in the floor of the box, may be closed by a slide, so that the lid containing the plate can be removed like an ordinary plate-holder and carried to a dark room, where it is opened and the plate is changed. When the lid is replaced this slide is removed, and as the shutter is made to revolve, the light falls upon whatever portion of the dry plate happens to be opposite the opening.

By reference to Fig. 2 it will be seen that when the large wheel which projects outside of the box is revolved by a crank it turns the small ratchet-wheel, which bears an eccentric pawl. (The crank has been removed in Fig. 2; it is seen in Fig. 1.) The central wheel has only six cogs. The pawl is pressed into one of these cogs by a spring. It pushes the central wheel around one-sixth of its circumference, when it returns to be pressed into the next cog. While the pawl returns it necessarily leaves the central wheel at rest, and whatever momentum this wheel carries is checked by a simple stop pressed by a spring upon the opposite side. The central wheel carries a square axle, which projects through a small hole in the centre of the double lid and fits into the brass disk before alluded to, causing the disk to revolve with the axle. The disk is covered by rubber cloth; and as the dry plate is pressed firmly against the rubber surface by the spring in the lid, the plate adheres to the rubber and revolves with the disk. Thus every complete revolution of the central wheel in the floor of the box carries with it the dry plate, stops it, and moves it on again six times. The velocity of revolution of the plate is only limited by the rapidity with which one can turn the crank.

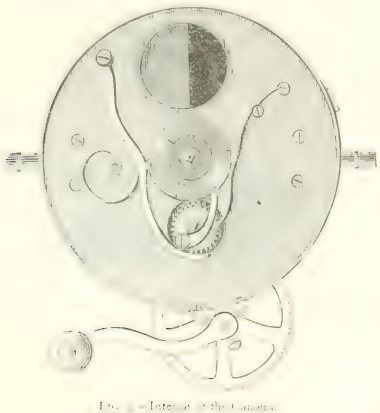


Fig. 2.—Interior of the Camera.

The shutter is revolved in the opposite direction by a wheel whose cogs are seen fitting into those of the little wheel carrying the eccentric pawl.

The two apertures in the shutter are so placed that at the instant of exposure of the plate it is momentarily at rest, while the plate when moving is covered by the shutters. This arrangement prevents vibration of the plate and blurring of the image. The camera is mounted by two lateral axles with screw clamps upon two iron stands, such as are in common use in chemical laboratories. A brass rod attached to the tube steadies it, and allows it to be screwed fast at any angle corresponding to the angle at which the heart is placed. It is thus easy to put a manometer tube in the femoral artery of an animal, bend it up alongside of the exposed heart, and simultaneously photograph the cardiac contraction and the degree of rise of the fluid in the manometer (!). The tube is arranged like the draw-tube of a microscope. It is made long, so as to admit of taking small hearts at life-size. The stand carries a support for the frog or other animal to be experimented upon, and a bottle of physiological salt-solution kept warm by a spirit-lamp beneath.

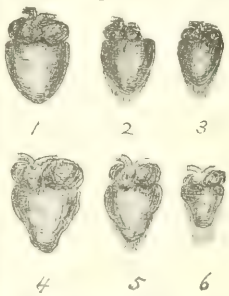


Fig. 3.—Photographs of the Heart in Motion. 1, Normal diastole; auricular systole. 2, ventricular systole. 1, 2, 3 were taken in a half-second; 4, 5, 6, same as 1, 2, 3, after injection of 1 c.c. dose of strophanthus hispidus. 4, 5, 6 were taken in a half second. The pulse rate was 74.

The whole apparatus is readily packed in a small space. I have already taken a number of photographs of various hearts and intestines with it, and the contraction of the heart of the frog produced by *strophanthus hispidus*, the new cardiac stimulant, is seen in Fig. 3, taken by this new instrument. The apparatus has the great advantage that six photographs of a single cardiac pulsation, or of any muscular contraction, may be easily taken in less than one second, or, by simply turning the crank slower, they may be taken at any desired rate to keep pace with the rhythm of the heart. The second-hand of a watch may be placed in the field of view and simultaneously photographed with the heart, so that there can be no question about the series of photographs all belonging to one pulsation.

I have already called attention [1] to the ease with which these photographs are enlarged for lecture-room demonstration, either on paper or in a stereopticon, and the ease with which they may be reproduced in print to illustrate the action of drugs.

25 East Thirtieth Street, New York.

Discussion on Ovariotomy.—The discussion concerning ovariotomy has now been going on for some months. Many of Mr. Lawson Tait's detractors are not slow to suggest that by his eager advocacy of the operation he has induced many surgeons to perform it in unsuitable cases, even if he has not done so himself. Mr. Tait's rejoinder is that he has frequently protested against the indiscriminate removal of the uterine appendages without due consideration. The Liverpool inquiry has not yet come off, and the whole subject may be regarded as in an unsatisfactory state. In evidence of this the following incident recently narrated on good authority may be recounted: A lady coming from abroad was advised to consult a certain distinguished surgeon who diagnosed disease of the uterine appendages and recommended their removal. By the wish of her friends she consulted a well-known gynecologist before consenting to the operation. He carefully examined her and then delivered himself to the following effect: "Yes, you may have your ovaries removed, and may be it will do you good. And you may have your great toe removed, and perhaps that would do you good. Of the two, perhaps the latter will do you the most good." The patient, however, in spite of this opinion visited the first consultant again, had the operation performed, and then left this country.—*London Correspondence.*

[1] Medical Record, [illegible]. Recent Advances in Methods of Studying the Heart. Medical Press, Boston, March 3, 1886, p. [illegible]. Instantaneous Photographs of the Heart, Johns Hopkins University Circulars, March, 1886, p. 60.

Clinical Department.

MIASMATIC HÆMATURIA.

Dr. J. Edward Stubbert, of Bloomfield, N. J., writes: "In the last number of the *Medical and Surgical Reporter* an article appears entitled 'Malarial Hæmaturia.' The writer claims, or intimates, that his plan of treatment is, *par excellence*, the mode to be adopted. From a rather extended experience with the disease in question, in the State of Florida, I am prepared to say that all cases are amenable to treatment by quinine, if such treatment be entered upon within thirty-six hours of the onset. As this peculiar disease is not widely known I will state briefly that it occurs only in those persons who have been for a long time subjected to slow malarial infection, without the proper administration of quinine. So nearly does the general appearance of the patient resemble that of one with yellow fever that superficial observers have named the disease 'highland yellow fever.' The distressing symptoms are hæmaturia, intense nausea, and black vomit, extreme thirst, frequently repeated chills of a congestive character, and, at, times, sinking turns amounting almost to syncope. The remaining symptoms are those common to all other cases of remittent fever. In fact, I believe the disease in question is simply an aggravated form of remittent fever. Owing to the severe gastric disturbance, it is impossible to exhibit quinine in sufficiently large doses per orem, hence it is my custom to administer hypodermatically ten grains of the bisulphate of quinine three times a day at least.

"The object being to thoroughly cinchonize the patient, the frequency of the dose will depend upon how readily that end is attained. My friend, Dr. George Troup Maxwell, of Florida, is in the habit of combining morphiæ sulph., one-eighth of a grain, with each injection of quiniæ bisulph. Saline diuretics seem to me to act well by relieving the kidneys by flushing.

"As soon as the patient becomes thoroughly cinchonized the temperature begins to fall, the urine becomes clear, all other symptoms ameliorate, and the patient goes steadily and rapidly onward to the stage of convalescence. I have never lost a case treated in this manner within thirty-six hours of its commencement. Dr. Maxwell has met with equally good results, and in a larger number of cases. The position taken by some, that 'pure blood' is passed from the kidneys, seems to me untenable. It is impossible for a reasonable physician to believe that quantities of blood so great as some claim could be lost daily and the patient still live. Is it not more reasonable to suppose that the evacuations are urine colored by the coloring-matter of the red corpuscles, which have been disintegrated by the high temperature, and the coloring-matter of which, by loss of plasticity in the blood, has been allowed to exosmose into the urine?"

A NEW METHOD FOR THE DETECTION OF HYALINE CASTS.

Dr. S. E. Armstrong, of Passaic, N. J., sends us a description of a method of manipulation devised by him to facilitate the detection of hyaline casts in the urine. He calls attention to the value of these casts from a diagnostic point of view, since the presence of albumen alone is no certain evidence of the existence of nephritis, and its absence does not necessarily imply a healthy state of the kidneys. He writes: "The hyaline cast may be said to form the stroma of all other varieties—the oily, epithelial, granular, etc. It is always found in some of the different stages of any of the forms of Bright's disease, particularly in the first stage, when a recognition of the trouble is most to be desired. The propriety of making a positive diagnosis on the strength of this one sign may justly be questioned, but there are usually other symptoms, objective or subjective, to aid us. Of course, the use of the microscope in the search for hyaline casts is an absolute necessity. Two methods are usually taught, viz., staining and tilting the mirror. The first I regard as impracticable, because it involves too much trouble; the second, because it is unreliable. I have never been able to make the desired success of either, though I must confess that I have not frequently tried the former. There is another method, which comes to me in the nature of a discovery. Others may have known of it for years; I have not been able to find a description of it in the books, although it may be there. Briefly, it consists in preparing the specimen in the usual way, between a plain slide and cover glass. Then placing the slide in position and adjusting the focus, the observer, with his eye at the instrument, presses the cover glass down with a thumb on either side of the objective, and then the slide being held firmly by the clips, pushes the cover-glass a little bit forward and back. By this means he has the advantage of *looking for an object in motion;* also, a cast, if present, is made to pass, rotating on its long axis, through different planes of the fluid, *hence through different possible foci.* By this means alone it is almost sure to be discovered. But there is still another advantage in this method, viz., as the cast revolves through the liquid it gathers on, perhaps amorphous urates, vibriones, or whatever minute object it comes in contact with, and is thus brought out into bold relief. Of course we must by previous examination exclude granular casts, otherwise *after* manipulation we may be puzzled to tell which variety we have discovered; we must also be sure we have not rolled out a white blood- or pus-corpuscle, so that it misleads us into the belief that we have found a short one of either one or the other variety. Prolonged manipulation is neither necessary nor advisable."

MOVEMENTS OF A TAPE-WORM OUTSIDE OF THE BODY.

Dr. W. E. Driscoll, of Cowan, Ind., referring to a case recently reported in The Record by Dr. Bidwell, sends the following: "A stout German girl, aged twenty-three, came to me in November, 1884, complaining of indigestion. She also complained of other symptoms, which pointed, as I thought, to tape-worm. I ordered her to fast twenty-four hours, beginning in the morning. The second morning I administered a dose of the tannate of pelletierin. This was at eight o'clock. Twenty minutes later I gave her a cathartic of jalap and calomel. I then left the house, and returned at 11 A.M., three hours after she took the remedy. She had passed the worm, had washed it clean, and placed it in the chamber. It had considerable motion, but not enough to crawl upon the floor had it been out. The patient stated that she had passed the worm at least half an hour before my return, and that it moved violently, and notwithstanding she washed it in cool water from the hydrant, it continued to move many minutes after it was voided. The girl resumed her duties the next day (that of chambermaid in a hotel). The medicine made her 'drunk,' she said, but not sick. The worm came away in one solid piece, head and all, and measured thirty-three feet."

The Disease of the Working Classes.—Aneurism of the aorta is the disease of the working classes, according to Dr. Richter (*Arch. f. Chirur.*, xxxii.). The two great causes are chronic alcoholism and severe muscular exertion. The greatest number of cases occur between the ages of fifty and sixty, next between forty and fifty, and last between sixty and seventy. The arch of the aorta has the most aneurisms, then the descending portion, then the abdominal, and last the ascending portion.

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GEORGE F. SHRADY, A.M., M.D., EDITOR

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THE VARYING RESULTS OF CONTUSION OF AN ARTICULATION.

TRAUMATISM, as is well known, is a frequent exciting cause of disease, calling into activity pathological processes which might otherwise have lain dormant for years. This, as has been pointed out by Verneuil, in Dechambre's "Dictionnaire Encyclopédique," is especially true of contusions where the tissues are bruised and rendered more vulnerable to the attacks of disease. But the results of contusion are varied, and a knowledge of the constitutional predisposition of the individual is essential to an approximatively correct prognosis of such injuries. This fact is well illustrated by the report of a series of joint injuries occurring in the practice of M. Verneuil (*L'Union Médicale*, June 19, 1886).

The first case was that of a young man, twenty-one years of age, who had fallen from a horse, striking heavily over the region of the great trochanter. The patient's mother had died of phthisis, and the man himself presented evidences of commencing tubercular trouble in the apices of both lungs. In spite of rest and appropriate treatment, the signs of osteitis of the hip soon presented themselves. The patient died in about three months from pulmonary disease, aggravated by the confinement and exhaustion consequent upon the coxitis. At the autopsy, the hip-joint was found in an advanced stage of disorganization, the head of the femur was nearly destroyed, and the joint was filled with tubercular fungoid growths.

The second patient was a strong, athletic man, twenty-two years old, who had fallen from a wagon on his hip. He suffered intense pain, was unable to walk, and was supposed to have sustained a fracture. Examination, however, showed simply a contusion of the articulation and of the surrounding tissues. The result of the injury was an acute rheumatic inflammation of the joint, which was, however, of short duration and yielded readily to treatment. The man was of a florid complexion, ate and drank a good deal, and had complained at times of slight pains in the legs, which he had attributed to exposure.

In the third case the patient was a girl, sixteen years of age, of good constitution, who had fallen violently on the left hip. She was treated at her home in the country for many months without much benefit, and was finally sent to a hospital. On admission she was found to be in excellent general health, notwithstanding her long confinement. She could not walk without the aid of crutches, and then only with difficulty. The affected hip was flexed nearly to a right angle, and the thigh could not be brought down on a plane with the other without causing tilting of the pelvis and curvature of the dorso-lumbar spine. After a careful examination a diagnosis by exclusion was made of neuromimetic coxalgia. This diagnosis was strengthened by the existence of ovarian tenderness and of areas of anæsthesia on various parts of the body. Upon placing the patient under chloroform, the limb could be at once restored to its normal position. It was retained thus for several days, bromide of potassium and various antispasmodics were exhibited, and the patient was sent home cured in a few days. Finally, there was another case, very similar to the last, in which there was apparent anchylosis of the elbow following a contusion of this articulation. The patient, a boy fifteen years old, was anæsthetized, with the object of breaking up the adhesions; but, to the surprise of the operator, the joint yielded immediately, the anæsthesia was complete, and there was no return of the contracture subsequently.

These cases are very instructive, showing, as they do, how varied may be the results of contusions of the articulations, and how much the prognosis depends upon the individual constitution of the patient. It is important also to remember that apparent anchylosis, following joint-injury, may be purely hysterical in character and easily amenable to treatment by reposition under anæsthesia and retention for a time in the normal position. Many of the alleged wonderful cures effected by the so-called bone-setters, and, in recent times, by faith-healers, are cases of this sort, and were they recognized, as they should be, by the medical attendant, the profession would be saved much discredit and quacks would be enabled to make much less capital out of their cures of cases "given up as hopeless by the most eminent surgeons."

A NEW BRAIN-FISSURE—THE PAROCCIPITAL.

PROFESSOR BURT G. WILDER, of Ithaca, has subjected a certain fissure, or, Ithacally speaking, "gyre," in the occipital lobe of the human brain to neuronymic and monographic treatment. The article may be found in the ventral portion of the *Journal of Nervous and Mental Diseases* for June, 1886. The fissure in question has heretofore been considered to form the posterior (caudal) extremity of the great interparietal fissure, but the investigations of Professor Wilder lead to a different view, and the fissure in question comes out from these investigations with a nosological enrichment and an anatomical autonomy that are most gratifying.

Professor Wilder believes that he has shown that the transverse fissure of Ecker, with which the interparietal fissures generally connects, caudal, *i.e.*, posteriorly, is not an independent fissure, but is made up of the caudal ramus and stipes of an independent fissure, *the paroccipital*. This paroccipital fissure is spoken of generally as the posterior division of the interparietal; but Wilder claims, from a study of a number of brains injected with alcohol, and otherwise prepared brains, that it is independent, and should be described as such. This new fissure is yoke-shaped, the yoke having two rami laterad,

and two stipes mesad (we are using here pure Wilderese), while the main bar is called the "zygon." We have never seen a yoke exactly like that figured by the distinguished neurotomist of Cornell. It comes [illegible] near to resembling that article, however, as the Great Dipper does to outlining a bear, and we are not disposed to complain.

Writers of anatomical text-books and republishers of Eker's cuts will have to bear in mind these two things, made probable at least by Professor Wilder's painstaking, though word-encrusted, researches:

First, The transverse occipital fissure, always figured as a separate fissure, is not such, but only a branch of the paroccipital.

Second, the posterior or occipital end of the interparietal fissure is to be regarded, perhaps, as an independent fissure (the paroccipital), and not as part of the interparietal.

Professor Wilder's article is accompanied with an excellent translation from Ithacan to English.

FIFTY YEARS OF MEDICAL MISSIONARY WORK IN CHINA.

The Medical Missionary Society of Canton, China, celebrated the semi-centennial anniversary of its existence on December 31, 1885, and a report of the proceedings, together with a review of the Society's work, have been forwarded to us.

An American physician and clergyman, Rev. Peter Parker, M.D., has the credit of establishing the first medical missionary hospital in China, fifty years ago. Dr. Parker was a pioneer in medical missionary labor, and was the means of causing a great deal of activity in this kind of work. His first hospital at Canton was directed by himself for twenty years. It was then placed in charge of another American, Dr. John G. Kerr, who is still there at his post.

The work of the medical missionaries at Canton has been a most laborious and useful one, and some of the gentlemen who have been so faithful deserve, perhaps, a wider recognition than they have received. The first Medical Missionary Society ever organized was started in 1838, by Drs. T. R. Colledge, Peter Parker, and Bridgman. Several gentlemen connected with this Society have made names for themselves in the medical history of China. Besides starting dispensaries and hospitals at various places in and near Canton, the advantages of modern surgery were given the Chinese. Dr. Parker, in 1844, performed lithotomy upon a Chinaman, "the first instance in ancient or modern times." In 1847 ether was introduced by Dr. Parker, and in 1848 chloroform was used in the Canton hospitals. In 1875 the first ovariotomy in China was performed at Hong Kong, by Dr. Young. One of the Canton medical missionaries, Dr. Benjamin Hobson, became the first medical bookseller in China. We are told that his books were very popular with the Chinese, and were extensively sold throughout that country and in Japan. As pioneer works in inculcating the principles of rational medicine, they have been undoubtedly of immense service.

Dr. Kerr, who has been at Canton now for thirty years, has been a most industrious laborer in this field. We find credited to his pen original works or translations into Chinese to the number of more than a dozen, besides the editing of a Chinese medical periodical called the *Western Doctor*.

As Dr. Kerr's works include "Treatise on Medicine" (six volumes), a "Manual of Operative Surgery," treatises on Diseases of the Eye, Skin, Hygiene, Vaccination, Syphilis, and Symptomatology, besides a work in two volumes on "Materia Medica," it may readily be supposed that the author is a gentleman of scholarly attainments as well as large productive ability and persistent industry.

Since the foundation of the original Mission Hospital at Canton there have been a score of other similar institutions established in China, and the work is constantly progressing.

AN AMICABLE DISCUSSION ON HOMŒOPATHY.

We have already alluded to the polite controversy which has been taking place in Boston between regular physicians and the homœopaths of the University School of Medicine. Dr. Conrad Wesselhoeft having last year delivered a lecture on homœopathy before the Boylston Medical Society, Dr. V. Y. Bowditch this year delivered an address on homœopathy before the Hahnemann Society. Dr. Bowditch's address was directed to the answering of a number of set questions propounded by the homœopaths. In answering these questions the lecturer presents the position of rational medicine toward dogmatic medicine in a courteous, yet logical and forcible, manner. We cannot but believe that such efforts as those of Dr. Bowditch will help to infuse into the profession a more fraternal feeling. The splitting of the profession into "schools" lowers us continually in the eyes of the public. Dr. Bowditch reminds us that while individuals disagree, there is a common bond of unity which cannot be ignored by honest men. "We are *all*," he says, "members of a profession which, when regarded in its true light, above the plane of party strife and mere selfish gain, I regard as the finest and noblest of all, and the feeling grows stronger within me with each year of practice. There is that in it far above the mere desire and ability to cure disease—that which can soothe all regrets for possible failure and disappointment in our daily work—I mean the power of human sympathy; the power which bids the young mother silently and gratefully press the hand that helped her in her hours of trial; the power that impels the dying man, at the very last, to turn to him who, though powerless to save, yet, by a word, a look, a touch of the hand, gives strength and courage to one just passing to that 'undiscovered country from whose bourn no traveller returns.' In the midst of discord and disappointment let us keep this thought before us, gentlemen, and at the end perhaps we may be permitted to see our past life, as it were, stretched before us, and feel that we have done our small share toward making our chosen profession what it should be—a blessing to all mankind."

Such sentiments as these should ever be borne in mind by the physician. They will be a better help to a successful life than a whole bookful of worldly wise instructions as to how to dress up "the physician himself."

A TEMPERANCE HOSPITAL.

A RECENT number of the *Lancet* gives an interesting account of the exercises attending the anniversary of the Temperance Hospital in London. This is a general medical institution, where a cardinal principle is the avoidance of the use of alcohol in any form. During the thirteen years of its existence, it has not been found necessary to administer alcoholic stimulants on more than three occasions. In the ten and a half years of its existence up to the year 1884, it had treated fifty-three cases of typhoid fever without alcohol; out of this whole number, five deaths occurred; twenty of the patients were abstainers from the use of alcohol, while the remainder had been drinkers to a greater or less extent. Of the fatal cases, four were non-abstainers. Statistical tables were presented showing the relative results of treatment, with and without alcohol, in acute rheumatism, pneumonia, bronchitis, etc.

While all will admit that alcohol, like all other remedies, is abused, yet we fail to see that the facts narrated with regard to this institution are particularly striking or present any especial lesson. Most of us would be very loath, to say the least, to discard the judicious use of alcohol in either private or hospital practice. The above statistics may possibly show that we could get along with less than we use at present, but that is all. Fifty-three cases of typhoid are not many. The efficacy of any plan of treatment with this number cannot be well demonstrated. The disease is in many localities a mild one, it requires no stimulants; this is the case in some years here in New York; at other times, the disease is from the outset marked by severe prostration, and requires stimulation at once. We have never found anything more useful for this purpose than the judicious employment of alcohol. While we favor all measures designed to promote temperance, we question the utility of applying prohibitory principles to hospital practice.

THE NEW SKIN DISEASE.—Dr. E. J. Bergen, of Hope, N. J., writes: "Referring to your editorial in THE MEDICAL RECORD of August 21st, entitled 'A New Skin Disease,' allow me to say that the disease mentioned is by no means confined to the Western States, although while practising in Kansas I first became familiar with it, receiving in that State the popular name of 'Missouri Mange.' The author whom you quote has given a very correct description of the trouble, and there is no doubt to my mind that, as Dr. Engstad states, the disease is due to a vegetable parasite, as I have repeatedly, during the vesicular stage, found the elongated cells mentioned. The past two years I have seen and treated a number of persons afflicted with the disease, and with uniform good results, employing the following method: First, a thorough washing with soap and water; while the skin is still soft, apply lightly a solution made in the following manner: To two ounces of slacked lime add one pound of sulphur and four quarts of water, adding from time to time water so that after boiling one hour there may be four quarts of the fluid, strain through muslin, and it is ready for use; one application is usually sufficient. The above treatment was suggested by knowing the advantage of washing with an alkaline solution before using sulphur ointment in ordinary scabies.

News of the Week.

NURSES FOR SMALL CHILDREN.—About a year ago a training-school for nurses was opened at the Post-graduate College Hospital. The profession will be interested to know that in connection with the usual advantages offered to pupil nurses, viz., training in the care of adult patients, this school has been able to give a special practice in the nursing of babies and young children in the ordinary infantile diseases—an extremely important division of their work.

MERRITT H. CASH PRIZE ESSAY.—The Medical Society of the State of New York offers to physicians of this State (New York) a prize of one hundred dollars, from the proceeds of the Merritt H. Cash Prize Fund, for the best essay on any medical subject that shall be approved by its Committee on Prize Essays. Essays for this prize must be printed by type-writer or otherwise, and sent to the Committee without any indication of authorship. The names of authors should be endorsed in sealed envelopes accompanying the essays, and bearing upon the outside mottoes or other devices which are duplicated on the essays. Essays for competition must be sent to the Chairman of the Committee, Dr. George F. Shrady, 247 Lexington Avenue, New York City, on or before December 20, 1886, in order that the Committee may have time to examine them and report at the next annual meeting of the Society, February 1, 1887.

"ROUGH ON RATS," AN ARSENICAL POISON.—Cases of poisoning by this preparation are of such common occurrence that it is well to remember that it is made simply of arsenious acid. The antidote is the hydrated oxide of iron, which can be prepared extemporaneously by adding an excess of aqua ammoniæ to the tincture of the chloride of iron. The mixture should be strained, and the magma then washed with water to remove the ammonia. Dialized iron, to which magnesia has been added, will also serve as an antidote. The sale of this preparation ought to be placed under the same restrictions as that of any other active poison.

SPAYERS RUN MAD.—Under this title *Leonard's Illustrated Medical Journal* quotes from an editorial in THE MEDICAL RECORD of last April, which it says was written "in defence of the recent craze for the spaying of women," and adds the comment: "If the arguments of the abortionist, the roué, and the prostitute are to become the arguments of the laparotomist, it is about time gynecology became one of the lost arts." This is very discouraging. Esteemed contemporary, we were on the other side. Read the article again, and try the effect of a second stroke.

THE DEATH OF DR. HERMANN MAAS is announced. Dr. Maas was professor of surgery in Würzburg, and was but forty-four years of age at the time of his death.

MEDICAL STUDY IN JAPAN.—The number of students in the Imperial University at Tokio is said to be nearly one thousand, a large portion of which are students of medicine. Five of the professors in the medical faculty are Germans.

Hydrophobia in Camels.—Several cases of hydrophobia occurred some time ago among a herd of camels in Algeria. The animals exhibited unmistakable symptoms of the disease, but there were no evidences of their having been bitten. A mad horse had gained admittance to the place where the camels were pastured, and it is supposed that the disease was transmitted through saliva which had fallen from the horse's mouth upon the grass, and the camels had received the poison through abrasions in the mouth from which these animals frequently suffer.

A New Russian University.—The Russian journals report that a private university, reserved exclusively for women, will soon be opened in Moscow. The university will embrace three faculties: philology, mathematics, and natural sciences. Under the latter will be included a course for medical study.

Professor Semmola, of Naples, has been made senator of the kingdom of Italy. This is an honor which is seldom conferred upon any but politicians and in reward for political services, and is therefore so much the more noteworthy when given in recognition of purely scientific labors.

The Value of Antisepsis.—A member of the medical profession has published a fee list, in which he estimates the value of his services at the rate of $500 for a non-septic dressing, while a dressing in septic cases is made at the comparatively cheap price of $25.

Sozolic Acid.—This substance, called also orthoxyphenylsulphurous acid, is said to possess superior antiseptic properties. It has been used internally as well as externally in erysipelas, small-pox, pneumonia, phthisis, and other affections, with, it is claimed, excellent results.

A New Journal.—The first number of the *Jornal de Medicina e de Pharmacia* appeared on July 3d. It is published in Paris in the Portuguese language, and is intended for circulation in Brazil. The editor is Dr. Simeon da Fonseca.

Medical Practice in Belgium.—A complaint has been made in the Belgium Senate that foreign physicians are allowed to practise in that country without obtaining a diploma from a Belgium university, thereby doing an injury to the native practitioners. The Senate was requested to pass a law to prevent physicians with foreign diplomas from practising in Belgium.

Cremation in New South Wales.—In the Legislative Council of New South Wales, on June 3d, Dr. Creed introduced a bill entitled, "To authorize the establishment of sites and apparatus for purposes of cremation." The object of the bill is to legalize cremation under certain necessary restrictions.

Honors to an Irish Surgeon.—The Earl of Aberdeen, Lord Lieutenant of Ireland, recently conferred the honor of knighthood on Mr. Stokes, President of the Royal College of Surgeons in Ireland.

Cholera in Japan.—Recent reports state that cholera is prevalent to an alarming extent in Yokohama and Tokio, and also in Corea, in which country the mortality from the disease is very great.

An Untimely Death.—A female physician, Mlle. Ribard, who went with the expedition that accompanied Paul Bert to Tonkin, has died of dysentery in the hospital at Quang Yen. She made a specialty of diseases of the eyes, and had been very successful, having cured many of the mandarins, and was just about to perform an operation on the king's mother when she was prostrated by the disease which terminated her life.

Ethoxycaffeine, a derivative of caffeine, discovered by Filehne, has been used by Dujardin Beaumetz in the treatment of migraine, with, it is said, very good results.

Night Medical Service in Vienna.—Baron Mundy has recently induced the municipal authorities in Vienna to establish a night medical service similar to that in existence in Paris and New York.

A Night Pharmaceutical Service.—The municipal council of Paris has decided to establish a night pharmaceutical service. In order to procure the medicines prescribed by the physicians of the night medical service, the patients must apply to the nearest police station, whence they are directed to the nearest apothecary whose name is inscribed upon the list. The medicines will be paid for by the city if the patient's circumstances are such as to require it; but if able, the patients must pay for the prescription, and thirty cents in addition as a compensation for the druggist's night work.

Hydrophobia is said not to exist in Lapland; but two dogs brought from that country, having been inoculated by M. Pasteur, contracted rabies, thus proving that Lapland dogs are not refractory to the disease.

Small-Pox in Zurich.—In May, 1883, owing to the clamor of the anti-vaccinationists, the authorities at Zurich abolished compulsory vaccination. For the twenty-seven months prior to this time there had been but 7 deaths per 1,000 from small-pox. In 1884 there were 11 deaths per 1,000; in 1885 there were 72, and in the first three months of 1886 for every 1,000 deaths from general causes there were 85 from small-pox.

Medicine in Tennessee.—It is said that incompetent physicians and quacks of all kinds are flocking in great numbers to Tennessee, and in some places actually supplanting the regularly educated medical men.

Poor Chicago.—The St. Louis *Weekly Medical Review* says that Chicago maintains six medical societies, seven medical colleges, and eight medical journals.

Inebriety cannot be prevented by throwing the responsibility on the inebriate, and punishing him for this, as if for crime. He is a sick man, and must be taken out of his surroundings and fully quarantined until he can recover.—*Quarterly Journal of Inebriety.*

A New Caustic.—It is reported that a mixture of calomel and benzol makes a very efficient caustic for the removal of epitheliomatous growths.

Medical Rapacity.—The London *Standard* tells of a surgeon who demanded a hundred guineas for a slight operation performed in his office, the entire visit lasting only fifteen minutes. After coming down successively to fifty and twenty-five, the surgeon finally accepted ten guineas on account.

Iodoform for Army Use.—Professor Mosetig-Moorhof considers that iodoform is the best antiseptic in time of war. It does not irritate the wound, and its action is invariable and permanent. At Belgrade, where this antiseptic was used, there were only 19 deaths among 824 wounded. Iodoform is less caustic than other antiseptic substance.

Treatment of Burns.—It is said that essence of peppermint painted over a burn will quickly relieve the pain.

Yellow Fever at New Orleans.—A Norwegian vessel from Aspinwall recently arrived at Ship Island quarantine, New Orleans, with six of her crew of twelve men down with yellow fever. No danger of the spread of the disease exists, as the vessel was quarantined and all necessary precautions taken.

The Pasteur Institute has received a donation of 100,000 francs from the Russian Government.

Dissection in Washington.—President Cleveland has vetoed the bill legalizing dissection in the District of Columbia, on the ground that the bill failed to provide sufficient safeguards against the delivery of bodies to unauthorized persons.

Massage in Glycosuria.—Finkler recommends massage in the treatment of diabetes. He has employed the method a number of times, and asserts that the quantity of sugar is considerably lessened, even when the patients continue with a mixed diet. Profuse perspiration begins shortly after the commencement of treatment, and the patients so treated almost always increase in weight.

Oxalic Acid as an Emmenagogue.—Dr. Poulet recommends oxalic acid very highly in the different forms of amenorrhœa, and says that no other emmenagogue can compare with it in the certainty of its effects. He uses the following preparation: Oxalic acid, 30 grains; syrup of orange-peel, 2 ounces; water, 6 ounces. The dose is a tablespoonful every hour.

Valerian in Diabetes.—According to M. Demange valerian is an excellent remedy for use in diabetes insipidus. It is given in doses of from two to four drachms a day.

Congenital Anidrosis.—At a recent meeting of the Obstetrical Society of Boston, Dr. C. E. Stedman reported a case of eclampsia, in which he had given three doses of one-third of a grain each of pilocarpine, without inducing perspiration. The hot-air bath was also ineffectual. He afterward learned that the patient never perspired, even when in health.

A National Orthopedic Association.—The *Medical Review* enters a protest against the movement which is said to be on foot, to form a subsection of orthopædics to the section of Diseases of Children of the American Medical Association. It says that orthopædic surgery is of sufficient importance to deserve a section to itself, and proposes the formation of such a section, or else the establishment of a national society of orthopædists. The latter would seem, under the circumstances, to be the more feasible plan.

Not a Good Opening for Physicians.—There would seem to be danger of a plethora of physicians in Kansas City, for the *Medical Index* of that city says that nearly fifty physicians have settled there during the past two months.

The Second Congress of Russian Physicians will be held in December of this year, in Moscow. The president of the association is Professor Sklifassovski.

A Cure of Stricture by Suggestion.—M. Ramey, of the Military Hospital of Saint Martin, recently reported a cure of spasmodic stricture of the urethra by hypnotic suggestion. Internal urethrotomy had previously been performed without relief. The patient was hysterical, and could be readily hypnotized.

A Handsome Bequest.—Dr. Orjekhovski, who died recently in Warsaw, left over 200,000 roubles to a charitable society of that city.

Dr. Ferreira dos Santos, who was commissioned by the Brazilian Government to study Pasteur's methods, with a view to the establishment of an institute for the prevention of rabies in Rio de Janeiro, has arrived in Paris. He brought with him a letter to Pasteur from Dom Pedro II., and also the grand cross of the order of the Rose.

M. Brown-Séquard has been elected titular member of the Académie des Sciences, having received twenty-eight votes more than his competitor, M. Germain Sée.

Gastric Catarrh in Moscow.—An unusually large number of cases of acute catarrhal gastritis have occurred in Moscow in the last few months. No cause has been found for the prevalence of the disease. Bacteriological examinations of the excretions have given negative results.

Condemnation of a Midwife.—In Altenburg, recently, a midwife was sentenced to imprisonment for two years, because she advised the parents of an infant suffering from ophthalmia not to seek medical advice. The only treatment consisted in local applications of chamomile tea, and the child lost one eye in consequence.

Auscultatory Percussion.—In an excellent historical article on auscultatory percussion in *Lo Sperimentale* for July, 1886, by Dr. A. Bianchi, the author gives full credit to Drs. Cammann and Clark for priority in the use of this diagnostic method. Auscultatory percussion has been rather extensively practised of late in Italy, but the first writers on the subject did not seem disposed to acknowledge the claim to priority of the American physicians.

A Chair of Evolution.—Herr Paul v. Ritter, of Basle, has signified his intention of leaving 300,000 marks to the University of Jena, for the purpose of promoting the study of philogenetic zoology according to the Darwinian theory. He will give 130,000 marks at once, and the balance will be paid after his death. Professor Haeckel, of Jena, an enthusiastic teacher of evolution, proposes to use the gift for the establishment of a professorship of zoology to be called, after the donor, the Paul v. Ritter Chair of Zoology.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING,

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, *and* 13, 1886.

MEETINGS OF SECTIONS.

SECTION IN SURGERY.

THURSDAY, AUGUST 12TH—THIRD DAY.

THE President of the Section, MR. ERICHSEN, took the chair shortly after 2 P.M.

DR. GEORGE HARLEY, F.R.S., then read two papers on

HEPATIC PHLEBOTOMY AND PUNCTURE IN HYPERTROPHIC CONGESTIONS OF THE LIVER.

Only one paper on the above subject had been announced, but Dr. Harley divided his paper into two, and thus secured fifteen minutes for each, a proceeding which called forth an indignant protest from one gentleman present.

In his first paper he described two

CASES OF HEPATIC PHLEBOTOMY,

in which he had withdrawn about a pint of blood from the liver by a trocar. These cases were published a month or two ago, and have already been referred to in THE MEDICAL RECORD.

In his second paper he compared

THE PUNCTURE OF GLISSON'S CAPSULE

to that of the tunica vaginalis in orchitis (which, however, I may remark, is not much practised), to acupuncture in sciatica, and to incising a whitlow. He described cases in which he had performed the operation, and said he used trocars varying in size from Nos. 2 to 5 of the liver trocar. Each one was from one to two inches in length. In one case, although the liver was as hard as a fibroid tumor, diminution in size followed the operation and the patient thought his liver became much softer. One of his cases was that of a gentleman who had lived many years in the tropics (South America). Being very wealthy, he had lived very freely, partaking of champagne unsparingly. As a consequence of this he began to suffer from hepatic symptoms, and when he came under treatment was suffering severely. He was anxious to obtain immediate relief, as he desired to leave England shortly.

THE OPERATION OF PUNCTURE OF THE LIVER

was proposed to him, to which he readily assented, and his liver was accordingly punctured in several places. He received great benefit from the operation, and returned to South America in a much better state of health. The improvement continued for some months. He then began to indulge in excesses again, thinking he could do so with impunity. This caused a relapse, and he had again to place himself under treatment.

MR. KNOWSLEY THORNTON then read a paper on

THE SURGERY OF THE LIVER.

and related some cases in which that viscus had been surgically dealt with. In one of his cases, what had been supposed to be ovarian disease proved to be a large, single hydatid cyst of the liver, of such a size that the gall-bladder was displaced into the right iliac fossa, had become adherent to the uterus, and (before the operation) was taken for the right ovary. The cyst was cleared out, the sac then sponged out with pure tincture of iodine and sewed up with the same sutures as those uniting the abdominal wound. The patient did well. Another case was that in which puerperal peritonitis had caused adhesion of the gall-bladder. Having related a case in which he had successfully removed a number of gall-stones from the gall-bladder, Mr. Thornton described one in which he had opened an abscess of the liver through the pleura, having previously sutured the two layers of the pleura together, so as to form a channel through which the pus might pass without entering the cavity of the pleura. He approved of antiseptics and, among them, he preferred a weak solution of corrosive sublimate. He believed in using large quantities of (weak) antiseptic solutions, so as to wash away every diseased particle. Where you could not destroy the virus, attenuate it. The liver should be treated surgically in the same manner as other organs.

MR. WILLETT then read a paper on

CHOLECYSTOTOMY,

of which he was the author jointly with Mr. W. A. Meredith. Mr. Willett described a case occurring at St. Bartholomew's Hospital, London, in which Dr. Gee thought obstruction of the common hepatic duct had occurred. The abdomen was opened, and the gall-bladder was found to be distended with sixteen ounces of clear serum, which were drawn off. There was complete obliteration of the common duct. For about a week an almost continuous flow of fluid took place from the opening made into the gall-bladder. Should

CUTTING INTO AND DRAINING THE GALL-BLADDER

be performed until aspiration had been tried, especially when there was a possibility of finding the duct obliterated? Mr. Willett suggested

THE DESIRABILITY OF MAKING AN ENTERO-CYSTIC FISTULA,

so as to render the operation complete. It had occurred to him in this case that he might do this, but he refrained. In future cases of the kind he would certainly do so. There were two sites at which this fistula might be formed. One was at the junction of the first and second parts of the duodenum; the other was where the ascending joined the transverse colon. From a physiological point of view the duodenal site was preferable, but the operation was more difficult of performance there, the space in which to work being smaller and deeper. The physiological reasons were also less valid than might be supposed, because examination of the secretion from the liver in these cases showed the biliary constituents to be greatly diminished in amount, the secretion being, in fact, little but serum. It was much easier to make a fistula into the colon. The colon and the gall-bladder lay side by side, and almost in the line of the incision. The artificial opening into the gall-bladder should be made at its lowest point, as there was then a probability of the gall-bladder ultimately contracting and forming merely a duct.

MR. HOWARD MARSH then read a paper on

A CASE OF ABSCESS OF THE LIVER, OPENED BY A SINGLE INCISION.

The abscess proved to contain thirty-six ounces of pus. He thought the operation might be safely performed on children. Abdominal surgery in children, he remarked, was as safe as in adults. Ovariotomy, removal of the kidney, gastrostomy, and operations for the relief of intussusception, had all been successfully performed on children. In operating on children it was desirable to avoid loss of blood as much as possible, and also that the operation should be completed with as little delay as possible.

Mr. Lawson Tait (Birmingham) then read a paper on

THE SURGICAL TREATMENT OF DISEASES OF THE LIVER.

Mr. Tait had operated on the liver in fifty cases in all. He exhibited a table of his cases, and made a few remarks on some of them. There were seven cases of

EXPLORATORY INCISION INTO THE LIVER,

of which one terminated fatally. Dr. Clifford Allbutt and himself had thought they felt a distended gall-bladder, but at the time of the operation they found what they had taken for the distended gall-bladder to be a colloid mass in the liver. He had performed hepatotomy in thirteen cases, all of which recovered. Of this number, nine were cases of hydatids, two were cases of cysts, one was a case of gall-stones, and one was one of tumor of the liver. The remaining cases (thirty) were all cases of

CHOLECYSTOTOMY.

One of those was a case of cholæmia, two were cases of distended gall-bladder, one a case of suppurating gall-bladder, two were cases of gall-stones crushed, and the remaining twenty-four were cases of gall-stones. Out of the thirty cases, one (a case of gall-stones) ended fatally, and two died since the operation from the progress of cancer of the liver. One of these was a case in which the operation was undertaken for distended gall-bladder, and the other was one in which it was done to remove gall-stones.

Mr. Tait said the secondary results were successful in all but one of the forty-six patients who recovered, and in that one jaundice had been present. Where jaundice was present, his experience was that the secondary results were often not satisfactory, and he therefore looked on cases in which jaundice was present with grave suspicion. He referred to a case in which he had operated on the kidney and removed a mass of gall-stones which had found their way down. The disease was really hepatic in origin, although it was cured by operating on the kidney. His thirteen cases of hepatotomy had been performed mostly for dilatation of the liver. In one case of gall-stones for which he performed hepatotomy, he

REMOVED A PIECE OF THE LIVER SUBSTANCE

in order to afford space for the removal of the gall-stones.

Mr. Erichsen having said a few words, the discussion was opened by Dr. Royle (Manchester), who described a case in which sixty gall-stones were found in the gall-bladder, and the patient had never passed a gall-stone and never had a symptom of any.

Dr. David Boys Smith (Netley) said puncture of the liver had been claimed by Dr. Harley as a novel operation, but it was the most ancient operation in the world. It had been performed by the Chinese for ages, and was systematically done in China now. He had had twenty-five years' practice of it. He described a case in which, while searching for pus, the liver was punctured in all directions. He did not find any pus, but the patient was benefited. As one of the professors at the Army Medical School, Netley, he protested against Dr. Harley's insinuation about the erroneous teaching of the schools as to the treatment of hepatic affections. He wished Professor Maclean had been able to be present, as he would have said how many times he had done it. He would, however, read one sentence from a letter from Dr. Maclean to Dr. Harley. Dr. Maclean wrote that he had "often done it and withdrawn five or six ounces of blood with benefit." Dr. Smith concluded by referring to a case in which the liver had been punctured and a fatal result (from hemorrhage) had ensued.

Dr. Cullimore claimed for Dr. Harley the credit of the operation, and defended the

PRACTICE OF TAKING BLOOD FROM THE LIVER.

He said he had himself suffered twice from abscess of the liver, and leeches placed over the liver gave him great relief.

Mr. Willett, Surgeon-Major Black, Mr. Prankerd, Dr. Ewart, and Dr. Johnson (late of Shanghai) also spoke and discussed the treatment of hepatic disease, both medically and surgically. Some of the speakers thought surgical measures should not be adopted until mercurials, salines, and other remedies had had a fair trial.

Dr. George Harley then replied. He repudiated the statement that his idea was not original.

ACUPUNCTURE OF THE LIVER

had frequently been done. So had exploring for an abscess. But this was not hepatic phlebotomy. Dr. Boys Smith had referred to Dr. Maclean. He thought the latter ought to ask to be saved from his friends. He had in his hand the letter from Dr. Maclean to himself to which Dr. Smith had referred, and from which Dr. Smith had quoted one sentence. What Dr. Maclean did say was that he had "with a needle drawn a few ounces of blood from the liver." This was a very different thing from the performance of hepatic phlebotomy as advocated by himself. As to his statement as to the teaching of the schools, he could only say that he had studied five years in the schools of England and Scotland, and six years on the Continent, and had never yet been taught to operate on the liver. It was always laid down that operations on the liver were not to be attempted. He had been taunted with having only two cases of hepatic phlebotomy, and with not trying other remedies. The fact was, patients were not to be met with every day who would submit to the operation.

As to the second objection, in his cases *everything* had been tried—mercurials, salines, and every conceivable remedy—and without effect. In one of his cases it was only when the patient was much reduced, suffering from dropsy and unable to stand, that permission to operate was given. He operated on her in that condition simply because he could not get leave to do so before.

Dr. Simon Fitch (Nova Scotia) then read a paper on

THE DOME-TROCAR AND A CURIOUS QUESTION OF PRIORITY,

and Associated Instruments in Paracentesis, Aspiration, Transfusion, Ovariotomy, and Tunnelling the Enlarged Prostate.

Dr. Fitch showed his trocar and explained the method of using it. At the conclusion of his demonstration a rather lively passage-at-arms took place between him and Dr. Ward Cousins, a Vice-President of the Section. The latter said it was the same as his own trocar (barring two trifling modifications, which he mentioned), and he was much obliged to Dr. Fitch for taking up his idea. Dr. Fitch rejoined that he should be very glad to see any book or pamphlet in which Dr. Cousins had described his trocar, and asked how long it was since Dr. Cousins brought his trocar out? Dr. Cousins having admitted that it was only a few years, Dr. Fitch rejoined that his was fifteen years old, and, on Dr. Cousins retorting that he should have brought it out before, said he had. It was described in the "Proceedings of the International Medical Congress at Philadelphia" (1876), and figured in a London surgical instrument-maker's catalogue for 1871. The whole scene was most amusing. No one, however, could imagine for one moment that Dr. Cousins had really appropriated Dr. Fitch's idea; his indignation was too genuine. Dr. Cousins is the inventor of so many useful appliances that he can well afford to lose the credit of one.

Mr. Edmund Owen then read a paper on

PSOAS ABSCESS; WHEN AND HOW TO OPEN IT.

Mr. Owen said there was no disease the treatment of which had derived a greater impetus from the introduction of antiseptics than psoas abscess. By antiseptics he did not mean the use of the spray. The spray was a cooling down in more senses than one, and the surgeon did not now have to look through a cloud of carbolic vapor at his patient. By the use of antiseptics he meant antiseptics as used by the great masters in surgery, whether by Tait, Gamgee, Savory, or Lister. Twenty years ago every surgeon preferred to leave a psoas abscess alone so long as it remained unopened. Stanley, writing forty years ago, said a psoas abscess might disappear. Could it? Mr. Owen said that in an extensive out-patient experience, extending over years, he had only seen one case in which, after a fusiform tumor had been detected ascending along the iliac fossa, he had seen it disappear. Aspiration was useless, for it refilled. When evacuation of the abscess was performed, it should be done thoroughly, and no useless temporizing measures made use of. During delay the pus would be burrowing out for itself an extensive ramifying cavity. A free anterior and posterior opening should be made, and the wound thoroughly drained. The sac should be washed out with a warm antiseptic lotion, and a drainage-tube the size of a cedar-pencil passed through. The wound should be covered with sublimate gauze, then some oakum placed over it, and the dressings changed as seldom as possible. He had employed as the antiseptic lotion a warm solution of corrosive sublimate (1 in 1,000). He should, however, in future discard the use of the sublimate, as he had had a case which died in four hours with black urine, due, he believed, to the absorption of the sublimate. Mr. Owen, in concluding, summed up his conclusions as follows: 1. Spontaneous absorption of psoas abscess is impracticable. Sooner or later it must be evacuated, either by nature or art, and the advantage is on the side of art. 2. The sac should be opened both in front and at the back, and irrigated. For a small abscess a single opening at the back might suffice. 3. Antiseptics should be employed. 4. The operator should bear in mind that pus might collect on the opposite side after evacuation of the abscess. If any rise of temperature take place, a second abscess should be suspected, and, if found, evacuated at once. Bilateral abscesses should be attacked simultaneously, as their cavities frequently communicate. In reply to a query from a member as to the source of his method, Mr. Owen replied that it was neither English, French, Scotch, nor Italian, but Welsh, thereby signifying that the idea was his own, and that he had not borrowed it from anyone.

Mr. William Adams then read a paper on

THE TREATMENT OF CONGENITAL DISPLACEMENT, THE SO-CALLED CONGENITAL DISLOCATION OF THE HIP-JOINT, BY LONG-CONTINUED RECUMBENCY AND EXTENSION.

A model of Mr. Adams' new extension couch was exhibited in a room adjoining that in which the meetings of the Section in Surgery took place.

SECTION IN OTOLOGY.

Wednesday, August 11th—Second Day.

ADVANCES IN OTOLOGY.

Mr. G. F. Hodgson, of Brighton, delivered his Presidential address, in which he traced the history of the progress of this department of surgery during the last half-century, and concluded by expressing a hope that the Section would not suffer by being presided over by a general practitioner.

Dr. Grant then read a paper on

PULSATING TINNITUS.

and another on "The Use of the Tuning-fork." In some remarks on this Dr. Erskine explained Hartmann's method of recording deviations of hearing-power. And Dr. Ellis proposed to relate a case and exhibit the patient at the dispensary the next morning, when cases were to be exhibited by others.

Mr. Cresswell Baber was then called upon for his paper on

THE EXAMINATION OF THE NASAL CAVITIES FROM THE FRONT.

which he read, pointing out as he went to the appearances to which he most wished to draw attention on enlarged diagrams, which he had had copied on a suitable scale from the illustrations to his recent work on the nose. He drew particular attention to the tubercle of the septum, and the manner in which this part causes variations in the image. This paper was well received, and Mr. Spencer Watson congratulated the author on the accuracy of his diagrams and the care which he had taken in recording graphically so many different images.

Mr. Lennox Browne said he had found great difficulty in representing the anterior image, and he did not think that any considerable success had been reached in such conventional diagrams of this part. At any rate, they were far less useful than those which were made of the larynx, and he fancied they would not be of much service to the general practitioner.

Dr. Grant thought that the section of the nasal cavities exhibited by Mr. Baber would afford a more satisfactory basis for recording cases than the view obtained in anterior rhinoscopy.

Mr. Baber replied that his diagrams were not intended so much for the general practitioner as for those who devoted much attention to diseases of the nose, and he had therefore brought them before the Section of Otology; and he handed round a sheet of clinical outlines intended for recording such cases on which, besides the anterior view, there was also a diagram of the posterior image as well as the sections which Dr. Grant preferred; and as they were easily detached, any or all could be used as found convenient. As Mr. Baber had mentioned that he had recorded on his diagrams between three hundred and four hundred cases, and as neither of his critics professed to have used them once, the impression conveyed was that the objections were futile.

Dr. Greville Macdonald then read a paper on "The Functions of the Nose." It was of quite an elementary character, and indeed could scarcely be otherwise, as the writer has only lately begun to study the subject.

Dr. Ellis then related a case of "pulsating tinnitus," and proposed to exhibit the patient the next day.

The Section then adjourned.

SECTION IN THERAPEUTICS.

Wednesday, August 11th—Second Day.

Dr. Lauder Brunton delivered the address. He recognized four stages in the development of medicaments: In the first crude drugs were employed, prepared in the roughest manner; in the second these were converted into more active forms, as extracts or solutions; in the third active principles were employed, as morphine and quinine; in the fourth we try to make substances possessing the action we desire. We are now just entering on what may be called the "iron age of pharmacology," which began, about twenty years ago, with the researches of Fraser and Crumbrown upon the connection between chemical constitution and physiological action. He then entered upon a curious and somewhat strange analogy between the flesh-hooks of Shiloh and the qualities of drugs—which illustration he labored at for a considerable part of the address. He concluded with a reference to

the small amount of pain inflicted upon animals, never wantonly and never carelessly, comparing that with the suffering endured by patients, and thus justifying experiments which have been denounced by fanatics, while in reality they advance the means of relieving pain and prolonging life, not only in man but in animals themselves.

Professor Oscar Liebreich then read a paper on

LANOLIN,

the new fatty substance with which his name is associated, in which he dwelt upon its physical properties and therapeutical uses. He did not profess that it was an absolute novelty, for it had been employed at a very early period, but only in a very repulsive form. In reviving its use he has obtained it in a state which leaves nothing to be desired, and the large quantity of water with which it will unite and the great readiness with which it will pass through the integument, carrying with it the medicaments with which it is charged, place it at the head of all substances for the basis of all ointments. Specimens of lanolin—pure and impure—were handed round, and the President thanked the learned professor for his paper.

Dr. Shoemaker, of Philadelphia, read a paper on

HAMAMELIS VIRGINICA,

in which he expressed considerable confidence in the value of this drug.

Dr. Edward Mackey, of Brighton (Vice-President of the Section), then read an interesting paper on

THE USE OF RESORCIN IN GASTRIC AND CUTANEOUS DISORDERS.

He drew attention first to its antiseptic properties, pointing out that a two per cent. solution retards putrefaction, but does not irritate the tissues. Sometimes a five per cent., or even a ten per cent., solution may be employed, but then considerable irritation may be excited, while the weaker lotions are generally effectual. Internally he had usually employed five-grain doses. It is not nasty, but the taste is easily tolerated by almost all patients. He usually gave it in water, with a little glycerine, or in chloroform water; doses of twenty or thirty grains have been given, but they give rise to febrile disturbance, while from thirty to sixty grains cause giddiness, prostration, anxiety, collapse, and unconsciousness. He therefore did not approve such doses. It was quite true that full doses lower the temperature, but the effect is only temporary and of doubtful advantage, so that resorcin may be said now to have passed out of the list of antipyretics. Two cases of gastric ulcer, treated in the County Hospital, with five-grain doses three times a day, began to improve as soon as the resorcin was taken, and completely recovered under the treatment. In one of these anæmia was so extreme that he had resorted to hypodermatic injection of dialysed iron, as employed by Dacosta. Twelve cases of gastric catarrh among the out-patients of the hospital, varying in age from twenty-seven to fifty, all of whom had been vainly treated by bismuth, magnesia, soda, prussic acid, and the usual prescriptions, soon got better under five-grain doses of resorcin *ter-die*. The drugs seem to stimulate and disinfect the mucous membrane. In children's diseases he had not found it so successful; he had given it in doses of two and three grains to children, but found that it neither relieved diarrhœa nor disinfected the evacuations. In skin diseases it was a valuable parasiticide; a ten per cent. solution sometimes relieved psoriasis. On ulcerating mucous surfaces it improved the condition and disinfected the discharge, as for example in otorrhœa.

Mr. Wilberforce Smith said that it seemed to act like carbolic acid, and he would like to ask whether the author had separated the effect from that of physiological treatment, which was often so effectual. Dr. Mackey replied that he had already pointed out in the paper the differences between resorcin and carbolic acid, the most important being that it was decidedly less irritant. As to physiological treatment, of course, his two in-patients had the benefit of rest, proper diet, and hospital care; but among the out-patients there was little opportunity for securing such benefit, and all we could do in such cases was to give physic, as the patients could not, as a rule, comply with other directions.

A DISCUSSION ON ANTIPYRETICS

was then introduced by Dr. Carter, of Liverpool, who had a number of charts recording cases illustrative of his remarks. He placed quinine at the head of all antipyretics, especially where any malarial influence was suspected, and he saw many malarial fevers in the Liverpool Infirmary. He usually gave a few doses of ten grains, and did not approve the enormous quantities often advised, and would fear to give them where a tendency to coma was observed. In some of these rare cases, when the temperature suddenly ran up to 106° F., he preferred cool baths, and perhaps a blister to the nape of the neck. In one instance he saw sinapisms applied to the calves without rousing the patient, although they had been so assiduously used that ulceration ensued and lasted a long time. Salicylate of soda he found very certain in its effects and the best remedy in rheumatic cases, but it had the disadvantage of sometimes causing great depression, and therefore for non-rheumatic patients he did not use it. Antipyrine he had found very effectual, but the effect was evanescent, and therefore the doses had to be given at frequent intervals; he did not give large quantities, but contented himself with ten grains every hour at first, and when the temperature had been reduced, at longer intervals. He mentioned some interesting cases, showing the certainty with which this drug will lower the temperature; one or two of which had converted a house surgeon, who was very sceptical of this, into a full believer. Curiously, he found antipyrine, though generally so certain, of no use whatever in severe febrile anæmia, and this corresponds with the observation that has been made that it produces no effect on the blood; the form, color, and other properties of the globules being unaltered by the drug. In other cases he considered antipyrine the best agent, and likely to become the general favorite.

Dr. Leech thanked Dr. Carter for the careful manner in which he had introduced this discussion, and suggested that each antipyretic may have its own sphere of action. In anæmia all of them frequently failed; on the whole, quinine is the best; he had given the large doses recommended by Liebermeister, and endeavored to time the doses in the manner advised by him. He thought that we should carefully study the duration of the action of our remedies, and that this was especially desirable in using antipyretics.

The time having now expired, the further discussion of this subject was adjourned.

Dr. Prosser James read his paper on

LOCAL ANÆSTHESIA.

He alluded to former efforts by himself, as well as others, to obtain substances which by local application would produce anæsthesia. Referring to Sir Erasmus Wilson's and Dr. Bill's discovery of the power of carbolic acid on the skin, he had followed up its use, largely diluted, on mucous membranes, and shown it to be a most valuable anodyne, as stated in his works on "Sore Throat," and on "Laryngoscopy." Further, he had employed it in combinations.

The sulpho-carbolates fail, but he had succeeded with simple carbolates of sodium and other bases, and now introduced them as valuable remedies, especially in the form of spray. Cocaine had then been introduced, and its place and power have become recognized. On account of its cost he had endeavored to find a substitute in caffeine, theine, theobromine, guaranine, etc. He had prepared a number of salts of these bases, forty or fifty of

which he exhibited last year in the annual museum, at Cardiff.

His method of ascertaining the effect of drugs on mucous membranes was to select a suitable patient, examine the larynx, then apply a solution and again examine at frequent intervals. In this way he had made many experiments, as, *e.g.*, those on expectorants, related in his work on "Respiratory Therapeutics," and which confirm those of Rossbach and Petronne on animals after section of the trachea. Referring to the action of cocaine, he had shown that it blanched the part to which it was applied, an observation simultaneously made by American observers. This effect he had sometimes utilized in local congestion, and he related a remarkable case in which highly vascular, warty growths had disappeared from the larynx after repeated applications of cocaine and sprays of a salt of caffeine. He then became desirous to determine whether any change in the local temperature could be proved to occur coincidently with the diminished vascularity. Of course the larynx could not be employed for such a research, and he was driven to experiment on the male urethra. A table of temperatures in this part was read, showing that in some instances a fall of fully 1° F. occurred when the urethra was rendered anæsthetic by cocaine. Similar, but less decisive, results were obtained by salts of caffeine and other alkaloids, and the author caused some amusement by remarking that his experiments, though so far decisive, were not very numerous, as patients with disease of the urethra did not fall in his line of practice; while, too, a healthy surface ought to be used, and gentlemen were not easily persuaded to submit to experiments on this part. He thought the facts noted worth reporting to the Section.

THE PRESIDENT thanked Dr. Prosser James on behalf of the Section for "his very interesting and valuable communication," and suggested that the discussion on it might very well be taken in connection with that on analgesics, which came next, if agreeable to the author and audience. This suggestion, being unanimously approved, was adopted, and the debate on analgesics began. The

DEBATE ON ANALGESICS

was introduced by Dr. Spender, in a paper rather too long for such a purpose, but full of interest. After some introduction, he said we come to close quarters with pain in neuralgia, calculus in the ureter, gall-stones, gout, etc., and patients demand relief at all cost. In such cases opium, or its alkaloid, still remained our chief agent. In supra-orbital pain, however, it was of little use, while ten grains of quinine, followed by a few doses of five grains, would cure. Gelsemium or chloral were not to be compared in these cases, especially when, as usually, there is a touch of malaria present. Again, in night pain in a syphilitic patient, analgesics of such a kind give only temporary relief, while iodides will, after a few doses, permanently remove the suffering. So salicin and arsenic are relatively indirect analgesics in other cases. Iron, in myalgia and neuralgia, has a similar relative value. Bromides only dispose to sleep, and in slight pain appear analgesic; but if the pain is sharp enough to baffle sleep, it defies bromides. They bring the system into a placid state disposing to sleep, but if this is disturbed the analgesic charm is broken. He referred to doses, and illustrated the subject by the different effect in various quantities of tartar-emetic, of opium, and morphia. Bleeding relieved vascular tension. Ergot raised motor force, and possibly sensation. He next urged that we economize our power by combining drugs, instancing morphia given with bromides, aconite with quinine, hemlock with several others, quinine with arsenic in herpes zoster, or with colchicum in gout, etc. He thought that, as surgeons have their instruments all in place, so as to find just what they want, so physicians should have a cupboard where all their analgesics could be seen in order at a glance, with hypodermatic syringes and other means of employing them. He concluded with a recognition of psychical analgesics, and the importance of recognizing not only the mental influence which by the sight of the dentist dismisses tooth-ache, but the spiritual comfort which the presence of a wise, christian physician may insensibly impart.

The PRESIDENT thanked Dr. Spender, and asked Dr. Brown-Séquard to follow.

DR. BROWN-SÉQUARD then gave an account of his discovery that a jet of carbonic acid gas, or of the vapor of chloroform, projected forcibly on the larynx, produced anæsthesia. Other agents will do it, but these are the best. After the larynx is thus anæsthetized the influence extends to other parts, and he has rendered animals insensitive to pain all over by this method. The effect lasts a long time—twenty-four or even thirty-six hours—and that without the least effect on consciousness or interference with any other function. He considered it due to an effect on the superior laryngeal nerve. When this nerve was divided, on one side there was no anæsthesia at all. He divided both and scarcely any effect occurred on either—only just enough to be attributed to the other less important nerves.

The higher the scale of the animal, the greater the effect. He had tried to apply it to man and had succeeded on himself, but the effect of projecting CO_2 on the laryngeal membrane is so exceedingly disagreeable, he had found no one else able to endure it for a long enough time, and, of course, precautions must be taken to prevent its inhalation. He was still, therefore, searching for an agent suitable for use on mankind. Galvanism of the nerve sometimes acted in the same way, but was very uncertain, and therefore useless.

Dr. Brown-Séquard's speech was listened to with the greatest attention, and he concluded amid most hearty plaudits.

PROFESSOR LIEBREICH, at the request of the President, next spoke. He drew a diagram on the blackboard to illustrate his views of the action of chloral and other ter-chlorine compounds, which, he said, began their action in the brain. If an agent next acted on the medulla and then on the heart when a toxic dose was given, life ceased when the heart no longer pulsated. If the heart preceded the cord, life could be maintained by artificial respiration.

He gave several illustrations, and showed their chemical relations to each other.

PROFESSOR LEECH agreed with much that Dr. Spender had said, but differed on dosage, and urged very small and very frequent doses.

DR. MACKEY, V.P., who had in the meantime assumed the chair, observed that the allotted time for the debate had nearly expired, and unless others desired to speak he would ask Dr. Prosser James and Dr. Spender to reply. Dr. Spender had been called away, and Dr. Prosser James expressed his great interest in the speeches and appreciation of the important statements which had been elicited, and regret that others did not join in the debate.

DR. MORTIMER GRANVILLE next read a paper on

THE RELIEF OF PAIN BY MECHANICAL VIBRATION OR PERCUSSION.

He no longer considered his method a novelty, as he had found that Mason Good spoke of percussion in his time as an established method of treating pain, and in early times the principle had been applied. His percuteur, however, which he exhibited, placed an easy and effectual method of using percussion in the hands of all.

MR. JESSUP read a paper on

THE EFFECTS OF COCAINE IN [illegible] EYE,

in which he pointed out that it is sometimes injurious. It might, he declared, produce glaucoma, and he found it increase exophthalmos.

Dr. Mackey, V.P., said he had used cocaine in a case of exophthalmos for the relief of pain, for which it was very effectual, and although it had been used some time no mischief had been noticed, and he asked Mr. Jessup whether, as an ophthalmic surgeon, he would advise its discontinuance? The case was not extreme.

Mr. Jessup had only used it in severe cases, but his experience showed it increased the disease, so that he could not advise it to be continued.

Dr. Stephen Mackenzie read a paper

ON CANNABIS INDICA IN CERTAIN HEADACHES.

He lauded the drug, but said it must be continued for months in full doses, with alteratives and aperients. It was in continuous, dull, heavy headaches he recommended it.

Dr. Mackey said that the late Dr. Seguin, of New York, had strongly recommended this drug, but chiefly in intermittent headaches. Dr. Mackey had followed this practice with success, and often in children, and he found Brighton children suffered much from these intermittent headaches. It was only in giving it in continuous cases that this paper differed from Dr. Seguin's practice, and curiously, the author of it used the cannabis in the same doses and the same combinations as Dr. Seguin.

No other member wishing to speak, Dr. Mackenzie replied that he was acquainted with Seguin's views, and the drug was recommended in all text-books, but not in these peculiar continuous cases. The time having now expired the Section adjourned.

Dr. W. H. Stone exhibited in this Section the apparatus which he had used at his recent Lumleian lectures, and during the day, in an adjoining room, he gave demonstrations from time to time to interested knots of listeners.

(To be continued.)

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

Tenth Annual Session, held at Indian Harbor Hotel, Greenwich, Conn., August 25, 26, and 27, 1886.

WEDNESDAY, AUGUST 25TH—FIRST DAY—MORNING SESSION.

The President, Dr. Edward Wigglesworth, of Boston, called the Society to order at ten o'clock. The first business was the reading of the President's address.

Gentlemen: Ten years ago, at Philadelphia, I had the honor of calling to order the first public meeting for the organization of this Association. Our specialty for the first time received national acknowledgment. Our guerilla warfare was over, and our subsequent record has been one of unbroken successive victories over bigotry, error, and ignorance.

But the day of paladins is past, and our ranks will admit more recruits. There are still remaining opportunities for more extended instruction of students in medical schools, while the lack of hospital facilities for the proper clinical treatment of diseases of the skin is a standing shame and disgrace to our municipal authorities, our hospital boards, and to the medical profession itself. Some progress has, however, been made. New York has now a special hospital for skin diseases, besides two wards in the Charity Hospital, and Philadelphia has special clinics with beds at three different institutions.

About twice as many cases of diseases of the skin are now annually treated by specialists as there were ten years ago.

The contributions to American dermatological literature during the past decade include the best treatises, hand-books, and atlases, the only periodicals, and some of the best monographs of the time in the English language.

Our sole local organization, the New York Dermatological Society, is as active as ever, and the good work which it has already done is constantly increasing.

Other objects of the foundation of our Association have been by no means neglected during the past ten years. There exists to-day a harmony and good feeling among us which, but for the personal acquaintanceship resulting from the formation of this Association, never would have existed. We have come into better accord as to the "Nature and Treatment of Skin Diseases." Our increased membership proves that our Association is "held as a place of aspiration," and it has consistently required "independent work in our department" as the essential preliminary step toward the acquisition of such membership. The systematic work of our Standing Committee upon Statistics has already furnished valuable data for comparison, as well as a series of excellent reports upon "Leprosy in America." Concerted official effort has done much, and will do more, to repress the rank luxuriance of growth of dermatological nomenclature, and to furnish a "uniform and simple system."

While much has been accomplished, much still remains to be done. The idea of specialism, already rooted, is to be nurtured and trained in the minds of the profession and of the public, and the practical development, socially, of our specialty itself, is to be elaborated in many minor details. The pioneer must no longer prove a martyr. A knowledge of the weaker side of human nature, useful for selfish, financial ends, must no longer be allowed to usurp the province of exact scientific acquaintance with disease, inuring to the benefit of our race. The "elaborate division of labor" is "as useful and successful in a learned profession as it is in the mechanic arts," for it is merely a relative question of height of standard. Specialism substitutes quality for quantity, which substitution is the essential characteristic of the civilized man as distinguished from the savage; while the rapidity of such substitution gauges the progress of civilization itself. Medicine is merely that complex whole which results from the combination of all its component parts, and their individual advancement is the criterion of its own progress.

Science is only exact knowledge. Medicine is that knowledge specially directed to the physical welfare of mankind, and specialism is only that further subdivision rendered necessary by the very various parts composing the individual, and possible by the extension of our opportunities for studying these parts due to increase of mechanical means for enlargement of the fields of our hitherto unaided senses. No one can to-day "take all knowledge to be his province." Science does not culminate in a Jack-of-all-trades, least of all in one whose conscience has become anæsthetized by custom, who confounds his own limitations with the "limitations of human understanding," and his own ignorance with "the immaturity of medical therapeutics." The specialist builds his own boundary wall, and cannot, if he would, poach upon the preserves of others. He "distinguishes what he can do from what he cannot," thus filling the old definition of the best physician. He cannot maltreat a patient, and when compelled to confess ignorance and seek superior wisdom, charge the wronged sufferer another and still higher fee for a "consultation," which is, in reality, a confession. It has been sarcastically said that "the sole duty nowadays of the family doctor is to decide what specialist shall be summoned." It certainly is his duty, and a very important one as a man of honor, to decide whether anyone, and if so, who, can probably accomplish that wherein he admits that he himself has failed. Unfortunately, many know so little that they are even ignorant of how much is known by others; but in many respects the specialist has already raised the average standard of requirement for general practice to such an extent that much of the old routine practice of physicians, who treated their patients for the very diseases for which they referred members of their own families to the specialist, has now become punishable malpraxis. But the general practitioner has his revenge in opposing as unnecessary the hospital appointment, and even the

private practice, of the very specialist to whom he himself flees as "a very present help in time of trouble."

We are told that "the human body is made up of parts and functions so thoroughly interdependent that it cannot be parcelled out into defined and isolated regions." It can, and it cannot. What scientist divides a country into square miles and attempts to become thoroughly conversant with every atom existing in each of those miles? The special divisions of study are rather the flora, the fauna, the geological strata, etc., though all these may pervade identically every mile of the region. If regional surgery is possible, then specialties are certainly not contra-indicated. We hear of "appalling pathological conglomerates," due to lack of proper "general medical treatment." Not only "conglomerates," but often single lesions, are very variously diagnosticated by different general physicians, and the "conglomerates" are usually merely the aggregated effects of original causes which might have been obviated by proper investigation in due season on the part of suitable specialists.

The aforetime "consulting physician" meant one who in addition to his general acquirements knew more about some particular thing than anyone else. We may be sure that his general acquirements had to pay the penalty. To-day we honestly admit this, and, renouncing the practice obtainable by general acquirements, keep to that particular thing of which we know more than others. No one has mental ability enough at the present time to add to the greatly extended knowledge necessary to the general physician the intensified fundamental acquaintance with detail needed by the specialist. Life is too short for the ablest intelligence to exhaust even any one specialty. The physician may, like Newton, "think the thoughts of God after him," but the thoughts of the infinite upon the smallest molecule of matter call for more than the limits of a finite existence. The true consulting physician of to-day is the specialist, and he should therefore receive this title at the hospitals with which he is connected, while those ex-physicians, called consulting, but never consulted, should receive their true and proper title of Emeriti.

But enough of the "idea of specialism." The public will in time appreciate the absurdity of being content with inferior results in one branch of medicine, because, forsooth, there are so many others in which their medical adviser is equally or more at home. It will reason rather that he who "insists upon doing the work of ten men manifests a quality of mind which we can only call arrogance, and which challenges for his work severe criticism." Versatility will not atone for crude and imperfect work any more than will lack of time, hurry of life, keenness of competition, or financial necessity, and it is merely brazen self-assertion which delights "not so much in doing the thing well as in showing how well he can do it."

Believing in the ultimate achievement of all possibilities, and in the progress of truth, I have no doubt as to the future of specialism if we are honest and earnest. Not infinite omniscience, but infinite morality, is the duty of the specialist, and this conscientiously carried out will blunt the sharpest dart of the hostile general practitioner. While visions of what yet remains to be accomplished might well lead us almost to despair, a mere glance at the generally prevailing ignorance on the part of both physicians and their patients shows conclusively that we and our work are imperatively demanded.

Dr. J. C. White, of Boston, held that more exact data must be obtained before we can regard these affections as a necessary sequel of syphilis, and as anything more than accidental occurrences. While there is nothing *à priori* against a casual relation existing between these conditions and syphilis, such relation has not been proved. The early roseolous exanthematous condition of the skin in syphilis is of sufficiently frequent occurrence to be looked upon as a distinct feature of syphilis. This is wholly unlike the rare forms of dermatitis which have been described to-day.

Dr. G. H. Tilden, of Boston, thought that in the present state of our knowledge it would be more philosophical to consider the appearances described as accidental rather than as dependent upon the specific disease.

RUBELLA, OR ROTHELN,

by Dr. I. E. Atkinson, of Baltimore, consisted of a thorough *résumé* of the literature of the subject, and gave an extended account of its symptoms, diagnosis, etc. The disease was regarded as distinct from measles and scarlet fever. Swelling of the lymphatic glands is a peculiar and marked symptom. This swelling is painful, but does not pass on to suppuration. In many cases fever is absent. The eruption first appears on the forehead and face, and in the course of a few hours spreads to other parts of the body. Complications and sequelæ are not unknown, the most common being bronchitis, pneumonia, and gastro-intestinal disorders.

The Speaker suggested that rubella be accepted as the proper title of this disease, and that it might be known in popular language as epidemic roseola.

Correspondence.

OUR PARIS LETTER.

[From our special Correspondent.]

THE TREATMENT OF PHTHISIS BY RECTAL MEDICATION—INFECTIOUS CHARACTER OF ERYSIPELAS—RESULTS OF OSTEOTOMY FOR CLUB-FOOT—JUGULATION OF TYPHOID FEVER—VACCINATION AND REVACCINATION—M. CHEVREUL.

PARIS, August 14, 1886.

At a recent meeting of the Academy of Sciences Dr. Bergeon brought to notice the advantages of a therapeutical method based on this principle, established by Claude Bernard, to wit, that the introduction through the rectum of substances, even when toxic, does not present any danger so long as pulmonary elimination is not interfered with. The author employed this method in several maladies, and particularly in pulmonary phthisis, and, after a certain number of trials, he gives the preference to sulphurous mineral waters. A current of from 4 to 5 litres of carbonic acid gas passing through from 250 to 500 grammes of sulphurous mineral water is introduced into the rectum twice in the twenty-four hours. A few days after the employment of this procedure Dr. Bergeon noticed: 1. A diminution, approaching almost to total suppression, of the cough. 2. A profound modification in quality as well as in quantity of the expectoration. 3. Suppression of the sweats. 4. Improvement of the general state, and that not only in phthisis at its commencement, but in its confirmed state. Auscultation, daily practised, permitted the doctor to verify the progressive disappearance of the moist râles.

In his inaugural thesis for the doctorate, Dr. Blaise chose for his subject "De l'Érésipèle Infectieux." According to the author, all the symptoms presented by erysipelas tend to demonstrate its infectious character. To the contagion, fever, shivering, the eruption, the visceral lesions, must be added, as proof of this infection, the hemorrhages. The hemorrhages which are met with in erysipelas are of diverse natures—hemorrhages from the mucous membranes, subcutaneous hemorrhages, deep sanguineous collections. The subcutaneous hemorrhages may show themselves under the form of ecchymoses, petechiæ, or under the form of purpura. The latter may

remain localized, or it may become generalized. It is transitory, appears at places where the erysipelatous eruption had just left, and may reappear at different times. It appears to come on after the eruption or during convalescence. The hemorrhages from the mucous membranes consist of frequent epistaxes, which are sometimes so profuse as to place the life of the patient in danger.

At a recent meeting of the Surgical Society of Paris, Professor Verneuil read a paper on "The Results of Osteotomy for Club-foot." His mode of operation consisted in taking away in succession the astragalus, the cuboid, the scaphoid, and the anterior half of the os calcis, until he is able to bring the foot in a line with the leg. He does not, however, attempt to fix the foot in position until the wound is in a fair way of being healed, and upon this he lays stress. Dr. Lucas Championnière, on the contrary, tries to obtain primary union of the wound, so that apparatus to correct the deformity may be applied as speedily as possible; while Professor Verneuil thinks that suppuration is useful in that it gives rise to a large mass of new-granulation tissue.

Professor Pécholier, of the Faculty of Montpellier, made a communication at the meeting of the Paris Academy of Medicine, last week, on the abortive treatment, or what he terms the "jugulation," of typhoid fever, which consists of administering the sulphate of quinine in doses of from one gramme to one gramme twenty centigrammes per day from the earliest recognition of the symptoms. During the first few days of the attack, or when there is much disturbance of the heart's action, he administers twenty centigrammes of digitalis, in combination with the sulphate of quinine, per day. When the body temperature is unusually high, foot-baths are added to the treatment, especially when any congestive phenomena are observed in the head or other viscera. By this treatment the disease, according to M. Pécholier, is "jugulated" in from thirteen to fifteen days; in support of which the doctor cites sixty-four consecutive cases which came under his own observation, and among which not a single death occurred.

According to a report furnished at the same meeting by Dr. Blot, director of gratuitous vaccination at the Academy of Medicine, where human lymph alone is employed, there have been, during the last six years, 19,000 vaccinations, and 5,336 revaccinations performed; 70,000 squares of glass, 16,000 tubes containing vaccine lymph, and 29,000 lancets tipped with the same, have been sent out in that time. Thus there are from 3,000 to 4,000 vaccinations and 1,000 revaccinations per year. As regards results, the successes by arm to arm vaccination amount to ninety-nine per cent., with the lymph in tubes from eighty-five to ninety per cent. This report was furnished at the requisition of the Minister of Public Instruction, in forwarding which the Academy expressed a wish that centres for vaccination should be organized all over France, so as to be within the reach of all. They should be placed particularly in the large seaport towns.

On the 31st of this month, the venerable M. Chevreul attains his 100th year, on which occasion a grand popular fête is to be organized in his honor. The greater number of his colleagues of the Institute have promised to take part in the celebration, which is fixed for September 1st. The fête is to take place at the Museum of Natural History, which has been chosen for several reasons. In the first place it was done to spare him as much fatigue as possible, being near to his own residence; and it has also been considered that the illustrious academician has spent nearly all his life at the Museum, where he entered in 1810, as chemical assistant, since which time he has never left it. In 1830, he succeeded his master, Vauquelin. Forty years later, being director of the Museum during the siege and bombardment of Paris, he managed to save from complete ruin the magnificent collection confided to his care.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 22 to August 28, 1886.

WOODHULL, A. A., Major and Surgeon. Granted leave of absence for fourteen days, to take effect on or about September 1, 1886. S. O. 197, A. G. O., August 25, 1886.

TAYLOR, M. K., Major and Surgeon. Leave extended one month. S. O. 195, A. G. O., August 23, 1886.

LAUDERDALE, J. V., Captain and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for one month's extension when his services can be spared. S. O. 195, A. G. O., August 23, 1886.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. On expiration of his present leave of absence relieved from duty in the Department of the East, and assigned to duty in the Department of Texas. S. O. 195, A. G. O., August 23, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau. Health Department, for the week ending August 28, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	27	6
Scarlet fever	14	5
Cerebro-spinal meningitis	0	0
Measles	27	11
Diphtheria	45	23
Small pox	0	0

UNIVERSITY OF LONDON EXAMINATIONS.—The pressure brought upon the University of London to induce that institution to hold its examinations more frequently has been partially successful. It is now announced that not only the Preliminary Scientific, but also the Intermediate Examination for the M.B. degree will be held twice a year. Candidates in future will also have to choose between the pass and the honors examinations at the latter as well as at the former examination. This is a unique departure in medical examinations. It means that candidates who wish for honors will, in future, have to go direct for the honors examination—in their honors subject or subjects—while taking the pass papers in the rest of the examination. At present a candidate can go in for a "pass," and then please himself afterward about going in for honors.

THE LATE DR. MOXON.—Our London correspondent sends us the following interesting account of Dr. Moxon: "In the person of Dr. Moxon London loses one of its ablest, most original, and highly esteemed physicians. Dr. Moxon was found dead in his chair at an early hour of the morning. He was only fifty. At the time of his death he was one of the full physicians to Guy's Hospital, having previously served the subordinate offices with credit and distinction. Dr. Moxon received his medical education at Guy's Hospital, and graduated with honors at the University of London. Both at Guy's and at St. Bartholomew's it is well understood that only on their own alumni will hospital appointments be conferred. At the latter hospital I believe the rule is absolute. At Guy's it has at any rate been very consistently acted upon, and to such an extent that it is not usual for outsiders to apply. The last vacant

assistant physiciancy was, it is true, thrown open, but it was nevertheless bestowed on a Guy's man. Dr. Moxon was more fortunate than many of his contemporaries in getting his appointment at a comparatively early age. At the older hospitals—notably at Bartholomew's—the tendency has been to hedge them about so strictly that a man may be nearly forty before he becomes assistant physician. Dr. Moxon excelled both as a writer, a teacher, and a practical physician. He was an early worker in the field of visceral syphilis, and wrote a paper on the subject in 'Guy's Hospital Reports' nearly twenty years ago. He will perhaps be best remembered by his published 'Lectures on Pathological Anatomy,' of which he was author jointly with Dr. Wilks. This work at once obtained an acknowledged position. With no pretence of being exhaustive, and no attempt to give all the minutiæ of pathological histology, it still remains unrivalled as a faithful exponent of naked-eye morbid anatomy, and that, too, in a style not devoid of literary grace. In literature and controversy Dr. Moxon was what may be called a free lance. He apparently delighted in the unconventional, and would say what he thought, whether popular or otherwise. He once gave a clinical lecture in which he expressed the wish that he could compel all his pupils to study heart diseases in the wards for three months without using a stethoscope, but simply paying attention to the general symptoms. His lively but good-humored criticism of Dr. Bristowe's definition of fever as 'that abstract condition which is common to all so-called "febrile disorders," and the presence of which gives them their claim to that designation,' is still fresh in our memories, and the pungency of Dr. Moxon's satire was not much detracted from when it was pointed out that he had only quoted one sentence in Dr. Bristowe's definition. Dr. Moxon took a great interest in the question of degrees for London students, but was anxious for the present university in London to retain its position. He was, however, wishful to see its influence extended, and the publication of a colonial pass-list of one of its examinations drew from him a sarcastic taunt as to the university concerning itself with primary education in the Mauritius. While, however, he will still live to the many through his published writings, he will be still more vividly remembered by those who had the pleasure and privilege of his personal acquaintance. As a clinical teacher, nothing was more remarkable than the way in which he always found something fresh to say about his cases. If he saw the same case several times a week for weeks, he would make it teach something on every successive visit. He was so unconventional, also, that it sometimes seemed as if his fluency in speech was running away with him and making him say what he did not mean, but even when on the verge of the absurd he would make what he was saying teach something and show that, however apparently purposeless his speech had been, he had not for a moment lost sight of the point before him."

Agnew's Surgery is now being translated into Japanese by Dr. Toynbe. It is to be published in seven volumes, at a cost to subscribers of seven yen, about six dollars.

Pollution of Thames Water.—Coincidently with the advent of real summer weather and the annual increase in diarrhœa cases comes the usual scare about the condition of the Thames. A new danger exists, we are told, in the regattas held on the Upper Thames. These attract a large concourse of yachts and house-boats, the sewage and refuse from which is mostly thrown overboard and comes down to pollute the intake of the water companies. How many germs may thus be introduced into the water we drink it is impossible to say. Meanwhile it is but a very poor consolation to be told by Messrs. Crookes, Tidy, and Odling that bacilli will not live long in pure water, as that of our metropolitan river is very far indeed from being pure.

Ninth International Medical Congress. The Ninth International Medical Congress will assemble in the city of Washington, the capital of the United States, on Monday, September 5, 1887, at twelve o'clock noon, in accordance with the arrangements made at Copenhagen in August, 1884.

Patrons.—The President of the United States, the Hon. Grover Cleveland; the Secretary of State, the Hon. Thomas F. Bayard; the President of the Senate of the United States, the Hon. John Sherman; the Speaker of the House of Representatives of the United States, the Hon. John G. Carlisle.

President of the Congress and Chairman of the Council: Nathan S. Davis, M.D., LL.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine, Chicago Medical College, and of Mercy Hospital, Chicago, Ill.

Vice-Presidents (as far as appointed): McCall Anderson, M.D., London, England; Mr. Thomas Annandale, Professor of Clinical Surgery, Edinburgh University, Edinburgh, Scotland; Professor Dujardin-Beaumetz, M.D., Paris, France; Cuthbert Hilton Golding Bird, M.D., Professor of Physiology, Guy's Hospital, London, England; Professor Carl Braun, M.D., Vienna, Austria; William Brodie, M.D., Emeritus Professor of Principles and Practice of Medicine and Clinical Medicine, Detroit College of Medicine, Detroit, Mich.; W. W. Dawson, M.D., Professor of Surgery and Clinical Surgery, Medical College of Ohio, Cincinnati, O.; Thomas M. Dolan, M.D., Halifax, England; F. R. Frazer, M.D., Professor of Materia Medica and Therapeutics, University of Edinburgh, Edinburgh, Scotland; J. A. Grant, M.D., Ottawa, Canada; J. A. S. Grant, M.D., Cairo, Egypt; A. L. S. Gusseraw, M.D., Professor of Obstetrics, Berlin, Prussia; Dr. Hans Ritter von Hebra, Vienna, Austria; Dr. E. Klein, London, England; Mons. le Baron H. Larrey, Paris, France; Sir William MacCormac, Surgeon St. Thomas' Hospital, London, England; Mr. George B. Macleod, Professor of Surgery, Glasgow, Scotland; John S. McGrew, M.D., Honolulu, Hawaiian Islands; E. M. Moore, M.D., LL.D., Rochester, N. Y.; Professor Von Monseil, Bonn, Prussia; Dr. Muller, Berlin, Prussia; William Murrell, M.D., London, England; Charles D. F. Phillips, M.D., M.R.C.S., late Lecturer on Materia Medica and Therapeutics, Westminster Hospital, London, England; Mr. Richard Quain, Professor of Anatomy, London, England; Tobias G. Richardson, M.D., Professor of General and Clinical Surgery, Medical Department, Tulane University, New Orleans, La.; Mons. P. Ricord, Paris, France: Professor John Burdon Sanderson, M.D., London, England; Lewis A. Sayre, M.D., Professor of Orthopædic and Clinical Surgery, Bellevue Hospital Medical College, New York; Dr. Mariano Semmola, Professor of Experimental Therapeutics, University of Naples, Italy; Dr. Leopold Servais, Antwerp, Belgium; J. M. Toner, M.D., Washington, D. C.; Dr. P. G. Unna, Hamburg, Germany; Professor F. Winckel, Dresden, Saxony; the President of the American Medical Association; the Surgeon-General of the United States Army; the Surgeon-General of the United States Navy.

Secretary-General: John B. Hamilton, M.D., Supervising Surgeon-General of the United States Marine Hospital Service; Professor of Surgery, Georgetown University, D. C.; Professor of Surgery, Chicago Polyclinic.

Treasurer: E. S. F. Arnold, M.D., M.R.C.S., Newport, R. I.

Chairman of the Finance Committee: Richard J. Dunglison, M.D., Philadelphia, Pa.

Chairman of the Executive Committee: Henry H. Smith, M.D., LL.D., Emeritus Professor of Surgery in the University of Pennsylvania, Philadelphia, Pa.

Chairman of the Committee of Arrangements: A. Y. P. Garnett, M.D., Emeritus Professor of Clinical Medicine, Columbia University, Washington, D.C.

The congress will consist of such members of the reg-

ular medical profession as shall have registered and taken out their ticket of admission, and of such other scientific men as the Executive Committee of the congress shall deem it desirable to admit. The books for the registration of members will be open from 9 A.M. to 5 P.M., on Thursday, September 1, 1887, and on each subsequent day during the session, under the charge of the "Reception Committee." Any member desiring to anticipate this registration can apply by letter to the Secretary-General and forward his dues, with his address in full, when a receipt will be returned. The dues of membership for residents of the United States will be ten dollars ($10.00). There will be no dues for members residing in other countries. Each member will be entitled to receive a copy of the "transactions" of the congress, when published by Executive Committee. The general sessions of the congress will be devoted to the transaction of business, and addresses and communications of general scientific interest by members appointed by Executive Committee. A printed "programme" of the sessions will be presented to each member on registering. A printed "order of business" for each day will also be issued. The work of the various sections will be directed by the president of the section, and the order will be published in a daily programme for each section. Questions and topics that have been agreed on for discussion in the sections shall be introduced by members previously designated by the titular officers of each section. Members who shall have been appointed to open discussions shall present to the secretaries of the section, in advance, statements of the conclusions which they have formed as a basis for the debate. Brief abstracts of papers to be read in the sections shall be forwarded to the secretaries of the proper sections, on or before April 30, 1887. These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the congress. Papers related to topics not included in the list of subjects proposed by the officers of the sections may be accepted after April 30, 1887, and any member wishing to introduce a topic not on the regular lists of subjects for discussion shall give notice of the same to the Secretary-General, at least twenty-one days before the opening of the congress. The titular officers of each section shall decide as to the acceptance of such proposed communications, and the time for their presentation. No communication shall be received which has been already published or read before a society. The official languages of the congress shall be English, French, and German. Each paper or address shall be printed in the "transactions" in the language in which each is to be delivered. All discussions shall be printed in English. The officers of the congress and the officers of the sections, including all foreign officers, will be nominated to the congress by the Executive Committee, at the opening of the first session. A partial list of the officers to be nominated (except the members of council of the different sections, the list of whom is at present imperfect) is offered herewith. The Executive Committee cordially invites members of the regular medical profession, and men eminent in the sciences collateral to medicine, in all countries, to participate, in person or by papers, in the work of this great humanitarian assembly. Communications relating to appointments for papers to be read in the congress should be addressed to Dr. John B. Hamilton, Secretary-General of the Ninth International Medical Congress, Washington, D. C. All questions or communications connected with the business of the Executive Committee should be addressed to Dr. Henry H. Smith, Chairman of the Executive Committee of the Ninth International Medical Congress, Philadelphia, Pa. Gentlemen named in any position in the congress are requested to notify the Chairman of the Executive Committee, as soon as practicable, of any error in the name, title, or address in this circular. Ladies in attendance with members of the congress, and those invited by the "Reception Committee," may attend the general sessions of the congress when introduced by a member. They will also be invited to attend the social receptions. The Executive Committee reserves the right to invite distinguished persons to any or all the meetings of the congress. The attendance of medical students and others interested in the work of the various sections, or in the general addresses delivered in the congress, will be permitted, on the recommendation of the Secretary-General or the officers of a section, on their taking out from the Registration Committee a general ticket of admission, fee one dollar ($1.00); but such persons cannot take part in the proceedings. All communications and questions relating to the special business of any section must be addressed to the President or one of the Secretaries of that section. As many details of the congress and numerous appointments of officers are yet to be completed, other circulars will be issued from time to time, as circumstances may demand. The following is the list, as at present completed:

Executive Committee of the Congress.—Drs. Henry H. Smith, Chairman; N. S. Davis, John B. Hamilton, E. S. F. Arnold, Richard J. Dunglison, Secretary; Abram B. Arnold, William T. Briggs, DeLaskie Miller, James F. Harrison, F. H. Terrill, William H. Pancoast, John H. Callender, Alonzo B. Palmer, J. Lewis Smith, E. Williams, S. J. Jones, William H. Daly, A. R. Robinson, Joseph Jones, Albert L. Gihon, John P. Gray, Jonathan Taft, Frederick S. Dennis, A. Y. P. Garnett.

Presidents of Sections.—General Medicine: Abram B. Arnold, Professor of Clinical Medicine, College of Physicians and Surgeons, Baltimore, Md. General Surgery: William T. Briggs, Professor of Surgery, University of Nashville, Nashville, Tenn. Military and Naval Surgery and Medicine: Henry H. Smith, Emeritus Professor of Surgery, University of Pennsylvania, and formerly Surgeon-General of Pennsylvania, Philadelphia, Pa. Obstetrics: DeLaskie Miller, Professor of Obstetrics, Rush Medical College, Chicago, Ill. Gynæcology: James F. Harrison, Professor of Obstetrics, etc., University of Virginia, Va. Therapeutics and Materia Medica: F. H. Terrill, Professor of Therapeutics, University of California, San Francisco, Cal. Anatomy: William H. Pancoast, Professor of General, Descriptive, and Surgical Anatomy, Medico-Chirurgical College, Philadelphia, Pa. Physiology: John H. Callender, Professor of Physiology and Psychology, University of Nashville, Nashville, Tenn. Pathology: Alonzo B. Palmer, Professor of Pathology, University of Michigan, Ann Arbor, Mich. Diseases of Children: J. Lewis Smith, Professor of the Diseases of Children, Bellevue Hospital Medical College, New York. Ophthalmology: E. Williams, Professor of Ophthalmology, Miami Medical College, Cincinnati, O. Otology: S. J. Jones, Professor of Ophthalmology and Otology, Chicago Medical College, Chicago, Ill. Laryngology: William H. Daly, Pittsburg, Pa. Dermatology and Syphilis: A. R. Robinson, Professor of Dermatology, New York Polyclinic, and of Histology and Pathological Anatomy, Woman's Medical College of the New York Infirmary, New York. Public and International Hygiene: Joseph Jones, Professor of Chemistry and Clinical Medicine, Tulane University; Ex-President Board of Health, New Orleans, La. Medical Climatology and Demography: Albert L. Gihon, Medical Director, United States Navy. Psychological Medicine and Nervous Diseases: John P. Gray, Professor of Psychological Medicine and Medical Jurisprudence, Bellevue Hospital Medical College, Utica, N. Y. Dental and Oral Surgery: Jonathan Taft, Professor of Dental and Oral Surgery, University of Michigan, Ann Arbor, Mich., Cincinnati, O.

Vice-Presidents of Sections.—General Medicine: W. W. Cleaver, Kentucky; J. A. Octerloney, Kentucky; P. G. Robinson, Missouri; Thomas F. Rochester, New York; Preston B. Scott, Kentucky. General Surgery: Moses Gunn, Illinois; J. W. Hamilton, Ohio; W. H.

Hingston, Canada; James M. Holloway, Kentucky; J. C. Hutchinson, New York; N. S. Lincoln, District of Columbia; Donald MacLean, Michigan; Donald Macrea, Iowa; M. Storrs, Connecticut. Military and Naval Surgery and Medicine: C. J. Cleborne, United States Navy; E. H. Gregory, Missouri; Frank H. Hamilton, New York; W. T. Hord, United States Navy; Frederick Hyde, New York; G. L. Porter, Connecticut; William E. Taylor, United States Navy; B. A. Watson, New Jersey. Obstetrics: Gustav Braun, Austria; P. Budia, France; J. Galabin, England; John Goodman, Kentucky; W. M. Knapp, Nebraska; R. L. Sibbet, Pennsylvania; Isaac E. Taylor, New York. Gynæcology: N. Bozeman, New York; Henry O. Marcy, Massachusetts; T. A. Reamy, Ohio; H. R. Storer, Rhode Island. Therapeutics and Materia Medica: Henry M. Field, New Hampshire; Albert Fricke, Pennsylvania; George Gray, Ireland. Anatomy: C. W. Kelly, Kentucky; Samuel Logan, Louisiana. Physiology. Pathology: Andrew Fleming, Pennsylvania; J. B. Johnston, Missouri; Henry F. Lyster, Michigan. Diseases of Children: William B. Atkinson, Pennsylvania; William G. Booker, Maryland; Cadet de Gassicourt, France; Edward Hunoch, Prussia; Adoniram B. Judson, New York; J. P. Owen, Massachusetts; Eustace Smith, England; Charles West, England; Joseph E. Winters, New York. Ophthalmology: A. W. Calhoun, Georgia; J. J. Chisholm, Maryland; P. D. Keyser, Pennsylvania; Dudley S. Reynolds, Kentucky. Otology. Laryngology: M. F. Coomes, Kentucky. Dermatology and Syphilis: James M. Keller, Arkansas; John V. Shoemaker, Pennsylvania. Public and International Hygiene: A. Nelson Bell, New York; John Berrien Lindsley, Tennessee; J. N. McCormack, Kentucky; J. F. Y. Paine, Galveston, Tex.; Benjamin W. Richardson, England; John Simon, England; J. W. Thudichum, England. Medical Climatology and Demography: Dr. A. Chervin, Paris, France; Traill Green, Pennsylvania; John H. Hollister, Illinois. Psychological Medicine: Julius Althaus, England; R. H. Chase, Pennsylvania; Eugene Grissom, North Carolina; John C. Hall, Pennsylvania; P. A. Hooper, Arkansas; J. S. Jewell, Illinois; S. S. Schultz, Pennsylvania. Dental and Oral Surgery: W. W. Allport, Illinois; S. W. Dennis, California; C. L. Ford, Michigan; H. L. McKellops, Missouri; A. T. Metcalf, Michigan; W. H. Morgan, Tennessee; A. L. Northrop, New York.

Secretaries.—General Medicine: J. W. Chambers, Baltimore, Md. General Surgery: Dudley P. Allen, Cleveland, O.; Carl Mayde, Germany; J. R. Weist, Richmond, Ind.; A. H. Wilson, South Boston, Mass. Military and Naval Surgery and Medicine: J. McF. Gaston, Atlanta, Ga.; E. A. Wood, Pittsburg, Pa. Obstetrics: A. Charpentier, Paris, France; T. Felsenreich, Vienna, Austria; W. W. Jaggard, Chicago, Ill.; John Williams, London, England. Gynæcology: Ernest W. Cushing, Boston, Mass. Therapeutics: Frank Woodbury, Philadelphia, Pa. Anatomy: Henry Morris, Philadelphia, Pa. Physiology: R. W. Bishop, Chicago, Ill. Pathology: H. M. Biggs, New York; I. N. Himes, Cleveland, O. Diseases of Children. Ophthalmology: S. C. Ayres, Cincinnati, O. Otology: S. O. Richey, Washington, D. C. Laryngology: William Porter, St. Louis, Mo. Dermatology: W. T. Corlett, Cleveland, O.; F. E. Daniel, Austin, Tex. Public and International Hygiene: George H. Rohe, Baltimore, Md.; Walter Wyman, United States Marine Hospital Service, New York. Climatology and Demography: Charles Denison, Denver, Col.; James F. Todd, Chicago, Ill. Psychological Medicine: E. D. Ferguson, Troy, N. Y.; E. Landolt (Berlin, Prussia), Paris, France. Dental and Oral Surgery: Edward A. Bogue, New York; S. F. Rehwinkle, Chillicothe, O.

Committee of Arrangements, Washington, D. C.—Chairman, A. Y. P. Garnett; Vice-Chairman, J. M. Toner; Secretary, C. H. A. Kleinschmidt; Treasurer, D. C. Patterson.

Executive Committee.—A. Y. P. Garnett, J. M. Toner, N. S. Lincoln, C. H. A. Kleinschmidt; Surgeon-General F. M. Gunnell, United States Navy; Surgeon-General Robert Murray, United States Army; Supervising Surgeon-General J. B. Hamilton, United States Marine Hospital Service; Chief Medical Purveyor J. H. Baxter, United States Army. Committee on Congressional Legislation: Dr. A. Y. P. Garnett, Chairman. Committee on Finance: Dr. G. L. Magruder, Chairman. Committee on Printing: Dr. J. B. Hamilton, Chairman. Committee on Reception: Dr. J. M. Toner, Chairman. Committee on Entertainments: Dr. N. S. Lincoln, Chairman. Committee on Transportation: Dr. J. W. H. Lovejoy, Chairman. Committee on Place of Meeting for Congress and Sections: Dr. D. C. Patterson, Chairman.

By Order of the Executive Committee of the Congress.

DR. HENRY H. SMITH, Chairman.
DR. RICHARD J. DUNGLISON, Secretary.

THE DEATHS IN INDIA FROM SNAKES AND WILD BEASTS were, in 1885, from snake-bites, 1,066; from wild beasts, 110.

A DEFENCE OF AMERICAN MEDICAL SCHOOLS.—Dr. H. W. Jones, M.A., an American resident of England, writes to *The Lancet:* "It is by no means uninteresting to a medical man 'abroad' to observe his own country and its institutions through the eyes of foreign authorities. And while we must confess to much that was questionable in the past, it appears at present that the case of medical education in the United States is hardly put with fulness—if, indeed, with fairness. As the effete doctrines of the early Church yet serve as the sceptic's best weapons, so now do the allegations which I here rehearsed rise against the 'American system.' We are charged with 'inadequate preparation,' opening the schools to crude and undisciplined minds; with a 'too short and narrow curriculum,' giving insufficient and unbalanced foundation for so serious and important a superstructure; with 'poverty of clinical advantages,' committing students to an unpractical, and, therefore, untrue, view of their future duties; with 'the full degree conferred by any of the too numerous colleges after such a course.' Truly a sad catalogue of errors, if applicable now and generally to the institutions of any country. But a knowledge of all the circumstances will insure material alteration in the scope of these charges, and a much closer approximation to the truth. Though I write without statistics at hand, and only from a general acquaintance with the facts acquired by long professional observation, I venture to state that more than half the American graduates have for many years gone out from the three great medical centres, New York, Philadelphia, and Boston, whither have gravitated for the same period the greater lights of the profession as practitioners, teachers, etc. These men, many of them of humble birth, self-taught, having elevated themselves to a great and noble success, do not forget their own origins, and are slow to place impediments in the way of those who have the same aspirations, the same difficult ascent to make. Hence the moderate requirements of the preliminary examination, to be followed in these schools by instruction not easily surpassed in breadth and accuracy, I am bold to say, whether it be didactic or clinical. Here hospitals are numerous and abounding in every variety of material. At Yale and the Cincinnati, Chicago, Michigan, St. Louis, and New Orleans schools the same is true, excepting the restrictions arising from moderate hospital accommodation, which will always vary with population. Here at least a third of the whole number of annual graduates receive their diplomas, and in most of these schools the final or 'pass' examination covers the entire field of study, determining the solid acquirements of the student, rather than what he may have "crammed" during the weeks previous. In some cases the 'State Medical Society' exercises a wholesome

supervision, its delegates taking active part in the oral tests applied to scholarship. Post-graduate courses are often open to the more ambitious student, and to such practitioners of long standing as may desire henceforth to restrict their work to special lines. To 'graduate into a specialty' is not with us *en règle*. It is the 'mushroom school' which gives rise to offences as rank in the nostrils of American as in those of foreign physicians. These spring up in the growing towns of the vast West, partly the offspring of local ambitions and rivalries, partly from a local demand for a not too costly medical instruction, made by the pupils and assistants of neighboring practitioners, or by youths who labor two-thirds of the year to earn the means of defraying the cost of a winter's tutelage in medicine. Few of these ever graduate, and if they do, few fail to seek their diplomas at a more legitimate fountain-head. The schools themselves meet with early graves, though their example and warning are not long heeded. It is true that all who graduate from these State-chartered schools receive the degree of M.D., and are styled 'doctors,' but in no country in the world does a man so soon find his proper level, whatever his profession or diplomas. It is the absence of social caste, the subordination of influence to real merit, the general indifference to titles, the knowledge that, after all, success must be fought for, which make the American physician so oblivious of the initialed distinctions that obtain in England and elsewhere. After all is said, in these days, when science is of common birth and acknowledges no single foster-mother, we may safely claim to be known by our fruits, and one may proudly point to the just and able criticisms of your own columns upon works of American origin for highest testimony to the value and volume of American professional attainment and culture."

The Treatment of Basedow's Disease.—Dr. W. Hale White (*British Medical Journal*) has followed up the history of twelve cases of exophthalmic goitre, and makes the following comment on the effects of treatment: Of the twelve, eleven died; but only two of these from the disease itself; the average duration was three and two-thirds years. With regard to the treatment, Jane A——, who did best of all the cases, had no treatment; Alice M—— benefited considerably from the local application of iced water; Ellen E—— was treated with the continuous current, with a good result; Ellen H—— did well on iron, digitalis, and belladonna; and Sophie S——'s account of her treatment, after leaving the hospital, is hardly trustworthy. It is noteworthy that the case which died of consumption was, as regards her Graves' disease, much improved by the application of the continuous current. Iron and digitalis are comparatively useless, and there is not sufficient evidence to show the value of belladonna; but two of the successful cases took it while under treatment by other means, so, perhaps, it had some share in their recovery. The lesson to be learned from these figures is that the prognosis of Graves' disease is bad, for the patients are partly liable to death from sudden syncope, and also seem more likely to die from other causes apparently unconnected with exophthalmic goitre; and, of those who do not die, many do not completely lose the disease. The best treatment would appear to be the continuous galvanic current and iced water. It was for this prognosis that I collected the cases; but they may be also utilized to show a few other points.

Pensioners, and the Mortality from Amputations.—A statement prepared at the Pension Office, by direction of the Chief of the Certificate Division, Mr. J. E. Smith, shows that there are only 453 pensioners of this class on the roll who have lost an arm at the shoulder-joint or a leg at the hip-joint. The small number as compared with the number of pensioners in the other classes indicate how few survive the amputation of an entire limb. There is greater danger attendant upon the entire amputation of a leg than of an arm, for there are on the rolls only 10 pensioners who have lost a leg at the hip-joint, while those who have lost an arm at the shoulder-joint number 443. They receive $45 per month. There are 3,105 pensioners who have lost an arm above the elbow, and 2,641 who have lost a leg above the knee. Such pensioners are to receive a pension of $36 per month, an increase of $6. There are also 839 pensioners who have lost an arm below the elbow, and 1,185 pensioners who have lost a leg below the knee. These pensioners are to receive $30 per month, an increase of $6. The bill further provides "that nothing contained in this act shall be construed to repeal Section 4699 of the Revised Statutes of the United States, or to change the rate of $18 per month therein mentioned to be proportionately divided for any degree of disability established for which Section 4695 makes no provision." The list of pensions now paid shows that in the higher grades the number of pensioners is comparatively small. For instance, what is termed total disability, such as the loss of both arms, both legs, both hands, both feet, the sight of both eyes, and insanity, the highest pension is paid, namely, $72 per month. The number of pensioners in these classes is as follows: Lost both arms, 21; both legs, 22; both hands, 7; both feet, 32; both eyes, 551; insanity, 190. There are only two persons who receive a higher pension than $72 per month, one of whom receives $75 per month and the other $100, the latter being General Black, Commissioner of Pensions, who received this pension by a special act of Congress. Of the 250,000 and more pensioners now on the rolls, the largest number, 60,268, receive $4 per month; the next highest number, 44,775, receive $8 per month.

The Homœopathic Treatment of Profanity.—"Another mental condition characterizing anacardium is a propensity to swear. Now, do not suppose that I recommend anacardium for the cure of profanity when it exists as a result of low morals; far from it. When, however, the propensity to swear comes as a result of mental disease, anacardium may do noble work. I once treated a minister who exhibited a remarkable *penchant* for profanity. Try as hard as he would, he could not help it. Anacardium made a complete cure in his case. Another remedy producing a disposition to swear is *nitric acid;* but I have never seen it do any good in these cases, excepting after the abuse of mercury."—*Hahnemann Monthly.*

A Dangerous Book.—The circulation of Dr. Ireland's book, "The Blot upon the Brain," has been prohibited in Russia. This is no doubt owing to the chapter on the hereditary insanity of the Romanoffs, and the historical illustrations about the harm insane monarchs have caused to their subjects.

Tracheotomy and Intubation.—Dr. F. E. Waxham, of Chicago, says that among 306 cases of tracheotomy performed in Chicago there were 58 recoveries, or 18.95 per cent.; while among 83 cases of tracheotomy there were 23 recoveries, or 27.71 per cent.

Teneriffe as a Health Resort.—It is proposed to establish near Orotava, in the island of Teneriffe, a great health resort on the plan of similar places in Switzerland, combining the advantages of a sanitarium for invalids with opportunities of healthy and instructive enjoyment for those who wish change. Humboldt pronounced the valley leading down to the sea the lovliest spot he had ever seen on earth, blessed with an eternal spring. About three miles higher up, at the old town, the air is bracing. The position lies embosomed in an amphitheatre of mountains, dominated by the famous peak.

The Virginia Medical Society holds its next annual meeting at Fredericksburg, beginning October 26th.

Remedy against Coryza.—Hydrochlorate of cocaine, grs. ij.; roasted coffee and white sugar, ʒ j. each. To be taken as snuff.

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Original Articles.

THE EVOLUTION OF THE APOTHECARY.

By W. A. PURRINGTON, D.

NEW YORK.

THE expression by Mr. Fox in an after-dinner speech, when on his special mission to St. Petersburg, of a patriotic belief that the "American language" was destined to become the universal speech, excited comment and curiosity. Matter-of-fact Britons resented this appropriation of their mother-tongue as an application of cuckoo methods to linguistics. Polyglot Russians yearned to acquire a new dialect.

Apothecary is one of those words in the use of which American differs from English and resembles Scotch; for with us, as in Scotland, prior to the passage of the pharmaceutical acts, if not now—it denotes one whose business, of a trading nature, consists strictly in selling, compounding, and dispensing drugs, chemicals, and kindred wares. The introduction into the stock-in-trade of soda-water, cigars, and confectionery, shows a tendency of the business to revert, even in great cities, to its type; for grocers and poticaries were formerly a single brotherhood, and were first incorporated into one worshipful society. Every grocer had an ἀποθήκη, by virtue of which he was a poticary.

In the fourth year of his pedantic and witch-hating reign, James I. granted a charter to "The Wardours and Fellowship of the Mystery of Grocers of the City of London," making of them a body corporate. But, as often happens where a child of his works secures a recognized social status for his family, the lesser, or junior, portion of this Mystery soon felt itself finer and more mysterious than the entire fellowship. Moreover, the blending of trades had its own inconveniences, easily conceivable to one who has been in rural districts where it still obtains. Our own Galen, who is heroic, once prescribed a very drastic remedy, and a combined haberdasher-grocer-apothecary of Westchester essayed to supply it. But the unusual dose, which "no one out here has ever took," drove him to a dispensatory, where for fifteen minutes he groped befogged, searching if a city man had anything in common with the ostrich. Only fear of not selling the drug decided him to risk decreasing the population.[1]

Perhaps (episodes of this kind as well as) a realization of the need of special care and training for the safe dispensing of medicines induced the "well-beloved Theodore de Mayerne and Henry Atkins," his "discreet and faithful physicians," to make those representations to James that induced him, in the thirteenth year of his reign, to separate the apothecaries from the grocers after nine years of union, and grant the former a separate charter under the corporate name of "The Master, Wardens, and Society of the Art and Mystery of Apothecaries of the City of London."

But although it was through the intercession of physicians that the apothecary, thus freed from the environment of grocerdom, was able to set up his own mystery, we may be very sure that the said Theodore and Henry never intended his evolution to go on until he should become, as he now is in England, a general practitioner of medicine. On the contrary, the new charter provided that the rights of the College of Physicians should not be abridged, that the college should exercise a certain supervision over the company, and that the apothecaries should consult the physicians on the use and properties of medicine.[1] The exclusive privilege granted to the apothecaries by their charter was this: "No person, free of the Grocers', or any other mystery in London, except those of the Apothecaries' Company, shall keep any apothecary's shop, or make, compound, administer, sell, send out, advertise, or offer for sale any medicines, distilled waters, compounded chemical oils, decoctions, syrups, conserves, eclegmas, electuaries, medical condiments, pills, powders, lozenges, oils, unguents, or plasters; or otherwise in any way practise the faculty of an apothecary," etc., under a penalty of £5. The only limitations upon this power were the said provision preserving the rights of the College of Physicians, whose licentiates might, under the statute, dispense medicine in their own practice, and the further provision that "approved chirurgeons" might enjoy their art "as much as belongeth and appertaineth to the composition and application of outer salves or medicines only, so that they do not vend or expose to sale to others such salves or remedies, according to the common manner of the apothecaries of London." But these provisions were not restrictions, in any proper sense, upon the monopoly of the trade. Physicians and surgeons could only dispense medicine in their own practice; they could not deal in it; and it follows that this statement of the "Encyclopædia Britannica," under the title "Apothecary": "The members of this society do not possess and *never have possessed* any exclusive power to deal in or sell drugs," is incorrect as a legal proposition.

The broad charter obtained for the physicians from Henry VIII. by Cardinal Wolsey, giving their college the licensing power theretofore vested in the clergy alone, which charter Mary confirmed, made the College of Physicians supreme in the whole field of medicine. It could license persons to examine and advise the sick, write prescriptions, dispense drugs,[2] and perform surgical operations;[3] whereas surgeons and apothecaries were narrowly limited in their respective functions. Whenever an apothecary or surgeon attempted to prescribe for the sick he stood in the peril of the law, and the college was not slow to punish him. Thus in 1602 one Jenkins, a member of the College of Surgeons, did "give judgment on urines and undertake cures." The Censors of the College of Physicians did then cause his arrest, and his counsel obtained, thereupon, a writ of Habeas Corpus; but on the return of the writ it appeared, in answer to the questions of Sir John Popham, Lord Chief Justice, that Jenkins could not justify his practice by the college seal, but could only plead: "I practised as a surgeon, and in that art the use of inward remedies is often necessary." Whereupon Sir John sent him back to durance,

[1] Romeo argued with his apothecary, hesitating to sell poison contrary to law: "The world affords no law to make thee rich; then be not poor, sell it and take this.—ACT V., Scene 1.

[1] "Proviso semper quod [illegible] compositiones et usum earundem concernent' advocabunt de tempore in tempus Præsidentem et [illegible] Majorem Civitatis London, aut alios Medicos Præsidentem præduct' nominand' pro avisamento in hac parte."—Charter, May [illegible].

[2] See the case of the Attorney-General ex rel Apoth. Co. vs. College of Physicians (1 D. & B. 231, 1 Phila. 168).

[3] 32 Hen. VIII., C. 40, 3, enlarging the original charter of the college, recites that the science of physic "doth comprehend, include, and contain the knowledge of surgery as a special member and part of the same," with which statement Dr. Davies, in his pamphlet on medical legislation, compares this saying of Celsus: "*Medicinæ autem omnes [illegible] duæ sunt, [illegible] ad curandum sequuntur.*"

saying substantially, as Goodall sums him up in his history of the college: "(1) There is no sufficient license without the college seal. (2) No surgeon, as a surgeon, may practise physick; no, not for any disease, though it be the great pox." And Sir John then further laid down six other propositions most disagreeable to Jenkins and like sinners, but of exceeding comfort to the college.

Before the incorporation of the College of Physicians the clergy were the source of license to practise physic. Successive bulls of the popes had failed to toss the priesthood out of this pleasant field of science. The college, as a corporate entity, seemed not only to have inherited the pride that marked the ecclesiastical body and caused the angels to fall, but also to have manifested it by self-mutilation, after the fashion of religious enthusiasts from the time of Atys to our own day. It was astraddle the bladder of professional pride that the apothecary floated on a silvery sea of shillings, sixpences, and half-crowns, to the humble but lucrative position of counter-prescriber and general practitioner, while the physicians, by their own acts, were impotent to stop him.

The surgeons had been originally barbers and smiths, *i.e.*, artificers; the apothecaries had been grocers, and still were tradesmen;[1] so that the physicians, notwithstanding their charter contemplated that they should dispense medicines and treat wounds and sores, enacted by-laws forbidding admission to their body to any who compounded or supplied medicine for gain, "surgeons, drug-compounders, or any other artificers of that sort, lest, perchance, if such men be admitted into the college we may seem not to have sufficiently consulted our own dignity or the honor of our country's universities, which, however, we ought, and we always desire, to attend with the deepest veneration." They decreed expulsion to any member of their college so far forgetting himself as to join the College of Surgeons or Company of Apothecaries,[2] and refused to license members of either body who did not first renounce membership therein.[3] The refusal of physicians to dispense even their own medicines; their requirement of a guinea fee for advice, and the expense and inconvenience to patients, especially in the country, of calling on the physician and apothecary, and possibly the surgeon, for a single case, were sufficient reasons why, in the course of time, the vender of drugs came to be consulted as to their use. Here was the apothecary's opportunity, especially if he had, as was commonly the case, a surgeon's license also. He was not bound to charge a specified fee, and the average man, though unwilling to pay for medical advice, is ready enough to purchase a nostrum. We love to be humbugged in gross ways. A remedy is tangible value for money; if the swallowing of it is followed by considerable discomfort the buyer is all the surer that it is efficacious. Advice, especially if consonant with common-sense, seems less valuable. If a wise physician should prescribe exercise and abstinence from rum to a victim of one of the commonest forms of "malaria," his fee would be paid grudgingly by one willing to spend cheerfully a tenth of his income in Golden Preparations and Certain Ague Cures, while keeping up, at considerable expense, the cause of his symptoms. So it came about that the apothecaries, unmindful of any gratitude they might owe to the memory of those faithful and discreet physicians who assisted their society into the world, and regardless of the limitations of their charter, fell to prescribing over their counters, and from that proceeded to visiting the sick. Let us hope that one cause of their success in gaining patients, as set out by one Doctor Murett, in 1669, in his lamentation over their encroachments on the privileges of physicians, was less important than he seems to have thought it, for he says that physicians unawares had been instructing apothecaries in their science by "sending them to visit their patients to give them the best account they could of the state of their health and effect of their medicines, and of late years taking them with them on their visits," so that during the plague of 1661, "*most of the physicians being out of town*," the apothecaries were enabled to "take upon them the whole practice of medicine."[1] This would imply that the physicians of the period were not only negligent of their duty in fair times, but that they fled their posts in time of danger, a charge savoring more of dyspepsia than of truth.

Whatever the causes were, the encroachments were made and punished during the period between the chartering of the company and the year 1703, when the House of Lords finally settled it in the case of William Rose *vs.* the College of Physicians, that an apothecary might prescribe his own remedies as well as sell them. This case is worth considering, for it was the last important step in the progress of the apothecary toward his present status as a general practitioner of medicine. The facts were these: William Rose being an apothecary, and John Seale, butcher, a sick man, the said Seale did send for the said Rose, who thereupon coming, did shake his head and look as wise as the whole Faculty, at which being much comforted, the thrifty butcher did ask the apothecary to send him something for his cure; whereupon the said Rose, not taking advice of any physician, did send some boluses to said Seale; charging therefor, but not for advice. The case does not state the effect of the boluses, nor is it important; for whether the patient was killed or cured was not material to the proposition of law, that it was alike contrary to the form of the statute for an apothecary to cure or kill. There does not seem to have been any doubt in the minds of the judges when the College of Physicians brought Rose up with a round turn for this his performance. It was argued several times—for Rose, as the result shows, was pertinacious—but the court, having true legal respect for statutes, said, unanimously, yet with a bit of sting in the tail of their judgment: "The making up and compounding medicines is the business of an apothecary, but the judging what is proper for the cure, and advising what to take for the purpose is the business of a physician; therefore, let the distemper be what it will, the prescribing and advising what is fit for it is the business of a physician, though without a fee; but that rarely happens," and it was unanimously agreed that the practice of physic in the meaning of the statute consisted:

"(1) In judging of the disease and its nature from the constitution of the patient, and many other circumstances.

"(2) In judging of the fittest and properest remedy for the disease.

"(3) In directing or ordering the application of the remedy to the disease; and that the proper business of an apothecary is to make and compound or prepare the prescriptions of the doctor pursuant to his directions; and it was agreed that the defendant's taking upon himself to send physic to a patient, as proper for his distemper, without taking aught for his pains, is plainly a taking upon himself to judge of the disease and fitness of remedy, as also of the executive or directory part."[2]

The appeal being taken to the House of Lords, it was argued for Rose:[3] "That the consequences of affirming the judgment would be to ruin all apothecaries, for in that event they could not follow their calling without the license of a physician;

"That constant usage and practice shows that selling a few lozenges or a small electuary to any person asking a remedy for a cold, or in other ordinary or common cases where the medicines had a known and certain

[illegible]

[1] Cited from Dr. Morris's Outline of Pharmacy in Ireland, in West R., April, 1858.

[2] 3 Salk., 17; 6 Mod., 44.

[3] See Parl. Rep. [illegible]

effect, where no fee was taken, could not be deemed practice of physic ;[1]

"That such affirmance would give physicians a monopoly of practice to the great harm of the public ; for it would lay a heavy tax on the nobility and gentry, who, in the slightest cases and *even for their common servants*, could not have medicine without consulting and feeing a member of the college ; it would deprive the poor of any advice ; it would be prejudicial to those suffering accident and taken sick in the night who send for an apothecary, who would risk the penalty if he applied the least remedy."

For the college it was argued that :

"By several orders of the college its members were enjoined to treat the poor gratis, and to visit them at their houses ;

"That when it was observed that these orders were defeated partially by the high price charged by the apothecaries for medicine, the college erected dispensaries in towns, where free patients could get medicine at one-third less than apothecary-prices ;

"That in emergencies, not only apothecaries, but anyone else, might relieve his neighbor, but this was no reason why apothecaries should practise at their leisure ;

"That in light indispositions the patient generally prescribed for himself, and the apothecary might lawfully put up the medicine ;

"That the most dangerous diseases begin with light symptoms, and the apothecary is not bred to detect them ; moreover, he is likely to sell his drugs plentifully, and if he makes a mistake in diagnosis, to cause great harm in what might have been remedied by proper treatment."

In spite of these arguments the Lords reversed the unanimous judgment of the Queen's Bench (how the vote stood does not appear, nor are the reasons from which the conclusion was drawn given. Whether the Lord Chancellor, sitting alone in solemn majesty, decided the question, or whether the lay Lords were affrighted at the prospect of having to employ a physician, as well as buy physic, for their common servants, we cannot know. What is certain is that the judges were reversed) ; and it was from that time on settled in England that an apothecary may prescribe as well as sell his own drugs. Two questions remained open : Whether an apothecary could recover, in an action at law, fees for medical advice,[2] or write a prescription for medicine not dispensed by him.[3]

In 1815 the Apothecaries' Act (55 Geo. III,C. 194) and in 1825 an act (6 Geo. IV., C. 133) amendatory of it, were passed, revising and confirming the ancient charter of the company. At this time the state of general medical education in Great Britain was deplorable. The case of Rose had established the right of an apothecary, with no other instruction than what he might have picked up in his apprenticeship behind the counter, to practise medicine. The powers of the College of Physicians appear to have been exercised rather too often against competent men, including graduates of the Scotch and Irish universities, and even of Oxford and Cambridge, as in Bonham's case, and too infrequently against veritable quacks and impostors. It was no simple matter to get the license of the college, and yet unlawful for the best-trained man to practise in London without it. The physicians seem to have forgotten that a charter, such as theirs, has no other *raison d'être* than the benefit to accrue to the public from the creation of a class of skilled medical men and the weeding out of the ignorant and inept. There was a little too much of the spirit of trades-unionism in their enforcement of the object of their charter as recited in its preamble.[1] The practice of medicine had fallen to a very considerable extent into the hands of quacks and incompetent apothecaries, while competent men were hampered by artificial restrictions. The company, thus freshly re-organized, set themselves about remedying this evil. The right of apothecaries to prescribe being established, the company licensing them now recognized that the right to advise implied the duty of care and wisdom in advice to which medical training and instruction were pre-requisities. They accordingly required candidates for their license to stand successfully examinations in chemistry, materia medica and therapeutics, botany, anatomy, and physiology, and the practice of medicine. The effect was that great benefit accrued from the act ; and this was frankly admitted by the physicians who at first disapproved of it.[2] Another effect of the act was to increase greatly the number of licentiates of Apothecaries' Hall as compared with the college. In the decade from 1848 to 1858, the year of the passage of the Medical Act, the licentiates of the College of Surgeons numbered 4,915, many of whom were, of course, apothecaries ; Apothecaries' Hall licensed 2,823, and the College of Physicians only 242. These statistics appear to have opened somewhat the eyes of the physicians, and shown them that the framers of their broad charter were wiser, perhaps, in their generation, than were they who drafted the by-laws. But it is a hard thing to admit errors ; so that the college did not entirely relax its old rules to meet the new crisis ; but in 1860, two years after the passage of the Medical Act, while still preserving in the by-laws the provisions prohibiting membership or fellowship in the college to anyone engaged in trade, or the practice of physic or surgery in partnership, or engaging to share profits on medicines with a chemist or other person, they nevertheless resolved to license a class of persons privileged to compound and dispense medicine in their own practice. Thereupon the apothecaries, who had come to believe themselves alone entitled to engage in general practice, filed an information and bill by the Attorney-General[3] against the college, praying that defendants should be restrained from thus amending their by-laws and granting such licenses. Mr. Roundell Palmer and others represented the college, and the case coming on in April, 1861, Wood, V.C., in an exhaustive opinion, sustained the right of the college under their charter to grant licenses in the entire field of physic.

We have thus seen the English apothecary not only evolve from a grocer into a general practitioner, but even acquire the assurance to attempt the curtailment of the chartered rights of the physicians. But it is not to be supposed that the apothecary, in our sense of the word, that is to say, the chemist and druggist, or, to use the English statutory term, the pharmaceutical chemist, is entitled to prescribe his drugs in England. The contrary has been held in two very recent prosecutions brought by the Apothecaries' Company to show that what was very good reasoning in 1703 to establish the right of Apothecary Rose to prescribe, is very poor logic when applied to Chemists Nottingham and Harrison. These two cases show very clearly the law applicable to counter-prescribing, as it has always been laid down by the law courts, on both sides of the Atlantic. They merit, therefore, full exposition.

In the Apothecaries' Company *vs.* Nottingham,[4] tried

[1] Compare Apothecaries' Co. v. Knottesham, 1 Str.

[2] A case very similar to this was tried in Massachusetts, and the court there held that the charge for the former sufficiently great to include a fee for the latter. The case may be found in 4 Cushing's Reports, p. 11 ; Morgan v. Hallock, Adams' Rep.

[3] This is still meat for lawyers. But it is certain that although under the Apothecaries' Act, an apothecary may not compound a qualified physician's prescription, he is not bound to compound one written by a fellow apothecary.

[1] "Cum regali [illegible] ... [illegible] ... [illegible] ...

in January 27, 1876, before Baron Bramwell, it appeared that the defendant, although only a chemist himself, was in partnership with a medical practitioner duly qualified, to whom he always referred such patients as in his opinion were seriously ill. It did not appear that he ever left his shop to prescribe, but it was admitted that he was in the habit of giving advice over the counter in what he considered trivial cases. In charging the jury the learned Baron said: "You have to find a true verdict on the evidence, *whether you like the act or not.*[1] Perhaps you may think that a person has a right to practise as he likes, whether qualified or not; or, on the other hand, you may think that, whereas the poorer classes have no opportunity of judging of or of ascertaining the qualifications of the persons to whom they resort for medical advice, the legislature should require such persons to possess proper skill and knowledge, and to obtain a certificate thereof. No doubt some people like to go to unqualified practitioners so as to get advice cheap; but there is the law, and we have to observe it. If you think this man has 'acted or practised as an apothecary,' then you must find your verdict for the plaintiff. Indeed, I feel some little difficulty in putting the case to you, for on the defendant's own admission he says he prescribed, and that if a person brought a child to him suffering from, say diarrhœa, and asked what was good for it, he gave the medicine; if, however, the case was serious, he sent the doctor. Surely that is acting and practising as an apothecary within the meaning of the act?"[2] Still more recently, in July, 1879, this whole subject was carefully and learnedly considered by Judge Matteran, Q. C., in the case of the Apothecaries' Company *vs.* Harrison.[3] The facts proved were that Julia Caddick went to the shop of defendant, a chemist, said she was suffering from weakness, and asked for something to relieve her. Defendant asked the cause of her weakness; she answered that it was left on her after confinement. He felt her pulse, looked at her tongue, and asked her to describe how she felt. She did so. He made up a medicine and charged only one shilling. Defendant's counsel urged in his behalf every argument brought forward for Rose, whose case, as we have seen, settled the right of the apothecaries to prescribe. He also tried to distinguish the chemist from the apothecary, by the criterion that the former could only practise in the shop, while the latter might visit; but the court said that the apothecary's right to visit was not clear as a legal proposition. Judgment was given for the company plaintiff, and the judge, citing the opinions of Bramwell and Creswell, *supra*, concluded his own opinion with these words, the applicability of which in this State and County is obvious to one familiar with their law and charities:

"I cannot, however, close this judgment without expressing my conviction that the act was intended (which intention has, I think, been successfully carried out) to have a beneficial action on the poorer classes. The more scientific masters of medicine being otherwise engaged, have no time to compound and dispense their own prescriptions; these, therefore, to save more valuable labor, are relegated to the chemists and druggists, who, if not a less highly educated class, are at least a class who have not passed the necessary examination to entitle them to practise as apothecaries. Now if the chemists were permitted to advise on the ailments of the poor, as well as to make up their drugs into medicines, the sick poor would lack the benefit of that highest class of skill which the rich by their purses can command. But this want has been provided for the necessitous at our public hospitals and dispensaries, where the ablest physicians, surgeons, and apothecaries in the land generously give their time and best skill to all comers, on whom not only sickness but poverty is pressing. The counsel for the defendant argued that the poor would suffer by limiting the action of the druggist according to the express language of the act; but to this argument the best answer is given by the act itself, which protects, benefits, and furthers the highest interests of the sick poor, by pointing and directing them to our public medical institutions for advice with reference to their ailments, and to the chemists for their medicines, when such are required, and are not provided for by those noble and charitable institutions."

Here, then, we leave for the moment our apothecary. Having triumphantly established, within less than a hundred years from his abandonment of the grocer, his own right to practise medicine, and having as triumphantly blocked, for nearly two hundred years, encroachments, exactly similar to his own, by the chemist, we have seen him, within the last twenty-five years, lay violent hands upon the venerable college whose members gave him his first start in life as a tradesman of a distinct sort; and we have seen him beaten in this assault, planned in the interest of his corporation as a trades-union, and not as the dutiful public servant that every corporation should be.

The apothecary's history is profitable for instruction. Not its least obvious lesson is that so long as the laws affecting the practice of medicine and the incorporation of medical societies are exercised, in pursuance of their ostensible object—*i.e.*, the furthering of the public welfare by requiring of practitioners conformity to a reasonable standard of professional attainment, those laws can be enforced; but that, whenever such legislation is attempted to be exercised in a selfish spirit of trades-unionism, for the benefit of corporations and their members, and in disregard of the public needs and convenience, the same laws will be nullified by close technical constructions, and if not repealed will fall into "innocuous desuetude." The medical profession in this country has been free, fortunately, from those arbitrary limitations which enabled the untrained apothecary partially to supplant the physician in England, by making it unprofessional for the latter to engage in the practice of medicine to the full extent authorized by the charter of the college granting his license. And there seems to be no adequate reason why the apothecary with us should be suffered to prescribe chalk-mixtures for "light cases of diarrhœa," bromides for "nervousness," and so forth. A judge in this city said some time ago that the court would take judicial notice of the fact that a lawyer could be found in half an hour for any client. And what with hospitals, infirmaries, dispensaries, night medical service, and about twice as many well-equipped physicians as lawyers in the county, there is certainly no crying need for laymen to render medical assistance except in cases of emergency.

[1] Our italics. There are similar New York cases affecting persons practising medicine under the guise of selling drugs.

[2] See Mr. Lumley's report of the matter, but see also [illegible] and apothecaries, in Apothecaries' Co. v. Lottinga, 2 M. and R., [illegible]

Parenchymatous Injections of Quinine in Ague Cake.—Professor F. Fazio relates in the *Rivista Clinica e Terapeutica* for July, 1886, the case of a woman, thirty years of age, who had suffered from malarial fever, and who had also marked hypertrophy of the spleen. The tumor extended from behind the margin of the ribs to a line drawn on a level with the anterior superior spine of the ilium. It was determined to attempt a reduction in the size of the spleen by means of parenchymatous injections of quinine. The instrument used was the ordinary hypodermic syringe provided with a longer and thicker needle than usual. The bisulphate of quinine was employed, and thirty-two injections of each 4½ grains were made, care being taken to make the successive punctures at some distance from each other. The result of treatment was a reduction of over one inch in the length of the tumor. The injections were not followed by pain or by any other unpleasant symptoms. The experiment was interrupted by the departure of the patient from the hospital, but Dr. Fazio believed that the results obtained were sufficiently encouraging to warrant further trials of the method.

A STUDY OF HERPES ZOSTER FRONTALIS SEU OPHTHALMICUS, WITH A CASE.

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T. T——, aged thirty, English, has been in the United States two years, and is a grocery clerk by occupation. He suffered from a very slight attack of small-pox twelve years since, and was then sick two weeks; had only two or three pustules over the entire body; one of these was on the abdomen, another on the right parietal region, but none on the forehead or face; his health was not afterward impaired. Two years later he had what his physician called "congestion of the brain"—had then much headache, but no delirium—and was sick three months, seven weeks of which time he spent in bed. He attributes the attack to overwork. Since this sickness he has had pain in the right knee-joint, but the latter has never been swollen. He has been troubled more or less with dyspepsia; otherwise the patient has been healthy.

There is no history of nervous disease in his family. His mother died of consumption at fifty, and a brother died of the same disease at twenty-five years of age. Family history otherwise good.

Patient first seen by me at the eye clinic of the Central Dispensary, January 22, 1885, when he gave the following history of his present sickness.

During the first week of August, 1884, he was exposed to a draught in the store where he works, and thinks he "caught cold." The following day he noticed a "twitching" of the upper eyelids of both eyes, which lasted for two days. A severe pain over both eyebrows then commenced, and extended upward and backward over the frontal and involving the tissues covering the anterior portion of the parietal regions. The pain was most severe on the right of the median line, and had lasted for forty-eight hours, when he applied ice-cold cloths to the painful parts during one night. Next morning his right upper eyelid was swollen and heavy, and overhung the ball so that he could not see unless he lifted up the lid with his finger-tips. The eyeball was pale, and his eyesight not as yet affected.

The pain over the frontal regions still continued, and he describes its character as lightning-like and intermittent in severity, but at no time was he entirely free from it, and the right side still continued to be the most affected. Besides the painful regions already named, the pain extended half-way down the right side of the nose, but was absent around the tip and within the nasal cavity.

About the time the right upper eyelid swelled he observed a crop of "water-blisters" over the painful region to the right of the median line. After their appearance the pain abated somewhat, but did not disappear. The vesicles appeared so quickly that, to use the patient's own words, "They were there before I knew it." He says there was no swollen, reddened base preceding the vesicular eruption. The fluid in the vesicles was clear. Vesicles were present over the right frontal region, involving the first inch of the hairy scalp; laterally they did not extend below the level of a line drawn from the outer canthus. The greater number were grouped for two inches above the base of the nose and near the median line, some crossing the latter for three-eighths of an inch. Above the right zygoma were two or three. On the upper eyebrow was one linear vesicle nearly one inch in length, extending downward and outward. The skin of the upper eyelid was the seat of two vesicles. Vesicles appeared over the right side of the nose, especially at the base around the internal canthus, and at and around the tip; the outer middle portion of the side of the nose was little involved. There were no vesicles on the lower eyelid, nor on the cheek.

He applied a solution of sugar of lead to the vesicular regions, and crusts formed, remaining several weeks.

The right eyeball became red and inflamed about the tenth day after the first appearance of the symptoms. He had, however, suffered from pain—similar in character to that already described—in the globe of the eye for four days before it became red, and the sight diminished at the onset of the pain. He also suffered from marked photophobia and profuse lachrymation, together with a thick discharge which glued the margins of the lids together, so that each morning he had to moisten the crusts before he could separate the eyelids.

The vision of this eye was now so markedly reduced that he could not see to read any type at any distance, neither could he distinguish one friend from another in the same room. The near and distant vision were alike. He describes his vision as clouded.

Thus the vision of this eye continued for four months, when he noticed it began—more or less suddenly—to clear up a little, but not sufficiently to read any but the very largest advertising type, though he could now discern one friend from another.

The pain, which had continued with almost unabated severity these four months, began to lessen at the same time that the sight began to improve. Now complete intermissions appeared, and these same periods of freedom from suffering have become more and more prolonged, and the painful area more and more circumscribed, until, at the present writing (January, 1885), he has from one to four paroxysms of pain in the twenty-four hours, each of which lasts from fifteen to twenty minutes.

The painful region is of circular form, of about an inch and a half in diameter, with the right frontal eminence as its centre. There is an occasional twinge of pain in the upper ciliary region of the right eyeball.

The pain is still of a stabbing character—comes suddenly, and is gone "before I know it." He considers that it is still steadily abating, though his sight is stationary. He has never been feverish, nor has he felt sick at any time during the attack; he had never before suffered from neuralgia nor other pain, except in the right knee-joint, and this was of a steady, aching character.

Condition January 22d.—Scattered over the right half of the frontal region are pale, punched-out, depressed cicatrices, more or less circular in form, and about the size of half of a No. 4 shot. They are most numerous and deepest near the median line, which they cross for three-eighths of an inch, and they appear grouped irregularly from the base of the nose to a mid-point between the latter and the margin of the hairy scalp. About one inch above the right zygoma may be seen a couple of discrete spots. Situated over the middle of the right eyebrow, among the hair, is a depressed linear scar three-quarters of an inch in length, passing downward and outward. There are two discrete, shallow spots on the right upper eyelid—the latter are the least marked of all the scars.

The skin of the right half of the nose, with the exception of a small portion at the outer mid-region of its side, and limited accurately by the median line, and especially around the inner canthus and over the nasal cartilages and tip, is the seat of grouped and discrete cicatrices similar to the foregoing. The skin of the affected regions is very markedly anæsthetic, as ascertained by the æsthesiometer, though the patient did not appear to be previously cognizant of the fact; that of the lower eyelid and cheek, and also that of the left side appear to be normal.

The right upper eyelid droops somewhat below that of the left eyelid, causing the right palpebral fissure to be the smaller of the two. The right lids appear in other respects normal. The lateral portions of the sclerotic are alone exposed and appear red, due to large, tortuous vessels wending their way from the canthi to the margin of the cornea. Near the latter are seen many more smaller tortuous vessels which fringe the lateral corneal margins. On separating the lids, so as to see the

junction of the sclerotic with the cornea above and below, other large, tortuous vessels are seen crossing over the sclerotic toward the limbus corneæ, where they disappear; the latter above and below is pale and free from the smaller tortuous vessels seen at the lateral limbus. No straight vessels are seen around the ciliary region.

The anterior portion of the sclerotic is more transparent than in health, and shades from a normal opaque-white near the equatorial region to a more or less mottled bluish-brown color near the margin of the cornea—such as seen in commencing annular ciliary staphyloma. This thinning of the sclerotic is most marked below the horizontal meridian of the eyeball.

On the corneal surface, and occupying only the pupillary area of the same, is a punctate abrasion of its epithelium, and, by oblique illumination, the finest superficial milkiness is perceptible, having fine, thread-like processes crossing its surface, but no ulceration.

The right ocular conjunctiva and the cornea are[1] anæsthetic, so much so that he permits my finger-tip to rest upon them without flinching—he says he feels it, but experiences no pain. The same parts of the left eyeball object even to the attempt at touch.

The anterior chamber is shallower than normal, the iris arching forward somewhat and the lens apparently advanced. The iris, of blue color and slightly muddy appearance, has large trabeculæ and looks swollen. The pupil is medium-sized and not strictly circular, the upper and outer portion of the iris being narrower than the remainder. To direct oblique illumination the iris is immovable, but consentaneously the faintest perceptible contraction is seen at the narrower portion. The fundus cannot be distinctly seen on account of the milky cornea, but the media appear fairly clear, for the disk is readily discernible from the remainder of the fundus. The tension of the ball is, if anything, slightly above normal.

The lids of the left eye are normal, sclerotic and cornea healthy, the anterior chamber shallower than normal; the iris, of clear blue color, arching forward slightly and evenly toward the pupil, is very sensitive to light, contracting readily both directly and consentaneously. The pupil is circular and of medium size. The media are clear; disk not transparent yet not perceptibly swollen; its details covered somewhat; its margins not clean cut but veiled, and extending from the latter a finely striated cloudiness is visible. Entire fundus has a misty appearance, so that its finer details are befogged. The retinal arteries, both on and off the disk, are very tortuous, pale, and, if anything, of decreased size. In places the outline of the vessels cannot be distinctly focussed, as if partially obscured in the swollen fibrous layer of the retina, but at no point do they disappear altogether. The retinal veins are straight, possibly a little larger and darker than normal.

Tension plus one. By direct examination I decided patient was emmetropic.

Acuity of vision.—Each eye tested separately. Right eye V= $\frac{6}{1 \text{XXX}}$, and rejects both plus and minus glasses; made only No. 10 Snellen at 6″ without glasses, and not any glass improves vision. Left eye V= $\frac{20}{\text{XXX}}$, and rejects both plus and minus glasses; sees Snellen's half circle equally distinct; reads No. 1 Snellen at 6″ to 13½″ without glasses, thus showing normal accommodation.

He considers that his vision with this eye is not as acute as before the disease commenced.

In the early period of the disease he had used a solution of atropine night and morning for one week. Knowing this, and being desirous to ascertain if there was a posterior synechia of the right eye, I inserted a very small portion of an ointment of atropia and morphia between the lids. After waiting forty-five minutes—being busy during this time—the pupil was seen to be egg-shaped, with the small end upward and outward, corresponding to the movable and narrowed portion of the iris. Three-fourths of the iris remained fixed, and the remaining fourth contracting caused an apparent displacement of the pupil up and out. The fixed iris looked more swollen, and its enlarged vessels were visible, giving it a brownish color. He said his eye ached during the first fifteen minutes after the application, and on questioning him now on the effects of its previous use he said the eyeball ached after each instillation, and during the latter two of the seven days the suffering became so great, and the cloudiness so marked, that the surgeon in charge stopped the further use of the atropine. The tension now seemed to be slightly reduced, but on palpation over the upper and outer ciliary region, contiguous to the contracted iris, he complained of pain; on previous palpation such was not mentioned.

The disk could be seen slightly more plainly, but not sufficiently so to satisfactorily describe.

Remarks.—From the distribution of the cutaneous scars it will be seen that the affected regions receive their sensory nervous supply from the frontal, lachrymal, and nasal branches of the ophthalmic division of the fifth cranial nerve. The couple of pits above the right zygoma are in the region supplied by the temporal branch of the upper maxillary nerve. This temporal branch, however, in its course through the orbit, receives a filament from the lachrymal nerve, and we may justly attribute the temporal scars to these added fibres. The lower lid receives its entire sensory supply from the palpebral branch of the superior maxillary nerve, and was not involved.

The ocular inflammation was transmitted through the ciliary nerves and lenticular or ophthalmic ganglion—which latter receives its long, or sensory, root from the nasal branch of the ophthalmic nerve—or directly from the nasal branch through the long ciliary nerves. The ciliary nerves—short and long—supply the eyeball. Thus we can trace the disease to the branches of the ophthalmic nerve; but is this the *fons et origo*, and what is the pathological process involved?

The patient was observed without any local treatment until February 5th, when eserine (gr. iij. to ℥ j.) was instilled into the right eye. From the 5th to the 15th, owing to the extremely severe weather, the distance, and an acute catarrh, the patient's attendance has been very irregular. During this period of ten days eserine has been used six times. The right pupil before the instillation had a diameter of four millimetres, and thirty minutes afterward a diameter of two and a half millimetres. The contracted pupil occupied a position within the lower inner quadrant of the cornea, in the angle formed by the horizontal and vertical meridia of the same. He has never experienced the slightest intraocular uneasiness at the time of, or between, the applications. Soon after the first use of eserine the previously continuous cloudy vision commenced to clear up somewhat, but only momentarily, relapsing again into thick cloudiness; later the cloudiness appeared less marked, and the clear interval more clear and prolonged; still later the clear intervals appeared twice daily, and lasted longer each time; now (15th) they recur three or four times daily, and he notices that his vision is always clearest in the early morning, and the cloud is steadily decreasing in density, and he can, for the first time since the onset of his eye-disease, read the clock in his room at eight feet distance. From January 22d to February 5th the right eyesight was stationary ($\frac{6}{1 \text{XXX}}$), but during the last ten days with this eye the vision has risen to $\frac{12}{1 \text{XXX}}$—just double the amount.

The second testing occurred on January 28th. At this time the left eye had a vision of $\frac{20}{\text{XXX}}$, and the right eye same as at first. Internal treatment commenced at this date, and consisted of cod-liver oil, quinine, and iodide

[1] [illegible] what he observed. He stated that in the right eye he had neither pain nor lachrymation [illegible] have since tested the same on two occasions, and with the same results, viz.: in the right eye no pain and no tears, whereas in the left pain was experienced and the tears flowed down the cheek. This experiment was tried on account of a similar observation noticed by one of Anstie's patients and referred to elsewhere.

of potassium, each given separately. On February 8, eleven days after the commencement, the vision of the left eye had risen to $\frac{20}{XX}$—normal.

March 3d.—During the last seventeen days eserine has been instilled into the right eye twelve times, and there has been a steady improvement in the acuity of vision, without the least intraocular irritation in this period of time. The vision has not been, neither is it yet, a constant quantity, varying from slight cloudiness (on exposure to bright light or due to fatigue) to very distinct vision (especially on first rising in the morning before exposure to light, and again in the evening).

In the store where he works he is exposed to the glare of the electric light, and he probably thinks correctly that this is the cause of his fluctuating vision.

During the last three or four visits I have noticed a steadily increasing injection of the ocular and palpebral conjunctiva of the right eye, until at the present there is an acute conjunctivitis. I consider the latter due to the eserine instillations and have stopped the same. There is, however, no intraocular irritation. Acuity of vision of the right eye, tested March 1st, and found as follows, the light being only fair: V = > $\frac{20}{XX}$; deciphers half the types correctly; reads No. 1 Snellen at 8″ with some difficulty, and No. 1 Jaeger readily at 6½″ to 10″, easily by choice at 7″.

He says he has been able to read ordinary newspaper print since February 20th with this eye. The cornea and media are now transparent, and the fundus can be readily seen, and to avoid needless repetition, I may state that in all its present characters it is similar to the left fundus already fully described.

The cornea, conjunctiva, and skin are still as anæsthetic as when first seen. He has been entirely free from all neuralgia for the past two weeks.

Since writing the foregoing history, which may be considered a typical one of the disease, with the exception that usually the vesiculation and scarring is limited by the median line, through the kind permission of Dr. E. L. Holmes, I have had the opportunity of consulting the fifth and sixth volumes of the "Royal London Ophthalmic Hospital Reports."

In these I find recorded 51 cases of herpes frontalis. Jonathan Hutchinson has collected 41, of which 26 were his own, occurring during a period of eight years. Mr. Bowman reports 9 cases, all his own, observed between the years 1855 and 1866. Dr. F. M. Mackenzie records one case in the *India Medical Gazette* of August 2, 1861. Together with the accompanying case these make 52 cases, and the subject of our present study.[1]

Unfortunately the records of the 52 cases are in many respects so imperfect that they greatly limit the usefulness of our study. Especially is this so in regard to the complications. The notes referring to the ocular inflammations are unfortunately so limited as to actually leave us in the dark as to the character of the same and its exact effects—the tension of the ball scarcely referred to, the acuity of vision rarely mentioned, and ophthalmoscopic description in one case only besides my own given.

Of the 52 cases, 31 occurred in males and 21 in females. The youngest patient was three and a half years of age, the oldest seventy, and of the later age there were two examples. The average age of fifty of the cases—in two it was not given—was 37.31 years. Before the tenth year there were 4 cases; between the tenth and twentieth years, 6 cases; between the twentieth and thirtieth years, 9 cases; between the thirtieth and fortieth years, 3 cases; between the fortieth and fiftieth years, 8 cases; between the fiftieth and sixtieth years, and the sixtieth and seventieth years, in each 10 cases.

The period of greatest immunity from the disease was during the fourth decennary, the largest number occurring equally during the sixth and seventh periods of ten years. Up to and including the fortieth year there were 22 cases; from the fortieth to the seventieth year there were 30 cases. The above would seem to show that the latter half of life is the period of greatest frequency of the disease. Where the previous health of the patients is referred to, in 20 cases it was good, in 5 it was feeble.

In 25 cases the right side was implicated, and in 22 the left was alone involved; in 5 cases the notes are imperfect.

From the distribution of the vesicles or the remaining scars, the first division of the trifacial was alone the diseased nerve in 48 instances. In the remaining 4 cases the superior maxillary nerve was implicated with the ophthalmic.

Motor disturbances were present together with herpes in 4 cases. The third nerve was affected in 3 of these, being completely paralyzed in 1, divergent strabismus existing—this case, however, made a complete and rapid recovery; in another there was partial ptosis, whether permanent or not is not stated; in the third case, ptosis, with markedly dilated and fixed pupil, was present, but no recti muscles were paralyzed or impaired; in the fourth case permanent internal strabismus was present, thus showing a paralysis of the sixth nerve and external rectus muscle. Hutchinson also states (vol. v., p. 258): "In all the cases which I have seen, in which the eye was affected, paralysis of the iris and total immobility of the pupil ensued."

Following Hutchinson's method we find that in its entirety the ophthalmic nerve was affected only in 2 cases; its frontal branch alone in 20 cases; the frontal and trochlear in 15; the frontal, trochlear, and oculo-nasal in 13; the superior maxillary in part, and all the ophthalmic in 1 case; the superior maxillary in part, and the frontal branch of the ophthalmic in 2 cases; the superior maxillary in part, and the frontal and oculo-nasal branches of the ophthalmic in 1 case.

In the differentiation of the affected nerve branches Hutchinson considers it difficult to state whether the lachrymal nerve is involved or not, yet he thinks where there is much upper-lid eruption, with "great swelling and much conjunctival congestion, we may safely believe that the lachrymal nerve is concerned."

It would seem more difficult to separate the lachrymal nerve from its share in cases of zoster frontalis than it would be to state in which cases it was involved. True, its fibres run side by side with, though separated from, those of the most frequently affected of all the branches of the ophthalmic, viz., the frontal, and we might infer that the origin of the two sets was the same; yet if this were so, they need not necessarily be both implicated, for, as will be seen later, it seems possible to have limited peripheral examples of this disease.

Seeing, however, that the lachrymal gland and upper lid receive their main nervous supply from the lachrymal branch, and seeing also that through the latter's connection with the temporal branch of the superior maxillary nerve it aids in the supply of the temporal region; again, seeing that upper-lid vesiculation and swelling, together with profuse lachrymation, and also temporal scarring, are present in the large majority of cases of herpes frontalis, we think we are justified in considering that it is the rule for the lachrymal branch to be involved in this disease.

Therefore a more simple division of the cases would be as follows:

Frontal and lachrymal nerves affected in 35 of the 52 cases; frontal, lachrymal, and oculo-nasal in 13; first and second divisions of the fifth, more or less combined, as before referred to, 4 cases.

The eyeball of the affected side became inflamed in 19 cases; in 6 of the others the eye is not mentioned; in 2 other cases there was conjunctivitis only. In the case where the third nerve was completely paralyzed the nose escaped and the eye was not inflamed. In the case of internal strabismus with diplopia the nose escaped and the eye did not inflame.

[1] One case may [illegible] have been [illegible] Hutchinson's further [illegible]

In the 19 cases in which the eye inflammation accompanied the zoster there was an associated nose implication in 15 of them; 13 of these occurred in Mr. Hutchinson's series, one only occurring in Mr. Bowman's cases (the remaining one is my own patient). Mr. Bowman records 4 cases of eye inflammation without any affection of the nose, though the forehead and infra-orbital regions were both involved in one of these. Vesicles or scars were present in 5 cases—all Mr. Hutchinson's—yet the eye was not inflamed. Here it may be remarked, however, that there were only one or two in each case above the mid-region of its side, and usually not below the level of the inner canthus. In one of these five cases ptosis was present, showing paralysis of the levator branch of the third nerve.

Thus Mr. Bowman had nose implication in 2 out of 9 cases, together with 4 cases of eye inflammation without nose involvement, whereas Mr. Hutchinson had 18 cases in which the nose was affected out of a total of 41, but not a single case of eye inflammation without an associated nose disease. We need not wonder, then, from their widely different experiences, that they should differently construe the same. On this subject Mr. Hutchinson says that he has never seen the whole side of the nose affected without also witnessing inflammation of the eye, and has never seen the eye inflame unless the side of the nose showed vesicles.

Bowman says he has not found affections of the eyeball to occur specially in those cases of ophthalmic zoster in which the eruption followed the course of the nasal branch.

Mr. Hutchinson says later that his rule ought perhaps to be modified a little, but that "it would be quite safe to assert that the eye scarcely ever suffers much when the nose is not affected, and that the severity of the eruption on the one part is usually in direct relation with the severity of the inflammation of the other."

Thus we have different views expressed by the early recorders of this disease. Though both are partially right yet neither expresses the entire truth. We will try to explain the nose-scarring without the eye inflammation, and the eye inflammation without nose disease. With one exception, in the cases of nose implication occurring without subsequent eye disease the scarring was limited to the upper half of the nose, was usually seated above the level of the inner canthus, and was in amount slight. Here the region of the trochlear nerves is alone involved. The supra-trochlear branch of the frontal leaves the orbit above the pulley of the superior oblique muscle "to end in the eyelid and forehead. Before the nerve turns round the margin of the frontal bone it sends downward a branch of communication to the infra-trochlear branch of the nasal nerve" (Ellis, p. 47). Again, the infra-trochlear branch, before it "leaves the orbit receives an offset of communication from the supra-trochlear nerve," and "it ends in the upper eyelid, conjunctiva, and side of the nose."

Now, on account of this communication with the frontal nerve, and seeing that the latter is the most frequently affected branch in cases of herpes frontalis, are we not justified in considering that these few upper-nose vesicles were due to these added fibres, and that the nasal nerve was not implicated at all? Thus the five cases of Hutchinson with nose-scarring and no eye inflammation may be explained and his amended rule still hold good.

But what of the case where the vesicles were present all over the side of the nose "to its tip?"

The terminal fibres of the nasal nerve are distributed over the cartilagino-cutaneous surface around the wing and tip of the nose, yet these fibres may not be the only sensory nerve-supply to the side of the nose below the inner canthus, for Ellis (p. 115, seventh edition), in speaking of the infra-orbital branches of the superior maxillary nerve, writes, "some incline inward to the side of the nose," and again, "the branches for the side of the nose supply the muscular and tegumentary structures."

Moreover, in Case 8 (vol. vi., p. 9) of Mr. Bowman's series, "there were marks of the herpetic eruption over the right forehead, and a small patch over the infra-orbital foramen, but none on the side of the nose." This would seem to show that only a few of the fibres of the infra-orbital branches were involved. Again, we must refer to another apparent anomalous distribution of the vesicles, as shown in Case 2 of Mr. Hutchinson (vol. v., p. 197), where "the mid-region of the left side of the nose was covered with vesicles extending exactly to the median line and no farther. Neither the lower part (ala) nor the upper part of the side of the nose was affected," and in this case "the eye itself was nowise affected."

In this case the nasal branches of the superior maxillary nerve would seem to be involved.

It would seem from these cases that the nose eruption is not necessarily dependent on the nasal branch of the ophthalmic. And if it be, the apparently limited peripheral cases of the second division of the trigeminus just related would premise a possibility of only a few filaments of any nerve becoming affected, the remainder of the trunk being sound. If the latter argument be accepted, we may not only explain Mr. Hutchinson's puzzling case of entire nose implication and no eye disease by believing that the fibres of the long sensory root of the lenticular ganglion and those of the long ciliary nerves were healthy; and again explain by it the four cases of Mr. Bowman, of eye disease without associated nose disease, by considering that the ocular fibres of the nasal nerve were involved, whereas the terminal filaments of the same nerve remained healthy. This, however, overthrows Mr. Hutchinson's amended rule, and would seem to show that from the cutaneous complication no rule can be formulated whereby we can foreshadow the probability of eye disease in any of these cases.

This we believe to be the truth.

Again, if this be true, we might still further speculate, and think it probable that in such cases as the above we had instances of only peripheral disease, possibly due to external causes.

When does the eye become inflamed?

Before answering this question we must refer to a wax model in Guy's Hospital, the notes appended to which say that the boy "was attacked with inflammation of the eye, and at the same time the herpetic eruption appeared."

If these notes are accurate, the possibility of the coincident appearance of the cutaneous and eye complications of zoster frontalis is proven. In point of time they both appear subsequently to the neuralgia, and in our 55 cases the eye complication follows, usually by a distinct period, the skin disease.

In 11 of the 19 eye inflammations the notes are imperfect and no statement given. The eye became inflamed two days after the appearance of the skin eruption in Case 5 of Mr. Bowman's series, and this is the shortest period stated. The case with the longest interval was one in which the eye was first affected one month after the vesicles appeared. Both Mr. Hutchinson and Mr. Bowman think the eye affection does not appear until after the eruptive stage has reached its height, or has begun to decline.

What tissues are involved in the ocular inflammation?

In the 19 cases the cornea alone was affected in 5; the cornea and iris together in 4; the iris alone in 2; the conjunctiva, cornea, and iris in 3; the conjunctiva, cornea, and lens in 1 case. In the 4 remaining cases the eye was practically lost. In one of these atrophy of the optic disk was diagnosed; in another, "most of the tissues of the globe, cornea, conjunctiva, sclerotic, and iris" were involved, and in the case accompanying this paper, besides the cornea, iris, and sclerotic, most probably the remainder of the uveal tract and retina were inflamed. If we bulk the cases, it will be seen that the cornea was affected in 14 of them, and the iris in 10;

thus the cornea is the part most prone to inflammation, and the iris only a little less so.

The acuity of vision and eye-tension is not referred to in 10 of the 19 cases. In one case the "globe is slightly prominent;" in another, "had no useful vision;" in a third, "cannot make out large ordinary print at all;" in another, "the sight was much impaired." In only one case of Hutchinson's is the exact acuity of vision stated, viz., $\frac{6}{xxx}$, and the tension is not referred to. In my case the tension was plus normal, the acuity of vision $\frac{6}{xxx}$, and could read only No. 10 Snellen at 6'.

In reporting cases the ophthalmoscope ought to be used where possible, palpation applied, and the acuity of vision given.

The etiology and pathology of this disease cannot well be separated. On this subject Bowman thinks that zoster is a peripheral disease, having its primary seat in branches of the nerves of common sensation.

Hutchinson is rather undecided in his views, at one time considering the disease to be of central origin, at another that possibly some cases are of peripheric origin only. It would seem that he was right, and that occasionally we may have cases of essentially peripheric origin and extent. The importance of this matter, in its influence upon the treatment of this disease, cannot be overestimated, for if herpes be always due to central disease, local surgical interference would be always contra-indicated; whereas, if we could know that we had a strictly peripheral case, exsection of the affected nerves would offer the most rapid and complete relief from the neuralgia which is the bane of this disease.

Bowman has mentioned cold as a possible external cause of this disease, and my own patient was conscious of being exposed to a draught, and "caught cold," the day before the disease commenced.

The lamented Anstie, in his work on Neuralgia (1871, p. 161), says: "The effect of a continuous cold *draught* of air impinging on the naked skin for some time is comparatively frequently seen in the provocation of a neuralgic attack; we say comparatively, because this influence is more frequently effective than blows, wounds, or temporary irritations of any kind applied to the peripheral ends of sensory nerves. But if neuralgia be a more frequent consequence of cold than of these other influences, a moment's reflection will show that it is by no means an absolutely common result."

Our pathology and etiology thus are far too general and indefinite to leave at the present stage, and in Anstie's conclusions, gained from his own experience and founded on that of others, we will, with the least time and space, find all that is requisite or known to further elucidate this part of our study. He writes: "Hereditary neurosis is an important antecedent of neuralgia in at least a very large number of patients. Neuralgia has no 'pathology,' if by that word we intend to signify the knowledge of definite anatomical changes always associated with the disease. It also possesses no demonstrable 'causes,' in the old metaphysical sense." He considers "that the essential seat of every true neuralgia is the posterior root of the spinal nerve, in which the pain is felt, and that the essential condition of the tissue of that nerve-root is atrophy, which is usually non-inflammatory in origin;" and at p. 190 he writes: "The trigeminus is in all its characters a spinal nerve, but it has sundry peculiarities both of structure and connections with other nerves."

From this it will be seen that he regards neuralgias as almost, if not wholly, of central origin.

Among the reflex influences that take part in the etiology and complications of neuralgia we shall only refer to those which more nearly apply to our special study: 1. "Neuralgia in a sensory nerve may (and almost always does to some extent) produce secondary vaso-motor paralyses. These paralyses may affect fibres which run in the same branch of the nerve as that which is painful, or fibres that run in another branch of the same nerve, or fibres that run with another sensory nerve, or the ganglionic chain of the sympathetic itself.

"In the present state of our information I am inclined to explain all the congestive complications of trigeminal neuralgia on the basis of vaso-motor paralysis. And I further believe that the cause of that paralysis is a direct extension of the original morbid process from the sensory root to the motor, affecting the origin of fibres in the latter which are destined to govern the calibre of ocular and facial vessels."

He is willing to admit that increased secretion may possibly be explained by vaso-motor paralysis, but the mere cessation of vaso-motion will not account for such facts as the rapid and simultaneous development of erysipelatous inflammation, of corneal clouding and ulceration of iritis and glaucoma, or nutrition changes in hair or mucous membrane, and considers "that there is a special set of efferent fibres in the trigeminus, emanating from the motor root, whose function it is in some unknown way to preside over the equilibrium of molecular forces in the tissues of which the nerve is distributed—trophic nerves, in fact, though not active dilators of blood-vessels."

2. "Neuralgia in a sensory nerve may increase, alter, or (more rarely) suspend the secretions of glands supplied by fibres bound up in the same branch, or in another branch of the same nerve, or in a different nerve with which it is connected, only through the centre, or (possibly) only through a plexus.

"In the great majority of cases the affection is in the direction of increase, at least the watery elements of secretion are often poured out in profusion. Thus profuse lachrymation is exceedingly common in ophthalmic neuralgia.

3. "Neuralgia in a sensory nerve can produce paralysis of muscles supplied by motor fibres bound up with the painful branch or with another branch of the same nerve, or in muscles supplied by a totally distinct nerve connected only through the centre."

In this, Hutchinson's idea, that cases of zoster frontalis with motor complications are instances of central origin of the disease, is indorsed. The above statement would scarcely apply to paralysis of accommodation usually present in the cases of eye complication of zoster, and due most probably largely to compression of the nerves supplied.

Anstie regards paralysis of muscles, secondary to neuralgic affections, as "pretty common," and further writes: "I find that in twenty-eight of the hundred cases which have been referred to, no less than twelve were connected with neuralgia of the trigeminus, and in most of these it was one or more of the muscles connected with the eye that were affected.

4. "As regards vision, besides minor perversions, I have observed more or less complete amaurosis in several instances of ophthalmic neuralgia: in one case it was absolute, and lasted, with but slight improvement in the intervals between the paroxysms, for nearly a month, but disappeared entirely, though somewhat gradually, after the final cessation of the neuralgia."

When considering diagnosis Hutchinson writes: "It is often considered to be erysipelas."

Undoubtedly Anstie has made the common mistake, for he continues: "In the first case I saw (a woman of thirty-two) nothing could be more startling than the rapidity with which an irregular patch of skin, including half of one cheek, the side of the nose, and a large part of the forehead and scalp on the same side, became converted into the dense, fiery-red, brawny tissue, with minute vesicles scattered over its surface, which looks so characteristic of erysipelas. This commenced immediately on the subsidence of severe neuralgic pain."

This is a typical case of facial zoster, implicating the first and second divisions of the trigeminus.

Anstie reports two cases which are of extreme interest because different from any of those reported by Hutchin-

son or Bowman, one of them being the only instance we have found where the third division of the fifth nerve was involved in the disease.

That they were cases, not of erysipelas, but of trigeminal neuralgia, with its skin and eye complications, I have no doubt. The only likeness to erysipelas that I can find in the one in which the third division of the fifth nerve was involved was the "continuous deep-red color," which Anstie notes, of the soft tissues of the affected nerve districts; but this redness is not by any means peculiar to the erysipelatous inflammation; and the only item that was lacking in the case to make it a typical one of zoster frontalis was the absence of vesicles. Here we are confronted with the question: Is it an accident, or is it essential to have vesicles present in cases of herpes zoster? It would seem that we may or may not have vesicles present in cases of zoster frontalis, according to the character or grade of the secondary inflammation accompanying these cases of trigeminal neuralgia.

The other case reported by Anstie is a very remarkable one, as it seems to prove that there may be repeated attacks of zoster. The family history of the patient was peculiar. All the members of the family of the patient's mother, for two generations, had died at middle age of apoplexy or some disease involving hemiplegia.

Now we have been taught that zoster only occurs once in a lifetime, and with all the credence and respect that is due seniority we have not doubted the statement until the perusal of this second case. We must not forget, however, that in the past a second attack of syphilis, measles, scarlet fever, and small-pox was considered impossible. Yet it is now known that there are certain individuals who are especially prone to contract a second or more attacks of the exanthemata. The supposed rule is little less valuable in practice on account of these few exceptions, yet to-day it is not arbitrarily taught.

If the disease that we are now considering be essentially a neuralgia with added parts—and still further evidence could be adduced that would show the same to be the case—and knowing that the repetition or continuation of the causation of the same will in ordinary neuralgia invoke other attacks, why is it invariably impossible to have a recurrence of this form of the disease?

Clinical experience has proven that it must be extremely rare, or the supposed rule of protection from subsequent attacks would never have been formulated.

In this second case of Anstie's the remarkable neurotic history is little less striking than is the apparent repetition of attacks of facial zoster, yet he would seem to regard the inflammation as erysipelatous in character, and he fails to mention scarring as remaining after one attack. Reference is not made to scarring resulting from herpes frontalis in his work, yet it is well known to be the rule, and this dermatological landmark must, in some of his cases at least, have been overlooked.

Herpes zoster is a neuralgic disease of the affected nerve branches—in this instance those of the fifth. The neuralgia always precedes for a variable period the cutaneous inflammation; it is always limited to the known distribution of the affected nerves; it is almost invariably accurately limited by the median line; the attack is not accompanied by constitutional symptoms.

The eye complication is peculiar to neuralgia of the ophthalmic nerve.

The above are sufficient to differentiate any case of facial zoster from erysipelas, for they are present—with the exception of the eye complication—before the cutaneous inflammation appears.

After the latter is present in zoster it closely follows the distribution of the neuralgia; in erysipelas it abhors any limit. The vesicles, when present, also follow only the distribution of the diseased nerves; are usually smaller, more numerous, and grouped: very different are the erratic and fewer bullæ of erysipelas. The vesicles and their débris remain from one to many weeks in zoster, the pain, though frequently abating when the eruption appears, still being usually present.

After the scabs drop off, in the young, an injection of the vessels over the seat of the eruption does not usually disappear for many more weeks; whereas in the aged, whose reparative processes are on the wane, we may have actual and persistently painful ulcers.

The patient who has once suffered from a typical attack of herpes zoster carries around with him, and may be recognized years afterward by, the permanent, depressed, punched-out, pit-like, white, discrete, and grouped cicatricial scars covering the former seat of the disease.

The scars are most distinct over the regions where the soft, subcutaneous tissues are most plentiful, viz., over the median frontal region and hairy scalp, also over the temporal region and the eyebrow. They are least marked, and almost imperceptible, over the thin, fine, skin of the eyelids.

Lastly, the neuralgia that is least marked in the youthful patient, and may remain with him a variable period of a few days, weeks, or months, may, in the aged and feeble, end only with the termination of life.

The remaining anæsthesia of the skin in the region of the affected nerve-districts has been already mentioned, and we have only to add that the eyeball when inflamed is also left in a more or less markedly anæsthetic condition.

With such a picture is it possible to confound this disease with erysipelas?

It seems more incredible to think that a neurologist of Anstie's calibre could have seen any relationship between the cutaneous inflammation of trigeminal neuralgia and that of ordinary erysipelas, which loathes any limit—anatomical or clinical—than it is for ourselves to believe that his second reported case was a true example of zoster frontalis, in whom there appeared three separate attacks of this disease.

That it was not a case of ordinary erysipelas few will deny. In the first attack the "erysipelas was accurately limited to the right half of the face." This speaks in favor of zoster, yet by no means is it impossible to have the limit of an attack of erysipelas to one or other side of—though not likely to be "accurately limited" by—the median line, which it is so prone to transgress on the face.

About four and a half years after the first attack, and preceded for a period of fifteen or sixteen days "with violent intermittent neuralgia," a second "attack of erysipelas strictly limited to the district of the painful nervous branches then set in." Yet another "attack of erysipelas occurred some three or four weeks after the first," and "the neuralgia disappeared about four months after its first occurrence. The pain was accompanied by intense conjunctival congestion and photophobia," and the eye was practically lost, for ophthalmoscopic examination was impossible.

Zoster has been mistaken for eczema in its vesicular stage, but the mere mention of the fact is all the interest it possesses for our study; a careful observation will readily prevent such an error.

Anstie reports other cases which illustrate the steps from the ordinary keratoiritis to the complete double glaucoma following, and the result of trigeminal neuralgia.

These, together with the case of my own patient, though not warranting a positive opinion, yet lead me to the belief that the character of the ocular inflammation of neuralgic zoster is *serous*, and though we have in the cases of our study evidences of posterior synechia, yet in cases of so-called serous iritis we may have present sufficient plastic material thrown out to agglutinate the *posterior* surface of the iris to the lens capsule.

I consider that the iritis is *serous*, and with a marked tendency to extension of the inflammation to the ciliary body, and still further to the choroid, and that, owing to

a vaso-motor paralysis only, or together with the influence of the special set of trophic fibres bound up in the trigeminus, and referred to elsewhere, we have a dilatation of the ocular blood-vessels with serous inflammatory exudation into the vitreous chamber, causing an increased intra-ocular tension, resulting, if sufficient, in inflammatory glaucoma in a proportion of the cases.

If this be so, its bearing on the management of the ocular complication of cases of zoster frontalis is obvious—so that, if possible, previous to the iritis, or, at least, previous to the glaucomatous condition, we may, by resort to prophylactic treatment, prevent, if possible, the onset of the latter disastrous result.

Before referring to treatment of zoster frontalis, a word more may be written on the character of the pain present in these cases, on account of its bearing on the matter of prognosis.

In our fifty-two cases neuralgia is mentioned in twenty-six as being more or less severe; in the remaining cases, in many of which the notes are too brief, because unobtainable, to call histories, the pain is not referred to. The pain was of a lightning-like character, paroxysmal, came unexpectedly, and was gone as quickly. It preceded, for some time, the eruption, and was localized to the affected nerve-districts, and lasted, after the acute stage of the complications, a variable period—speaking generally, the shortest time in the youthful patient, and the longest period and most severe in the aged. In one case it was present six years afterward, in another four years, and in Trousseau's cases five and fourteen years respectively. For this distressing symptom alone some sought advice.

Anstie writes (p. 54): "I have known one patient, a woman over seventy years of age, absolutely killed by the exhaustion produced by protracted suffering of this kind."

As to the degree and importance of the pain at different periods of life, Anstie says: "Painless herpes is commonest in youth. From the age of puberty to the end of life the tendency for herpes to be complicated with neuralgia becomes progressively stronger," and, referring to its recurrence after the cutaneous outbreak, he further writes: "In old people it almost always does return, and often with distressing severity and pertinacity. Six weeks or two months is a very common period for it to last, and in some aged persons it has been known to fix itself permanently, and cease only with life."

Treatment.—The general and main treatment of herpes frontalis is undoubtedly that of the neuralgic state on which it depends. Therefore, in all cases—whether peripheral or central in origin—we must treat this disease by properly selected constitutional methods.

Cod-liver oil, strychnia, arsenic, and iron are all useful. Quinine is valuable in these cases, and Anstie says: "It is a fact that quinine does benefit ophthalmic neuralgias where there is no room for suspicion of malaria." He recommends two-grain doses three times daily. At any period of the disease hypodermics of morphia, together with chloral and bromide of potassium for their hypnotic effects, are valuable as temporary aids in the treatment of the neuralgia.

For the skin complication topical treatment is required, and among the best remedies are sedatives and those which exclude the air, "by which we seek to mitigate the paroxysm" of pain at its apparent site. Anstie says: "Very much the best agent of this kind is the flexible collodion. In neuralgic herpes and erysipelas the effect of this agent, conjoined with the hypodermatic injection of morphia, is of the greatest possible service in mitigating the pain. In herpes it prevents the occurrence of sores after the vesicles fall," frequently troublesome in the aged, "and which very much increase the severity" "and intractability of the consecutive neuralgic pain." To the ordinary flexible collodion the addition of the local anæsthetics, iodoform and the more powerful, though less permanent, hydrochlorate of cocaine would seem to increase the anodyne results. The latter remedies might, however, be used in solution, and applied when needed for the pain. Ether in the iodoform solution would increase its effects. A cap of cotton, that was found useful in one of Bowman's cases, covering completely the painful nerve-districts, would probably be a serviceable addition to these remedies.

Anstie also suggests the application over the painful nerve-districts of the tincture of aconite, or veratrine ointment, only in those cases where the skin is unbroken after the inflammation has passed entirely away, or in those cases where the skin was not complicated.

Speaking of blisters in neuralgia, Anstie considers Valleix's assertion, "'that they are the best of all remedies,' is not very wide of the truth," though not universally applicable. He agrees also with Valleix that "flying blisters" are preferable to the plan of keeping the blistered surface open and irritated. Anstie regards blisters as "true stimulants of nerve-function," and in order to thus act "it will be necessary that the skin irritation be either produced at some distance from the seat of greatest pain, or if applied in the spot it shall be comparatively mild in degree." He, therefore, applies "the blister at some distance from the focus of pain," but in choosing the site "there must be an intelligible channel of nervous communication between the irritable portion of skin and the painful nerve."

Blistering, however, is a remedy which is not well suited to aged subjects, and for such the "continuous applications of moist warmth," together with the use of chloroform liniment and mild rubefacient remedies, are to be preferred. Anstie speaks in the highest terms of the value of galvanic electricity, but does not favor Faradism in true neuralgias.

Now we come to the discussion of surgical interference in those cases where the neuralgia, in spite of all previous methods of treatment, still persists, rendering even life itself irksome to our unfortunate patient.

Again to Anstie we look, who says, in speaking of resection of nerves: "Neuralgias of the trigeminus are pretty nearly the only cases in which the proposal of neurotomy or neurectomy ought to be entertained. Resection of painful branches of the trigeminus has been performed in a great number of instances, more especially by German surgeons, with results that merit our attention. On the other hand, with the exception of simple division of the nerve, which can be subcutaneously performed, and is a trivial proceeding (but has very short-lived effects), these operations are by no means without danger, especially where they are pushed to such a length as the opening of bony canals and the resections of considerable portions of bone, in order to get sufficiently far toward the centre, and fatal results have in more than one case followed."

We have had three different opinions expressed as to the seat of the origin of the neuralgia in these cases of zoster frontalis—Bowman considering examples of this disease to be mainly of peripheral origin and extent; Hutchinson thinking them to be in the majority of instances central, yet considering those few of extremely limited area most probably peripheral, whereas Anstie regarded every true neuralgia of central origin, and therefore justly objected to surgical interference in any of them.

On the seat of the disease will depend the result of surgical procedure in any of these cases. In those cases of recognized central origin neurotomy or neurectomy is most certainly contraindicated, yet in those cases of essentially peripheric origin and extent—and we believe with Hutchinson that there are such—they would seem to be as essentially desirable.

Unfortunately we have no accurate means of differentiating between the two kinds of cases.

Those instances of zoster frontalis occurring in the aged, especially with a previously neurotic history, and again associated with secondary motor paralysis, are

almost certainly of centric origin. Those cases also of severe disease, involving a large area—not only all the branches of the ophthalmic, but also implicating the second or even all three divisions of the fifth nerve—are most probably of central origin.

Whereas those cases occurring in the first half of life, in previously non-neuralgic patients, with a recent history of exposure to cold, damp wind, and with a continuous pain, together with disease of limited extent, involving, may be, only a few terminal filaments of one or more branches of any one or more divisions of the fifth, will most probably prove to be instances of peripheral origin and extent.

Further than these indications we cannot go at present.

Seeing, however, that it is conceded by our three authorities, and an accepted fact of our day, that subcutaneous section of superficial sensory nerves is a riskless and simple procedure, and painless under anæsthesia; therefore, in those instances where we have any doubts as to the character of the case, a division of one of the nerve-branches would seem to be indicated as a test of the seat and extent of the disease. This having been done, and the patient again conscious, if the pain has now ceased in the region of distribution of the divided nerve-branch, and palpation over the same area does not cause its return in that or other districts, we may justly consider the case to be one of peripheral extent and origin, and after again anæsthetizing our patient, proceed, as far as the same is possible, to exsect a portion of each of the affected nerve-branches.

In those cases where the pain persists after our experimental division of the nerve it would seem wiser to desist from further operative procedure, and treat the patient according to the best methods suggested to the mind of the physician in charge.

Limited by our study, therefore, we believe that exsection in the properly selected cases offers the most rapid and permanent relief from the persistent neuralgia of zoster frontalis, and that in the hands of the educated clinician—not loaded down with the heavy weight of the uncertain pathology of these cases—it is likely to gain a permanent and worthy stand.

The treatment of the eye complication is as yet untouched, and calls for a few remarks. Hutchinson, as far as I can find, does not refer to ocular treatment, and Bowman's remarks are unsatisfactory.

Whether on account of vaso-motor paralysis through palsy of the sympathetic, or on account of certain fibres of the trigeminus being active ones of secretion, we know not, yet we believe that the characteristic quality of the eye complication of zoster frontalis or trigeminal neuralgia is one of serous inflammation of the affected tissues, resulting in a variable increase—according to the grade of the inflammation—of the intra-ocular fluids. The same increase may be only of slight amount and temporary, causing no organic harm. In those instances of severe disease there appears to be a tendency to implication of the deeper tissues of the ball, resulting in such an increase in the intra-ocular fluids that the same are formed more quickly than removed; hence we have a steadily increasing intra-ocular tension resulting, if not relieved, in glaucoma in a few instances, and a more or less complete destruction of the organ by the same, or by secondary trophic changes, the sequelæ of the inflammation.

Appreciating the danger, can we not anticipate the same by proper prophylactic treatment in those cases seen previous to the onset of the ocular complication? Again, in those cases where the eye-inflammation has already commenced when first seen, can we not limit the extension of the same so that the deeper tissues of the eyeball may escape and the eye be saved? Yet again, in those cases where the glaucomatous condition is already present, can we stay the progress of the same with the hope of having a maimed, instead of a completely destroyed, eye.

A remedy, in order to achieve the desired results, must be one that will reduce the calibre of the paralyzed ocular vessels and thus limit the production of the intra-ocular fluids; again, if possible, it must unlock the outlet so that the excess of fluid may escape from the eye. To be of prophylactic use it must prevent the vascular dilatation and keep the drain open.

In eserine we find the remedy that, *par excellence*, achieves the above results. This remedy may already have been recommended in these cases, but if so it is unknown to the writer.

As a prophylactic its occasional use, in the form of ointment, is advisable; after the keratitis is present it will need to be used more frequently, together with the general treatment for the same; in cases of keratoiritis, or iritis, it may still be used, but on account of its irritant effects the result must be watched. If the intra-ocular tension becomes plus normal and the iritis and ciliary neuralgia are increased by its use; again, in those cases where, together with an active iritis, we have extension of the inflammation to the deeper tissues of the uveal tract with increasing tension under its use, we must withdraw the remedy and either resort to paracentesis of the cornea, or, if the integrity of the eye is endangered, iridectomy may be considered advisable.

Yet in the majority of instances we anticipate that eserine—especially as a prophylactic and in the very earliest stages of the ocular inflammation—will be found an unmixed good. In our own case it has been used without the slightest irritant effects, and the neuralgia of the eyeball has ceased entirely, the sclerotic is paler and more opaque, the tension is lowering, the cornea and media becoming clearer, his vision showing signs of improvement, the fundus seen more clearly, and the vision of the fellow-eye has risen in eleven days from $\frac{20}{XXX}$ to normal.

In the hydrochlorate of cocaine we have the most powerful local anæsthetic and vessel contractor, and its slight mydriatic action, together with its slight paresis of accommodation effect, may not be especially injurious in these cases. In those cases where eserine's irritating action is pronounced, in the cases of iritis, or in those cases of deep inflammation, it would seem that the hydrochlorate might be used before resorting to operative procedures. Its effects, as thus far investigated, are very transient, and we know not as yet whether its frequent application—as would be needed in these cases—can be fearlessly pursued. In a few cases recorded it would seem that occasionally its effects are not entirely intra-orbital, for, besides the local action, marked pallor of the skin, together with beady perspiration and threatened and actual syncope, has been observed. If due to the drug, probably an anæmiating effect is produced on the nervous centres, though Dr. J. L. Minor [1] attributes these symptoms to the conscious fear of the patient when an operation is going to be performed, and the latter is undoubtedly a facile explanation.

Is atropine a remedy suitable for this form of eye-inflammation? "According to the most recent and reliable tonometrical investigations, atropine diminishes the intra-vascular tension by paralyzing the muscular coat of the vessels, but the general intra-ocular tension in the vitreous is increased by its use" (Bull).

Any remedy producing such results, in our opinion, ought to be entirely avoided in the eye complication of trigeminal neuralgia, lest we precipitate the result that we endeavor to avoid, viz., glaucoma, by not only increasing the intra-ocular fluid, but also by damming up the iritic angle and Fontana's space, and thus blocking the drainage system of the eye.

My own patient states that atropine was used twice daily, in the early stage of his eye disease, for one week. During the latter two days of this time the suffering following its application, together with the marked reduction of vision, caused the surgeon to interdict its further

[1] See M[illegible]

use. After its effect passed off, he says the eye became comfortable and the increased cloudiness disappeared. If used at all, it should be only for diagnostic purposes, and only by those skilled in ophthalmic practice.

Before closing this unexpectedly prolonged study, and as an apology for the same, a word about the frequency of herpes frontalis may be added. Hutchinson says: "The disease is, I am persuaded, more frequent than is generally supposed. In proof of this I may mention that, during the last year, no fewer than three patients have consulted me in private on account of its effects." Again, he says: "I have found most surgeons very incredulous as to this disease, and I free in their assertions that they had never seen it, and that it must be extremely rare. My conviction is that it is misnamed."

Again, the impulse of which this study is the result was created by the fact that my own patient had gone unrecognized for nearly five months, and had been seen by four different practitioners. The first recognized the herpetic eruption, knew it was not erysipelas, yet asked the patient if he had ever had syphilis; the second recorded "herpetic condition of the lid;" the other two—both specialists—recognized the iritis; but all overlooked the trigeminal neuralgia.

Conclusions.—From the foregoing study it would seem that the phenomena of herpes zoster frontalis are dependent upon, and the result of, the neuralgic disease of the ophthalmic division of the fifth cranial nerve; that the essential condition is one of asthenia of the nervous tissues involved; that there is no definite or constant anatomical change in the affected nerves; that in the great majority of instances the disease is of central origin, but that in a few cases it appears to be of peripheral origin and extent; that the associated cutaneous and ocular inflammations are secondary to the neuralgic disease, and appear subsequently to the onset of the same; that these dependent inflammations are due to vaso-motor paralysis on account of palsy of the sympathetic, or due to the influence of a special set of trophic fibres embodied in the trigeminus; that the extent and severity of the inflammations are in direct relation to the severity, extent, and persistence of the neuralgia; thus we may have any degree of increased vascularity or inflammation—from simple hyperæmia to complete destruction of tissue.

The essential treatment of the disease is that of the neuralgic state; that in the instances of central origin local surgical interference is contra-indicated, but in the fewer cases of peripheral origin and limited extent, excision of the affected nerve-branches is advisable; that the ocular inflammation is serous in character, with a special tendency to increased intra-ocular tension and the glaucomatous state; that on this account eserine would appear to be the remedy *par excellence*.

The disease, though almost invariably occurring but once in a lifetime, and also, almost invariably, accurately limited by the median line of the body, may, in very rare and exceptional instances, not only transgress for a short distance the median line, but also occur more than once in the same individual.

That it is a disease occurring with greatest frequency and most severity in the latter half of life; that it is a disease important, not only on account of the destructive ocular inflammation, the severe and often prolonged suffering, but also on account of the risk to the life of the aged patient; that it occurs more frequently than is generally supposed; that it is often misnamed, and hence overlooked.

[illegible]

The French Plan of giving Castor-oil to children is to pour the oil into a pan over a moderate fire, break an egg into it, and stir up. When done, flavor with a little salt. *Archives of Pediatrics.*

[illegible] to Professor [illegible] of Rush Medical College, indorsing [illegible]

Clinical Department.

ANTIPYRIN AS AN ANALGESIC IN HEADACHE.

Dr. John Blake White, Physician to Charity Hospital, New York, sends us the following:

"The high road to truth is the knowledge of facts, and well is it for searchers after truth when facts can be ascertained and carefully recorded.

"Symptoms are the alphabet, cases the language, of disease, and that physician subserves his profession who carefully records his experience.

"During the past two years I have abundantly tested the therapeutic value of the drug known as antipyrin in various forms of headache. The prompt relief obtained through its use compels me to accord to it a high rank among our medical resources. I have already called attention (*Medical News*, July 10, 1886) to the potent antipyretic power possessed by this remedy in the management of various forms of fever, and have observed that after its administration the urgent symptom of headache, so uniformly present in these cases, was soon controlled.

"Antipyrin undoubtedly possesses bradycrote properties in a high degree, as the pulse is notably softened and moderated in frequency soon after a proper dose of it has been taken. It produces some somatic change favorable to a reduction of the pulse in cases of fever, and so exerts a calming influence upon the vaso-motor system. The capillaries, through its agency, doubtless dilate, and local congestions are dissipated, as the relieved patient usually sinks into a refreshing repose soon after its exhibition. In the course of large experience with antipyrin I have found that, when administered in masterful doses, it not only promptly relieves the symptom of headache whenever present, whether resulting from disordered digestion, disturbance of the menstrual functions, loss of sleep, undue mental effort, or even that associated with dreaded uræmia, but also possesses reliable prophylactic virtues against recurrent attacks of cranial neuralgia. So confident am I of the power of this remedy to disappoint neuralgic headache when imminent, that I have instructed many patients, who are liable to such visitations, to keep in readiness and take a dose of antipyrin as soon as they have premonition of its recurrence, and all so far testify in favor of its efficacy.

"The value of this remedy in the above respect has not only been tested in my hospital and private practice, but I also record the fact that it has proved successful in the hands of professional friends, upon whom I had urged its employment for the relief of neuralgic affections of the head and face. I have been singularly impressed with the promptness of relief which often followed the administration of even a single dose of fifteen grains of the antipyrin. The grateful relief from headache usually ensues within half an hour after the drug is taken. A sense of drowsiness ordinarily supervenes, followed by a brief but sufficient slumber, and the patient awakens quite relieved of this distressing symptom. I have never yet seen the sleep-disposing properties of antipyrin alluded to by any other observer, although this effect seldom fails to ensue when a full dose such as I have named has been taken."

The newly formed State Board of Health of Massachusetts has been organized by the appointment of the following members by the Governor: Dr. H. P. Walcott, of Cambridge, chairman; Dr. F. W. Draper, of Boston, medical examiner; Dr. E. A. Jones, of Taunton, homœopathist; Julius H. Appleton, of Springfield, manufacturer; Thornton K. Lathrop, of Beverly, lawyer; Hiram F. Mills, of Lawrence, civil engineer; James White, of Boston, retired merchant.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ANOTHER NEW ANTIPYRETIC-ANTIFEBRIN.

IT would seem as though there were already a sufficient number of antifebrile remedies to satisfy the most enthusiastic therapeutist, but the list is being added to almost daily, and the clinical mine shows as yet no signs of threatened exhaustion.

The latest discovery in this direction is announced by Drs. Cahn and Hepp, of Strassburg, in the *Centralblatt für klinische Medicin* of August 14, 1886. The substance is known chemically as an acetanilid or phenyl-acetamid, the formula for which is $C_6H_5NHC_2H_3O_1$, but the writers have given it the more convenient name of antifebrin. It is a clean, white, crystalline, odorless powder, imparting a slight burning taste when placed on the tongue. It is almost insoluble in cold water, dissolves with difficulty in hot water, but freely in alcohol and alcoholic liquids, such as wine. It melts at 235.5° F., and sublimes unchanged at 557.5° F. It possesses neither acid nor basic properties, and is very rebellious to the action of most reagents.

The authors have experimented with the remedy in a number of febrile troubles—among others typhoid fever, erysipelas, acute articular rheumatism, pulmonary phthisis, and septicæmia—and state that the results obtained were very satisfactory. It is given in doses of from four to fifteen grains, shaken up in water, dissolved in wine, or enclosed in wafers. A maximum dose of thirty grains per diem was not exceeded. In general terms it may be stated that it is of about four times the strength of antipyrin. The effect of the drug upon the temperature is noticed at the end of about an hour, and attains its maximum usually in about four hours, passing off again, according to the size of the dose, in from three to ten hours. The action of antifebrin manifests itself externally by a reddening of the surface and moderate perspiration. The patients sometimes complain of a cold feeling, though there was never any decided chill noticed. The pulse-rate falls proportionately to the temperature. There was never any nausea caused by even large doses.

In conclusion, Drs. Cahn and Hepp speak enthusiastically of the marked antipyretic properties of the new drug, and of the absence of any untoward symptoms attributable to it. It has also, they claim, the advantage of cheapness, being obtainable for the moderate price of about twenty-five cents an ounce at wholesale.

PHYSICIANS AND INSURANCE CERTIFICATES.

SOME days ago the daily papers noticed an instance where a physician was accused of assigning a wrong cause of death on an insurance certificate, for the purpose of collecting the amount of the policy for the benefit of the patient's friends. The accused person was able to completely exonerate himself from the charge. The fact, however, of such circumstances having arisen, calls attention to the methods of business pursued by some life-insurance companies, which are worthy of severe condemnation. These methods are embarrassing to the physician, but of especial unfairness to the insured.

We do not refer to the large companies with their enormous legitimate business, where the risk of each individual case is carefully considered before any policy is written, and where the relation between present age and chances of long life are computed from carefully prepared tables of vital statistics. The laws of insurance are compact, and the companies manifest no desire to evade any of their responsibilities; but we have reference to some of the smaller industrial insurance organizations. Their policy seems to be to take any risk, however great—that is, they get all the premiums they possibly can; then, if, at the time of death of the insured, they can prove that he or she had any chronic disease, they try to evade the full payment of the policy.

Among many of the poorer classes the small amount of their insurance means a great deal. Their wages and the cost of living allow of no savings. The policy practically represents a burial fund. About this, least of all, should there be any haggling by the companies, or any delay in its prompt payment. A physician may be called in to see a patient in the last stage of phthisis. The patient dies, and the medical attendant is called upon to certify whether the patient was afflicted with any chronic disease. If he is honest, he must answer yes, though he knows that this will result in a partial or entire forfeiture of the amount of the policy. If the company was not willing to pay the whole amount in case of death from any cause, it should not have taken the risk. The persons thus exposed to injustice are those whose lack of means prevents them from resorting to legal redress. The agents of some of these companies are irresponsible persons, whose business methods are hardly to be commended. In this great city there is a large enough field for legitimate business, even among industrial organizations. There is no need of their taking extra-hazardous risks. Still less is there justification for their receiving premiums and then refusing to fulfil their part of the contract.

THE EXCRETION OF DRUGS BY THE MAMMARY GLANDS.

A GOOD many observations have been made upon the subject of the medicines excreted by the mammary glands. It has been claimed that mercury, iodine, bromine, arsenic, strychnine, chloroform, sulphur, and chloral may be thrown off by this gland when taken into the stomach of the nursing woman. It cannot be said, however, that our knowledge of the subject is as complete and definite as it should be, and hence the recent experiments by Fehling are of interest. Fehling observed the effects on nurslings of various drugs given to the

nursing mothers. According to the Paris correspondent of the *British Medical Journal*, when doses varying from two to three grammes of salicylate of soda were administered to the nurse, every time that a child was suckled within an hour after the administration of the dose the salicylate appeared in its urine. After an interval of twenty-four hours there remained no trace of the drug. When the child was suckled too soon after the medicine had been taken, the salicylate could not be found in its urine. Elimination was completed at the same time in the mother and the child. With iodide of potassium the results were the same. The milk, when analyzed, gave the characteristic reaction. In the infant, elimination lasted seventy-two hours, in the mother forty-four. After twenty-four hours the milk still contained iodide of potassium. With ferrocyanide of potassium reaction was very pronounced in the maternal urine, but absent in the child's. Prolonged applications of iodoform upon vaginal and vulvar wounds of women in parturition, after prolonged use, generally resulted in iodine being found in the milk and urine of the mother, but not always in the urine of the infant. The child was never indisposed, even when iodoform was used to dry up the umbilical cord. There was only a small quantity of mercury transmitted through the milk of a nursing mother, and its presence was not constant. It appeared that the food of wet nurses—even acid fruit-juices and vinegar—had no influence on their nurslings. Thornhill had stated that he observed prolonged sleep occur to children after administering to their wet-nurse such narcotics as tincture of opium in doses of from twenty to twenty-five drops. Fehling observed neither prolonged sleep nor constipation in the children. Hydrochlorate of morphine or chloral, in tolerably strong doses, did not affect the sucklings. Subcutaneous injections of moderately strong solutions of sulphate of atropine produced very pronounced symptoms in the mother, and dilatation of the pupil in the infant, which disappeared in twenty-four hours. This substance should, therefore, be employed in very feeble doses. In a very great majority of cases the milk of a woman attacked with fever had no influence upon the nursling. In those rare cases when the temperature reaches 104°, the variations in the child's temperature were identical with those of the mother. In some instances children had died of intestinal catarrh where the mother's milk could be the only cause of the affection. Bumm has observed, in a case of inflamed breast, the passage of the micrococcus from the milk into the digestive apparatus of the child.

CHARLESTON PHYSICIANS IN GREAT NEED.

In the telegraphed reports of the calamity which has visisted Charleston much is said of the general distress which prevails, and instances of individual suffering are related, but we do not remember to have seen any mention of the trials of the physicians. As is usual at such times, they have been silently going about doing good and administering to the needs of others, while themselves homeless and ruined. Yet the wants of the business classes and of the laborers and others are telegraphed abroad, and appeals for help for them are made, while the physician, too busy in his work of mercy to think of himself, is [illegible] without a word of recognition or even thanks.

We are permitted to present the following extract from a private letter from one of Charleston's best known physicians to a medical gentleman in this city:

"We are distressed," he writes, "almost beyond endurance. Our women and children are our sources of anxious solicitude. May God protect them in the open field, tenting in the night air! My entire family—wife and four children, the oldest eleven years of age—are out of house and home, like hundreds of other sufferers." . . .

We think little more need be said to show the necessity of speedy aid for the sufferers among our own brethren in Charleston. There are no doubt many cases of individual want among medical men and their families, for while their services are in demand, and they are busied in attending to those suffering from injuries and the results of exposure, yet they are seldom paid, at least in cash. Their families are homeless and must be provided for, but food and shelter are not to be obtained without ready money in such times, and ready money the physician but rarely obtains.

We therefore appeal to our readers throughout the country to help their brethren in South Carolina in this their hour of need. We are accustomed, by our very calling, to help others when in distress, and let it not be said that we are indifferent to the sufferings of those in our own ranks. Now is the time to help them, and he who gives quickly gives twice. THE MEDICAL RECORD will gladly receive subscriptions for this object, and will forward the amounts so received at once by telegraph. Acknowledgments will be published in our next issue.

News of the Week.

A FATAL AFFAIR.—A coroner's inquest was held short time ago on the body of a woman who, it appeared, had been suffering from heart disease, and this bringing on a fit of despondency she had taken a dose of Paris green. The coroner's jury found that the woman had died of "heart disease accelerated by partaking of a dose of Paris green."

DEATH FOLLOWING AN APPLICATION OF COLLODION.—A death is reported in France from the application of collodion to the face of a woman suffering from small-pox. The design of the application was to prevent pitting. Suppuration took place under the mask of collodion, and the patient died after great suffering. As the small-pox was discrete and uncomplicated, and the autopsy showed no visceral lesions, the fatal termination would seem to have been due to the injury resulting from the collodion.

DEATH FROM ETHER.—Mrs. Mary S. Wesselhoeft, forty years of age, said to have been the wife of an American physician, was found dead in her bed in London on August 5th. According to the evidence of her husband, given at the inquest, it appeared that the deceased had suffered from asthma, for the relief of which she was supplied with ether. A pint bottle, two-thirds full of the drug, was found by the bedside, and the atmosphere of the room was charged with the vapor of ether. The jury returned a verdict in accordance with the medical evidence,

and expressed the opinion that it was unwise to have allowed the deceased to have so much ether at her command.

HOSPITAL SATURDAY IN ENGLAND.—At the board meeting of the Hospital Saturday Fund, held on August 7th, it was reported that, notwithstanding the unfavorable state of the weather, the Hospital Saturday street collection had realized £4,000; being £500 less than the amount obtained last year.

HONORARY DEGREES FROM HEIDELBERG.—Upon the occasion of the recent celebration of the five hundredth anniversary of the University of Heidelberg, the honorary degree of Doctor of Medicine was conferred upon Graham Bell, of Washington; Professor Chevreul, of Paris; Baron Nordenskjöld, of Stockholm; Sir William Thompson, of Glasgow; Professor Roscoe, of Manchester, and others. Professor Koch, of Berlin, was created Doctor of Philosophy.

PROFESSOR VON LANGENBECK has been suffering for some time from failing vision due to a cataract. He recently submitted to an operation for its removal at the hands of Dr. Pagenstecher, of Wiesbaden. The operation was entirely successful. Many friends, including the Emperor and Empress of Germany, have sent telegrams of congratulation to the eminent surgeon.

"WHO WILL BE THE FIRST TO TACKLE A WEN?" The question is answered by the following, clipped from a recent issue of the *Buffalo Express*: "Yesterday afternoon, Dr. —— performed a skilful operation in the removal of a large *follicular tumor*, several ounces in weight, from *the head* of Mrs. L ——, of this city, who has for many years suffered great pain from its continued growth and pressure under the scalp." What next?

A CASE of yellow fever from the steamer Alvo, of the Atlas Line, found its way into St. Vincent's Hospital on Saturday last. The disease was duly diagnosticated, and the patient transferred to the Reception Hospital, where he died.

THE DEATH OF DR. THEODOR JURIÉ is announced from Vienna. He was born in October, 1809, and began the practice of medicine in 1834. He celebrated his jubilee two years ago, upon which occasion, among other honors, the Emperor of Austria conferred upon him the title of nobility, creating him Edler von Lavandal. His death was caused by embolism of the cerebral arteries. He left two sons, both practising physicians in Vienna.

ANOTHER SUCCESSFUL CASE OF LAPAROTOMY FOR INTESTINAL WOUNDS.—It is stated in *Dance's Texas Medical Journal* that Dr. Bacon Saunders, of Bonham, Tex., has operated twice for wounds of the intestines, and once with success. These cases have never been recorded, but a report of the operations is promised by Dr. Saunders.

THE RELATION OF HEIGHT TO WEIGHT.—According to Dr. Broca, the well-known French anthropologist, the human body should weigh as many kilogrammes as it measures in centimetres, after deduction of the first metre. Thus a man measuring one metre eighty centimetres (six feet), should weigh eighty kilos (176 pounds). Should his weight be more or less, he is too stout or too thin.

DEATH FOLLOWING AN INTRA-UTERINE INJECTION.—Dr. Otto Engström reports in the *Finska Läkaresällskapets Handlingar*, Nos. 5 and 6, vol. 27, the case of a woman, thirty-seven years of age, who was suffering from fungous endometritis. The mucous membrane of the uterus was curetted and then an injection was made of a solution of iodine, one part to thirty of water. After the second injection, which was made with a stronger solution (1 to 10), the patient had a chill which was followed by symptoms of peritonitis, and death occurred three days later. There was no evidence at the autopsy of any fluid having passed through the Fallopian tubes, and the writer believed that the inflammation of the peritoneum arose by extension from the uterine substance.

Obituary.

THOMAS ALEXANDER McBRIDE, M.D.,

NEW YORK.

THE many friends of Dr. McBride were shocked to hear of his untimely death, which occurred at sea on Tuesday, August 31st. During the past year, although he kept actively at work, he was far from being a well man. The symptoms of Bright's disease, from which he had been suffering for a considerable period, became more pronounced, and he was forced to go abroad for rest and treatment. He spent the greater part of the summer at Carlsbad, with the result of a temporary improvement; but after reaching Southampton on his return homeward he was seized with uræmic coma, and died on the second day of the voyage. His body was committed to the deep with appropriate funeral ceremonies, the Rev. Dr. Buell, of St. Luke's Church, New York, officiating.

He was born in Sandusky, O., in 1844, and was at the time of his death forty-two years of age. After completing his early education in his native State, he matriculated in the College of Physicians and Surgeons of New York, and graduated in medicine in 1871, immediately thereafter entering Bellevue Hospital and serving his interneship in the medical division. He then commenced practice in New York, where he rapidly gained an enviable reputation for studious research, for accuracy in diagnosis, and skill in therapeutical resources. Devoting himself to renal and nervous disorders, he soon rose to a high rank as a consulting physician in these branches. With a peculiar aptitude for applying the results of recent discoveries to practice, he was considered to be one of the most accomplished practitioners of the day.

Notwithstanding the demands of a large business, he found time to keep abreast of all the advances in his department, and by his numerous and well-digested medical papers to add the results of his personal observations, oftentimes astonishing his friends with the variety and profundity of his knowledge of the most abstruse questions in our science. Many of these papers he contributed to the *American Journal of Neurology and Psychiatry*, of which he was for a long time the editor-in-chief. He was for several years attending physician to Bellevue Hospital, and at the time of his death attending physician to the Presbyterian Hospital, lecturer on clinical medicine at the College of Physicians and Surgeons, and member of the following: The Medical Society of the County of New York, the New York Academy of Medicine, the Laryngological, Neurological, and Practitioners Societies; also of the University and New York Yacht Clubs.

Of a genial temperament and generous spirit, he endeared himself to a large circle of friends, in whose memories will linger the recollections of a lovable and well-spent life.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING.

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, and 13, 1886.

MEETINGS OF SECTIONS.

SECTION IN OBSTETRICS AND GYNECOLOGY.

WEDNESDAY, AUGUST 11TH—SECOND DAY.

PRESIDENTIAL ADDRESS.

DR. MEADOWS (President of the Section) took the chair at 2 P.M., and delivered an address. In his opening remarks Dr. Meadows drew the attention of his audience to the wide separation that was steadily taking place between gynecology and obstetrics. It was true that in the minds of some the two departments were still indissolubly linked, but the divorce had really taken place, and with the rapid development taking place in our knowledge of these arts, the gap must become more and more marked. The enormous advances made in gynecology had riveted the attention of the medical world on the practitioners of this branch of medicine; the marvels of ovariotomy and the great strides made in other departments of abdominal surgery were among the greatest triumphs of skill the world has ever seen. In no other department of medicine had so much been done to save human life and successfully alleviate human suffering. Referring to the discussion that was to take place on the "Alternatives to Craniotomy," Dr. Meadows condemned the latter operation in the severest terms, and trusted the day was not far distant when destruction of infant life by the perforator would be a thing of the past. No words could be too strong when used against an operation the practice of which was opposed to every sentiment of religion or morality. The operation had been held in check in former times by the religious feeling of the age, and the same voice still condemned so coarse and barbarous a proceeding. It was to be hoped that in the time to come living children would always be secured by the operation of Porro or by Cæsarean section. To the gynecologist will be due the credit of saving infantile life, and in this respect he stands far in advance of the obstetrician. The facility with which craniotomy can be done will always be a temptation to use it instead of resorting to the Cæsarean section or to Porro's operation, and unless a feeling of deep moral responsibility is uppermost in the practitioner's mind the obstetric art will be still disgraced by the frequency with which embryotomy is practised. Speaking of the papers that were promised on the subject of "Removal of the Uterine Appendages," the President entered his protest against such a misapplication of terms; the uterus and the Fallopian tubes ought to be spoken of as the appendages of the ovaries, and not *vice versâ*. The removal of the uterine appendages was an operation which was rapidly rising into importance, and must occupy the thoughts of every serious mind; it was much to be regretted that so much angry feeling had been imported into this matter, but it must be remembered that great advances were always attended with great opposition. Perhaps, if the Section could imagine some operation suddenly brought forward to deprive the male sex, in a similar way, of the testicles, an idea could be obtained of what an outcry would certainly be raised; as it was, placed outside the pale, the superior sex could look on unprejudiced and weigh the matter calmly. Dr. Meadows held that removal of the uterine appendages was a most useful operation, and commended its employment in certain cases of neurotic disease, in cases of uterine fibromata, and also in extreme instances of pelvic distortion, where the birth of a living child was impossible. In these latter cases removal of the uterine appendages was preferable to Porro's operation, the induction of premature delivery, etc. A word of warning needed to be uttered against the over-frequent employment of the operation; there was a risk of abuse in this direction, and nothing was more calculated to damage its utility and good name. As long as our present skill in diagnosing the exact condition of the organs within the pelvis was so imperfect, hindrances would always exist in judging the correct indications for the operation; in all cases the importance of a careful course of medical treatment must be weighed before radical measures were adopted with the knife, and the physician's skill must be exhausted before the appendages are removed. Brief reference was made to the other papers promised, especially those by Dr. Lusk and Dr. Emmet, and a hope expressed that many points would be brought out in the discussion following. In conclusion, Dr. Meadows, after referring once more with pride to the advances made, dwelt for a short time on what might be called the dark spots in gynecology, and trusted light might soon be thrown even on these. It was most desirable that we should possess an exact knowledge of the effects of drugs on the various pelvic organs; a great step would have been made when we ascertained the action of one or two drugs on each of these structures; if the action of even one remedy was clearly defined at this meeting, the labors of the Section would not have been in vain.

DR. ROBERT BARNES read a paper on

THE ALTERNATIVE TO CRANIOTOMY.

The author at the outset laid it down as a rule that the nearer we attain to the abolition of craniotomy the nearer do we attain to perfection. After drawing attention to a memoir which had been written by Dr. Tyler Smith in condemnation of the operation, it was pointed out that craniotomy was almost always performed for some condition of pelvic distortion, and as the latter was to a great extent a preventable disease, we could hope for considerable assistance in the abolition of the operation from measures which improved the sanitary surroundings of our young girls. Here was a domain in which medicine and hygiene had their scope. As a matter of fact, the passing of the Factory Act, which limited the age at which young girls could be employed in the workshop, had done much to lessen the frequency of pelvic distortion. The testimony of medical men in our large manufacturing towns showed that pelvic deformations were much less common than they were fifty years ago; while in countries such as Germany, where no such safeguards were adopted, the museums were full of specimens of distorted pelves, and craniotomy was of frequent occurrence. Craniotomy had been done in two classes of cases: (1) those in which the head was delayed above the brim, and in which the perforator was justly used; and (2) cases in which the head was delayed in the pelvic cavity, and in which forceps ought to be employed. In the first class there could be no question that premature labor ought to be induced: even if the head was then large, the vertex was very plastic and could be readily moulded; or, in more extreme cases, turning could be practised. When once a fœtus was known to be dead, it was not necessary to seek any alternative to craniotomy. If the pelvis was known to be impassable, should abortion be done at an early month, or should the woman be allowed to go full time with the prospect of Cæsarean section? The former seemed preferable. If the child has gone full time, then some alternative must be sought. In considering embryotomy, it must be borne in mind that the instruments for the operation had been greatly improved. The advantages of Porro's operation was that the child was saved, and

the mother, too, probably; in the Cæsarean section the mother is liable to be exposed to the same danger again and again; if craniotomy is tried and fails, the result of Porro's operation or Cæsarean section is rendered less hopeful. In contracted pelves, where the diameter is three and a half to three inches, the mortality after craniotomy ought to be no greater than in normal delivery; here Cæsarean section or Porro's operation are not indicated, nor are they justifiable. Religion and sentiment had both exercised an influence on the performance of embryotomy, but the subject should be weighed quite apart from these factors, and the teaching of science alone be regarded. One question we had to consider was this: "Is Cæsarean section, even with its modern improvement, as good and safe for the mother as embryotomy?" In the case of Porro's operation there would always be the existence of shock to the mother, due to the strangling of the neck of the uterus by the serre-nœud; this must always be a serious matter for consideration. In the hands of men skilled in abdominal surgery Dr. Barnes felt sure both Cæsarean section and Porro's operation would give brilliant results; but the case of the general practitioner had to be considered, and was there not a great risk of a vastly increased mortality if the latter, with only a few and distant opportunities for operating, was to substitute abdominal section, as a rule, for the easier operation of craniotomy. Cases often occurred in which moderate degrees of contracted pelvis was not diagnosed till the first labor; in such instances it was justifiable to perform embryotomy, since in succeeding pregnancies living children could be born by the induction of premature labor, and thus lives saved. In extreme cases of pelvic distortion, where the opportunity for the induction of labor had been passed by, Porro's operation ought to be done. In pelves with a diameter of three and a half to three and a quarter inches craniotomy was indicated; in cases complicated by tumor, in ruptures of the uterus, and disease of the latter organ, Porro's operation was called for; in atresia of the cervix Cæsarean section might be needed; in convulsions or in hemorrhage labor should be brought on and craniotomy avoided. In conclusion, the writer remarked that the best alternative to embryotomy lay in the production of a perfectly healthy and virtuous female population.

Dr. Kinkead, of Galway, read a paper on

CRANIOTOMY AND CÆSAREAN SECTION.

He admitted that under certain favorable conditions Porro's operation was desirable, but was inclined to give the preference to Cæsarean section. The causes of death after the latter proceeding were—1, shock and exhaustion; 2, peritonitis; 3, incarceration of intestine; and 4, hemorrhage. Craniotomy with a pelvis of only one and a half inch in diameter was to be condemned; it often had to be followed by Cæsarean section or Porro's operation. As regards the occurrence of shock, there was no greater risk in this respect after Cæsarean section than there was after craniotomy. Hemorrhage during the former operation could always be restrained by compression of the cervix, either with the fingers or by an elastic band; in late hemorrhage this method was of course not available. Careful and close suture of the edges of the uterine incision was the only real safeguard against late bleeding. The employment of a mere continued suture had been shown to be useless; the right way was to make peritoneal flaps and treat the incision by Sainger's method. Dr. Kinkead approved of the use of carbolized gut for sutures. Great stress must be laid on the careful sponging out of the peritoneal cavity after the operation; the toilet of the peritoneum required to be made as carefully as after the performance of ovariotomy, if success was to be assured. Cæsarean section ought to be as safe for the mother as craniotomy. The performance of craniotomy through a conjugate diameter of two and a half inches was dangerous and hard, while Cæsarean section presented no difficulties to any man.

Dr. W. T. Lusk, of New York, remarked that as in England, so in America, cases of extreme pelvic distortion were rare. Below a three-inch diameter craniotomy was always a serious operation, and, looking back to his own experience, he often felt regret at the thought of some cases he had done embryotomy on in the earlier years of his practice. Certainly the result of his observation was to make him hope that before long craniotomy would be abolished. Men had spoken of the bad success attendant on Cæsarean section, and referred to the almost constant failures at the large lying-in hospitals of Vienna and elsewhere; but in making such quotations we must remember what a mortality normal labors had formerly at these centres, and then we should cease to wonder at the failure of the Cæsarean section. Moreover, looking over the statistics of Michaelis, for example, we found that many cases were operated on when in *articulo mortis*, and then recorded as failures due to the operation. Reference was made to cases of Cæsarean section done lately by Leopold, according to Sainger's method, and in these the success had been most encouraging. If the pelvic diameter was under two and a half inches the Cæsarean section gave better results than craniotomy. In his opinion Porro's operation should be reserved for cases in which labor had been prolonged and degenerative changes had taken place in the uterine tissue; in cases where the uterus had undergone marked retraction and the vagina had been dragged up, Dr. Thomas' operation of laparoelytrotomy was indicated. The latter operation had scarcely had a fair trial; in cases where the general conditions were good it would be found decidedly successful.

Dr. Wilson, of Baltimore, strongly confirmed all that the previous speaker had said, and spoke in strong condemnation of craniotomy.

Dr. Swayne thought embryotomy could never be abolished; in certain cases the operation was perfectly justifiable, though at times turning might be more advantageously employed. Where the conjugate diameter was below three inches he would abolish craniotomy and perform a Porro operation.

Mr. Lawson Tait protested against the idea that Cæsarean section was necessarily a fatal operation. As regards craniotomy, however, there was a political side to the question, and the matter might be regarded from the standpoint of political economy; over-population was one of the great difficulties of the present day, and a certain amount of infant mortality in childbirth was not without its advantages. The question might be viewed from the side of morality, and certainly we had no right to destroy life. Much harm, however, had been done by regarding woman exclusively as a childbearing machine, and against such a view he would energetically protest. In his opinion Porro's operation would give better results than craniotomy, even in the hands of an inexperienced operator.

Dr. Moore Madden considered that craniotomy could not be too strongly condemned. In an experience of twenty years, with large opportunities for obstetric experience, he had never once seen a case in which he could think craniotomy was called for. He wished to press strongly the question, "Are we justified in destroying any life?" The child was in utero through no fault of its own, and its life was as precious as that of the mother; the idea of over-population, as suggested by the last speaker, could not be weighed in the argument for a moment. The operation of craniotomy was a disgrace to us; the best reference to it was given in the dictum of Sir James Simpson, viz.: "Cold steel for the child and mercury for the mother." He looked forward to the time when craniotomy would be a thing of the past.

Dr. Neville could scarcely believe that cases requiring craniotomy or Cæsarean section were so rare as Dr. Madden seemed to suggest. In his opinion Cæsarean

section was the preferable operation; Sänger's modification of the Cæsarean section had [illegible] cases with only 7 deaths, and would probably [illegible] improvement even on these figures.

Dr. Buchanan, of Glasgow, thought that the opinions of a surgeon in matters relating to obstetrics was valueless. Doubtless craniotomy was far too frequently done. It had been said, "Given a case of deformity at the brim—if an obstetrician attends, we see craniotomy; if a midwife, a living child;" and there was some truth in the old adage. Personally he had done craniotomy with success where the pelvic diameter was only one and three-quarters of an inch; but in such cases the patient must be seen early, before the liquor amnii has long escaped. In withdrawing pieces of bone great care was needed lest soft structures should be damaged; very often the fatal results of craniotomy were due to want of care in the above respect. Say what we may, Cæsarean section was a fatal operation; in Glasgow there had not been a single successful case; he should prefer Porro's operation to Cæsarean section.

Dr. Thompson denounced craniotomy in the severest terms, and expressed strong opinions in favor of Porro's operation and the Cæsarean section; to his mind men had been backward in performing these latter to the extent they deserved.

Dr. James, in an experience of forty years of extensive private practice, had never once seen a case in which craniotomy was indicated. He advocated an early use of the forceps, and had gained great benefit from the practice.

Dr. Edis thought that the subject of preventive midwifery had hardly received the notice it deserved. In every case a preliminary examination ought to be made when we first see our patient, so that time may exist for the induction of premature labor, if pelvic deformity is found to be present. In every case in which craniotomy has once been performed the patient should be solemnly warned of her condition, and the exact condition explained to her. The difficulties in connection with the operation of laparo-elytrotomy were insisted upon, and Dr. Edis expressed the opinion that the large surgical procedures in obstetrics must always rest in the hands of men with special surgical experience and skill.

Dr. Wright spoke earnestly in favor of Porro's operation, and expressed a firm belief in its advantages.

Dr. Robert Barnes, in reply, stated that the progress of Cæsarean section would depend on the progress of surgical skill, and on judgment in the election of cases. In cases where the pelvic diameter was between three and a half and three inches craniotomy would give as good results as normal labor. He cordially approved of Dr. Edis' remarks. It was a matter of regret that in the discussion speakers had not made more distinction between cases of moderate and cases of extreme pelvic distortion; the latter cases ought to be put in a separate catalogue by themselves. In Porro's operation shock due to the strangling of the neck of the womb would always be an important factor, and for that reason Sänger's modified Cæsarean section had a distinct advantage.

Dr. T. A. Emmet, of New York, read a paper on

CERTAIN MOOTED POINTS IN GYNECOLOGY.

In commencing his subject, Dr. Emmet warned his hearers not to lay too much stress on versions and flexions of the uterus as causes of various symptoms arising apparently from the pelvic organs. Dysmenorrhœa, uterine fluxions, and discharges might be only one way in which the uterus obtained relief for itself; the really important point was to weigh the coincidence of pelvic inflammation, peritonic or cellulitic. A pessary was of little use in merely altering the direction of the uterine axis; if it corrected a prolapsus, it was doing real service, but not else. In using a pessary one always had to consider the risk that the instrument might cause dragging on a tissue already inflamed, and increase the latter. One effect of uterine displacement was to cause stretching of the neighboring blood-vessels and tension of the pelvic fascia—conditions which easily led on to inflammation; by lifting up the uterus, and removing the sources of mischief, a pessary did good and helped to restore the circulation to its normal condition. As regards the forms of displacement, it must be noted that retroversion was often congenital, and in itself of no importance. Dysmenorrhœa was never due to uterine flexions, the association was merely accidental; the fault really lay in the nervous system, and not in the obstruction. It must always be remembered that dysmenorrhœa was only a symptom. Dr. Emmet considered that forcible dilatation for dysmenorrhœa was to be condemned as unscientific, for the cervix may be patulous and yet dysmenorrhœa exist; in most cases of painful menstruation pelvic peritonitis was present and existed as a cause. Referring to the effects of fissure of the cervix, the author was convinced that one point had been brought clearly and certainly home to his mind, namely, that epithelioma of the cervix was commonly secondary to, and the direct result of, a previous fissuring of the neck of the womb. Now and then pregnancy might cause the removal of the effects of pelvic peritonitis, but it could not be surely relied on; dilatation, by causing pregnancy to become possible, was sometimes of use in this way. Numerous cases of pelvic peritonitis and troublesome adhesions had been caused by the injudicious use of ergot; with an undilated "os," and the presence of a fibroid in the uterine cavity, ergot only increased the congestion of the pelvis. Hot-water injections into the vagina lessened pelvic congestion, and we possessed no better method of relieving dysmenorrhœa than by the employment of the hot vaginal douche. This latter fact would not be the case if painful menstruation depended, as some suppose, on mechanical obstruction. Endometritis and endocervicitis were rare, except in theory; the real trouble consisted of a surrounding pelvic peritonitis; once this latter was checked, and the circulation thus restored, all uterine discharges would cease. As regards the application of iodine to the interior of the womb, the author stated that he rarely employs this treatment; as a matter of fact he had reached a point in practice in which he seldom introduced an instrument into the uterus—his uterine sound had been broken for eighteen months, and he had never missed it. All that a sound taught might be made out with the fingers. The uterine mucous membrane would so readily absorb all substances presented to it that it was advisable to do all that was possible by way of the vaginal mucous membrane; moreover, the latter had the advantage of presenting a more extensive surface. By giving up applications to the interior of the uterus, and by largely discarding the use of pessaries, Dr. Emmet had increased his success in treatment; the use of glycerine pledgets he always found valuable. Pelvic peritonitis must always be more common than cellulitis; in chronic cases of the latter disease the connective tissue seemed to become absorbed and disappear, till finally the appearances presented were those of pelvic peritonitis.

Dr. Graily Hewitt read a paper entitled

THE EARLY HISTORY AND ETIOLOGY OF UTERINE FLEXIONS AND DISPLACEMENTS.

In opening the discussion, Dr. Hewitt dwelt briefly on the congenital displacements of the uterus; it must be clear that the normal forward inclination of the uterus must favor anterior displacements. The condition of congenital retroflexion was undoubtedly much rarer than the corresponding anterior malformation, yet it did undoubtedly exist; retroflexion was not uncommonly found in virgins—reference to his case books showed that out of 250 cases 60 occurred in young virgins. Probably an abnormally loose condition of the utero-sacral ligaments was one cause of congenital backward displacements. In considering the pathological production of flexions it

was very important to weigh the state of the uterine tissue; undue softness of the wall of the womb is not infrequently met with, and if associated, as it often is, with abnormal thinness of the muscular parietes, flexibility is increased and the condition of flexion favored. Dr. Emmet's view, that impaired nutrition of the uterus, due to congestion of the pelvic viscera, acted as a cause, was also true, and malnutrition of the uterine muscle was often the first step in the chain of processes which ended in the establishment of a flexion. The changes undergone by the uterus at puberty without doubt exerted a powerful influence on the after-shape of the uterus; this was well illustrated by cases of imperfect development of that organ. Most cases seen in practice were caused by an acquired softness of tissue; the part played by subinvolution was doubtful. In many cases of flexions undue hardness of the uterine tissue existed; this was really secondary to pre-existing softness, and depended on long-standing congestion with overgrowth of connective tissue; it acted perniciously by fixing the flexions, just as plaster-of-Paris sets a mould when it gradually hardens. The action of traumatism was most important as a cause of flexion; lifting, retching, straining, and muscular effort, all tended to produce uterine displacement, and once the uterus has slightly prolapsed the case is likely to go on from bad to worse. Among the examples of acute traumatism must be reckoned blows, falls, jerks, etc.; of course, granted one finds a flexion and there is a history of violence, it does not necessarily result that the two are connected; but when, after a fall or jerk, the next menstrual period is abnormal, and vaginal examination shows the existence of a flexion, it is fair to connect the two. Numerous cases of displacement, due apparently to the various causes enumerated, were given by the author by way of illustration. Once produced there was no difference in the way in which anteflexion and retroflexion became intensified.

In the discussion that followed the reading of the papers by Dr. Emmet and Dr. Graily Hewitt, Dr. Bantoch remarked that he was obliged to entirely disagree with Dr. Emmet. With regard to the pathology of pelvic inflammation he would say nothing, but on the subject of pessaries he must speak strongly. He could not lay too great stress on the value of a well-adjusted pessary. Patients suffering with severe headache, and hardly able to walk, were at once relieved by the application of a well-fitting instrument; the relief given was so immediate that it could not be due to an improved condition of the pelvic circulation. Dr. Emmet had spoken of dysmenorrhœa as a single disease, while really it depended on many causes, *e.g.*, on the state of the ovaries, of the tubes, displacements, etc. Dr. Bantoch considered that division of the cervix alone would cure a mechanical dysmenorrhœa, and cited a case in illustration. Perfect rest might be a substitute for internal remedies applied to the uterine canal, but many patients could not afford to lie up for twelve months.

Dr. Gordon, while agreeing in the main with Dr. Emmet, yet thought that dilatation was occasionally of use, and regarded it as a form of nerve-stretching. The idea that chronic inflammation attacked the uterus was utterly fallacious; there was no such form of disease, and the theory had done immense harm. What really did exist was a *chronic passive congestion*—a process usually secondary to an *acute* but brief attack of inflammation. Pessaries could not be slighted, for they served to maintain the uterus in a favorable condition for processes of repair. There was no need to defer operation in cases of lacerated cervix, for the operation itself did good by depleting the part and relieving congestion.

Dr. A. B. Hirsh has been elected Adjunct Professor of Orthopædic Surgery in the Philadelphia Polyclinic, and also Orthopædic Surgeon to the United Hebrew Charities of Philadelphia.

SECTION IN SURGERY.

Friday, August 13th—Fourth Day.

The President of the Section took the chair at eleven o'clock.

Professor Victor Horsley, M.B., F.R.S., then read a paper on

THE ADVANCES IN THE SURGERY OF THE CENTRAL NERVOUS SYSTEM.

Professor Horsley related the history of several cases in which cerebral operations had been performed. His paper was illustrated by photographs illuminated by the lime-light, and some living patients were shown at its close.

A short discussion on the subject then took place

Professor Charcot, of Paris, referred to the labors of Fournier and Hughlings Jackson in cerebral localization.

Dr. Hughlings Jackson followed and related some cases he had observed. In one case, under the care of Sir Andrew Clark, at the London Hospital, the patient had ninety-six convulsive attacks in all, every one of which began in the thumb. By experimenting on a monkey it was found that similar convulsions could be caused, and the probable centre affected in man was thus ascertained.

Dr. Royle, of Manchester, also spoke.

Mr. Bruce Clarke then read a paper on

THE EMPLOYMENT OF ELECTRICITY IN THE TREATMENT OF DISEASES OF THE URINARY ORGANS.

He thought Stohrer's battery the best for the purpose. The use of a galvanometer was necessary, for the employment of a given number of cells was no guarantee of the strength of the current, as the latter lessened during the operation. The exact strength of the current and the length of time during which it should be passed were matters for consideration in each individual case. Electricity was often of use in cases of incontinence and stricture, where the former was of long standing, and where the passage of a catheter showed a tender spot to be present in the urethra. In such cases the passage of a metal electrode down the urethra, and the passage of an electric current through it for a few minutes, on reaching the tender spot, often gave relief. The positive pole was applied to the sacrum, and the negative one in the urethra. Mr. Bruce Clarke described a case in which the patient had had six attacks of gonorrhœa, and was suffering from gonorrhœal rheumatism. A bougie electrode (No. 9 English) was passed down the urethra and passed to and fro for six minutes while the current was passed. There was no pain at the time of the operation, but slight pain in the testicles next day. The pain in the knee joints went away, and the patient was soon able to walk. In the treatment of incontinence, from two and a half to five *milliampères* was a sufficient strength of current. The negative pole was placed either on the perineum, or in the bladder, or over the pubes. Mr. Clarke also alluded to electricity as an agent of use in treating cystitis. For its use in the treatment of stricture he referred to a paper read by Dr. Steavenson and himself before the Medico-Chirurgical Society some months ago.

Dr. Steavenson then read a paper on the same subject, in which he discussed more especially

THE TREATMENT OF URETHRAL STRICTURE BY ELECTRICITY.

Electrolysis, he said, did not burn as did the cautery. He supposed that what really occurred was that a series of decompositions and recompositions occurred as the current passed from one to the other pole of the battery. He referred to the recent lectures of Dr. Stone before the Royal College of Physicians. The cathode was safer to employ than the anode for application to places where it was desirable to leave no scar. The electrolytic treatment of stricture possessed several advantages. No

anæsthetic was necessary, and it was a great assistance to the operator for the patient to be conscious. No bleeding need occur. If any did take place it showed either that the current was too strong or that the wrong pole had been used. Antiseptics were not needed, as the process was aseptic. The negative pole set up destruction of tissue similar to that caused by the caustic alkalies, but an absorptive action around the stricture was also started as the capacity of the urethra went on increasing after the operation. In the majority of cases no recontraction occurred. Dr. Steavenson concluded by reiterating that electrolysis was not the same as the galvano-cautery, and did not leave a scar.

Mr. Erichsen said that Mr. Bruce Clarke's cases were different. In using electricity for the treatment of incontinence an action on the nervous centres took place. In using it for cystitis it must not be forgotten that catheterization was practised, and part of the benefit might be due to that. Electrolysis as a remedy for stricture was not altogether new, for he remembered a French gentleman coming to University College Hospital, twenty years ago, and giving a demonstration on the subject. The decomposition of tissue caused by electrolysis was analogous to that set up by the application of potassa fusa. Cases treated by the latter agent, however, frequently did badly ultimately.

Mr. Vincent Jackson, of Wolverhampton, asked as to the after-treatment. Another gentleman asked as to the use of electricity to the external parts of the body.

Mr. Bruce Clarke then replied. He agreed, he said, with Mr. Erichsen, that his cases were very dissimilar, and he could not explain how the same agent (electricity) could do equal good to cases varying so much from one another. He felt they were only upon the threshold of the subject. Electricity might, perhaps, improve the nutrition of the parts to which it was applied. In reply to Mr. Vincent Jackson he said he should shortly publish a series of cases and give full details. He would, however, mention one case. This was that of a patient whose stricture had been incised nine months before he had seen him. Relapse had occurred and the stricture would only just admit a catheter. After six weeks' electric treatment the patient was discharged well, and a No. 11 could be passed. This favorable result was achieved in spite of the perineal fistula re-forming—a result which might, he admitted, be due to the passage of the current. He saw the patient three weeks ago and the improvement was maintained. As to the application of the electrolytic current to external parts of the body, he had used it thus: One case was one of stricture at the meatus, and he watched the process. Another was that of a strumous scar in the neck. In both cases no destruction of epithelium took place, but the tissues seemed simply to melt away after four or five applications. No soreness was caused. In the case of the scar in the neck, a marked diminution in its size rapidly occurred, as shown by a comparison of the scar from time to time with a plaster cast which had been taken of it before the operation.

Dr. Steavenson also replied. He said that in stricture a process of electrolysis occurred, but suggested that when electricity was used for the treatment of cystitis and incontinence it acted upon the nerve-centres in the cord and strengthened their inhibitory action. When the negative pole was used for application to the tissues no decomposition of the metal pole occurred (this did occur if the positive pole were used), but an action similar to that caused by the application of caustic potash. You could, however, limit the action and remove the electrode as soon as a sufficient application had been made. This could not be done in using caustic potash. Mr. Bruce Clarke and himself, he said, had been led to take up the subject by the American literature on the subject. Dr. Newman, of New York, had had a hundred cases (and some of them were now of eleven years' standing) in which no recontraction had taken place.

Mr. Reginald Harrison, of Liverpool, then read a paper on

THE TREATMENT OF PERINEAL TRICK FISTULÆ BY INTERNAL AND EXTERNAL URETHROTOMY COMBINED.

Mr. Harrison said he had known no case in which urethrotomy had been followed by a stricture. Where rupture of the urethra had occurred, if the urethra were excised and the wound treated as a lithotomy wound, a traumatic stricture did not necessarily result. It was almost invariable for urinary fever to occur after urethrotomy. But this was not so after lithotomy. He thought it had something to do with the urine, and referred to M. Bouchard's views on

TOXIC URINE,

which he had recently discussed at length in the *Liverpool Medical Journal*. Mr. Harrison said he had determined—after performing internal urethrotomy—to open the membranous urethra, and pass a catheter thence into the bladder, so that no urine passed over the wound caused by the internal urethrotomy. During the last two and a half years he had now adopted this procedure in twenty cases. All were selected cases, in which there was great contraction. No rigor followed the operation in any case, and in most of them no contraction occurred. In every one of the twenty cases the healing of the perineal opening was perfect. Mr. Harrison said his method was no novelty, for Professor Annandale, of Edinburgh, practised it in 1875. Otis also wrote advocating the same combined method for strictures deeper than five and a half inches.

Professor Pancoast showed a silver bougie-catheter devised for the purpose of keeping the urine from the wound.

Dr. Ward Cousins and Mr. Walter Whitehead also spoke.

Mr. Reginald Harrison then replied, and said it was a question of perfect drainage.

WHERE DRAINAGE WAS PERFECT THERE WAS NO UREthral FEVER.

The meeting then adjourned for an hour for luncheon.

On resuming the work of the Section, at 2 P.M., Mr. Noble Smith read a paper entitled

ON OBSCURE DISEASE OF THE SPINAL COLUMN.

Spinal cases were sometimes very obscure, he said, and pain might be absent. Caries of the spine was nearly always the effect of scrofula, and rest for the diseased part was necessary, or the patient would get worse and die. Surgeons differed as to the method of applying it. He believed plaster-of-Paris might be used more freely if applied on a different method. He objected to pressure being made on the side of the thorax. Mr. Noble Smith advocated the use of an apparatus applied to the back only and leaving the chest free.

Mr. Jessop, of Leeds, having made a few remarks, Sir William Stokes, of Dublin, then read a paper on

ACUTE MYXŒDEMA FOLLOWING THYROIDECTOMY.

The case was that of a young girl with enlarged thyroid. There was not only considerable deformity, but urgent dyspnœa to such an extent as to lead them to think tracheotomy might be required. He operated on the lines laid down by Kocher, and the operation was difficult. Considerable hemorrhage occurred, although the vessels were secured as far as possible before being divided. The operation was performed antiseptically, and the wound afterward dressed with sublimate gauze. Only the left lobe of the thyroid was removed. After the operation the right lobe lessened, but this decrease in size was not permanent. It again enlarged and caused so much dyspnœa that a second operation for the removal of the right lobe was attempted. The second operation was also difficult, and occupied an hour and a half. The vessels were very friable. The patient was

much collapsed, and hypodermatic injections of ether were made and brandy given internally. Milk and beef-tea were afterward given. The tumor removed weighed seventeen ounces. On the second day fair reaction occurred. All was satisfactory until the eleventh day. The pulse, temperature, and respirations were normal; the wound aseptic, and union firm. On the eleventh day the patient was sitting up and seemed well. On the twelfth day the patient was still going on well, so far as regarded her pulse, respirations, and temperature, but she complained of a dull aching pain in her legs and knee-joints. Then an epileptiform convulsive seizure came on. Subsequently slight puffy swelling of the hands and feet was noticed, and also some mental torpidity. These symptoms increased up to the twenty-first day. The convulsive seizures occurred again and again, and each one left the patient weaker and with greater pulmonary oppression. Two days later she died. At the autopsy the lungs were found highly œdematous and the epithelium was desquamating.

Mr. Erichsen referred to the history of the subject and suggested that

ONLY DIVISION OF THE ISTHMUS SHOULD BE PRACTISED.

Had anyone, he asked, seen a case in which the isthmus had been divided causing atrophy of one lobe without any further result?

Mr. Lennox Browne then read a paper on

THE MORE COMPLETE SURGICAL TREATMENT OF SUFFOCATIVE GOITRE.

He said the distinction between fibrous and cystic goitre was not maintainable. It was to Sir Duncan Gibb that we were indebted for the suggestion to divide the isthmus. He remarked that menorrhagia was a frequent complication of thyroid tumors, though, in young girls, amenorrhœa occasionally occurred.

Mr. Hemming asked whether any part of the isthmus should be removed? He had seen one case in which a part of the isthmus had been removed, and another in which simple division had been practised.

Mr. Jessop referred to a case in which he thought the central lobe produced pressure.

Mr. Lennox Browne said he had removed a portion of the isthmus in one case. His impression was that the central lobe produced pressure rarely.

Mr. Walter Whitehead then read a paper on

THREE HUNDRED CONSECUTIVE CASES OF HÆMORRHOIDS CURED BY EXCISION.

He had, he said, abandoned the ligature, as he found that the disease recurred. After abandoning the ligature he had tried the cautery in over fifty cases, with a resulting conviction that it was inferior to the ligature. He had never used it since 1876. Then he had adopted excision and used it in every case, with the exception of a few in which he had employed galvano-puncture. He had had no death, no secondary hemorrhage, no complications, and, to the best of his knowledge, all his patients were safely and permanently cured. He observed that no surgeon understood the anatomy of hæmorrhoids until he had removed them from living patients. They were not distinct tumors, but a plexus of veins surrounding the gut was invariably involved. He preferred the lithotomy position. Instrumental dilatation of the sphincter was objectionable. The incisions should be made through mucous membrane, and not through the skin.

Professor Pancoast and Mr. Jessop then made a few remarks, the latter being in favor of the cautery. Mr. Reeves also joined in the discussion.

Mr. Erichsen remarking that

CONTRADICTION SOMETIMES FOLLOWED THE USE OF THE CLAMP AND CAUTERY,

asked whether such was the case after the galvano-cautery?

Mr. Whitehead replied, and said that on an average his patients were able to resume business in ten days.

Mr. Charles Smith, of Brighton, then showed and explained his

NEW CLAMP FOR THE TREATMENT OF HÆMORRHOIDS

in place of reading the paper on the same which had been announced by him. It was, he said, on the model of the "spanner," as would doubtless be observed by those of a mechanical turn of mind. He remarked that ether was an objectionable anæsthetic in rectal cases, as it caused congestion of the rectum.

Mr. Benton then read a paper on

FISTULA IN ANO OF THE HORSE-SHOE SHAPE.

It was, he said, very rare, and he had only met with five instances among seven hundred and fifty cases of rectal disease.

Mr. Startin read a paper on

THE SURGICAL TREATMENT OF ACNE AND LUPUS.

He had used electrolysis in treating the latter, and exhibited the needle he employed for the purpose. He used a Grove's battery of twenty cells.

Dr. Wile, of Newtown, Conn., then read a paper

ON THE RELATION WHICH ALIMENTATION BEARS TO THE RESULTS OF SURGICAL PRACTICE.

He had, he said, failed to find any treatise on diet in surgical practice in libraries containing fifty thousand volumes of medical works. There were works on diet, and special works on invalid diet, and diet for infants, but none on diet for surgical patients, nor had he been able to find even an article on the subject. In surgical cases he urged that those substances should be given as food which yielded the largest amount of albumen to the blood. The processes of repair in a part only went on when it was abundantly supplied with albuminous bodies. It was necessary that an adequate supply of these should be supplied to the blood in such a form as could be easily digested. Suitable aliments were milk—either simple, or pancreatized by the addition of pancreatic extract and bicarbonate of soda—eggs, slightly cooked, and meat, either cooked or, in some cases, given raw.

Papers by Mr. F. Churchill ("On the Multiple Causation and the Immediate Treatment of Congenital Club-foot") and by Mr. F. B. Jesset ("Surgical Treatment of Certain Tumors of the Neck") were then read. The latter advocated early interference with cervical tumors, and said they should not be allowed to grow to a large size unchecked.

The proceedings of the Section then terminated.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

Tenth Annual Session, held at Indian Harbor Hotel, Greenwich, Conn., August 25, 26, and 27, 1886.

(Continued from page 275.)

Wednesday, August 25th—First Day—Morning Session.

In the absence of the author, Dr. G. H. Fox, of New York, a paper was read by the Secretary, entitled

REPORT OF A CASE OF LYMPHADENOMA (MYCOSIS FUNGOIDE) AND AUTOPSY.

The paper described the case of Mrs. G——, thirty-three years of age, the mother of six children. During pregnancy, in 1881, she suffered with general pruritis, which passed away after confinement in October. A year later, small, flattened, circular tumors appeared in the axillæ and on the breasts. These became moist, and were accompanied with a burning sensation. The eruption disappeared from these situations and reappeared upon the back and other portions of the body. After the birth of her last child, in February, 1885, a tumor developed at the inferior angle of the left scapula. The lesions on the other parts of the body disappeared, with the exception of two spots on the finger and one on the left

cheek. The tumor on the left scapula gradually softened and disappeared.

The patient was admitted to the hospital in October, 1885, and was fairly well nourished. There were at this time numerous tumors over the body, some of which were superficially ulcerated. The worst tumors were on the breast. Hypodermatic injections of Fowler's solution were used without benefit. Chaulmoogra oil was given in increasing doses without causing any improvement.

The patient died in April, 1886. The microscopical examination gave the usual appearances of these growths. The internal organs were found to be normal.

A NOTE RELATIVE TO THE BULLOUS ERUPTION OCCURRING AFTER THE INGESTION OF IODINE COMPOUNDS.

A paper with this title was, in the absence of the author, Dr. J. N. Hyde, of Chicago, read by the Secretary.

The first case described was that of an infant, aged seven months. Three weeks before coming under observation the eruption made its appearance. The face, the dorsal aspect of the hands and forearms, and the scalp were covered with isolated whitish, split-pea to marble-sized, flattened, slightly umbilicated lesions resembling molluscous tumors. The contents of the lesions were inspissated, thick, and grumous. It was learned that iodide of potassium in one-grain doses had been administered for a febrile attack. On the discontinuance of the iodide and the use of antiseptic powder the lesions rapidly disappeared.

Case II.—A lad, fifteen years of age, who had recently undergone an operation for necrosis of the right femur, developed an eruption involving the entire body. There were two distinct sets of lesions. That which predominated was composed of annular circinate plaques, varying in diameter from several centimetres to half a metre. There were also here and there, particularly about the finger-ends, distinct blebs. The patient had been taking iodide of potassium in fifteen-grain doses. This was discontinued and the eruption speedily disappeared.

The speaker then referred to other cases of similar eruptions described by various writers, and in conclusion presented the following interrogative propositions :

1. Are there not three sub-forms of the bullous exanthem developed in certain individuals after the ingestion of iodide of potassium ?

2. Is not the first and most common of these to be generally recognized in persons of advanced age and cachectic condition, the rash being then present in the form of typical bullæ ?

3. Is there a second and still rarer sub-form, in which the eruption is displayed in di- or polymorphic manifestations, typical, perfect bullæ being then mingled with papules, tubercles, scarlatiniform maculations, or with other and different lesions ?

4. Is there not a third and rarer sub-form, the quasi-bullous rash to be most frequently recognized on the face and dorsal aspect of the hands and forearms of infants and children, where the lesions are semi-solid, slightly umbilicated, and filled with inspissated, yellowish matter, and which may shrivel and dessicate on the suspension of the drug inducing the condition ?

5. Is this last-described lesion one to be recognized solely as the result of the ingestion of iodide of potassium, never under other circumstances, and one as peculiar to the special condition it represents as is the gumma to syphilis ?

Adjourned until evening.

Evening Session.

Dr. R. W. Taylor, of New York, read the first paper, which was entitled

PRECOCIOUS GUMMATA.

The following conclusions were presented :

1. Like the osseous affections, affections of the nervous system, malignant syphilides in general, besides many other affections, the gummata syphilæ may be precocious in appearance, occurring as early even as the second month of infection, but usually in the third or fourth month, or after that time.

2. Of the precocious gummatous syphilide or gummata there are three quite clearly marked forms : First, the early, general, and copious form ; second, the more localized form, which may invade several regions, is usually symmetrically distributed, and sometimes even is confined to one region, particularly one side of the face or scalp, and the roof of the mouth ; and third, a form in which more or less severe neuralgias precede and accompany the eruption, which in many particulars resembles simple erythema nodosum, but which in its etiology is not in any way related to this simple form of eruption, but is a direct outcome of the syphilitic diathesis.

3. That these precocious gummata partake in general of the features of those of later forms, but that they differ in a more acute invasion, in a much more rapid course, and are usually not as profound and destructive in their action as the classical eruption.

4. That of these precocious forms of gummata, there are found to be two varieties : one a non-ulcerative or resolutive, the other ulcerative.

5. That in the treatment of these precocious syphilides, a combination of mercury and iodide of potassium is much more efficacious than is mercury alone.

CLINICAL NOTES ON SCABIES.

The speaker, Dr. F. B. Greenough, of Boston, had noted a rapid increase in the number of cases of scabies seen during the past few years. The number of cases had rapidly increased from three in 1879 to one hundred and sixty during the last year. Inquiries as to the number of members of the same family of whom the patients could give an account as being similarly affected gave one hundred and ten such cases, which, with six cases seen in private practice and the one hundred and sixty above reported, made a total of two hundred and seventy-six cases that had come under his cognizance during the past year. The percentage of cases of scabies to other cases of skin disease had varied from three-tenths per cent. in 1876 to over thirteen per cent. during the past year. This great increase in frequency seemed to be one of the most interesting and important points brought out by his notes.

The facts which were especially noticed were, the few cases in which typical burrows could be found ; the great constancy of the manifestations on the penis in male subjects ; the difference of the symptoms produced by scratching, according to the situation of the lesion ; and the success of treatment. He had used almost entirely an ointment consisting of two parts of sulphur, one of carbonate of potash, and three of petroleum ointment, simply cautioning the patient against applying it to inflamed and pustular localities. He referred to the distribution of the eruption as of importance in the diagnosis of difficult cases, and called attention to the differential diagnosis between scabies and certain other cutaneous diseases.

DISCUSSION.

Dr. A. R. Robinson, of New York, suggested that in cases where there was difficulty in the diagnosis, a vesicle be opened and its contents examined under the microscope, for the young acari or the fæces.

Dr. L. N. Denslow, of St. Paul, had seen a number of cases in which no burrows could be found, but under treatment suitable for scabies they have recovered. The treatment used has been thorough scrubbing from head to foot, followed by the application of sulphur ointment.

Dr. E. B. Bronson, of New York, agreed with the author of the paper as to the frequent absence of the cuniculi. In many cases he had depended largely upon the elongated character of the efflorescence in making the diagnosis. For three months, he treated all cases of scabies with naphthol, using a fifty per cent. preparatio

rubbing the body thoroughly with this once. This has produced a satisfactory result.

Dr. S. Sherwell, of Brooklyn, recommended as a prophylactic the sprinkling on the sheet of a teaspoonful of the dry sulphur. This acts as a disinfectant and is unpleasant to the acarus.

Dr. H. W. Stelwagon, of Philadelphia, presented some

CLINICAL OBSERVATIONS REGARDING THE VALUE OF RESORCIN, ICTHYOL, AND LANOLIN IN CUTANEOUS DISEASES.

Resorcin.—In eczema it is rarely of benefit, but possesses some power over the itching. For this purpose a six per cent. ointment is useful. In tinea sycosis it has proven of some value in ten to twenty per cent. strength. In tinea tonsurans it is inferior to the remedies usually employed.

In seborrhœa and alopecia dependent upon this disease, a lotion consisting of a drachm of resorcin, one or two drachms of castor-oil, five minims of Peruvian balsam, and four ounces of alcohol, was of value. In tinea versicolor it was found less useful than a solution of hypophosphite of sodium. In psoriasis, and in one case of lupus erythematosus, the result was negative. In one case of superficial epithelioma a fifty per cent. ointment produced a good result; in a second case a fair result; and in a third the result was negative.

Ichthyol.—In a small proportion of cases of rosacea and acne vulgaris a ten to twenty per cent. preparation was found beneficial. In furunculus it acted with good results in three cases when applied as a twenty per cent. plaster; in the fourth case it had no effect. It was of service in psoriasis, and also in a case of lupus erythematosus. In favus it was used without effect.

Lanolin.—In some cases, as an ointment base, this is superior to the ordinary fats in use. Where a simple protective action is desired, it is inferior to vaseline, cold-cream, or lard. In chronic cases, where there is infiltration, and a degree of penetration is the object, lanolin is especially valuable. The main disadvantage of lanolin, as now manufactured from sheep's wool, is its strong sheepy odor. In a few acute and subacute cases of eczema, lanolin, for some reason, proved irritating. As a rule, however, it is bland and unirritating.

The meeting then adjourned.

Thursday, August 26th—Second Day—Morning Session.

The first paper, by Dr. G. H. Tilden, of Boston, was entitled

TROPHONEUROSIS OF THE SKIN CAUSED BY INJURY OF THE MEDIAN NERVE.

He described the case of a carpenter, wounded in the wrist by a saw four months before coming under observation. Three or four days after the infliction of the injury there was loss of the tactile sense, and a feeling of numbness in the last two phalanges of the fore- and middle-fingers. This steadily increased. Three weeks after the accident a bulla appeared upon the terminal phalanx of the middle-finger. Similar lesions have developed from time to time upon the last two phalanges of the fore- and middle-fingers. The bullæ appear every two or three weeks, and are unaccompanied by any subjective sensation. The skin over the affected phalanges is of a white color and of glossy texture.

Six weeks' treatment with the Faradic current caused decided improvement in all the symptoms. During this period only one bulla formed. He then stopped treatment and returned to work. Three weeks later all the former symptoms suddenly returned. It was suggested that an incision be made over the seat of injury with the view of determining the exact condition, and, if possible, remedying it. To this the patient did not consent.

The treatment of these cases consists in the use of electricity and the application of blisters over the seat of injury. A last resource is to cut down upon the affected nerve and endeavor to relieve any constriction or pressure upon the nerve which may be found. If no such condition is detected, resection of a portion of the nerve might be advisable, since complete section is not apt to be followed by spontaneous trophic changes, and since it has been found by some observers that resection of a portion of the affected nerve is sometimes followed by the arrest of the trophic changes.

Dr. James C. White, of Boston, read a paper entitled

NATIVE PLANTS INJURIOUS TO THE SKIN.

The speaker enumerated over fifty species which have irritating properties when brought in contact with the skin. With reference to rhus poisoning, the speaker said that the rhus toxicodendron was comparatively innocuous, while the rhus venenata was the most poisonous species of this plant.

Dr. H. G. Piffard, of New York, read the next paper, entitled

NOTES ON DRUGS,

in which he referred briefly to several recently introduced preparations.

Dr. F. B. Greenough, of Boston, then read

A FEW ADDITIONAL NOTES ON PSORIASIS.

The paper was supplementary to one presented at the last annual meeting of the Association. The author had attempted to obtain further testimony in reference to the general health of the patients affected with psoriasis. He found that, as a rule, patients with psoriasis were above par in general health and strength. He had records of twenty-nine cases out of 1,220 cases of skin diseases, giving a ratio of cases of psoriasis of two and one-third per cent. In twelve cases in which evidence could be obtained, four gave a decided history of the existence of disease in some member of the family. The fact that these cases showed such a high standard of general health he considered a strong argument against the possible connection between psoriasis and syphilis.

Dr. A. R. Robinson, of New York, related the history of a case of

CHONDROMA OF THE UPPER LIP.

The tumor occupied the right side of the upper lip of a man thirty-six years of age. It had been growing for two years, and was one inch in length by three-fourths of an inch in diameter. It was egg-shaped, the broad end having its seat in the submucous tissue, among the mucous glands. The mucous and cutaneous structures were freely movable over the tumor, which was sharply limited, somewhat encapsuled, and nourished by a small artery entering at the base. Microscopical examination showed the tumor to consist of embryonic, gland, and connective tissue. The gland tissue was formed of hypertrophied mucous glands and new gland tissue. The connective tissue was myxomatous, fibrous, and cartilaginous. There were several islands of cartilage, the largest being in the central part of the tumor. All varieties of normal cartilage were present, viz., hyaline, fibrous, and reticular, and also the variety met with in the heads of cephalopodes, namely, cartilage with ramifying or branched cells, *chondromes à cellules ramifiées.*

Dr. P. A. Morrow, of New York, read a paper on

KERATOSIS FOLLICULARIS, ASSOCIATED WITH FISSURING OF THE TONGUE AND LEUKOPLAKIA BUCCALIS.

The patient, C. O——, a sailor twenty-one years of age, came under observation in December, 1885. Five years previously, soon after beginning his seafaring life, he noticed a number of blackish points upon the back of the hands, some of which he squeezed out. Soon afterward these appeared upon other parts of the body. They improved when he was on land, but were aggravated when he was at sea. The entire surface of the body, with the exception of the face, palms, and soles, was

found to be the seat of the follicular disorder. The ducts of the sebaceous glands were occupied by comedo-like bodies projecting sometimes one-fourth to one-half an inch above the surface. From many of the follicles small white hairs protruded. The comedos, when pressed out, were hard and dry. The hard portion of the comedo was continuous with an adhesive substance dipping deeply into the follicle. There was no evidence of irritative or suppurative action. They were not accompanied with itching.

The tongue was large and rough to the touch, the surface was deeply fissured, the fissures extending to the submucous tissue. The buccal mucous membrane presented a bluish-white appearance, thickened and raised in places, forming distinct plaques which were superficially fissured. The patient stated that the tongue had been white and a little sore ever since he could remember. The absence of irritation or marked sensitiveness of the fissured organ was quite noticeable. Examination seemed to exclude the possibility of a syphilitic origin. The speaker referred to other cases which had been reported. He objected to the term icthyosis, since that suggests a disease of a different nature. He selected the term keratosis follicularis as more correctly expressing the pathological condition present, as well as indicating the anatomical seat of the disorder. Drawings representing the microscopical appearances of the lesions were presented.

Dr. J. E. Graham, of Toronto, Canada, presented a

CLINICAL STUDY OF SCLERODERMA.

The author first related the histories of two cases of this rare disease. The first patient, Mrs. R——, forty-seven years of age, had previously suffered from rheumatism. The hardening of the skin began in March, 1882, and was first noticed over the back of the neck. It gradually spread so that, in about ten weeks, the integument over the greater part of the body was affected. The movements of the limbs as well as those of respiration were impeded. The internal treatment adopted was liquor ferri iodidi and liquor arsenitis. A faradic bath over the surface of the skin was used. In six weeks the skin began to grow softer, and in ten months the patient was quite well. There has been no return of the difficulty.

The second patient, Mr. H——, forty-seven years of age, came under observation in May, 1886. There was a history of hereditary rheumatism. The disease had commenced some months previously. The first symptoms were stiffness of the limbs with œdema of the lower extremities; then hardening of the skin over the hips was noticed; this gradually spread and was accompanied with pigmentation. The treatment consisted in the administration of potassium iodide at first, and latterly of salicylate of sodium. There has been some improvement under this treatment.

In his remarks in connection with the disease, the speaker referred to the following points: 1. That the disease is found principally in temperate climates, and occurs in seasons when there are sudden changes in the weather. 2. That it is more closely related to rheumatism than has been supposed. 3. That although morphœa has in all probability a similar pathological origin to scleroderma, yet the clinical distinctions are so marked that at present it is expedient to treat it under a different name.

Dr. L. N. Denslow, of St. Paul, described a case of scleroderma in which benefit has followed the daily use of the constant current for six months.

Dr. Le Grand N. Denslow, of St. Paul, read a paper on

CARCINOMA CUTIS.

The skin of the right chest from the second to the seventh rib, and from the posterior border of the axilla to the median line, was covered with a nodular new-growth which presented no ulceration. Around the nipple the nodular mass reached a thickness of one inch. The older portions of the growth were covered with thickened epidermis and thick brown scales. There was slight enlargement of the axillary glands. The different nodules were not movable beneath the skin, but the whole mass was free from the fascia. The mass was the seat of occasional neuralgic pains. The duration of the growth was seven months. The patient died four months after coming under observation.

Dr. I. E. Atkinson, of Baltimore, said that these cases are exceedingly malignant. He mentioned a case in which the disease ran its course in two or three months. These cases are so malignant that it would seem that no operative procedure is justifiable.

Dr. R. W. Taylor, of New York, referred to two cases of hard chancre of the nipple in men, in which the induration was so marked that for a time they were looked upon as cases of cancer of the nipple.

Dr. I. E. Atkinson, of Baltimore, read a paper on

SCARLET FEVER AND SCARLATINIFORM ERUPTIONS FOLLOWING INJURIES AND OPERATIONS.

The following conclusions were presented: 1. Unprotected persons who have suffered injury or undergone operation are much more liable to scarlet fever than healthy individuals. 2. When an epidemic tendency to these symptoms prevails after injuries and operations, it may be concluded that true scarlet fever is present. 3. Septicæmia is occasionally accompanied with scarlatiniform eruption. 4. Medicinal eruptions, especially from cinchona alkaloids, may follow accidents and injuries.

DISCUSSION.

Dr. P. A. Morrow, of New York, mentioned the rash which often follows the use of antipyrine, and which frequently simulates scarlatina, although it is usually of a more measly character. Again, carbolic acid and iodoform dressings will often produce rash presenting the objective appearances of scarlet fever. The eruption known as the "doctor's rash," which appears upon the persons of sensitive individuals stripped for examination, was also referred to.

Adjourned.

FRIDAY, AUGUST 27TH.—THIRD DAY.—MORNING SESSION.

Dr. J. E. Graham, of Toronto, Canada, exhibited the specimens from a case of ainhum.

Dr. S. Sherwell, of Brooklyn, read the first paper, which was entitled

REMARKS AND QUERIES ON, AND AS TO, THE RELATIVE FREQUENCY OF MOLES AND THEIR PATHOLOGICAL CHANGES ON THE HEAD AND FACE.

In looking up the statistics of one of the institutions with which he is connected, he found that, in a period of eighteen months, he had seen forty-seven cases suffering with neoplastic and hypertrophic growths. In thirty-six of the cases the growths occupied the face and head. In eleven cases only were the growths found on the body and limbs. Seventeen of the cases, in which the growths were on the face, were classed as epithelioma.

Moles, and similar growths, while common on other parts of the body as well as on the face, yet in other situations seem less likely to undergo destructive pathological changes. The field electively most inimical to the presence of these growths, and destructive activity in them when already present, may be bounded thus: A quadrangle just taking in the lower lip, the corners of the mouth, extending back to the ears on both sides, vertical lines extending upward to about an inch above the supra-orbital ridge, united by another horizontal line. Of the space thus included, the vicinity of the eyelids and bridge of the nose was, in the author's experience, the most usual seat of these growths.

The most rational explanation for the frequency of these growths in the situations described, is the nature and abundance of the circulatory nutrition, which must favor

hyperplasia. If, however, we accept this, why should those errors of the capillary system, such as nævi, not oftener degenerate? He had frequently operated on these latter deformities, often causing much irritation, but had never seen more than a slight keloid change result. The speaker then referred to the special danger of malignant degeneration which attended the presence of moles in persons of advanced life.

In regard to treatment, he had come to the conclusion that when malignant action is either present or suspected, the combination of Volkman's curette, followed by the potential cautery, is the most efficient and easiest method of treatment.

Dr. I. E. Atkinson, of Baltimore, held that the probable explanation of the frequency of the presence of moles, etc., upon the face, as compared with other portions of the body, was that, when in this situation, patients seek relief on account of the disfigurement, while when covered with the clothing attention is not attracted to them.

Dr. R. W. Taylor, of New York, said that Dr. Sherwell was to be congratulated upon the clear manner in which he has called attention to the danger of these various growths upon the face in a person over forty-five years of age. Such growths are very prone to assume malignant action. In the same connection it may be remarked that any inflammatory mass upon the prepuce, particularly if the result of anterior lesion, should in old persons always be ablated.

Dr. W. A. Harcaway, of St. Louis, presented some

NOTES OF A CASE OF EXFOLIATIVE DERMATITIS (PITYRIASIS RUBRA?) WITH BULLOUS LESIONS.

The patient was forty-five years of age, stout, and somewhat nervous. The disease came on three weeks previously, after a night of fatigue and exposure. The following day a red patch appeared on the pit of the stomach. Others developed, soon running together, leaving no healthy skin between. There was very little scaling at first, and no moisture. The chest, arms, back, and thighs presented the usual appearances of pityriasis rubra. There was neither moisture, crusts, nor appreciable infiltration, the skin was shining and of a violaceous hue. In the morning a handful of scales could be gathered from the sheet, but they were not as large as usual. Three or four days after the first visit there appeared upon the thighs, abdomen, and buttocks a number of tense bullæ. Their appearance was preceded by a distinct chill, and followed by a moderate elevation of temperature. The blisters did not run into each other. The bullæ appeared in successive crops of not more than a dozen, each crop being preceded by a chill. Quinine was freely administered, and at the end of a week the bullæ ceased to appear. The patient gradually improved.

The writer thought that this and other cases which he had seen, showed diseases usually supposed to run a dry course, may, under certain circumstances, be complicated with lesions containing fluid.

Dr. G. H. Tilden, of Boston, reported

A CASE OF PROBABLE TUBERCULOSIS OF THE SKIN.

Dr. Le Grand N. Denslow, of St. Paul, made a supplementary report with reference to

THE TREATMENT OF ACNE BY THE USE OF SOUNDS.

At the last meeting he had reported five cases in which this plan of treatment had been of value. Four of these cases were adults, and all had remained well. The fifth case was that of a boy about fourteen years of age, and in this case relapse had occurred.

A communication with reference to the organization of a congress of American physicians and surgeons was received, and the following Committee of Conference, to report at the next annual meeting of the Association, was appointed: Drs. H. G. Piffard, of New York; F. B. Greenough, of Boston; R. B. Morison, of Baltimore; G. H. Tilden, of Boston, and Le Grand N. Denslow, of St. Paul.

The following officers were elected:

President—Dr. H. G. Piffard, of New York.

Vice-Presidents—Dr. F. B. Greenough, of Boston; Dr. R. B. Morison, of Baltimore.

Secretary—Dr. G. H. Tilden, of Boston.

Treasurer—Dr. Le Grand N. Denslow, of St. Paul.

The Association then adjourned to meet at the call of the Council.

Correspondence.

ICE CREAM POISONING.

To the Editor of The Medical Record.

Sir: In your review of my report to the Michigan State Board of Health on the analysis of the Lawton cream, there are a few statements which I hope you will permit me to comment upon.

In the first place I have never "claimed," as you say, "to have discovered the *fons et origo* of the poison in a new ptomain," etc. I hope that I am sufficiently acquainted with the nature of ptomains to know that they are produced by fermentation or putrefaction. The *fons et origo* of the poison must be the ferment which produces the ptomain. Of this I speak as follows: "How the special germ which produces the poison found its way into the Lawton cream I cannot say; but that it was present in the milk, or was contained in the eggs used, I think cannot now be doubted."

I desire it to be distinctly understood that I do not claim that tyrotoxicon has existed in every ice-cream which has produced untoward effects upon man. Mineral poisons have been found in ice-cream, and Dr. Bartley's idea that the poisonous properties of the cream which he examined were due to the use of putrid gelatine is a rational theory. The poisonous principle in this case might arise from the decomposition of the gelatine itself; or with the gelatine there may be introduced into the milk a ferment, by the growth of which a poison might be produced. But the Lawton cream had no gelatine or mineral poisons either in it.

In view of Dr. Morrow's letter in your issue of July 27th, I am sorry that you did not refer to my proof, that the vanilla used in the Lawton cream was not poisonous. The vanilla which remained in the bottle was sent to me, and on page 4 of the report you will find the following: "Mr. Novie and I took at first thirty drops each of the vanilla extract. No ill effects following this, Mr. Novie took two teaspoonfuls more, with no results. This settled the question of the poisonous nature of the vanilla more satisfactorily than could have been done by a chemical analysis." Moreover, as you will see from page 7, by adding a piece of the solid portion of the Lawton cream, about the size of a filbert, which had been washed with distilled water to normal milk, and then following the details of the Lawton caterer, with the exception that no flavoring whatever was used, I made a cream which was highly poisonous.

I find that in my report the time which elapsed between the making of the vanilla custard and its freezing is stated only indirectly, and that by giving the time during which I allowed the custard which I made to stand before packing in ice. The testimony on this point, as obtained from Lawton, from different persons, varies as to the exact time, some placing it at one hour and a half, others at four hours. I took three hours as the probable time, as you will see from my report.

I have recently received a letter from Lawton which throws much light upon this subject. Permit me to give the following extract: "The cream was frozen in the back end of a wooden building owned by C. M. Morrick,

and located on Main Street. It is surrounded by shade, has no underpinning, and the sills have settled into the ground. There are no eave-troughs, and all the water falling from the roof runs under the building. The street also largely drains under the building, the streets on two sides having been raised since the building was erected. The building had not been occupied for a number of months, consequently had no ventilation, and what is worse, the back end (where the cream was frozen) was last used as a meat market. The cream which was affected was that portion last frozen, consequently it stood in an atmosphere more like that of a privy vault for from one and a half to two hours before being frozen. It seems to me that anything so sensitive to surroundings as milk could not escape being affected by such surroundings."

The above, written by an unprofessional man, and written after my report, is, to my mind, very valuable information.

You regret that I have not given the chemical properties of tyrotoxicon. These, so far as I know them, are given in *Zeitschrift für physiologische Chemie*, B. x., H. 11. As they had been presented to the Board a year ago, I did not repeat them; but I gave the reference, and any chemist can find them.

You think that my theory does not explain the occurrence of poisoning, with the production of identical symptoms, from the use of other alimentary preparations, as pastries, puddings, etc., in which only a minimum quantity of milk is used. Does the fact that a ferment will produce a poison by its growth in milk prove that the same ferment will not produce a poison in pastries, puddings, etc.? There are present the same foodstuffs—albumen, fat, and sugar. Or does similarity of symptoms always prove the presence of the same poison? In a general way, may we not say that symptoms arising from poisonous cheese or ice-cream are identical with those of arsenic? At least most physicians, in treating such cases, have almost invariably diagnosed arsenical poisoning from the symptoms.

That there is no better food for children than good milk, I will claim as earnestly as anyone. But that unclean nursing-bottles or other foul receptacles of milk are beneficial to the health of children I doubt, and I simply suggested the possibility of the poison being generated in such vessels.

As to the direct agency of bad milk in causing cholera infantum, and the desirability of withholding milk as food during the course of the disease—and this is the only time in which I have recommended that milk be withheld—I am now collecting evidence. I will only say that several physicians in this State are now treating cholera infantum in accordance with the suggestions of the report, and they claim to be very successful, and I have not heard of any "boom for the venders of artificial foods" being created thereby. The use of a little rice-water or mutton-broth during a short course of cholera infantum can hardly lead to a great boom for the venders of artificial foods.

Respectfully,
V. C. VAUGHAN.

INTRAVENOUS INJECTION OF SALT SOLUTIONS.—Dr. F. B. Harrington has tabulated all the recorded cases of transfusion with salt solutions. He recommends that the solution be made as follows: Sodii chloridi, 6 grammes; sodii bicarbonatis, 1 gramme; aquæ destillatæ, 1,000 grammes. The solution should be warmed and kept at a temperature between 100° F. and 104° F. The solution should enter the circulation at a low pressure, and its effect on the heart should be carefully watched. Gravity pressure is safer than a syringe, an elevation of from one-half to three feet being sufficient. The amount used would depend upon the effect upon the circulation, but it may be from one to four pints.—*Boston Medical and Surgical Journal*, May 27, 1886.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August [illegible], to [illegible], 1886.

MIDDLETON, P., Major and Surgeon. Assigned to duty at St. Francis Barracks, St. Augustine, Fla., as Post-Surgeon. S. O. 126, Division of the Atlantic, September 2, 1886.

LA GARDE, L. A., Captain and Assistant Surgeon. Upon departure of Third Infantry from Fort Ellis, M. T., to proceed to Camp Sheridan, Mammoth Hot Springs, Wyo. Ter., and report to the Commanding Officer for duty, relieving Assistant Surgeon Pilcher. S. O. 87, Department of Dakota, August 27, 1886.

CRAMPTON, L. W., Captain and Assistant Surgeon. Relieved from further duty at Bellevue Rifle Range, and granted leave of absence for one month, to take effect before rejoining his proper station (Fort Bridger, Wyo.). S. O. 108, Department of the Platte, August 28, 1886.

PILCHER, JAMES E., First Lieutenant and Assistant Surgeon. When relieved by Assistant Surgeon La Garde from duty at Camp Sheridan, to return to his proper station (Fort Custer, M. T.). S. O. 87, Department of Dakota, August 27, 1886.

WOOD, L., First Lieutenant and Assistant Surgeon (recently appointed). Ordered to report by letter to the Commanding General, Department of Arizona, for assignment to duty. S. O. 202, A. G. O., August 31, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from duty in Department of the East, and assigned to duty in Department of Arizona. S. O. 203, A. G. O., September 1, 1886.

WALKER, FREEMAN V., First Lieutenant and Assistant Surgeon (recently appointed). To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 203, C. S., A. G. O.

Official List of Changes in the Medical Corps of the United States Navy for the [illegible] ending [illegible], 1886.

CLARK, JOHN H., Medical Inspector. Ordered to special duty, Portsmouth, N. H., and Widow's Island.

KINDLEBERGER, D., Medical Inspector. Ordered to Hospital, Washington, D. C., October 1, 1886.

GIHON, A. L., Medical Director. Ordered to Hospital, Mare Island, Cal., October 15, 1886.

ROBINSON, SOMERSET, Medical Inspector. Detached from Hospital, Mare Island, Cal., October 15, 1886, and wait orders.

SPEAR, J. C., Medical Inspector. Ordered to Naval Laboratory, New York, September 28, 1886.

BLOODGOOD, DELEVAN, Medical Director. Ordered to Hospital, Norfolk, Va., September 29, 1886.

TAYLOR, J. Y., Medical Director. Ordered to Naval Laboratory, New York, September 29, 1886.

DEAN, R. C., Medical Director. Detached from Naval Hospital, New York, and wait orders.

SIMON, W. J., Surgeon. Detached from U. S. S. Constellation, and special duty at Naval Academy, Annapolis, Md.

HENRY, C. P., Assistant Surgeon. Ordered to Hospital, Philadelphia, Pa.

FITTS, H. B., Passed Assistant Surgeon. Detached from Hospital, Philadelphia, Pa., and wait orders.

STONE, E. P., Assistant Surgeon. Ordered to Receiving Ship New Hampshire.

DICKSON, S. H., Passed Assistant Surgeon. Detached from the Naval Academy, October 1, 1886, and ordered to Navy Yard, Washington.

LIPPINCOTT, J. G., Passed Assistant Surgeon. Ordered to Naval Academy, October 1, 1886.

SHIPPEN, E., Medical Director. Detached from Naval Hospital, Philadelphia, and ordered to attend officers of the Navy and Marine Corps at Philadelphia not otherwise provided with medical aid.

HORD, WILLIAM T., Medical Director. Detached from Examining and Retiring Boards at Washington, October 5th, and ordered to Naval Hospital, Philadelphia, Pa.

DEAN, R. C., Medical Director. Ordered to duty as member of Examining and Retiring Boards at Washington, October 5, 1886.

BRANSFORD, J. F., Surgeon. Detached from U. S. S. Iroquois, and ordered to Naval Hospital, New York.

HALL, C. H. H., Passed Assistant Surgeon. Detached from Naval Hospital, New York, and ordered to Naval Hospital, Yokohama, per steamer of 21st inst.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 4, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	[illegible]	1
Scarlet fever	1	1
Cerebro-spinal meningitis	[illegible]	[illegible]
Measles	[illegible]	[illegible]
Diphtheria	[illegible]	1
Small-pox	0	

HOW TO PRESERVE THE DEAD BODY.—Dr. H. Speier, of Duluth, Minn., writes: "In reply to the inquiry of Dr. Kennedy in THE RECORD of August 7th, I will briefly give him the method for preserving bodies invented a few years ago by Wickersheim, of the Anatomical Museum of Berlin. The process is simple and cheap, and the inventor claims that by it the color, form, and flexibility of dead animal bodies and all their tissues are completely preserved. He says that after several years sections for scientific or legal purposes can be made, decomposition and even foul odor being entirely absent. The preserving fluid is made as follows: Take 3,000 grammes of boiling water, dissolve in it 100 grammes of alum, 25 grammes common salt, 12 grammes saltpetre, 60 grammes potash, and 10 grammes arsenious acid. After cooling, filter the solution. To 10 litres of this neutral, colorless, and odorless fluid add 4 litres of glycerine and 1 litre of methyl-alcohol. Inject the body with the preserving fluid, then immerse it in the same for a few days. Rub and dry the body, envelop it in a sheet soaked in the same fluid, and place in an air-tight receptacle. If Dr. Kennedy ever uses the method given here, I should like to hear what results he gets from it."

LABOR AMONG THE NATIVES OF NEW GUINEA.—The Rev. W. S. Lawes describes, in the *Australian Medical Gazette*, of June 15, 1886, some of the customs among the natives of New Guinea in sickness and childbirth. When labor pains come on, the mother of the woman and her mother-in-law come—the former to assist the woman, the latter to receive the child. A rope is made fast to the roof and hangs at a convenient distance from the woman, so that she can hold on to it when the pains come on; her mother sits behind her, so as to support her back and head. They are always delivered sitting. When the birth is difficult (a rare occurrence even in *primipara*), a ceremony is gone through, which consists of the assembled friends performing an incantation and calling upon their ancestor god to help. It is only in extreme cases, such as malpresentation, that they endeavor to pull the child away with force. When the child is born it is received by the expectant grandmother, who sucks its mouth immediately. The cord is not cut until after the placenta has come away; when it has come the grandmother works the cord by her finger-nails until it becomes thin; she then cuts it with a piece of flint; it is not tied. The previous manipulation of the cord prevents loss of blood. The distance from the navel at which it is cut is measured on the child's thigh. Among the Motu tribe, mother and child remain in the house until the cord drops off, usually on the fifth day. Then the mother takes the child down into the sea and bathes herself and it. At Hood Point the mother takes the child in her arms as soon as it is born and plunges with it into the sea. The object is said to be to make it fearless of the sea. They are a tribe of fishermen. In the Gulf, to the west, they take their new-born babe to meet the breakers, and let the surf break over it. The same reason as above is given for it. Until the mother is able to feed her child, relatives and neighbors suckle the child. From the time the navel cord drops off, the child is given ripe bananas, when procurable, and very soon yams and other vegetables—all chewed first by mother or sister. Milk of animals is unknown among the natives as an article of diet. The children are really never weaned—a big boy, three years old, will come in from play and run up to his mother for a drink. The husband does not cohabit with his wife until the child is six or eight months old, and sometimes not until it is able to run about. They believe that it would have a prejudicial effect upon the child to do so.

SWALLOWING A CENT.—Dr. J. L. Gardner, of Voluntown, Conn., writes that he was called to see a child, two years of age, who had got a copper cent in the pharynx, whence it was pushed into the œsophagus by the mother in her efforts to relieve the choking. The writer pushed it down into the stomach, and then administered castor-oil for some days. The coin had not been passed, however, at the end of four weeks, and the child seemed to be suffering no ill effects. An irregular practitioner in the neighborhood was called in and informed the mother that there was no danger, as the stomach juices would eat up the coin. Dr. Gardner inquires whether any harm is likely to result from the lodgment of the coin in some part of the intestinal tract.

CULTURE OF VACCINE IN MUSHROOM JELLY.—Experiments have recently been made by the Finnish Medical Society in the cultivation of artificial lymph in sterilised mushroom jelly. The artificial lymph has also been dried and used for vaccination. A child was exhibited at one of the meetings who had been vaccinated by the artificial lymph in the arm. There were nine vesicles in three rows. They were all well developed, and did not present any dissimilarity, although two rows had been produced with lymph taken from different parts of the culture glass, and the third row with dried lymph from the same glass. Former experiments had not been so successful, owing to the resistance of the lymph to the effects of drying. The cultivation of the lymph has now been brought to a more satisfactory point.

NITRITE OF AMYL AS AN ANTIDOTE FOR OPIUM.—*L'Union Médicale* reports the case of a person who took two ounces of laudanum, and showed every symptom of opium-poisoning—coma, small pulse, feeble and infrequent respiration (six to the minute), coldness and cyanosis. Belladonna proved useless, while inhalation of nitrate of amyl immediately improved and ultimately restored the patient.

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Original Articles.

PERI-UTERINE INFLAMMATION.

A STUDY OF PERI-UTERINE INFLAMMATION IN ITS RELATION TO SALPINGITIS, BASED UPON SIXTEEN CASES OF EXTIRPATION OF THE TUBES AND OVARIES, OCCURRING IN BELLEVUE HOSPITAL.

BY WILLIAM M. POLK, M.D.,

THE purpose of this paper is the consideration of those inflammatory masses found about the roof of the vagina, generally to the sides of the uterus, sometimes behind, and but very rarely in front of it. These masses are described under the heading "Pelvic Cellulitis" and "Pelvic Peritonitis" in the works usually used by the English-speaking members of our profession, and from the time they were first noted and described have been the subject of controversy.

Let it be understood that I exclude the results of hæmatocele, of fibroid tumors of the uterus, of tubercle and cancer, of extra-uterine pregnancy, and disorders of the rectum and bladder, conditions which may simulate the masses in question, but with histories and signs so different as to preclude the chances of confounding them at the bedside.

At first, as is seen in the papers of Doherty, read before the Obstetrical Society of Dublin, May 5, 1842, and that of Fleetwood Churchill, read before the Surgical Society of Dublin, January 28, 1843, all that was claimed was, that such masses were found in parturient women chiefly, but in the non-parturient occasionally; and as Churchill, in particular, pointed out that they resulted sometimes in an abscess, no attempt seems to have been made to differentiate the point of development for such morbid products, the writers in the main resting satisfied with the assertion that they belonged to the uterine appendages. As Churchill says: "I shall therefore speak of the disease as affecting the uterine appendages, be they Fallopian tubes, broad ligaments, or ovaries, one or all—nay, as extending itself sometimes to the neighboring cellular tissue." Years before this the affection had been described imperfectly by La Motte and Puzas; but it was not until the times of Aran, Nonat, Bernutz, and Simpson that a determined effort was made to settle the important question as to the point of development and the line of propagation of these products of inflammation. Nonat maintained that the point of development was the cellular tissue adjacent to the uterus, beneath the peritoneum. Bernutz denied that any peri-uterine inflammatory mass—phlegmons as they were called—could belong to the cellular tissue immediately adjacent to the uterus, but admitted the possibility of implication of this tissue secondary to a pelvic peritonitis, and conceded the existence of phlegmons in the cellular tissue between the layers of the broad ligaments—his conclusions being that the peri-uterine masses, which during life presented all the symptoms of the so-called "peri-uterine phlegmons" or "cellulitis," were formed by the pelvic viscera being matted together by peritoneal adhesions, and, consequently, that such masses were in the peritoneal cavity.

His words are: "I find that the tumor found after death is formed by various intra-pelvic viscera being matted together as a consequence of the inflammation," and concludes that inflammation of the pelvic peritoneum is always symptomatic, that it is generally so of inflammation of the ovaries or tubes, and, comparing the post-mortem lesions with the symptoms, he is led to the belief that the majority of the more important symptoms are attributable to pelvic peritonitis, while those of the uterine and tubo-ovarian affection, although of much more importance, are very obscure. He then goes on to relate a number of cases to corroborate his views—several of the series, notably the first, being particularly interesting to us now, as they so clearly illustrate pyosalpinx and pelvic abscess as a direct result of the tubal inflammation.

These conclusions have been singularly verified by the observations of the present day, and Bernutz may be said to be, if not the first, at least the most dogmatic and precise advocate of tubal disease as a factor in the pelvic disorders of women.

It was not to be supposed that his statements would pass unquestioned. They were combated, chiefly by the English school, mainly by Sir James Simpson. The condition which Bernutz described was one so rarely fatal that but few chances of post-mortem examinations in the early stages of the disease were offered. Where the cases did die, it was in consequence of the disorder passing on to the stage of abscess, and in them the involved tissues were so altered and intermixed with false membrane that it was difficult, and even impossible, to determine the precise origin of the inflammation. On the other hand, his opponents had many opportunities among the numerous deaths from puerperal inflammation to demonstrate the existence of inflammatory swellings in the area of cellular tissue adjacent to the uterus. Still, enough was accomplished to make it certain that the masses in question were sometimes in the peritoneal cavity, that possibly they might be the result of the extension of salpingitis, and that they might end as intra-peritoneal abscesses. Out of this grew an attempt to differentiate the conditions clinically, and by some writers the lateral peri-uterine masses were classed as instances of cellulitis, while those posterior to the uterus were classed as instances of peritonitis, but still the tubes were largely ignored. Then came certain observations made by Emmet and Schultze, to the effect that the cellular tissue of the utero-sacral ligaments was often involved, so that retro-uterine masses were by some again regarded as instances of cellulitis, and were called "parametritis posterior." Here the subject rested when Mr. Tait began his work. Then, for the first time, the views of Bernutz were put in the way of verification, for it became possible to check the results of bimanual vaginal examination by direct digital exploration of the intra-pelvic regions.

In the winter of 1883 Dr. Emmet presented to the Obstetrical Society of New York several specimens of diseased tubes which Mr. Tait had given him; and, in answer to questions as to the method of diagnosis, said that the tumors which such tubes and their surroundings made in the pelvis were regarded by Mr. Tait as identical with those which we in this country had viewed as due to "cellulitis" and "peritonitis" (see "Obstetrical Society Report," December 5, 1882). A few weeks later (December 21, 1882) Dr. Gaillard Thomas read a paper

[illegible] Society of Physicians and Patholog[illegible] Washington, June 15, 1886.

before the Academy of Medicine, reporting four cases which he viewed as corroborating this and other positions of Tait.

Dr. Wylie, January 15, 1885, read an interesting paper bearing on the subject before the New York Academy of Medicine, and has since followed it by another before the New York State Society. In both he commits himself to a belief in the identity of so-called chronic cellulitis and salpingitis. It is plain, then, that the opinion is rife.[1] It only remains to substantiate it. After hearing Dr. Emmet's statement and reading Dr. Thomas' report, my attention was fixed upon all such cases that came before me. My ward in Bellevue Hospital is the recipient of many patients suffering from "cellulitis" and peritonitis, of all origins and in all stages; the sufferers coming there are such (working-women) as are peculiarly exposed to the causes of pelvic inflammation. My conclusions gradually shaped themselves in the direction indicated by the English surgeon, so that during the winters of 1883, 1884, and 1885, I shifted my position to the doctrine that tubal disease is the principal factor in so-called pelvic cellulitis and pelvic peritonitis, adopting in the main the central idea enunciated by Bernutz twenty-five years ago. As time has passed, these views have become more firmly impressed upon me, so that now I regard perituterine inflammation as a dependency of salpingitis, and hold with Bernutz that in the symptomatology of these masses "the majority and the more important symptoms are attributable to pelvic peritonitis, while the uterine or tubo-ovarian affection, although of much more importance, is indicated only by obscure symptoms."

The salient question then is this: What are the inflammatory masses commonly met with about the uterus and the broad ligaments? Are they the result of parametritis (pelvic cellulitis), derived directly from the uterus and vagina, through the medium of the parenchyma, the lymphatics, or the veins, or are they the result of a perimetritis (pelvic peritonitis) derived from the uterus through the medium of the tubes? Owing to the inroads of surgery upon the pelvis this has become more than ever a grave question.

In this inquiry the position which I desire to occupy is this:

First.—That the inflammatory masses commonly found about the uterus, and which are described under the headings "Pelvic Cellulitis" and "Pelvic Peritonitis," are the result of salpingitis, plus peritonitis—the tubal disease being the direct result of disease of the uterus; that such masses are composed of the tubes and ovaries, with sometimes adjacent viscera, the whole being united by recent or organized lymph, the interspaces in acute cases, and sometimes in chronic cases, being filled with a serous exudate; that such swellings may be augmented by secondary infiltration of the adjacent sub-peritoneal connective tissue, but such infiltrations are subordinate in extent and influence to the peritoneal inflammation.

Secondly.—That these masses do not originate directly from the uterus or vagina as a *cellulitis*, *except* as the consequence of an *evident septicæmia* ingrafted upon those organs, after an abortion, a miscarriage, a labor, or after some operation; that even in such cases it is more than probable that salpingitis and peritonitis will be associated with and predominate over the cellular inflammation; that when these masses do begin as a cellulitis (the patient surviving the septicæmia), they rapidly tend to suppuration; that they end very rarely in the chronic indurations or swellings under consideration in this paper.

It is admitted by all that the vagina, and, chiefly, the uterus are the starting-points for these swellings; some hold that the ovaries are, but this I will not consider, as I do not think that the proofs of primary ovarian inflammation, outside of tubercular and cancerous deposits, being the initial factor in the production of the swellings in question, are conclusive, too few of the reports being explicit in excluding previous salpingitis.

The uterus and vagina being then the clearly admitted sources of the disorder, the question is in what way does the inflammation travel outward.

Through the tubes to the peritoneum; by way of the lymphatics, lymphangitis; by the veins, phlebitis; or directly through the parenchyma of the organs?

In one or the other of these ways, or by a combination of both, or all, inflammation travels from the genital tract outward.

In the first it gains direct access to the cavity of the peritoneum, in the other, by running in a more indirect way. Let us inquire as to which is the usual path. In septicæmia it travels by all. Excluding this condition it travels outward by way of the tubes. One of the most effective blows struck in favor of this last assertion was the discovery of the extreme rarity of acute metritis in the non-pregnant uterus. But the question of transmission by way of the lymphatics and veins is not so easily regulated.

Admitting, then, for septicæmia, a transmission by all the routes, will it apply to all of the puerperal inflammations or to all of the non-puerperal? The large majority of these masses are preceded and accompanied by symptoms of simple inflammation. Are such symptoms the expression of so serious conditions as lymphangitis and phlebitis? The history of such conditions, when developed in connection with the inflammations of other organs, forbids us so thinking.

Let us look at this subject from the stand-point of analogy and then examine the facts bearing upon it.

When an inflammation is started in the vagina, as in gonorrhœa, or from any irritant substance, it is a matter of daily experience that it tends to follow the mucous membrane into the uterus, and it would be singular if that inflammation, after covering the endometrium, should stop at the tubal entrance. If those tubes are capable of admitting the passage of spermatozoa and ova, their natural office, surely they would seem the easiest path of transit of the usual inflammatory process found in the uterus. There is one very suggestive fact with this question which has been the subject of considerable thought on my part. It is this: If cellulitis is so common about the uterus, why is it so uncommon about other organs? Let us, in order that the analogy may be as perfect as is possible, look into the behavior of the cellular tissue adjacent to other pelvic viscera.

Take, first, the genito-urinary tract of the male, and pass in review all the inflammatory conditions to which that tract is subject—their course is definite, with frequent extension along the various mucous surfaces, but with rarely an implication of the cellular tissue about them.

Take the prostate gland, which, in point of structure, is more nearly allied to the uterus than any other organ, and see what the history of its inflammations is. How often do we find cellulitis as a result of inflammation?

Take the penis, a mass of venous sinuses, how often do we have phlebitis as a result of its inflammations; we *do* have implication of the cellular tissue immediately adjacent to the urethra, the sub-mucous tissue, but how often does it extend to the cellular tissue entering into the composition of the entire organ?

Given a gonorrhœa, or an inflammation the result of some traumatism, and see how it will extend to every mucous tract—to the kidney on the one hand, to the testicle on the other—and how rarely are any of the cellular planes about these various organs involved to any appreciable degree.

Take the bladder and study its inflammations, and certainly they are common enough. Look next at the rectum, affected, for instance, with the ulcers of dysentery, and how often will you find inflammatory swellings in the folds or at the base of the meso-rectum?

It is hard to understand that inflammation will behave so differently in these organs from that which occurs in connection with the uterus. It is much easier to believe that inflammation here will follow the same law, and travel in general along the mucous surfaces into the tubes and out at their extremities. Here a suggestive fact relates to the ureters. These canals pass through much of that cellular tissue, in their course across the floor of the pelvis, in which those upholding the doctrine of cellulitis have located these masses. If they are right, it is strange that the ureters are so rarely constricted; no other flaccid canal surrounded by indurated masses of new tissue would be likely to fare so well. With the masses in the peritoneal cavity these canals are simply pushed against the yielding pelvic floor. With such masses at the base of the broad ligament and about the cervix, constriction or compression of the ureters, with dilatation above the constriction, and the inevitable results to the kidney, would be a far more common condition in the female than post-mortem examinations now show us.

But, after all, such arguments, while useful and suggestive, are not conclusive. The facts of the autopsy and operating-rooms are the pivots of our faith in medical science.

Let me then call your attention to this fact: In a large number of post-mortem examinations made in the dead-house of Bellevue Hospital, it is noticed that, excepting those patients who have died of septicæmia, it is the rarest thing to find pelvic cellulitis, unless the cellulitis be clearly secondary to a previous inflammation of the pelvic peritoneum. On the other hand, nothing is more common than to find evidences of peritonitis about the ends of the tubes, and it is noticeable that in such cases the evidences of such inflammation diminish as you leave the extremities of the tubes; that the cellular tissue about the uterus and in the broad and utero-sacral ligaments does not present evidences of inflammation, or, if it does, such evidences are confined to that immediately underlying the peritoneum, and diminish and disappear as you approach the uterus. In these cases the tubes always show implication.

In other words, the post-mortem evidences of peri-uterine inflammation are common, and these evidences are such as to show that the inflammation was a product of salpingitis, and not secondary to cellulitis; and that if cellulitis were present, it was either secondary to peritonitis, or else was a lesion of septicæmia in common with those which belong to that disorder when originating in other structures of the body.

In this connection it is well to quote the words of the pathologist of the Woman's Hospital of New York, Dr. Coe.[1]

"Of half a dozen fatal cases of hystero-trachelorraphy and incision of the cervix, in which I have enjoyed the rare opportunity of studying carefully the sequences, in every instance the cause of death was acute, diffuse peritonitis. The inflammation could be traced straight up from the wound along the mucous membrane of the uterus as an endometritis, along the tubes as a pyosalpinx, and then to the peritoneal cavity. In none of these cases was there any evidence of acute cellulitis, although old cicatrices were not wanting." On pages 71–73 he makes other suggestive statements—speaking of the results of limited inflammation in the pelvis as observed after death: "My attention was early directed to the subject by Dr. W. H. Welch, who had for years been seeking positive proof of the existence of circumscribed indurations in the vicinity of the uterus resulting from cellulitis. Judging by a letter received from him a few days since, I infer that he is still sceptical as to their existence. I do not go as far as that. By far the greater number of these indurations are situated high up in the broad ligaments, and consist of cicatricial masses, mostly confined to the peritoneum, of tubes or ovaries surrounded by old adhesions, or occasionally of an imprisoned knuckle of intestine. The 'thickening' of the utero-sacral ligaments, so frequently alluded to in works on gynecology, has, when carefully dissected out, proved in my experience to be due, not so much to a disease of the connective tissue of these ligaments, as to a cicatricial condition of the peritoneum covering them. The induration at the bases of the broad ligaments have been the special objects of my search. I confess that I have rarely (perhaps half a dozen times) found such thickenings in the cadaver which could be referred to a pure and straightforward cellulitis." "In by far the greater number of cases, where a well-marked laceration of the cervix is present, there is absolutely no induration whatever in the broad ligaments."

Let me now offer the record of sixteen patients in whom the symptoms and signs present were those of "pelvic cellulitis" and "pelvic peritonitis," but in which abdominal section showed salpingitis, periovaritis, and peritonitis. In two of the cases there was slight œdematous swelling of the cellular tissue in the broad ligament, just beneath the spot at which an inflamed tube had rested; in the remainder the most careful examination failed to detect the slightest induration or swelling in any part of the cellular tissue that lay about the uterus or between the peritoneal layers of the ligaments.

The method of examination pursued was the following: Bimanual vaginal exploration of the uterus and its surroundings was employed in each case, both before and after the operation.

Before the operation indurated sensitive masses were present about the uterus, in each patient, and the mobility of the organ was impaired to a greater or less degree. After the operation the masses could not be found in a single case, and the mobility of the uterus was restored to about its normal range in nearly every instance. During the operation two fingers were placed astride the broad ligaments, every portion being thus readily explored. The entire pelvic floor was likewise examined by touch, and whenever the method seemed incomplete the opposing fingers of an assistant were placed in the vagina. Between the two it was impossible for any induration or thickening to escape detection.

An item of interest in many of the cases is the appearance of abortions and miscarriages as etiological factors.

Case I.—M. C——, aged twenty-six. This patient presented the symptoms of pelvic inflammation on entering the hospital. The cause was probably gonorrhœa, but the duration of it was difficult to determine. She presented extensive indurations in the region of both broad ligaments. Under treatment that on the right diminished, that on the left remained. Upon opening the abdomen chronic salpingitis, periovaritis, and peritonitis were found on both sides. The left ovary was as large as a lemon, and was firmly bound to the pelvic wall and the broad ligament. The tube and ovary on the right were slightly attached to the posterior face of their broad ligament.

Removing all these pelvic viscera, the masses and indurations disappeared, and the mobility of the uterus was restored.

Case II.—M. M——, aged thirty-four. Miscarriage two years *previous*; after that, pain in the left pelvic region continuous. Examination showed a sensitive mass in the region of the left broad ligament. The uterus was drawn to that side, and its mobility lessened.

Upon opening the abdomen salpingitis, periovaritis, and peritoneal bands were found; the bands attaching the tube and ovary to the broad ligament.

With the removal of the tube and ovary the mass disappeared, and the mobility of the uterus was restored.

Case III.—M. H——, aged thirty-seven. This patient was treated for several years for chronic cellulitis in various hospitals. On admission she had the symptoms of pelvic inflammation. Examination showed a mass in

[1] Transactions of Alumni Association, Woman's Hospital, 1886.

the region of both broad ligaments. Upon opening the abdomen chronic salpingitis with periovaritis was found, both tubes and both ovaries being bound to the posterior face of the broad ligaments, low down, by numerous and strong adhesions. With the removal of the tubes and ovaries the masses disappeared.

Case IV.—M. H——h, aged thirty-five. This patient had had two abortions, five months apart, between five and six years ago. Symptoms of pelvic inflammation were present since the last. Examination showed masses in the regions of both broad ligaments, extending to the lateral fossæ of Douglas. The uterus was retroverted and adherent to the pelvic floor. Upon opening the abdomen, chronic salpingitis and periovaritis were found on both sides, the tubes and ovaries being embedded in thoroughly organized new tissue. They were removed from the left side, but not from the right, the adhesions proving too strong. Examination showed that we had removed the mass on the left, but that on the right remained. But it was evidently due to the tube and ovary, and not to any thickening of the tissue of the broad ligament.

Case V.—S. D——, aged twenty-five. This patient had an enlarged and tender uterus which was retroverted. I used the sound several times in order to replace it before applying a pessary. After the last of these efforts she developed a mass on the right side of the uterus in the broad-ligament region, which was very sensitive. Nothing distinctive was found on the left side. With its appearance she complained of the usual symptoms of pelvic inflammation. A month's treatment diminished the mass slightly and relieved the symptoms, but as she clamored for an operation, I opened the abdomen and found the following conditions: On the right side a dilated tube with swollen walls. Its cavity contained a starchy, muco-purulent fluid. It, together with the ovary, was covered with recent lymph, and they were bound loosely to each other, both being attached to the posterior face of the broad ligament. There was no fluid exudation at that time, all that was present being recent lymph, some portions of it having attempted organization.

The left tube was dilated, its cavity containing the same kind of fluid as that found in the right. Upon this side there was but slight evidence of peritoneal exudation. Both ovaries showed periovaritis; the left but little; the right extensive implication. In this one the evidences of inflammation extended even to the cortex of the organ. It was enlarged as a whole. After both tubes and both ovaries had been removed, all trace of the mass previously found by vaginal examination disappeared. Here we have an admirable case for testing the reality of the condition known as cellulitis, for every symptom and every sign were identical with those given as dependent upon that disorder.

I class the case now as one of acute salpingitis—one, therefore, which no doubt would have recovered if its course had not been interrupted by an operation.

Case VI.—L. D——, aged twenty-eight. This patient came into the hospital with the symptoms of pelvic inflammation. Examination showed a mass in the region of the right broad ligament. Under treatment, this so far subsided that nothing remained of it but some obscure thickening of the tissues and a little sensitiveness to pressure. Leaving the hospital at the end of six weeks, she returned again at the end of six months. The sensitiveness had increased somewhat, and the thickening in the region of the base of the right ligament was more prominent. The abdomen was opened and the right tube and ovary were found diseased and adherent to the broad ligaments. (Chronic salpingitis, peritonitis, and periovaritis.) After the removal of this tube and ovary and the tearing up of the peritoneal bands, the thickening disappeared.

Case VII.—R. H——, aged thirty-nine; pelvic pain for years. On this account she had become an opium-eater. Examination showed induration and thickening in the regions of both broad ligaments, with exquisite sensitiveness. Upon opening the abdomen, chronic salpingitis, peritonitis, and periovaritis were found on both sides, the viscera being attached to the posterior face of the broad ligaments. With the removal of the tubes and ovaries the thickenings and indurations upon the two sides disappeared.

Case VIII.—A. L——, aged twenty-nine. This patient contracted gonorrhœa from her husband some years before admission to the hospital. She had been suffering from pelvic pain for three years. Examination showed sensitive masses on both sides of the uterus in the regions of the broad ligaments, the largest being on the right side. Upon opening the abdomen, chronic salpingitis, periovaritis, and peritonitis were found on both sides. Tubes and ovaries were attached to the posterior face of the broad ligaments by many adhesions. After the removal of these organs the masses could not be found.

Case IX.—P. G——, aged twenty-one. Constant pelvic pain for one year. She attributed it to the wearing of an ill-fitting pessary. A sensitive mass was found in the right broad-ligament region. Upon opening the abdomen chronic salpingitis, periovaritis, and the remains of a peritonitis were found. Tube and ovary were attached to the posterior face of the broad ligament. After the removal the mass disappeared.

Case X.—K. D——, aged twenty-five. This patient gave the history of frequent abortions. For two years she has suffered from constant pelvic pain. A small sensitive mass was discovered in the region of the left broad ligament. Upon opening the abdomen, hæmatosalpinx, the end of the tube being closed, periovaritis with atrophy of the organ, and the remains of peritonitis were found. The tube and ovary were attached to the posterior face of the broad ligament by new tissue. The upper border of the broad ligament was shortened. After the removal of the tube and ovary the mass disappeared.

Case XI.—O. S——, aged twenty-six. She had had several abortions. After the second or third, she could not recall which, she had an attack of pelvic inflammation. From that time to date she has suffered from constant pelvic pain. Examination revealed sensitive masses on both sides of the uterus in the broad-ligament regions, the largest on the right side. Upon opening the abdomen chronic salpingitis, periovaritis, and the remains of peritonitis were found, the conditions being best marked on the right side. The tubes and ovaries were adherent to the posterior face of the broad ligaments. After their removal the masses disappeared.

Case XII.—M. T——, aged twenty-four. This patient gave the history of frequent attacks of pelvic inflammation extending over a period of four years. She traced them to her last confinement. Examination showed sensitive masses on both sides of the uterus in the broad-ligament regions. Upon opening the abdomen chronic salpingitis, enlarged ovaries, and the remains of peritonitis were found. After the removal of the tubes and ovaries the masses disappeared.

Case XIII.—E. M——, aged twenty-seven. For three years had suffered from constant pelvic pain. The originating cause was obscure. Examination showed the uterus retroverted and bound down, and sensitive masses on both sides in the broad-ligament regions. Upon opening the abdomen, the uterus, the tubes, and the ovaries were found to be firmly bound to the pelvic floor by well-organized adhesions, the tubes and ovaries being likewise firmly attached to the posterior face of the broad ligaments. With much difficulty they were removed, the uterine adhesions being torn up at the same time. The masses could then no longer be found.

Case XIV.—A. W——, aged thirty-eight. This patient had suffered from pelvic pain for several years. The originating cause was obscure, but it seemed to have been

due to pelvic inflammation induced by treatment for posterior displacement of the uterus. Examination showed that the uterus was retroverted and bound down. Sensitive masses were discovered on both sides of the uterus in the broad-ligament regions. Upon opening the abdomen, the remains of pelvic peritonitis were evident. The uterus was fixed in the cul-de-sac. Chronic salpingitis and periovaritis were present on both sides, the tubes and ovaries being attached to the posterior face of the broad ligaments, but not to the pelvic floor.

The adhesions binding down the uterus were separated and the tube and ovary upon the left side removed, after which the mass upon that side could no longer be felt. The appendages upon the right side were not disturbed, owing to the accidental wounding of a vessel close to the uterus. There was prolonged and very troublesome bleeding. By the time this was controlled I did not think it wise to further prolong the operation, the patient's condition forbidding it. This case afforded me an opportunity to study the behavior of an inflamed tube after the adhesions binding it down and crippling it had been torn up. I carefully freed the right tube and ovary from the adhesions binding them to the posterior face of the broad ligament, and satisfied myself that they, as with the appendages on the left, represented the mass felt in this region through the vagina. I used a drainage-tube, as there had been a good deal of manipulation in the pelvis. This served the additional purpose of keeping the uterus forward.

The patient remained in the hospital nearly two months, and when I examined her just before her departure I found both sides of the uterus free from the masses, and from sensitiveness as well. The permanency of the improvement upon the right side is to be determined by time. But if salpingitis and peritonitis were the result of a retroversion, the correction of the latter in the manner employed in this case, together with the treatment of the tubes after the fashion employed with the right, might be found not only safe, but complete and satisfactory. Upon this subject I hope soon to present further observations. I will merely say here that I am convinced that the only reliable treatment for a displaced and adherent uterus is to be found in abdominal section. Whether the appendages are to be removed in all these cases is, in the light of this case, to me, an open question as yet.

Case XV.—A. H——, aged thirty-three. The patient gave a history of pelvic inflammation extending back to a miscarriage one year ago. She had been coming into the city from one of the suburbs for treatment. This involved a good deal of effort and some exposure, and coming, as it did, not only before, but after the treatment, was no doubt the immediate cause of the attack which brought her into the hospital. Be that as it may, when admitted she had the symptoms of acute pelvic inflammation.

The uterus was fixed at about the centre of the pelvis, and was anteverted. In the region of both broad ligaments and behind the uterus there was a solid mass of indurated and very sensitive tissue. The whole of the posterior half of the pelvis appeared to be filled in with inflammatory material.

When I opened the abdomen the following conditions were found to exist: The uterus was placed as described. The sigmoid flexure was attached to the fundus, and extended thence along the upper border of the left broad ligament to the pelvic wall. The uterus, with its broad ligaments stretching straight from it to the pelvic walls, divided the pelvis into two halves about equal. The posterior half was filled with exudation, formed and fluid, with enlarged and infiltrated ovaries, and with dilated tubes containing pus, that on the left being the larger. The fluid portions of the exudation were in parts purulent. This entire collection was roofed over with organized new-tissue, which extended from the fundus of the uterus and from the upper border of both broad ligaments backward to the posterior pelvic wall, striking it about one-third the way down. The rectum and sigmoid flexure were involved in this mass, but the coils of small intestines lay upon the roof of the tissue mentioned, free from every implication. The purulent portion of the exudation occupied the cul-de-sac of Douglas. In it was found the extremity of the left tube, but the opening into the tube was closed by recent lymph.

After much effort the left tube and ovary, together with all the fluid and some of the organized exudation, were removed. The tube and ovary on the right side could not be taken out. The result was this: Nothing remained of the mass felt through the vagina except a small mass in the region of the right broad ligament. This was clearly the tube and ovary on that side, as they were attached to the posterior face of that ligament. The left broad ligament and the regions posterior to the uterus were free.

This evidently was a case of pelvic abscess in an early stage, the point of origin having been the left tube.

Case XVI.—M. B——, aged twenty-three. She gave the history of pelvic inflammation extending over several years. The origin appeared to be in a miscarriage four years before entering the hospital.

Examination showed hard, sensitive masses in the regions of both broad ligaments, together with some sensitive induration in Douglas' cul-de-sac.

Upon opening the abdomen, chronic salpingitis, periovaritis, and peritonitis were found on both sides.

The mass in Douglas' cul-de-sac was composed of the end of the right tube, which was firmly bound to the posterior face of the lower part of the uterus. The remainder of that tube, the left tube, and both ovaries were firmly attached to the posterior face of their respective broad ligaments. There was no thickening of either of these ligaments, nor any masses within their basic lines. The diseased viscera were so firmly attached in their different locations that it was impossible for me, with safety, to do more than remove a portion of the left tube. The masses therefore remained, but digital examination showed them to be made up of the tubes, ovaries, and peritoneal adhesions, the cellular planes being free.

Here, Mr. President, I must end my argument.

I am aware that while it may be thought conclusive as to the first proposition it may be deemed deficient as to the second. To this I must answer: If we admit the first, we virtually concede the second. On taking up this subject it was my intention to end it here, but further consideration induced me to proceed and aim at some practical deductions.

I will offer no apology for the observations which are to follow, observations which some may consider premature. First, because I am convinced of the correctness of my position; second, because I feel that the time has come when everyone who has facts with which to back his beliefs should not only present them, but should be willing to aid in working out the conclusions to which they point.

Having this object before me, I now pass to a hasty review of the pathology, etiology, symptoms, prognosis, and treatment of these tubal products.

First as to the *pathology*.

Acute stage.—The tumors themselves are made up of tube, ovary, and exudation; sometimes a coil of intestine is included, perhaps the omentum.

These masses of tube, ovary, etc., are, as a rule, attached to the posterior face of the broad ligament, sometimes well up, again low down, but may also be in direct contact with the uterus, attached to its side, or posterior face; sometimes in as close contact with the latero-posterior aspect of the pelvic wall, a free space existing between the mass and the uterus; then, again, you may have the entire region posterior to a broad ligament, from the pelvic floor to the brim, filled with the mass; these may be single, on but one side, but quite often they exist on the posterior face of both broad ligaments, and if extensive, by coalescing they may fill the whole of the pos-

terior portions of the pelvis. When they are small, the uterus is but slightly displaced; forward, if the masses are double; to one side, if single—that is, to the side opposite to that occupied by the mass. This displacement is in direct proportion to the size of the mass. A single tumor may so fill one side of the pelvis as to force the uterus completely to the opposite side, but always canting it forward to some degree.

In case the masses are on both sides and are large, the uterus is carried directly forward, the amount of displacement being directly proportioned to the size of the mass. It may fill the entire pelvis, crowding the uterus and broad ligaments against the anterior wall of the pelvis, or forcing them down upon the vesical and paravesical regions, the uterus being in a state of complete anteversion. This condition gives you the impression that the uterus is enveloped by the inflammatory mass. There is one peculiarity of these displacements which is worthy of notice, namely, that the uterus as a whole is pushed not only out of position horizontally, but is likewise pushed downward. Whenever the posterior half of the pelvis is thus completely filled, the calibre of the rectum will be encroached upon, a fact which demonstrates itself clinically by the constipation and tympanites present in such cases. In the formative or acute stages of these masses you will find an abundant supply of serous exudation filling the interstices between and about the viscera implicated, and this exudate is responsible for the boggy sensation first given the examining finger, and for the size and smoothness of contour presented a little later. This inflammatory mass not only contains, but is surrounded by, organized lymph thrown out by the implicated peritoneum.

The exudation at the periphery serves to circumscribe the mass, and thus stands as a barrier between the central inflammatory nidus and the general peritoneal cavity. Sometimes this proves ineffectual, and then to the picture heretofore confined to the pelvis we have general peritonitis added. Entering the mass, we find the evidences of inflammation best marked about the fimbriæ of the tube, or tubes, from where it can be traced directly into their cavities. A word in reference to the exact condition of these tubes. The walls are thickened from inflammation and infiltration. As a rule they are dilated; sometimes to the dimensions of the small intestine, but generally to a less degree. The distention is, of course, greatest in the infundibular portions. In view of the fact that the end of the tube represents the centre of the extra-uterine inflammation, it is of importance to see just how it is placed. Its normal position is in fairly close relation with the outer and posterior aspect of the ovary, thus about midway the posterior face of the broad ligament, but this is subject to many variations, usually the result of inflammatory process. Be this as it may, we find the end of the tube in the inflammatory mass under consideration, the ovary, as a rule, being close by. But it may be attached to the pelvic wall, to the floor of the pelvis, to the brim of the pelvis, to the side of Douglas' cul-de-sac, to the rectum, to the sigmoid flexure, to the cæcum, to the posterior face of the broad ligament, to the uterus, and even to the bladder. Thus we see that while the centre of the intraperitoneal inflammation generally is the posterior face of the broad ligament, and is in immediate relation with the ovary, it may occupy a number of widely separated points.

The attachments at the pelvic brim, and even in the iliac fossæ, would seem to be confined to cases in which the uterus is enlarged to a considerable extent, though in one of my observations this was not the case, it being of about normal size.

If we see the tubes while in this, the acute stage of inflammation, the usual evidences of inflammation of a mucous tract will be noticed, and these evidences can be traced into the uterus to its mucous membrane. The tubes will be distended, and there will be fluid in them proportional to the amount of distention, and this fluid will vary in its appearance, and even position, according to the nature of the inflammation coming from the uterus. If that be infectious—as, for instance, in gonorrhœa or septicæmia—it will be more or less distinctly purulent; if, on the other hand, the inflammation be non-infectious, it will be muco-purulent, or chiefly mucous. This fact, the distention of the tubes, and the muco-purulent character of the contained fluid in this the acute stage of the pelvic swellings under consideration, is of importance in its bearing upon the question of treatment. The amount of tubal distention would seem to depend upon the perfection of the closure of its outer end.

The ovary may be said to be always implicated in this peritoneal inflammation, the fimbria which attaches it to the tube forming a ready transmitter of the process from the tube; but the extent to which it is involved must depend upon its proximity to the tubal opening and upon the degree of the inflammatory process. The limits of this paper will not permit more than a passing allusion to the changes effected in these organs in any stage of the inflammatory process. They suffer but little in the early stage, the changes being most marked on the capsule. This is covered with lymph or pus, as the case may be; and if the septic element largely predominates in the inflammation, the organ as a whole will be softened and the lymphatics leading from it will contain purulent lymph. As briefly as possible I will now trace the sequences of this the acute stage of these inflammatory masses.

Chronic stage.—What are the after-effects? This question resolves itself, first, into the consideration of the subsequent course of the inflammatory process, and, next, its effect upon the organ involved.

As to the subsequent course, this differs in no essential from inflammation of other structures and surfaces, and depends upon the state of the general health and the nature of the infecting element. We have:

Resolution, organization, and suppuration.

It is doubtful if the effects of a peritoneal inflammation ever disappear entirely, the peritoneum in this respect resembling the pleura. Still, in the lesser forms, nothing may remain but some thickness of the membrane. On the other hand, numerous dense and extensive adhesions and thickenings may result.

Lastly, suppuration may take place and an abscess be formed. Now just here let it be understood that the evidence of frequent suppuration in these masses is abundant, and it is clear that the purulent collection may be without the tube, the tube opening into it, or entirely within it; but in general it appears that even when within the tube its outer wall is either some one of the pelvic viscera, usually the ovary, or else some part of the pelvic wall or floor. I could cite numerous recorded cases to prove this. I will, by way of illustration, mention three that have recently come under my observation.

Case I.—W——. November, 1885. Right tube the size of a large walnut; the fimbriated end adherent to the pelvic wall just behind the spine of the ischium. Pulling it from this attachment the cavity of an abscess was opened. The wall of this cavity was made up chiefly of the outer expanded end of the tube, but the pelvic wall at the point of adhesion formed a part of it. The peritoneum at that point was eroded, showing that perforation in time might have occurred.

Case II.—A. W——. March, 1884. A fistulous opening just below Poupart's ligament on the right side; another lower down on the inner side of the thigh.

These sinuses unite on the surface of the psoas magnus muscle just above Poupart's ligament; from that point a single sinus extends to the brim of the true pelvis; there it passes into the cavity of the right Fallopian tube, whose fimbrated end is here closely united to the brim by adhesions. The cavity of the tube and the cavity of the uterus are freely communicable.

Case III.—In the report of Fleetwood Churchill, be-

fore quoted, a similar case is mentioned, on the authority of Mr. Lee.

Case IV.—Case XV., already recorded in this paper, is a fourth illustration of the method of the development of an abscess in this condition.

These cases are very suggestive as to the termination of tubal and intraperitoneal purulent accumulations, and point distinctly to the following: Given a salpingitis and peritonitis which goes on to suppuration, the location, and sometimes the direction of exit, of the pus is determined by the location of the extremities of the tubes. Now bear in mind the varying positions in which those extremities have been found, and we see that such abscesses may be found originating low down in the pelvis, or high up, even at the "brim," or in contact with some of the viscera, the ovary being the part generally involved. My observations have led me to the following conclusions as to the course of the pus: In the majority of instances it makes its way downward, and finds exit through the vagina most frequently; next, through the rectum. But it may take a course heretofore regarded as belonging to psoas and parametric abscesses—*i.e.*, through the anterior abdominal wall, above Poupart's ligament or below it on the thigh, and it may escape through the gluteal regions or into the peritoneal cavity. I will not detain you longer with further accounts of the results of these cases of purulent salpingitis, for there is nothing in the history of purulent accumulations in the peritoneum, arising from other sources, to invalidate the conclusions. My object is to bring forward distinctly the causative relation of salpingitis to these abscesses. There is one matter, however, worthy of consideration, namely, that it is possible and probable that some of these abscesses of tubal origin may have as their most extensive bed the cellular tissue about the uterus, in the broad ligament, or at the pelvic floor, being therefore extraperitoneal. The suppurating tube becoming attached at or near to the pelvic floor, as in the Cases I. and IV., or to the lower section of the posterior aspect of the broad ligaments, both common occurrences, perforation of the serous membrane and invasion of the cellular planes is a step easily taken.

Once there, the pus may wander in any of the directions that a collection primarily cellular may take.

For these reasons, then, I do not consider that any report upon the point or origin of a peri-uterine collection of pus (pelvic abscess) can be complete without a clear statement as to the position and condition of the fimbriated end of the tubes, no matter whether these abscesses be peritoneal or in the cellular planes.

From this it will be seen that it is not necessary to limit the abscesses of salpingitis to such as can be imprisoned beneath the broad ligaments of a retroverted uterus. Such abscesses can form in the peritoneal cavity, no matter whether the starting-point—the end of the tubes—be below or above these ligaments, in this respect resembling the behavior of an extra-uterine pregnancy.

As to the ultimate effect upon the organs involved. In this I will be as brief as possible, referring anyone who may care to look more deeply into the matter to the admirable monograph upon the subject of pelvic peritonitis by Julius Heitzmann, of Vienna.

The changes wrought in and about all the involved viscera are as varied as are the degrees of the inflammation. As already said, nothing may remain to show that inflammation has existed but some slight thickening of the peritoneum about the tubal extremity. On the other hand, dense masses of new tissue may be left, which for years distort and imprison the various organs.

First, as to the tubes. *They may escape any permanent injury. Their position and form, and the condition of all their coats—serous, muscular, and mucous—present nothing abnormal, unless it be some slight thickening of the fimbriæ.*

Then, again, they may be occluded, thickened, distorted, dilated, and bound to one or more of the adjacent viscera, to the posterior face of the broad ligament—their usual position—to the pelvic wall, or to the floor. Then they contain mucus or a muco-purulent fluid, a clear serous or a bloody fluid.

The ovary may be unaffected; but, again, it may be embedded in masses of tissue and clearly atrophied. Between these two extremes are many varieties of changes, but they are mainly thickening of the capsule and increase of the connective tissue, the result of the periovaritis. The so-called cystic degeneration may exist, but whether this be secondary to the periovaritis, which is a part of the pelvic inflammation, or due to independent changes in the Graafian follicles, I cannot say. The evidence points to an origin independent of salpingitis and peritonitis. One of the most interesting points in this subject is the result to the ovaries. Certainly in a large number of cases these organs are left in excellent condition, and just so long as any portion of the parenchyma is normal, that portion at least can perform the function of ovulation; and when we remember how small a portion may contain large numbers of Graafian follicles, it would seem that the ovary might undergo considerable change without destroying its ova-producing power.

I cannot banish the belief that there is no more reason for destruction of the ovary because of salpingitis and peritonitis than there is for destruction of a testicle because of epididymitis with inflammation of the tunica vaginalis; and yet it is to be borne in mind that permanent obstruction of the Fallopian tubes is the equivalent of destruction of the ovaries, so far as childbearing is concerned. In studying the results to the uterus, it should be understood that with the disappearance of the acute stage of the pelvic inflammation this organ, which has been displaced in one direction by the pressure of the masses of exudation, is now displaced in the opposite by the contraction of the same exudation, now diminished in bulk and organized. This is the case except in those instances in which the new tissue has extended far enough to bind the uterus in the position first given it. The mobility of the organ may not be interfered with if the inflammatory remains be slight, but if they are at all prominent it is fixed in direct proportion to the extent and length of the adhesions.

The uterus may then be retroverted and bound down—attached to the rectum and in the cul-de-sac—and this is rather a common pathological condition. It may be thrown into a position of anteversion or lateral anteversion by shortening of both, or one, of the utero-sacral ligaments. Another common displacement is the lateral one, dependent upon shortening of the broad ligaments, the fundus being the portion chiefly affected if the contraction be along the upper border, the cervix if it be along the base.

The condition of the structure of the organ is apt to be decidedly abnormal if with these displacements the tubes are in a state of chronic inflammation. This is most often seen in the retroversion. You have the body enlarged and sensitive, and from the cervix a purulent or muco-purulent discharge escapes.

The ligaments rarely escape some damage; they may be infiltrated, distorted, and shrunken, the condition of necessity exercising a decided influence upon the position and mobility of the uterus, as has already been pointed out.

With the uterus in a state of complete retroversion, or even flexion, it is possible for the posterior face of the broad ligament to become adherent to the pelvic floor, thus encapsulating the tube, but I cannot say that I have seen this often. When the inflammation is extensive about the rectum and dense masses of tissue remain, that viscus is constricted. I have seen three cases in which the calibre of the gut was narrowed to about the size of the index-finger; fortunately this is not often present. In one of my operative cases I found two cysts about as large

as a walnut situated in the meshes of the new tissue—a condition often noticed by others.

The picture here presented of salpingitis and its results is a varied one, but the graver lesions described are fortunately in the minority, the milder ones being those presented in the majority of the cases met with. It will be observed, Mr. President, that I have made no mention of those cases of pyo-, hydro-, and hæmato-salpinx in which the disease is confined to the tubes. This I have done purposely, for the reason that the condition is rare and is more likely to be confounded with hypertrophied ovaries and with beginning par-ovarian cysts than with the condition heretofore described under the heading of "Pelvic Cellulitis."

The *Etiology* of salpingitis and its peritoneal and visceral results centres about the inflammations of the inner lining of the body and neck of the uterus.

I know full well that several observers have claimed that even tubal inflammation, such as we see in post mortems, is the result of cellulitis, the process passing from the peritoneum to the tube, or from the ovary to the tube. To make this clear, the absence of an inflammation continuous from the mucous lining of the uterus to that of the tubes must be shown in cases of salpingitis, otherwise we are forced to the conclusion that these observers have reversed the current of the pathological sequences.

The line of propagation is undoubtedly a direct one from the mucous membrane of the uterus to that of the tube. The degree and character of the uterine implication determines, no doubt, the degree and character of the tubal and peritoneal inflammation, both, as in all tissues, being governed to a large extent by the conditions of the general system. Every patient, therefore, who has an endometritis, no matter how produced, has taken the first step toward a salpingitis and its results.

The *Prognosis* in this disease is a subject worthy of the most earnest study, for the reason that in the light of the brilliant success now obtainable in abdominal surgery there revolves about it the question of removing the tubes and ovaries—a mutilation to be avoided, unless imperatively demanded in the interest of the life and health of the sufferer.

If I have succeeded in establishing the identity of salpingitis and its results with the so-called pelvic cellulitis, we must admit that death is an exceptional result of this disease. It may be expected whenever evident septicæmia is at the bottom of the inflammation, or whenever a depraved constitutional condition is present, because in such a presence acute general peritonitis is apt to develop.

Pelvic abscesses are by no means an uncommon sequence, but, even with this, recovery is the rule—death, when it does come, being the result of pyæmia, of prolonged suppuration, or of acute general peritonitis. It is evident, then, that the large majority of cases of salpingitis and peritonitis do not die. But what is the ultimate effect of the disease upon the health and comfort of the individual? Experience shows that the majority of the cases get well, many getting so well that they not only suffer but little inconvenience, but are able to bear children subsequently. This is within the experience of everyone practising in the departments to which the disease belongs.

The "cure" is indicated by the disappearance of the pelvic indurations, but especially by the freedom of the patient from pelvic pain, backache, and endometritis, and the return of a menstruation such as is normal. If the masses remain after six or eight months' treatment, the "cure" of the patient is very doubtful, in spite of the fact that some such cases will, for years, experience but little discomfort. So long as the indurations remain, so long as there is tenderness about the uterus and the organ is not freely movable, the disease is present; and, upon provocation, is liable to spring up to its original dimensions, and go even beyond into the domains of danger and death. It is in these cases that we usually find sterility established as a permanency. They are instances of chronic salpingitis and peritonitis, with an implication of the ovary, usually in the form of peritonitis. Heretofore I have known them and described them as instances of "chronic cellulitis."

The symptoms and signs.—Believing that I have succeeded in establishing the relation between the disease of the tubes and the pelvic masses or indurations in question, I need not waste your time in discussing this part of the subject. I need merely refer you to the symptoms and signs set down in any recent work on pelvic cellulitis and pelvic peritonitis, asking you to bear this in mind—that whenever the symptoms and signs of septicæmia are unmistakably present, you must be prepared to recognize the possible existence of a primary cellular inflammation; but in the absence of such distinct symptoms and signs, to doubt its existence; and, granting its existence in any given case, never to lose sight of the fact that an inflammatory mass about the lateral or posterior aspects of the uterus is much more quickly produced by a salpingitis than by a cellulitis, so that even in the presence of septicæmia such masses are far more likely to be the result of the former than of the latter.

Touching the symptoms and signs of chronic cellulitis and peritonitis, they, with unimportant changes, should be labelled, "the symptoms and signs of chronic salpingitis and peritonitis." The question of the recognition of a cellular abscess versus a tubal or peritoneal abscess depends upon the close study of the antecedent history, but as the indications of treatment are the same in both we can afford to ignore the differentiation.

The treatment.—I have nothing new to offer you upon this subject. I only wish to reconcile differences. He who believes in the cellular origin and location of these evidences of inflammation inveighs against him that believes in their tubal origin, while he of tubal proclivities makes answer by showing the dilated, infiltrated, and pus- or muco-pus-containing tube. This may be a sufficient answer so far as settling the question of location of the inflammatory mass goes. But do all the advocates of tubal extirpation answer so well the next criticism of the opponent, namely, "If the cases which you show me in your wards and on the operating-table are cases fit for tubal amputation, how is it that so many identical cases get well in my hands?" Here the issue is now joined, and it is in the interest of progress that I have tried to show that there was a mutual misunderstanding.

The cellular advocates are wrong in their pathology and half right in their treatment. The tubal advocates are right in their pathology, but are half wrong in their treatment. The first is too little of a surgeon, the second is too much. I cannot answer for other countries, but in our own I am sure that the one permits many a woman to suffer, and perhaps die, who can only be relieved by the knife, while the other cuts too freely. A dilated tube with a cavity filled with fluid is his sufficient answer; but he fails to note the distinction between acute salpingitis and chronic salpingitis, and looses sight of the fact that the first and even the second may often be cured by simple methods—sacrificing, therefore, many tubes and ovaries which might better be left in place.

These two conditions are distinguishable, not only after opening the abdominal cavity, but before. *After*, by looking for the evidences of recent inflammation just described in the section on pathology. Before opening the abdomen, by a study of the patient's antecedents; for instance, the history of recurrent pelvic inflammation, or of constant pelvic pain, extending over a period of months or years, and associated with sensitive, indurated masses about the uterus, the mobility of the organ being lessened, are conclusions of chronic salpingitis. Rectal and vesical disorders being excluded, even less distinct evidences, provided they are associated with such a history, would be conclusive. But the *recent* development of a mass about the uterus in connection with any of the

causes known to produce salpingitis, and associated with pelvic tenderness and lessening of the uterine mobility, is to be regarded as the indication of acute salpingitis. The records of the dead-house and the bedside show conclusively how largely in the majority the cases of recovery in salpingitis are. It behooves us, then, to be slow in laying operative hands upon these tubes. In acute cases never, unless to cut short a peritonitis that threatens to become general; but in chronic cases, whenever other measures have been *faithfully* tried and found wanting, every patient should be offered that measure of relief that surely can be gotten from abdominal section.

In the interest of conservatism, let us hope that this will not always mean extirpation of the tubes and ovaries, for who can say that the abdominal surgeon may not devise means by which those organs may be so treated as to secure health without always robbing of the possibilities of maternity. Some recent work of my own in that direction encourages me to think that this may yet be an accomplished fact.

Conclusions: Salpingitis is not a new disease, nor a rare disease. It is, with peritonitis, the most common form of inflammation about the uterus, holding in point of frequency about the same relation to the extra-uterine surface that endometritis does to the intra-uterine. The majority of the cases get well. A minority do not, and these are capable of causing such danger and distress that abdominal section, with removal of the tubes and ovaries, becomes a necessity.

THE RADICAL TREATMENT OF VARICOCELE.

By E. L. KEYES, M.D.,

NEW YORK.

In The Medical Record of February 20, 1886, I published a short article upon the treatment of varicocele, advocating the subcutaneous application of catgut.

During March and April, while in England, I was impressed by the impunity with which Mr. Lawson Tait seemed to use silk for all purposes. He assured me that he was in the habit of having his ligatures at the bottom of ordinary wounds disappear without giving him any trouble. I can only vouch for this statement, not for the fact, since I had no opportunity of observing it. Mr. Tait seems to prepare his silk in simple hot water.

I determined to try silk in varicocele. On my return to this city in April, I operated, for the first time with ordinary twisted surgeon's silk, rather fine. I prepared, it by boiling in simple water, and carried it to the hospital in a bottle full of alcohol and bichloride of mercury, one in one thousand.

The case was a very bad one, the veins large, the tissues lax and pendulous, the patient anæmic and feeble. I operated as already detailed in The Medical Record, February 20th. My patient had not a bad symptom, got up at the end of the fifth day, and left the hospital on the sixth day. I have seen him recently, three months after the operation. A solid cord replaces the site of the former wormy bunch of veins. The veins are patulous below, but shrunken, and the patient has lost the discomfort and dragging pains formerly complained of.

I have operated since the middle of April upon five cases with silk, my house surgeon at Bellevue, Dr. Mitchell, upon two. My patients remain in bed five days, and always leave the hospital at the end of the week. No dressing is made, the testicle being simply supported upon a piece of rubber plaster passed across the thighs beneath the scrotum. Sometimes an anodyne for a couple of days is required, sometimes a laxative. I have never used an anæsthetic, except sometimes a local injection of cocaine hydrochlorate at the time of operating. I have never seen a bad symptom, never a drop of pus. Whether the silk is absorbed or not I do not know; certainly the small, hard lump remains about the cord more than three months, gradually growing smaller, and painless.

One strong incentive which caused me to experiment with silk was a letter from a physician, one of my catgut operations, received in April, which informed me that he feared that the vein tied with catgut had in his case again become pervious. I think this may perhaps occur in some cases after catgut, but believe it impossible if silk is used.

I have modified my needle, the one I now use being figured herewith. The front eye carries the ligature; the loop of silk passes through the other eye and is held tense over one of the steel buttons in the handle of the needle.

I see in Bell's article in the "International Encyclopædia of Surgery," vol. vi., p. 589, which appeared in June of the present year, that Mr. Barker[1] has used silk antiseptically applied through a puncture made by a knife. The silk is cut short and left in. He dresses with salicylated wool and reports that his patients have no suppuration and leave the hospital in "ten days or a fortnight." This method seems less good and less speedy than the subcutaneous application of silk by the aid of a needle.

How long silk has been used subcutaneously and by whom it was first employed in this manner for the cure of varicocele, I cannot say. It is quite possible that the practice is very ancient, but I had not heard of it when I began to use silk.

That it has been so used since January, 1878, is proved by a short article[2] in the August number (1886) of the *Annals of Surgery*, from the pen of Mr. Ogston, of Aberdeen. I received this journal to-day, August 9th. He uses carbolized silk, dresses for three days with salicylic wool, and says that "at the end of three weeks the patient can safely walk about, using, however, a suspensory bandage, and being careful to avoid strain, pressure, or fatigue of the part."

[1] Path. Assn., Aug. 4, 1886.

TREATMENT OF INEBRIETY.

By C. F. BARBER, M.D.

FORT HAMILTON, L. I.,

In reviewing the subject of my heading, I am struck with the fact that there seems to be a want of harmony existing between the many authorities writing upon it. Some seem to be in doubt as to the way in which this disease should be handled, while others mark out for us an explicit course to follow. Bearing these facts in mind, I deem it not presuming on my part to place before the readers of The Medical Record the course pursued in an institution where hundreds of addicted persons are treated yearly.

In the first place, it is with much reluctance that a patient will consent to enter an institution, nor, in many cases, will the friends of the patient take the steps to have the unfortunate victim placed where care and proper restraint can be exercised. It is then, I may say, with the inebriate proper we have to deal. It may be an old, steady drinker, or one who at intervals—at first months apart, now but a few days, or at longest a week or two—indulges in his uncontrollable dissipation.

I am sorry to say that in this country the amount of liquor consumed is surprisingly great, and many inebriates exist where we least suppose such a condition possible. I feel safe in saying that the American of the present day cannot, as a rule, use liquor without overstepping the bounds of propriety.

Unquestionably, the first procedure with these patients is to place them in as advantageous a position as circum-

[1] Lancet, 1886.

[2] Page [illegible].

stances permit ; a place where restraint can be exercised, where their habits can be controlled, and where they may be supplied with the best dietary possible. Healthful sleep, regular meals, and abstinence from stimulating liquors are the great factors in restoring the shattered nervous system and failing bodily health.

When the physician is called, he does not find his patient in a state of sobriety, but suffering from the effects of a debauch ; eating little or nothing, but stimulating instead, nervous in the extreme, with head throbbing, perhaps having hallucinations, the stomach irritable and unable to retain food, insomnia pronounced. We are advised by many to cut off the supply of stimulants at once, and by administering nervines to control the excitement, and tone the system by tonics. Theoretically this may seem correct, but practically I am certain it is unsuccessful. We are taught never to empty an overdistended bladder rapidly, but to allow a little urine to flow at a time, thus permitting the overtaxed muscles to regain their normal state.

If this procedure be scientific, as we know it is, why not allow this overtaxed system to gradually drift back to the normal condition by allowing a moderate supply of stimulants? Place two cases side by side, and to one administer nervines, tonics, etc., to the other allow a guarded amount of liquor, and I am certain you will not hesitate to agree with me in adopting the latter course. Permitting these cases a supply of liquor will, and has prevented many attacks of delirium. I do not, nor can I, think anyone will deny the utility of the bromides, chloral, opium—the latter especially—in delirium, when other means have failed to produce sleep. As to the kind of liquor called for in these cases, it is difficult to lay any special rules. Whiskey, administered in milk with an egg, is probably the best means of aiding the patient to recovery. Beer and ale I have seen produce wonderfully good results when all other means have failed. There occur cases where chloral has a tendency to produce excitability, and the bromides have little or no action ; in such I have seen the fl. ext. piscidiæ erythrinæ and ex. hyosciami produce most excellent results. A purge will often relieve many disagreeable symptoms. To allay the irritability of the stomach we must keep the patient quiet, permit the free use of ice, but allow little water, cold water seeming to produce an increased desire to vomit. A glass of hot water will sometimes stop emesis. The usual sedatives may be given, but milk diluted with lime-water, and beef-tea or broths, given hot, are more liable to be retained than other forms of food.

So soon as the patient is able to retain solid food, stimulants may be lessened or abandoned. Tonics of quinia, gentian, nux vomica, or some of the preparations of iron, may be given with good results. We are asked as to the length of time a patient should remain in an institution. Experience, our best guide, has shown us the longer the abstinence the better the result. A good plan, which has been adopted by some with much experience, is to oblige a continuous residence of three months, after which the patient may be allowed to go and come at intervals, so long as he may continue to do well. Should he continue to be free from the use of stimulants for several months, it is fair to presume he is able to launch once more into the world. When injuries or diseases are the cause of an abnormal mental condition, we cannot hope for a good result until the cause is removed.

CAN A MAN HAVE A FEMALE COMPLAINT?—A young man entered the Dispensary of the Chicago Policlinic recently, and going up to the clerk held out one of the dispensary circulars, with the question : "Say ! isn't this the hour for diseases of women ?" The clerk answered in the affirmative, when the young man said : "Well ! I've got a disease of a woman and want to be treated." —*Journal of the American Medical Association.*

Clinical Department.

ON THE TREATMENT OF SUMMER DIARRHŒA OF INFANTS BY ANTIFERMENTS.

DR. DOUGLAS MORTON writes : "For several years my management of the summer diarrhœa of infants has been based upon the belief (1) that in cholera infantum there prevails vaso-motor paralysis identical in character with that of sunstroke ; (2) that this condition, involving more or less turgidity of the blood-vessels of the gastric and intestinal mucous membrane, and consequent abeyance or impairment of digestion, leads to fermentation of the ingested food ; and (3) that the inflammatory phenomena that frequently occur in the course of these diarrhœas are attributable to the irritant action of intestinal contents in a state of fermentation. It has been shown that inflammatory lesions increase in frequency and intensity as the sigmoid flexure is approached. Practically, in all cases, the lower part of the colon is the seat of lesion ; it occurs less often in the ileum, and is rare higher up. Bearing in mind that fermentative products increase in quantity and irritating qualities as the process advances and the intestinal contents are propelled in their course through the canal, these facts of pathology are just what would have been looked for.

"This simple view of the nature of the disease, in which the difference between the severest cholera infantum and the milder diarrhœas that occur in hot weather is regarded as merely one of degree, and in which entero-colitis is considered, at least in a great number of cases, a result of, or a stage in either manifestation, appears sufficient for the facts of the case. The assumption that has been made of a microbe of cholera infantum seems entirely unnecessary. The widely and densely diffused germs of the ordinary fermentations are taken in with the food, and, in default of an adequate supply of normal digestive ferments, they speedily begin their peculiar work of decomposition with the production of irritant matter enough to account for all local inflammation, and probably, through absorption, when this is possible, for general symptoms.

"In milder forms the dejecta are made up in large part of food in process of fermentation, and are consequently of acid reaction. In cholera infantum, on the other hand, the stools are alkaline, and this, doubtless, is due to the fact that the quantity of blood serum poured into the canal from the turgid vessels of its walls is sufficient not only to neutralize all acid present, but to give an excess of alkali. In these cases the osmotic relations seem to have been brought into a state of unstable equilibrium, and there remains only the irritant effect of undigested and fermented food to precipitate a profuse discharge.

"It appears, therefore, that there are two indications for treatment which lead all others in importance. The first is to overcome that effect of heat by which the mucous lining of the alimentary canal has been brought into a state of congestion and consequent readiness for great and rapid loss of appropriated material. This indication is to be met in the main by measures for reduction of temperature. The second indication is to prevent fermentation ; and since the question of diet has such important bearing on this point, I would like to impress the truth that food which fails to be digested not only adds nothing in the way of nutriment, but, by undergoing fermentation, becomes an irritant, and thereby causes a loss of already appropriated material. It therefore becomes sometimes an object of much importance in treatment to withhold food altogether for a considerable length of time.

"My purpose here is chiefly to emphasize the value in the treatment of this disease of agents that have the power of preventing fermentation. Until about three

years ago it had been my habit to use the milder antiferments in common use—as carbolic acid, hydrochloric acid, bismuth, chlorate of potassium, sulphite of sodium, and some others—and while using these I had never realized the importance of this part of treatment. Since that time I have been using two far more effective antiferments, nitrate of silver and bichloride of mercury, and have found that in many cases—perhaps the majority—to check and to prevent fermentation constitutes all the treatment needed. As to the comparative value of these agents I have not yet determined. My impression is, however, that when nausea and vomiting have been present the silver salt has given better results, but that generally the bichloride has been more useful. The dose that I ordinarily give of the former is gr. $\frac{1}{20}$ four or five times a day to a child one year old, dissolved in distilled water and largely diluted; and of the latter, gr. $\frac{1}{100}$, also dissolved in water to which has been added a little alcohol or aromatic tincture of some kind. There need be no fear that the bichloride given in doses amply sufficient to prevent fermentation will irritate the bowels, provided it be plentifully diluted with water.

"There may be diarrhœas in which it is well to give astringents, but I am quite sure they often do harm in the ordinary summer diarrhœa of children. Looseness of the bowels often continues for weeks after the acute stage passes off. In such cases I find an excellent remedy in the tincture of nux vomica, given in small doses—from a quarter to half a drop to a child a year old—every hour or two. This restores the lost tone of the arterioles throughout the alimentry canal, and greatly helps the enfeebled digestive powers. It is well at the same time to give pepsin with hydrochloric acid. There lies in one other drug, in considerable measure I believe, the power of counteracting the tendency in this disease to congestion of the abdominal viscera. This drug is belladonna. In cholera infantum I find it well sometimes to give hypodermatic injections of morphia, and give it associated with atropia in the tablet triturates so much used now. In the very minute quantity in which it is associated with the morphia in them, I find it sufficient to give decided color to the pallid face of a sick child, and, given alone in larger doses, I have seen it flush the face and neck with ruddy glow. In doing this it obviously draws a large amount of blood away from the internal organs."

A VEHICLE FOR QUININE, AND THE TREATMENT OF WHOOPING-COUGH.

Dr. F. A. Castle, of New York, sends us the following: "Dr. E. M. Lyon's recommendation of simple elixir as a vehicle for quinine (Medical Record, August 28th, p. 234) is open to the objection that the mixture of quinine salts with most sweet vehicles produces a worse-tasting compound than the quinine alone would be. The best vehicle for quinine is a solution of glycyrrhizin, and several formulas are in use among pharmacists for an elixir glycyrrhizæ comp. which serve to disguise the taste of quinine, as well as various other substances, much better than simple elixir. The glycyrrhizin seems to act by coating the crystals of the quinine salt, and for a few moments interfering with their solution. For this reason the elixir and the quinine should be prescribed separately, and their admixture be made just as they are about to be taken. A teaspoonful of the elixir, if well made, will disguise the taste of five grains of the sulphate of quinine quite perfectly, and nothing needs be taken afterward to remove any unpleasant taste.

"When quinine is taken in substance or in watery solution, and something is desired to dispel the bitter taste, I know of nothing better than a mouthful of soft bread. During service on a gun-boat in the Lower Mississippi I had abundant opportunities for trying a great variety of methods for administering quinine, and I never found anything equal in effectiveness or convenience to the chewing of a bit of bread-crumb. It seems to absorb the quinine and saliva from the surface of the tongue, and the impression upon the nerve-terminations lasts but a few moments after the morsel is swallowed.

"Respecting the treatment of whooping-cough by other methods, as referred to in the editorial article on p. 127 of The Medical Record for July 31st, I would like also to say that the value of cresylic alcohol (or cresol) is too little appreciated generally. By the aid of heat this substance is easily volatilized, and the air of a room may be sufficiently charged with the remedy to affect the respiratory passages. Since using cresol for this purpose I have rarely had occasion to resort to other measures, and nearly every case that I have treated with it improves rapidly as regards the severity of the paroxysms, the frequency of vomiting, the disturbance of sleep, and the amount of bronchitis. I have good reason for thinking that the duration of the disease is also somewhat shortened."

THE TREATMENT OF RHUS-POISONING.

Dr. R. G. Williams, of Whitney, Tex., writes: "While the subject of rhus-poisoning is under consideration, let me suggest a remedy which is certainly a specific, cheap, and found almost everywhere wherever the rhus grows. This remedy is more simple than bromine, does not cause any burning, stinging sensations such as are excited by the application of tinct. iron or spt. turpentine, and is more harmless than the corrosive sublimate. It is simply a strong decoction of the common cup-oak bark boiled to the consistency of tar, and applied by means of a camel's-hair brush or an ordinary brush or mop. It must be painted over the poisoned surface two or three times daily. Twenty-four hours' treatment is generally sufficient for a cure. This treatment is painless; the only unpleasant feature is the discoloration of the parts, but as this disappears in forty-eight hours it is really of no moment."

Dr. J. B. Kell, of Delphos, O., sends the following: "I desire to contribute my observations upon the treatment of this obstinate and exceeding painful cutaneous affection. I have been affected with the disease six times, the last attack occurring the past spring and being so severe as to render my features barely recognizable. As regards the treatment of my own cases, I have made use of many much-lauded applications, such as lead and opium wash, tincture of myrrh, and corrosive-sublimate solution, all of which certainly had a beneficial effect; but what I and the majority of sufferers have always desired is an immediate relief from the smarting pain and intense itching which are present. With me, none of the remedies I have made use of seemed to produce this anxiously hoped for relief, until I applied to the inflamed parts a saturated solution of potassium chlorate, the effect of which was extremely gratifying. The linen with which the remedy is applied need not be changed more than once an hour. In from twelve to fifteen hours the vesicles gradually disappear, the swollen part resumes its natural configuration, and life once more becomes enjoyable."

Dr. J. R. Flowers, of Columbus, O., writes: "I wish to add my mite to the therapeutics of ivy-poisoning. While camping out on Indian River, in North Michigan, during the summer of 1882, one of the ladies of our party was severely poisoned with ivy. An old native Indian gathered a quantity of boneset (*Eupatorium perfoliatum*) and, after pounding the tops and leaves to a pulp, applied it to the parts affected during the night. The next morning the swelling had all disappeared. Since that time I have used the fluid extract of the same for all my cases, and the result has been an immediate cure. Several of my medical friends have tried it, and the result has in every case been very satisfactory."

Dr. W. H. German, of Morgan Park, Ill., writes: "In the treatment of poisoning by Rhus venanata I have obtained better results from the use of the officinal gly-

cerite of tannin than from any other remedy. Applied freely every three or four hours it is promptly effective at any stage of the attack."

Dr. L. C. Winsor, of Spirit Lake, Ia., writes: "In an editorial published in the issue of July 31st, I see it stated that no internal treatment seems to be indicated in cases of dermatitis venenata. For a number of years past I have been subject, each summer, to attacks of that disease. When exposed to the rhus venenata I have found the numerous external applications to be of little benefit, except as palliatives. But during the last two years I have aborted several attacks in my own case, by the internal use of liq. potassi arsenitis, taken to produce its physiological effects. I have also had the same success in the cases I have had in practice. My experience, however, has been limited, and I desire to know if this remedy is reliable in this disease, or if my cases have all been of a very mild type."

TOY-PISTOL WOUNDS.

Dr. Robert T. Morris, of 945 Broadway, writes: "Dr. Powers writes on the above subject in The Medical Record for August 21st, and I should like to add a little testimony in support of his method of treatment. For a long time wounds made by blank cartridges gave me a good deal of trouble, and several of my cases developed cellulitis in the vicinity of the wound. When, after careful antiseptic dressing, one patient had tetanus and two or three had cellulitis, I decided to dissect out the whole region of the wound in my next case and find out if possible where the cause for the trouble lay. Shortly afterward a typical case came for treatment. There was the little dirty hole in the midst of a grimy palm, with just a suggestion of hemorrhage. The wound appeared to be quite superficial, and the probe would not enter the opening for more than one-eighth of an inch. Under strict antiseptic precautions I trimmed away the bruised skin and cut away a section of palmar fascia beneath, when, much to my surprise, a lot of felt wadding peeped up out of the hole. The wad, which had penetrated the palmar fascia as a small hard mass, had become swollen and infiltrated with blood until it would have filled a small thimble, and the elastic fascia had closed it in so completely that no one would have suspected its presence deep down in the hand. I opened the wound very freely and allowed it to granulate up from the bottom. Since that time I have treated a large number of blank-cartridge wounds of the palm, and have had no cases of wound-infection among them. Sometimes it was necessary to excise quite a large piece of palmar fascia in order to keep the wound open, and this was done in cases in which no wadding was found, because the minute grains of residue from burned powder often bruise the fascia and set up a low inflammation, which holds on in a discouraging way for weeks or months. The subject of blank-cartridge wounds is a very important one indeed, and principally because, as in sprains of the ankle, the injuries do not appear to require the radical treatment which is really necessary in order to insure recovery. The true character of the wound being recognized, the treatment is simple and effective."

ACUTE POISONING FROM SARDINES.

Dr. A. E. de Cailhol, of Los Angeles, Cal., referring to a case of poisoning from sardines reported in The Medical Record of August 7th, in which the writer asks whether the symptoms were caused by tin or ptomaines, reports the following case in answer to the question: "Ten years ago, when practising in St. Louis, Mo., I was called at night to treat a case similar to the one of 'M. C.' The symptoms clearly pointed to poisoning from copper. But there was no copper vessel in the kitchen. By very careful investigation and a great deal of talking with the mother, the only one of the family who was not ill, I obtained the following information: A week previous to the accident the father had had the fancy to eat sardines in oil; after having *completely detached the top* of the box and eaten two or three sardines, he ordered the remainder to be placed in the cupboard. On the evening I was called he asked for the sardines again, and the wife went for the box and placed it upon the table. The father divided the rest of the sardines between himself and his three children; the mother, in order that her children might have more, refrained from taking any. As she was the only one of the family not sick, of course I concluded that the sardines were the only cause of the trouble. *I asked* for the empty box and was told it was in the slop-barrel. I hastened to the back yard, and on the top of the barrel I found the tin box with some oil in it and the top with its label at the bottom of the box. My object was to analyze the remains; but, after examination at the light, owing to the oxidized condition of the copper label soldered on the loose tin top, I concluded that the case was one of copper poisoning. The copper label, having been in close contact with the oil and sardines for a week, had become covered with a coat of *vert de gris* which was perfectly visible on it, and, when soaked in oil and upon the sardines, had rendered the whole poisonous. I think the case of 'M. C.' had the same origin."

Progress of Medical Science.

Paresis of the Respiratory Muscles following Diphtheria.—Dr. Rothmann reports the case of a boy, seven years of age, who suffered from great difficulty of respiration following an attack of diphtheria six weeks previously. Inspection of the thorax showed the upper portion to be entirely without motion, and the lower ribs only rose and fell almost imperceptibly with the respiratory act. The epigastrium was also motionless, and none of the accessory muscles of respiration came to the aid of the little sufferer. The only way in which the child could increase his feeble expirations was by pressing with his little fists on the upper part of the abdomen. The treatment consisted in hypodermatic injections of strychnine, and the application of the induced current to the phrenic nerves and the abdominal muscles. After twenty applications of electricity, and the administration of about one-third of a grain of strychnine the patient was cured.—*Wiener Medizinische Wochenschrift*, June 12, 1886.

Immediate Restoration of Parts to the Normal Position after Tenotomy.—The following are the conclusions of a paper read by Dr. Reginald H. Sayre at a meeting of the Orthopædic Section of the Academy of Medicine (*Alabama Medical and Surgical Journal*, July, 1886): 1. After tenotomy the parts should be immediately restored as nearly as possible to the normal position, and there retained during ten days or two weeks, after which time whatever subsequent treatment may be necessary to vitalize paralyzed muscles, or complete the restoration of natural functions, should be carried out as may be necessary. 2. This proceeding is accompanied by the least discomfort to the patient, and annoyance to the surgeon, and with a vast saving of time. 3. There is no more danger of non-union of the ends of the divided tendon in this manner than by other modes of proceeding. 4. There is less apt to be a thin, imperfect bond of union between the ends of the tendon than when the gradual reduction of the deformity is practised. 5. This mode of operation is applicable at the foot, knee, thigh, or neck, where there is no anchylosis to be overcome, but that in cases of long-standing anchylosis at the knee when tenotomy is but preparatory to *brisement forcé*, the latter should be deferred for forty-eight hours, to avoid possible risk from gaping of the external wound due to the

violence of the manipulations. Should the deformity at the knee be due simply to contractured muscles, immediate replacement may be practised here also.

Hyperæmia and Phlegmon of the Vagina.—Dr. Antonio Stravino reports several cases of this condition, occurring in consequence of sexual abuses (*Giornale Italiano delle Malattie Veneree e della Pelle*, May and June, 1886). Among the causes he distinguishes the exciting and the predisposing. Of the former he mentions frequent repetition of the sexual act, its performance during menstruation, or too soon after child-birth, masturbation, gonorrhœa, and the use of cold to suppress the menstrual flow, or leucorrhœa. Of the predisposing causes the most potent are the great vascularity of the uterus and its adnexa, the numerous anastomoses, and the serpiginous course of the vessels tending to retard the circulation, the complicated venous circulation, the abundance of lymphatics, and the free communication existing between the subperitoneal and uterine lymphatic ducts. Besides the usual symptoms of vaginal phlegmons, there are acute pains during coitus, a tendency to menorrhagia and metrorrhagia, and to leucorrhœa, sterility from the acidity of the uterine mucus, gastric disturbance, and nervous irritability. In the treatment, Dr. Stravino recommends absolute rest in the supine position with the legs elevated, abstention from the sexual act, the application of cold, local abstraction of blood, and a general tonic regimen.

Excision of the Primary Sore in the Prevention of Syphilis.—Dr. Andronico reports four cases in which he excised the initial lesion of syphilis, with a result of preventing the appearance of secondary symptoms. All the cases were apparently above suspicion, as the author was able to trace the source of infection and to convince himself of the nature of the affection in each instance. He concludes from these cases that: 1. The abortive method is an effectual means of preventing systemic infection, when the primary lesion is situated upon certain parts suitable for operation, such as the labia majora or minora, prepuce, or skin of the penis, etc. 2. The excision must be made within forty-eight hours, or, at most, within three days after the appearance of the chancre. 3. A greater age of the primary sore and the existence of glandular infection are contra-indications to the operation.—*Giornale Italiano delle Malattie Veneree e della Pelle*, May and June, 1886.

Nervous Eczema.—Dr. Tommasoli relates the following interesting case. (*Giornale Italiano delle Malattie Veneree e della Pelle*, May and June, 1886). The patient was a boy six years of age, who had had for eighteen months symmetrical patches of eczema on the legs, forearms, and ears. Various methods of treatment had brought about some amelioration, but not a cure, which was obtained only by prolonged use of the sodic chloride of gold. The boy was of an irascible disposition, and had intervals of aggravated bad temper which, his mother said, rendered him unbearable to those about him. During these attacks, although every precaution was taken to prevent him scratching himself, there was an increase in the areas of eczema, and the patches, which were usually dry, became moist and covered with crusts, and there was an increase in the number and size of the papules.

Treatment of Ulcers by Carbolic Acid Spray.—M. Gilles de la Tourette reports in the *Revue de Chirurgie* for July, 1886, several cases of indolent varicose ulcers, which had resisted all other ordinary methods of treatment, cured by the use of a spray of carbolic acid. The solution used varied in strength, according to the apparent indolence of the ulcers, from 1 to 50 to 1 to 20, and the ulcer was sprayed continuously for from an hour and a half to two hours every morning and night. In the intervals the surface was covered with borated vaseline of ten-per cent. strength. From the very first days of treatment the pain grew less, and soon disappeared. There were no symptoms, either local or general, of phenic-acid poisoning. Extreme age and debility of the patients offered no contra-indication to the treatment. The author found that the best results were obtained in ulcers with flat edges from which cicatrization could readily proceed, and he was unsuccessful in those cases with hard and elevated edges. After the treatment had been carried out for some time in such cases, the surface of the ulcer would look healthy but the edges still remained indurated. It was proposed to scarify the edges but the patients would not consent.

Anæsthesia [illegible] Dr. Pitres relates in the *Journal de Médicine de Bordeaux*, a case which well illustrates the power of hypnotic suggestion in producing anæsthesia. The patient was an hysterical woman, easily hypnotizable, who was suffering from a very painful phlegmon on the left thigh, following a hypodermic injection. The abscess was the seat of acute shooting pains, and could not be touched without causing the patient to scream. Dr. Pitres proposed to put the woman to sleep by hypnotism, then to order her to allow the abscess to be opened without feeling any pain, either during or after the operation, and finally to wake her up and make the incision. This was done as proposed; a dissection was made down upon the abscess, which was emptied of the pus, cleaned and dressed. During all this time the patient watched the proceedings with a smile, and expressed astonishment that the abscess could be opened without giving her the slightest discomfort.

Treatment of Glaucoma by Cocaine and Eserine.—Dr. H. Armaignac reports in the *Revue Clinique d'Oculistique* for June, 1886, two cases of glaucoma treated by instillations of cocaine and eserine. The former was used in a three-per cent. solution, the latter in a solution of the strength of 1 to 200. A drop of each was placed in the eye at intervals, varying according to the indications, and six minutes were always allowed to elapse after one solution was instilled before the drop of the second solution was put in the eye. Very signal benefit was obtained in each case, and the writer hoped that the success obtained would lead to further trials of this method of treatment.

Cæsarian Section in Country Practice.—Mr. Thompson Forster relates in *The Lancet*, of August 14, 1886, an interesting case of Cæsarian section successfully performed under great difficulties. The case was one of dystocia from contracted pelvis, and the woman had been in labor two days. The head was perforated and every effort made to extract it, but without success. It was then determined to perform the Cæsarian section. The woman was laid across the bed, the nurse took charge of the patient's hands, and an assistant gave the chloroform. A farthing candle was on the bed, another on a chair with a basin of water and some sponges, and one small oil-lamp was on a box with the instruments. No more assistants could be had, as the room was not large enough to accommodate them. The incision was made through the abdominal wall and the uterus, and the child was abstracted. Considerable hemorrhage occurred, but after some difficulty the uterus was made to contract and the bleeding ceased. During the whole of the time the woman was vomiting violently, and the intestines escaped from the wound. These had to be held back with one hand while the sutures were passed through the abdominal wall with the other. Of course, no attempt at antisepsis was made. There was considerable elevation of temperature during the succeeding days, and trouble was experienced from bed-sores, but the woman eventually recovered, and one month after the operation was met by Mr. Forster, walking with her husband.

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CALOMEL AS A DIURETIC IN HEART DISEASE.

IN the eager search after, and trial of, new remedies which seem to characterize the modern school of therapeutists, and for the furtherance of which even several medical journals have been specially established, we are in not a little danger of overlooking valuable properties possessed by some of the standard agents of the materia medica. It is seldom that one can open a journal of the present day without seeing a notice of some new hypnotic, antipyretic, cardiac stimulant, or anæsthetic, but the study of the older remedies, the catalogue of whose virtues is by no means complete, is apparently well-nigh abandoned.

Dr. B. Stiller, of Buda-Pest, contributes an article to the *Wiener Medizinische Wochenschrift* of July 10, 1886, upon the curative properties of calomel in cardiac dropsy. While recognizing, that digitalis, properly employed, is the best remedy of the kind which we possess, he was yet not blind to the fact that it possesses some disadvantages, and set about to determine what other medicine was the best suited for use in the necessary intervals of the administration of foxglove. Convallaria, maialis, adonis vernalis, and caffein, were each in turn tried, and rejected as unsatisfactory. Finally he saw in the *Orvosi Hetilap* a report by Dr. Jendrassik of a number of cases of cardiac dropsy successfully treated by calomel. The latter had accidentally discovered the diuretic action of calomel while giving it, for another purpose, to a patient with heart disease.

Acting upon the suggestion of the Hungarian journal, Dr. Stiller began experimenting with the mercurial. The results obtained were so prompt and convincing that the writer is led to rank the drug among the most valuable of all cardiac diuretics. In the case of a man, sixty-eight years of age, with ascites and œdema of the lower extremities dependent upon mitral insufficiency, the secretion of urine was increased within a week from thirty to over one hundred ounces a day, and in another week the dropsy had entirely disappeared. No other remedy than calomel was used. In another case of ascites and anasarca, following general dilatation (weakened heart), the quantity of urine was increased in five days from a little over ten ounces to over one hundred. A number of other cases are reported in which equally striking results were obtained.

From a study of all the cases thus treated the author comes to the following conclusions: 1. Calomel is a prompt diuretic and hydragogue in cardiac dropsy, its action in this respect being even more speedy and intense than is that of digitalis. 2. It removes not only œdema of the tissues, but also effusions within the great cavities of the body. 3. Diuresis usually comes on suddenly on the third or fourth day; it is then advisable to discontinue the remedy, and to resume it only in case the urine becomes again markedly reduced in amount. 4. Calomel seems merely to facilitate resorption of the fluid, and not to exert any influence upon the heart or kidneys; yet œdema, consequent upon nephritis or obstruction to the portal system, and inflammatory exudations, do not appear to be influenced favorably by the mercurial, and even in cardiac dropsy, when the urine is very albuminous, the action of the calomel seems to be retarded, no effect being observed in many cases until the fifth or sixth day. 5. Finally, the drug is no substitute for digitalis, since it is not in any sense a cardiac remedy; but it answers an admirable purpose as a complement to the other, and as a special stimulant to resorption in cases of necessity.

The dose employed was usually about three grains three times a day, though sometimes smaller quantities more frequently repeated were found more beneficial. Diarrhœa was a frequent result, and sometimes necessitated the temporary withholding of the remedy; but it could be restrained by opium, which latter, given in combination with the calomel, seemed not to affect its diuretic action. The writer met with but one case of stomatitis, although Jendrassik found it to occur with rather unpleasant frequency.

THE FUNCTION OF THE PROSTATE GLAND.

PHYSIOLOGISTS have for a long time believed that the prostatic secretion served some more important purpose than that merely of a diluent of the spermatic fluid, but they were unable to determine precisely what its other functions might be. As is known, the secretion is a thin milky fluid, of an acid reaction, and containing various salts formed by the union of phosphoric, sulphuric, and hydrochloric acids with potassium, sodium, and calcium. It also contains a peculiar organic base, the phosphate of which, known as Böttscher's spermatic crystals, gives to the seminal fluid its peculiar odor. The milky appearance is due to an emulsion in an albuminous fluid of five drops of lecithin.

That the prostate gland plays an important part in the generative function is shown by the fact that it exists only in the male, and that it remains undeveloped up to the time of puberty. Experiments have shown also that the prostatic secretion is a stimulant to the spermatozoa, and as it is an integral part of the ejaculated seminal fluid, Buxmann believed that its most important function was to preserve the life of the spermatozoa. This theory has recently received confirmation through a case reported by Professor Fürbringer, at a meeting of the Berlin Medical Society (*Berliner Klinische Wochenschrift*, July 19, 1886).

The patient was a young man, thirty years of age, who was sent to the author on account of spermatorrhœa.

He was a moral and intelligent gentleman, of a nervous disposition, and with a neuropathic family history. Examination revealed no organic cause for his trouble, and the diagnosis was made of neurasthenia, with the added symptom of seminal losses during defecation and micturition. Examination of the fluid showed it to be odorless, Böttscher's crystals were absent, and though well-formed spermatozoa were present in great numbers, most of them were motionless, only a few executing sluggish movements for a minute or two. The emission was a simple flow of the unmixed contents of the seminal vesicles, due, without doubt, to a nervous atony of the ejaculatory ducts. The patient was sent for treatment to an institution for nervous diseases, and returned after two months very greatly improved in health, suffering from passive seminal losses only at rare intervals. A second examination of the fluid gave the same results as the previous one. But he shortly afterward had an emission, accompanied by erection, during sleep, and an examination of this matter showed it to be a perfectly normal seminal fluid. Well-formed Böttscher's crystals were present, and the movements of the spermatozoa were visible for over twenty-four hours.

From a study of this case the author concludes, justly as it would seem, that the function of the prostatic secretion is to exert a specific vivifying influence upon the spermatozoa, which while in the seminal ducts and vesicles possess but slight vitality, quickly die when removed from the body unless subjected to the stimulating influence of the prostatic fluid. Thus Buxmann's supposition appears to be confirmed, and a not unimportant advance has been made in the study of the physiology of generation.

THE UTILITY OF OPERATION IN EPITHELIOMA OF THE LIP.

It is commonly supposed that epithelioma of the lip is one of the most curable of all forms of cancer, and that its removal by excision is less frequently followed by a return of the disease than is that of any other variety of malignant growth. Yet writers on this subject are by no means agreed as to the prognosis in such cases, some alleging that an early operation is almost invariably successful, while others, although admitting that a removal of the neoplasm prolongs life, believe that a return occurs in nearly every instance.

We find in the *Centralblatt für Chirurgie* of June 19, 1886, an interesting series of statistics bearing upon this point, collected by Dr. A. Wörner from the records of the clinic at Tübingen and from other sources. The number of Tübingen cases was 305; and of these, 354 operations were performed upon 277 patients. In the greater number the removal was accomplished by a simple V-shaped or semicircular incision, though in a few, owing to the extent of the disease, resection of a portion of the jaw was required. Of the 277 patients operated upon, 142 relapses occurred in 111 individuals, of which 87.3 per cent. occurred within the first year and 12.7 per cent. after the lapse of one or more years. In one instance the disease returned nine years after the operation; the growth was removed a second time, and then the patient passed eleven years without a relapse, and died finally of old age. Of the 277 cases, [illegible]; per cent., were still living, without a return of the disease, at an average period of 5.8 years after excision, and 71, or 25.63 per cent., had died of other affections at an average period of freedom from relapse of 8.4 years after operation. The mortality of the operation itself amounted to 5.77 per cent., the fatal termination in most cases being attributable to hypostatic pneumonia occurring in individuals of advanced age. The greater number of the operations was performed prior to the introduction of the modern antiseptic methods.

Dr. Wörner has also collected another series of cases from the writings of Thiersch, v. Bergmann, Billroth, Winiwarter, Fischer, Kocher, and Partsch. Of the 866 cases in this series, 244, or over 28 per cent., were free from a return of the disease after a period of three years following excision, and of the 622 relapses, 545, or 87.6 per cent., took place within the first year. The mortality following the operation was for the entire series about 7 per cent., varying, in the statistics of the different operators, from 2.81 to 14.9 per cent. The cases all belonged to the pre-antiseptic period.

From these two series of statistics, embracing in all 1,143 cases, we find that a very large proportion of all cases of relapse occur within the first year, while the number of relapses after the third year is so small that patients who have survived this period without a return of the disease may, almost with certainty, be regarded as definitely cured. But, what is of greater importance and more to the point, these figures establish beyond question the value of excision of the growth, and justify the general opinion that operation is beneficial and necessary in epithelioma of the lip. Of the Tübingen cases over 57 per cent. lived for three years or more without a return of the disease, and of the cases reported by other observers 28 per cent. were free from relapse at the expiration of the same period. Thus, roughly speaking, we are justified in hoping that from one-fourth to one-half of our patients will be permanently cured by an operation; and for the others, unless the disease be so far advanced as to be beyond the reach of the knife or the caustic, we may at least expect a prolongation of life and a considerable period of freedom from suffering.

CONDURANGO IN GASTRIC TROUBLES.

After the disappointment of some sanguine therapeutists whose hopes had been raised by reports of the alleged virtues of condurango as a specific for cancer, the drug fell into disuse and almost oblivion. But if the experience of Dr. Wilhelmy, of Berlin, be borne out by others, we may expect to see a rehabilitation of it as a remedy of some value in certain affections, though not in carcinoma.

This author writes in the *Berliner Klinische Wochenschrift* of July 19, 1886, that he has found condurango wine very serviceable in many affections of the stomach. He was led to use it from the fact that Friedreich had claimed to have cured carcinoma of the stomach by condurango; and while believing that there had been an error in diagnosis, he yet thought it likely that the drug would prove to be of value in non-cancerous gastric diseases. He prepared a wine of ten per cent. strength, made from good Madeira, to which was added two per

cent. of citrate of iron, and a bitter to disguise the taste. In cancer of the stomach he found that the wine without iron, given in two tablespoonful doses four times a day, reduced the pains very considerably within two weeks, increased the appetite, and quieted very markedly the distressing vomiting. The cancer was not cured, for the patients died, but their life, while it continued, was made much more endurable. In cases of cancer of the pylorus, he found that a longer continued moistening of the surface of the neoplasm was of service, and to this end advises the exhibition of somewhat larger doses, about three tablespoonfuls.

Much more distinct, and in some cases even brilliant, results were obtained in the treatment of gastric ulcer by condurango wine with iron. The best results were observed in those instances in which chlorosis appeared to be the cause of the ulceration. Only those cases are cited in which vomiting of blood, the passage of blood in the stools, or the presence of a fixed circumscribed painful point over the region of the stomach, rendered the diagnosis certain. The author gave the ferrated wine in tablespoonful doses six times a day, whether hemorrhage were present or not, and had almost always the satisfaction of noting the disappearance of bleeding and of pain within from two to four days. He used morphine and ice only in a few of the worst cases, but of course observed great care in the regulation of the diet. Many of the patients were domestic servants, and they were usually able to return to their duties within eight or ten days, though the use of the wine was continued for two months longer. There were a few relapses, but they were not severe, and were of very short duration. The chlorosis was cured as well as the ulceration. In other chronic affections of the stomach good results were obtained, and Dr. Wilhelmy says that he was especially pleased with the effects in phthisical anorexia. The exhibition of the wine in these cases was quickly followed by a very noticeable and lasting improvement in the appetite and digestion.

CONTRAST BETWEEN AMERICAN AND BRITISH METHODS IN LAMP OPERATION FOR HEMORRHOIDS.

Almost simultaneously an American writer and a British writer described the methods of removing hæmorrhoids with the clamp and cautery, together with the after-treatment. The contrast to the description of the latter is interesting and instructive.

Dr. Richard Davy, in a clinical lecture on rectal fistula and hæmorrhoids at the Westminster Hospital, says, in closing his account of the operation: "After all the hæmorrhoids have been carefully removed, inject about one ounce of sweet oil into the rectum; and should oozing be free plug the rectum." This he does by the means of a sponge covered with oil-silk introduced with a pair of bone forceps. Then he goes on to say: "The after-treatment consists in good, nutritious, non-stimulating diet, rest in bed, the moderate use of opium, and retention of fæces, so as to avoid the action of that complicated group of muscles necessary for the act. I have often had my patients pass two, or even three, weeks without any action of the bowels; and although to the general patient this confinement seems very dreadful, any evil effect can be readily overcome eventually by a warm soap and water wash. The sponge is usually expelled or withdrawn on the succeeding or second day, and recovery is complete in about one month from the day of the operation."

Dr. C. B. Kelsey says in his paper on "The Treatment of Hæmorrhoids," in a recent number of The Medical Record, that after the clamp operation, "Seldom is it necessary to give any morphine except the suppository placed in the rectum immediately after the operation. . . . Very exceptionally does this method keep the patient confined to his bed and room after the tenth day . . . The bowels should not be confined more than fifty-six hours. If the bowels are confined until the tenth day great pain will be the invariable result of the first motion. The fæces have become hard and voluminous. Great straining and suffering are the necessary consequences. Moreover, nothing is gained. The wounds heal no more quickly for the constipation, if as quickly, and the idea that the passages may in some way cause them harm is not founded on fact.

"By the other plan an easy, natural movement is secured on the third day, which is attended with little or no pain. The rectum is thoroughly cleansed, not only of fæces but of blood and discharges, in the most natural and effectual way; there is less danger of absorption of offensive matter, and the patient, if one of regular habits, feels much better every way. After the first motion a gentle laxative should be given every night, for ten days longer, to secure one easy, natural passage daily.

"After the operation the patient may usually consult his or her own appetite as regards diet. Nothing reasonable need be denied—another point gained by getting the bowels in regular working order."

DISCOVERY OF THE PATHOGENIC ORGANISM OF THE SWINE-PLAGUE.

The extreme difficulties of reaching certainty in bacteriological researches must be apparent to anyone who has followed the record of its work in the past ten years. An excellent illustration is found in the study which has been made of the virus of hog-cholera (swine-plague, infectious pneumo-enteritis). Dr. D. E. Salmon gives some account of this in a recent issue of *The Sanitarian*. Hog-cholera costs this country some twenty-five millions of dollars yearly, and hence deserves attention from economists as well as men of science. It is an infectious disease spreading epidemically through herds. In 1876 Dr. E. Klein described a micrococcus which he found in the tissues of animals suffering from the disease. In 1878 he found, cultivated, and inoculated a bacillus, and thought it pathogenic. Lately, however, he has attributed the disease to a different bacillus occurring in the form of short rods. In 1880 Dr. Salmon found and cultivated a micrococcus which he believed, until lately, to be the essential virus of swine-plague. In 1883 M. Pasteur announced that the *rouget* of France, believed to be identical with our swine-plague, was caused by a dumb-bell-shaped microbion. This germ, he said, could be attenuated and made to act as a vaccine. We are told, however, by Dr. Salmon, that the vaccine which Pasteur now sells for *rouget* contains a fine bacillus,

which grows in cultures into filaments of considerable length. Inoculations with this vaccine, according to Dr. Salmon, do not cause a disease identical with [illegible] plague.

Dr. Salmon states that he has at last found a [illegible] which seems to be very certainly the cause of swine-plague. The organism is rather a bacterium than bacillus; it is very irritant, and produces all the symptoms and lesions of the disease. It was found in the tissues of hogs in the early stage of the disease, and it is believed that previous errors have been due to the fact that in the late stages various septic and other organisms develop.

DO LOWER ANIMALS HAVE TYPHOID FEVER?

For many years it was contended that the so-called pig-typhoid, or, as it is now known, infectious pneumo-enteritis, was identical with human typhoid. French veterinarians have also claimed that horses suffered from typhoid fever; but the swine-plague has been found to be a distinct disorder, and the question whether the horse can have typhoid is still unsettled.

Recently, however, Dr. J. Bland Sutton (*Journal of Comparative Medicine*) brings forward evidence to show that monkeys, tigers, and beavers may have enteric fever.

In 1839 M. Rayer describes an epidemic of this disease which broke out among the monkeys in the ménagerie of the Muséum d'Histoire Naturelle, Paris. On this occasion, M. Serres, who had previously observed the affection in monkeys, dogs, and cats, and had made careful preparations of the intestinal lesions, was able to make careful observations on the animals during life. The symptoms were very striking, being diarrhœa, increased frequency of pulse, and fever ending almost always in death.

Dr. Bland describes cases of typhoid fever which he observed, in 1882, among the monkeys of the London Zoological Gardens. While making a post-mortem examination on a lemur which had died in the Zoological Gardens, from perforation of the ileum near the cæcum, the Peyer's patches were found to be ulcerated in the same manner, and presented the typical appearance as these structures do under the same condition in man. No other organs presented lesions of note. For some days before death the lemur had suffered from profuse diarrhœa, the keeper experiencing considerable difficulty in keeping the cage clean. Dr. Bland was so positive that the ulcerations were typhoid that the deaths of other monkeys were predicted.

Seven days later another monkey, which had lived in the cage with the first, died with the same symptoms and lesions; later, two other monkeys and a tiger died of the same disease. At the time these cases occurred typhoid fever was raging in the neighboring district.

In 1885 the Zoological Gardens received an instalment of six Canadian beavers. Four of these died with a disease lasting about six weeks, and characterized by disinclination to food and profuse diarrhœa. On post-mortem examination ulcerations of Peyer's patches were discovered.

Dr. W. L. Conklin, Superintendent of Central Park Menagerie, reports a case of apparent typhoid occurring recently in a monkey. The animal had suffered from diarrhœa and hemorrhages from the bowels, and an autopsy showed extensive ulcerations of Peyer's patches. Dr. Bland states that the utmost care was taken to exclude the question of tuberculosis.

Experiments with cultures of the typhoid bacillus have, it is believed, resulted in producing a disease allied to, or identical with, typhoid in the rabbit and guinea-pig, although here experimenters differ.

There is, however, more or less evidence that typhoid fever can affect, not only man, but the quadrumane—the tiger, cat, and dog, the guinea-pig and rabbit, and possibly the horse.

The importance of this fact, if established, is twofold: It makes it possible to study the disease more systematically, and to apply to it experimental methods; again, if our menageries and our stables can breed the typhoid poison, it is a matter of the highest importance that this should be known.

THE MUSCULAR DISEASE.

Under the above title a writer in the *Philadelphia Medical Times* describes the different forms of progressive muscular atrophy which originate and are confined to the muscle itself. The researches of neurologists in late years have clearly established the fact that there are two sharply distinguished forms of progressive muscular atrophy; the one has its seat in the trophic centres of the spinal cord, and it constitutes the ordinary type of progressive muscular atrophy. It is sometimes spoken of as the Duchenne-Aran form of the disease, and it is not infrequently met with by practitioners.

The other types include all the various forms of progressive atrophy in which the disease is seated primarily in the muscle; these are united by the writer under the general title of "the muscular disease." Up to within a recent period, observers had been describing and classifying as distinct disorders many different phases of this affection. For example, the pseudo-hypertrophy of children has been treated of as an independent disease; so also the infantile progressive muscular atrophy described by Duchenne, and the juvenile progressive muscular atrophy of Erb. Other forms were described and distinguished by the parts of the body first attacked, or the age of onset, or the presence or absence of a false or true hypertrophy. It seems quite evident now, however, that these atrophies are all essentially identical. They are family or hereditary diseases; they begin in the muscle, producing a degenerative atrophy of that tissue, with or without a false hypertrophy; their course is very chronic, and often interrupted by long periods of rest; the muscles are attacked one after another in the order of their anatomical relations, and not in groups having the same physiological function, as is the case in the spinal form of the disease. There are no vaso-motor symptoms and no fibrillary twitchings. All these things serve to separate the spinal and myopathic atrophies quite sharply, and also to unite the latter in a common type.

Few cases of the muscular disease have been recognized in this country, and these have generally been cases of pseudo-hypertrophy. It may be that a wider

knowledge of its characteristics will lead to the report of more cases.

The relations of the atrophies are well shown in the following table:

The progressive muscular atrophies of spinal origin	Aran) Bulbar paralysis. of Vulpian.
The primary progres	1. Pseudo-hypertrophic paralysis. (*a*) Juvenile atrophy of Erb. atrophy of Duchenne. (*c*) The non-atrophic form of Charcot. (*d*) Other types, classified (by Eich- attacked.

News of the Week.

The Case of Counter-prescribing and the Verdict.—Mr. W. A. Purrington, counsel for the Medical Society of the County of New York, sends us the following: "Sir: My attention has been called to an editorial in The Medical Record upon counter-prescribing, in which reference was made to a brief of mine in a recent case affecting apothecaries. I do not think that the discharge of the defendants in that case is attributable to any defect in the law—defective as our present law is. The question was one of veracity, and the committing magistrate believed the testimony, it would seem, of the defendants. Believing their testimony, he did right in discharging them; if he had believed the patient's story he should have held them. No reason was assigned for his decision; but I do not think there is any doubt but what, if anyone should do as the complainant testified the defendants did, a clear case of practice of surgery would be made out. They, however, flatly contradicted the patient, and the magistrate necessarily had to believe one side or the other; and I am perfectly satisfied with his decision."

A Fellowship in Pathology at the Johns Hopkins University, yielding five hundred dollars in addition to free tuition, will be granted in October, 1886, if a suitable candidate applies. The application must be made prior to October 1st. The candidate must give evidence of a liberal education (including especially physics, chemistry, biology, and modern languages), and of special aptitude for pathological study, such as that afforded by some previous scientific work. The holder of the fellowship will be expected to devote his time to some special line of investigation (not strictly professional) under the direction of the Professor of Pathology. Further information concerning the purposes and the regulations of University fellowships is contained in the "Annual Register."

The Medical College of the State of South Carolina in Ruins.—The following letter to Dr. L. A. Sayre, of this city, will explain itself: "Charleston, S. C., September 11, 1886. Dear Doctor: In the great calamity which has befallen the people of this city, the Medical College of the State of South Carolina has been seriously injured—to such an extent that the Faculty have felt constrained to appeal to members of the profession to aid them in repairing the damages. I have been requested by the Faculty to write to you, asking that you will use your influence among friends to obtain any assistance in their power. We hope to begin lectures on October 15th, perhaps in a temporary building. The entire roof of the college will have to be reconstructed; the walls also parted. The contributions to the people here have been very generous, but medical institutions and physicians derive no benefit from such. You know what peculiar position in a community we occupy: every service expected of us, and the most unselfish devotion to relieving others; while we are supposed to be endowed with the faculty of living on air. I need not give you any description of the scenes through which we have passed—the character of which has not been exaggerated in the papers—as these last have furnished the entire country with full particulars. We are still sleeping in a tent in a garden, as women and children complicate the difficulty, and are not readily moved out of the house in case of a shock. These have greatly subsided in force and frequency, and confidence is being fast restored. My house, being of brick, is seriously injured, but habitable. I remain, dear doctor, with best wishes for your health, sincerely yours. F. Peyre Porcher, M.D., Professor in Medical College of the State of South Carolina."

Cases of Glanders and Farcy have of late been quite numerous in this city, and the Board of Health has undertaken to enforce vigorously the articles of the Sanitary Code, compelling a prompt notification of the presence of this malignant and dangerous disorder.

Association of German Naturalists and Physicians.—The fifty-ninth annual meeting of this association will be held in Berlin, from the 18th to the 24th of September. There are to be thirty sections. The official programme has been issued, and contains a long list of titles of papers on various subjects, medical and scientific, which are to be presented.

New Swedish Universities.—The establishment of two new universities in Sweden is contemplated. They are to be located at Stockholm and Gothenburg. The two now in existence are in Upsala and Lund.

Society of Russian Alienists.—The first congress of Russian alienists is to be held in Moscow, in December, on the occasion of the second congress of Russian physicians.

Female Medical Students in India.—There are at present fourteen female students in the Madras Medical College, four of whom are natives of India. Lady Dufferin has done much to promote the medical education of women in that country, and has secured good appointments for a number of female physicians in Calcutta and elsewhere.

The Fifth Annual Meeting of the Society of Italian Alienists will be held in Sienna, from September 19th to the 25th.

A Congress of Cremationists.—The German and Austrian Cremation Association will hold a congress at Gotha about the middle of September. A matter which will be specially considered is, how to overcome the opposition of the various governments who have hitherto declined to permit cremation.

THE CHLORODYNE HABIT.—The number of forms of dissipation is something almost incalculable. We constantly meet with reports of the arsenic habit, the chloral habit, the ether habit, and many others, and the *British Medical Journal* notes three cases of the chlorodyne habit. At the inquest on the body of a lady, aged sixty-two, of independent means, residing with two elder maiden sisters, it was stated in the course of the medical evidence, that all three of the sisters had been in the habit, for two or three years, of taking chlorodyne in large quantities, so much so, that their bodies had become emaciated, their mental condition affected, and the use of their limbs had become impaired. The body of the deceased did not weigh more than fifty pounds, and death was due to continued overdosing of chlorodyne. The jury returned a verdict of death from continued overdoses of chlorodyne.

A DEFECTION ON VACCINATION.—The British Medical Association has been invited, through the public press, by an anti-vaccinationist, to select a "champion" to discuss in public debate with another champion, appointed by the anti-vaccination societies of England, the merits of vaccination.

FASTING IN RUSSIA.—It is stated in the *Echo World* that the Holy Synod, in St. Petersburg, has decided that Russian soldiers in future must observe Lent in the most rigorous way. They will have to fast not only during the four "Great Lents" yearly, but also every Wednesday and Friday, and the six great days of prayer and repentance. This is the calculation: The Great Lent (of Easter), 79 days; Petroffki Lent, 20 to 50; Usspenski Lent, 17; Filippoffski Lent, 39; six days of prayer and repentance, 6; 31 Wednesdays and 31 Fridays, 62; total, 170 to 200 days, on which dates neither meat nor fish (during the Easter Lent), nor eggs, nor milk, nor even sugar, is allowed. The officers assert that the physical strength of the soldiers must inevitably suffer from the new regimen.

A NEW DANGER IN OVARIOTOMY.—The dangers of spaying have hitherto been confined to the woman operated upon, and, owing to the greater skill which has come from the rapidly increasing experience of many operators, these have been growing less and less. But now it is the operator who is incurring the greater risk. Two surgeons in Liverpool have recently exposed themselves to the vengeance of the irate husbands of their patients. One of these aggrieved individuals has sued a surgeon for damages for unsexing his wife, and the other has sent the author of his woes a challenge to fight a duel.

ANOTHER PROTEST AGAINST INDISCRIMINATE OVARIOTOMY.—It is evident that the medical conscience is beginning to be awakened to the fact that the operation of spaying is often performed without sufficient justification. In a recent article on "The So-called Laparotomy Epidemic" in the *Dublin Journal of Medical Science*, Dr. T. More Madden expresses himself in the following terms: "The facts cannot be eliminated from consideration in this discussion that the ovaries are to women what the testes are to men, and that by their complete removal in either case the mutilated individual is thereby unsexed. New [illegible] hence the more euphonious phrases by which the removal of the uterine appendages are now referred to, or the more scientific and successful method in which this is accomplished, do not render the ultimate consequences of operations for spaying, or castration of women, now less important than when such operations were more rudely performed and more tersely, if less scientifically, described. These secondary consequences are, *inter alia*, to render those on whom such procedures have been completely carried out, by the removal of both ovaries or Fallopian tubes, incapable of fulfilling what in every Christian community has been generally recognized as one of the chief functions and primary objects of woman's married life, namely, that of childbearing. I have already expressed my belief in the occasional necessity of such operations as the only available means of saving life in certain exceptionally urgent cases. But I need hardly add that, in my opinion, even in these they should not be resorted to without absolute and well-proven necessity, or without the patient's concurrence and full knowledge of all their consequences. Moreover, in obtaining such consent, it should be borne in view, as Dr. Wiglesworth has observed, that there are 'two ways of putting the nature of an operation before patients. If women were only told that by removing their ovaries they became sterile, few in these days would object; but if they were told in addition that by this operation they were completely unsexed, that sexual desire became feebler, that in a few years their voices would change and become somewhat masculine, and that in time the face would become "hairy" like a man—in fact, that a change would ensue somewhat similar to that which takes place in the larger animals after spaying, not one woman in fifty would consent to the operation, except it became a matter of life or death.'"

LIGATURE OF THE VERTEBRAL ARTERIES.—Dr. A. C. Bernays writes: "In your report of my case of 'Ligature of the Vertebral Arteries,' on page 221, August 21, 1886, an error has crept in which I desire to have corrected. In speaking of the high pulse-rate after the ligature, it is given as 180 per minute. This is an error; its greatest height was 100, and this lasted only a short time. The pulse gradually returned to the normal condition as the collateral circulation was more perfectly established."

CONTAGIOUS [illegible] IN BERLIN.—The police authorities of Berlin have ordered that every physician who is called to attend a case of puerperal fever shall report the same, within twenty-four hours, to the sanitary commission, giving also the name of the midwife who had charge of the case.

A SERIOUS OUTBREAK OF DIPHTHERIA is reported from West Cowes, in the Isle of Wight. It is stated that the sanitary condition of the town is about as bad as possible.

A NEW RUSSIAN JOURNAL.—It is announced in *Vyatch* [illegible] *and Petersburg Obstetrical and Gynecological Journal*. It is to be the organ of the recently formed Obstetrical and Gynecological Society of St. Petersburg, and the editors are to be Drs. Krassovski, Slavjanski, and Smolski.

A Curious Attempt at Deception.—A Russian peasant woman, who desired to pass off an infant as her own, in order to make it appear that she had just been delivered, procured the lung of a sheep to answer as a placenta and the seminal duct of a he-goat to represent the umbilical cord. The deception was discovered by Dr. Solovjeff, who relates the case in the *Volkhski Vestnik*.

Professor von Arlt, the well-known ophthalmologist, of Vienna, is reported to be suffering from gangrene of the foot following phlebitis and thrombosis of the leg. It was proposed to amputate the leg, but the patient's general condition is so bad that it is feared the operation may prove fatal.

A Short Method of Cure for all Diseases.—The latest religious sect in Russia has been founded on the dogma that it is a sin to let a fellow-member suffer the martyrdom of disease. Accordingly, when anybody falls sick, one of the believers goes to him and chokes him to death. The person commissioned for the deed is clad in red clothes and is known as "the red death." Unfortunately they do not confine their delicate attentions to the members of the sect alone, but, impelled by a broad charity, seek to cure in their peculiar way everyone, whoever he may be, who has the misfortune to become ill.

Bacteriotherapy.—Drs. Testi and Marzi report in the *Gazzetta degli Ospitali*, three cases of tuberculosis treated by inhalations of bacterium termo. In each case there was a marked diminution in the number of tubercle-bacilli found in the sputa, but in other respects there was no improvement, and the disease progressed steadily just as if untreated. The results of the experiments thus far made in this direction are not encouraging. They appear to show that there is an antagonism between the bacterium termo and the bacillus tuberculosis, but they also show that the disappearance of Koch's bacilli from the sputa is of no special moment. They merely furnish an argument for those who deny that any causal relationship exists between the bacilli and the tubercular process.

THE CHARLESTON MEDICAL RELIEF FUND.

We take great pleasure in announcing the following subscriptions, in answer to the appeal of The Medical Record for the relief of the suffering physicians of Charleston. The families of many of the physicians are still without sufficient shelter, and more funds are urgently needed. They will be sent without delay to responsible parties, who will take special pains to distribute them in a way to do the most good.

William Wood & Co., New York	$50 00
A. H. Buck, M.D., New York	10 00
Conrad Meinges, M.D., Jersey City, N. J.	10 00
M. G. Dadirrian, M.D., New York	1 00
S. Baruch, M.D., New York	25 00
F. S. Grant, M.D., New York	5 00
Chas. Schram, M.D., New York	5 00
H. P. Chace, M.D., Highland Falls, N. Y.	5 00
Geo. W. Gay, M.D., Boston, Mass.	10 00
J. R. Shellenberger, M.D., Philadelphia, Pa.	5 00
J. H. Bogart, M.D., Roslyn, N. Y.	10 00
J. I. Roe, M.D., Vienna, N. J.	5 00
Richard S. Seaman, M.D., Glen Cove, L. I.	10 00
E. M. Stelle, M.D., Bernardville, N. J.	2 00
M. A. C. and U. W. C., New York	2 00
Daniel A. Currie, M.D., Englewood, N. J.	$10 00
G. W. Talson, M.D, New York	5 00
C. C. Wyckoff, M.D., Buffalo, N. Y.	10 00
A. Huntington, M.D., New York	10 00
"H.," Grand Rapids, Mich.	5 00
F. N. Bruman, M.D., New London, Conn.	5 00
W. J. Scott, M.D., Cleveland, O.	5 00
J. N. Dixon, M.D., Springfield, Ill.	5 00
B. M. Griffith, M.D., Springfield, Ill.	5 00
Thos. W. Dresser, M.D., Springfield, Ill.	5 00
Drs. Buck and Matthews, Springfield, Ill	5 00
H. C. Gill, Springdale, Ia.	1 00
Milo Avery, Springdale, Ia.	1 00
W. H. Draper, M.D., New York	25 00
Mr. William R. Warner (W. R. Warner & Co.), Philadelphia	25 00
W. A. Reed, Philadelphia, Pa.	50 00
F. H. Gerrish, M.D., Portland, Me.	5 00
W. H. Buttolph, M.D., Short Hills, N. J.	10 00

Obituary.

JAMES G. WAKLEY, M.D.,

LONDON, ENGLAND.

Dr. James G. Wakley, editor of *The Lancet*, died August 30th, of cancer of the tongue and fauces, at Heathlands Park, near Chertsey, England. He was the youngest son of the late Thomas Wakley, founder of *The Lancet*, Member of Parliament for Finsbury, and Coroner for Middlesex, and is survived by his brothers, Thomas H. and H. Membury Wakley, having been associated with the former as half proprietor of *The Lancet*. He became a member of the Royal College of Surgeons of England in 1849, and was graduated Doctor of Medicine at King's College, Aberdeen, in 1852. At his father's death, in 1862, he became editor of *The Lancet*, the duties of which position he discharged for nearly twenty-five years, continuing, in spite of much recent suffering, active in his work up to last Easter. Dr. Wakley proved himself a worthy successor in every way to his distinguished father. Through his painstaking labor, his journalistic skill, and his conscientious devotion to the best ideals in medical journalism, he has kept *The Lancet* against all rivals in the high position won for it by its founder.

JOHN BURKE, M.D.,

NEW YORK.

Dr. John Burke died of pneumonia at his home in this city, on September 8th, at the age of fifty-nine years. He came from his native town, St. John, N. B., early in life to study medicine in this city. He was graduated from the University Medical College in 1849. After graduation he began the practice of medicine in the lower part of the city. His practice was a very large one. He was a member of several local medical societies.

Posterior Luxation of the Upper Eyelid.—Dr. Dépoutout reports, in the *Journal de Medecine et de Chirurgie Pratiques*, a case of luxation of the upper eyelid behind the globe of the eye. A young girl, whose crooked nose and prominent eyes had earned for her among her playmates the nickname of "The Owl," was eating one day, when she suddenly experienced a peculiar sensation in the orbit, and putting her hand to her eye was horrified to find that the globe was almost entirely uncovered. Examination showed that the eye was in its natural rather prominent position, but the upper lid had slipped over it, and was concealed behind it in the cavity of the orbit. The reduction of the dislocation was easily performed, and no evil results, as regarded the vision of the eye, followed the accident.

Reports of Societies.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING.

Held at Brighton, England, on Tuesday, Wednesday, Thursday, and Friday, August 10, 11, 12, and 13, 1886.

MEETINGS OF SECTIONS.

SECTION IN OBSTETRICS AND GYNECOLOGY.

THURSDAY, AUGUST 12TH—THIRD DAY.

Dr. [illegible] read a paper on

THE PROPER TREATMENT FOR THE HÆMORRHAGE OF LAPAROTOMY IN ABDOMINAL PREGNANCY.

In order to illustrate the point in question Dr. Lusk recorded the particulars of a case which had lately occurred in his own practice. Mrs. B——, after several attacks of peritonitis, was found to be suffering from an extra-uterine abdominal pregnancy. Having remained for some time under medical supervision, and the fact of the death of the child being fully established, it was suggested to her that she should undergo the operation of laparotomy, with a view to the removal of the fœtus. This, however, she declined. Some months later the general health was found to be rapidly failing, and signs of septic poisoning had fully established themselves. Under these circumstances she had almost determined to avail herself of the chance of relief offered by operation, but before doing so sought the advice of a medical friend, who advised her to go to the seaside and try first what change and climate would do. Very shortly, however, after reaching her destination health failed so rapidly, and signs of hectic became so marked, that she determined to return at once to New York and seek the help of Dr. Lusk. By this time the patient's strength was so exhausted that all hope of benefit from the operation seemed impossible. At the pressing request, however, of her friends it was decided that the abdomen should be opened. At the operation the sac of an abdominal pregnancy was found closely matted to surrounding parts; on opening the sac a fœtus was found in an advanced state of decomposition. The patient rallied from the operation, and for a time hopes were entertained of her recovery; but her strength had become so reduced that she failed to weather the period of recovery and gradually sank. It was clear that the time lost in temporizing and trying the effect of climatic changes allowed her to become so reduced that the chance of relief by the operation was lost.

The moral of such a case as the one just recorded is clearly this: "Is it not a mistake to wait long after the death of the fœtus before performing laparotomy?"

In studying the question the author intended to leave out the treatment of tubal gestation in the early months. The presence of a lithopædion is so rare, and so few cases are known, that they are no help in calculating the result of abdominal ectopic gestation. The question of waiting seems hardly to have been fully discussed, or its risks duly appreciated; cases are numerous where patients have sunk and died while waiting for the formation of these fistulæ; in other cases the process of elimination has extended over years, and even then complete recovery has not been perfectly obtained; in other cases operation has, after all, had to be resorted to, or the patients have been left to linger on in disgusting condition.

Dr. Lusk pointed out that the fatal cases after laparotomy had not been as carefully tabulated as was necessary, if the full value of the operation was to be impartially weighed.

In the fatal list might be found cases which had been left, and only sent for operation when the condition was past recovery; at other times operative measures had been undertaken on the dying—indeed, one might also have said, on the dead. Clearly, the lesson so far brought forward is, that with the first sign of failing health laparotomy ought to be done. Waiting was supposed to make the occurrence of hemorrhage during the operation less likely, and, again, to give time for the more perfect shutting off of the sac from the peritoneal cavity. The great risk of waiting was the insidious way in which septic trouble was apt to supervene; in America, certainly, the mistake had been made more than once of supposing the early septic appearances to be those of malarial poisoning.

The teaching, then, of all past experience is to warn us against waiting till the signs of septic poisoning may have manifested themselves, and rather to resort to operation while the patient's health is good and strength unimpaired. The question of operation during the life of the fœtus, and so endeavoring to save both mother and child, would naturally present itself in discussion; the possibility of this proceeding had been fully established by the now famous case of Dr. Jessop, but, as a rule, the question would always be a hard one to decide. In all cases, if possible, operative procedures should only be undertaken by those who had had considerable experience in abdominal surgery. One point in favor of early operation ought not to be overlooked, viz., that by opening the abdomen at an early period, before the cyst-wall had become matted to surrounding structures, there would be a better prospect of removing the whole sac.

Mr. Lawson Tait considered that the moral of the paper was, delays are always dangerous, and early interference wise.

Dr. Meadows recorded a case of abdominal extra-uterine fœtation operated on by himself successfully. The patient had come under his care two years after the termination of the full time of gestation. The abdomen was considerably enlarged and presented all the characters of an ovarian cystoma containing much solid material. After incising the abdominal wall the much-thickened sac was opened, and a macerated, but not decomposed, fœtus was removed. The cyst was stitched to the edges of the abdominal incision, and the patient made a perfect recovery. In this case there had been no signs of septic poisoning and the patient's health had continued good; delay had apparently acted beneficially by causing thickening of the cyst-wall, and so lessening the chances of septic absorption.

Dr. Wilson, of Baltimore, advocated the performance of laparotomy, as soon as the diagnosis of extra-uterine fœtation had been made, in all cases in which the application of electricity, the injection of morphia into the cyst, and such like expedients had failed. He recorded particulars of a case which had occurred in his practice, in which twins had existed, one of whom was born *per vias naturales*, and the other by abdominal incision from an extra uterine cyst. The mother died in thirty-six hours from septicæmia.

Mr. Jessop, of Leeds, wished to know why, as in his own well-known case, an operation should not be undertaken early, with the view of saving both mother and child. Was not the time while the child was still living the right one for operation, and what were the dangers of interfering then? In his own opinion, the best time to operate was the earliest time at which you met with the case; such had been his feeling when he undertook the case he had referred to, and the success gained might be a guide for others.

Mr. Alban Doran was of the opinion that the longer the delay the greater would be the thickening of the cyst-

wall. He recorded a case of extra-uterine pregnancy occurring in his own practice, in which the cyst-wall was found greatly hypertrophied and very intimately adherent to the surrounding tissues. The result proved fatal to the mother. In this case, had the operation been done earlier, the cyst and neighboring viscera would have been less matted together, there would have been a fair chance of removing the cyst-wall entire, and the mother's life would have been saved.

Dr. Edis thought that with our present knowledge we must treat each case on its own merits; different cases taught different lessons, and no one was quite a guide for another. The question of operating during the life of the fœtus was a difficult one to decide; there was little doubt it increased the risk to the mother. In his opinion the matter must be left at present *in statu quo*.

Dr. Berry Hart presented a report of

A SUCCESSFUL CASE OF ABDOMINAL SECTION FOR RUPTURED FALLOPIAN-TUBE FŒTATION, WITH MICROSCOPIC EXAMINATION OF THE PART OF THE TUBE REMOVED.

In the case recorded, the diagnosis of extra-uterine pregnancy advanced to the third or fourth month had been made, and abdominal section, with a view to its removal, had been advised; the patient, however, though warned of the risks she ran, refused to consent to the operation. Within a short time, however, symptoms of rupture of the sac supervened, and the patient, now alarmed at the possibility of fatal termination, consented to the operation. When the abdomen was opened the cyst was found ruptured and empty, and the fœtus lying loose among the coils of the small intestine. There was no difficulty experienced in the removal of the sac, and hemorrhage was easily stopped by pouring in water heated to 120° F.; the advantage of hot water as a controller of hemorrhage was so admirably illustrated in this operation that Dr. Berry Hart forcibly urged its employment in all similar cases. Discussing the advisability of abdominal section in all cases of ruptured extra-uterine pregnancies, the author quite admitted that cases of rupture do recover, but thought that, on the other hand, it was necessary to consider that a large number of these cases were ultimately seen on the post-mortem table. There was no difficulty in making the diagnosis when rupture had occurred, and the presence of intense anæmia would always serve to differentiate these cases from those in which the occurrence of somewhat similar symptoms was due to the swallowing of irritant poisons. The success obtained by Lawson Tait and other operators in similar cases was strongly in support of the opinions he had advanced, and would serve as an encouragement to others who were resolved to treat these cases on what was clearly the only rational plan. The author considered there was very little risk in operative treatment.

Dr. F. H. Aveling gave an account of

A CASE OF EXTRA-UTERINE GESTATION ARRESTED BY ELECTRICITY.

The history of the case was as follows: The patient, while living in the country, was attended by her doctor for repeated attacks of colicky abdominal pain, which was, however, relieved by hot fomentations and opium. After one of these attacks the symptoms of syncope and collapse were so marked that a consultation was deemed advisable. Vaginal examination having shown the presence of a tumor in Douglas' pouch, and the mammary and other signs of pregnancy having been found to be present, the diagnosis of extra-uterine pregnancy was now made. The patient having been removed to London, another consultation was held, and the presence of extra-uterine gestation being established beyond doubt, it was resolved to make an endeavor to check the further development of the cyst by the use of electricity. In carrying out this treatment a faradic battery was used; one pole was introduced into the vagina and pressed against the tumor, while the positive pole was placed on the abdomen over the site of the growth. After the fourth application it was noticed that the tumor had decidedly shrunk in size, and from this time all symptoms of pregnancy gradually disappeared, the catamenia was re-established, and the uterus underwent involution. When last examined the growth had so far shrunk as only to be represented by a small thickening in Douglas' pouch. In studying the history of this method of treatment, we find that it was first employed in France, but soon afterward followed out in England by Dr. Braxton Hicks, who seems to have been the first to have used the current without inserting the electrodes within the sac. In the case now under consideration retroversion of the uterus was probably the cause of the abnormal gestation, and similar cases are recorded by Dr. Meadows and others.

Dr. R. Petch read a paper on

EXTRA-UTERINE GESTATION TREATED BY GALVANO-PUNCTURE.

A case of well-marked extra-uterine gestation came some time ago under the care of the author.

The diagnosis was established beyond all doubt, the uterine bruit could be heard over a considerable area, the fœtal heart-sounds were audible, and pregnancy had probably advanced to the end of the fifth or beginning of sixth month. Desirous to try the effects of galvanism, Dr. Petch passed two needles connected with the battery into the sac *per vaginam*, and closely watched the result. After several applications of the battery the tumor began to shrink, the fœtal heart-sounds were lost, and the uterine bruit gradually ceased. Month by month the tumor grew gradually less, and the parts at the same time resumed their normal state; by the end of six months nothing could be felt of the growth but a small, hard mass, about the size of a chestnut, which lay behind and to the side of the uterus. It was noticeable that, though the fœtal heart-sounds ceased soon after the first application of the current, yet the uterine bruit was audible for some weeks later, or, in other words, the utero-placental circulation persisted long after the death of the fœtus. This last observation seems to teach us how important it is to wait some considerable time after the death of the child before operating, if we would avoid the risks of hemorrhage from detachment of the placenta. If gestation has in any case advanced over seven months, abdominal section ought to be performed for the sake of the child; but if the patient comes under our notice before the seventh month, there is no reason for considering the life of the child, and measures such as galvanism are clearly indicated. There is one point to be considered in connection with the use of electricity before the seventh month, and it is this—even if electricity fails, it in no way interferes with the performance of laparotomy at a later period. The only objection to electricity, which the author could think of, was that it might leave behind a shrunken mass, the presence of which might prove a complication in a later pregnancy. In his own case the patient had gone through a normal pregnancy recently, so this fear had not been realized.

Dr. Wright commented on the remarkable way in which the placenta is absorbed in cases of extra-uterine pregnancy and thought it bore on the way in which shrinking took place after the death of the fœtus.

Dr. Wylie drew attention to the difficulties of early and accurate diagnosis in extra-uterine pregnancy. He narrated two cases which had occurred in his own experience by way of illustration, and mentioned that in one of these the supposed pregnancy was found on removal to be an ovarian cystoma. In his opinion many cases were overlooked, owing to the difficulties of diagnosis.

Dr. Gardiner, of Montreal, thought that the occur-

rence of pregnancy under unusual circumstances, as for example after a long period of sterility, after an attack of pelvic inflammation, after operation, etc., was a guide to diagnosis. He gave particulars of a case observed by himself, and stated that he considered it unnecessary to pass the electrodes within the sac; it was quite sufficient to apply one pole in the rectum against the growth, while the other was pressed on the abdomen over the position of the cyst. In his own case, which was four months gone, one or two applications of electricity had been enough to arrest further development. Cessation of fœtal life was not enough of itself to remove all danger; his own patient, thinking herself cured, had insisted on leaving bed and getting about prematurely, with the result of bringing on pain, fever, and alarming symptoms for a time.

Dr. Edis condemned in the strongest terms those who looked on at a woman with a ruptured extra-uterine cyst and took no steps to open the abdomen; such conduct was little else than criminal. He thought that many of the cases of so-called arrest of extra uterine gestation were cases of mistaken diagnosis; pyo-salpinx, ovarian tumor, etc., were liable to be confounded with ectopic pregnancy. Galvanism should be used up to the end of the third month; at the sixth month the employment of galvanism was a mistake, and laparotomy was the operation indicated. In his opinion Dr. Retch had erred greatly in not allowing his patient to go on to the seventh month, and then undergo abdominal section. He narrated a case in which he removed a fœtus per vaginam by cutting with Praguelin's cautery into the sac. Once a sac had been tapped, further steps should be taken with a view to the removal of the tumor.

Dr. Routh thought these cases of ectopic gestation fell naturally into three groups. 1. Cases seen in the early months: here the placental souffle could be heard with the vaginal stethoscope at the sixth week, and diagnosis was easy. 2. Cases at mid-term: here, if rupture occurs, death is almost certain, therefore operation should always be undertaken. 3. Cases after the seventh month where the child is living: in these cases Cæsarean section is indicated and operation is a duty.

Mr. Lawson Tait pointed out that cases of extra-uterine pregnancy always arise owing to the absence of the epithelium and cilia of the Fallopian tubes; if the latter are present impregnation never occurs in the tube, and ectopic gestation is impossible. Rupture always occurs at the site of the placenta: when the latter was placed at the upper part of the tube, a fatal result was the rule; when at the lower, hemorrhage occurred between the layers of the broad ligament, and a favorable issue was often obtained. He protested against children in favorable cases being killed by galvanism or any such nonsense. In his opinion cases were never diagnosed until rupture had taken place.

Dr. Hanks narrated a case of extra-uterine pregnancy, and stated his belief that it was possible to diagnose cases before rupture had taken place.

Dr. Steavenson dwelt on the various forms of electricity used, and considered that men ought to know which was the best form to employ.

It had been supposed that the death of the fœtus was due to shock, but if the nervous supply of the fœtal heart is studied it will be seen how improbable such an explanation is. A shock sufficiently strong to kill the fœtus would be almost certain to cause the death of the mother.

Dr. Lusk thought that it was a matter of indifference whether galvanism or faradism was used, but had found by experience that the galvanic current had to be used in a much stronger degree than the faradic. Faradism could be used with much less discomfort to the mother.

In the early months electricity ought always to be tried, though it was not always successful; in one case he remembered the fœtus was supposed to have been killed, yet the tumor continued to increase and the child reached full term.

Dr. G. Ranney, of Michigan, read a paper on the

TREATMENT OF [illegible]

The author advocated in all cases treatment by compression with a many-tailed bandage. The latter was of service whenever for any reason it was necessary to check the secretion of the milk.

Illustrative cases were read showing how useful the method was in cases where the child was still-born, in incipient inflammation of the breast, or even in an advanced stage of inflammation. Rubber cloth with adhesive straps might be substituted for the many-tailed bandage. After the breasts had been brought toward the middle line, with a napkin between them (if necessary) to secure even pressure, the bandage should be tightened from above downward; by the time the lower part was finished the upper part would be ready for retightening; this process could be advantageously repeated two or three times. Mere continued pressure with the hand on the breast was sufficient to empty the distended mamma and give relief.

Dr. Edis confirmed this method of treatment.

Dr. Bantock used the method even when abscess had formed. He preferred strips of plaster to the many-tailed bandage.

Dr. Swayne was in the habit of opening abscesses and then using compression by means of strips of plaster.

Dr. Ranney in reply stated that he preferred the bandage to plaster, and that he never allowed abscesses to form.

Dr. M. Beverley read a paper in which he presented

A RECORD OF TWENTY CASES OF EMMET'S OPERATION FOR LACERATION OF THE CERVIX UTERI AND OF THREE FOR PROCIDENTIA UTERI.

In the author's opinion labor was always the cause for this operation. Usually there was a history of either rapid or instrumental delivery; the history of uterine phlebitis or cellulitis secondary to labor was common. Among the prominent symptoms of ruptured cervix might be mentioned backache, anæmia, sleeplessness, mental irritability, faceache, and leucorrhœa. Vaginal examination generally showed the existence of ectropion of the cervix, granular erosion, hardness of tissue, and a bulky uterus; much new tissue was always present. Dr. Beverley considered that much harm was done in treatment by the use of irritants, the cautery, etc. He had never found any difficulty in the performance of the operation. Out of the twenty cases recorded eighteen had healed by the first intention. Complete rest and hot-water injections were always used for ten days before operating, so as to ward off the possible occurrence of cellulitis. All the author's success had been gained in cases in which ordinary methods of treatment had been exhausted and failed. Reference was made to the use of the operation in staving off the onset of epithelioma.

In the second part of his paper Dr. Beverley commenced by describing the operation as laid down by Dr. Emmet. The great superiority of this procedure over Alexander's operation of shortening the round ligaments was dwelt upon. In the author's first case there was complete procidentia of twenty years' standing, and all forms of pessary had failed to give relief.

Dr. Gordon thought the operation for lacerated cervix, as done in England, was seldom carried out as Dr. Emmet advised. When carried out in the manner recommended by the latter the operation did much good, but badly executed it caused more harm than good.

Dr. Kelly approved of the operation for procidentia uteri, and described it with the help of diagrams.

Dr. Wylie thought that cases of fissure, with sub-involution and evasion, would be operated on much sooner in America; here they were treated unduly long by caustics and irritants.

Dr. Beverley briefly replied.

FRIDAY, AUGUST 13TH—FOURTH DAY.

DR. SAVAGE, of Birmingham, read a paper on

THE REMOVAL OF THE UTERINE APPENDAGES.

Though a great deal had been written and spoken about the removal of *normal* ovaries, yet it was very rarely that healthy glands were extirpated; in most cases the ovaries when removed had been found to be useless for their child-begetting function. There were cases in which the removal of perfectly healthy ovaries was justifiable, as when a pelvis was so contracted that the birth of a child *per vias naturales* was an impossibility, and again in some cases of myo-fibromata of the uterus, though in these latter cases the ovaries were generally found to have become diseased. The most common causes which led to symptoms indicating the need of operation were peritonitis—either ovarian or pelvic—or diseases of the tubes, such as arise from the spread of the gonorrhœal inflammation upward from the vagina. The first class of cases (ovarian peritonitis) often follows a miscarriage or confinement, and is septic in nature. A typical case of this latter class often presents the following history: There has been a confinement, followed by puerperal inflammation; then comes a long period of sterility; later, much pelvic pain is complained of; vaginal examination shows the ovaries to be enlarged and tender, while the general health is more or less wrecked. In former times the occurrence of gonorrhœa in the female was considered a very trifling accident, but with our present knowledge we are bound to look on every such patient as exposed to the risks of pyo-salpinx. We really want to know the pathological importance of (1) atrophied ovaries, and (2) enlarged ovaries. It is still a question where the line is to be drawn between enlarged hypertrophied ovaries and ovarian cystoma, nor is the connection between adherent appendages and cystoma fully established beyond all possibility of discussion. To the inexperienced, difficulties in diagnosis must be common, but in many cases enlarged tubes can be easily mapped out; moreover, the symptom of metrorrhagia often serves as a valuable guide. In acute pyo-salpinx the temperature is a guide, but it lends no aid in chronic cases. The effect of chronic disease on the ovaries is to render these latter rotten and pultaceous; the glands in such cases are useless in the female economy and their removal is clearly beneficial. The frequency with which blood-collections occur in the tubes has been much questioned; in the author's experience they are much more common than text-books would lead us to imagine. Referring to those cases in which hemorrhage from the uterus continued after the removal of the appendages, Dr. Savage was of the opinion that these cases did not often depend on imperfect removal of the ovaries and tubes, but he had no explanation to offer of the causes of such an accident. In the operation itself there should be no difficulty, except in cases where the disease was of old standing and strong fibrous adhesions were found to exist. No case ought to be beyond the skill and resource of an operator; cases which in former years he had himself left uncompleted owing to the difficulties of removal, he would now with his increased experience certainly finish; it was a reproach on our skill and dexterity if we allowed ourselves to be vanquished by the difficulties arising from old adhesions or matting of the tissues to surrounding structures. Now and then bleeding might be profuse, but it could always be controlled by pressure. In every case early operation was very desirable, and it was everything to catch the case at an early stage. Patients in whom the ovaries were adherent and buried in a mass of inflammatory exudation were most frequently the subjects of the operation, and next in order of frequency came the cases of distended Fallopian tubes. In opening the peritoneal cavity a short abdominal incision was desirable, because though it is a matter of small consequence whether the abdominal wall is divided for an additional inch or two, yet the longer the incision the greater the opportunity for septic absorption. Another advantage of a short incision is that the intestines are less likely to prolapse.

DR. MORE MADDEN also read a paper on

THE REMOVAL OF THE UTERINE APPENDAGES.

The operation for removal of the uterine appendages is indicated principally in three classes of cases: (1) In certain cases in which disease of the Fallopian tubes exists; (2) in some cerebral cases secondary to ovarian irritation; (3) in fibro-myomata of the uterus. No doubt could exist of the possibility of operating, and there could be no question as regards success, but the real point at issue was, with what degree of frequency ought the operation to be done. In deciding this question the consensus of opinion of gynecologists as a body ought to be taken, and the matter should not be left to the dictum of a few operators. There was no doubt that ovaries were being removed with growing frequency; as Dr. Carter had pointed out, the gynecologist removes a woman's ovaries with as little hesitation as a butcher spays his cows, and with about the same amount of regard for his patient. The operation, moreover, was not always successful in its results, for, to the author's own knowledge, many women in New York who were minus their ovaries and tubes still attend the hospitals and suffer as much as ever, if not more. In view of the fact that so many ovaries were about to be taken away, it was highly desirable that a discussion, ethical, moral, and surgical, should be held. In spite of all that had been said and argued to the contrary, the ovaries were to a woman what the testicles were to men, and to remove either without unsexing the patient was simply an impossibility. Childbearing was woman's function and woman's privilege, and every woman ought to be told the result of the operation before it was done.

The mere change of voice and growth of hair need not be weighed; there were other and far more important results. Considering the increased frequency of the operation one was bound to ask, Does this increased number of öophorectomies depend on an increased frequency of salpingitis, ovaritis, etc.? So far, Dr. More Madden had not found such to be the case. No one could say that ovarian and tubal diseases were disorders but lately recognized, for these complaints had been diagnosed and treated long before the present rage for operating had come in.

Even among modern operators there is much difference of opinion as regards the frequency with which öophorectomy should be done. The statistics of Sir Spenser Wells were interesting in this respect. The author's own experience, from observations made in the dissecting and post-mortem rooms as well as in practice, was that *grave* tubal or ovarian disease was rare; therefore he hoped to-day to hear some good reasons given why the operating mania should have so suddenly sprung up. In the causation of disease of the uterine appendages extension of septic mischief after delivery was the most common factor; next in order came gonorrhœa and catarrhal disease. In some of these cases aspiration would succeed, and in others, treatment leading to resolution.

Öophorectomy had its most useful application in cases of uterine myomata, though even here it should not be used indiscriminately in young patients. There was always one point to be borne in mind, viz., that a myoma did not usually lead to a fatal termination, while the same could not always be said of the operations for its cure.

In cases of old, quiescent fibroids an operation should not be undertaken, nor, again, in those cases where the ovaries might be expected to be found deeply placed behind the growth. It was probably useless for any one man to endeavor to stem the present epidemic of operating mania, but he felt bound to enter his protest; it would be a matter of deep regret if a useful operation

should fall into reproach, and become obsolete, because at present its most ardent exponents insisted on practising it in an indiscriminate and reckless manner.

Dr. Bantock thought that there were two great classes of disease in which removal of the uterine appendages was indicated: (1) When the appendages were the seat of some disease, such as pyo-salpinx, etc.; (2) when the appendages were healthy, but were removed for some neighboring disease. In the first class of cases, after rational and constitutional treatment had been tried, operative measures must be resorted to. A word of warning was necessary lest constitutional treatment should be too contracted, and so the result of the operation marred. In cases of papilloma of the tube, abdominal section was the only resource. If acute ovaritis, chronic ovaritis, ovarian cirrhosis, cystic degeneration of the ovary, or extreme atrophy of the ovary existed, the operation for removal was indicated. In all these conditions pain was a constant symptom. Acute ovaritis was so rare a disease that he had never seen a case of it; considering that during senility ovarian atrophy was always normally present, it was curious that such severe symptoms should arise from the above-mentioned cases of extreme atrophy. In the second class, in which neurotic diseases, epilepsy, etc.—were included, the operation was doubtful, and at best only tentative. To perform the operation in every case of insanity was certainly wrong; but if the disease arose or became intensified at the menstrual periods, operative measures might be tried. With small myomata, operation might be needed, but we must not overstep the boundary of prudence; in many of these cases dilatation of the cervix, scraping, and the application of iodine, or enucleation, ought first to be tried. Roughly speaking, one might say that if the tumor weighed two to three pounds and was growing quickly, then oöphorectomy was indicated; but if the tumor weighed only about one pound and was descending through the os uteri, the removal of the uterine appendages was unjustifiable. The operation had been done for dysmenorrhœa, menorrhagia, and displacements of the uterus, but in these cases it was certainly wrong.

Dr. Bantock protested against the excessive frequency of the operation, and felt that the warning note was needed. The case of the unfortunate Mr. Baker Brown was still in our memory, and served as an illustration of the necessity for caution.

Dr. Gordon, of New York, was of the opinion that in the question of operating every man must decide for himself; those who saw most of these cases would be the men most competent to form an opinion. It was not always possible to judge by physical signs; he had himself, in some cases, removed tubes and ovaries when there was absolutely nothing to be made before the operation by physical examination, and yet the success gained justified his decision. If operation is certified by result, then other men's *dictum* is worthless.

Dr. Elder, of Nottingham, wished that Dr. Savage had said more about alternative measures. To his mind the subject should be considered under three heads: (1) In connection with uterine myomata; in certain of these cases the operation was certainly called for. (2) Oöphorectomy for disease of the ovaries other than ovarian cystoma. In cases in which the ovaries are enlarged and adherent, and where menhorrhaga or metrorrhagia is present, there can be no doubt of the advisability of operating. In all cases the patient's friends ought to be informed of the proposed operation, and the effect ought to be clearly explained to them. In cases of extreme atrophy of the ovary removal was justifiable; but oöphorectomy for neuroses gave disappointing results. (3) Accumulations of blood, pus, or serum in the tubes, etc. In cases of hæmato- and pyo-salpinx operative measures were called for, but in every case the diagnosis ought to be based on objective as well as on subjective signs, and other treatment should have been given a trial first. The patient's consent must of course be always obtained.

Dr. Imlach thanked Dr. Savage and Dr. More Madden for their papers, and felt sure that discussion on so important a topic would be welcomed. In many of these cases of disease of the uterine appendages only two courses were open, either to cure your patient by operation or to send her home as incurable. It was not fair for men who were ignorant of, or had no experience in, these cases to offer criticism; a man ought to go to the Hospital for Women, either in Birmingham or Liverpool, and investigate for himself. Unjust criticism could always be met by seeing the cases referred to before they had been operated on, and again six months afterward. Disease of the uterine appendages might occur at any age, but pyo-salpinx was seen most frequently in young women. It was idle to say that women do not die of this disease; uterine disease, both chronic and acute, is a frequent cause of death. In every case Dr. Imlach made it a rule to explain to the patient all the risks and results of the operation. In cases of prolapsed ovaries he should not operate unless severe symptoms arose; in any case he did not remove the uterine appendages for ovarian prolapse, but preferred to stitch them up to the pelvic brim and so suspend them. The latter operation relieves pain, and occasionally has proved a cure for sterility. Men who only occasionally operated were much more likely to remove the appendages in unsuitable cases than those who had had greater experience.

Dr. Wylie agreed with the previous speaker. He had been one of the first in New York to take up the operation for the removal of the uterine appendages. Before commencing operative measures he had spent two years in perfecting his diagnostic skill, and even now he made a point of watching every case for some time before undertaking a surgical proceeding. At present he could always recognize cases of pyo-salpinx before operation. A man who was known as an operator would, of course, get more of these cases than other men. He made it a rule to preserve all appendages removed, and was then able to show them in confirmation of the necessity for operating. All great advances in surgery were sure to pass through a testing time.

Dr. Davies, of Liverpool, stated that the pathology of the tubes was a much simpler matter than that of the ovaries. In most cases of hæmato- pyo- and hydrosalpinx operation was needed, and nothing else would avail.

Dr. Wilson, of Baltimore, thought that the need of operative measures in many cases was undeniable; but the pendulum had probably swung a little too far. In cases of bleeding myomata of the uterus the latter organ should be opened up, the site and attachments of the tumor located, and then, if enucleation was impossible, oöphorectomy should be performed.

Mr. Lawson Tait agreed with all that had been said by Dr. Savage. He regretted greatly that so many misrepresentations had been made concerning the operation. Spaying was a mistaken term, as it implied the removal of ovaries before the onset of puberty. In the experience of men who had a special reputation for this operation the number of cases would, of course, be considerable.

Dr. Kelly, of Philadelphia, thought a protest was needed against over-frequent operating. He should always refuse to complete the operation, whatever the symptoms might be, unless he could find diseased tissue at the time of operating.

Dr. Graily Hewitt felt it would be difficult at present to lay down any hard or fast rule for operation. The question of diagnosis was all-important, and full care had been taken to perfect this. He dwelt on the chronicity of certain diseases in connection with the generative organs. Malnutrition of the body was often the great obstacle in obtaining a cure, and therefore attention directed to that point was urgently needed; the use of massage might be considered in this connection. Oöphorectomy was justifiable in some cases of chronic

displacement of the uterus. Much had been learned lately regarding the harmful action of gonorrhœa, especially when the latter had become chronic.

Dr. Vincent Jackson, of Wolverhampton, thought it would be a great gain if experienced operators would publish the results of these operations twelve to eighteen months after they had been done.

Dr. More Madden having briefly replied, a vote of thanks was given to the President, on the proposal of Dr. T. Savage, seconded by Dr. Gordon. The President conveyed the thanks of the section to the American visitors for the share they had taken in the work of the section, and Dr. Wilson, of Baltimore, briefly responded.

Correspondence.

OUR LONDON LETTER.

From our Special Correspondent.

THE BRADSHAWE LECTURE—COLLEGIATE RESIDENCE FOR MEDICAL STUDENTS—INSANITATION AT THE HOUSES OF PARLIAMENT.

London, August [illegible], 1886.

Not a very large audience assembled at the College of Physicians, on the afternoon of Wednesday last, to hear the annual "Bradshawe Lecture." The wisdom of fixing the date of its delivery at a time of year when only those are in town who cannot get away is more than doubtful. On this occasion the lecturer was Dr. Julius Dreschfeld, Professor of Pathology at the Victoria University, and Physician to the Manchester Royal Infirmary. At the best, Dr. Dreschfeld is not an orator calculated to "draw" a large audience. He is a practical physician, a skilled pathologist, and a scientist who keeps himself well abreast of the most recent advances in medicine; oratory, however, is not his *forte*, and the less said about his "delivery" as a lecturer the better.

Turning from manner to matter, more appreciation can be expressed. Dr. Dreschfeld took for his subject "Diabetic Coma." Sudden death, he said, was not uncommon in diabetes, yet the term "diabetic coma" was by no means applicable to all cases, though coma might be a chief symptom.

Thus coma might be due to cerebral hemorrhage. Acute croupous pneumonia might occur in diabetes and cause death without the usual pulmonary symptoms, the chief phenomena being dyspnœa and coma. Death in coma might result from interstitial nephritis complicating diabetes. It might also result from intercurrent affections.

The lecturer then went on to speak of the kinds of diabetic coma, and referred to a paper read by himself before the Midland Medical Society, in 1881. In this he had differentiated three chief forms. Twelve months later Frerichs had expounded the same views and adopted an identical classification.

The first of these forms had been recognized by Prout; it was that of "diabetic collapse." It consisted in the development of drowsiness, with extreme coldness of the surface, quick pulse, and shallow breathing. The urine contained from five to eight per cent. of sugar, a little albumen, but no aceto-acetic acid. Active delirium and convulsions were absent. The pupils, though sluggish, reacted to light. Death occurred, with falling temperature, in from ten to twenty hours. This form was most frequent in persons above forty who had suffered from diabetes for some time, and who were, as a rule, stout and well nourished.

In the second or "alcoholic form" of diabetic coma, the patient had all the appearance of acute alcoholic intoxication. Several cases of this variety were described. One was that of a middle-aged man who had been in hospital for diabetes. While walking in the garden he suddenly exhibited symptoms of alcoholic intoxication. Deep coma and death soon followed. The urine drawn from the bladder showed, besides sugar, a considerable amount of alcohol. It was clearly proved that the patient could have had no access to any alcoholic liquor.

POSSIBLE EXTENSION OF MALARIAL DISORDERS BY MEANS OF WATER-SUPPLY.

To the Editor of The Medical Record.

Sir: As you are aware, I have been pursuing the inquiry in regard to the possibility of the extension of malarial and intermittent fevers by the use of water from streams along whose banks diseases of this type are endemic. It is somewhat difficult to secure unbiassed testimony in regard to the matter, because of the implied interference with the "vested rights" of water companies. Nevertheless, it is for the interest of such corporations, as well as their patrons, that any evidence bearing upon this point should be examined carefully.

Recent researches in regard to the extension of cholera in Spain make it highly probable that running water does not readily purify itself, at least not so far as the contagion of cholera is concerned. There is ground for the belief, also, that the poison of typhoid may be conveyed long distances in running water. In the very nature of the case these diseases, propagated in this way, occur in localized epidemics, due to accidental contamination of the water-supply. A sudden outbreak of sickness of this sort naturally excites earnest inquiry in regard to its causes. The attention of sanitary authorities is aroused and a thorough investigation is begun at once. But in the case of diseases of a malarial type the condition of affairs is quite different. If water indeed serves as a vehicle for their conveyance, it is by a more gradual process. Years may be required to bring into general use the water from a public water-works, so that its full effect can be seen. The increase of the disorders in question has been so insidious that their source is overlooked. For this reason the problem is much more difficult than in the case of a single well-defined outbreak of disease, which may be shown to be plainly due to temporary contamination of the water in use. If, however, instances such as one within the knowledge of the writer can be shown to be not uncommon, it is evident that we have to deal with a very grave subject.

In a town of considerable size, which shall be nameless, the inhabitants years ago were, as a rule, entirely free from malarial diseases, except along the banks of the adjacent river. During the writer's acquaintance with this town, which was extensive and of long standing, he never heard of these diseases prevailing except in the immediate vicinity of the stream in question. Some years since a system of water-works was introduced, taking the water from this river, whose surroundings were positively and unquestionably malarial. Soon intermittent fevers and allied disorders begun to prevail throughout the town, and have not ceased so to do every year subsequently. Where once they were practically unknown they now are very common. It is as if the inhabitants all lived close to the banks of the stream. They have not gone down to the river, but the river has come up to them. Whether it is the use of such water for drinking purposes, or the saturation of the soil in various ways by its means, that may be presumed to extend these diseases, is to the writer as yet unknown. Perhaps further investigation may show that the case which has been described is of an exceptional character, but it certainly has impressed upon the mind of the writer the conviction that the subject is by no means unworthy of further research.

Yours, respectfully,

M. A. Veeder.

Lyons, N. Y., August [illegible], 1886.

IN REFERENCE TO "WHAT CAN WE CURE?"

To the Editors of The Medical Record:

SIR: It is hardly possible that the article under the above title in THE MEDICAL RECORD of August 21st will have no replies. If the term *cure* be used rather liberally, as by the correspondent from Missouri, surely the answer to this question may be, even in this day of pathological investigation, a large number of diseases. We are advised to "father no prescriptions," unless it be for opium or alcohol. Allowing due praise to opium in its various uses, it must still be the unfortunate hobby of a practitioner with whom it outweighs the whole materia medica. We will say nothing of the number of people who are its victims, even where its use was rationally begun. Besides opium, alcohol, and quinine, can we do nothing with aconite, bromides, digitalis, hydrargyrum, iodides, or iron? That collyriums have never cured acute ophthalmia is certainly untrue outside of Keytesville. I am one of those "fanatics" who occasionally "slander" alcohol, although admitting its power to keep the heart "wagging"—and the tongue as well. I believe that aconite and quinine, with or without cold sponging, have done as much by controlling the height of fevers as alcohol has done by supporting vitality during their decline. "A doctor's faith in physic is the measure of his intellect. It is always in inverse proportion." Is not, then, the surgeon's faith in the knife and ligature in inverse proportion to his intellect? When he sees a carcinoma let him rest with "confidence in God and nature" and leave it, as a certain Irish army surgeon preferred to leave bullets, to "festher oot." He says "the strife between nature and art in the cure of disease has resulted in a victory for the former."

Perhaps the opponent of nature in the strife at which the correspondent umpired was a *lack of art*, for true medical art has not been at strife with nature.

GEORGE S. WRIGHT, M.D.

New [illegible]

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 5 to September 11, 1886.

WAKEMAN, WM. J., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for three months' extension, to take effect when his services can be spared in the Department of the Platte. S. O. 207, A. G. O., September 6, 1886.

WALES, PHIL. G., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension to November 5, 1886. S. O. 70, Division of the Pacific, August 31, 1886.

BANISTER, WM. B., First Lieutenant and Assistant Surgeon (recently appointed). To report by letter to the commanding general, Department of Arizona, for assignment to duty. S. O. 208, A. G. O., September 7, 1886.

WALKER, F. V., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Adams, R. I. S. O. 131, Division of the Atlantic, September 8, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 11, 1886.

WOODRUFF, C. E., Assistant Surgeon. Ordered to Receiving Ship Vermont, October 4, 1886.

ATLEE, L. W., Assistant Surgeon. Detached from the Vermont, and ordered to the Quinnebaug, per steamer of 25th inst.

BOGERT, E. S., Medical Inspector. Detached from the Trenton, and placed on waiting orders.

FEREBEE, N. McP., Surgeon. Detached from the Trenton, and placed on waiting orders.

BIDDLE, C., Passed Assistant Surgeon. Detached from the Trenton, and placed on waiting orders.

SCOTT, H. B., Assistant Surgeon. Detached from the Trenton, and placed on waiting orders.

Medical Items.

CONTAGIOUS DISEASES IN THE CITY.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 11, 1886:

[illegible]		
[illegible]		
[illegible]		
Measles		
Diphtheria		1
Small-pox		
Yellow fever	1	1

AN EARLY LAPAROTOMY.—Dr. T. E. Murrell, of Little Rock, Ark., writes: "Apropos of the prominence which laparotomy now holds before the medical world, I wish to call attention to a bit of oral history obtained through my father. When a boy, then living in East Tennessee, he heard a man named Bailey narrate to his father (my grandfather) the details of an operation performed by a surgeon on his (Bailey's) father, he himself assisting the surgeon in such way as he could. His father had been suffering for some days from obstruction of the bowels, and every available means failing to relieve him, and his condition growing more and more grave, the doctor decided to open his abdomen and see what was the matter. This he did, exposing the intestines and carefully examining them. He found one of the small intestines abruptly twisted upon itself, completely closing the lumen. This he unwound, and having replaced the bowels, sewed up the wound which he had made, and his patient made a perfect and speedy recovery, and lived many years afterward. From my father's age at the time he heard Bailey relate this circumstance, and the length of time the elder Bailey had been dead, and his having lived several years after the operation, he says it could not have been later than 1805, and perhaps several years sooner. My father was born in 1809, and has a most vivid recollection of what he saw and heard in boyhood. Living in a new and sparsely settled country, such occurrences were likely to become traditional. I have at long intervals questioned my father in reference to the above story, and he has invariably corroborated every detail in so far as was made known to him at the time when first heard, and, from the source, he does not question its truth. It is more than likely that we here have a case of ileus relieved by laparotomy, performed by a pioneer surgeon about or before 1805. I wish I had more direct testimony. Perhaps some *old resident* of East Tennessee, near the Virginia line, may be able to give it."

DENVER MEDICAL COLLEGE.—We are sorry to note that this institution is at its old tricks again, viz.: advertising itself and secretary in the daily press. This is wrong; it is unethical; it is very bad taste; it is a violation of the spirit, if not the letter, of the code of ethics of the American Medical Association.—*Denver Medical Times.*

A Flameless Disinfecting Lamp.—The Paris correspondent of the *British Medical Journal* gives a description of a flameless lamp for disinfecting the sick-room. It consists of a spirit-lamp and a spiral thread of platinum about fifteen millimetres in length. In order to use the lamp, it must be filled with alcohol at about 90°. The wick is moistened, and the spiral thread, having been previously soaked in alcohol, is so placed that it surrounds the wick as closely as possible without touching it. This last precaution is essential. Then the lamp is lighted, and the platinum-thread immediately becomes red-hot. Two or three minutes afterward the lamp is put out by using a glass extinguisher. Currents of air must be avoided, as they make the lamp flicker, and the platinum-spiral is then exposed. As soon as the lamp is put out the extinguisher is removed from it; the spiral remains incandescent, and continues in this condition so long as there is alcohol in the lamp; it then gives out a sweet etherized odor, and the most mephitic air is quickly purified. In a smoking-room, where generally the smell of smoke is persistent, all odor disappears after the flameless lamp has been used. In order to understand this somewhat complex phenomenon it is necessary to remember that hammered as well as spongy platinum possesses, at a very high temperature, the property of condensing gas, and facilitating in its pores the combination of the oxygen of the air with combustible gases. The reflex action must not be forgotten; the heat given out by the spiral provokes an abundant evaporation of alcohol. The vapor of alcohol, in passing upon the incandescent platinum, is decomposed, and liberates its oxygen, of which part goes to increase the incandescence. Thus the incandescent platinum accelerates the evaporation of the alcohol, and *vice versa*. The rest of the oxygen which is set free spreads about the room, and renders the atmosphere wholesome. It is possible that the vapor produces ozone and aldehyde. The production of aldehyde is more probable than that of ozone. The manufacturer of this lamp asserts that ozone is produced when a small quantity of a liquid which he calls ozogene, and contains ether, is mixed with the alcohol.

Uses of Potassium Chloride.—At the recent meeting of the American Medical Association, Dr. A. F. Pattee, of Boston, communicated a paper on potassium chloride. He had used it in many cases of anæmia with success, and had also found it beneficial in the first stage of hepatic cirrhosis. Inflammatory exudations—*e.g.*, pelvic cellulitis—and glandular enlargements subsided under its use. In stomatitis it was equal to the chlorate. He had also used it in ovarian neuralgia and menstrual headache, where it was more reliable than the bromides. Combined with corrosive sublimate it was one of the best remedies for syphilis. In cellulitis he gave it in ten-grain doses every three hours. He had also used it in epilepsy, finding it most serviceable in anæmic cases.—*Philadelphia Medical News*, July 5, 1886.

Fluoride of Ammonium is recommended by Dr. J. Lucas, of Bombay, in the treatment of hypertrophy of the spleen. He states that it excels any other method of treatment with which he is acquainted. It is administered in small doses (five drops) of a weak solution (strength not stated), and given after meals to prevent a purgative or nauseant action.—*Prov. Med. Journal.*

Therapeutical Notes.—Professor Da Costa considers aconite *the* remedy for *cerebral congestion*, combined with the bromides and laxatives, or even bleeding in the severer forms. Professor Bartholow considers jaborandi the most efficient remedy we possess for *alopecia*. For local application, he combines with equal parts of soap liniment the fluid extract, or one part of fluid extract of jaborandi, one of tincture cantharides, and two of soap liniment. Dr. Neff still continues to be successful in the treatment of asthma with *pyridine*. He has now had fifteen cases in which he has used it, without a single failure. In several cases in which he has used it a number of times, the number and severity of the attacks have seemed to be lessened. Whether these are cases of *post hoc* and not *propter hoc* only a larger experience can decide.—*Coll. and Clin. Record.*

Turpentine in Malignant Tumors. — Professor Vingt, of Barcelona, employs a hypodermatic injection of one part of turpentine and two parts of alcohol in carcinoma and sarcoma, and has frequently succeeded in causing these neoplasms to disappear. A local inflammation, with fever, lasting eight days, was the usual consequent.—*Therap. Gazette.*

Long-continued Albuminuria. — We once asked Dr. Johnson how long he had known a case of albuminuria to extend. He replied, thirty years. We may safely conclude that a disease which could be extended over thirty years might, with more care, extend over forty, and leave life very much uncurtailed. But this implies great care on the part of the patient and physician alike.—*Lancet.*

A Question of Priority in the Treatment of Asphyxia of the New-born.—Dr. George H. Noble, of Atlanta, Ga., writes: "I was very much surprised to see, in The Medical Record of July 3, 1886, that Dr. L. N. Sharp, of Minneapolis, Minn., was claiming my method of treating asphyxia in the new-born from syncope or anæmia of the brain. I was surprised that the doctor did not give me credit for it, as my article upon that subject was published in the *Amer. Jour. of Obstetrics and Diseases of Women and Children* in April, and copied into *Gaillard's Medical Monthly* of May, and in the June number of the *New Orleans Medical and Surgical Journal*. I was surprised to see that parts of his article read very much like parts of mine; and further surprised to see that Dr. J. C. Roberts, of Pulaski, Tenn., was making a similar claim in The Medical Record of July 31st. I would therefore be pleased if you will kindly publish this note, that these gentlemen may know of *my priority over them both*, for I fear that they are not very extensive readers of the medical literature of the day. It seems that a man in the medical atmosphere that Dr. Sharp is would have access to all the leading medical journals of this country, though he may not subscribe to them. It sometimes occurs that the same thing is discovered by different parties about the same time, and it may be the case in this instance; nevertheless *I have the priority*—unquestionably."

The Watermelon Vine as a Source of Musk.—Dr. A. G. Chase, of Millwood, Kan., writes: "In a recent number of The Medical Record I called attention to the tip ends of the watermelon vine as a probable source of obtaining musk. I collected a quantity of the young ends and made an aqueous extract, evaporating to a waxy consistence. I have used it in the form of pills in two cases, as a nervine, with very prompt and decided action. I would like to call the attention of pharmacists as well as physicians to it, for further examination. I have been very partial to moschus for many years, in the nervous and hysterical symptoms of young girls."

Abortive Treatment of Mammary Abscess.—Dr. A. G. Chase, of Millwood, Kan., writes: "Dr. Eliot, of Washington, D. C., in The Medical Record of July 31st, speaks highly of spirit of turpentine as an abortive of mammary and other suppurations; and while I know it to be good, I would like to call attention to what I have found to be a much better remedy, to wit, extract of belladonna. I generally use the solid extract, rubbed up with enough simple cerate to soften; or paint with fluid extract of belladonna ʒ ij., tincture of iodine ʒ j. I never fail in arresting suppurative tumors when the application is made any time before the formation of pus."

It is better to be sure than sorry;
It is better to know than to worry.

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Original Articles.

THE COEXISTENCE, OR THE COMPLICATION, OF ANAL FISTULA WITH PHTHISIS PULMONALIS.

Its Pathology, Treatment, and Cure, Considered with Reference only to the Operation.

BY WILLIAM BODENHAMER, A.M., M.D.,

THE subject of the association of anal fistula with phthisis, and the conflicting opinions concerning its treatment or non-treatment, when found thus connected, are of late being discussed, *pro et con*. This discussion reminds me that about forty years ago I paid some attention to this subject, and I feel disposed to give some of the views I then entertained concerning it to the profession now, for what they are worth.

The consideration of the copresence, or the complication, of fistula in ano with phthisis involves a most interesting and important point regarding its pathology, treatment, and cure; and it will be perceived that this subject has engaged the minds of the [illegible] our profession.

I will now introduce the subject by remarking that fistula in ano, when not connected with morbid conditions of the lungs, intestines, or other viscera, equally incurable and fatal, may be regarded as one of the most simple and satisfactory subjects of surgical practice. Indeed, it derives nearly all its difficulties and dangers from diseases that complicate or succeed it.

An anal fistula may exist in a phthisical patient without either disease becoming immediately complicated; for it is possible for the two diseases to exist in the same patient at the same time without either becoming involved in the other. Sooner or later, however, they may become involved to such an extent that neither can be cured. The two diseases may also be complicated, and stand in the relation of cause and effect, as they doubtless do in the majority of instances. Indeed, to repeat, an anal fistula may be associated with phthisis in two different characters—first, as a contemporaneous but independent accident, and secondly, as a consequence. Both diseases, too, may be produced by the same cause at the same time—that is, the same agent or low condition of the system which predisposes to the one will aid in the development of the other.

If the writings of the authors who have more especially studied the subject of anal fistula be consulted, it will be found that the earliest of them make no allusion to the disease being in any way connected with phthisis; and, although the more modern writers have adverted to the copresence of the two diseases, they have, for the most part, considered the phthisis in the light of a cause, instead of the consequence, of the anal fistula.

Now it must be admitted, by all accurate observers who have had much experience in the treatment of anal fistula, that it sometimes coexists with phthisis without exerting any favorable or unfavorable influence upon the latter, the two diseases being, as it were, independent of each other; and it must also be admitted that anal fistula is much more frequently complicated with phthisis, and is often the result of it, and when this is the case the two diseases may mutually react one upon the other, but unfavorably to each.

I will now show that, not only is the frequency of the connection of these two diseases denied, but when it does occur, the influence which one exerts over the other is also denied. As a confirmation of this, I will quote from the classical works of Laennec, Andral, Louis, Clark, Quain, and Gross:

M. Laennec says: "It is a common opinion, strengthened by the adoption of it by M. Bordeu, that phthisical subjects are particularly liable to fistula in ano, which helps to protract the termination of the disease. I have seldom observed this complication, and when it existed, it has appeared to exert no influence over the progress of the case."[1]

M. Andral says that he had met with only one instance of fistula in ano in eight hundred patients manifestly affected with phthisis in different stages, and he expresses a decided judgment against the commonly entertained opinion that this connection is frequent.[2]

M. Louis says: "I have not been any more successful than M. Andral, and I can readily account for the common error on the subject of fistula in ano in phthisical subjects by the habit, still adopted by medical men, of making analysis of their cases by the aid of memory—that is, of attempting impossibilities—and obstinately refusing to count in cases where it is obvious that that process cannot be dispensed with."[3]

Sir James Clark also says that, although he has often met with fistula in ano, he has not been able to trace any connection between it and phthisis further than its probable dependence on abdominal plethora, which so frequently precedes the latter malady.[4]

Mr. Quain says: "The belief which has long commonly prevailed, that there is a proneness to the formation of fistula in ano among persons laboring under pulmonary phthisis, has, like several other opinions resting on general impression, been shown not to stand the test of the strict observation of facts."[5]

Dr. Gross says: "It is a pretty common opinion that phthisis frequently gives rise to anal fistula, establishing thus, as it were, a sort of an issue which, by diverting from the affected organ, retards, as is supposed, the progress of the original malady. Respectable as the authority certainly is by which this notion is sanctioned, it is entirely at variance with the experience of every intelligent observer of the present day. The circumstance, I am convinced, is in a great measure, if not wholly, accidental; at any rate, I can truly say that it has rarely occurred in my practice, nor have I witnessed it more than three or four times in my dissections of phthisical subjects."[6]

The following extract of a letter, addressed to the writer, is from the late and lamented Dr. W. A. McDowell, who during his life treated more cases of consumption than any other physician in the Mississippi Valley:

"DR. BODENHAMER:

"DEAR SIR: Yours of the 29th ult., relative to complications of fistula in ano with phthisis, was duly received. That the complication is frequent, and that the

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H. Walshe, M.D. Second edition. 8vo. Lon[illegible]

fistula exerts a salutary influence over the phthisis, I believe is the general impression of the medical profession. Yet I am not able to furnish you any valuable personal experience on the subject, never having met with the complication but twice in the whole course of thirty-two years' practice. In one of these cases both diseases were cured, the fistula first; in the other both diseases continued unto the death. Yet the well-known irregularity of the bowels in phthisis, the relaxing influence of diarrhœa and the alternate irritation of constipation, would seem necessarily to conduce more than ordinarily to anal ulceration; but the idea of any beneficial influence from this, or from any other intestinal irritation, in the treatment of a disease in which so much depends upon the condition of the digestive functions as phthisis does, is unexplained, and I think inexplicable. If the revulsive influence of a counter-irritant were necessary, I should prefer to establish it upon any other part of the body," etc.

Statistics.—With regard to the question of the frequent or the infrequent occurrence of anal fistula with phthisis, I will cite Mr. Allingham, of St. Mark's Hospital, London, who, in a very able article on "Fistula in Conjunction with Phthisis," says: "For my own part, I am quite convinced that a very considerable percentage of fistulous patients have more or less tubercular lung affection. I have endeavored to find out what the percentage is, and have carefully gone over a period of nine years in private practice, from 1871 to 1880, and find that, out of 1,632 cases of fistula seen by me during that period, 234 had phthisis, either active or latent."[1]

According to an estimate I myself made in 1860, with special reference to this very question, I found that, out of nine hundred and sixty cases of anal fistula which came under my immediate observation during a practice of nineteen years, that is, from 1841 to 1860, seventy-three cases were accompanied by well-marked phthisis in its several stages, from its inceptive to its advanced or confirmed stage. The anal fistula in fifty-five of these cases seemed evidently to have been the result of the phthisis. It may be remarked that the discrepancy with regard to the ratio of such cases, which has been noticed, may perhaps be owing to the fact that those surgeons who treat the diseases of the rectum as a specialty are more apt to see more of them, and notice them more particularly, than the general practitioner, or those who have declared that they have seldom seen them.

The relation between anal fistula and phthisis.—The next question is: Is there any relation or connection between fistula in ano and phthisis pulmonalis when these two diseases coexist in the same patient, and, if so, can it be explained? Some authors maintain, as I have already shown, that no such connection exists between them; and, if there is such, they deem it inexplicable. Now, that there is such a relation or connection between the two diseases, when thus associated, is a point in pathology which may be easily traced, explained, and established. It is well known that there is a large amount of the cellular membrane which invests the inferior extremity of the rectum; that this tissue in this vicinity has a large number of veins; that these veins, in the advanced stage of phthisis, can have but little adventitious support, in consequence of the great absorption of fat in such cases, the emaciation of which is always strongly marked in the adipose cellular membrane and muscles. Tubercular deposits in the lungs, too, must in a greater or less degree interfere with the return of the blood from the veins; and the constant impulse communicated to the anal region by coughing must also greatly tend to the production of anal abscess and anal fistula. Indeed, disease of the lungs, and especially tubercular degeneration, is that which most commonly gives rise to abscess and fistula of the anus; and this may also be accounted for by the well-known tendency which exists to ulceration of the intestines in phthisis, or to retarded venous circulation, as already stated. From these several considerations, and the proneness to suppuration in the cellular tissue of the rectum, we can at once account for the connection, as well as the frequent occurrence and concurrence of these diseases with phthisis pulmonalis.

Are anal fistulæ natural emunctories?—I will now quote the opinions of some distinguished authors who consider anal fistulæ, when coexistent with phthisis pulmonalis, as natural emunctories, and therefore should not be treated or interfered with in any way, but let alone, believing that these two diseases are in sympathy and have a mutual dependence upon each other. As a proof of this they say that when the fistula first forms the lungs are always at once relieved. The phthisis is immediately suspended in its destructive course, and as long as the fistula keeps open and continues to discharge freely so long is the patient respited. When these authors speak of an operation in these cases they mean the knife operation.

M. Velpeau says: "Experience proscribes the performance of the operation for fistula in ano in consumptive patients, first, because in most instances the fistula moderates the progress of the pulmonary disease; second, because it is usually caused by the ulceration of one of the thousand tubercles with which all the organs are then cribbled; third, because the wound rarely heals up, but suppurates abundantly, and reacts in an injurious manner upon the ensemble of the organism; and, fourth, because if by chance it closes up, it is remarked that the pulmonary affection, which was momentarily suspended, rarely fails to become thereby aggravated."[2]

Dr. Bushe says: "From what we have said when treating of stercoraceous abscesses, it is very apparent that a great many of them depend upon disease of the lungs; therefore, when they degenerate into fistulæ we should not operate on them, else their healing will give rise to an increase of the pulmonary disorder and curtail life. There are also other sympathetic fistulæ which it would be improper to meddle with, as those depending upon disease of the uterus and spine, as well as those which occur in the last stages of other organic diseases."[3]

M. Ribes observes, in his inimitable essay, that, according to his experience as well as that of others, the fistula in ano in phthisical subjects should remain undisturbed, and that it is not only useless, but even dangerous, to subject such patients to the operation.[4]

Sir Astley Cooper says: "Often, before a person perishes from phthisis he has a fistula in ano, and this is the reason fistula is considered as a dangerous disease, although in reality it is not so, but it is the consequence of the more important diseases which destroy life. The surgeon often brings discredit upon himself by operating in these cases in the last stage of phthisis, when no operation ought to be performed and when it is impossible the disease can be cured; therefore that death, which is the result of pulmonary disease, is falsely attributed to the fistula in ano."[4]

Mr. Colles says: "Are there any circumstances, general or local, that should deter us from venturing on relieving a fistulous patient, who is also suffering from phthisis, by the knife operation? There are both. I mentioned to you that experience proved, in particular instances of fistula in ano, a connection or sympathy between the local disease and grave pulmonary affections; now, if you meet a case of this kind, never attempt to operate if you find on inquiry that the patient had a chest affection for some time, that there came on the local complaint about the rectum, and that on its appear-

ance the other complaints were relieved; any operation that you perform for that man's fistula would hasten his death."[1]

M. Lisfranc is of opinion that it is very improper to operate for anal abscess or for anal fistula in phthisical subjects, for that death from phthisis in all probability will succeed the cure. He further states that he has often seen natural emunctories prolong the life of phthisical patients for a greater length of time than those established by art.[2]

It will be perceived, from the very able and distinguished authors I have presented—and many more might be named—that they fully confirm the popular prevailing opinion in the profession, that anal fistulæ, when associated with phthisis, are considered as natural emunctories and highly beneficial to the lungs; and that it is not at all justifiable to attempt the treatment or the cure of the fistulæ in patients suffering from phthisis, or in those predisposed to it.

It was this theory that induced the celebrated Baron Heurteloup, of Paris, a number of years ago, to believe that artificial fistulous drains or exutories would be equally as beneficial to consumptives as the spontaneous or natural ones represented by the fistulæ; and it was this belief that caused him to practise, at the Hôpital de la Charité, the operation of establishing artificial fistulæ in tuberculous patients in whom no anal fistulæ existed. This practice in his hands, however, met with no success; the derivative effect of the anal irritation made no decided impression upon the lungs. Those, however, who believe in the beneficial effects of the natural fistulæ in phthisical patients, do not admit that artificial substitutes will ever answer any good purpose. The benefit, however, resulting from the establishment of an artificial drain does not depend upon the large quantity of the discharge, but upon the degree of irritation that is caused and kept up upon the surface; hence, in my opinion, artificial drains are much better than the natural ones, so called, as they are completely under control and may be located and regulated exactly to suit the nature of the case. Had Baron Heurteloup established an exutory upon the chest instead of a seton in the anus of his phthisical patients, he might have benefited them more. It is strange that any intelligent physician would ever think of establishing a drain in the anal region to relieve phthisis.

The plausible theory that an anal fistula is salutary, and a derivative remedy in phthisis and must be let alone, as contended for by authorities, is, in my opinion, a serious error, and has proved so in numerous instances. It is true, I have seen patients in the advanced stage of phthisis apparently benefited on the first appearance of an anal fistula; they were unexpectedly, as it were, restored to better health, and their pulmonary affection became quiescent for the time being; but the improvement proved not to be permanent; it did not last long; the discharge from the fistula either continued to increase, or it dried up, and the patients, sooner or later, sunk. As a general rule, anal fistulæ greatly aggravate the pulmonary affection by impairing the constitutional powers, especially if attended by a copious discharge of pus and much irritation. The principal indication in all such cases is to build up, not to deplete.

I have never seen a case of phthisis, in any stage, cured by a fistula in ano, or even the life of such prolonged to any length of time, and, according to my experience, it never does any permanent good in any instance. All such cases, therefore, should have the advantage which a proper and judicious treatment offers, recollecting that an anal fistula may more frequently be the primary cause of phthisis than the cure or the mitigation of it. I have yet to see the first bad results from attempts at curing both diseases in such patients by proper treatment. It is true that in all cases in which the fistula appears in the last stage of phthisis, which is not uncommon, when all hope of the patient's recovery is gone, it would be improper, as well as useless, to attempt its cure, if, indeed, it could then be done; that is, if a phthisical patient with an anal fistula, in whom the phthisis has made rapid and serious inroads upon the respiratory organs—especially if attended by hectic irritation, profuse sweats, cough, colliquative diarrhœa, etc., and the fistula not painful, distressing, nor discharging too freely—no prudent surgeon would institute such operative proceedings for the treatment of the fistula that would in the least be calculated to shock the nervous system and to impose an additional burden upon the vital functions.

Differential diagnosis.—Some of the diseases of the pelvic region, especially anal abscess and anal fistula, sometimes produce, in weak and emaciated subjects, hectic fever, night sweats, cough, expectoration, and great physical and mental depression. Such cases are sometimes diagnosticated as phthisis by superficial observers, when no organic disease of the lungs really exists. In such the anal fistula is let alone, and allowed to reduce the vital powers of the patient by keeping up a copious and constant drain upon the vascular system, and a continued irritation of the nervous system, respectively; so that in course of time the lungs also become seriously affected, and death is sooner or later the result. This is no imaginary occurrence, as I could here report several such cases that came under my own observation.

Bronchitis.—Chronic bronchial catarrh sometimes simulates tuberculous phthisis so closely that it is well calculated to deceive, especially if attended, as it sometimes is, by persistent cough, expectoration, loss of color and strength, shortness of breath, and in some cases even hectic fever, night sweats, and diarrhœa. I have treated successfully a number of cases of anal fistula associated with chronic catarrh of the bronchiæ, which had been previously pronounced confirmed phthisis, and all treatment of the fistula interdicted on penalty of speedy death from phthisis.

Tuberculous disease of the rectum.—It is said that tubercles in the lungs are essential to their existence in other organs—that is, that they are always developed in the lungs first. But this is not always so, for I myself have, in several instances, found them, or what are commonly called tubercles, in the glands of the rectum when their existence could not be diagnosticated in the lungs. They seemed in these instances to have been developed in the glands of the rectum first. As a general rule, however, whenever they are developed in any one organ, they invade all others: doubtless originating in the lungs in the majority of instances.

Tuberculous degeneration of the rectum requires prompt and energetic treatment, or it will speedily result in ulceration and fistula; and it is the disease commonly called consumption of the bowels, and often attended by many of the symptoms of tubercular phthisis—which it very much simulates and in which it ultimately terminates unless timely arrested. Here the disease originates in the rectum, but subsequently terminates in the lungs, the rectal disease being the primary affection. On the contrary, however, it is well known that in protracted phthisis the rectum becomes greatly attenuated, all its coats being thinned and wasted, and sooner or later diarrhœa sets in, and patches of ulceration of the mucous membrane take place. These ulcers vary in form and size, being mostly circular depressions in the mucous membrane and not large; when they occur low down, between the internal and external sphincters of the anus, they are almost certain to result in abscess and fistula. These ulcerations in the rectum are by no means uncommon in phthisical subjects, and are, with their concomitants abscess and fistula, one of the complications of phthisis. Here the primary disease is phthisis, and the ulceration, the abscess, or the fistula, whichever obtains,

[1] [illegible]
Pg. [illegible]
[2] [illegible]

is the effect or the consequence of it. This plainly shows the connection between the two diseases.

There are, however, other ulcerations of the rectum almost identical in character with those already described, which are independent of phthisis, being the result of other chronic affections, as the ulcers which are known to occur in the last stages of low fevers, in chronic dysentery and diarrhœa, or in persons of a lax, lymphatic, and scrofulous constitution. Such ulcers, if not cured, are liable sooner or later to result in abscess and fistula in ano, and ultimately in phthisis in those predisposed to it.

Treatment.—Now, the most important and practical point for the surgeon to consider in this controversial affair is not whether anal fistula and phthisis are seldom or often found in the same patient, or whether, when thus found, there is an intimate or no connection between the two diseases; but it is whether anal fistulæ, when found in phthisical patients, should be let alone or treated, and if treated, by what method. These are the important points.

Before treating a case of fistula in ano, the surgeon should never neglect to ascertain to a certainty whether or not pulmonary disease is present in the case. If phthisis or a strong predisposition to it exists, which a careful physical exploration of the chest will always disclose, the treatment, if any, must be regulated to suit the case.

It is an established canon of surgery that, in order to cure an anal fistula, it must be cut—that is, divided with the bistoury; and it is also equally a law of surgery that when an anal fistula is complicated with phthisis it must not be cut, but let alone.

In accordance with the theory of non-treatment in such cases, the patient is advised not to have anything done for the fistula, as any interference with it, or the cure of it, would only accelerate the pulmonary affection and hasten his death. It is strange, passing strange, that with the abundant resources of the present advanced stage of surgery all surgical treatment of the anal fistula in such cases should be proscribed. I readily admit that to attempt to cure such cases by the knife operation would be highly improper, and it was doubtless in reference to this operation alone that this opinion was first advanced, and not to other proper and judicious surgical measures, of which there are certainly such.

The practice of the non-treatment in the cases under consideration, as advocated by the authors I have cited, and by others equally distinguished, is, however, happily and surely becoming antiquated. There is not one good reason to be urged in its favor, except in those cases in the last stage of phthisis. The views of authors generally upon this subject are anything but clear and sagacious; although able and highly distinguished, as they most certainly are, they too often allow themselves to adopt certain fanciful theories of disease, and strive too much to confine nature within definite bounds and arithmetical calculations.

In the several cases of phthisis I have named, which are at all proper for surgical treatment of the fistula, I prefer the operation by ligature to that by the knife; it has never been productive of any injury in my hands, but, on the contrary, in producing the most happy results, as I could, had I the space, illustrate this article by a large number of well-authenticated cases. I am therefore decidedly of the opinion that if any surgical operation for the fistula be adopted, it should not be by the knife, but by the ligature; for the method by the ligature is much safer and judicious, for if it does not tend to cure the phthisis, it does not at least accelerate its progress; whereas the method by knife in such cases must prove injurious in the highest degree, both in its present and future consequences. We are therefore neither justified nor warranted, by either experience or reason, in operating with the knife in such cases.

The knife operation requires the patient to be placed under anæsthesia, which is contra-indicated in phthisis; it also requires the patient to be confined to his bed and his room for a longer or shorter period; whereas when the ligature is employed no confinement is required; he can be up and about and in the open air all the time. This is of the greatest importance in the treatment of phthisical patients.

The ligature, if properly employed, does not cut or divide the fistulous sinus at once as the knife does, but it works its way through the tissues by a process of ulceration and suppuration, and not by a cutting process; indeed, it does not cut at all in the sense of the knife operation. It must be admitted, too, that the process is a healthy one, by all who understand the *modus operandi* of it and that of setons and issues. I have had abundant evidence, both from clinical observation and physiological experiment, of its great utility in the particular cases I have mentioned.

In operating by the ligature, the tightening should be effected by twisting instead of by a knot, for a knot cannot be regulated nicely or exactly; it is either made too tight and causes too much irritation and pain, or it is not made tight enough and does not succeed well. The process, too, of tying the knot frequently is attended with trouble and with pain; whereas the daily twisting of the ligature is easily made and exactly regulated, so as not to be too tight and painful, yet at the same time quite efficient.

I never hesitate to operate by the ligature in these cases, unless the lung affection is very far advanced; and even in such cases no harm to the chest difficulty will result from the ligature properly employed, or used as a seton. But in extreme cases the fistula should not be laid open, either by the ligature or by the knife, for if this is done the divided parts might not heal, and the patient left in a much more miserable condition than before, especially if he was suffering from diarrhœa. By the use of the ligature, however, this serious mistake need never occur, for the process of tightening must be conducted slowly, as a test, so that if granulation and healing did not promptly follow in the wake of the ligature, which can easily be ascertained from time to time, the tightening of the ligature could at once be stopped, and the continuity of the sphincter ani and parts preserved, the ligature either being removed or used as a seton. Indeed, if the surgeon should find, by the slow use of the ligature in such a case, that the sinus was not filling up and healing, and the patient not improving, but getting worse, he could at any time stop its use without doing any harm whatever. This cannot be done when the knife is used.

Blindness and Fecundity.—It has been asserted by Magnus, Fuchs, and others, that children, one or both of whose parents may be blind, are very liable to be themselves blind. Magnus investigated fourteen instances of married couples in whom one or both were born blind, or became blind at an early age, and found that, out of thirty-four children begotten of these marriages, eight, or 23.5 per cent., were either blind or weak-sighted. Mr. Simeon Snell reports, in the *British Medical Journal* of August 7, 1886, thirteen instances of marriages, one or both the contracting parties being blind, in which none of the children had any trouble with the sight nor any trouble with the eyes. He noticed one curious fact, however, and that was the small proportion of births. There were ten men with sighted wives, and excluding one whose wife had ceased to bear children before his blindness came on, there were left nine, with twenty-six children between them, or less than three per family. Adding to this number three blind couples with two children, there was a total of twelve with twenty-eight children, or two and one-third per family. It would almost seem, therefore, that such marriages are less than usually fruitful. Farr placed the number of children per wife in England as 5.2.

IS ELECTROLYSIS A FAILURE IN THE TREATMENT OF URETHRAL STRICTURE?

BY ROBERT NEWMAN, M.D.

THE electrolytic action (electrolysis) of a galvanic current on animal tissue is an undisputed chemical fact. Its application in the treatment of urethral strictures, practised by me for the past eighteen years, has been recognized almost universally, and followers of my method report success in thousands of cases. Good results have been reported by eminent medical men, *e.g.*, Belfield, Hutchinson, Farrand, R. Morris, Prince, Frank, Glass, Martin, and a number of others. We may add to these recent reports of distinguished surgeons of London, for example, W. E. Steavenson and W. Bruce Clark. A method so favorably spoken of naturally had many imitators, and it is not surprising that amongst these were many medical men illy prepared to do the operation successfully and totally ignorant of the proper procedure; their dominating idea being that any electrical instrument, used in any arbitrary manner, ought to give brilliant results, and failing in accomplishing these, they condemn and ridicule all reported cures by expert and careful operators.

In former papers on this subject I have tried to point out that failure in the cure of any given urethral stricture by galvanism was due to a number of causes, among the most frequent of which were the following: 1, Incompetence of operator; 2, mismanagement of the whole case; 3, wrong diagnosis; 4, faulty instruments.

I. *Incompetence of operator.*—To succeed, the operator must be an accomplished surgeon and electrician, knowing the difference between a galvanic and an induced current, in the first place; and, secondly, having some knowledge of the different results obtained by each current on animal tissue. An accomplished surgeon must he be, so as to be able to lightly introduce instruments into a diseased urethral canal and safely guide them through all parts of an abnormal or pathological passage.

The science of electricity belongs to the elementary course taught in our literary schools, and every student of medicine is expected to know all about the different actions of divers batteries. No one is competent to discuss what electrolysis might do and what it might not do unless he can tell an induced current from a galvanic circuit. Alas! how many of our medical men know when either current is indicated in the treatment of any disease requiring electricity? Hear what a professor of medicine in a provincial town says:

"Our students do not need and *would not understand* the higher and special branches of medicine, for they have no preliminary education. They come from their villages, some direct from the ploughshare; they go back again to their villages, where it is sufficient to treat fevers, zymotic diseases, bowel complaints, and to manage confinements. These branches they are taught, and if they need more let them come to us for consultations and operations."

This is one reason why many medical men look upon the treatment of disease by electricity as a sort of charlatanism—they do not know what it is because they have not been taught it at their schools. Now, do our best medical colleges in large cities give their students any better chance? I am not aware that any college has ever appointed a professor to the chair of electrical therapeutics, or that even electrolysis has been practically taught anywhere. As a curious fact I may mention, however, that the only professor of surgical electricity can be found in the Homœopathic College, in New York.

I will append the gist of a few letters that reach me almost daily, in support of my statement that the greater part of our profession are in ignorance of the uses, and even of the definition, of electrical currents.

Letter 1 asks: "How many cells shall I use of an eighteen-cell Kidder battery for *curing* stricture of the urethra by electrolysis, and how apply the bougies?"

Letter 2 writes: "How many cells of the battery do you generally use, and what size of a bougie?"

Letter 3 wants to know if the gravity battery is not best, and if he may use as an electrode a *rubber* catheter.

Letter 4 insists on using an electrical machine *to turn with a crank*, and as his two hands are engaged thereby, thinks one pole in the urethra is sufficient, asking, of *what use is the positive pole*, when the negative does the work?

Letter 5 reports that he has used such strong currents, that the patient *screamed with pain*, and notwithstanding the result was not satisfactory.

Some of these would-be operators do not even moisten the sponge, others *oil* their electrodes. I am surprised that even a reputable text-book on electricity advises to use the *positive* pole at the seat of the stricture, which must inevitably ruin the patient's urethra.

In my former articles, the modus operandi, how to use the galvanic current, the application of the poles, the strength of current, the duration of the séance, the intervals of application, and all minutiæ have been so exactly described that such ludicrous questions not only show the ignorance of the inquirer, but prove that he has not even intelligently read my articles. He has simply understood, in a misty way, that electricity can be used for curing strictures, and being disappointed at his want of success insists that the method is a delusion and a snare.

I cannot refrain here from mentioning a letter just received by a gentleman in Canada, who has studied electricity and its application in medicine and strictures.

He writes: "I meet with a great deal of scepticism and ridicule from my professional brethren. A professor in a medical college here walked up to me in a drug store and ridiculed my attempt to electrolyze some enlarged glands of the neck in a young man, and flauntingly offered to *bet* me $50 to $5 that I could not cure him, or do him any good. Nevertheless the neck is improving markedly. A professor of therapeutics argued with me that all batteries were alike, and the little old-fashioned crank-machine as good as any, but that they all did more harm than good. The professor of medical jurisprudence took a case away from me, telling the patient that electricity would do more harm than good. The professor of surgery asked me how I knew that destruction of tissue takes place in electrolysis," etc.

This ignorance and blind opposition is not only confined to teachers of medicine in Canada, but, in the face of daily accumulating facts, there are men in high standing in the United States who oppose the progress of electrolysis with an obstinate ardor that borders on vindictiveness. Thus we see the first cause of failure: "Incompetence of the operator."

II. *Mismanagement.*—Others, though having enough knowledge of the subject, will fail on account of carelessness: they do not give time to the details, are without any perseverance, and easily become discouraged if their first trials do not give them a perfect result. The following extract is from the letter of a prominent physician:

"April 10, 1885.—Assisted by Dr. B., who loaned me his battery, I pass a No. 0 (English) electrode through the stricture, but the patient was unable to bear the pain, even with only six or seven cells. Ether was administered, and with eleven cells I passed a No. 9 steel sound into the bladder.

"April 12th.—Passed a No. 8 (English) sound, this made the stricture bleed.

"April 13th.—Patient complained of chills and fever; ordered quinine. (N. B.—This was an attack of urethral fever, which passed away in a few days.)

"May 12th.—While absent from the city patient had an attack of retention, which was relieved by a catheter.

"May 22d.—Passed a No. 8 sound, much to patient's surprise. The stricture bled again.

"May 23d.—Electrolysis with ether as before. No. 10 was passed into the bladder, but only after the steady use of twelve cells for a long time.

"May 28th.—Passed No. 10 English catheter, drew off urine, followed by another chill.

"May 29th.—Still experiences some pain on micturition."

The doctor, in treating the foregoing case, violated nearly every rule which would lead to success.

First, he passed an electrode which gave pain; pain should not be given under any circumstances. If soreness is already present this is to be removed by appropriate remedies.

Second, he did wrong to give an anæsthetic, which follows from the foregoing—where there is no pain an anæsthetic is not required. The patient should be able to express his feeling as a partial guide to the operator.

Third, the current used was entirely too strong in this case. Eleven cells may be used perhaps in exceptional cases, where the battery fluid is weak and cells and elements small. Six cells would have been fully sufficient.

Fourth, more than one electrode was passed at a single sitting. The invariable rule is that no two instruments should be passed, even for several days after the operation.

Fifth, two days later an English sound was passed, making the stricture bleed, which showed that damage was being done to the urethra. Why No. 8 was selected after No. 9 had passed two days previously I cannot understand. The object is to enlarge the calibre of the urethra, during each subsequent sitting. This treatment also brought on two attacks of urethral fever, which will never happen with proper care.

Sixth, instead of allaying pain and irritation the doctor made matters worse, by using the sound and producing more irritation.

Notwithstanding all this mismanagement the patient and doctor were pleased with the improvement. One year later the operator wrote me, however, that the case did not turn out as well as he could have wished. He acknowledged his errors and reported other more successful cases.

I will conclude this article with some rules, as a safe guide for practitioners who wish to adopt the treatment of electrolysis in stricture of the urethra, which will also serve as answers to numerous questions received from correspondents.

1. Any good galvanic battery will do which has small elements and is steady; the twenty-cell Drescher battery, carbon and zinc, is an excellent instrument, sufficient, particularly, for the beginner.

2. The fluid for the battery ought not to be used too strong.

3. Auxiliary instruments, as galvanometer, etc., are important to the expert, but not necessary for the beginner.

4. For the positive pole a carbon electrode is used, covered with sponge, moistened with hot water, and held firmly against the cutaneous surface of the patient's hand, thigh, or abdomen.

5. For the absorption of the stricture the *negative* pole must be used.

6. Electrode bougies are firm sounds insulated with a hard-baked mass of rubber; the point is a metal bulb, egg-shaped, which is the acting part in contact with the stricture.

7. The curve of the bougie is short; large curves are mistakes.

8. The plates must be immersed in the fluid before the electrodes are placed on the patient, and raised again after the electrodes have been removed.

9. All operations must begin and end, while the battery is at zero, increasing and decreasing the current slowly and gradually by one cell at a time, avoiding any shock to the patient.

10. Before operating, the susceptibility of the patient to the electric current should be ascertained.

11. The problem is to absorb the stricture, not to cauterize, burn, or destroy tissues.

12. *Weak currents at long intervals.*

13. In most cases a current of six cells, or from two and a half to five milliampères, will do the work, but it must be regulated according to the work to be done.

14. The séance should be at intervals, not too frequent in succession.

15. The best position for the patient to assume during the operation is that which is most comfortable for himself and the operator. I prefer the erect posture, but the recumbent or others may be used.

16. Anæsthetics I like to avoid; I want the patient conscious, so that he can tell how he feels.

17. Force should never be used; the bougie must be guided in the most gentle way; the electricity alone must be allowed to do the work.

18. During one séance two electrodes in succession should never be used.

19. All strictures are amenable to the treatment by electrolysis.

20. Pain should never be inflicted by the use of electrolysis; therefore it should not be applied when the urethra is in an acute, or even subacute, inflammatory condition.

III. *A mistaken diagnosis* is another fruitful source of disappointment with many. It stands to reason that where no stricture is present, but some other disease of the urethral mucous membrane, and this is energetically treated with the galvanic current, no cure can result, and even some harm done. Still some have reported unfavorable to the efficiency of the current where there never was a stricture present. The following have been mistaken for stricture to my knowledge: Spasm of the bladder; the encroachment on the calibre of the urethra by an enlarged prostate; granulations and ulcers of the urethra; urethral abscesses, etc. Some tumor, neoplasm, or calculus may cause impediment to the flow of urine and be mistaken for stricture by the neophyte. Chancroidal and syphilitic conditions may still more complicate the diagnosis. I will give in brief one of these troublesome cases, which occurred in my own practice. Patient came from the South, entirely broken down, to be treated for stricture. Three were found, respectively 1 inch, 3½ inches, and 6½ inches from the meatus.

During June, 1885, his condition and general health improved under treatment. Electrolysis materially improved the two deeper-seated strictures, but the anterior one was not favorably influenced by the current, on the contrary, the induration spread toward the meatus.

July 11th.—Stricture close to meatus very much indurated, firmly matting together mucous membrane and subjacent tissues. Electrolysis was applied and succeeded in softening the tissues beyond my expectation. I was able to pass a French No. 25 well and for fifteen minutes; with six cells applied the current.

August 1st.—Stricture worse, scarcely admits No. 18 bougie, and submucous tissue hard and callous. I now put my patient on the mixed treatment, and it was astonishing to see the callous appearance vanish, and now the remaining stricture was easily removed by the current.

September 26th.—No. 26 French can easily be passed. A year later re-examination proved the complete cure.

Now I could understand why a friend of mine, who was well pleased with his results in deeper-seated strictures, kept complaining to me that he did not get favorable results whenever he treated strictures situated in the immediate neighborhood of the meatus, but that they would recontract, and sometimes become worse after treatment, notwithstanding the greater care taken and my rules literally followed. Taking into consideration that this gentleman took most of his cases from the venereal class of a hospital, the solution of the difficulty was easy in the light shed on it by my own case.

These cases are not so simple as they may seem to the readers of this paper, for in many of them no [illegible] symptoms can be discovered, nor will the patient admit, or know of, the probability of a syphilitic infection.

IV. *Faulty instruments* certainly may become a cause of failure, though an expert operator may partly overcome this cause by the skilful handling of even rude instruments. Nevertheless, a careful man will select the best instruments as an important factor to his success. A good outfit consists of: A *galvanic* battery, with conducting wires, sponge electrodes, connecting screws, bougies à boule, and a full set of electrode bougies. The latter should have a proper curve, must be smooth and well polished, and well insulated, except at the bulb. The latter, again, must have the proper size and shape. A set of tunnelled electrodes and a few auxiliary instruments complete the set.

The electrodes may be either curved or straight, the bulbs acorn- or egg-shaped. I prefer to have them with short curves. The tunnelled electrodes are of invaluable aid in strictures of small calibre, and if used properly will make false passages a fable of the past.

For a further description of the instruments used by me, and the modus operandi, I refer to my former articles, particularly to THE MEDICAL RECORD of August 12 and 19, 1882, and to [illegible] of January 3, 1885. The question asked so frequently as to the number of cells used cannot be answered more definitely than the dose of morphine to be given in different diseases can be answered by any one dose. The operator must select the strength of the current for each individual case.

It would certainly be desirable to express the quantity of electricity in positive numbers, but at present we have not yet uniform and reliable galvanometers. While I advise weak currents of about six cells, this measure does not express a fixed quantity, and at best is only relatively correct. The amount of electricity to be used depends partly on the work to be done, and also on the nature of the stricture. In the practical application other facts must also be considered; for example, the state of the atmosphere, whether it be humid or dry, exercises great influence on the current. In clear, dry weather six cells may do the work for which on an unfavorable day ten or more cells would have to be used. Even if we had a universal system of measuring our currents it would not be of any practical benefit in these cases, for the exact amount a patient could endure would have to be determined afresh at every sitting by the operator, for the patient will sometimes bear much less at times, and then, again, he will not be affected by a much stronger current.

There may be other reasons of failure, but I have already touched on so many that other causes will easily suggest themselves to an intelligent surgeon.

To judge from the many causes which might operate to produce failure in this treatment, it may seem very difficult to produce many good results. Such, however, is not the case, and with care and good management failures are the exception. All depends, as in every other operation, upon the skill and the talent that is brought to bear upon each case. In support of this let me cite a short report by a physician. He writes from Rockaway, N. J.:

"A gentleman came to me suffering from chills, following the repeated trial of passing an impervious stricture by Professor N——. He said the doctor had failed to pass any instrument whatever into the bladder, and had that day given up in disgust. I proposed electricity. He consented, and on examination I found three strictures, located deep in the urethra, two-thirds the distance to the bladder. The first sitting was prolonged to twenty minutes, a No. 8 acorn-shaped bougie being used at the seat of the stricture. I did not succeed in engaging it. One week later the seance was repeated in the same manner; did not succeed in passing to bladder. Two weeks later I used a straight tip in place of the acorn-shaped one, and succeeded in passing this through a corkscrew-shaped stricture one and three-eighths of an inch in length. At the next seance I passed readily a No. 10 bulb, acorn-shaped. Since then I have succeeded in obliterating it to such an extent that I can scarcely feel any constriction on passing the instrument. Patient has never had a chill or any untoward symptoms after any of the sittings."

The case speaks for itself. Here a professor, whose skill in using instruments is undoubted, was unable, at nine trials, to pass any instrument into the bladder, and acknowledged his incapacity to do it. By the aid of electrolysis another doctor, probably not as skilled in the manipulation of instruments in the urethra, succeeds.

Now, in conclusion, electrolysis of urethral strictures *must* and *will* succeed, in proper hands, in every case that is intelligently and judiciously undertaken. The operation itself needs a clear head, a steady hand, fingers which both see and feel, patience, and good discrimination in the application of the strength of current and length of sitting. In the strictest sense of the word, there *can be no failures* in dissolving away the dense tissue that constitutes a stricture, for electrolysis is based upon a fixed chemical action of the constant current on these animal tissues. Electrolysis cannot fail, but operators may, and do.

[illegible] AND MALARIAL GERM.

[illegible] M.D. [illegible]

As the attention of the medical profession has been recently directed toward the supposed parasitic origin of malarial fevers, no apology is necessary for this paper.

Patient No. 1,753 was admitted into the Post Hospital at Columbus Barracks, O., August 16, 1886. The patient was a negro man, aged twenty-six. He had been employed for the past two years as a cook, most of the time on board a boat which plied between Cairo and St. Louis.

When admitted into hospital he was suffering from a well-marked chill, which was followed by fever and sweating. The diagnosis of tertian intermittent fever was made. No quinia was administered, but the fever was subdued by antipyrin and acidulated drinks, and the bowels moved by a dose of calomel, sodium bicarbonate, and rhubarb, five grains each.

On August 17th the patient had a slight rise of temperature about the hour at which he had had the chill on the previous day.

On August 18th, about half an hour earlier than on August 16th, the patient had a severe chill, and during the paroxysm three specimens of his blood were taken and immediately placed under the microscope. These specimens were prepared in the following manner, suggested to me by Dr. Kinsman, of Columbus, O. The glass slides and thin covers were first carfully cleansed in water acidulated with hydrochloric acid, and then washed in stronger alcohol. A thin ring of pure vaseline was made on the slide. The diameter of the ring was somewhat smaller than that of the circular glass cover. A finger of the patient's right hand was carefully cleansed with stronger alcohol, which was allowed to evaporate. Then a narrow rubber band was placed tightly around the finger, about an inch from its extremity. A slight prick of the lancet in the finger's end was followed by the appearance of a small drop of blood. A glass cover was applied to the surface of the drop without touching the finger, and immediately placed over the vaseline ring on the slide in such a manner as to have the blood dropped adhering to the cover within the ring.

On placing one of the specimens under a one-eighth inch objective the following bodies were observed: Nu

merous red and some white blood-corpuscles, and several almost transparent bodies about the size of the red corpuscles. These bodies seemed to be surrounded by a membrane less transparent than its contents and presented the following appearances: These were at first globular and contained a few dots, which were in motion among themselves. At the end of two minutes they had assumed an oval shape, still containing dots, and two minutes later they had assumed the appearance of slightly curved, short cylinders, containing a few dots. Several similar bodies were observed later, which assumed a more fixed globular shape, and did not become cylindrical. Other bodies were observed which contained dots and had several thread-like bodies attached to them. These were longer on one side than on any other. These bodies moved in their entirety; their dots moved among themselves, and there appeared to be a waving movement among the transparent filaments.

This last-described body ultimately got near enough to a red blood-corpuscle to apparently touch it with its longer filaments, and then all of its movements ceased. These bodies were observed by Major Charles R. Greenleaf, Surgeon U.S.A., as well as by me. A careful examination, five or six hours after the one recorded, failed to demonstrate these bodies to Dr. Kinsman, Dr. Greenleaf, and myself. It should be stated, however, that the blood had thoroughly coagulated before this examination was made.

The administration of quinia in full doses soon removed all malarial symptoms; and after the administration of the quinia no more bodies of the kind described were observed.

Clinical Department.

OPERATION FOR HARE-LIP SUCCESSFULLY PERFORMED UNDER COCAINE.

Dr. A. H. Goelet, of 243 West Fifty-fourth Street, reports the following: Miss Mary N——, eighteen years of age, had a shallow though very disfiguring cleft in the right side of her upper lip, which she desired to have corrected by operation. It was decided to use cocaine, although the patient was timid and sceptical in regard to the full anæsthetic properties of the drug. Assisted by Drs. Cutler and Kinch the writer performed the operation on July 7th. One assistant compressed the coronary artery between his thumb and finger at either angle of the mouth, and the cocaine was injected hypodermatically in the vermilion border on either side of the notch, ℥viij. being used on each side, and the operation was commenced within two minutes. The lip was transfixed near the border on the left side of the notch, and the incision carried to the apex of the cleft. The same was done on the opposite side, and the flaps drawn down. The projection being too great at the margin of the lip, the flap was cut obliquely through, a small piece removed, and the coaptation was made perfect. The whole was neatly sewed with fine iron dyed silk which had been sublimated in a solution of 1 to 1,000. One hare-lip pin was introduced near the vermilion border, the wound dusted with iodoform and sealed with flexible collodion. Over this were placed several layers of antiseptic absorbent gauze, which was held in place by a strip of rubber adhesive plaster from one cheek to the other.

The pin was removed on the third day and the other sutures on the fifth day, when union was found to be perfect and complete. There was very little œdema.

The patient experienced no pain during any step of the operation (which occupied nearly three quarters of an hour) except that occasioned by the prick of the hypodermatic needle. A sponge was placed in the mouth and with the co-operation of the patient, who kept it pressed against the front teeth, the blood was prevented from reaching the throat.

Those who have experienced the difficulties of this operation under ether will readily appreciate the advantages of this method, which insures perfect quiet and the co-operation of the patient.

The projection at the margin of the lip which was intentionally left at the time of the operation has now disappeared and the result is perfect.

FAILURE OF LARGE DOSES OF ANTIPYRIN IN A CASE OF SUNSTROKE.

Dr. M. Singer, house surgeon of St. Mary's Infirmary, Galveston, Texas, reports the following case: "A man, name unknown, aged about forty, was brought to St. Mary's Infirmary on August 5, 1886, at 6 P.M. At about three o'clock in the afternoon he had been found lying unconscious in the street by a police officer who, supposing him to be drunk, took him to jail. Two hours later the jailer, noticing the deep coma and intense bodily heat, had him conveyed to the hospital. Upon admission the pulse was 120, full and strong; respiration, 40, stertorous, with short intermissions about every five minutes; temperature, 108.4°. Skin hot, dry, and parched; coma complete; pupils slightly contracted. I gave fifty grains of antipyrin under the skin, applied sinapisms to extremities, and ice on the head. At 7 P.M. the patient's condition was unchanged, every symptom as before. Gave ten grains of antipyrin under the skin.

"At 8 P.M. the patient's general condition remained the same, except that he had passed his water in bed. Pulse, 122; temperature, 108.8°. Gave hypodermic, twenty grains of antipyrin. At 9.30 P.M. symptoms unchanged, except for the temperature, which now was 109.8°. The excessive heat of skin could well be felt through the patient's shirt and the bed sheet. Gave hypodermic, twenty grains of antipyrin.

"At 11 P.M. pulse 140, weak; temperature, 109.8°; respiration 18, stertorous, puffy, sometimes catching and irregular.

"Patient died at 11.30 P.M. Temperature at time of death, 110°; post-mortem temperature taken three-quarters of an hour after death, 108.5°; pupils slightly dilated. The temperature in this case was taken in the axilla. No other antipyretic measures were employed but those metioned above. I have used the same preparation of antipyrin in many febrile conditions, and in doses of from twenty to thirty grains, without failing at any time to reduce the fever heat. In this case, however, one hundred grains of the drug given under the skin within a period of three and a half hours proved to be utterly worthless. No diaphoresis was produced at any time after the administration of the remedy."

INTESTINAL OBSTRUCTION FROM AN UNUSUAL CAUSE.

Dr. E. T. Gould, of Sonora, Cal., writes that he was called on the morning of June 27th in consultation upon a case of obstruction of the bowels occurring in a patient fifty-eight years old. Laparatomy was advised, but as the attending physician did not concur in this it was decided to use morphine hypodermatically in sufficient doses and with sufficient frequency to produce entire freedom from pain for forty-eight hours, and then to give a full dose of castor-oil. The treatment was ineffectual and death occured on June 30th. Five hours later the autopsy was made. The cause of the obstruction was found to be strangulation of four feet of the ileum by a loop of diverticulum. The diverticulum, an inch and a half in length, was from the ileum, and its tip had become adherent to the bowel as a result of previous inflammation. It was located three feet from the ileo-cæcal junction.

POISONING FROM CORROSIVE SUBLIMATE IN OBSTETRICAL PRACTICE.

Dr. P. J. Clark, of Oakland, Neb., writes: "I have the misfortune of adding another case of intoxication from corrosive sublimate to the already long list which I see reported in The Medical Record of July 10th. On November 19, 1885, I attended a case of [illegible] labor, and delivered by podalic version. The uterus was washed out by a solution of bichloride of mercury, 1 to 1,000, and all seemed to go well until the third day, when the patient complained of considerable pain. This was quieted by morphine, and the vagina irrigated twice daily with a solution of the bichloride, 1 to 1,000. In a few days the patient complained of great pain in the abdomen, and suffered from profound depression of the nervous system and salivation. She had been very restless and could not sleep for several nights before, and now she said she was going to die. The irrigations with the solution were discontinued, and chlorate of potash was administered. In a week the woman had entirely recovered. I was very much surprised at the time, as I had never met with such an experience before and had seen no cases reported. I would not use as strong a solution again.

CIRCUMCISION UNDER COCAINE—IMPROVED OPERATION.

Dr. E. R. Palmer, Professor of Physiology in the University of Louisville, writes that, desiring to perform circumcision under cocaine, he determined to use Corning's method of sequestration. "The patient, a young man, twenty years old, with a complete congenital phimosis, was seated in a chair, and the penis was seized by my assistant and drawn upon firmly. A Martin bandage, seven-eighths of an inch wide and a yard and a half long, was next applied, the first turn being made behind the scrotum to prevent slipping, and the bandage being then wound tightly back and forth from the symphysis pubis to the corona and back again. An ordinary hypodermatic syringe was next filled with a six per cent. solution of cocaine, and the needle, directed toward the extremity of the penis, was passed at four different points through the skin over the glans, a fourth of the contents of the syringe being discharged each time into the subcutaneous tissue. No attempt was made to introduce the drug from the mucous surface. In about three minutes I began adjusting a Rogers clamp, occupying as many more minutes in getting it placed to suit me and screwed down. The prepuce was removed with one stroke of a pair of long curved scissors, and the clamp removed. The dorsal artery was found not bleeding; the frænum was not cut. The mucous membrane was split up, and some eighteen sutures leisurely introduced. The bandage was now removed and, contrary to expectation, no hemorrhage ensued. Less than a drachm of blood was lost during the entire operation. The wound was dressed loosely with absorbent cotton wet with equal parts of listerine and water. Not a twinge of pain was felt after the last needle-puncture had been made. The young man, of nervous temperament, was at first quite pale, but later assisted in the stitching, and as he washed his hands after the operation remarked that his penis still felt dead. The wound healed in forty-eight hours by first intention.

"The advantages of the bandage are several: It wholly controls bleeding, it localizes the action of the cocaine, and it increases the facility with which the penis can be handled during the operation. The reverse direction for application, that is, from behind forward, will be found the best, because the easiest, and fully effectual."

Dr. Palmer adds that he performed the operation a second time in the same manner with equally good results as regards anæsthesia. But the continuous suture was used, and although perfect coaptation was accomplished, some trouble was experienced later from swelling and from syphilitic induration of the parts. It was attempted to remove the suture but this was found impossible, and the writer thinks it would have been better had interrupted sutures been employed. The case is now doing quite well, however, and the result will be good.

THE VALUE OF DELAYED OPERATION IN MAMMARY CANCROID.

Dr. C. Deaderick, of Knoxville, Tenn., reports the following instructive case: "In May, 1878, I was called, in consultation with two other physicians, to see Mrs. E. L. M——, a lady fifty-eight years old, who had an infiltrating scirrhous cancer of the breast. The disease had been in progress about two years (she had nursed her husband a few years before, who died of cancer) and was far advanced, nearly the whole breast being involved, as well as the axillary glands on that side, which were very much enlarged. A rough ulcerated and bleeding surface, about two and a half inches in diameter, covered the most projecting portion of the tumor. The patient's general health was extremely poor. There was loss of appetite, great emaciation, nausea, and feebleness. Taking everything into consideration, the case did not seem to be a favorable one for surgical operation. There was one point upon which we all agreed, viz., that she would not live through the summer without surgical interference, but upon the matter of the propriety of a surgical operation we could not agree. The attending physician took positive ground against it. The writer took positive ground for it, and our colleague said he would sustain either one of us. This "dead lock" necessitated the calling of a fourth, Dr. J. M. Boyd, who decided with the writer. Accordingly on May 26, 1878, I, assisted by Drs. J. M. Boyd and J. P. Park, removed the whole of the diseased breast and all of the enlarged axillary glands. The prostration of the patient, after the operation was completed, was such that we thought it imprudent to remove her from the operating table for several hours.

"The wound healed promptly, but in July following a nodule, about as large as a filbert, developed near the cicatrix, and on July 23d, after freezing the parts with rhigolene spray, I removed it. Again, on August 21st I removed another small lump from near the edge of the cicatrix, but at a different point; again, on October 20th, another from a point two inches above the outer end of the cicatrix; again, on February 17, 1879, another from near the edge of the cicatrix; and finally, on May 21, 1879, another, an inch and a half above the middle part of the cicatrix.

"After that the disease seemed to be exhausted, and there was never any evidence of a return of it. After the first operation the patient's health improved very much and continued good for several years; but her constitution was always delicate, and at the time of the original operation she was prematurely old physically.

"About eighteen months ago her general health began to fail, and she died in her sixty-sixth year, August 9, 1886, of marasmus, having lived seven years two months and nineteen days after the last removal.

"Taking into consideration the general condition of the patient and the advanced condition of the disease, the result was extraordinary, and is a strong argument in favor of the knife *persistently* used in removable cancer."

THE PRAIRIE ITCH.

Dr. John F. Lockwood, of Batavia, Ill., writes that while living in Central Wisconsin he had several cases of the so-called "prairie itch," or "Michigan itch," and always succeeded in curing it by the following: Acid. sulph. dil., [illegible]

dose, a teaspoonful three times a day, half an hour before meals whenever there was any acidity. Several writers in *The Medical Age* maintain that the disease is merely a variety of scabies, and state that they have always obtained a speedy cure by the use of some form of sulphur externally applied. And Dr. Hope, in a recent number of THE MEDICAL RECORD, writes that his experience with the disease in Kansas was very similar.

CORROSIVE SUBLIMATE IN THE TREATMENT OF PURPURA HÆMORRHAGICA.

DR. R. A LANCASTER, of Gainesville, Fla, writes: "A short time since I had a patient suffering from a severe attack of purpura hæmorrhagica. There were well-marked purpura spots larger than buck-shot scattered over the body, limbs, forehead, and roof of the mouth. There was also free and persistent hemorrhage from four decayed roots of teeth on either side of upper and lower jaw. In spite of the heroic use of all the recognized hæmostatics and astringents, both internally and locally, the bleeding continued for seven days. Having tried all the remedies that I had ever heard recommended, with apparently no result, I decided to try the local application of a strong solution (1 to 240) of the bichloride of mercury.

"The mouth was well rinsed with this, and pledgets of cotton wet in the solution and applied to the bleeding surfaces.

"The bleeding was at once arrested and convalescence established. This result would seem to support the 'germ theory' of this disease. The patient was so low and so nearly bloodless that the hemorrhage may have been about to cease of its own accord, but if I should ever have another such case to treat I shall certainly give the remedy a further trial—both locally and systemically."

CONSTITUTIONAL SYMPTOMS FROM COCAINE

DR. FREDERICK S. WILLIAMS, of Puyallup, Wash. Ter., reports a case of operation for lacerated cervix uteri in which, as the patient objected to ether, cocaine was used. A pledget of absorbent cotton, saturated with a twenty per cent. solution of cocaine, was placed over the cervix, and after a time the edges of the laceration were pared without giving rise to any pain. Then four minims of the same solution were injected on each side of the wound. No pain was felt from the needle-punctures, but in about a minute and a half the patient began to speak as if with an effort, saying, "I feel as faint," and gasped as if struggling for breath. She was immediately placed on her back, with head lowered, and told to breathe deeply.

She obeyed for a few times, then recommenced her gasping, which she continued for about a minute. Then followed shallow breathing for four or five minutes, when she began to rally a little, and the breathing became gradually stronger but irregular.

Her pulse at first was very rapid, irregular, and weak, then became during most of the time of the shallow breathing almost imperceptible, gradually returning with the approaching normal respirations.

Consciousness at once was dulled, and during the period of the shallow respirations was completely lost.

At the end of about ten minutes she rallied, her pulse, respirations, and consciousness returning to their normal condition. She was then very much frightened, and asked what time it was and about her children, stating she had been asleep and felt numb all over. These symptoms were, as manifested, uninfluenced by drugs or stimulants, as none had been given, except a dose of potassium bromide at the beginning. Dr. Williams then proceeded with the operation, and introduced three stitches without any further mishap. There was very little hemorrhage from the cut surfaces. The patient stated that some of the medicated applications to the uterus had pained her more than did the operation.

CONGENITAL MALFORMATION OF THE EXTERNAL EAR.

DR. E. H. JONES, of Weyauwega, Wis., writes: "In THE MEDICAL RECORD of August 7th Dr. T. R. Williams, of Beechtree, Pa., relates a case of congenital malformation of the external ear which was very similar to one occurring in my own practice. On January 3, 1886, I delivered Mrs. F—— of a healthy male child weighing about eight pounds. The nurse calling my attention to the right ear, I found upon viewing it posteriorly it appeared to be perfect, but an anterior view revealed the fact that the meatus and folds of the cartilaginous portion were completely obliterated; the tragus was also wanting. The parts were covered by integument of the same character as that of the cheek, with the exception that two small warts were situated near the site of the closed meatus. The child has remained perfectly healthy, never having shown any symptoms of trouble arising from the closed ear."

TREATMENT OF ASPHYXIA OF THE NEWBORN.

DR. EDWARD REYNOLDS, of Boston, Mass., referring to the mode of restoration of asphyxiated infants by suspension by the heels, writes: "I wish to describe a method in which I have great confidence, which combines the advantages of this position with a most efficient and yet gentle, artificial respiration. The child lies on its back, head downward, upon the operator's forearm held nearly perpendicularly to the floor, and is retained there by his fingers, which are hooked over its shoulders. In this position the child's arms fall downward by the sides of its head, and their weight, aided by that of the thorax itself, at once draws the ribs into the position of complete expansion of the chest. If, now, the thorax be compressed against the forearm by the other hand and suddenly released a most satisfactory respiration is the result. This method, combining as it does the advantages of an afflux of blood to the brain with a most efficient artificial respiration and an easy escape of fluid from the trachea, seems to me well worthy of a more extended trial, especially as my experience with it, though not very large, has been most satisfactory."

IODOL IN OCULAR THERAPEUTICS.—Iodol is a combination of iodine and of pyrol. It is a grayish powder, containing eighty-five per cent. of iodine, and possesses the properties of iodoform without its disagreeable smell. It may be employed either as an ointment, with an equal weight of vaseline, or in alcoholic solution with glycerine. It is but very slightly soluble in water. According to M. Trousseau, in a cummunication made by him to a recent meeting of the Société de Thérapeutique, excellent results have been obtained from its employment as a pomade in cases of blepharitis with ulceration, in affections of the lachrymal passages, and in chronic conjunctivitis. On the other hand, it has but slight effect in acute conjunctivitis. The ointment is much superior to the yellow precipitate one in phlyctenular or granular conjunctivitis, and in chronic (torpid) ulcers of the cornea. In fine, iodol is superior to iodoform by its marked anæsthetic and antiseptic properties, and by its rapid influence upon the cicatrization of rebellious ulcers. —*Dublin Journal of Medical Science*, July, 1886.

Progress of Medical Science.

Peripheral Neuritis in Locomotor Ataxia.—The history of peripheral neuritis has been enriched in the past few years by numerous works which have had the effect of causing a modification of some of the views formerly held as to the pathology of tabes dorsalis, and as to the pathogeny of certain complications of this affection. MM. A. Pitres and L. Vaillard have reviewed in an article in the *Revue de Médicine* for July, 1886, a number of cases hitherto recorded, and have added a report of five coming under their own observation. From a study of these cases they are led to conclude that: 1. The peripheral nerves in tabes are often the seat of inflammatory changes. 2. Neuritis in this disease does not differ in any of its anatomical characters from other recognized forms of the non-traumatic affection. 3. The topographical distribution of this inflammation is very variable; it may affect the sensory nerves, the mixed nerves, or the visceral nerves. 4. In most cases, though not in all, it begins at the terminal extremities of the affected nerves. 5. The extent and gravity of the neuritis bear no constant relation to the duration or the extent of the medullary lesions. 6. The complication plays no part in the production of the specific symptoms of tabes, such as the lightning pains, ataxia, abolition of the patellar reflex, etc. These symptoms would seem to be due to the sclerosis of the posterior roots and of the posterior columns of the spinal cord. 7. On the other hand, certain irregular symptoms, occurring at times in locomotor ataxia, seem to have a direct causal relation to peripheral neuritis. Such are: *a*, the areas of cutaneous anæsthesia or analgesia; *b*, the trophic cutaneous affections, perforating ulcers, various eruptions, falling of the nails, etc.; *c*, certain motor paralysis, with or without muscular atrophy; *d*, arthropathies and spontaneous fractures. 8. The visceral crises occurring in locomotor ataxia are also, perhaps, in certain cases, the consequence of neuritis of the corresponding visceral nerves.

Paralysis Agitans without Shaking.—Dr. Beevor related several cases of paralysis agitans without tremor, in a paper read before the Medical Society of London. In these cases, fixed attitude, rigidity of the neck, with difficulty in looking up, expressionless countenance, slow delayed movements, difficulty in rising from the sitting posture, monotonous and mumbling speech, were present. The writing in nearly all the cases was wavy; retropulsion, apropulsion was frequently present. Charcot, Buzzard, and Gowers have published cases of this kind. It seems possible for paralysis agitans to run its course without any tremor being present.—*Birmingham Medical Review*, July, 1886.

Congenital Bilateral Dislocation of the Radius.—Dr. R. Heelis reports the following case in *The Lancet* of August 7, 1886: A boy, eight years old, was brought to him on account of trouble with the arm. Examination showed a dislocation of the left radius, which was easily reduced; but any slight motion would throw it out of place again, especially pronation. In complete flexion the dislocation was reduced: it could easily be reduced by manipulation in any position of the forearm, as the joint was so loose and there was some lateral movement possible in the humero-ulnar articulation. The right radius was partially dislocated—that is to say, only about one-fifth of the circumference of the head rotated on the external condyle of the humerus, the rest projecting behind and to the outer side of the joint. This dislocation was irreducible—at any rate, unless considerable force was employed. The external humeral condyles on both sides appeared to be unusually small, hence the difficulty of retaining the dislocated bone on the left side in position. The dislocation therefore was similar on both sides, being outward and backward. When the arms were extended there was a considerable projection on the outer and upper part of both forearms, produced partly by the outward dislocation and partly by the disproportionate development of the supinator longus. All the normal movements could be performed by both forearms, but pronation and supination, especially the latter, were very weak, and their place was usually taken by movements of flexion and extension. The patient seldom used his right arm, which was less muscular than the left. The existence of some deformity had been noticed by the parents since his first year, and even from birth. There was no history of any accident to the boy or to the mother during gestation, or at delivery, which was normal.

Tuberculosis of the Tongue.—There are two forms of lingual tuberculosis, the primary and the secondary, both of which are rare, but the former especially so. Secondary tuberculosis of the tongue is usually met with in the latter stages of pulmonary phthisis, and occurs in the form of superficial and dirty-looking ulcers, which are exceedingly painful and add greatly to the sufferings of the patient. The primary form is a very uncommon affection, or at least it is so considered, though it may be that this belief has arisen from mistakes in diagnosis, lingual tuberculosis having been regarded as carcinoma and reported as such. Dr. G. Feurer reports two cases of the disease in the *Correspondenz-Blatt für Schweizer Aerzte* of August 15, 1886, and the following description is taken from his article: The muscular tissue is very seldom the seat of tubercular disease, and this is the explanation of the freedom which the tongue enjoys, for of all muscular structures it is the one most frequently attacked. Primary lingual tuberculosis occurs usually in individuals who have acquired or inherited a predisposition to the disease, but who are as yet free from the specific lesions in other organs. In addition to a more or less characteristic, often granular, ragged, and dirty ulcer, there is a deep infiltration in the substance of the tongue. This infiltration consists of a number of more or less sharply defined nodules, the size of a millet-seed, either isolated or lying closely together. Sometimes these become agglutinated into a whitish-gray, transparent, or cloudy mass, presenting an appearance like that found sometimes in tuberculosis of the testicle. Microscopical examination shows these nodules to be tubercles with all their histological characteristics. Tubercle bacilli are also present. There may, in certain cases, be such a marked swelling of the tongue as to completely fill the mouth, showing the marks of the teeth and interfering with speech and mastication, and presenting the picture of a subacute glossitis. At times there is fever of a hectic type, and the patient's general health becomes seriously depressed. There is usually considerable pain, which is increased by attempted mastication. The pain is, however, localized, and the radiating pains, to the ear and elsewhere, such as are commonly noticed in carcinoma, are absent. This is due, the author says, to the fact that while cancer spares no tissues, but invades all, nervous as well as others, which lie in its path, tuberculosis adheres to the connective-tissue spaces and affects the other tissues only indirectly in interfering with their nutrition. The submaxillary glands are infected in tuberculosis of the tongue, but they are never enlarged to such an extent as they are in carcinoma. The disease occurs probably by direct infection through wounds of the tongue, for if the bacilli were brought through the blood-channels, they would probably be arrested in other more predisposed organs. In both of the cases observed by Dr. Feurer there had been wounds of the tongue which did not heal, and in the immediate neighborhood of which the infiltration commenced. The treatment of lingual tuberculosis consists in the early removal of the diseased foci, and of the swollen glands in the submaxillary region. The prognosis is as yet unsettled. In some cases there has been no return of the disease, after a number of years.

either in the tongue or in other organs. In one case of the author's the patient died, four months after the operation, of meningitis, apparently tubercular, though an autopsy was not made. Usually, when the lingual affection has not been removed the disease has in time attacked other organs, generally the lungs or intestines.

Potassium Permanganate in Burns and Frost-bites.—Dr. A. A. Züboff writes in a Russian journal that, having tried potassium permanganate in upward of sixty cases of burns and frost-bites, he has arrived at the following conclusions: 1. Permanganate of potash, in the shape of frequently changed compresses (linen or hygroscopic cotton-wool soaked in a solution of one or two grains to an ounce of water), is an effective remedy for frost-bite of the first and second degrees. 2. The same lotion acts as successfully in burns of the first degree. 3. It is less successful in burns of the second degree. At all events, the permanganate lotion rapidly relieves inflammation around blisters, and pain, and prevents suppuration when blisters remain intact. In this category of cases it is advisable to employ a weaker solution (half a grain, or even less, to an ounce). Two cases are given in detail. One of the patients received (when taking a vapor-bath) a scald of the first degree, extending from the breasts to the inguinal folds anteriorly, and between the same levels posteriorly. Pain disappeared within an hour after the application of the permanganate lotion. Soon the epidermis began to peel off. She was cured within eleven days. Another woman had a similar scald of the face and a hand. She also obtained rapid relief, the treatment lasting a week.—*London Medical Record*, August 16, 1886.

Inversion of Uterus with a Large Fibroid.—Dr. Goossens, of the Rotterdam Hospital, mentions, in a Dutch medical journal, an interesting case of inversion of the uterus complicated with a fibrous tumor of the wall. The woman was first admitted into the hospital in 1881, for menorrhagia which had lasted for three years, or since her last confinement. On examination, a large tumor was found in the vagina, the base being evidently within the uterus. By means of bimanual exploration, the organ was felt to be enlarged and hard. While the surgeons were considering whether a vaginal operation or a laparotomy offered the best hope of success, the patient solved the question for them by leaving the hospital. After the lapse of four years she was brought back, apparently dying from profuse hemorrhage. During defecation, a large rounded mass was extruded about eight inches from the vulva; this proved to be a myoma of the fundus of the now inverted uterus. An elastic ligature was at once applied to the base of the myoma, care being taken not to wound the peritoneum inside the inverted organ. The hemorrhage being thus arrested, the tumor was removed, and, antiseptic measures being taken, the uterus was replaced. The patient was ultimately discharged, cured.—*British Medical Journal*, August 21, 1886.

Bone Drainage in the Treatment of the Early Stages of Hip Disease.—At a recent meeting of the Surgical Section of the Academy of Medicine in Ireland, Mr. Stokes read a paper on this subject (*Dublin Journal of Medical Science*, August, 1886). The author commenced by alluding to the fact that hip excision is not maintaining the position in surgical estimation that other joint-resections occupy, which he believed to be due to a twofold cause—first, the rarity of the cases in which the disease is sufficiently limited to enable the disease to be completely removed; and second, the difficulty of maintaining fixation of the limb after the operation. He pointed out how very disheartening the statistics of the operation are, as shown by Dr. Yale and many German operators of eminence. He also showed that the results of the cases treated by methodical expectation, especially where suppuration in the joint occurs, are hardly more encouraging, and quoted Hueter's opinion that suppuration in the hip-joint is a "nearly absolutely fatal process." The principles of treatment that, as a rule, are mainly relied on were then discussed, and shown to be too frequently unsatisfactory. The author then discussed the views of Sir B. Brodie and others as to the pathology of the early changes in scrofulous hip disease, and inclined to the opinion that those held by that distinguished surgeon were correct—viz., that in the great majority of instances the primary changes consisted in an inflammation in the cancellous tissue of the bone, the result usually of a traumatism. The views of other surgeons and pathologists were then mentioned, notably those of Mr. Cooper Foster, Mr. E. Owen, and Mr. Hilton. Assuming that Sir B. Brodie's views were correct, the author drew attention to the desirability of giving an early exit to the inflammatory exudations in the cancellated tissue of the bone, and thought that could be best done by the manner recommended originally by Mr. Kirkpatrick—viz., by perforating the bone and freely applying potassa c calce along the tract of the wound of both the soft and osseous structures. In illustration of the advantages to be derived from this line of treatment, the author gave the details of three cases in which he employed it, and in which the results were very encouraging.

Treatment of Cystitis in the Female.—In a paper read before the Obstetrical Section of the Academy of Medicine in Ireland, by Dr. T. More Madden (*Dublin Journal of Medical Science*, August, 1886), the writer laid considerable stress on the efficacy (after the failure of milder measures in otherwise intractable cases) of freely dilating the urethral canal so as to cause a temporary incontinence of urine, and thus allow of the direct application of whatever local medication was deemed necessary to the endo-vesical mucous membrane. This plan of treatment Dr. Madden recommended as a substitute for Emmet's operation, or the formation of an artificial vesico-vaginal fistula in some cases; and at the same time he exhibited a new dilator, which he had designed and used for this purpose in many cases of cystitis.

The Oertel Treatment of Disorders of the Circulation.—It is not yet two years since Oertel published in Munich his new views on the treatment of disorders of the circulation, yet they have already met with a great amount of acceptance in Germany, and especially among medical men practising at the various baths, who, with very good reason, believe that such places offer greater facilities for carrying out this mode of treatment than can be enjoyed by patients living at their own homes.

Oertel's general idea is that, in many cases, owing to an accumulation of blood in the venous side of the circulation, the heart has more work to do than it can perform; and therefore his first object is to diminish the amount of work it has to perform by the reduction and regulation of the amount of fluid in the system. His second object is to repair alterations which have taken place in the respiratory and circulatory organs, and the further disturbances in the other organs connected with them, as far as is possible. It is a much simpler matter to effect the first than the second object. The only way of carrying out adequately such an abstraction of fluid consists in the energetic increase of the watery excretions, and in a correspondingly great diminution in the amount of fluid taken into the body, so that the loss of fluids through the skin and kidneys may no longer be covered by what is absorbed from the stomach and intestines, and that the superfluous amount of fluid in the body—partly in the blood-vessels, and partly in the tissues—may be brought down to a normal quantity. In short, the principle is—withdrawal of fluid, and introduction of only small quantities of it. Fluid may be withdrawn through the kidneys, or through the intestines; but it can be much more safely removed through the lungs and through the skin. Oertel's grand method of carrying out the latter intention is by

exercise in the open air, by ascending heights, and by active muscular exertion producing free perspiration. This is the marked recommendation of Oertel, and wherever there are hills at any health-resort patients are now advised to follow it; and rival stations compete for superiority in the advantages which they offer in this respect. Rapid excretion of fluid, however, can be produced more quickly than by exercise, by the use of hot-air and of vapor-baths, more especially of the former; and hence such baths, which are now to be found at most health-resorts, are recommended as a substitute, or, at all events, a supplement, to the hill-climbing cure. Of course, in such treatment special attention has to be directed to the condition of the heart; yet it is remarkable to what extent hot-air and vapor-baths have of late days been considered permissible in heart-affections; but it is agreed that they are entirely inapplicable in mitral stenosis, and especially in disease of the tricuspid valves or of those of the pulmonary artery, and also in affections depending on atheromatous disease of the aortic valves. The second means of diminishing the current of blood in the system is by cutting off supplies of fluid, by using a diet which shall improve the quality of the circulating fluid. The following are some of Oertel's directions about diet: There must be no long table d'hôte dinners; small quantities of nourishing food must be eaten more frequently. During the meal no fluid is to be taken. One hour, or an hour and a half, after meals small quantities of light, red, or white wine may be allowed; wine or water, if possible, to be iced in case of the patient complaining of thirst. Strong wine, tea, coffee, and beer are disallowed, unless specially ordered by a medical man. As to solid food, Dr. Oertel is liberal, and allows great variety. One must specially avoid fat, soups, potatoes, pastry, puddings, unless they are very light. He hopes by his regulation of the supply of fat, albumen, and hydrocarbons, to favor perfect digestion and perfect oxidation, and thus improve the blood. (It may be remarked, in passing, that Oertel's dieting is considered to be as effective in polysarcia as the Banting cure.) As to the second object, or the reparation of harm already done to the organs of circulation, something is supposed to be gained by the great improvement that has taken place in the blood, especially in its being less watery; but the greatest change is expected from muscular exertion. We have not space to follow Oertel into the detailed directions he gives as to walking and ascending hills, how the patient must not be tempted by the violent action of his heart to sit down and rest; how, on the contrary, he is to avoid sitting down, and remain standing, supported by his stick or by some fixed point, till the heart has become quiet. Further, the patient, when he has got through his prescribed distance, is not to sit down, but to remain standing until he turns to walk back. By such and by other strenuous exertions the muscles of inspiration are strengthened by deep inspirations; the alveoli of the lungs, before pressed together, are expanded again, and allow air to enter into them, and the functions of oxygenation to be performed. At the same time, exercise strengthens the muscular fibres of the heart, relieves it of a portion of its fat, and increases its power of working, which is aided by the improved character of the blood to be propelled. The various baths are vieing with each other in proclaiming the advantages they offer for hill-climbing; and at Baden and other stations an elaborate system has been introduced of marking the length and the degree of ascent of every path through the woods. Those who employ compressed-air chambers say that they produce analogous effects, and may be used with most advantage in the case of patients who are not able at first to take the strenuous exercise recommended. The use of compressed-air chambers produces a permanent expansion of the pulmonary space, relieves difficult breathing, and increases the depth of inspirations. During their use more oxygen is conveyed to the blood, the beats of the heart become slower, and the heart is strengthened. In these days the employment of muscles and kneading, or massage, going under the name of curative gymnastics, are in great favor; and a claim has been put in for them as subsidiary aids in expanding the thorax and strengthening the muscles of the heart and chest. Such is a general outline of the doctrines on the improvement of the circulation that are at present current in Germany. Of course, these views have not met with universal acceptance, but the general opinion on the subject is thus represented. A patient with an affection of the heart, who was formerly forbidden every exertion, who was to guard against any, even the slightest, excitement of the heart's pulsation, is now told to ascend hills, to excite his pulse—a proceeding which was formerly considered to be certain death, but which is now believed to strengthen the muscles of the heart. The patients suffering from accumulation of fat and from fatty heart, who were formerly ordered drinking cures exclusively, are now told, "Get rid of your water; be thirsty." These are rapid springs in practice, which everyone cannot take at once. But Oertel's principles will eventually be accepted by all. They carry with them such a stamp of truth and simplicity that it is impossible that they should not be correct. That the improvement to be gained by the use of this system should be permanent, it is necessary that the reduced and more solid diet shall continue to be adhered to, and the climbing of hills be continued. It need scarcely be added, considering the organs that are the subject of it, that this mode of cure is not to be lightly undertaken without the cognizance of a physician. With reference to the absolute novelty of the hill-climbing recommended by Oertel, it may be remembered that a somewhat similar exercise was prescribed some years ago to patients with pulmonary affections, but not when cardiac complications were known to be present. It remains to be seen how far the new system of treatment will stand the test of time and of experience. [illegible]

Ichthyol in Rheumatism.—Dr. Dubelir reports eight cases of rheumatism treated by ichthyol at the Moscow Military Hospital. Six of the cases were acute, and two chronic. The preparation was used both internally and externally. The affected parts were first washed off with soap and water, dried, and then smeared with the ichthyo-sulphate of ammonium, and covered with cotton or flannel. After long use, or when the skin was insufficiently or not regularly washed, pustules were caused by the application. Internally the author gave fifteen to twenty-five drops of the ichthyo-sulphate of ammonium in a wineglass of water, or else administered the remedy in the form of pills of one and a half grain each, from six to twelve pills a day. In every case the pains were quieted, but the swelling of the parts did not disappear. The writer advises, therefore, that ichthyol be given in rheumatism only for its anodyne effects.—*Russkaya Meditsina*, August 10, 1886.

Gelosine as a Vehicle for External Medication.—Gelosine is a mucilaginous principle extracted from the *gelidinum corneum*, a native of Japan. It is a colorless, amorphous, non-nitrogenous substance, which forms the basis of vegetable jellies. It is soluble in warm water, rendering solid on cooling five hundred and fifty times its own volume, the result being a fine transparent jelly, which is very slow to undergo putrefactive changes. M. Guérin considers that gelosine is admirably adapted for purposes such as poultices, vaginal and urethral suppositories, etc. The jelly undergoes gradual contraction, in which process any medicinal substance contained is slowly expressed until complete dessication is effected, thus bringing it constantly into contact with the skin. The only preparation needed is to dissolve gelosine in suitable quantity in warm water, and then add the medicinal agent, either in solution or in a state of fine division.—*London [illegible]*, July 15, 1886.

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HEREDITARY DISEASE AND RACE CULTURE.

DR. GEORGE J. PRESTON contributes an interesting article with the above heading to the *Popular Science Monthly* for September. "Men have seemed," says the author, "to regard mental superiority as incompatible with physical perfection. They have rationally regarded the highest type of man as formulated in the old proverb, 'Mens sana in corpore sano,' but in their actual living have regarded it as an absurdity." The article strongly brings out the comparative estimate placed upon physical qualities by the ancients and by those of modern times. The old Spartans left all their weak and sickly offspring to die on the mountain-sides. In Athens, where the "state" idea was so strongly grounded, each man aimed at personal physical perfection, so that his services might be all the more valuable to the state. In those days the force of hereditary disease was scarcely felt. The first appearance of any taint caused its possessor to fall behind in the struggle. It was truly a survival of only the fittest.

Now the present state of affairs is entirely different. A higher development of ethics has come about. Philanthropy and the science of medicine have caused this change. We acknowledge the great-heartedness of the one and the skill of the other. A more perfect knowledge of disease has all but banished the dreadful plagues from off the earth. The average of human life is longer than ever before. But at the same time this same ministration has preserved and intensified hereditary influences. Men live now more comfortably than did their ancestors. At the same time they are more cursed with the effects of hereditary disease. In spite of longer lives they are physically weaker. We erect hospitals to save the weak and deformed. "To anyone who has had access to any large city hospitals it is a pitiful sight to see the multitude of children who are tided over a few years and are then sent out into the world branded with a hereditary taint to propagate their wretched breeds.'

This is certainly a dark picture, but who can say that its colors are gloomier than the facts warrant? The existing prevalence of phthisis and insanity are directly confirmatory of its truth. "The very precautions against death are themselves in some measure new causes of death. Let the average vitality be diminished by more effectually guarding the weak against adverse conditions, and there inevitably come fresh diseases." We see a child flat-breasted, with a graceful, slender neck, suspiciously fair complexion, and a thin, white skin with the veins prominent therein. We at once suspect a tuberculous taint. A course of cod-liver oil with other tonics may tide the child over its present dangers. Yet if the child grows up and marries, we know that the chances are almost ten to one that the offspring will manifest a similar taint. So much, then, is race culture affected by hereditary disease.

Dr. Preston does not condemn the philanthropic spirit of the times. Still less does he belittle the results which medical skill can accomplish. He makes a plea for greater care and foresight on the part of those about to marry in their choice of life-partners. He enjoins upon parents the duty of making this subject in all its bearings plain to their children. He admits the natural repugnance which obtains when "breeding" ideas are connected with human marriage, but he shows how this repugnance has led to a false modesty, and this to steady race degeneration. "We know of no government," he says, "sufficiently strong to forbid the banns of a man whose lungs are full of tubercle, or a woman upon whose person cancer has shown itself." We should not, however, go back to the old Spartan rigor. People will marry and be given in marriage as in the days of Noah so till the end of time. But we can best lighten the burden by educating the people up to the proper views on this question. Care through generations may eliminate evil tendencies just as carelessness may augment them.

THE UTILIZATION OF CLINICAL MATERIAL.

A PROBLEM of the present day is how to make the most judicious use of clinical material. Overcrowded benches at dispensaries attest its abundance. Its scarcity at some of our teaching institutions proves its unequal distribution. This scarcity has led in some quarters to most pernicious practices to further personal ends. Given, then, this abundance of material in the aggregate, how can the best use be made of it?

Physicians may be divided, broadly speaking, into two classes—those who practise among the well-to-do people, and those who work among the persons of small or, at best, very moderate incomes. The latter people, as a rule, are allured by the dispensaries away from private practice. They do not consider themselves as belonging to the poorer classes, and would indignantly repel any suggestion of being "shown to students." Below these two classes of patients is still a third class of persons, who make up the great bulk of clinical material. They fairly swarm here in New York. To their credit be it said, that they are rarely reluctant to be utilized for purposes of instruction. Yet if they receive their medical advice and often medicine free, there is no reason why they should not in this way return some equivalent for it. We would most strongly condemn the practice of offering any pecuniary inducement to this class to pose as clinical material. It almost puts a premium on disease. Yet we know that at some of our teaching institutions strong inducements to attend, outside of legitimate professional advice, are made to poor patients. If this practice continues much longer, physicians living in the neighborhood of these institutions will have to organize to defend themselves.

Such an organization is neither visionary nor impracticable. Any person had rather be treated in private than publicly, and if physicians, in order to protect themselves, agree to treat poor patients free at their offices, the dispensaries would soon show a falling off in attendance.

It is a great task to reform the existing order of things. We had hoped great things from the "Charity Reform" committee appointed at the Academy meeting held some months ago. We must confess our disappointment, for, as far as we know, nothing decisive has come about from the action then and there taken. It does not seem an impossible task to so associate the teaching institutions and non-teaching dispensaries in such a way that the patients treated in the latter should be sent to the former to be utilized for teaching purposes. Many of them doubtless would not go. Enough of them probably would go to supply the demand; for the most successful teaching clinics rarely utilize more than half a dozen cases at a time, but into the merits of these few they go most thoroughly. Treatment might be refused at the dispensary a second time, unless the patient should bring from the teaching institution a card certifying to his or her actual attendance at the latter place.

The result of such a plan would be an increase in the amount accomplished with our present facilities, both in treating the sick and in utilizing them as clinical material. The annual reports of the dispensaries might not be able to indulge in such fervid rhetoric as to the amount of good done. The managerial bosom might not swell quite so high with self-complacency. So long, however, as institutions ask for contributions from the public, so long the latter has a right to demand that the policy of the managers shall be "the greatest good of the greatest number."

THE EFFECT OF COLD APPLICATIONS TO THE HEART IN FEVER.

Dr. F. T. Grigorovich (*Vratch—The Practitioner*) has studied the effect of applications of cold to the præcordia in fever. It is known that in irritable conditions of the heart cold applied here has a sedative effect. Grigorovich, however, hoped to lessen directly the temperature of the heart, and in this way prevent the pyrexial changes. He thinks that he succeeded, but it seems very doubtful when we remember that the heart is being constantly charged with hot blood from the viscera and muscles.

The method employed was to apply ice-bags to the præcordia, keeping them on for several hours daily, so as to exclude reflex effects. The cases in which it was tried were of typhoid fever. Dr. Grigorovich thinks that if applied early the ice-treatment has a beneficial effect on cardiac action.

His conclusions are as follows:

"(1) The cold undoubtedly reaches the heart itself, and thus produces an effect on its action.

"(2) This effect is particularly noticeable when the cardiac beats are increased in frequency in consequence of a high temperature quickly attained, and where a certain degree of sensitiveness to a high temperature exists.

"(3) The effect of cold is not marked at the end of a prolonged attack of fever, pathological changes having by that time probably become established in the muscle.

"(4) The local application of cold is only capable of protecting the heart-muscle from the effects of a high temperature when it is applied assiduously from the commencement of the [illegible].

"(5) Under its influence the action of the heart improves, the number of beats diminishes, while their force and amplitude increase.

"(6) Cold applied to the region of the heart diminishes the gravity of the *typhoid* condition, and favorably influences the respiration.

"(7) With regard to the effect of cold applied to the region of the heart on the course of the general temperature, I cannot at present express a decided opinion, as I did not investigate the question; but, in the results which I obtained, indications may be found of the possibility of its causing some diminution of the temperature.

"The observations were carried out in 1884 in the Rostoff local military hospital."

MULTIPLE NEURITIS.

Dr. Buzzard[1] made a happy selection when he chose the subject of neuritis for the series of Harveian Lectures delivered by him last winter, for in the past five years neurologists have made some very notable advances in the study of this subject. The most important outcome is the establishment of the fact that cases of extensive paralysis, of very varying types, may be caused by an inflammation and degeneration of the peripheral nerves alone, the nerve-centres not being involved. These forms of paralysis from multiple neuritis have not been systematically described in current text-books, although clinical histories of this kind have been reported at different times since the days of Dr. Lettsom, one hundred years ago; and Dr. Buzzard quotes an excellent description by Dr. Graves of an epidemic of multiple neuritis occurring in Paris in 1882.

Multiple neuritis, as it ordinarily occurs, is a disease due to some toxic agent or miasm entering the system. It occurs as an epidemic disease in Japan and South America under the name of beri-beri, or kakké. In India it has been described under the name, "iguipeditis," and in France, "acrodynia." Besides being caused by an infection, it may follow severe exposures, these producing what is termed the "rheumatic" form; while much more often, in this country and in Europe, it is due to alcoholic excesses, diphtheria, lead, arsenic, and possibly other metallic poisons. The symptoms in typical cases are those which would naturally follow from an irritation and partial or complete loss of function of the nerves of the extremities. The patients suffer first from sensory disturbances, prickings, numbness of the hands and feet; then burning sensations, smarting pain, tenderness of the soles of the feet, or perhaps of the whole extremities. With the sensory symptoms there gradually appears motor weakness, and, in bad cases, complete paralysis, the lower extremities suffering the more. In some cases even the nerves of the face and eyes are in-

[1] Part [illegible] and other Diseases of the Nervous System. By [illegible] M.D. London. 1886.

volved, and the patient lies in bed a helpless wreck. There are very rarely indeed any "girdle-symptoms," such as occur in myelitis, and no bladder or rectal troubles.

The muscles gradually atrophy, and show partial or complete degenerative reactions. They are often tender to the touch, and especially over the motor points and along the course of the nerves.

Sometimes, and particularly in the alcoholic and diphtheritic cases, the symptoms resemble those of locomotor ataxia. The tendon-reflex is gone, there is very marked ataxia, without any great loss of muscular power. These cases are known as alcoholic, or diphtheritic, etc.—pseudo-tabes. They may deceive the physician if he is not careful, and lead to a wrong prognosis as well as diagnosis.

The prognosis in multiple neuritis is usually good. The patient recovers, though it often takes a very long time. Only in cases where the muscular atrophy is very great is full restoration to health impossible.

Pathologists divide neuritis into two types—the interstitial and the parenchymatous or degenerative. The two forms generally are more or less mingled.

The interstitial form predominates in the more localized cases due to rheumatic influences, phthisis, infective fevers, and injuries.

It is the parenchymatous form which is found in the multiple neuritis that we have been describing. It has been observed that parenchymatous neuritis often attacks only certain segments of a nerve, and it has then been called segmental neuritis.

Multiple neuritis runs a course lasting several weeks before recovery sets in, and the length of time of convalescence depends upon the severity of the case, and especially the extent of the muscular atrophies.

In the treatment not much can be done at first except to relieve the symptoms. Later, electrical, mechanical, and tonic treatment is indicated.

THE COREAN GOVERNMENT HOSPITAL.

In former times it was usually the missionary who first gained admittance to the hermit nations of the East, and whose labors did much to dispose the inhabitants of those countries to look with less disfavor upon the outside barbarians from Europe and America. Now the physician is perhaps the most powerful agent in reconciling these peoples to the introduction of Western ideas. When they find that we can give them health they soon learn to believe that we have other gifts of nearly equal value to bestow upon them, and they are ready to submit to civilizing influences and to receive the agents of progress in exchange for these advantages.

One of the surest indications that Corea, which was until very recently a forbidden land, will soon remove all remaining barriers to intercourse with Western nations is to be found in the fact that there has been in existence, for nearly eighteen months, a Corean government hospital in Seoul, under the direction of two American physicians, Drs. H. N. Allen and J. W. Heron. The establishment of the institution resulted from a fortunate accident. Dr. Allen happened to arrive in Corea just before the *émeute* in 1884, and was called upon to treat the wounds of Prince Min Yong Ik, who had recently returned from this country, and was favorably disposed toward Americans. An account of this case and of its favorable termination was published in THE MEDICAL RECORD of June 13, 1885. The results obtained in this case, and in those of a score of wounded Chinese soldiers, were so favorable, and demonstrated so clearly the superiority of Western medical science, that Dr. Allen soon had more Corean patients on his hands than he could attend to. An application was then made to the government for a hospital, and the suggestion was immediately acted upon. A good site was selected, the buildings upon it made suitable, several hundred dollars appropriated for medicines and appliances, and a full staff of Corean officers appointed to represent the government in the institution. The hospital was opened on April 10, 1885, and the number of patients applying for relief increased so rapidly that it was soon found too great a tax for one man, and accordingly Dr. Heron was sent for.

During the first year 265 patients were treated in the hospital, and 136 operations were performed; only 6 deaths occurred. In the dispensary 10,460 patients were treated, and 394 operations were performed. A medical school has also been opened in connection with the hospital, and the government has nominated 16 students, of whom 12 will be admitted and will receive as thorough and practical a course of instruction as is possible under the circumstances.

It is impossible to estimate the amount of good which this undertaking is destined to accomplish, and Drs. Allen and Heron certainly deserve great credit for having done so much and so well in so short a time. And we hope that the success of their undertaking in the future will be commensurate with the promises made by its beginning.

News of the Week.

THE AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will hold its next Annual Session at Pittsburg, Pa., October 12th and 13th.

THE AMERICAN RHINOLOGICAL ASSOCIATION will hold its fourth Annual Meeting in St. Louis, Mo., October 5th, 6th, and 7th.

ERRATA.—Our attention has been called to the following in THE MEDICAL RECORD for September 4th: P. 268, under "A Chair of Evolution," *philogenetic* should be *phylogenetic*, from the Greek φῦλή (a community related by descent), not φίλος (a friend), nor φύλλον (a leaf). P. 264, under "A New Brain Fissure," *gyre*, the English form of *gyrus*, is used in the article referred to as a brief synonym for *convolution*, and never instead of *fissure*. In the ninth line from the bottom, *caudal* should be *caudally* or *caudad*.

THE PARKES MEMORIAL PRIZE.—This prize, which consists of £100 in money and a gold medal of the value of fifteen guineas, is awarded every third year to the writer of the best essay on a subject connected with hygiene, the competition for which is open to medical officers of the British army and navy. The prize was awarded this year to Dr. Andrew Duncan, of the Indian Medical Service, the subject of the essay being "The Prevention of Disease among Troops during Military Operations in

Tropical and Subtropical Climates." The subject of the next prize is "The Etiology and Prevention of Yellow Fever," to be illustrated as far as possible from the personal experience of the writer.

A Training-school for Nurses for the Insane has been established by the managers of the Hudson River State Hospital in connection with the institution under their charge. It is intended for the instruction of those who wish to make a specialty of nursing the insane, either in private houses or public institutions. Graduates of general hospital training-schools will be admitted to the school for the period of one year, at the end of which time, after passing a satisfactory examination, they will receive diplomas bearing the seal of the hospital, and the signatures of the President of the Board of Managers, the Medical Staff, and the Principal of the Training-school. They will be paid at the rate of $20 per month during the first six months, and $25 per month for the second six months. For those who remain in the service of the hospital after the completion of this term special rates of remuneration will be arranged. Women, between the ages of twenty and thirty years, who are not graduates of general hospital training-schools, will be admitted to the school and receive a course of instruction covering a period of two years. After a satisfactory examination at the conclusion of this course, they will be granted certificates of graduation bearing similar signatures to the diplomas. They will receive from $10 to $17 per month, rated according to proficiency and time and value of service. Special rates will be made for hospital service after graduation. In connection with the hospital there is also a training-school for men who are between twenty and thirty years of age. The course of instruction covers two years, at the end of which certificates of graduation are bestowed upon evidence of competency. The men are paid at rates ranging from $16 to $22 per month, according to proficiency and time and value of service. Special rates are arranged with those who remain at the hospital after graduation. All the pupils and nurses are allowed board, lodging, washing, and medical care, if required, free of charge. Applicants for admission to the training-school must pass the preliminary examination required by the New York Civil Service Commission. This examination is conducted at the hospital by the officers of the institution, who constitute the Provisional Examining Board. Applicants must be of healthy constitution, and temperate and moral in habits, and must present letters, certifying to character and qualifications, from two or more responsible sources. The diplomas of trained nurses are received in lieu of letters. For the instruction and training of women, the managers have secured the services of Miss S. I. Hawley, a graduate of the Bellevue Hospital Training-school, with subsequent experience in a hospital for the insane. In her capacity of Matron of the Hospital and Principal of the Training-school, she gives daily instruction at the bedside and at class-recitations. Applications for positions in the training-school may be made to Dr. Joseph M. Cleaveland, Superintendent, Hudson River State Hospital, Poughkeepsie, N. Y.

The Penny Passed.—Dr. J. L. Gardner writes that his patient, who was reported to have swallowed a copper cent, successfully passed the latter after a lodgement of five weeks.

The Editor of "The Lancet's" Confession of Faith.—Some time before his death the late Dr. James G. Wakley made a special request that the following confession of faith should be introduced into any notice of his life which might appear in the pages of *The Lancet*: "Feeling my deep responsibility to God for the position in which, in His providence, He has placed me, I desire to testify to the comfort derived during my sickness from a lively faith in our Lord Jesus Christ, and that I die in the sure hope of a glorious resurrection."

The Cholera.—It is now stated that the cases which have been reported as cholera in Northern Italy are not such at all, but are cases of typhoid fever. Cholera has existed and still prevails, however, in Southeastern Italy (Bari, Brindisi, Lecce, etc.). Cholera is reported to have appeared at Aksu, in Central Asia. In Japan and China it is reported that the disease has been making frightful ravages. In the former country, according to the *Japan Gazette*, there have already been 59,000 cases, with 37,000 deaths, this year.

Free Dispensaries are almost unknown in France, there being but three in Paris, according to the correspondent of the *Provincial Medical Journal*.

The late Dr. John Burke.—At the last regular monthly meeting of the New York Medical Union, held September 14, 1886, Drs. P. J. Lynch, D. McSweeny, and Alexander D. Hunter being appointed a committee to take suitable action in regard to the death of the late Dr. John Burke, reported the following preamble and resolutions, which were unanimously adopted:

Whereas, It has pleased Almighty God to remove from this life, in the prime of his usefulness and maturity of his experience, our esteemed friend and associate, Dr. John Burke, a founder and former President of this Society; therefore be it

Resolved, That, while we bow in humble resignation to the divine will, we lament in the death of Dr. Burke the loss of a faithful friend and skilful physician, who contributed much from the fruits of his great experience and sound judgment to the interest of our discussions and to the usefulness of our Society.

Resolved, That we recognize in his successful professional career the encouraging example of what industry and intelligence, with spotless integrity of character, may accomplish, without extraneous aid, when directed by the noble and self-sacrificing spirit of our profession, for the attainment of honorable ends.

Resolved, That we hold in grateful and affectionate remembrance the many kindly and estimable qualities of mind and heart which endeared him to all with whom he came in contact, and caused him to be justly regarded as one of the most popular and conscientious practitioners in our city.

Resolved, That we extend to his bereaved family the assurance of our deep sympathy and condolence in their great affliction; and pray that the God of mercy may pour into their wounded hearts the balm of His divine consolation.

Resolved, That the foregoing be sent to The Medical Record for publication, and that a copy be transmitted to the family of the deceased.

An Epidemic of Dengue has appeared in Australia.

Morphine instead of Quinine.—Another case in which a druggist put up morphine instead of quinine is reported from Columbus, O. The patient died.

Dr. William W. Jackson, for the past ten years physician to the City Prison, and medical examiner of the Department of Charities and Correction, died on September 14th at his residence in Harlem. Dr. Jackson was fifty-six years of age.

A Dispensary that is not Needed.—"The managers of the Presbyterian Hospital," writes the New York correspondent of the *Weekly Medical Review*, "have finally decided to erect a new building for the purposes of a dispensary, and have appropriated $100,000 for that purpose. The project has met with dissatisfaction on the part of all except the managers themselves. The institution is situated in a part of the city occupied by some of our wealthiest residents. Only four or five blocks off is the dispensary of the Mt. Sinai Hospital, one of the best equipped and most efficient institutions of its class in the city. It is true that the Presbyterian Hospital has a large tenement-house district lying east, but there is no complaint that the poor of that region are not already amply cared for in the way of medical charity. The whole project of a new dispensary seems a most decided 'black eye' to the cause of charity reform, which grows very, very slowly in this great city."

St. Luke's Hospital.—It is reported that the managers of this hospital have decided to expend from $70,000 to $100,000 in the erection of an additional building on the present site. This means that the hospital will not be removed, at least for a very long time to come. Some criticism is excited by the fact that the hospital, while owning immensely valuable grounds, which if sold would make the institution almost independently rich, yet continues to occupy them and to ask people to contribute to its expenses. The site is, however, a very convenient and luxurious one.

THE CHARLESTON MEDICAL RELIEF FUND.

The hearty response to our appeal on behalf of the suffering medical gentlemen of Charleston shows how keenly alive their brethren are to the necessities of the situation. We have received many touching letters of sympathy, which have accompanied the substantial offerings of money, but we must be content to mention merely the names of the donors. We are pleased to hear that there are not so many medical gentlemen in need as we were at first led to believe. The following letters, received since our last issue, will explain the situation more explicitly:

To the Editor of The Medical Record.

Dear Doctor: After unavoidable delay in reply to your touching letter, which has been read to my colleagues with appreciative thanks from all, let me state: That the profession *en masse*, while anxious for immediate aid—some to rebuild the homes, others for their daily necessities, since no bills are collected—are decidedly opposed to having their names mentioned, or to having a special rehearsal of their losses recounted. Your proposition to forward whatever contributions reach you to me, and through me to a committee, say of three, consisting of Drs. Porcher, Prioleau, and myself, for distribution, is the readiest and easiest way of reaching all who stand in need.

I must say to you that our urgent need at present is the repairing of our old Medical College of the State of South Carolina. It will take $6,000 to do this. The college is an individual enterprise; it is not a city or State organization, and it has no endowment. The faculty has always supported it, through all its trials, and we have never before asked for aid! We want this aid now, and I for one am not ashamed to beg.

There are those who will not directly beg, though I know that they will gladly receive what may be proffered.

What we now most urgently require, or look for, is the means to rebuild our poor old college, and in this direction you must move with others to help us.

With kindest regards and thanks to you, to Dr. Buck, and others who may assist us in this direful distress, accept in advance the gratitude of the entire profession.

Truly and gratefully yours,

Middleton Michel, M.D.

6 Glebe Street, Charleston, S. C.,
September 14, 1886.

To the Editor of The Medical Record.

Sir: In your issue of September 11, 1886, there appears an article headed "Charleston Physicians in Great Need." Please contradict this. The profession in Charleston has just held a meeting, in which it was found that while some few may solicit and accept aid as private individuals, the medical profession of the city as represented by its leading members would under no circumstances accept money assistance, nor do they desire to be placarded as mendicants.

Thanking your journal for the kind sentiments expressed, and assuring you that we appreciate its generous and brotherly feeling, I am, as ever, one of your warmest admirers and subscribers.

Thomas Legaré, M.D.

We are glad to learn that so few require assistance, and we trust that the offers of their brethren throughout the United States will be taken in the proper spirit.

Thus far we have collected and forwarded to Dr. Michel five hundred and sixty-one dollars. This sum is specially designed to relieve the pressing needs of medical men and their families. We, however, heartily sympathize with the College faculty, and will gladly forward any sums sent through us for the aid of the institution.

The following is the list of additional contributions to the Medical Relief Fund:

J. H. Mennen, M.D., New York	$2 00
Fairchild Bros. & Foster, New York	50 00
Charles Milne, M.D., New York	5 00
Wm. P. Beach, M.D., Eatontown, N. J.	2 00
E. P. Swasey, M.D., New Britain, Conn.	5 00
Thomas E. Satterthwaite, M.D., New York	20 00
J. E. Sheppard, M.D., Atlantic City, N. J.	5 00
L. A. Walker, M.D., New York	2 00
H. Knapp, M.D., New York	25 00
Geo. E. Percy, M.D., Salem, Mass.	15 00
Edward P. Rose, M.D., Crested Butte, Col.	20 00
L. H. Miller, M.D., Brewster's, N. Y.	3 00
V. P. Gibney, M.D., New York	20 00
S. Pollak, M.D., St. Louis, Mo	5 00
H. A. C. Anderson, M.D., New York	10 00
J. C. McKee, Surgeon, U.S.A.	25 00
Charles W. Packard, M.D.	10 00
N. B. Scott & Son, Hagerstown, Md.	5 00

In acknowledging the contribution of Dr. Conrad Wienges, last week, the name was accidentally misspelled.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Md., September 21, 22, and 23, 1886.

TUESDAY, SEPTEMBER 21, 1886.—FIRST DAY.—MORNING SESSION.

The Society convened in the hall of the Johns Hopkins University, and was called to order at 10 o'clock by the President, Dr. THOS. A. EMMET, of Cincinnati, O.

THE ADDRESS OF WELCOME

was delivered by Dr. H. P. C. WILSON, of Baltimore, who referred to the honorable distinction which the Society had won, and, in the name of the citizens of Baltimore, in the name of her women, in the name of the general profession, and in that of the resident Fellows, welcomed its members within her borders whenever they might feel inclined to come.

Dr. H. P. C. Wilson, of Baltimore, then read a paper entitled

THE DIVISION OF THE CERVIX BACKWARD IN SOME FORMS OF ANTEFLEXION OF THE UTERUS WITH ELONGATION, RHEUMATISM AND STERILITY,

in which he advocated the adoption of this procedure in the following classes of cases:

First, those of anteflexion of the uterus with elongated and indurated cervix, when the body is bent upon the neck, or the neck upon the body, or when they are bent upon each other, thus forming a more or less acute angle at the internal os.

Second, in such acute anteflexion as when the cervix is hypertrophied, blue as a mulberry, and its tissue dense, almost like cartilage.

Third, those cases in which at the internal os the encircling band gives to the finger the feel of a strong cord between the neck and the body.

In the cases of anteflexion when the knife should be used all the above lesions are coincident, with more or less diseased Nabothian and utricular glands and diseased mucous membrane, all of which must be cured by proper after-treatment. He regards the cut as no more dangerous, when made with proper precaution, than when made elsewhere in the body, and believes it to be the most efficient method of rectifying anteflexion of the uterus. The patient should be allowed to thoroughly recover from the operation before any intra-uterine medication is begun, and then the best consists in the local use of Churchill's tincture of iodine. The patient should keep quiet in bed for two weeks, with almost no treatment, after which manipulation exceedingly gentle, with sound dilatation, etc., may be resorted to for the purpose of keeping the canal open sufficiently.

The paper was discussed by Dr. T. A. EMMET, of New York, who thought that he would have been willing, fifteen or twenty years ago, to have endorsed everything which Dr. Wilson had said, for he had no doubt that he had done as much harm as anyone by the operation, a fact which had caused him to change his opinion concerning it. The operative procedure is not free from danger. He had known at least twenty deaths to occur from it. But, as Dr. Wilson had said, if all pelvic inflammation is first removed, very likely but little harm will be done by the cut; but also no good will be done by it.

Dr. J. R. CHADWICK, of Boston, had been disappointed with regard to the results of the operation when performed for either dysmenorrhœa or sterility.

Dr. W. H. BAKER, of Boston, thought that Dr. Wilson should be congratulated on account of his success in the performance of this operation, and it seemed to him that the paper showed very conclusively the difference in experience which gynecologists might have in its performance. Since he performed it first he had been led to perform it less and less, and had limited it to cases in which there is lack of development.

The paper was further discussed by Dr. FORDYCE BARKER, of New York, who was the first to bring one of Simpson's uterotomes to New York, and which Sims used in his early operations; by Dr. JOHN SCOTT, of San Francisco, and Dr. HOWARD, of Baltimore, who had resorted to all methods of incision, and had used all instruments devised for the purpose, and was not wedded to either method or instrument exclusively. With regard to the frequency with which the operation had been performed, Dr. Wilson probably had done it ten or fifteen times to his once. In cases where the vaginal portion of the cervix is very long, producing a small anterior and a large posterior cul-de-sac, he performs the operation of making the posterior incision when all other measures fail to give relief. Performed as it should be, there was not more danger than with other operations of similar magnitude, and a certain proportion of patients can be cured by it.

The discussion was closed by Dr. WILSON, who said that he had not heard anything in the discussion which convinced him that in properly selected cases division of the cervix was not the best thing that could be done for the patient.

Dr. R. STANSBURY SUTTON, of Pittsburg, then read a paper entitled

ANOTHER MODIFICATION OF EMMET'S CERVIX OPERATION.

Last year he directed the attention of the Society to a modification of Emmet's operation, which had for its object the preservation of the cervix in cases in which the typical operation was not possible, and he now asked attention to a further method of circumventing the same difficulty. He related the history of the case in which he had performed it, with such success as to convince him that it was worthy of further trial. The angles of the laceration were completely filled with hyperplastic tissue, and the cervix was of almost cartilaginous density. With a pair of strong scissors, one blade thrust into the cervical canal, he divided the cervix back to the full depth of the inguinal laceration, and then with a double-edged knife made incisions across the central lumen of the internal os and denuded the four surfaces in such a manner that when they were brought together there were left two ridges of tissue remaining, surmounted with a thin layer of mucous membrane; these stood above the surface to the height of about seven millimetres, and the face of the crest was about three millimetres wide. The extremity of these strips at the edge of the incision turned out, the object being to preserve the contour of the future os and cervix.

Dr. EMMET, of New York, was struck with the ingenuity of the procedure, a device which required practice to determine whether it could be made applicable to a large number of cases. As a rule in such cases, when there was a condition very much like that present in an old tonsil, he believed that it was better surgery to amputate a portion, and cover the stump with vaginal tissue.

Dr. G. J. ENGLEMANN, of St. Louis, thought that it was very much the same position as was taken by Dr. Sutton last year, reached by a somewhat different method. He did not regard the strip of mucous membrane as of very much importance, as the introduction of a piece of fine catgut would keep the canal open all that was necessary.

The paper was further discussed by Dr. Baker, of Boston; Dr. Scott, of San Francisco; Dr. Dudley, of New York; Dr. Chadwick, of Boston; and the discussion was closed by Dr. Sutton.

A paper by Dr. ELWOOD WILSON, of Philadelphia, on

THE TREATMENT OF RECENT LACERATIONS OF THE CERVIX UTERI,

was read by the Secretary, Dr. JOSEPH TABER JOHNSON, of Washington. It contained brief reports of six cases of

recent laceration treated successfully by the local application of nitrate of silver, every five days, of the strength of a dram to the ounce of water. He had never found the method successful in chronic cases. In many cases nothing but Emmet's operation could restore the parts to their natural condition, and while it was one of the most valuable additions to gynecological science which had been made, still many had been carried away by its brilliancy, and it had been performed when it was unnecessary. Ten or twelve days after confinement examine, and if a laceration exists, thoroughly cleanse and dry the surface, and carefully paint it over with the solution mentioned. If the fissure be discovered immediately after labor, treat the parts antiseptically until the local use of the silver is resorted to, using iodoform bacilli introduced into the cervix, irrigations with bichloride solution every third day, and antiseptic napkins.

Dr. Barker, of New York, regarded the paper as practical in one particular especially, namely, the cases illustrated the fact that it was unnecessary to resort to operative interference at once after labor has been completed.

Dr. Emmet, of New York, believed that the only condition which required immediate interference after labor was the occurrence of hemorrhage.

The paper was further discussed by Dr. Scott, of San Francisco, and Dr. Barker, after which the Society adjourned to meet at 3 P.M.

First Day—Afternoon Session.

The first paper was read by Dr. T. A. Emmet, of New York, entitled

PELVIC INFLAMMATIONS—CELLULITIS VERSUS PERITONITIS.

The central point of the paper was that the more circumscribed the inflammation seemed to be, unless a pure cellulitis, the more serious would be the consequences if its existence be practically ignored. An apparently limited inflammation is to be feared, because it almost always started in the peritoneum, and is nearly always the remnant of a more extended one. It has been held that, as a rule, there was but little evidence of previous inflammation at operations for removal of the ovaries and tubes, and his own experience had confirmed the accuracy of the observation. The question had been raised as to the existence of pelvic cellulitis, since its products found afterward are so few. But the products of cellulitis rapidly clear up, and the walls of the passages are separated as by lateral traction, and if the inflammation stops short of pelvic abscess, nothing can be detected by the fingers except a few bands running in different directions. By degrees the surrounding connective tissue is drawn together by its own elasticity and fills the space unoccupied.

If the inflammation is below the dip of the peritoneum, there is nothing to mark the site of extensive disease except a small scar. Connective tissue never regains its integrity after having been once inflamed. If the surrounding connective tissue can supply the loss, the part will return to its former shape and the injury become unappreciable. On the other hand, if the inflammation is more extended, or the tissues break down into abscess, the injury can be repaired only by adhesive inflammation of the parts involved. When cicatricial contraction occurs after healing by granulation, the contraction is not due so much to loss of tissue as to the *absence* of contraction from surrounding connective tissue destroyed before the scar was formed.

Dr. Emmet then referred to the recent paper by Dr. H. C. Coe, of New York, and spoke of the relation of gonorrhœa to pelvic inflammations. Reference was then made to the operation for removal of the uterine appendages, which he believed had been done in New York with as good results as had been obtained abroad, and, furthermore, that if the true proportion of deaths could be ascertained the rate of mortality would be fearful. It should be done only as the last resort, and after all other means have failed to afford relief. The operation doubtless fills an important place, but its usefulness must be restricted or the good name of the profession will suffer in the future.

Dr. Robert Battey, of Rome, Ga., regretted that he was looking upon one side of the shield, while Dr. Emmet was looking upon the other. From his own standpoint he regarded most of these serious inflammations of the pelvic cellular tissue, which are so destructive in their course, as dependent upon disease of the ovary, either cystic or cirrhotic. With reference to the frequency with which removal of the ovaries and tubes was done at the present time, he was largely in sympathy with Dr. Emmet; he thought that it was performed too often. He did not believe that in every case of organic disease of the ovary extirpation was required. He had seen cases where the operation had been refused, and the result had been rather gratifying. But he had performed it also with exceedingly gratifying results. The general health of the patient must be broken down; it must appear that there is no other practical remedy; it must appear probable that extirpation will eventuate in cure—to justify the operation.

Dr. R. Stansbury Sutton, of Pittsburg, continued the discussion, and exhibited several specimens which he had removed with the result of curing the patients. He believed that the blame should not be attached to the operation, but be placed upon those who were performing it without having had the requisite amount of experience to enable them to perform it properly.

Dr. S. C. Busey, of Washington, said that if more regard was paid to the histological anatomy of the pelvic tissues there would be less disagreement in pathology. The cellular tissue is a vast lymphatic sac, as also is the peritoneum, and it seemed to him that the whole subject could be simplified by classifying these affections as pelvic lymphangitis, varying in different cases.

With reference to removal of the uterine appendages, he thought that too many operations had been performed, and perhaps there were too many operators undertaking to do it. Still he believed that diagnosis should be based upon something besides moral, ethical, or social considerations.

The discussion was continued by Dr. Engelmann, of St. Louis; Dr. Scott, of San Francisco; Dr. Mann, of Buffalo, and Dr. Wilson, of Baltimore.

Dr. John C. Reeve, of Dayton, O., then read a paper entitled

A CASE OF ABDOMINAL SECTION FOR CHRONIC SUPPURATIVE PERITONITIS.

The detailed history of the case was given, which occurred in a woman who lived as though she was married. It was a case of abdominal disease. Pus was discharged by the rectum. After declining laparotomy, offered when it was evident that she could not be cured by other treatment, she finally asked for the operation. The patient recovered from it, and was doing very well, but chronic kidney disease was present and doubtless would terminate fatally before long. A fecal fistula remained, from which there was an occasional discharge, although passages per rectum occurred almost daily.

The paper was discussed by Dr. Scott, Dr. Goodell, of Philadelphia; Dr. C. C. Lee, of New York; Dr. Sutton, Dr. J. Taber Johnson, of Washington, and the discussion was closed by Dr. Reeve.

The Society then adjourned to meet at 10 A.M. Wednesday.

A banquet was given at the Hotel Rennert, in the evening, by the Baltimore Gynecological and Obstetrical Society.

British Medical Association.

FIFTY-FOURTH ANNUAL MEETING.

Held at Brighton, England, Tuesday, August 3, Wednesday, and Thursday, August 4, 5, and 6, 1886.

MEETINGS OF SECTIONS.

SECTION IN PUBLIC HEALTH.

WEDNESDAY, AUGUST 4TH—SECTION DAY.

DR. TAAFE, Medical Health Officer of Brighton, delivered his

OPENING ADDRESS.

In the course of the decade of the Registrar-General between 1871 and 1880, the death-rate in England and Wales was 21.27 in that decade, while it had been 22.4 for the thirty years between 1838–70. The borough of Brighton had shared in this improvement. The average death-rate in the two decades 1851–60, 1861–70, was 22.5. [illegible] it was [illegible] Parliamentary borough of Brighton and Hove, the annual death-rate was 16.4, and adding 10,000 as the average visitors to the city, this gave a death-rate of only 15.2 per 1,000. The death-rate for 1885 was 13.1, 14.1, 12.9, 13.5 in the Palace, Kemptown, Preston, and Hove districts. Dr. Taafe then referred to the way in which the Registrar-General's weekly returns might prove misleading. In the reports the Registrar took a weekly population as a constant, by means of which he calculated the annual death-rate for any one week. This constant was obtained by dividing the gross population by 52.17747 (the correct number of days in a year being 365.24220), thus getting a weekly population; and by multiplying the number of deaths by 1,000, and dividing by the weekly population, the annual death-rate was obtained. Thus, when there were 2 deaths in Brighton, with a population of 107,000, the death-rate given in the Registrar-General's returns was put down at 1 per 1,000. Recently the Registrar-General, in addition to giving the death rate for the week, had given that of the three previous weeks, which was a great improvement.

DR. KELLY, in moving a vote of thanks to Dr. Taafe, said that people should not believe too much in weekly returns. The President had shown them the decreased death-rate for the past ten years, but not the birth-rate, which had also decreased. The only advance made was that more people were living at an advanced age now than formerly. With regard to London, it was the last place which should be looked to for sanitary improvements.

DR. EWART seconded the motion. He attributed the decrease in the death-rate chiefly to improved sanitation, but it must be remembered that they had by no means reached perfection.

DR. EWART then read a paper on

SCARLET FEVER, ITS ORIGIN, AND THE BEST SANITARY MEASURES FOR DEALING WITH THE DISEASE IN CITIES.

Of all the acute infectious diseases among children scarlet fever was the most fatal, for it accounted for one-twentieth or twenty-fifth part of the general death-rate, so that from twenty thousand to twenty-two thousand deaths occurred from it annually in England. It occurred among all classes, but was mainly a disease of early life. Thus 63.87, 89.8, and 95.63 per cent. of the deaths from scarlet fever took place under five, ten, and fifteen years of age, while only 1.75 per cent. took place in persons over twenty-five. Its infectious character was found on the clearest evidence. The period of its importation into North America from Europe (1737), into South America [illegible] land (1847), and Australia (1849), was pretty exactly known. If tropical regions were excepted, there were few countries where it did not break out occasionally, either in the sporadic or endemic form. Though it was difficult to trace out the origin of the first case in many instances, there seldom was any doubt as to how it spread afterward. The certainty of its diffusion among the predisposed when no preventive measures were adopted, and the almost equal certainty of its extinction when these were vigorously carried out, pointed to its propagation by infection. The retention of a single case during a small portion of the infective period into a children's hospital exposed some of its inmates to attack; while its prompt removal, prior to the development of its infective property, was sure to prevent its communication to others. Immunity was also obtained by disinfecting tainted articles. The disease had been produced by the inoculation of the small vesicles liable to form in the course of the eruptive stage, and in such cases the usual exemption from recurrent seizures common to other contagious diseases was obtainable. Stoll succeeded in inoculating the scales during the peeling process, although this had generally failed. That the poison was contained in the blood was proved by the fact that infants had been born with the disease, and because rabbits were easily killed by inoculating them with the blood of patients with scarlet fever. The transmission was usually by means of air tainted with the products of the disease. The poison had been known to be transmitted by a letter, a shawl, a piano, a box of toys, by horses, swine, cats, dogs, and cows. It had been communicated directly by the cow, and from the milk of the infected animal. It might be derived from water contaminated by the poison.

It was often conveyed into schools, churches, assemblies, by persons free from the disease themselves, but who had been in presence of the sick; and often spread far and wide by children who were themselves in the latent period; and it was found to lurk in the walls of rooms where patients have slept, and which had been imperfectly purified. The period of incubation varied from two to five days, but it might last only twenty-four hours, or extend to fourteen days. In inoculated cases seven days was the period. The disease was rarely communicated in the incubative period; but from that date up to the end of the peeling process it was very contagious, although not so much so as measles, whooping-cough, or dengue. Second attacks very rarely occur; third attacks and even fourth attacks have been mentioned, but were most rare. In all cases the first essential condition of prevention of scarlatina was segregation of the affected from the healthy, and continued isolation of the sick until all risk of communication had gone by. These desiderata were generally practicable among the richer classes. The quarantine-room in private houses should be at the top of the house, and should have as little furniture as possible. A sheet should be suspended on the outer aspect of the doorway, and constantly kept moistened with chloride of lime, carbolic acid, Condy's fluid, or other disinfectant. A small basin containing terebine should receive the expectoration of the patient. A large vessel containing a strong solution of carbolic acid, say in the proportion of a quarter of a pint to a gallon of water, should be kept in readiness, into which shirts, towels, etc., should be immersed. These articles should then be boiled, and then, if possible, be subjected to the influence of dry heat. The receptacles for the excreta should be charged with disinfectants, and at once emptied into the water-closet. When the peeling process commenced, the body should be anointed twice a day from head to foot with camphorated olive-oil—for the purpose of fixing the contagium, and preventing its escape into the surrounding

air—until the patient was well enough to take a warm bath, when he should be well rubbed with terebine soap. The bath and scrubbing should be repeated for four or five days. After this the patient might return, in some four to six weeks in all, to the family apartments.

Skilled nursing was important, as unskilled nurses would be sure to neglect some precautions. The nurse should not wear outer woollen garments, as these might keep up the contagion. The physician on leaving the sick room should always wash his hands with terebine soap. Attached to every public institution there should be a separate infection hospital. When convalescence was re-established the room should be thoroughly disinfected, and the bedding submitted to a dry heat of 250° F. In the event of death occurring, the body should not be removed from the room, except for burial or to go to the mortuary. It should be put into the coffin without any delay, and a pound or two of carbolic acid along with it, and then buried or cremated. This was Dr. Budd of Bristol's admirable plan. In the crowded haunts of the poor and in many cottages in the country Dr. Budd's plan could not be carried out. It was for this reason that of late so much attention had been given to the construction of hospitals for the sick. These should be far from other human habitations, to as secure a good system of quarantine, and should consist of separated buildings for the reception of small-pox, scarlet fever—and perhaps measles and erysipelas—and typhus fever. Each pavilion should form a small hospital, and each should have its own nursing staff. Self-supporting institutions might also be formed for the treatment of the richer classes. In removing scarlet-fever patients the patients were placed in the best circumstances for recovery, while the family and the public were protected in the event of the transfer being made early enough. Under the present state of the law, removal, as a general rule, was voluntary, and only affected small portions of the community, and was very partial in its operation. This should be seen to in some future statute. Notification of diseases had been carried out in many large cities. Notification was either made by the family medical attendant, conjointly by him and the householder, or by the householder or other responsible person. The results had not been so encouraging as had been expected. To obtain the cheerful co-operation of the medical profession the duty of notifying ought to be imposed on the natural guardian of the patient, or the householder alone.

The partial or local plan of notification had been successfully opposed, with a few exceptions, by the profession at health-resorts, and on good grounds, particularly as regarded marine sanitaria. It stood to reason that unless the whole country were subjected to the scheme of compulsory notification, it could not be so successful as it otherwise would be. What was the use of having it, for example, at those health-giving places, so long as the populations from which they derived their visitors—their stock in trade—remained altogether unprotected? And until these were equally guarded the benefit to be expected in sanitaria from notification was problematical. Seeing that in all our watering-places the medical practitioners were keenly alive to the necessity of affording every assistance in their power, with a view to stamp out contagious diseases, the game would hardly be worth the candle. When the physician was first called to an infectious case he had at once to think how isolation or antisepticism should be carried out for the good of the patient and the protection of the community. If these objects could not be accomplished at home, then the practitioner should try to obtain the consent of the responsible person to have the patient transferred, under the necessary precautions, to a well-appointed hospital, where they could be carried out. Notification could do no more than this. General compulsory notification might do more if it carried with it the power to place all cases, where the needed amount of isolation could not be procured at home, in the quarantine of some public institution. It was doubtful, however, if such a law would be sanctioned by public opinion at present. It was improbable that the legislature would sanction such an extensive curtailment of private rights, involving arbitrary interference, under most distressing surroundings, with parental authority, individual liberty, and responsibility. What the upshot of such a law would be was clear from the fate of the Contagious Diseases Act, and the unpopularity and danger to which universal vaccination had been exposed by cumulative punishments. The time might come when the people, being better educated, might sanction, as they had done with respect to other enactments for the preservation of health, life, and property, a general law for the compulsory notification of contagious diseases, carrying power to place those laboring under any of them, who could not receive proper treatment in their own homes, in the quarantine of a hospital specially set apart for the purpose.

Dr. Squire said that whatever sanitation had done for people generally, he did not think it had made much difference, with regard to scarlet fever, between the rich and the poor. Whatever hardships the poor might have to complain of, their children ran about and played in the streets, and got a fair amount of fresh air, and in his experience it was not the poor only who got the worst of scarlet fever. Some of the worst results were found among the most vigorous and most careful. He was in favor of notification of contagious diseases and of isolation, and said he knew an instance in which good had been done by a lady going round a poor district, and giving little bits of advice as to cleaning, etc., where isolation could not be obtained.

Dr. Grimshaw, Registrar General of Ireland, said that while many objected to notification they had no right to take their private feelings into consideration when these interfered with the safety of the community. Scarlet fever was like a cask of gunpowder, and no government would allow such a cask to be kept in a place where it was unsafe for the neighbors. He greatly approved of notification and compulsory segregation.

Dr. H. Butterfield agreed with Dr. Squire that there was very little connection between the sanitary condition of a house and the outbreak of scarlet fever. He rose principally to suggest that notification of infectious diseases was of no use unless they had a hospital where they could isolate such cases. The mere knowledge that the disease existed might enable them to use disinfectants; but unless, in a large town, they could remove the patient, they had very little control over the spread of the diseases. Isolation was the great thing, but in country villages it was very difficult to prevent infection. Medical men might lecture the people, but directly they had turned their backs their orders were disobeyed and communication was allowed with the sick. One good plan had been adopted, and that was to send a nurse to the village in which cases broke out. The nurse would visit all the houses where there were cases, and by kindness win the confidence of the people, give directions as to cleansing, etc., and after she had left there was always an improvement in the general cleanliness of the people.

Dr. Vacher (Birkenhead) spoke in favor of private sanitaria for isolating cases occurring among the richer classes, who could afford to pay. He said he would simply provide furnished rooms, and the mother and servant could go with the patient and carry out the nursing themselves if they chose. He believed such places would be gladly taken advantage of. In a private house he did not believe they could maintain perfect isolation.

Dr. Groves spoke in favor of isolation, and said he had gone so far as to go round a village with a bell, call the people together and announce the names of the people suffering from infectious diseases.

Dr. Kerr protested against this, and said it was a good way to spread contagion. He did not agree with any hard-and-fast line being drawn with regard to notification, but hoped that some compromise might be arrived at.

Surgeon-Major Evatt (Woolwich) alluded to the desirability of having public scientific lectures. He observed that, while many men capable of educating the public were massed together in such congresses, nothing was done to educate the masses, although they were ready to learn.

Dr. Sykes (London) gave a case where a child, living at a milk-shop in London, had scarlet fever, and the mother refused to allow it to be removed. He did all he could, but without avail, for the parents continued to sell milk, with the result that the disease was spread. Notification was useless without the powers of compulsory removal.

Friday, August 13th—Second Day.

A paper was read by Dr. Norman Kerr (London)

HYDROPHOBIA AND ITS PREVENTION.

He said he had, from personal immunity after bites from dogs, and from observation of the immunity of patients in similar circumstances, for a long time been sceptical as to the existence of true hydrophobia. He had also had under his care persons who had died from the effects of bites of dogs which had not been rabid. But the English recent experience of hydrophobia had caused him to change these views, and he now fully recognized the existence of genuine hydrophobia. In the latter part of the eighteenth century it appeared in the West Indies, and in the beginning of this century in South America. In England and Wales, during the three quinquennial periods from 1870, the average annual number of deaths from hydrophobia was forty-two. Probably not more than twenty-five per cent. of those bitten by rabid dogs recovered. No microbe had as yet been found in this disease.

Various animals became rabid as well as dogs. He approved highly of excision of the part bitten, and vigorous cauterization. Pasteur had been more successful than any other person who had treated the disease, for out of 740 cases treated by him, which had been certified to have been bitten by rabid dogs, only four had died of the disease. Two regulations, if strictly enforced, would prove effectual—muzzling of all dogs, and the capturing of all wandering dogs. In this way the disease might be stamped out.

Dr. Charles Drysdale (London) read a paper

ON THE POLLUTION OF THE RIVER THAMES AND THE PURIFICATION OF THE SEWAGE OF TOWNS.

He said that the Thames was now sadly polluted by the enormous amount of sewage poured into it at the outfall at Barking Creek, so that Lord Bramwell and the Commission had said that the state of the river was a disgrace to civilization. How could this be remedied? There was but one way, and that was to imitate Paris, Croydon, and other cities, and last of all Berlin, and utilize the liquid part of the sewage by pouring it over the fields of Essex, Kent, Hertfordshire, and Surrey, by means of pipes through which the water could be pumped up to any requisite height and then allowed to flow over the land. The main points observable in the Croydon sewage farms, which was a great success, were: 1. That the sewage should reach the fields in less that twenty-four hours after it entered the sewers in any city. It would then be almost inodorous and very fertilizing. To this effect the solid part was strained off, and at Croydon the solid part, coming from 66,000 persons, only filled one cart per diem. 2. The best kind of cultivation in sewage farms of large cities was that which limited the products to rye-grass and root crops, such as mangel wurzels.

At Croydon five or six cuttings of rye-grass were obtained during the summer, and as much as fifty tons of mangel wurzel were obtained per acre by the use of fluid sewage. The effluent at the Paris farm at Gennevilliers was quite potable, and that at Croydon was nearly so; therefore the stream was perfectly purified, and fish could live again in the water. All chemical treatment of sewage was extremely expensive and most unsatisfactory, as the quantity of sludge requiring to be removed in London would be quite enormous, and the tank alone, which was proposed in order to precipitate the sewage, would cost a million sterling. Mr. Chadwick had calculated that grass could be grown, by the aid of the London sewage, enough to feed 250,000 cows, which would greatly improve the milk-supply of London, at present so wanting in that important part of diet. The expense of pumping up fluid sewage to a height of say two hundred feet would be extremely small, and the hills of Surrey and Kent, as well as those of Essex and Hertfordshire, might all share in the fertilizing fluid. No evils resulted from well-managed sewage farms. At Croydon the death-rate near the sewage farm was fourteen per thousand, and it was quite inodorous. Market gardening should not be attempted, or it would prove a failure; but the production of milk and meat would prove a great success, and was the only real solution of the sewage question.

Dr. Michael Taylor (London) read a paper

ON DIPHTHERIA IN CONNECTION WITH DAIRIES AND COWS.

In one outbreak he had seen, the roof of the house leaked and mould appeared, when in a few days the children sleeping in the room were attacked. In another case, old clothes and a number of calf-skins were stored in a room, and these became mouldy and caused the disease.

Dr. Charles R. Drysdale read a paper

ON THE SUPERIORITY OF ANIMAL VACCINE.

In 1877 he had studied animal vaccination in Brussels, at Dr. Warlomont's institution, and then had recommended in the Medical Society of London that calf-lymph should take the place of long-humanized lymph for three reasons: (1) Because in times of epidemics of small-pox calf-lymph could be had in quite unlimited quantities; (2) because it could not be accused of conveying syphilis; and (3), and by far the most important of all, because evidence showed that animal vaccination was considerably more protective against small-pox than long-humanized lymph. This latter was proved by the remark of Dr. Warlomont, that in the terribly severe epidemic of small-pox, 1870–71, no person who had been vaccinated with animal lymph took the disease, and by the evidence given by Dr. Martin, the great vaccinator of the United States, recently deceased, that he had offered a reward of £100 to anyone who should show him a case of small-pox which had occurred in a patient vaccinated by him with animal vaccine, and that no one had been able to claim the reward offered. Mr. Babcock, a chemist of Brighton, had clearly shown by inoculating some two hundred cows with small-pox matter, and obtaining a vaccine vesicle in thirty-three cases, that small-pox and vaccine were the same disease, and that when we vaccinated ourselves we merely took a mild attack of small-pox. At the beginning of the century, when the illustrious Jenner was alive, human lymph was more preventive than now, because nearer to animal vaccine, and we should, therefore, as had been done in the United States, abandon the use of humanized arm-to arm vaccination, and have recourse solely to calf-lymph for vaccination. He proffered a resolution to that effect.

Dr. Murphy greatly approved of calf-lymph, but would not advocate the present system.

Dr. B. James seconded the resolution.

Dr Squire proposed an amendment that arm-to-arm vaccination is necessary and useful.

Dr. Glazier moved that arm-to-arm vaccination should be maintained.

Dr. Poole seconded, and this amendment was carried.

SECTION IN THERAPEUTICS.

FRIDAY, AUGUST 13TH—FORTIETH DAY.

The Section met at 11 A.M. for the purpose of undertaking a discussion which had been announced for several weeks would be opened by DR. SAUNDBY,

ON THE ACTION OF DRUGS IN ALBUMINURIA.

On the appointed day, when those interested in this subject had duly assembled, Dr. Saundby did not turn up, and although his paper will probably appear in the "Journal," no discussion of it could take place, as it was not read, and those of us who were most deeply interested and anxious for the subject to be fully discussed, and willing to express our own views upon it, had the choice of leaving the Section or listening to other papers, but no opportunity of hearing anything on the topic which had attracted us. Of course we cannot tell for certain why Dr. Saundby was absent, but there was a whisper that he had gone for his holiday. I venture to state that anyone who undertakes, weeks in advance, to commence a discussion on a specially selected subject ought to make considerable sacrifice in order to fulfil his engagement, and I would add that the *reading* of a lengthy paper is not the best way to open a debate. Dr. Saundby similarly failed to appear both at Cardiff and Belfast, although he had on each occasion been announced to take part in discussions.

DR. J. BLAKE read a paper on "The Climate of California in Relation to the Treatment of Consumption."

DR. MITCHELL BRUCE read one on "Morphine in Diabetes."

MR. ST. GEORGE related numerous experiments with "Malacta in the Treatment of Rheumatism."

DR. C. R. DRYSDALE read his paper

ON MERCURY.

of which the following is an abstract:

He said that at the present moment a more positive view was arising as to the way in which virulent diseases, such as syphilis and even phthisis, should be treated. A great deal of this was due to the revolution which had silently taken place of late years in the domain of medicine, owing to the discoveries of M. Pasteur as to the cause of fermentation and of virulent diseases. Although the germ of syphilis had not been clearly seen, there was no doubt that it, like the germ of hydrophobia, existed, and hence there seemed much likelihood that the two remedies, mercury and iodine, which experience had shown to be of service in the treatment of that disease, would be found in the near future to act in the tissues in a similar manner to that in which they acted when applied externally in surgical diseases. The question would then arise—Could mercury be called an antidote in syphilis, as sulphur ointment was in scabies, or whether could it be described by such an ambitious title? Historically, it would appear, according to Astruc, that when syphilis was first treated, at the beginning of the sixteenth century, mercurial inunction was tried on the patients because it had been found to cure scabies, and ever since that date there had been a certain number of authorities who had considered that mercury could cure syphilis, or that it possessed antidotal properties against the disease. Among recent authors, for instance, the late Mr. Solly believed that mercury often cured syphilis at the outset. Mr. Erichsen had also expressed his opinion in the same direction. Mr. H. Lee gave evidence before the Lords' Commission, in 1882, that mercury, given during the period of the initial sore, sometimes prevented entirely the appearance of any further symptoms of the disease. The most positive in this affirmation was Mr. Jonathan Hutchinson, who, in his Lettsomian lectures, delivered in 1886, alleged that it was quite easy, by the proper administration of small doses of mercury and chalk, during the period of the chancre, to put an end to the disease altogether, so that no further symptoms should ever show themselves. Mr. Hutchinson, then, evidently believed that mercury was an antidote in syphilis. This evidence was of the highest importance, coming as it did from such very high authorities.

Dr. Drysdale could only say that he much regretted that his own experience entirely failed to corroborate this view. Briefly, he had never been able to prevent the occurrence of some form of secondary symptoms by the mercurial treatment of the chancre, and had always been accustomed to give a prognosis in that direction.

Dr. Lancereaux, in 1873 ("Traité de la Syphilis"), also denied that mercury had any power in warding off the second stage, or even preventing the occurrence of tertiaries. Diday, also, affirmed that mercury did not prevent the appearance of secondary eruptions, and did not even weaken them when given in the chancre. Then, again, Dr. A. Fournier, although convinced that mercury greatly lessened the severity of the secondary disease and the expectation of tertiaries, still was silent on the antidotal properties affirmed by Mr. Hutchinson, and employed it for ten months, in interrupted courses, for the space of two years. Another view was that of Dr. Keyes, of New York, who affirmed that mercury was an antidote to syphilis locally as well as generally. That physician considered small doses of mercury as tonic, and employed them continuously for a period of three years in syphilis, in all cases. One of the difficulties in the way of arriving at a judgment on this question consisted in the fact that syphilis in modern times was usually a very mild disease, consisting in many cases of nothing more than the chancre and a mild roseolar eruption, so that, in many cases, the disease required no treatment. In conclusion, Dr. Drysdale said that, although both mercury and iodine were doubtless antidotal to syphilis, he could not admit that mercury could nip the disease in the bud, although his practice now was to give it always in very small doses, such as one grain of mercury and chalk twice daily, during the early period. He thought that its chief value was to be seen in severe outbreaks of the disease, in iritis, in disease of the retina, and early brain symptoms, and also, to a certain degree, in warding off the tendency toward tertiary disease, a property which Dr. Alfred Fournier enthusiastically ascribed to it. He thought it should be rarely used in tertiary syphilis, or, at any rate, that iodide of potassium should form the main treatment, and mercury only the adjuvant in that stage. Iodide of potassium was the true antidote to the germ of syphilis when that had become mitigated by age in the human system.

PROFESSOR VICTOR HORSLEY then read a paper, prepared by himself and DR. SEMON, on

AN EXPERIMENTAL RESEARCH INTO THE DIFFERENTIAL ACTION OF ETHER UPON THE MUSCLES OF THE LARYNX,

upon which DR. DONALDSON made some pointed criticisms, and referred to his own important experiments in this direction.

DR. ISAMBARD OWEN then read an abstract of the report of the Collective Investigation Committee on "Hamamelis Virginica." No discussion on this subject took place, and, as the time was now nearly expired, it was impossible to resume the important debate on "Antipyretics," which had been adjourned. This is the more to be regretted as it was introduced by Dr. Carter in an unexceptionable manner. He did not read a lengthy paper, but presented an account of his hospital practice in tables, to which the members could refer, and by way of introduction to the debate spoke on the several conclusions to which he had been led.

THE OVARIES: The Lord gave and the man taketh away. Happy is the man who hath his jar full of them.

SECTION IN OTOLOGY.

THURSDAY, AUGUST 12TH.—THIRD DAY.

The day commenced at 9.30 A.M., with the exhibition of living patients at the Throat and Ear Dispensary.

At 2 P.M. the reading of papers was resumed.

DR. DELSTANCHE, of Brussels, related

A CASE OF A REVOLVER-BULLET IN THE EAR,

and afterward addressed the Section on foreign bodies in the substance of the lobule. As both these papers were read in French, many members found it difficult or impossible to follow, and there was no discussion; but as the papers related only to the facts of cases little could have been elicited.

DR. URBAN PRITCHARD then read a paper on "Counter-irritation in the Treatment of Diseases of the Ear." MR. BROWNE took exception to some of Dr. Pritchard's opinions, but advanced no solid argument.

DR. SYMINGTON read a paper on "The Anatomy of the Ear in the Child," in which he stated that the external meatus was not nearly so deep in children as is commonly supposed, a point of considerable importance when any kind of manipulation is undertaken. Further, that the mastoid antrum is much more superficial in children than in adults, and in illustration of the anatomical points he laid down he showed sections of the skull to exhibit the relations of the parts, the position of the Eustachian tube, etc.

MR. SPENCER WATSON opened a discussion on "The Complications of Nasal Polypi," which he minutely and carefully described. DR. DUNDAS GRANT made a few remarks.

DR. WALTER WOLSTON read a paper on "The Treatment of Nasal Polypi by the Electro-Cautery," in which he related several cases. He showed the battery he employed, purchased from the Scottish Electric Co.

Some other papers were taken as read, the authors not being present when called upon.

FRIDAY, AUGUST 13TH.—LAST DAY.

The Section met at 11 A.M., when an extremely interesting demonstration was given by DR. DELSTANCHE, who exhibited and described a number of ingenious instruments, including a

ADMINISTRATION OF CHLOROFORM

Maekel's post-nasal mirror, together with cauteries, iron wire, numerous tubes and other appliances; also whalebone clips for use in the treatment of fractures of the nose, and a syringe intended for the purpose of passing fluids through the Eustachian cavity, a practice which will probably not be generally approved.

MR. SPENCER WATSON exhibited a ring-knife, and DR. WOLSTON some other apparatus.

Some of the members were much interested in the exhibition of instruments, and offered suggestions and criticisms. This closed the business of the Section.

MANUFACTURE OF QUININE BY SYNTHESIS.—It is said that Mr. Cresswell Hewett, of England, has discovered a process of making quinine by which the price of the drug may be reduced to about six cents an ounce. The synthetical manufacture of quinine was first suggested to Mr. Hewett in 1869 by the late Dr. Mattheson, of St. Bartholomew's Hospital. The importance of this discovery is rendered greater by the fact that, while hitherto we have been depending for our quinine on the cultivation of the cinchona tree, from whose bark only about two per cent. of good quinine can be extracted, ninety-eight per cent. being valueless, the drug can now be manufactured without limit, by a very simple process, from an article which can always be got in abundance in any part of the world.

Correspondence.

OUR LONDON LETTER.

MOVEMENTS [illegible] THE BRITISH [illegible] THREE [illegible] THE THEORY OF COLOR-VISION—DOCTORS AND THEIR DOOR-PLATES.

THIS is the season of the year at which additions and improvements are being made to the buildings of the medical schools. In two, at least, improvements are being carried out on a most extensive scale. These two are respectively the most easterly and the most westerly of the medical schools, one being that attached to the London Hospital, at Mile End, the other that in connection with St. Mary's Hospital, at Paddington. The school buildings at the London Hospital are being virtually rebuilt. Only one lecture theatre has been available for class purposes during the past session; the fireplace in the dissecting-room has been bricked up, and loud have been the complaints from both the students and teachers as to the lack of accommodation of every kind, and the uncomfortable conditions under which—especially during the winter months—all the work has been carried on during the past year. Now, however, the work is approaching completion, and the London Hospital authorities may shortly be congratulated on the possession of one of the finest sets of buildings in London for the purposes of medical teaching. A residence for students is being erected as part of the new buildings. The improvements at St. Mary's Hospital are also extensive, and affect both the hospital and the medical school buildings. The drainage at the hospital has been found to be so bad that the hospital has been closed, so as to give the workmen free scope. A new post-mortem theatre is being constructed, with all modern improvements, and in close communication with it, and forming part of the new block of the school buildings, a well-arranged pathological laboratory is being erected, with every appliance not only for pathological observation, but for original research, including a separate room devoted to bacteriology. St. Mary's, although the youngest of the metropolitan medical schools, having been founded only in 1851, is, I believe, the first to provide a well-equipped pathological laboratory. Its authorities are, therefore, to be commended for their enterprise, especially as it is only three years since a very large sum was expended in adding very largely to the existing school buildings.

The annual meeting of the British Association for the Advancement of Science came to an end a few days since. A very interesting, and also unprecedented, feature of the meeting was the joint meeting of the members of the sections in Biology, Mathematics, and Physical Science. This was to discuss the physical and physiological theories of color-vision—a subject always interesting to physiologists, and doubly so to ophthalmologists and neurologists. Professor G. H. Darwin said this was the first time any two sections of the Association had met together to consider a subject that concerned both. The topic of consideration lay at the meeting point of physiology and physics.

Lord Rayleigh explained the relation between light and color. The difficulty of color-vision was caused by the fact that different color-waves had different degrees of intensity under different conditions, and thus, when they mixed in various degrees, they produced vastly different effects. As a consequence, the eye could not be depended upon to tell what was the physical composition of mixed light. After discussing the theory of color, showing that the spectrum disclosed red, green, and violet as being the primary colors, he touched upon the

question of "color-blindness," and asserted that there was really no such thing as absolute color-blindness, in the sense of a person having no discrimination for color at all. Dr. Arthur König, of Berlin, gave the results of experiments with the spectroscope. Dr. Michael Foster said the physiological view was antagonistic to that of physicists in several radical points. In the course of his remarks he declared that the pernicious practice of smoking, if long persisted in, and particularly if the smoker confined himself to one kind of tobacco (N.B. Dr. Foster smokes incessantly), produced color-blindness so as to destroy the perception of red. All people were more or less color-blind in the outside of the pupil, but those who were called color-blind really had, as it were, a patch cut out in the middle of the retina, where they were color-blind. They could not see red, or they could not see green. They called green yellow, and so on. There was the further stage, where they had no sense of color at all. The more physiologists knew about the living body, the nearer they drew to the completion of the theory that there were two processes always going on in the body—a building up and a breaking down. In the theory of color-perception this idea was carried out in the supposition that certain rays of light, acting on the retina, broke down the substance of the retina and produced another sensation of color. When the breaking down went on, the sensation produced was yellow, and when blue rays fell upon the same substance of the retina it was built up. Then they came to a point where the breaking down and the building up neutralized each other, and they had no sensation of color at all, or, in other words, color-blindness.

A curious chapter might be written on the history of doctors' door-plates. These, like most other things, have a fashion of their own, and one which changes from time to time. Years ago, when open surgeries were more common than they are now, the possessor of one would commonly inscribe on the door "Smith, Surgeon"—or whatever his name might be—and if he could secure a corner house with a large door at the corner, and put "Smith" looking one way and "Surgeon" the other, he felt happy. Nowadays open surgeries are at a discount, and although their place has been taken, to a certain extent, by cheap dispensaries, the owners of which occasionally paint up their names over the front in the style of small shopkeepers, still the better class of general practitioners avoid both open surgeries and cheap dispensaries. The usual style is "Mr. ——, Surgeon," and where the practitioner has become well known and lives in an aristocratic neighborhood, the "Surgeon" is often dropped. A university graduate who engages in general practice generally styles himself Dr. simply—thus "Dr. Graduate"—or, occasionally, "John Graduate, M.D." (or M.B., as the case may be), "Surgeon" being added or not, according to taste. Since the advent of the L.R.C.P. diploma, the magic inscription "Physician and Surgeon" has found its way on to numerous door-plates, the placid conviction being entertained that the diploma of L.R.C.P. conveys the title and standing of a physician to its possessor. As the gentlemen who so label themselves are invariably engaged in general practice, and mostly dispense their own medicines, the contrast between what they are and what they profess to be is sufficiently striking. A good many doctors who have taken the L.R.C.P., either at London or Edinburgh (mostly the latter), dub themselves Dr. on the strength of it, a proceeding to which just objection is often taken, especially when it is maintained that a university graduate of medicine, who has only the bachelor's degree (M.B.), has no right to any title but Mr. A wide gulf, however, separates him from the holder of a mere diploma; while at some universities (*e.g.*, Oxford) the only bar between his M.B. and the M.D. is the keeping of so many terms and the writing a dissertation. Bonâ-fide hospital physicians generally sign themselves simply "Dr. Blank," or, in rare cases, "John Blank, M.D." I have seen the following on a physician's door-plate, "Mr. ——, M.B.," while one young physician of my acquaintance simply announces his name on his door-plate, preceded by his initials, but without other prefix or affix. Consulting surgeons generally put "Mr. ——" on their doors, and nothing more. The late Mr. Maunder (imitating the Dublin fashion) had "Surgeon Maunder" engraved on his brass door-plate. Mr. Hutchinson, when in practice in the City, announced himself to the passer-by as "Jonathan Hutchinson," without further addition, a mode which he dropped for the more conventional "Mr. Hutchinson" when he moved westward. Such physicians or surgeons as have attained the dignity of a baronetcy or knighthood do not usually hide their light under a bushel, but make it as public as black paint on a brass plate can do it for them. The simple knight has to be content with "Sir William Blank," while his more distinguished professional brother who has obtained the hereditary distinction has the privilege of adding to the above the affix "Bart." The size of door-plates is a matter in which considerable diversity of taste is exhibited. A walk down Brook, Grosvenor, or Harley Streets will bring to one's notice a very large variety of these silent advertisements. The older men mostly have their names in very large letters on the brass plates, as was the custom of a bygone age. Where, by long usage and frequent cleaning, all the paint has worn off, even an inscription in large-sized letters is by no means easy to decipher. A fad of the younger generation is to have their names engraved in such a miniature fashion as to be literally illegible from the pavement. In some cases a veritable sea of shining brass is left around the small island of black paint in the centre; in others, this expanse is reduced to the smallest possible limits, and the plate made no larger than is absolutely necessary to contain the name. I have spoken of brass plates, but I have seen a copper door-plate, or at least one to which acid had been applied so as to dissolve away the zinc and show up the copper. I once saw a physician's name painted on the woodwork of the door. Of all the claustral announcements I have ever seen, I think the strangest was one I saw once in a provincial town (Bath), viz., "Mr. ——, Dermatologist."

OUR PARIS LETTER.

(From our Special Correspondent.)

AN INTERESTING CASE OF GASTROSTOMY FOR REMOVAL OF A FORK FROM THE STOMACH.

It will be remembered that about ten years ago a great sensation was caused by an operation, which was successfully performed by M. Léon Labbé, the well-known surgeon, on a young man who had swallowed a fork. A similar case has been lately presented at the Academy of Medicine by Dr. Polaillon, surgeon of La Pitié Hôpital.

It was that of a juggler who was in the habit of "swallowing swords and walking-sticks" in public. On August 5th last, while at Luchon, the man, by way of diverting some of his friends, pushed an ordinary-sized fork down his throat, but held the prongs to prevent its slipping into the stomach. Feeling a sense of suffocation, he made a deep inspiration and let go the fork. He made several fruitless attempts to withdraw the fork, which gradually descended into the stomach.

Beyond a little spitting of blood, due to the excoriations caused by the fork in its passage along the pharynx and œsophagus, he experienced no inconvenience, and continued his juggling exercises next day as if nothing had happened to him. After a few days he felt some uneasiness in "the pit of the stomach," and consulted several medical men, one of whom sent him to Dr. Polaillon, who admitted him into his ward at La Pitié Hôpital on August 14th, that is, six days after the accident. Notwithstanding the slender form of the patient, the fork, which was of tinned iron and of large size, could not be felt.

The patient remarked that he suffered when his stomach was empty. He was therefore obliged to eat frequently to prevent pain. The functions of the stomach and of the intestines were normal, and there was no vomiting nor spitting of blood. An œsophageal tube, charged with a metallic stylet, was introduced into the stomach, with the expectation of feeling a sensation similar to that produced by the presence of stone in the bladder, but the result was nil. This threw some doubt in the mind of the surgeon as to the correctness of the patient's statement, particularly as it appeared to him unlikely that a man who was in the habit of swallowing swords could suffer so much pain as he did from the passage of the small tube into the stomach. To remove all doubt from his mind, M. Polaillon had recourse to the ingenuity of M. Trouvé, the well-known electrician, who proposed the following means of exploration for the establishment of the presence of the offending body in the stomach: 1. A magnetic needle of extreme delicacy turned toward the epigastric region of the patient whenever the latter approached the needle, and it was curious to notice that the needle followed the patient's movements. 2. A large electro-magnetic apparatus, placed a few millimetres from the abdominal wall, suddenly produced, while the electric current was being passed over, a slight arched elevation of the skin, as if a body intra-abdominal rushed toward the electro-magnetic machine. This was considered conclusive for the diagnosis, and an operation was decided upon. Gastrostomy was performed according to the method adopted in the case of M. Labbé's patient. The stomach was opened about the level of the ninth rib, and an iron fork twenty-one centimetres long, and weighing fifty-nine grammes, was removed. The patient was put under chloroform, and all antiseptic precautions, including the carbolic spray, were employed. Up till now, in operations of this kind, the lips of the cutaneous wound and those of the stomach were sutured together, thus leaving a fistula, which eventually healed up. M. Polaillon, for the first time, sutured up the stomach completely, leaving the organ free in the abdominal cavity. The patient is going on favorably, and the present is the nineteenth case on record of such accidents.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 1 to September 15, 1886.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon. Resignation accepted by the President, to take effect November 5, 1886. S. O. 212, A. G. O., September 11, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending September 18, 1886.

SIMONS, M. H., Passed Assistant Surgeon. Detached from the Alert and placed on waiting orders.

NORFLEET, E., Passed Assistant Surgeon. Detached from the Alert and placed on waiting orders.

BOGERT, E. S., Medical Inspector. Ordered to Navy Yard, New York, September 28, 1886.

HIGH DEATH-RATE IN KANSAS CITY.—During the week ending August 21st, the death-rate of Kansas City reached the very alarming figure of 31 per 1,000 inhabitants. This is by far the highest death-rate ever known in Kansas City, the average for the past fifteen years having been about 15 per 1,000. The city is said to be in a very unsanitary condition, and the high mortality has been attributed to that cause.

Medical Items.

CONTAGIOUS DISEASES IN WASHINGTON.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 18, 1886:

[redacted]

BERI-BERI IN THE ITALIAN ARMY.—The Italian army has suffered greatly from this disease in the past few years. From 1879 to 1883, inclusive, 17,722 soldiers were attacked, an average of 3,544 a year; and in 1884 there were 5,388 treated for beri-beri, of which number 235 died and 842 were incapacitated for further military service, and of the balance more than half were invalided and rendered unfit for active duty in the field.

DIPHTHERIA IN SPAIN.—Diphtheria has been for some time very prevalent in Madrid and Granada, attacking many adults as well as children. In Granada the schools have been closed, and many of the soldiers in garrison there have suffered severely.

DEFICIENT HOSPITAL ACCOMMODATIONS IN ATLANTA.—Complaint is made that there is no good hospital in Atlanta. *The Medical and Surgical Journal*, of that city, says that it is shameful that a city of 50,000 inhabitants should be so poorly provided with accommodations for the sick poor, and urges the establishment of a hospital with from 75 to 100 beds, and furnished with all the necessary appointments.

JEWISH PHYSICIANS IN RUSSIA.—The medical department of the Russian Government has been collecting statistics concerning the number of Hebrew physicians, apothecaries, etc. According to the Odessa *Listok* there are in that city 99 Jewish physicians, 6 of whom are women, 2 veterinary surgeons, 9 dentists, 35 accoucheurs, and 23 apothecaries. The object of the enumeration is not known, but it is supposed that the government intends to limit the number of Hebrews in the medical profession as it has already done in the army.

PROVIDING FOR THE FAMILY OF PROFESSOR VON GUDDEN.—A gratuity of £10,000 has been granted from the Bavarian Civil List to the widow of Professor von Gudden, of Munich, who perished with the late King of Bavaria in the lake at Castle Berg. He left a family of eleven children.

CONSUMPTION OF TOBACCO IN EUROPE.—M. Paul Leroy-Beaulieu, writing in the *Économiste Français*, gives the following figures, showing the quantity of tobacco consumed in the different countries of Europe, and the rate per 1,000 inhabitants: Spain, 110 pounds; Italy, 128 pounds; Great Britain, 138 pounds; Russia, 182 pounds; Hungary, 207 pounds; France, 210 pounds; Denmark, 224 pounds; Norway, 229 pounds; Austria, 273 pounds; Germany, 336 pounds; Holland, 448 pounds; and Belgium, 560 pounds.

THE GERMAN ANTHROPOLOGICAL SOCIETY. — The seventeenth annual meeting of the German Anthropological Society was held in Stettin on August 10th and 11th, under the presidency of Professor Virchow, and was well attended by members from all parts of Germany and from foreign countries.

A Change in Medical Study in Vienna.—It is stated that after the beginning of next year the vacation courses of the Vienna Medical Faculty will be discontinued.

A Long Life.—Leopold von Ranke, now more than ninety years of age, presents the anomaly of a man who has never taken any physical exercise and is yet in perfect health. The great German historian has almost lived in his library, working for fifteen hours a day, and he has laid out more work which he hopes to complete before his hundredth birthday.—*Medical Times.*

Late Childbearing.—Dr. A. O. Banes writes in the *Medical Brief* that there is an aged and respectable couple residing in St. Joseph, Mo., the husband seventy-one and the wife sixty-five. The enterprising woman gave birth to a fine, healthy boy, much to the surprise of their kind neighbors and to themselves, as she thought an ovarian tumor was developing.

The Baltimore University of Medicine recently purchased St. James' Methodist Episcopal Church in Baltimore, and has removed its free dispensary to the building. Among the improvements will be two large lecture-rooms, two hospital-wards, office, and faculty-rooms. It is expected to be ready for fall lectures. The Sisters of Charity will have charge of the sick, and as soon as possible apartments will be erected for their accommodation.

The Annual Meeting of the German Ophthalmological Society was held in Heidelberg on August 9th. It was attended by one hundred and fifty visitors from all parts of Europe. The Von Gräfe gold medal, for the most valuable contributions to ophthalmology during the last ten years, was presented to Professor von Helmholtz, of Berlin.

Another Case of Retraction of the Penis.—Mr. Thomas F. Raven writes, in *The Lancet* of August 7, 1886, that he is led to report the following case from reading of a similar instance recorded by a Russian physician, Dr. Ivanoff: The patient, a healthy, steady, single man, aged twenty-seven, shortly after he had gone to bed one night, felt a sensation of cold in the region of the penis. He was agitated to find that the organ, a fairly developed one, was rapidly shrinking, and was, he thought, finally retiring. Mr. Raven was called, and found him highly nervous and alarmed. The penis had almost disappeared, the glans being just perceptible under the pubic arch. The skin of the penis alone was visible, and looking as it does when the organ is buried in a hydrocele, or, in an extreme degree, as it does after death by drowning. The writer reassured him and gave some ammonia, and found next day that the natural state of things had returned. But the patient remained weak and nervous for some days. He could give no explanation of the occurrence, and the unnatural condition has never returned.

Medical Instinct in Animals.—Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek dark, airy places, drink water, and sometimes plunge into it. When a dog has lost its appetite, it eats that species of grass known as dog's grass, which acts as an emetic and a purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. An animal suffering from chronic rheumatism always keeps, as far as possible, in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antennæ of the ant, and other ants came and covered the wounded part with a transparent fluid secreted in their mouths. If a chimpanzee is wounded, it stops the bleeding by placing its hand on the wound or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog on being stung on the muzzle by a viper was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in winter it remained lying in a brook, where its food was taken to it. This animal recovered. A terrier hurt its right eye. It remained under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment, rest and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye; again licking the paw when it became dry. Animals suffering from traumatic fever treat themselves by the continued application of cold water.

The Tenesmus of Dysentery, or diarrhœa, or the vesical tenesmus of cystitis, may be very much relieved by placing a pillow under the buttocks, and making the patient lie upon his back in such a manner that the parts are thus raised somewhat higher than the other portions of the body.— *St. Louis Med. and Surg. Journal.*

What New York Drinks.—A recent official report by the New York health authorities states that the Croton water-shed embraces 239 square miles, and has a population of 20,000, with 1,879 dwellings, and as many privies, about as many barn-yards, pig-pens, and cesspools, besides cemeteries, graveyards, slaughter-houses, and other sources of contamination, and with no drainage except by the surface which conducts it to the aqueduct. Yet the Croton is the best water-supply enjoyed by any large city in America or elsewhere.—*The Sanitary Era.*

Advice to Physicians Contemplating Post-graduate Study in New York.—The New York correspondent of the *Mississippi Valley Medical Monthly* writes: "Permit me to offer a few words of advice to those of your readers who may contemplate a visit to New York. Briefly it is this: Make up your mind before you leave home what special branch or branches you wish to study up, and when you get here devote your entire time and energy to obtaining just what you want. This advice is based on my own, and the experience of a great many of my fellow-students here. When I first came here I was led hither and thither by things that attracted me, to the detriment of the branches which I wished to master. No difficulty will be found in getting what is desired. The doctors of New York are eminently a teaching class, and if one cannot teach you what you want he is sure to know of some good man who can."

A Large Vesical Calculus.—Mr. Thomas Smith reports, in *The Lancet* of August 7, 1886, the removal of a stone weighing 24½ ounces from the bladder. The stone was ovoid in shape, and measured 13 inches in its largest circumference and 9½ in its smallest. On section it was found to be dense in structure and regularly laminated, and to consist of phosphates externally, with a large oxalate nucleus. The patient was a soldier, forty-three years of age. The calculus was removed entire by the suprapubic operation, and the patient recovered completely.

The Soochow Mission Hospital.—We have received the third annual report of the Soochow (China) Hospital for the year 1885. There were 203 patients treated in the hospital, and 9,744 in the dispensary, giving a total of 9,947 for the year. The hospital is under the care of the China Mission of the Methodist Episcopal Church, South. Dr. W. R. Lambuth has retired from the management of the hospital, and has been succeeded by Dr. W. H. Park, a former student in the polyclinic of this city. There is a medical school attached to the hospital, and a request is made for $500 for the purchase of papier maché models from which to demonstrate anatomy to the students.

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Original Articles.

SOME CONSIDERATIONS ON HYSTERIA.

BY MARY PUTNAM JACOBI, M.D.,

NEW YORK

NOTWITHSTANDING the voluminous literature which exists on hysteria, something always remains to observe and describe in it. And this is to be expected when it is remembered that hysteria implies disarrangement of the functions of any part of the nervous system—in its four spheres of intelligence, mobility, sensibility, and visceral neurility. Every advance in our knowledge of these mysterious functions must, therefore, lead to some new point of view in regard to hysteria, or to mental, motor, sensory, or visceral neurosis. Is it possible at the present day to formulate the fundamental condition of hysteria in such a way as to bring it into harmony with the facts of the hysterical temperament, of the general neurotic diathesis, of the vaso-motor spasms, of the special, mental, motor, and sensory phenomena of hysteria, and of the relations of the developed disease to the reproductive organs on the one hand, and to moral and social conditions on the other?

It seems to me that we can assert the following to be the two-fold condition fundamental to hysteria: There is, in it, a congenital or acquired deficiency in the power of nerve-elements to effect the storage of force in nerve-tissues.

Fundamental condition of hysteria.

This can only be overcome by increasing the amount of stimulus to which these elements are subjected. Conversely, the elements of those centres, which are subjected to a preponderance of stimulus, will perform the function of storage most effectively, and, in so doing, will acquire preponderance over the others and this is done by the sensory centres of the brain.

These centres, connected with the nerves of special sense and of common sensibility, are, from the beginning of life, exposed to the most incessant stimulation, from the constant impact upon them of centripetal impressions. The registration of these impressions is attended by chemical synthesis within the cells (Meynert) by "negative work" (Wundt). Such synthesis implies the storage of oxygen into complex chemical compounds, in which it becomes latent. These may be called force-compounds, because upon their explosive decomposition depends the liberation of energy, or force, the "positive work."[2]

Thus the synthetic nutritive processes of the central nervous tissues are closely associated with their functional stimulation through the arrival of impressions from the periphery. "The optic nerve, which resembles in structure the central white substance, undergoes changes within two or three days of extra-uterine life, which far exceed those changes which would take place during a much longer period of intra-uterine life. This shows most distinctly that the nutrition of central nervous tissues is greatly aided by sensory stimuli." "The centripetal nerve-tracts are the keys which start the mechanism of the entire central nervous system, and we see that the peripheral nutritive influence is indicated by the special order in which nerve-tracts [illegible] their white substance" (Meynert, "Psychiatry Transl. Sachs.," pp. 268 and 269, 1885).

As far as the sensory centres are concerned, there is no indication that their storage capacity in hysteria is deficient; indeed, the preponderance of sensation over centrifugal force, motor or mental, would lead us to infer a relative excess of storage in these centres. But the theory of deficient storage of force in hysterics is based on their inability, as compared with persons soundly organized, to bear fatigue, mental exertion or emotion, or privation of food, or fresh air; peculiarities which are noticeable even in persons who, at the time of trial, are in good health, with their constitutional tendencies latent.

Exertion, mental or physical, implies nervous discharge; the capacity for this is proportioned, partly to the amount of force-material previously stored in nerve-cells, partly to the capacity of these to rapidly store up new material, even while discharging-processes are going on. Deficiency of storage necessarily accelerates the moment when consumption of force-material must be complete, unless this can be rapidly renewed—hence accelerates the approach of fatigue. But the same deficiency in storing processes, which would lower the amount of accumulated supply, might be expected to render storage during action, difficult or impossible. The hysteric, therefore, should require more absolute rest for recuperation after exertion than is necessary for a normal person. The same circumstances would render either privation of food or of abundant air-supply sooner intolerable. Hence it is the hysteric who is most likely to faint in a badly-ventilated room.

The portions of the nervous system whose capacities are impugned by these facts, are those which are associated with centrifugal impulses or with the liberation of energies in action. These centrifugal energies are of two kinds; motor and mental. The stimuli which provide for the storage of force-material in the nerve-centres concerned in mental and in motor action are more indirect than the stimuli of the sensory centres. It seems to be the discharge of motor energy, which, possibly by emptying the cell of a certain amount of material, principally determines the acquisition of new material from the blood, and its storage in forms of higher complexity. It is well established that the nutrition of the muscular fibre depends largely upon muscular action, which involves repeated explosive decompositions and elimination of material from storage cells. In centres of incessant reflex action, this stimulus from its own function may be supplied as constantly as is that of the sensory centres. But wherever volition is involved there exists the possibility of avoiding action and, by so much, of lessening the amount of stimulus which should be supplied to the motor mechanisms.

Deficient centrifugal energy from deficient storage of force.

In the cortical motor centres of the brain, according to the bold and ingenious hypothesis of Meynert, a second form of stimulus exists, derived from the registration of impressions during the performance of reflex-motor acts by subcortical mechanisms. Of each such act an impression or image is said to be registered upon the cortical cells connected with the nerves supplying the contracting muscles. The impression is called by Meynert an "innervation sensation," and is supposed by him to be transmitted to the thalamus from nuclei of the tegmentum, which are themselves connected with the lenticular body, and from the

Meynert's theory of cortical registration of reflex acts.

[1] The [illegible] paper was read before the Neurological Se[illegible] Academy of Medicine, [illegible]

[2] The negative work is the first result of centripetal stim[illegible] central ganglion-cells. During the [illegible] by the positive work, centrifugal impulse resulting [illegible] Wundt: Mechanik du Nerven, 1871.

thalamus to the cortex, by the fibres of the corona radiata. The cortical cells are thus rendered "spectators" of all reflex acts. The registration of the impression is attended here, as elsewhere, by chemical synthesis, *i.e.*, by the storage of material destined for the future elaboration of force.

The sensory impression which has initiated the reflex act is also registered in the cortex, and, when transmitted to other cortical areas associated with that which has received this impression, it becomes transformed into a secondary, that is, into an ideal impression. The revival of such a secondary impression, thus the memory of the original sensation, tends to revive the image of the motor act originally associated with it, and which has been registered in the motor centres. The revival of this image liberates energy in a centrifugal direction, along the fibres of the pyramidal tract to spinal nerves and voluntary muscles. This energy, due to intra-cerebral stimulus, is said to be voluntary; but it is directed to the same nervo-muscular mechanism, as had already accomplished motor acts of the same form as those now designed, *i.e.*, the subcortical reflex mechanisms.[1]

Thus the stimuli to storage in the cortical motor centres are: 1st, the registration of impressions of innumerable reflex motor acts, performed involuntarily, and before conscious volition is possible; 2d, the liberation of energy under the influence of intra-cerebral impulses associated with memorized and with secondary impressions. This latter constitutes the performance of voluntary acts, or, in other words, is the exercise of the positive function of the centre, the evolution of its positive work.

Stimuli to storage in cortical motor centres.

The "latent areas" of the cortex (Exner), unconnected with either motor or sensory tracts, continually receive through association-fibres and the gray net-work of the surface secondary impressions obtained by revival of those which had been originally registered in the motor and sensory regions. Consciousness is gradually built up of masses of such secondary impressions, and thus is finally traceable to memories of the impressions made on the organism by the outside world, and of the movements which have been performed by the organism in direct or indirect response to these impressions. It is to be presumed that the registration of the secondary impressions is attended by chemical synthesis in the registering cells, similar to those which accompany the registration of primary impressions.

Development of consciousness.

And further, we must infer from the foregoing considerations that each ganglionic cell or area of the cortex acts both as a receiving and as a discharging centre. In registering sensory, motor, or revived (ideal) impressions, its protoplasm performs a work of chemical synthesis. In transmitting impressions, either in a centrifugal or in an intra-cerebral direction, the same protoplasm effects a chemical decomposition, whereby energy is liberated.

The same reasons which compel us to infer that, in motor areas, this liberation of energy acts as an indirect stimulus to storage, apply to all the areas of the cortex, to the latent (mental?), as well as the rest. Thus the intra-cerebral circulation of impressions is *the* stimulus, although an indirect one, upon which force-storage in the cortex depends, and for those cortical regions which receive no direct stimulus through centripetal nerves, and no indirect stimulus through motor nerves, this intra-cerebral circulation is the only functional stimulus. When an impression is received on a ganglionic cell, its registration directly effects chemical synthesis; when an impression is liberated, its transmission indirectly does the same thing.

The smaller the amount of force-material stored up from the blood under the influence of the centripetal stimulus, the smaller can be the amount of work evolved in the centrifugal direction in a given unit of time. If the amount is increased, the period of its evolution is shortened—*i.e.*, the advent of unconquerable fatigue is accelerated. Conversely, when we note the speedy advent of fatigue, as in children, women, and hysterics, we must infer that the storage of force-material has been less than in cases where the period of exertion can be prolonged. The wide diffusion of the "hysterical temperament" in women is correlated with their generally lesser capacity for the storage of force, which may, nevertheless, remain within physiological limits. If the deficiency fall below these limits, it results in the altogether morbid limitations of hysteria. And, while there are many women whose capacity for force storage—as measured by their capacity for exertion—considerably transcends the average of their sex, and even reaches the masculine average, so there are not a few men whose capacity in this respect falls to the level of hysteria, and who exhibit hysterical phenomena in consequence.[1]

Significance of fatigue.

The sensory centres of the brain in hysterics are exposed to two different kinds of derangement—corresponding to two opposite phenomena—anæsthesia and pain. In the first, the registering power of the centre is so diminished as to fall below the level of consciousness; and this either by privation of blood-supply, through vaso-motor spasm, or by direct depression of protoplasmic energy to appropriate material from that. The latter case enters completely into the general theory of depressed storage-power in hysterical nerve-tissues.

Hysterical derangement of sensory brain-centres.

In the innumerable forms of hysterical hyperæsthesia, an opposite process must occur. The centripetal stimulus remaining the same, it would seem as if a larger amount of chemical syntheses were effected in the centre under its influence. When a sensory centre is subjected to an excess of stimulus—through a violent centripetal irritation—it is known that the functions of other nerve-centres may be transiently arrested or inhibited. We may ask whether the same inhibition of other centres is not liable to occur when in the centre there is an excess of reaction to a normal stimulus?

Inhibition has been explained as a phenomenon of interference between the waves of molecular movement transmitted along nerve-fibres; interference analogous to that, which, when occurring between waves of light causes darkness, and between waves of sound causes silence.[2]

Theory of inhibition.

In the nerve-tissues, if these waves of molecular movement coincide, the intensity of the movement is increased. But if one wave be retarded out of the normal rhythm, so that its crest fall within the trough of the other, this second wave will be antagonized, and the action of the nerve-centre from which it emanates will, therefore, be apparently diminished. In reality it is not the activity of the centre which is diminished, but the effect of that activity.

This is the explanation of inhibition given by Claude Bernard for the chorda tympani, by Ranvier for the vagus, by Lauder Brunton and by Wundt for the phenomenon of inhibition in general. In accord with this conception, we may suppose that when in a nerve mass, as the sensory centres of the brain, the negative work of intra-molecular synthesis and storage becomes greatly increased, the wave of movement constituting the positive work or centrifugal impulse may become retarded, and this disarrangement of normal rhythm may suffice to make it interfere

Inhibition from sensory nerves.

[1] Charcot remarks that male hysteria has become rather a topic of the day, [illegible] a monograph by Batault, containing two hundred and eighteen. See Gaillard's Journal, June 1886. I have seen several such cases.

[illegible] des Menschen, 1881.

with and antagonize the molecular waves coming from other cortical areas. These latter, therefore, would be inhibited, as an indirect consequence of the surcharge of sensory centres.

The violent centripetal irritations of sensory centres which are accompanied with pain, always tend to arrest motor and mental action. Their action is not limited to the fore-brain; the arrest of the heart's action is a well-known phenomenon of sensory inhibition. Nor is it probable that the irritation expends itself exclusively upon the sensory centres of the cortex, but is rather distributed throughout all the receiving stations of the cerebro-spinal axis. Now when, under the influence of a normal stimulus, the cortical centres have acquired the habit of registering impressions abnormally and excessively, as is shown by the patient feeling pain entirely out of proportion to the magnitude of the irritations, we must believe that the work of chemical synthesis excited in the sensory centres, is also excessive. It should, or at least may, follow that the waves of molecular movement transmitting impression in an intra-cerebral direction become retarded, and thus "interfere" with waves coming from other cortical areas. Then, though to a less degree than with violent pain of peripheric origin, the play of intracerebral associations and impulses, and their ultimate convergence upon motor (volitional) acts, will be interfered with. Hysterical "paralysis of volition" should be the necessary correlative of hysterical hyperæsthesia.

Relation between hysterical hyperæsthesia, and hysterical paralysis.

Many facts indicate that the inhibition of one nerve-centre by another is powerful in proportion as the storage of force in the first exceeds that of the second. The feeble control of the vagus centre over the heart in rabbits, the feeble control of the cortex over the subcortical motor (convulsive) centres in young children, negatively illustrates this law.

In accordance with this, the inhibition of the non-sensory cortical areas will be easy, in proportion to an habitual deficiency in the storage power inherent in their tissues. And since the active function of these areas in motility, volition, and thought, has been shown to furnish an important though indirect part of the stimulus upon which this force-storage depends, everything which diminishes such activity diminishes the power of resistance of these parts of the cortex to the inhibitory influence of sensory areas—renders the latter, if we may so express it, more and more tyrannous.[1]

It is generally admitted that activity of thought and of motion tends in some way to blunt sensation. We can most clearly represent this fact to ourselves as implying that, during such centrifugal activity, currents of molecular movement set in from the sensory centres, involving liberation of energy from them and chemical decomposition in them—thus elimination of material that had been previously stored up, perhaps in excess. In the primary reflex acts the current of impression always passes from the sensory toward the motor centre. But, as Meynert observes, in the brain, impressions can certainly traverse fibres in both directions; and as the impulse to voluntary movement does not come from the areas registering the primary sensation, but from others which have become associated with them, it is perfectly in order to suppose that the intracerebral discharge of the sensory areas is often initiated by the play of molecular movements in the mental motor regions. And this brings the argument round to its starting-point, and suggests that one way in which the sensory centres may become hyperexcitable, through excess of storage material, is through the lessened discharge of these centres when the play of centrifugal activities is defective. It is certain that the sensory centres of the cortex are capable of continuing their functions of registration almost indefinitely, even in the exaggerations of pain, while the exercise of either active thought or mobility has quite a limited duration.

Effect on sensory centres of centrifugal activities.

Hyperæsthesia from diminished mental and motor action.

The foregoing considerations indicate that the following series of conditions succeed each other in the cortex of the hysterical brain: 1. A diffused deficiency in storage power; deficiency shared more or less with other nerve-tissues, usually congenital, sometimes acquired. 2. Nevertheless, effecting of abundant storage in the sensory centres, under the permanent stimulus of centripetal impressions. 3. Deficient centrifugal activities, mental and motor, or exhaustion of mental and motor areas by exertion performed with inadequate storage material. 4. Deficient discharge of sensory centres, which continue to store material under the stimulus of centripetal impressions, but fail to decompose and eliminate this sufficiently when centrifugal movements diminish in activity. 5. Hyperexcitability of the sensitive centres, which contain an excess of force-material produced during registration of impressions, and not broken up by their transmission. 6. Tendency on the part of these surcharged sensory centres to inhibit the activities of the rest of the fore-brain.

Succession of fundamental cerebral conditions of hysteria.

The phenomenon of mental inhibition, resulting in inability for mental exertion, is extremely common in hysteria. It is often described as "causeless mental depression," as "wilful hysterical indolence," or as "brain exhaustion." I have not found the suggestion anywhere, that the depressive mental phenomena of hysteria depend upon functional inhibition of the thought-areas of the brain Yet this view seems to me the true one, and alone consonant with all the facts of the case. I have often noticed this condition in uterine disease, where it persists until this is cured. It is not by any means always associated with pains, either in the pelvis—the then focus of irritation—or in the head. After the foregoing analysis it may be inferred that, in these cases, impressions have been generated on a diseased endometrium, or among pelvic nerves, which, though not giving rise to local pain, may, when transmitted to the sensory centres of the cortex, so overexcite them that they inhibit the remaining cortical areas.

Hysterical cerebral inhibition (cerebral neurasthenia).

The following case offers a curious form of cerebral inhibition:

CASE I.—Unmarried woman, a teacher. Subject for several years to attacks of transient amblyopia in the left eye, coming on many times a day, and lasting from a few seconds to a minute or two. These attacks had been diagnosed by two competent oculists as "epilepsy of the retina." During a year before consultation the patient was also subject to nervous attacks, in which consciousness seemed to be, not abolished, but perverted for a while. The condition is imperfectly described by the patient, who can only say that "everything seems strange," that people do not seem to be the same; that she looks very badly to them, and has an inexplicable but profound consciousness of distress. This condition may last fifteen minutes, half an hour, or longer. Examination discovered marked prolapsus of the uterus, so that the cervix came just to the introitus, and apparently rubbed upon the labiæ minoræ. There were no local symptoms of the polapsus. The uterus, which was healthy, was replaced by a cup-pessary, and the cerebral attacks immediately and permanently disappeared. The ocular attacks persisted. The entire persistence of consciousness during the attacks exclude, I should think, the diagnosis of epilepsy. These attacks seem to me to illustrate, though in a peculiar form, and on a transient and intermittent scale, the cerebral inhibition that is so common and so distressing in hysteria, perhaps especially in that of pelvic origin.

[1] A [illegible] cells, should be regarded as sensito-motor, and this especially if the fundamental [illegible] present understood, seem to indicate a frequent, though not universal, commingling of sensory and motor elements rather than an identity of these in function. The schema of sensory inhibition stated in the text must, of course, be provisional.

Such inhibition, I would suggest, is the real basis of the mental symptoms, which result, not from excess of mental exertion but from peripheric irritations in predisposed persons.

The sense of mental inability is usually attended with psychic pain, and the latter is sometimes so predominant that the former is not complained of. Psychic pain, if we accept Meynert's exposition of it, is a direct consequence of cortical inhibition.[1] Whatever interferes with the free diffusion of functional activities throughout the cortex, and with the localized hyperæmias attendant upon these, occasions the "hampered mood," which expresses itself as mental distress, or psychic pain. The immediate mechanism of this is the same, whether the cause be physical—*i.e.*, hysterical—or moral—*i.e.*, objectively justified by events. Meynert thus describes the latter form of inhibition:

Meynert's theory of psychic pain.

"The news of the death of a person who was bound up with a good portion of our thoughts, whose image would be frequently revived in our brain by the most manifold associations, and which, when presented to the brain, would arouse all sorts of secondary presentations and pleasurable emotions—such news, we repeat, would cause inhibition of all these associations, and the place of easily excited associations will be usurped by others not yet easily transmitted. Inhibition is attended by emotion and psychical pain." [2]

Vaso-motor excitation causing anæmia of brain.

According to the same author a second condition exists, which must constantly tend to increase both psychic pain and mental inability whenever cortical activity is diminished or inhibited.

Theory of cortical inhibition of vaso-motor centres.

During the functional activity of the cortex, or of any segment of it—and it is probably never active throughout its whole extent at once—the vaso-motor nerves of the arterioles going to the segment are inhibited, the blood-vessels consequently dilated, and at the same time a direct attractive force is exercised on the blood-current by the chemical processes which are quickened in the ganglionic cells. As a consequence of this combined effect, a larger current of blood is carried to the active tissue. Conversely, when the cortex ceases to be active, as in sleep, or from being itself inhibited, or under any other influence, the vaso-motor tonus of the blood-vessels is resumed, the blood-vessels contract, the cortical tissue becomes relatively deprived of blood—anæmic, or, to use Meynert's expression, dyspnœic. This condition again tends to diminish the power of functional activity in the cortical segment or segments to which the contracted arteries are distributed.

Psychic depression in grief and in hysteria.

The foregoing considerations may explain the phenomena of mental depression (inability for exertion, psychic pain) both in grief and hysteria. In the former the activity of more or less extensive areas of the cortex is directly arrested by destruction of the objects and associations which calls this into play. In the latter the same activity is inhibited by the excessive activity of the sensory areas. In both cases the diminution of functional activity in the ganglionic cells of the cortex is followed by an excess of activity in the subcortical vaso-motor centres released from cortical control. Hence, in the corresponding segments of the cortex must follow localized anæmias, which tend still further to hamper the functional activity of these segments. The greater and more unimpeded the functional activity of the cortex, the more widely diffused the attendant hyperæmias, the more intense is the consciousness of psychical well-being or happiness. The unimpeded diffusion of intracerebral impressions irresistibly suggests a correlatively facile diffusion of desire and activity over all impediments in the outside world; consciousness is permanently triumphant. In the contrary case the arrest of cerebral activities suggests as irresistibly oppression, defeat, humiliation, disaster in external events; imposes subjectively the depressing emotions of mortification, distrust, and apprehension—the depression of spirits which is unconquerable, even when the patients themselves recognize its objective groundlessness. "I have everything to live for, but I am perfectly wretched," is a common remark. "I know I am better, because I can now look at that undertaker's shop on the corner without feeling ready to burst into tears," remarked one patient to me.

This depression often reaches its maximum during pregnancy, when hysterical women often say they will "go crazy," and not infrequently commit abortion, only to rid themselves of this subjective misery.

When the personality is so completely invaded that the patient does not recognize the groundlessness of her mental suffering, the case becomes complicated by her endless misconceptions of her social relations. A (relatively mild) form of the delirium of persecution is extremely common among hysterics, even those who never exhibit the severer physical phenomena of the disease. The harmonious maintenance of social relations seems to demand the self-consciousness of an energetic and adequate personality. Cortical inhibition, which weakens this consciousness and fills it with self-distrust, almost necessarily engenders suspicion of others.

In the typical hysterical temperament egotism is a noticeable feature. In hysterics of small minds this may suffice to exclude all interest in external objects. In larger and more cultivated minds such interests are not excluded, but there is an extraordinary tendency to look at them only in their relation to the person, and only in so far as they can be made material to subserve his or her vanity and *amour-propre*. This remarkable tendency is clearly traceable to the predominance of the sensory functions of the fore-brain. Nerve-currents constantly direct attention toward the goal to which they flow. For centripetal sensory impressions this is the receiving organism; for centrifugal, it is the world upon which that organism expends its energies. Exaggeration of the sensory functions constantly tends, therefore, to exalt the consciousness of the personality over that of the external world. Activity of the voluntary functions constantly tends to divert attention from the personality to the external world. When this habit is firmly established, feelings, as well as actions, direct attention to the external world in which they originate; the individual constantly becomes more and more objective. On the other hand, the person who, in the presence of interesting or impressive events, is only preoccupied with the emotions or sensations they may have engendered in himself is distinctly marked with the hysterical stigma, even though, which is rare, no other sign of it ever appear.

One curious result of the psychic aspect of hysteria is the manifold way in which it checks the development of the maternal instinct. The frequency of uterine disease in hysterics—the frequency with which their reproductive organs are imperfectly developed, the frequency of accidental abortion—entails sterility in an immense number of cases from physical causes. Where hysterical women bear children, they are usually unable to nurse them. In cases where there is no physical impediment to conception this is often purposely avoided from mere moral perversity. The patients profess to hate children, are in despair if they become pregnant, and, as already noted, not infrequently commit abortion, under the influence of the intense mental depression to which a pregnancy subjects them. When such women nevertheless have children, the hysteria, if not too profound, may be cured. But not infrequently the defect in maternal instinct persists, and the lives of the children are made wretched by the ceaseless exactions, and even increasing selfishness, of the hysterical mother—personal selfishness which is in unnatural contradiction to the profounder maternal egotism which is natural. These conditions are no more universal, or all combined in one person, than are any other symptoms of hysteria. Those women who are sterile from physical incompetence are

Sterility in hysteria.

often tormented all their lives by the longing of unsatisfied maternal instincts. Many hysterical women do make devoted, though rarely judicious, mothers. But if not for one cause, then for another, the net result is a great diminution of complete reproductive capacity in hysterics.[1]

The bearing of children implies the liberation, on an immense scale, of centrifugal energies, mental and motor. It is the type of an action—correlating, correcting, and balancing—a feeling, emotion, and passion. From a philosophical point of view, therefore, the sterility or the deficient maternal instinct of hysterics belongs to the same class of conditions as have been already described, and in all of which there is deficiency of motor (centrifugal) force, with conservation of sensory (centripetal) function.

The physical sterility, when congenital and not acquired, allies hysteria, even when remotely, with the neuroses of degeneration. What I have termed the moral sterility, which, in one way or another, results in perversions of the maternal instinct, can be traced to the same preponderance of sensory functions, with exaltation of the narrowest nucleus of the ego, that, namely, which is constituted by the limits of the physical organism. The normal maternal instinct implies one of the first and always the most powerful enlargement of this nucleus, so as to embrace the offspring within the pale of self-consciousness. Failure of this instinct implies a most unnatural narrowing of the range of life within the sensory or purely personal sphere.

Most important, both for diagnosis and for justice, is it to recognize that the mental and moral defects which result from the conditions described are by no means always present. To many hysterics may be applied the phrase reserved by Clifford Albutt for "neurasthenics," whom he would distinguish from them,—"they are the salt of the earth."[2]

Just as marked intellectual ability, and even genius, is quite possible in hysterics,[3] so may the most amiable, unselfish, and affectionate character be not infrequently found among them. These facts simply mean that the organic tendency, though existing, has been counteracted, either by a development of cortical tissue considerable enough, and endowed with sufficiently abundant associations, to resist complete inhibition in mental spheres; or else by the educational direction given to the formation of associations, and to habits of action, which enables these to offer resistance to sensory inhibition.

Between the cases where mental depression is caused by sensory inhibition and those where it is due to the inhibition of associated ideal impressions, lie the others, where a real moral cause permanently deranges the mental mechanisms, and the affected persons become hysterical from grief or shock. These cases are in many respects analogous to cases of chorea from fright. An impression is made upon certain cortical areas so powerfully that they remain overexcited, and inhibit the activity of the rest. In chorea it is the motor regions of the cortex which are chiefly affected by the inhibition. In adult hysteria it is all of the fore-brain which is concerned in thought or volition; the convergence of intracerebral impressions upon centrifugal tracts is impeded, so that thought and volition are held in abeyance. Sometimes even portions of the sensory centres are involved in the inhibition; the patient suffers amblyopia, or localized anæsthesia of some sphere of common sensibility. More often the sensory centres remain intact amidst the depression of all the rest, and the patient becomes the victim of agonizing pains—though in the absence of any peripheric cause for pain. These are the pains of cerebral origin, which are typically hysterical.

Hysteria developed by grief.

Hysterical, *i.e.*, cerebral pains.

In suspensive or cataleptic hysteria, which is more frequently induced by moral than by other causes, the entire fore-brain has lost its susceptibility to stimuli; hence has lost its power of either storing force or of liberating energy. The complete suspension of function in these cases is only the maximum exaggeration of the condition which is fundamentally characteristic of all forms of hysteria.

In these suspensive forms of hysteria the perversion of oxidation processes is also exaggerated to a maximum. The amount of urine and of urea is greatly diminished; the latter may fall from twenty to two grammes a day.[1] The phosphoric acid is also diminished. Empereur has measured the absorption of oxygen and elimination of carbonic acid in this class of patients, and has found both greatly diminished. In one case the movement of disassimilation, as thus estimated, was twenty-four times less than normal. According to the same author, cataleptics absorb more oxygen than they eliminate carbonic acid, although both processes are greatly diminished in intensity.

Suspensive or cataleptic hysteria.

The extent of these chemical alterations indicate that the depression of function extends beyond the fore-brain, and probably involves the entire nervous system; hence affects all the nutritive processes under its control. Since the main object of the absorption of food, the circulation of albumen and its oxidation, is the maintenance of energy in the nervo-muscular system, the suspension of such energy is naturally followed by depression to the lowest point of nutritive absorptions and oxidations.

In chloro-anæmia, the peculiar neurosis of puberty, which is so closely allied to hysteria and so frequently passes into it, the characteristic alteration of the blood has been shown to be a diminution, not in the number of the blood-corpuscles, but in the hæmoglobin they contain (Gowers). There is, then, in these elements, a deficiency in the power of fixing or storing oxygen, which, demonstrated in them, may serve as an index to a similar (probable) deficiency in the elements of the nerve-tissues. Between chloro-anæmia, the mildest form of the disorder, and suspensive hysteria, the most complete and severe, stretches an uninterrupted series of morbid states.

Deficient oxygen storage in chloro-anæmia.

The existence of psychic symptoms in a case of hysteria, or in the history of the case, is admitted to establish that the fore-brain is then involved in the disease. But in the cases where these are inconspicuous, the participation of the brain is less readily seen, and still less does it appear self-evident that non-psychical symptoms are to be referred to the brain. Thus, though a few writers define hysteria as a disease of the brain,[2] there are more who call it a diffuse cerebro-spinal neurosis, or a neurosis of the vaso-motor system.

The problem should be thus stated: Given a group of sensory, motor, or vaso-motor phenomena, to decide whether these originate in disorders of the medullary or spinal nerve-centres, or whether they are due directly or indirectly to disorders of the cerebral cortex.

Hysteria a cerebral neurosis.

Now, it can be shown, I think, first, that in a large group of cases the phenomena in question either are attended by some mental symptoms, or that these have occurred in the history of the patient previous to the manifestation of the physical symptoms; second, that the characters of the "physical" symptoms themselves are explicable when referred to the brain, but not when referred, finally, to lower centres.

Distinction with medullary spinal neurosis.

It is the neuroses which present these two fundamental characters which may properly be called hysterical; and are so even when they have themselves been caused by organic disease in a thoracic or abdominal viscus, or

[1] The classical notion that sexual impulses are [illegible] certainly erroneous. Both physically and morally, these are often exaggerated or singularly perverted, the latter trait constituting one of the most [illegible] links with insanity. The peculiar whims in these respects of hysterical [illegible] tendencies to sterility by leading [illegible] Moreau has given a truthful picture of the refined hysterical [illegible] Nervous Neuroses.

[2] Madame de Staël indulged in the most violent outbursts of hysterical emotion. Charlotte Brontë suffered from prolonged hysterical hypochondria, probably due to endometritis; George Eliot was the victim of hysterical headaches, and probably of other forms of the disease.

[1] [illegible]

[2] Jolly: Ziemssen's Handbook, art. Hysteria.

are associated with organic disease of the nerve-centres themselves.

Neuroses which really originate in medullary-spinal centres, though often presenting symptoms which resemble those of hysteria, and sometimes occurring independent of hysteria in persons of hysterical constitution, require to be carefully distinguished from the hysterical neurosis itself.

Analysis of the non-psychical symptoms of hysteria.

The principal non-psychical phenomena of hysteria are, in the motor sphere, paralysis and convulsion; in the sensory sphere, anæsthesia and pain; in the visceral sphere, numerous derangements, traceable to vaso-motor spasm or the spasmodic contraction of unstriped muscular fibre.

That hysterical paralysis is an affection of the cortical motor centres is generally conceded, chiefly on account of the marked influence often seen to be exercised over it by mental impressions. But this is also indicated by the (frequently) monoplegic character of the paralysis, and by the preservation of nutrition and Faradic contractility in the affected muscles. The second character, identical with that of organic cerebral paralysis, excludes the ganglionic centres of the spinal cord, and establishes the cerebral origin of the disease. The monoplegic form of paralysis is as characteristic for the cortex in functional derangement as in organic lesion.

Such functional cortical paralysis represents the maximum degree of inhibition of the cortical motor areas—of which some degree exists in the majority of all cases of hysteria. When the paralysis involves the nerves of the lower extremity, and utero-ovarian disease coincides, the paralysis is often called reflex, and supposed to be in some way connected with reflex spinal arcs.[1]

First motor disorder, or paralysis.

But, first, there is no physiological experiment which exhibits paralysis resulting from irritation[2] of the sensory part of a reflex arc, but only excess of muscular contraction—spasm.

Second, cases of paralysis without pelvic symptoms, or ascertainable lesion, entirely resemble those in which these coexist.

Third, paralyses of distant nerves—as of the laryngeal, or paresis of the nerves of the throat—are very common substitutes for paraplegic paralysis, and certainly lie beyond the pelvic reflex arcs.

The following cases are illustrations:

Case II.[3]—Intensely chloro-anæmic girl of twenty-two. Ovarian hyperæsthesia for a year, without tangible lesion of uterus or ovaries. Then suddenly, incomplete paraplegia lasting twenty-four hours. Recovery; relapse a few weeks later. Paraplegia remained incomplete for several months. Patient began to suffer from severe dysmenorrhœa; pelvic pains gradually encroaching on intermenstrual period, until life was rendered perfectly wretched by them. Ovary found prolapsed. Paraplegia became so complete that patient could not move toes, and remained so for seven years. Then oöphorectomy was performed by Dr. Mundé for relief of dysmenorrhœa; and with no hope of affecting paralysis. In ten days after the operation, patient could move the toes; in a month, had quite recovered power of walking. Ovaries, to naked eye, said to have been healthy.

Case III.—Girl engaged in factory work. Incomplete paraplegia, with fixed right ovarian hyperæsthesia; no dysmenorrhœa; uterus retroverted; otherwise healthy. Permanent replacement of uterus had no effect; galvanism at times entirely restored power of walking; this again lost.

Case IV.[1]—This case was diagnosed as true locomotor ataxia in several hospitals, but the ataxic symptoms entirely disappeared after an operation for laceration of the cervix.

Case V.—Married woman, aged forty. Subject for many years to altercations with husband; loss of power of walking—*i.e.*, experienced so much pain in walking that she considered herself unable to walk, and took to bed for two years. No uterine disease at all. Recovery rapid after positive diagnosis of hysterical nature of "paralysis."

Case VI.—Woman, aged thirty-five. Subject for five years to uterine hemorrhages, associated for a year or two with intermittent aphonia. Uterine fibroid sessile in fundus. Removal; arrest of hemorrhages, but attacks of aphonia continued to recur for a long time.

These cases, varying superficially, resemble each other in the preservation of nutrition and Faradic contractility; indeed, in the absence of all objective symptoms, and the summing up of the disease in the single condition—inability of the will to determine the contraction of certain muscles. To what could this be due but to depression, or inhibition of the functions of the cortical motor centres in liberating energy in motor tracts in response to intracerebral stimulus? In Case IV. alone did the inhibition of the cortical centres seem to be associated with peripheric irritation, for in Case II. the ovaries were reported as normal, and the operation seems to have been successful through removing the stimuli of the menstrual processes from hyperexcitable sensory centres. The sensations of fatigue, of which hysterics complain so much and so bitterly, often represent a minor degree of inhibition of cortical motor centres. It makes no difference how perfectly may be accomplished nervo-muscular functions through the body, if the only conscious spectator of these—the fore-brain—registers them awry.

Hysterical fatigue a minor degree of hysterical paralysis.

When the patient is anæmic or cachectic, there is certainly often reason to suppose that the reparative nutrition of the entire nervo-muscular system is impaired. But this is not the case in really hysterical fatigue, which, though just as real to the consciousness of the patient, may coincide with every sign of excellent general nutrition. The intimate process of the phenomenon of fatigue is to-day supposed to be the accumulation within nerve- or muscle-tissues of the waste chemical products of previous exertion. The elimination of these acid excretæ is often interfered with in lithæmia, from the diminished alkalinity of the blood bathing the cells, and into which the acid substances should osmose largely in proportion to that alkalinity.[2] Hence the frequent muscular pains, aching, and weariness; and, when the condition extends to the fore-brain, the frequent clinical combination of lithæmia and hysteria. High tension in veins and in capillaries must also interfere with exosmosis from cells; hence the low arterial tension of anæmia, which constantly tends to increase venous tension, interferes with the elimination of waste, and tends to prolong fatigue, as frequently happens in anæmic hysteria. But in the brain exist special mechanisms for the removal of waste, which are correlated with the special necessity for prompt and complete removal. And that it is this mechanism which is principally deranged in the fatigue of hysteria is shown, I think, by the peculiarities of sleep in hysterical persons, and their habitual increase of fatigue immediately after the period which should, normally, restore them. The fatigue-products of the brain, if not of all nervo-muscular tissues, are principally eliminated during sleep. This is the reason that the morning urine contains, as Mendel demonstrated, larger amounts of phosphoric acid than that formed during the day. During sleep, both the breaking down of waste products into their elements and the elimination of these from nerve-tissue occur more extensively. Among nerve-tissues it should be principally those of the fore-brain

Fundamental condition of fatigue.

[1] Reported by me in the Archives of Medicine [illegible] for August.

[2] See Ranke: Lebens bedingungen der Nerven.

[illegible] Brown-Séquard's [illegible] for spasm, in [illegible] depends [illegible] tation. [illegible] ory, substituting that of an ascending neuritis, on the testimony of two cases, with autopsies.

[2] Brown-Séquard's experiments consisted in hemi-sections of the cord, which were followed by hyperæsthesia of the same side due to vaso-motor paralysis.

[3] The termination of this case was observed and reported by Dr. Munde in the New [illegible] Medical [illegible].

which is thus refreshed by sleep, since its activity is much the most completely suspended. Now, it is quite characteristic of persons in whom hysteria exists, or is imminent, that they wake in the morning with a sense of physical fatigue, or of mental depression or irritability. Schopenhauer thinks it is one among many proofs of the theory of pessimism, that the happiest moment of the happiest life is that of falling asleep, and the unhappiest moment of unhappiness is that of first awakening. This is true when legitimate causes for mental depression exist, and is also true when their influence is simulated in hysteria.

In the nervous system, and especially in the brain, the waste products do not pass directly into capillaries, but into the lymphatic sheaths surrounding the arteries. The circulation of the lymph-current, and its passage from the perivascular to the subarachnoid spaces, is regulated by the pulsations of the brain, or its variations in volume, by which the lymph-spaces are rhythmically compressed. The brain-pulsation is composed of three factors: the arterial pulse-wave, the respiratory wave, and the vascular wave. The respiratory wave results from the aspiration of venous blood from the brain during inspiration, and the obstruction to its flow in expiration. The vascular wave advances like a peristaltic movement, and consists in rhythmic dilatations and contractions of the arterioles, apart from the cardiac pulse, and dependent on intermittent vaso-motor influences. This vascular wave is said by Burckhardt[1] to be much more regular during sleep than in the waking period, and constitutes, according to this observer, the principal motor mechanism for removing waste products through the lymphatic products. It is said to give two to six tracings a minute. Its lowest point (I am now quoting from Meynert's citations) corresponds to the contraction, its elevation to the relaxation of the arteries. When the wave begins as systole in the arteries at the base of the brain, this is constricted, and the brain mass at the same time pushed upward with the advancing column of blood; simultaneously, the arteries of the convexity dilate in diastole and receive the blood; the cerebral hemispheres swell, and, being compressed against the rigid skull, compress the roof of the ventricles and compel one portion of the ventricular fluid to escape by the foramen of Magendie, another portion to flow into the veins of the choroid plexus. In the second stage the arteries of the convexity are in systole, those of the base in diastole, causing swelling of the base, which opposes the return into the ventricles of the fluid which has escaped into the subarachnoid spaces, so that this fluid passes over the convexity of the brain, between it and the skull, and enters the great nervous sinuses.

Removal of waste products from the brain.

If it be true, as is now asserted, that this vascular wave is of more importance in the lymph-circulation in the brain than either the pulse- or respiratory-wave, it is clear that any disorder of the vaso-motor centres which govern it may greatly disturb the removal of waste products by interfering with the normal development of such a wave. If, for example, the normal intermittence of vaso-motor impulses becomes exchanged for a permanent tonus, the diastolic portion of the wave would disappear, and with it the swelling of the hemispheres by which the ventricles are compressed. There would remain the variations in volume due to the cardiac systole and diastole; but in sleep these are reduced to a minimum. Hence in any persons subjected to abnormal vaso-motor irritations must exist an imperfect removal of waste products from the brain during sleep, and therefore imperfect refreshment by the great restorer.

Interference with refreshment brain by vaso-motor spasm.

Apart from the foregoing conditions, we may inquire whether the diminution of oxygen absorbed during sleep—diminution which amounts to twenty-four per cent. of that of the waking hours'—is not liable in hysterics to interfere with the oxidation of waste products, and hence with their reduction to the most soluble form. The normal diminution corresponds, of course, to the diminished demand for oxygen force-compounds, which are evidently formed in smaller quantities at night. But the other destiny of oxygen in the nervous tissues is the complete reduction of chemical substances, whose first decomposition was attended by the liberation of energy. Where the habitual supply of oxygen is very near the margin, the diminution during sleep may easily reduce it below the amount at which prompt and effective oxidations are possible. Hence, by a double mechanism, the sleep of the neurotic is liable to be uncertain and unrefreshing; to be tormented by bad dreams, among which are most characteristic those of falling a height. The restlessness and bad sleep closely imitate that of fevers, where the nerve-tissues are surcharged with their own poisonous excreta.

Experiments showing vaso-motor irritation brain.

The curious researches of Anjel[2] on the peripheric blood-flow during brain-activity offer experimental indication of vaso-motor irritation in the brain. In normal persons, during mental activity, the turgescence of the tissues of a limb enclosed in a plethysmograph is found to diminish—presumably from the afflux of blood to the brain.[3] But in neuræsthenics, under the same circumstances, the plethysmograph registered no change. The author infers that from permanent and abnormal excess of tonus in the blood-vessels of the brain the alterations in its blood-supply are less marked, and especially that less abundance of blood is thrown into the brain during its functional activity. Hence more ready exhaustion by this.

The motor derangement of hysteria opposite to paralysis and fatigue is convulsion. The co-ordinate character of hysterical convulsion distinctly marks it as cerebral, as effected in the highest reflex centres, *i.e.*, the co-ordinating—centres, formed by the subcortical basal ganglia of the brain. Thus, while sharing the cerebral origin of other hysterical phenomena, it does not imply a condition of exalted activity of the cortical motor centres, which would contradict the general theory of their condition we have been trying to establish. On the contrary, the excessive excitability and activity of the subcortical motor centres imply diminished control over these by the cortical centres, which normally inhibit them in part. It is well known that hysterical convulsions are often brought on by painful, or even by simply disagreeable, moral impressions.

Second motor disorder of hysteria, or convulsion.

The following case is all the more worthy of citation because illustrating hysteria in the male subject:

Case VII.—Man, aged sixty. Long subject to attacks of co-ordinated convulsions, diagnosed as hysterical by several American and European physicians. On one occasion, trifling altercation at table with an old lady; patient withdrew to his room in great offence; and two hours later was seized with severe attack of typical convulsion; the body curved in opisthotonus, then bounding from the bed in clonic spasms, these alternating with fits of sobbing and tears. Consciousness was evidently preserved throughout.

Painful emotion, it has been said, implies inhibition of cortical activities. The inhibited cortical areas lose their own power of inhibition over the subcortical sensory-motor ganglia. If the total cortical area thus inhibited be large, the negative excitation of these ganglia may be so great that involuntary but co-ordinated muscular contractions ensue (hysterical convulsion).

The tendency to cortical inhibition should be resisted in proportion to the mass of secondary impressions which have been previously organized—in virtue of the chemical synthesis attending their registration—in cortical areas. This theoretical statement agrees perfectly with the ob-

[1] Ueber Gehirnbewegungen. Mittheil. d. Naturf. Gesellsch. zu Bern.

[2] Archives de Physiologie, [illegible]

[3] Amadon [illegible] rise of temperature in the brain during voluntary [illegible]

servation of common experience, that the liability to hysterical convulsion varies in inverse proportion to the mass of ideas previously organized in the consciousness of the individual. If this be small, a slight degree of annoyance suffices for the convulsion; but in the contrary case the phenomenon, when of mental causation, only appears after prolonged and profound disturbance. It is curious to notice, however, that hysterical convulsion much more often appears after slight than after severe moral causes; the latter seem to arouse impressions that re-enforce resistance to inhibition.

Finally, the convulsion may be spontaneous. Yet, of all hysterical accidents, I think this is most frequently traceable to the immediate influence of moral events; also, is the most often limited to persons of narrow intelligence. The post-epileptic hysterical phenomena noted by Gowers[1] are not infrequently convulsive. They are considered by this author to mark the advent of a slight degree of brain-degeneration; *i.e.*, such impairment of cortical power as diminishes cortical inhibition over subcortical ganglionic centres.

A third form of disorder in the motor sphere is, like paralysis and convulsion, common both to hysteria and to organic brain disease—this is contraction or rigidity of muscles. In organic disease this follows upon paralysis caused by lesion of the pyramidal tract. In hysteria the contraction is not necessarily preceded by paralysis, and this circumstance is often the only means of establishing the diagnosis. In organic disease, muscular rigidity is known to be associated with sclerosis of the lateral columns of the cord, or, more specifically, with descending degenerations of the pyramidal tracts. Correlatively with this discovery, hysterical contraction has also been assigned to these tracts. Charcot has even discovered lateral sclerosis in an old woman who was said to have suffered for many years before death from hysterical contraction.

Third motor symptom, contraction.

The primary condition in descending sclerosis is the atrophy of the medullary sheaths of nerve-fibres which have been separated from their trophic centres in the brain. Trophic centres are evidently those from which start nerve-currents. The reason why the fibres of the pyramidal tract degenerate after a hemorrhage into the internal capsule is, admittedly, because the passage of nerve-currents through them is interrupted. The same degeneration is observed after lesions of the central convolutions, when, though all the mechanisms of movement remain intact, the mechanisms for conveying voluntary impulses have been destroyed.

Is it not possible that, if these mechanisms be, not structurally, but functionally impaired, as they are in hysteria,[2] and the passage of nerve-currents from voluntary impulses suspended, the nutrition of the centrifugal tracts may suffer in some manner analogous to that by which the medullary sheaths waste in organic hemiplegia, but much less intense. Thence, as a consequence, the rigidity of the muscles connected with these tracts.

Such a sequence cannot be considered inevitable, for there are many cases of hysterical paralysis without contraction, and many cases of contraction where the inability to move the limb begins at the same time with its rigidity. But it is difficult to see how the line of causation can be in any other direction than that indicated.

Anæsthesia, the first great division of sensory hysterical phenomena, can be interpreted in one of two ways.

Sensory hysterical phenomena: First, anæsthesia.

It implies such defective blood-supply to the cortical receiving centres that they are unable to obtain material for the chemical syntheses of registration, though constantly receiving the stimulus of centripetal impressions. The anæsthesia would then be attributable to vaso-motor spasm.

But it is probable that the nerve-elements of the sensory centres may also suffer direct depression of their power to respond to stimulus—depression analogous to that suffered by the motor centres in paralysis. In both cases the depression simply exaggerates the habitual defect in the power of force-storage. Anæsthesia, like catalepsy, belongs to the graver forms of hysteria. The stimulus to sensory registration is so great and so permanent that in sensory centres the defect is habitually overcome, even when obvious in others. When these also fail it is evident that the defect is unusually great.

Amblyopia is the most serious form of anæsthesia. The following case illustrates the serious difficulty in diagnosis which this symptom may occasion:

Case VIII.—Unmarried woman. Sufferer from various forms of neurotic disorder for several years. After a period of several months of unusually good health, seized suddenly with the most violent pain in eyes, occipital headache, vomiting, and amblyopia, which in a day or two increased considerably, but never to total blindness. The pupils were widely dilated and insensible to light. For two days there was rigidity of the neck and some retraction of the head. Pulse and temperature remained normal; consciousness was unaffected. No ophthalmoscopic examination at the time; a diagnosis was made of a basilar meningitis localized around the optic chiasma. The patient, however, began to recover in a week, but remained subject to violent headaches, as indeed before the attack. Some years later this patient had an attack of incoercible anorexia and vomiting, which terminated fatally in ten weeks. At the autopsy the brain, medulla, and cord were carefully and microscopically examined, and not the slightest trace of organic lesion found. The vomiting, though fatal, had evidently been hysterical, the disturbance in the nerve-centres functional.[1]

This termination made it strongly probable that the cerebral accidents of the preceding years, including the amblyopia, had been also functional, hysterical, developed under the same influence—a neuritis of the median nerve, as seemed to be chargeable with the final and fatal irritations.

In minor forms of hysteria, disturbance of the visual sphere not leading to amblyopia is extremely common. Much of this is due to spasm of accommodation, with spasm of the internal recti muscles, or else to paresis of the same muscles. These disorders will be presently considered.

Of all hysterical disorders, pain is the most frequent, the most distressing, and often the most perplexing, either for diagnosis or treatment. The important characters of hysterical pains are the following: They predominate on the left side of the body; they are entirely out of proportion to the peripheric irritation in which they seem to originate, both in intensity and duration; they are capable of surviving the complete subsidence of peripheric irritation; they may exist in the absence of all ascertainable peripheric irritation; they often develop and cease, like other hysteric symptoms, under the influence of moral impressions; they are constantly liable to diffuse from the locality in which they first appeared into others, not adjacent, but often connected with the first by ramifications of the same nerve-plexus. The diffusion, however, easily exceeds these limits, and often is general. At other times, however, pain may remain with the utmost tenacity, limited to a single spot or nerve-trunk for years.[2]

Second sensory disorder, pain.

Spots of hyperæsthesia are usually aggravated by pressure; deeper-seated pain is sometimes relieved by it; thus especially in the head, and when seated in the muscles of the back.

The reactions of hysterical pain to electricity are also

[1] A very similar case, in which hysterical amblyopia existed in the presence of the optic nerve system, in a neuritis of the median nerve. The terminal history of this case has just been reported by Dr. R. Osgood Mason, Am. Journ. Med. Sciences, July, 1886.

[2] Charcot has recently pointed out the error of considering hysterical phenomena necessarily fugacious and mobile.

variable, although, as a rule, galvanism has a surprising effect in dissipating these pains.

Case IX.—Complains of fixed pain in track of last dorsal and ilio-hypogastric nerve, and in iliac branch of the latter. This locality is a frequent seat of hysterical pain, with or without distinct ovarian hyperæsthesia, with which the ilio-hypogastric pain is frequently associated. The application of a galvanic current of fifteen milliampères, descending from the spinal cord along the nerves, invariably relieved the pain in ten minutes. After half a dozen applications the patient professed herself entirely cured, for the time at least, though the pain had previously persisted with more or less intensity for a year.

Case X.—Married woman, thirty-five years of age. Markedly hysterical temperament, in the form of emotional excitability. Symptoms developed after a winter passed in nursing a relative, and suffering with much physical fatigue, and also anxiety. There was uterine catarrh of moderate severity; hyperæsthesia, without hyperæmia of fundal endometrium; left ovarian hyperæsthesia marked; ovary not perceptible. No dysmenorrhœa, but subject to violent "bursting" headaches just before menstruation, immediately relieved by flow. During premenstrual week, invariably severe mental depression.

In addition to the headaches and the fixed pain in the ovarian region, the patient suffered from pain in the cutaneous branch of the second lumbar nerve where it passes over the left hip, in the middle gluteal nerve on the same side, and in the left pudic nerve. All these pains, as well as ordinary headache, could invariably be dissipated for several hours, or even days, by galvanism applied with the polar method. There seemed to be no difference between the effect of the two poles. The method was not tried on the premenstrual headache.

This patient was subjected to a certain amount of intra-uterine treatment, which was always very perturbating. The patient certainly derived no immediate benefit from this, though immediately after its cessation, and on going into the country, she became quite well. The galvanism, however, retained a permanently beneficial influence, whose duration constantly increased. My present impression is that this treatment would have sufficed, with time, to cure her; but while under my treatment she at one time consulted a prominent gynecologist, who diagnosed endometritis and ovaritis, and advised a six-weeks' residence in his hospital. This advice was not followed, but it was about six weeks later that all symptoms disappeared.

Case XI.—In this case, a girl of naturally hysterical temperament, developed the most marked hysterical symptoms in connection with a retroversio uteri, some of which persisted, though much relieved, after the position of the uterus had been rectified. Among these appeared a new symptom—pain in a fixed part of the vagina, apparently in a branch of the pudic nerve. This pain caused, for a long time, endless trouble about the pessary, which, however, had evidently nothing to do with it; and was so much aggravated by walking that the patient scarcely took any exercise. The pain was aggravated by galvanism, but yielded to a few applications of iodine, made while the patient was being much benefited from the health-lift.

Case XII.—A robust young German woman, twenty-eight years of age, consulted for violent pains, which occupied nearly all the branches of the left lumbar plexus, accompanied by ovarian hyperæsthesia, and which had lasted a year. These pains would be subdued during the application of a strong galvanic current, but would return in from five to ten minutes afterward. There was no ascertainable utero-ovarian disease. Hysterical symptoms during the year the patient was under observation, but no history of these could be obtained at first. At the end of a year the patient was in the same condition, and disappeared from observation.

Case XIII.—Young lady, thirty-two years of age. Lithæmic family history; some relatives with marked hysterical hypochondriasis. Patient herself had had several attacks of hysterical affections of different kinds, now consulted for a spot of pain in left ovarian region of abdomen, that, at first thought, might have been associated with uterine or ovarian lesion, but which soon showed itself as pure ovarian hyperæsthesia. This pain was relieved by galvanism, but more so and more permanently by Faradism, applied externally, and disappeared after a few applications, though it had lasted six months.

Case XIV.—Young woman, about thirty years of age. Marked and peculiar hysterical egotism; complained of a pain in track of right twelfth intercostal nerve, said to have lasted seven years. Said to have been aggravated by exercise taken under advice of physician. This pain was quite unaffected by electricity.

Case XV.—Unmarried girl, twenty-seven years of age. Pain in left crural nerve of eighteen months' duration, during a year of which patient had not walked at all. Either galvanism or faradism temporarily relieved pain, but did not cure it. Patient subsequently cured by sojourn at Weir Mitchell's hospital, where faradism was applied to every part of the body except the affected nerve.

Case XVI.—Very delicate girl of nineteen years of age. Two years previously severe chloro-anæmia, with amenorrhœa of six months' duration. Recovery. Then severe moral strain through illness and death of father. Patient profoundly prostrated in strength, though making every exertion; constant fatigue, anorexia, much insomnia, nervous fever, headache constant, with frequent exacerbations. Tonics, given at first by another physician, produced no effect. Headache finally greatly improved by mild galvanic current, nape to forehead, and with labile passes here. Relief persisted for twenty-four hours, and was especially marked to the distress which had existed at the nape of the neck.

Case XVII.—Markedly hysterical constitution, though of an active and cultivated intelligence and most affectionate disposition. Ovarian hyperæsthesia developed, together with a retroversion of the uterus, immediately upon an arrest to menstruation through a moral shock received while menstruating. Amenorrhœa persisted for a year; then menstruation returned, but was often accompanied by hemorrhage from the rectum. The ovarian hyperæsthesia persisted for three years more, causing almost entire inability to walk. During this period, however, it was always relieved, and seemed gradually to abate and disappear, under the daily application, externally, of faradic electricity.

Case XVIII.—Unmarried woman, thirty-eight years of age. Many hysterical symptoms. Pain in right knee, developed after slight sprain, and persisting for several weeks. Readily dissipated by a very mild application of galvanism; polar method, anode. Some return of pain cured in same way, as rapid and more permanent cure effected by arsenic.

The following case illustrates the development of pains by moral impressions, in a way that is all the more interesting from the age and sincerity of the patient:

Case XIX.—Woman, fifty-six years of age. Neurotic symptoms of many kinds for many years. A month after death of husband, to whom she was much attached, and whom she had nursed through a trying illness, patient began to have the most agonizing pains darting all over the body. The pains had lasted a fortnight when I saw the patient. They rapidly yielded to bromide and valerian, though for some weeks showed a constant tendency to return.

The same line of reasoning which, as I think, establishes the cerebral nature of hysterical paralysis, anæsthesia, and contraction,[1] should assign the far more frequent phenomenon of hysterical pain also to the cerebral sensory centres. "The impressions of the [entire] body are conveyed to the brain by the ramifications of all the nerves and their terminal or-

Cerebral origin of hysterical pain.

[1] The cerebral [illegible]

gans; *mutatio mutandis* we may argue that the cerebral cortex is the surface upon which the entire body is projected by means of these nerves."[1] No sensory impression can rise into consciousness until it has been thus projected upon the cortex; conversely, the sensory impressions that exist in consciousness, without any objective justification, can only arise in the cortex. The sensory hallucinations of insanity sufficiently prove that the cortical terminations of sensory nerves, in this case most notably those of special sense, are capable of generating impressions which are referred to the periphery. The pains of pure hysteria can only be hallucinations analogous to those of insanity, and generated in the sensory centres of the cortex. For where else could they be generated?

As in insanity slight lesions of the auditory apparatus may initiate hallucinations of hearing which suffice for a basis to a delirium of persecution, so in hysteria slight, and even physiological, impressions may suffice to initiate hallucinations of pain in morbid sensory centres. The brain-cortex is the only part of the nervous system which possesses the power of immeasurably magnifying an impression, in a way that we can perhaps rudely represent by the action of the galvanometer or the boussole. This magnifying power, and still more the capacity for generating a hallucination of pain in the absence of all irritation, is often clinically interpreted as the "imagination" and "exaggeration" of hysterics. These expressions, which, properly understood, really place the pain on the most profound morbid basis, by referring it to disordered action of the brain, are, singularly enough, often taken to justify a contemptuous dismissal of the whole subject. But what can be more serious than a fact of consciousness which has been produced by illicit means?

The remarkable diffusion of hysterical pains is often interpreted as indicating diminution of resistance in the spinal cord, with consequent irradiation in it of centripetal impressions. But irradiation in the cord does not lead to diffusion of sensation, but to wider response in reflex movement. This is shown in Pflüger's experiment, and probably also in strychnine-poisoning.

On the other hand, a moderate degree of diffusion of impression through the receiving-centres of the brain would cause the excitation of areas belonging to centripetal nerves which terminate on the periphery at some distance from the one originally irritated. The course of centripetal nerve-fibres may be compared to a sheaf, expanding at both ends and compressed in the middle. The separation of the central terminations of nerve-fibres at the cortex corresponds to the much wider separation of the same fibres at the periphery.

By a diffusion of the irritation from a single focus may be excited any or all of the pains so characteristic of hysteria—the clavus, inframammary, third intercostal, præcordial, epigastric, infrascapular pains; those in the track of the external branches of the lumbar and sacral plexus, the pain over the crest of the ilium, and, possibly, the ovarian hyperæsthesia.

The frequency with which pain is referred to the regions of the lumbar and sacral plexus, even in the absence of any utero ovarian disease, may be explained, at least in part, by the masses of impressions which are being continually generated at the peripheric expansion of the utero-ovarian nerve during the rhythmic processes of menstruation. The frequency of slight disorders of these processes increases the probability of morbidly affecting the cerebral sensory centres through their medium. But, as will presently be shown, vaso-motor spasm probably plays an important *rôle* in the sensory symptoms referred to the pelvis, notably in the ovarian hyperæsthesia.

Pain in the track of the occipital and trigeminal nerves, the basis of some of the most violent headaches observed in neurotics, is often difficult to interpret. Are these true neuralgias, irritations of the roots of nerves by obscure nutritive changes in their nuclei of origin? It is well known that Anstie explains neuralgic pain by atrophy of the posterior nerve-roots—minor degree of the lesion which causes the pains of tabes dorsalis.

The old and oft-quoted remark of Romberg, that "pain is the cry of the nerve for healthy blood," has led almost to a habit of referring these and other neuralgias to anæmia. They are certainly often associated with lithæmia. Apart from general conditions interfering with the abundance or the purity of the blood-supply, the medullary and upper cervical nerves are especially exposed to localized anæmias during irritations of the medullary vaso-motor centre. Such irritations are most frequent in hysteria.

Explanations of true neuralgic pain.

But all the foregoing causes produce pain directly; a real change takes place in the sensory roots, or the nuclei of origin of the nerves, which is simply registered by their cortical fibres in the sensory regions of the cortex. When due to vaso-motor spasms, these neuralgias may be indirectly due to hysteria. In other cases they may be simply associated with hysteria. Finally, though there be at present no absolute proof of such an occurrence, there seems no reason why sensory irritations should not diffuse into the cortical areas of the trigeminal and occipital as into those of other nerves, and thus pain be referred to their distribution even when both their peripheric expansion and nuclei of origin were intact.

Pain in the head—headache—can never be the direct expression of irritations of the cerebral sensory centres, for such irritations are always referred to the periphery of the nerves connected with these centres. The location of pain in the head after cerebral irritation implies that irritation has been referred to the ramifications of the trigeminal nerve in the dura mater, or to the branches of the occipital nerve distributed over the scalp.

This pain may originate in several ways. In the first place, typical hallucinations of pain may be generated in the cortical centres for the dura mater nerves, and referred to their periphery, as in hysterical pelvic pains.[1] In the second place, hysterical vaso-motor irritations, generated through lack of cortical control over vaso-motor centres, may cause spasmodic anæmia of the nuclei or spinal roots of these nerves, or diffused neuro-paralytic congestions of the dura mater. Finally, true neuralgias of these nerves from general anæmia, or from lithæmia, may develop in hysterical persons, and associate themselves with typically hysterical symptoms.

Case XXII.—Amenorrhœa and severe headache, almost incessant for two or three years. Frequent paroxysms of neuralgiform pain in nape of neck, and extending forward in track of superficial cervical plexus. These paroxysms always relieved and finally cured by aconitia, which had no effect on the headache at all.

Hemicrania has long been regarded as a vaso-motor neurosis; as such it is sometimes hysterical, sometimes direct, especially from the blood-poisoning of lithæmic indigestion. A number of distressing paræsthesias in the head are most common in hysteria and in uterine disease—the head is too big; is empty, hollow; is burning, etc. Vertical and occipital headache is most characteristic of uterine disease, and of uterine hysteria. A constant, diffused, dull headache is also frequent, and would be best explained by diffused congestion of the dura mater through vaso-motor paresis.

(To be continued.)

Artificial Tape-worms.—A writer in the *Southern California Practitioner* says that the people from the country around Los Angeles go to that city for treatment for tape-worm, and return with yards of tænia in bottles. The worms, he admits, are very pretty and perhaps worth all they cost, for they are made of celluloid.

[1] Meynert, l. c., c. i., p. .

[1] See Dr. Thomas, "Clinical Lectures," chap. v. Hysteria. An analysis of the action of the sensory ganglion upon the sensitive nerves of dura mater.

ADVANCEMENT OF TENON'S CAPSULE.

By J. HERBERT CLAIBORNE, Jr., M.D.,

NEW YORK.

Five years ago De Wecker proposed and performed advancement of Tenon's capsule. Having seen the operation performed a number of times by him and others, with good result, I became imbued with a desire to test its advantages myself. I have performed the operation twice in the case below cited, and am induced to publish the results, not from the conclusions which can be drawn from so limited an experience, but from a desire that the steps of the operation may be definitely described, and that others may be led to perform it and to give us the benefit of their observations. Before the American Ophthalmological Society, convened at New London during July, Dr. Knapp cursorily described the operation and gave the results of advancement of Tenon's capsule in ten cases. His impression as to the usefulness of the operation was favorable.

The case upon which I operated was that of a boy, aged twelve, who had squinted with the right eye from early childhood. There was a convergent concomitant squint of at least three lines and a half.

He squinted with the left eye only under cover of the hand, and the parents stated that they had never seen him squint with this eye. Under cocaine, tenotomy of the internal rectus was performed "extra conjunctiva." In order to prevent sinking of the caruncle, a double suture was passed through the conjunctiva, two lines to the outer side of the caruncle, the needle cut off, each end threaded separately, and one passed through the upper and the other through the lower limit of the corneal lip of the wound. The sutures were then tied so as just to bring the lips of the wound together.

Immediately after the operation the correction was perfect, but when the boy returned, on the third day, there was a squint of at least one and a half line left.

Four or five days after the tenotomy, advancement of the capsule of Tenon over the external rectus of the same eye was performed under cocaine. The conjunctiva was picked up and a vertical wound made with the scissors two or three lines from the corneal margin; the conjunctiva was then freely dissected up as far outward as the outer canthus, and upward and inward above, and downward and inward below the cornea, to a distance corresponding to one-third of its diameter.

The wound in the conjunctiva was then enlarged, a triangular flap (with base outward) dissected up and cut off. The width of this flap at its base was at least four lines, the length, from apex to base, at least five.

The capsule of Tenon was then picked up at the upper and outer, and lower and outer angle of the wound, and a free incision made into it at each point.

Sutures were then passed under the conjunctiva, above and below the cornea, carried into the sac of the capsule, and brought out through the conjunctiva as far outward as possible. The patient was directed to look in the direction of the effect desired, namely, outward, and the sutures were tied tight. While the patient was yet on the table, the squint had entirely disappeared; when he alighted, however, the correction was very slight indeed. He now squinted with the other eye also, to the extent of at least two lines.

This condition was not altered in five days. Advancement of the capsule was then done over the external rectus of the left eye. The method of procedure was the same. As to the effect, the same was observed as in the other eye; correction was complete while the patient was lying on the table, but was almost *nil* after he alighted.

When he returned, on the third day, it was observed that the upper suture had slipped; the lower one, however, still held firmly; correction was more pronounced, but by no means complete.

The squint in the right eye still remained. From the first operation to the last, instillations of a three per cent. solution of atropine were made into each eye every third day.

There was considerable, though no alarming, reaction each time, and the boy complained of pain during the night following each advancement. The manifest hypermetropia had been found to be $\frac{1}{40}$, the total $\frac{1}{24}$; after the effect of the atropine had worn off, he accepted $+\frac{1}{36}$ for both eyes. This glass was immediately prescribed. After three days' use of them, the eyes were noticeably straighter, and they continued to become straighter, till at the present date, four weeks since the last operation, there is perfect parallelism, with and without glasses, for distance, and only the faintest squint in the left eye in fixing objects at eight or ten inches. There is still considerable redness and injection over the seat of each advancement. The cicatrices are perpendicular and well marked.

As far as my recollection goes, the operation is described above as it is performed by De Wecker.

Dr. Knapp loosens the connections between the capsule and the muscle with the hook, and in addition adds a third central suture, which passes through conjunctiva, capsule, and muscle, and is carried through the centre of the conjunctival band left at the corneal margin.

The operation seems to be indicated in myopathic and paretic strabismus, and is peculiarly useful in cases of high degree of aberration when combined with tenotomy of the contracted muscle; also in slight degrees of squint, in which we might easily make an over-correction by tenotomy.

According to Dr. Knapp, the sutures may be removed on the following day, if over-correction is feared, or several days later, if not. Great stress is laid by De Wecker on rotating the ball in the direction of the effect desired while the sutures are being tied.

It is pertinent to state that the caruncle was prevented from sinking by the method of placing the suture as described in the tenotomy; it is quite possible that at the same time the capsule was unintentionally advanced.

"Contrary" Action of Antipyrine.—Dr. S. Lindeke reports the following case in the *Norsk Magazin for Lægevidenskaben* for August, 1886. A man, aged twenty-five, with symptoms of incipient phthisis, had a fever of moderate intensity, though very obstinate, for which antipyrine (from thirty to seventy-five grains a day) was ordered. On the tenth day an eruption simulating measles appeared, and the remedy was discontinued. Two weeks later the temperature began to rise, and antipyrine, thirty grains, was again ordered. Soon the patient began to complain of a burning sensation in the mouth, which radiated into the pharynx, nose, and eyes. He became nauseated and vomited, and half an hour later had a severe chill. The temperature rose very rapidly from 100.8° F. in the morning, to 105.3° F. in the evening. The pulse rose to 160, but the respirations remained easy, and at about twenty in the minute. The following day the whole body was covered with a scarlet rash, the conjunctivæ were injected and the eyelids swollen. The temperature fell gradually during the day, and was only 97.2° F. on the second morning. The burning sensation had disappeared, and the patient complained of nothing, but had no appetite. The eruption faded slowly, and was scarcely visible on the fifth day. The writer believes that the drug was pure, as a dose of the same was given to another patient without causing any unusual effects. He excludes idiosyncrasy, as the same patient had taken the remedy before for ten days, with no other bad effect than the production of an exanthem. The man was taking arsenic at the time, but was also taking it when the first course of antipyrine was exhibited.

Clinical Department.

A SHORTENED CORD COMPLICATING LABOR.

Dr. G. F. Harvey, of Parsons, Kan., writes: "Among the causes of difficult labor shortness of the cord is one that does not often present itself to the ordinary practitioner. With this belief I venture a report on the following observations, hoping it may be found suggestive to those who may meet with a similar case, and induce them to adopt at an earlier period than I did a course of action which would save anxiety. Mrs. A ——, of good general physique, was engaged in her second labor, the head presenting in the first position, with no unusual symptoms. The first stage passed naturally, os dilated fully, and the membranes ruptured. Strong and frequent pains set in, and continued for two or three hours without engaging the head, which was drawn with each pain toward the right side of the pelvic brim, and although repeatedly placed in position made no advance. As time passed the patient became unmanageable from the intensity of the pain, which seemed to centre on the right side of the abdomen, where the smaller bulb of an hour-glass contraction of the uterus could be felt. This was grasped at every pain with loud cries of 'being torn to pieces,' and appeals for 'a knife to cut it out.' Under chloroform the consultant applied the forceps, but under such disadvantageous circumstances and with so much hemorrhage that I thought it safer for the patient to turn, which was done without much difficulty, except for the paralyzing effect of the uterine contractions upon the hands. There seemed plenty of room in the pelvis for the body to come down, but it took the united pull of counsel, nurse, and myself, with fingers in the child's mouth, to deliver the head, which, with the placenta compressed into a ball, came out together with a noise like the pop of a cork from a jug—the release of tension being so sudden that they both fell to the floor. The cord was drawn many times round the neck of a strangled child, the free end being so short that in unwinding it the placenta swept round close to the head, being less than four fingers'-breadth long. It was thought that the short end of the cord, drawing on the placenta, excited the abnormal contraction of the right side of the uterus and caused so much agony to the mother, at the same time drawing the head out of the axis of delivery. As there was not any hemorrhage until that following the use of the forceps, it is very probable there was no separation of the placenta before that time. This was the first case of the kind that had been met by counsel or myself in an obstetric experience of nearly twenty years. Hence my starting proposition that they are not a common complication of labor."

SCARLET FEVER AND THE PUERPERAL STATE.

Dr. G. F. Harvey, of Parsons, Kan., reports the case of a woman, who, "on the seventh day after childbirth, got up to have her bed remade, during which a neighbor's infant was laid upon it; when taken off the child was seen to be covered with a red rash, and it died of scarlet fever during the week. On the following day the patient, having passed a restless night, was found with a temperature of 104° F., dry skin, red strawberry tongue, complaining intensely of headache, smarting of the eyes, and burning pains in the abdomen, limbs, and feet. There was a tendency to delirium, the abdomen was swollen and very tender, the lochia had almost stopped, and had a very offensive ammoniacal odor. Her first child, about two years of age, had been taken sick also through the night, and now presented a clear case of scarlet fever, and in due time desquamated. For about five days the mother's condition was quite critical, large doses of opium being necessary to control the abdominal pains, which were spasmodic in character, and accompanied by an almost constant belching. Recovery took place, there not being any sore throat, rash, desquamation of the skin, or other symptoms of scarlet fever, except 'the tongue' and smarting of the ocular conjunctiva. Since this time the patient has been again delivered normally. I was not present, although called about the second week to treat her for abdominal colic, with eructations similar to those above referred to, and I was told she had had stomach-aches very frequently since, although before her health had been superb. Her first labor was natural. I had acted as counsel at it, in the first stage, during which she had been wrongly instructed to make strong bearing-down effort twenty-four hours before full dilatation occurred. About a month or six weeks after the patient and child were convalescent the husband, a plasterer, did some work at a house several blocks distant. Precautions had been taken to exclude him from contact with the family. In about three days a little girl came down with scarlet fever. She had been met outside the house, taken up and kissed on the occasion of the first visit of the workman. During the month following six children of this family were attacked by the disease, three of them having severe throat symptoms. The mother, who was very near her confinement, nursed them all through, and while the last three were still in bed, was delivered, a face presentation making a tedious labor, but without any hemorrhage until the placenta was delivered by expression half an hour or more afterward. There was no manual interference in the delivery after the discovery of what was thought to be vertex presentation early in the case—and, contrary to custom, the same with the placenta—so it is very probable there was no abrasion of the parts, as there was no appearance of blood on the child. A point is made of this, as it is thought that micro-organisms do not commonly affect the parts of parturients unless there is some solution of continuity for them to nestle and propagate in. The patient made a good recovery, and resumed her duties on the ninth day. The babe took scarlet fever on the fifteenth or sixteenth day, had sore-throat, swelled neck, fever, general rash, and desquamated skin and hair. Scarlet fever had been prevalent about this time, and I had learned of two ladies dying of puerperal fever in our community—one, a primipara, who, in the first week had inhaled air that blew over a lawn on which was spread the bedding of a child that had recently died of this fever, and the other was exposed in some way unknown to me. I would gather from these observations that antiseptic precautions are more especially necessary, after instrumental and primiparal labors, during the prevalence of infectious diseases, while it is not of importance in cases which suffer no lacerations of the genitals."

Memorizing Doses.—Dr. G. A. Wiggins, of Philadelphia (*Medical World*, August, 1886), gives some general rules, with their exceptions, which are thoroughly reliable: 1. The dose of all infusions is 1 to 2 oz., except infusion of digitalis, which is 2 to 4 drs. 2. Dose of all poisonous tinctures is 5 to 20 minims, except tincture of aconite, which is 1 to 5. 3. Dose of all wines is from ½ to 1 fl. dr., except wine of opium, which is 5 to 15 minims. 4. Of all poisonous solid extracts you can give ½ gr., except extract of calabar bean, which is $\frac{1}{15}$ to ¼ gr. 5. Dose of all dilute acids is from 5 to 20 minims, except dilute hydrocyanic acid, which is 2 to 8 minims. 6. Dose of all aquæ is from 1 to 2 ozs., except aqua lauro-cerasus and aqua ammonia, which are 10 to 30 minims. 7. Of all syrups you can give 1 drachm. 8. Dose of all mixtures is from ½ to 1 fl. oz. 9. Dose of all spirits is from ½ to 1 fl. dr. 10. Dose of all essential oils is from 1 to 5 minims.

Progress of Medical Science.

Resection of the Hip in a Phthisical Subject.—As the question of operation for local tubercular affections in subjects with pulmonary involvement is still a matter in dispute, the following case, reported by M Henri Bresson in *Le Progrès Médical* of August 14, 1886, is deserving of notice. A girl nine years of age was brought to the hospital to be treated for hip-disease. There were no tubercular antecedents, but on admission there was found to be trouble in the lungs as well. There was flatness on percussion at both apices, especially the right, and on auscultation there was exaggerated vocal resonance; the respiratory sounds were blowing and jerky, and there were numerous moist râles on both sides with inspiration and expiration. The child was very pale and weak, with no appetite, had a persistent diarrhœa, and coughed incessantly. An abscess appeared at the hip, and was opened antiseptically, but the symptoms, both local and general, grew steadily worse. At the solicitation of the parents Dr. Cazin resected the hip, removing a portion from the articular extremity of the femur, and scraping out the diseased bone from the cotyloid cavity. The wound healed by first intention, and in a few months the child was walking about without crutches, with only about half an inch of shortening. The general condition improved steadily, the sweats and the diarrhœa ceased, the appetite returned, and the patient gained in flesh. There was also a marked improvement in the pulmonary symptoms, all the physical signs having disappeared at the time the child left the hospital, with the exception of a scarcely appreciable dulness at the right apex, and a few crackling râles audible only on coughing

Resection of the Lung and Extirpation of a Kidney.—M. Demons read an interesting note at a recent meeting of the Paris Surgical Society. An adult was stabbed between the ninth and tenth ribs. A portion of the lung-tissue protruded and formed a mass about as large as an apple; the same day the patient passed blood with his urine, indicating a wound of the kidney. M. Demons resected, by means of an écraseur, the hernial portion of lung, and applied the thermo-cautery to the surface. Some days after the operation there was purulent effusion on the left side of the thorax; chemical analysis of the fluid proved it to be principally urine. It was decided to remove the kidney. Nephrectomy was performed in the lumbar region; the twelfth rib made the operation more difficult, but M. Demons, remembering M. Le Dentu's opinions, carefully avoided cutting it. The pedicle of the kidney was divided and carefully ligated. The wound was sutured with metallic threads; reunion took place by first intention, but two months subsequently a mass of cellular tissue sloughed away and opened the cicatrix. It is now six months since the operation was performed, and recovery appears to be perfectly established.—*London Medical Record*, August 15, 1886.

A Remarkable Monstrosity.—At a meeting of the South Indian Branch of the British Medical Association, Mr. Browing (*The Indian Medical Gazette*, July, 1886) presented some notes of a case of monstrosity on exhibition at Hyderabad. The boy was twelve years old, and, except for the deformity, was well formed in every respect. The monstrosity occurred as an almost perfectly formed upper and lower extremities, about as large as those for a child eight years old, attached to the epigastric region by short, fleshy pedicles. The upper extremities sprang from the ensiform cartilage, which was turned outward at a right angle with the sternum. On the under-side of the pedicle, and lying between the humeri, was a bone with a sharp inferior angle, like that of an ordinary scapula; both humeri articulated with this bone and were freely movable upon it. The arms were fairly well formed, but the forearms and hands were deformed. The lower extremities were attached by a pedicle, which contained several strong, fibrous bands attached to the iliac bones. The buttocks springing from this were fully formed, and presented dimples over the base of the sacrum and the trochanters. The buttocks bore a strong resemblance to those of a female, and on either side of a depression corresponding to the site of the anus were two rounded elevations like the labia majora. On twisting the buttocks around, the penis, stunted but otherwise perfectly formed and with the prepuce, was seen. The integument surrounding the base of the penis was like mucous membrane and darker in color than the surrounding skin, and formed a depression into which the penis was received when the thighs were approximated. During the examination of these parts about half an ounce of fluid, like urine, exuded from the penis, and it was learned that this took place daily some three or four times, but that it had no connection with the micturition of the boy, and that he was not conscious of the act on the part of his parasite. The odor and general appearance of the genitals were like those of a female. The knees were anchylosed and the feet were somewhat deformed. The child could not voluntarily move any of the accessory limbs, but sensation was present in them, the boy being able to localize the place touched. An examination of the abdomen revealed a large mass extending beyond the umbilicus and filling up the right side of the abdomen. In spite of his deformity the boy walked and ran freely. The boy was of a healthy family, and had several perfectly formed brothers and sisters.

Dislocation of the Testicle.—Dr. Smith reports in *The Indian Medical Gazette* for July, 1886, the case of a soldier who was struck with a rifle-butt in the scrotum. He complained of great pain, and examination showed absence of the left testicle from its normal position, and the presence of a small, rounded tumor, very sensitive on pressure, in the groin about at the internal ring. Nothing was done for the man except to relieve him of heavy work. Some months later the soldier died of beri-beri, and on post-mortem examination the testicle was found lying within the abdominal cavity, where it had contracted some adhesions to the peritoneum. A slit was seen at the internal ring, through which the little finger could be passed into a pouch running toward the scrotum. The man stated, at the time of the receipt of the injury, that the two testicles had always been present in the scrotum up to the time of the accident.

Wound of the Orbit.—Dr. Wm. Fraser relates in *The Lancet* of August 28, 1886, the case of a boy, eleven years of age, who was brought to his office, the schoolmaster saying that the boy was running with others to school, and while climbing the gate he slipped, running a slate-pencil he had in his hand into his eye. On raising the upper lid of the right eye the end of a slate-pencil could be seen protruding at the inner canthus, between the lower lid and sclerotic, the direction being downward, inward, and toward the nose. With a forceps the writer was just able to catch it, and it took a steady, hard pull to extract it, the point being tightly lodged in the bone. It measured one and five-eighths inch, one and a half inch being out of sight. The wound was dressed with benzoic acid on damp cotton-wool. The following day the eye was not much swollen, and there was no ecchymosis at all. The boy could see quite clearly. There was a little tenderness toward the bridge of the nose. At the end of a week the boy was well, and there was neither swelling nor pain in the eye. The accident occurred three months ago, and there had never been any complaint of the eye since.

The Fee: Put not off till to morrow—the taking of the fee.

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THE ORGANIZATION OF FOREIGN BODIES WITHIN ANIMAL TISSUES.

IT is well known that many animal substances, such as catgut, decalcified bone, and even sponge, may, under favorable circumstances, undergo organization when enclosed within living tissues. And however great may have been our astonishment when the possibility of such a change was first demonstrated, we now regard it as a very natural process, since it is but the conversion of one animal tissue into another, and the revivification of a substance containing the germs of life within its cells. But, however familiar we have become with this power of assimilation of animal substances which is inherent in the living tissues, we should hardly have been ready to admit a little while ago that vegetable substances could in like manner become organized and incorporated into our tissues without having first been disintegrated and worked up in the laboratory of the chylopoetic system. Yet some recent experiments, and in particular one made recently by Professor C. Vanlair, of Liège, would seem to prove beyond doubt that such a change may take place.

In an article in the *Revue de Chirurgie* for August, 1886, M. Vanlair writes that he was making some experiments in the tubo-suture of nerves, using for this purpose rubber drainage-tubes, as he had found decalcified bone to become too speedily absorbed. In one of these experiments he employed a tube of ordinary gray vulcanized caoutchouc, having a diameter of one-fifth of an inch and measuring an inch and a fourth in length. The walls of the tube were three-fiftieths of an inch thick.

The experiment was partially successful as regards the regeneration of the nerves, but the point of greater interest was the metamorphosis which the rubber tube had undergone. It had been in position seven months and a half, and had apparently undergone partial absorption; for its upper end was nearly intact, but it became gradually thinner until it finally disappeared. On microscopical examination it was seen that the substance of the caoutchouc had lost its amorphous appearance and had acquired a complicated structure. Two different systems were to be distinguished: First, a more or less homogeneous parenchyma, and, secondly, a very large number of blood-vessels.

The stroma, forming a compact, resisting mass, was divided into fine connective-tissue fibres, united irregularly into bundles—wavy, crossing each other in every direction, and receiving a bright rose-colored stain in boracic carmine—and into cells occupying the interfascicular spaces. These cells were of an average diameter of twenty micro-millimetres, and some were polygonal with blunt angles, while others were slightly elongated though not fusiform. They had large nuclei, ten micro-millimetres in diameter, enclosing one or more large nucleoli. Sometimes the cells were more or less kidney-shaped, but there was no appearance of segmentation. The cellular elements were distributed irregularly between the fibrous bundles.

The vessels were very numerous, and belonged to the type of capillaries. In some the walls were formed of a continuous layer of elements, for the most part flattened and resembling normal vascular endothelium. In others there was a simple and regular cellular layer resting upon a fine membrane formed by fibrilli similar to those of the parenchyma, and containing within their meshes a number of cells identical with those of the parietal layer. In a third type the cellular lining of the vessel was formed of several layers of irregularly placed epithelioidal cells, nearly filling the lumen of the capillary. Finally, there was a rudimentary form, presenting on section a fibro-cellular ring, the interior of which was traversed by delicate trabeculæ containing in their interstices a few epithelioidal cells. None of these vascular membranes presented any traces of muscular fibres, nor were the walls formed of any distinct tunics.

The outer surface of the tube was very irregular and presented a fungous appearance, while the inner surface was smooth and showed no distinct line of demarcation from the subjacent tissues. At its lower part the tube had become assimilated to the surrounding connective tissue, and had finally disappeared. But this was not a resorption analogous to that of drainage-tubes remaining long in suppurating tissues, but was rather a true organization of the substance of the caoutchouc.

That indiarubber can thus become organized is the more remarkable when we consider that it is a pure vegetable exudation, devoid of all structure, and seemingly more calculated to act as a foreign body and to prevent the union of wounded surfaces than to undergo organization and to become thus an integral part of the animal tissues.

FLAT-CHESTED WOMEN AND THE HIGHER EDUCATION.

"IT would be a curious and not uninstructive task to take a census of the nursing-bottles in use in the various civilized countries. It would be a tolerably accurate index of the animal powers of women in those countries. It is extremely probable that twice as many are in use in America as in any two or three countries in Europe, and when we come to compare this country with China, for example, it is safe to say that we destroy more nursing-bottles each year than have been used in China since the instrument was thought of. Our education, our civilization, is one that stunts, deforms, and enfeebles women, and as such it must be unsound."—*Journal of American Medical Association.*

This may all be true; but there is no greater fallacy than that of associating the flat chests and milklessness of American women with higher education. It is only

the minutest fraction of one per cent. of American women who get such an education anyway. We feel quite sure that the American fathers who smoke and drink and tear through life at such a rattling pace are much more responsible for nervous, unfruitful, flat-chested women than educational over-pressure.

THE PROGRESS OF HOMŒOPATHY.

The homœopaths have been holding an International Congress at Basle, Switzerland. It was the Third Quinquennial Congress, and was attended by only forty delegates, of whom seven were from America. The sessions seem to have been largely occupied with persuading the members that homœopathy is growing. It would take a brave heart, however, to find encouragement in the various reports presented. Thus, by their own figures, we learn that in France there are but 200 homœopaths, in Belgium about 60, in Switzerland 23, in Spain 137, while in Germany and England the reporters do not venture to estimate the number. Judging from the statistics given, it would be a large estimate to suppose that in all Europe there were 1,000 homœopaths.

The real hope of homœopathy appears, therefore, to be in this country. Here, it is stated, there are over ten thousand homœopathic practitioners, with fourteen medical colleges, fifty-one hospitals, forty-eight dispensaries, one hundred and forty-three societies, twenty-two journals, and thirty-three pharmacies. There is no doubt that the United States is infested, beyond any other country, with the silliness of attenuations and potentializations. It appears to be one of the social disorders to which new countries are subjected, but it is one which, despite the apparent showing of statistics, the United States is surely outgrowing.

BRIGHT'S DISEASE AND PSEUDO-BRIGHT'S.

Professor Mariano Semmola, of Naples, recently read before the Académie de Médecine of Paris a paper upon the pathology and treatment of Bright's disease which is likely to attract much attention.

The objects of the communication are announced categorically as follows:

1. The control of preceding researches by the author and an explanation of points that have been criticised.

2. The presentation of new experimental studies of Bright's disease.

3. Exhibition of the histological changes in the skin in Bright's disease.

4. The demonstration by clinical and experimental researches of the unicity and constant character of Bright's disease.

5. The indication of some errors previously held as regards treatment.

True Bright's disease, according to Semmola, is a well-defined affection, not of the kidneys primarily, but of nutrition, having the following characters:

1. A peculiar etiology, viz., the excessively slow action of humid cold upon the skin.

2. There is a progressive defect reaching to complete abolition of the functions of the skin, due to a progressive ischæmia, with atrophy of the sweat glands, of the Malpighian layer, with a connective-tissue proliferation of the derm.

3. There is a chemico-molecular alteration in the ingested albuminoids, an alteration characterized by a morbid diffusibility, and, in consequence, lack of power to be assimilated. They are, therefore, eliminated by the emunctories of the body, and, of course, mainly by the kidneys.

4. There is a progressive lessening in the combustion of albuminoids, and, in consequence, a lessened excretion daily of urea, and a lessened amount in the blood.

5. There is a subcutaneous infiltration of serum, beginning in the face, and not standing in any relation with hydræmia.

6. There is a very characteristic cachexia, which is not dependent on the loss of albumen, but on a profound disturbance in assimilation.

7. There is a *secondary* development, very slowly, of an inflammatory process in the two kidneys, producing in these organs the characteristic histological changes of diffuse nephritis, of which the typical form is constituted by the large white kidney.

Professor Semmola attacks the prevalent views, which uphold the clinical unity of Bright's disease, but admits an anatomical plurality so far as the kidneys are concerned.

There is only one true *Maladie de Bright;* but there are sharply characterized forms of what are called "pseudo-Bright's disease." These are the forms produced by syphilis, alcohol, lead, gout, etc.

Professor Semmola thinks it is never difficult to distinguish between true and pseudo-Bright's, as, for example, by the absence of œdema until late; in nephritis of arterial origin; by the small amount of albumin lost through gouty kidneys, etc.

The author insists, then, that the true *Maladie de Bright* is a constant morbid type, marked by a definite and peculiar etiology, evolution, anatomy, nosography, and treatment.

It is upon this point of treatment that Semmola lays much stress. The fundamental therapeutical indications are:

1. To give the patients a food which is the most assimilable possible.

2. To excite methodically the functions of the skin.

3. To favor by every means possible the assimilation and combustion of the albuminoids.

To carry out these indications Semmola recommends, first, an exclusively milk diet; second, methodical and repeated dry friction of the skin, massage, warm douches, and baths; third, residence in a warm, dry, and constant temperature; fourth, the use of iodide and chloride of sodium, increasing it to the point of tolerance; fifth, if, after two or three weeks, the albumin is still present, Semmola gives, in place of the iodide of sodium, the phosphate of soda, or small repeated doses of hypophosphite of soda or of iron, increasing the dose until three or four grammes are taken daily; sixth, the use of inhalations of oxygen; seventh, the abandonment entirely of astringents.

PATENT MEDICINES.

Despite the advancements made in medical science and in general intelligence among the people, the use of patent medicines is steadily increasing both in this country and England. Twenty years ago there were, in Great Britain and Ireland, 11,520 patent medicine venders, and 7,500,000 stamp labels issued. In 1885, the number of venders had increased to 20,279, and the number of labels has increased to 21,500,000. In other words, the amount of patent medicines sold and used to-day is three times greater than it was twenty years ago, and the tax upon it yields to the British Government over $600,000 annually.

While we have not the figures by us, we are confident that a similar, if not greater, increase has taken place in this country.

This increase in patent-medicine taking is due to several causes; but the most potent is doubtless the fact that certain men, with highly developed business instincts, have discovered that, by confident assurances and striking appeals to the imagination, almost anyone can be made to take medicine. Aside from this, we are in a medicine-taking era. People are constantly looking after their health, and this introspection breeds a habit of calling on druggists and the doctor.

There can be no doubt that a people would be far healthier and wealthier if all patent medicines were thrown into the sea; but as this is an unlikely issue, the most that can be done is to attempt the task of educating the people to understand that the patent medicine is an unwholesome element in society, and one which sensible men will avoid.

HAY-FEVER EXPERIENCES.

Despite cocaine and galvano-caustics hay-fever continues to flourish, and the Association of Hay-fever Sufferers at its last annual meeting at Bethlehem reports itself in an unusually flourishing condition. The meeting in question is made up of sufferers from hay asthma, who annually indulge in a sort of rhinopathic love feast, in which experiences in sternutation and allied phenomena are exchanged, and all the remedies heard of or tried during the year are reported upon. The meetings are, therefore, very suggestive, and have about them a picturesque and eye-suffusing interest. We chronicle some of the contributions.

Mr. Fassett stated that he had found relief for two years through the rubbing of a "magnetic physician;" another gentleman highly recommended the use of sanitary woollen clothing; a third believed in the value of strict diet. With great difficulty and after persistent urging the Association succeeded in securing the presence of a distinguished microscopist of New York, whose name is more particularly associated with the Yeast-plant and Hot-water School of Pathology and Therapeutics.

This gentleman gave a lecture on hay-fever, and stated that the morphology of the secretions in this disease and in asthma was identical, and we gather from a not very complete report that the doctor found "spiralis" and various yeasty germs in the sputa of both diseases. Professor Lockwood, in apt connection with this, stated that he had once magnified the discharges (whether under a microscope or by a dose of oil he does not say) of a child two years old, and found in them a perfect botanic garden.

The president very sensibly recommended that all hay-fever sufferers start for an exempt region before their attacks came on, and the ex-president advised sufferers who are compelled to travel to insert in the nose a small piece of sponge kept wet with water. After the transaction of business the Association adjourned—just like any other one.

THE PROGRESS AND PREVALENCE OF BALDNESS IN AMERICA.

The subject of baldness is one that oftener awakens facetious comment than serious investigation. Mr. Virgil F. Eaton, however, has recently published in the *Popular Science Monthly* the results of a very extended inquiry into the causes and prevalence of premature loss of hair among American men. Mr. Eaton's method has been to visit public assemblages of every character and count the bald heads. He finds that in most of the Eastern cities fully thirty per cent. of the men over thirty years of age show unmistakable signs of baldness, while nearly twenty per cent. have spots on their heads that are not only bald, but actually polished with the gloss that is supposed to belong to extreme old age alone.

New York and Boston take the lead in the proportionate number of bald pates, and after these come Philadelphia, Washington, and the Western towns. Mr. Eaton discovers, too, that the more refined the show, the more fashionable the church, the greater is the proportion of bald heads. For instance, when Patti was singing at the Boston Theatre, forty-two per cent. of the men on one occasion and forty-six per cent. on another were bald-headed, while at John L. Sullivan's exhibition of the manly art only twelve per cent. of the men in Mr. Eaton's vicinity were bald. He also found that forty-six per cent. at one of Matthew Arnold's lectures, and less than twenty-five per cent. at a variety theatre exhibited baldness or signs of baldness. At the fashionable Trinity Church of Boston, nearly half of the men were either actually bald or on the road to baldness.

Mr. Eaton's curious observations, therefore, tend to confirm the view that the coming man is to be bald, and that the per cent. of baldness is in direct proportion to amount of education and cultivation which a community receives.

Sir Joseph Lister's Operations.—The foreign correspondent of the *American Practitioner and News*, who has watched Sir Joseph Lister operate, says that he is excessively slow, and is by no means careful in the details of antisepsis. He has given up the spray entirely, and is now using for dressings gauze and cotton impregnated with a new antiseptic. The nature of this is at present a secret. The bold Kentucky correspondent confesses that he "had the cheek to ask Sir Joseph for information on the subject, when he very politely replied that he was sorry to have to decline giving it to me; that it was yet a secret, and he wished to keep it as such until he was fully satisfied as to its efficacy, when he would make it known to the profession. He said that it had been on trial in his wards for many months, and that so far he was greatly pleased with it."

News of the Week.

Typographical Error.—Dr. W. M. Polk writes: "May I trouble you to say in your columns that, owing to an oversight in looking through the proof of the article on 'Peri-uterine Inflammation,' the first sentence, first column, page 311, reads incorrectly. It should read, 'It is hard to understand that inflammation will behave so differently in *the uterus* from that which occurs in connection with *those organs*.'"

Medical Society, County of New York.—At the stated meeting of the Medical Society of the County of New York, held September 27, 1886, Dr. Cornelius R. Agnew read a memoir of S. Oakley Vanderpoel, M.D., LL.D., Dr. D. B. St. John Roosa read an obituary sketch of Thomas Alexander McBride, M.D., and Dr. Wesley M. Carpenter read a memoir of Austin Flint, M.D., LL.D. Nominations for officers for the ensuing year were made, together with nominations for twenty-four delegates to the Medical Society of the State of New York, to serve for four years.

The Epidemic of Pleuro-Pneumonia in one of the great cattle centres of the West has justly excited a wide alarm. Several years ago we showed the great dangers to the cattle industry which this disease entailed, and the especial danger of its getting west of the Alleghanies. The advice at that time given by all experienced in veterinary police, that all infected herds should be quarantined and destroyed, was slow to be received, but it is likely to be acted upon now.

Another Convalescent Hospital.—St. Andrew's Convalescent Hospital is the name of a new institution which is now open at 206 East Sixteenth Street, in this city.

A Case of Rabies cured by hypodermatic injections of corrosive sublimate and atropine, is reported by Dr. de Pietra Santa, in the *Journal d'Hygiene*. The man was bitten by an undoubtedly rabid dog, and developed symptoms of hydrophobia two and a half months later.

Microbes Cease to Exist, according to Miquel, at a height above the sea-level of from one to two miles. In city streets, however, there are five thousand to the cubic metre of air.

It is reported that M. Pasteur is ill; and a sympathetic contemporary suggests that it is not strange he should feel fatigued after having snatched almost two thousand persons from certain death.

When to Give the Remedy for Tape-worm.—Dr. W. C. Bennett (*N. E. Medical Monthly*) thinks it a mistake to give the anthelmintic fasting; his experience is that it should be given one or two hours after a full meal.

Large Bequest to a Western Medical College.—We learn from the *St. Joseph Medical Herald* that the late Samuel Ensworth has bequeathed a sum of about one hundred thousand dollars in trust for the erection and maintenance of the St. Joseph Medical College and a hospital to be erected in St. Joseph upon such a site as may be selected.

A New Western Medical Association.—The Mississippi Valley Medical Association has set in motion the work of organizing a general association of the profession in all the States and Territories west of the Alleghany Mountains.

Dr. R. T. Edes has resigned the chair of Professor of Clinical Medicine at Harvard, and goes to Washington to live.

Jefferson Medical College.—It looks almost as if Jefferson Medical College would be driven by force of professional opinion to elevate its standard. At any rate, it has of late received publicly some very severe hits. The West Virginia Board of Health, on July 14th, refused to register its diplomas. The next day they rescinded their action, but meanwhile the news of it got abroad and considerable comment was excited. The charge against Jefferson is that no entrance examination is called for, only two courses of lectures are required, and the final examinations are, to put it mildly, not difficult. We have in this city two or three colleges that are no better in these respects than Jefferson. We have often insisted that, even if it be at some pecuniary loss, our large city colleges should institute more rigid courses, and we believe that the time is approaching when such changes must be made or the colleges will lose in character more than they will gain in students.

A Well-deserved Gratuity.—A gratuity of $50,000 has been granted from the Bavarian Civil List to the widow of Professor von Gudden, of Munich, who perished with the late King of Bavaria in the lake at Castle Berg. He left a family of eleven children.

Professor Von Arlt, of Vienna, is reported to be seriously ill with gangrene of the leg.

The Unmitigated Nuisance (to nine-tenths of subscribers) of "The Educational Number" of the English medical weeklies is upon us now.

Mr. Lawson Tait is in a peck of trouble. First of all, he is experiencing the results of writing too much and reading too little. In a letter to the *Journal of Obstetrics*, he attacked the German surgeons for their work in hysterectomy, and said that these surgeons would never venture to publish the detailed statistics of their cases, as is done by English surgeons. In a reply to this, published in the *Journal of Obstetrics* for August, Professor Carl Schroeder says: "I protest against the assumption that only statistics published in this manner deserve belief. This demand is induced by a distrust which, so far as I know, is in no way justified. My statistics of myomotomy are published, the first one hundred cases in Hofmeier's book on 'Myomotomy,' and the whole number up to that time—one hundred and thirty-five cases—in the seventh edition of my work on 'Diseases of Women.' If Mr. Lawson Tait pronounces these figures incorrect, I shall not discuss the matter with him, since I do not care to carry on a literary discussion with an opponent who takes me for a falsifier." It thus appears that the kind of statistics which Mr. Tait thought would never be published at all, had already been printed. We learn from the *Medical Press* that Mr. Tait has recently commenced a suit for libel against a physician who had written something to his discredit.

THE NOTIFICATION OF INFECTIOUS DISEASES BY PARENTS.—Austria has a law compelling, not the doctor, but the parents or head of the household, to notify the authorities at once when any case of infectious disease develops in the house.

M. TARNIER has received an honorary degree of doctor of medicine from Edinburgh University.

PROFESSOR CHEVREUL, of Paris, is probably the oldest scientist in the world. He celebrated his one hundredth birthday on July 31st.

A MONUMENT TO RUSSIAN ARMY SURGEONS.—The foundation has been laid at Kars for a monument to the memory of the surgeons who died while serving in the army of the Caucasus during the Turko-Russian War.

A NEW DISINFECTING COMPOUND for purifying the atmosphere of the sick-room has just been presented to the Berlin Medical Society. Oils of rosemary, lavender, and thyme, in the proportion of 10, 2½, and 2½ parts respectively, are mixed with nitric acid in the proportion of 30 to 1½. The bottle should be shaken before using, and a sponge saturated with the compound and left to diffuse by evaporation. Simple as it is, the vapor of this compound is said to possess extraordinary properties in controlling the odors and effluvia of offensive and infectious disorders.

THE CHICAGO OPHTHALMOLOGICAL COLLEGE is the title of a newly organized institution in Chicago. It is said to be connected with the new Polyclinic.

THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF MICROSCOPISTS at Chautauqua, this year, is said by Dr. James to have been a great failure. This was due chiefly to the lack of accommodations for the members, and the absence of any attractive social features.

MEDICINE AND POLITICS IN IOWA.—We trust that the doctors of Iowa will listen to the appeal made by the *State Medical Reporter* in its last issue. The editor states that the Hon. J. A. Lyon was the most active supporter and main agent in securing the medical registration law. For this he is to be opposed in his present canvass for the position of State Auditor. If he has been of service to the physicians of the State, it is but right that they should stand by him now. The profession will accomplish much more for itself when it has learned the wisdom of acting in complete harmony politically in matters relating to itself.

THE VIRGINIA MEDICAL SOCIETY holds its next annual meeting at Fredericksburg, beginning October 26th.

A REGULAR PHYSICIAN OPPOSED TO THE IOWA REGISTRATION LAW.—The Iowa *State Medical Reporter* states that a Dr. Perry Engle, of Newton, is president of a society organized to resist the State medical registration law. The *Reporter* adds: "Dr. Engle is a member of the State Medical Society, and a member of the American Medical Association. As a member of the American Medical Association, does he appreciate the fact that, in opposing the medical law he is opposing the resolutions of the American Medical Association, that have been absorbed and become a part of the State law, and does he know the class of men of whose cause he is the champion?"

RETIREMENT OF FRENCH PROFESSORS.—MM. Gavarret, Hardy, and Sappey have retired from their professorial chairs in the Paris Medical Faculty, and are honorary professors.

MONUMENT TO THE LATE PROFESSOR ROBIN.—The friends and pupils of the late Professor Ch. Robin have decided to collect the funds necessary to erect a monument in honor of the memory of that distinguished scientist. The subscription has been opened, and a goodly sum has already been realized.

DEATH OF ANOTHER PATIENT OF M. PASTEUR.—A child, three years and a half old, is reported, in *The Semaine Médicale* of last week, to have died lately from rabies, at Teste. He was bitten by a mad dog on June 14th last. On the 16th he was brought to Paris, where, during ten days, he was submitted to Pasteur's treatment. After his return to Teste, on June 28th, the child was seized, on August 12th, with the first symptoms of hydrophobia, to which he succumbed in a few days.

THE REPORT OF THE THIRD ANNUAL MEETING OF THE NATIONAL VETERINARY MEDICAL ASSOCIATION, held at Washington, December 15 to 17, 1885, is before us, and gives evidence of a praiseworthy effort to raise the status of veterinary medicine. In the introduction the Secretary says: "Just as the American medical profession did not obtain public and world-wide recognition until it presented the imposing front of a united national body—ready to sustain its individual members at home and enforcing respect from abroad—so we as veterinary surgeons cannot hope to earn the social and scientific recognition due to members of a learned profession until the American Veterinary Association shall stand before this and other communities as a compact organization, and show what its aggregate is really made of."

MORALS AND MASSAGE.—English journals are exposing some of the immorality which is said to be associated with the practice of massage by professionals. If the stories are true, many of the establishments are little better than houses of ill-fame. One journal says: "There is only too much reason to believe that the professional *Masseur* exercises his or her skill in the direction of exciting the sensual feelings of the patients, or rather victims, and that the success of the professional rubber is closely connected with effects on the system in this direction." Physicians in this city are often informed of similar practices occurring in such establishments here; and doubtless there are none who do not take proper precautions in recommending massage.

THE ASTLEY COOPER PRIZE.—The Astley Cooper Prize, of the value of $1,500, has been gained by Mr. Bowlby. The subject of the essay was "Diseases and Injuries of the Nerves, and their Surgical Treatment, together with the Operations performed upon Nerve-Trunks in the Treatment of Various Diseases, and Description of the Changes which ensue in other Structures, as well as in the Nerves themselves, from these Operations."

THE COMPULSORY VACCINATION LAW at Leicester, England, has been so strenuously resisted that it is no longer enforced, and eighty per cent. of the children born are not vaccinated.

Turpentine in Phosphoric-poisoning.—M. E. Rondot, of Bordeaux, has demonstrated, from clinical observations and experiments, the efficacy of turpentine in the treatment of poisoning by phosphorus, when given either immediately or even some hours after the poison has been swallowed. The turpentine and phosphorus combine, and are eliminated without causing any other morbid phenomena than a local reaction on the alimentary and urinary organs. It is important to administer the turpentine at the outset, so as to neutralize the greatest quantity possible of the poison.

An Attempt to Cultivate the Poppy in Minnesota for the purpose of obtaining opium, has failed. It is probable that Minnesota is too wide-awake a State for such a plant.

A New Interpretation of "M.D."—The *California Practitioner* tells us of a doctor who went to Riverside for his health, and giving up practice went into the milk business. He printed his cards "J. B. Johnson, M.D. (which means Milk Distributor)." He recovered.

Virchow and American.—A cablegram from Berlin, dated September 21st, says that at the meeting of the German Society of Naturalists and Physicians, Professor Virchow paid a great tribute to America, which was received with much applause. He said that the presence of a large American delegation in the convention was a source of unbounded joy to their German colleagues. The natural philosophers and doctors of Germany and America had for a long period worked shoulder to shoulder, and he hoped the good feeling would continue. He fully expected that a large German delegation would attend the proposed Medical Congress in Washington, if the committee of the American Medical Association succeeded in smoothing over the differences existing in that body.

How to Detect a Morphine-taker.—Professor Bull, of Paris, states that there are two ways by which the morphine habitué can be detected, and these are to be found in the skin and in the urine. The skin will be found to be covered with little dark spots situated in the centre of little indurations about the size of a large shot. It is needless to add that these indurations are the result of the little wound of the needle, but as these lesions are generally found on the inside of the thighs, the patient refuses to let them be seen, and in that case examination of the urine will prove of great service. A few drops of tincture of iron are put into the suspected liquid, and if morphia be present a blue tinge will be produced.

A Monstrosity Dying.—The daily papers have been giving an interesting account of the monstrosity known as the "twins of Locana." They are boys, and resemble each other very exactly. Their names are John and Jacob. They are separate as far as the sixth rib, and have one abdomen and one pair of legs between them. Jacob moves the right leg, John the left. The twins cannot walk, and keep their balance by lacing their arms around each other's neck. Jacob eats often and heartily, and is the healthier of the two, and, to all appearance, it is he who keeps his brother alive. Recently the twins quarrelled over a toy, and John grew so excited that his heart-blood suddenly ceased to flow, and he changed to a condition of complete lethargy, from which he had not awakened the following morning. The boy suffered from the same complaint a year ago, in Berlin, and Professor Virchow then declared that a recurrence of the lethargy would certainly put an end to the twins' life. We are informed that a number of Vienna physicians are observing the malady, but they entertain little hope for John's life, and if John dies, Jacob must follow him to the grave.

The Lemon Treatment.—"Lemonade" is a fashionable thing in England just now. Advocates of this acidulous fruit say that the way to get the better of a bilious system, without blue pills or other drugs, is to take the juice of one, two, or three lemons, as appetite craves, in as much iced water as makes it pleasant to drink without sugar, before going to bed. In the morning, on rising, at least half an hour before breakfast, take the juice of one lemon in a goblet of water.

The Value of Vaccination in Military Surgery.—M. Maydl states (*Medical Press*) that of 3,000 men wounded in the Bulgarian war, which were brought to Belgrade, only 51 died; of these 22 deaths were the result of tetanus; the surgical mortality was only 0.9 per cent., thanks to the use of antiseptic dressings. This result is the more remarkable as the sanitary condition of the soldiers was very defective. Cases of erysipelas were also very rare, and, in spite of the want of care on the field, M. Blum reports that of 136 cases, of which 116 were lance or sword wounds, 12 complicated fractures, and 10 articular wounds, all treated antiseptically, there were no deaths or purulent diseases. The dressings were done with carbolic gauze, at 0.5 per cent., and the instruments washed with disinfectant fluid at 25 per 1,000. After the first day the wounds were aseptic. This war has, therefore, done much to let us know the value of antiseptic treatment in military surgery.

The Physicians of the United States.—In a recent directory of the physicians of the United States, published by Polk, the total number is given as 85,671, of whom 83,239 are males, and 2,432 females. This makes the ratio of physicians to population about one in 650, allowing for the increase in population since the last United States census. Maryland is the most crowded State, having but 329 people for each physician. Other crowded States are Colorado, 341, Indiana, 396, Oregon, 353. All the remaining States are above 400. New Mexico has relatively fewer physicians than any other State or Territory, with 1,494 people to each medical man. The remaining States and Territories coming above the one thousand mark are Utah, 1,035, North Carolina, 1,029, South Carolina, 1,084. Ohio has 502, and Kentucky, 551. There are relatively more physicians in Ohio than in either Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, or Pennsylvania. Taking the table before us as a guide, the "vacancies" exist in New England rather than in either the Central or Western States. There are relatively more physicians on the Pacific coast than on the Atlantic.

The Dominion Medical Association held its nineteenth annual meeting at Quebec, on August 18th and 19th. There were interesting papers and discussions on diabetes and tracheotomy; a case of contagious lobar pneumonia and one of ainhum were also reported. Altogether, the work of the meeting was very creditable. The following officers were elected: President, Dr. J. E. Graham, of Toronto; Vice-Presidents, Drs. Dupuis, Russell, Currie, and O'Donnell. The meeting next year will be held at Hamilton.

A Public Exhibition of the "Germs of Life."—The *St. Louis Medical and Surgical Journal* is justly indignant over the outrageous violation of the proprieties of life made by one of the exhibitors during the meeting of the American Microscopical Society at Chautauqua. We are told that during an entire evening the exhibitor in question was engaged in showing, to a mixed assemblage of non-professional men and women, living human spermatozoa. These were announced on the programme as "the germs of life."

A Cause and a Cure of Clergymen's Sore Throat.—Mr. Thomas Whipham (*The Lancet*) thinks that many cases of clergymen's sore throat are due to the practice by this class of hanging down the head while preaching, or reading in service. Cases are cited in which speedy relief was obtained by the patient's holding the head erect in speaking.

The Pathogenic Micro-organism of Delhi Boil has been discovered by Dr. Cunningham. It is larger than a lymph-corpuscle, varies in shape, and contains a nuclea-like body which has an affinity for staining material. The organism is classed provisionally with the monedineæ among mycetozoa.

The Mississippi Valley and Part of Texas resent the imputation of being malarious laid upon that section by Dr. Billings in his address before the British Medical Association; and they protest against his exhibiting maps of the United States with an inky discoloration of the whole Southwest. Dr. Billings intimates that malaria appears to be unfavorable to the development of scientific research. It is evident from the perusal of our Southwestern exchanges that it is not inconsistent with a lively exhibition of editorial rhetoric.

A Cyclopean Male Fœtus.—The very rare monstrosity of a cyclops was presented by Dr. William Craig before the Medico-Chirurgical Society of Edinburgh recently (*Edinb. Med. Journal*). The monster was still-born. It had but one orbital cavity, into which entered a single optic nerve. This divided and was connected with two rudimentary eyes.

Justice in Missouri.—The *Weekly Medical Review* reports the case of a so-called doctor, who was recently tried for practising without a license and who was sentenced to a year's imprisonment. Over a year ago, says the *Review*, a similar case came before the same court, and then the judge directed the jury to bring in a verdict in favor of the defendant. This inconsistency is explained by the *Review* on the ground that in the last case the defendant was a poor man without friends. It is unpleasant to learn that our new medical registration laws develop such incidents as these.

Should the Healthy Children in a Family where Measles is Present be kept from School?—Dr. H. Wasserfuhr in the *Berlin Klin. Wochenschrift* answers this question in the negative. He thinks that the enforced idleness of four or six weeks is injurious; that the spreading of measles by a healthy child, though possible, is a very unlikely event; that practically a regulation excluding such persons cannot be enforced, and that measles is a very mild affection if it attacks children in the school years. This view is the one generally adopted, we believe, by sanitary officers in this country. In this connection we note in the *Allgemeine Med. Central-Zeitung* an authentic report by Dr. E. Heusler of a case in which a physician in charge of some small-pox patients carried the infection into the wards of another hospital, and this despite change of clothing and other precautions.

Controlling Sex Again.—Nothing illustrates the readiness with which any extravagant theory of controlling sex in generation can get the support of clinical facts better than a recent letter of Dr. Heusler, in the *Allgemeine Med. Central-Zeitung*. He supports the Heger-Roth theory that sex may be determined by the position assumed in cohabitation. In a case in which two female children had been born, the husband had always slept on the same side of his wife. He was advised to change; the result was a boy. Case II. Two girls; change in position ordered, result a boy. Case III. One girl; change in position, result a boy. Case IV. Four boys; change of position advised, a girl. Case V. Two girls; change, with result of a boy. Case VI. A boy; no change made, the next two children boys. It is easy to see how statistics of this kind may be almost indefinitely accumulated, since, after parents have had several children of one sex only, the probabilities are always strongly in favor of a change of sex the next time.

Catarrhal Jaundice is to be placed in the list of infective diseases, according to Professor Kelsch, of Val de Grace, who has been studying the subject, especially the epidemics of the disease that occur in armies. M. Kelsch asserts that the simple and malignant forms are one and the same affection, and therefore sums up his belief in the propositions that (1) sporadic or epidemic catarrhal icterus is a specific, infective disease; (2) that the infective agent is developed outside the organism; (3) that it is generated in marshes and in soil abounding in animal and vegetable matter; and (4) that, owning thus a common origin with malaria and typhoid fever, the coincidence of epidemics of jaundice with ague and typhoid is explained.

In Syria the most frequent disease is malaria, and after this syphilis, which especially affects Mohammedans. Pulmonary emphysema is common as a result of excessive smoking.

CHARLESTON MEDICAL RELIEF FUND.

The following is the list of additional contributions to the Medical Relief Fund:

D. Webster, M.D., New York	$20 00
E. E. Aukes, M.D., New York	1 00
G. H. Newcomb, M.D., Albany, N. Y.	5 00

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Md., September 21, 22, and 23, 1886.

Continued from page [illegible].

WEDNESDAY, SEPTEMBER 22D—SECOND DAY—MORNING SESSION.

THE Society was called to order at ten o'clock by the President, DR. T. A. REAMY, of Cincinnati, O., and the Secretary, DR. JOSEPH TAYLOR JOHNSON, of Washington, read DR. JOHN GOODMAN'S (of Louisville, Ky.) paper on

ERGOT AFTER LABOR.

in which he referred to the use of this agent for preventing after-pains, promoting involution, and preventing post-partum hemorrhage. He rejects it for the first purpose, and regards the doctrine that it hastens involution as an absurdity. The only benefit that can be claimed for ergot after labor is the prevention of hemorrhage, but its use is attended by danger so great that it should not be administered indiscriminately.

DR. BARKER, of New York, regarded the paper as the most original one he had ever listened to in the Society, especially in its peculiar mode of reasoning.

THE PRESIDENT said that he had already, in a paper to be read before the Cincinnati Academy of Medicine, entered his protest against the routine practice of giving ergot after the completion of the third stage of labor. From careful observation at the bedside, and from reflection he had reached conclusions that supported the views of Dr. Woodman with reference to the use of this drug in obstetric practice.

DR. GOODELL, of Philadelphia, thought that the two cases reported by Dr. Goodman had not given him sufficient experience to warrant the statements which he had made. Dr. Goodell had given ergot in about twenty-five hundred cases, and had no reason to say that any harm had been done by it.

DR. ENGELMANN, of St. Louis, used ergot very much less than he did five or six years ago, and believed that the hot antiseptic douche, the faradic current, etc., were much more effective means for bringing about the end for which ergot is administered; but after the contents of the uterus have been expelled ergot will always remain a useful and effective remedy.

DR. PARVIN, of Philadelphia, believed that small doses of ergot merely increased normal contractions of the uterus, and that the effect of the drug is not always to induce tonic contractions. Besides, he wished to contest the assertion that ergot should never be given before the uterus is emptied, for it would be found that the two most successful men in the management of placenta prævia—Ellwood Wilson, of Philadelphia, and Murphy, of England—were men who give ergot.

The paper was further discussed by Dr. John C. Reeve, of Dayton, O.; by Dr. A. J. C. Skene, of Brooklyn; by Dr. Engelmann, of St. Louis; and by Dr. P. C. Williams, of Baltimore, who advocated its use.

DR. THEOPHILUS PARVIN, of Philadelphia, Vice President, was called to the Chair.

THE PRESIDENT'S ADDRESS.

DR. THAD. A. REAMY, of Cincinnati, O., President, then delivered his address, in which he referred to the work done by the Society during the first decade of its existence; to the death of Albert H. Smith, and paid his memory a high tribute of respect; to the Congress of American Physicians and Surgeons, and recommended that the Society consider favorably the proposition extended to join that scientific body.

He then passed to the consideration of several current topics which possess special importance.

THE ABDOMINAL EPOCH OF THE SURGICAL AGE IN GYNECOLOGY.

Skilful hands are busy everywhere, and remarkable results are reported from all quarters. The statistics of American operators are constantly improving, in some instances reaching a high standard, although they have not yet risen to the high mark attained abroad. The exact reasons for this discrepancy await demonstration. It is probable that the explanation will be found largely in climatic influences and constitutional conditions. Again, it is unquestionably true that, in our country, these operations are undertaken by a relatively larger number of operators than abroad. The rule should be that they should be performed, so far as practicable, only by skilled operators. Surgery with regard to cystic disease of the ovary imperilling life has been eminently successful. But is the operation of removing the ovaries for supposed beginning cystic degeneration, "catarrhal salpingitis," "congestion," "enlargement," etc., always justifiable? He thought that it was not. Have not the glowing reports of such cases, and the cures wrought, together with the facility of the operation and its wonderful immunity from danger to life, led to the extirpation of many a sinless ovary? How often have we seen patients cured by recourse to diet, massage, electricity, vaginal irrigations and medications, postural treatment, etc.; and such recoveries are so numerous as to be painfully suggestive of too much freedom with the ovary, considering our want of familiarity with the minor pathological changes. The truth of this remark is in no way invalidated because of attempts in high quarters to settle this whole question on clinical testimony exclusively. The conclusions reached by Dr. H. C. Coe, in his recent paper on the slight pathological provocations which have been deemed sufficient reason to warrant the extirpation of the ovaries, are not adapted to give rest to the consciences of any who may have been over-zealous in performing spaying without due discrimination.

Statistics are frequently quoted to show the sum total added to human life by the single operation of ovariotomy. But may it not be feared that some one will show the other side of the picture, and that some ingenious statistical cynic will compute the years of human life lost to the human race by this destruction of ovaries whose functional activity is yet unabated? There has been written entirely too much constructive pathology of the ovary. Much of the pathology, he feared, had been created to order to justify the removal of functionally active ovaries after they have been extirpated. We need the "fiat lux" of a practical pathology, sustained by the most extensive comparative investigation, upon healthy and unhealthy organs. A humane and economic conservatism should keep our fingers off these organs until we know whether they are yet capable of performing their function, or whether they are physiologically dead, or whether their possessors can be cured without their sacrifice for minor disease; if the operation must be done, but one ovary should be extirpated, unless positive disease of both be detected on exposure.

The recent practice of Schroeder in leaving the undiseased portion of one ovary is a movement in the right direction. Many of the remarkable cures reported after removal of these appendages must be taken with reserve, until such time has passed as will preclude the possibility of a relapse, or at least render it improbable. Time will, he feared, much change the aspect of some reported cases, and this opinion was not wholly speculative. "Let us as a Society and as individuals do our duty toward women by proclaiming and practising against this unsexing enthusiasm."

Not one word, however, of this should be so interpreted as to detract one iota from the boon conferred

upon suffering woman by the performance of spaying in properly selected cases.

The triumphs of ovariotomy have opened a broad field of possibility in abdominal surgery, both for the gynecologist and the general surgeon. One of the recent innovations of abdominal section is its employment in

SUPPURATIVE PERITONITIS

and the reports from this practice in England are highly satisfactory.

ALEXANDER'S OPERATION

has just entered upon trial, since it has been performed less than one hundred and fifty times. It unquestionably rests upon sound principles, and probably it will have a future. The mortality, however, should lead to testing its utility with great caution and conservatism.

Our manifest inability to detect

EARLY PREGNANCY

is the opprobrium of obstetrics. Hegar's sign, recently brought forward, is no more decisive than many others of a similar character; moreover, it is not new.

The President then spoke of the subject of

DIAGNOSIS,

and said that attention had been apparently so riveted upon surgery that its importance had been lost sight of. The scarcity of investigation and literature on this subject is greatly to be deprecated.

Reference was then made to the scarcity of papers on

MEDICINAL THERAPEUTICS

in the department of gynecology, and to the use of

ELECTRICITY IN GYNECOLOGY,

the utility of which had at last been well established. He had had some admirable results in arresting the growth of

FIBROIDS OF THE UTERUS

by the employment of electricity.

HYSTERECTOMY

for these growths had recently received a wonderful impetus in the remarkable results obtained by Keith and others, particularly in Scotland and England. Schroeder has had a mortality of about twenty-nine per cent. The late Dr. Thomas Wood, of Cincinnati, performed the operation seven times, with two deaths, a mortality of thirty per cent. Dr. Reamy has performed the operation five times, with two deaths, a mortality of forty per cent. It is probable, however, that in all fibro-cystic tumors of the uterus, as well as in all suppurating ones, hysterectomy offers the only hope.

After referring to craniotomy, Cæsarean section, laparo-elytrotomy, the Porro and the Porro-Müller operations, and to the total extirpation of the uterus for cancer, the President spoke of

EPITHELIOMA OF THE CERVIX,

and said that, after a careful clinical study of the subject, in a large number of cases, he unequivocally committed himself to the belief that the cervical traumata of parturition strongly predisposed to the development of epithelioma. It is well established that epithelioma commences in the mucous membrane. In *six* cases seen within the last three years he had removed the neoplasm while it was yet confined to the mucous membrane immediately covering the indurated connective tissue resulting from laceration. Emmet's operation for restoration of the cervix to normal conditions in cases where manifest fissure exists, was, in his opinion, warranted for the sole ground of prophylaxis against malignant disease, if upon no other.

The address was concluded with some remarks with reference to the

UTERINE CURETTE

and the dangers which sometimes attend its employment, but which cannot be foreseen. He reported a case in which the flexible copper-wire instrument passed through the anterior wall of the uterus. The patient recovered.

The President received a vote of thanks for his highly interesting address.

Dr. Fordyce Barker, of New York, then read a paper on

MATERNAL IMPRESSIONS ON THE FŒTUS IN UTERO.

The belief that maternal impressions may affect the nutrition and development of the fœtus in utero has existed from the earliest periods of which there are any records. The oldest evidence of this belief is found in the thirtieth chapter of Genesis, in an account of a business transaction between Jacob and his father-in-law Laban, in which this belief prompted Jacob to adopt a method, which in recent times has become very common in Wall Street, that of doubling his capital "by watering the stock."

The law of Lycurgus, that Spartan women when pregnant should look constantly at statues of Castor and Pollux, representing strength and beauty, so that their offspring might be similarly developed, must have been based upon this belief.

That maternal impressions may affect the form, development, and the future character of the fœtus, has been very generally accepted as true by all women in all ages, and by men so far as they have had any idea on the subject. Medical writers with hardly an exception, down to the beginning of the eighteenth century, express the belief, with more or less distinctness, that fœtal marks and deformations are due to the emotions, desires, or shocks of the pregnant mother. Within the last twenty-five years many papers have been published in which this theory has been strongly controverted; the most able and scientific being, in his judgment, that by Dr. G. J. Fisher, of Sing Sing, N. Y.; but, Dr. Barker thought, it must be conceded that the weight of authority was in favor of the doctrine that maternal impressions may affect the development, form, and character of the fœtus. Quotations were made from Carpenter's, and also from Dalton's "Physiology," in which it is stated that bodily deformities or other peculiar tendencies may result from maternal impressions.

All who disbelieve the doctrine urge that deformities are due to arrest of development, but no one has brought forward any sound physiological reason why this arrest of development may not have been caused by maternal impressions affecting fœtal nutrition by their influence on the maternal blood, as well as by falls, injuries, diseases, etc. Probably the subject had been obscured by the tendency to restrict the term "maternal impressions" to purely emotional causes, whereas it really includes those which have a physical as well as psychical origin.

The paper was discussed by Dr. S. C. Busey, of Washington, who said that any prevalent and current belief must be based upon an element of truth; and that nature never does her work by freaks, but in the world of life, as in the physical world, there is no effect without a cause; there can be no natural deformity simply as the result of chance. Dr. Busey referred to several cases which sustained the view that fœtal deformities may be caused by maternal impressions.

Dr. John S. Billings, of Washington, honorary member, thought it well to occasionally get upon the outer boundaries of our knowledge, as it would enable us to keep in view some slight conception, at least, of our ignorance on certain subjects. To admit what had been claimed for the cases reported, it must be

assumed that there exists a force of which we have no scientific knowledge.

The discussion was continued by Dr. Goodell, of Philadelphia, and was closed by Dr. Barker.

On motion by Dr. Chadwick, of Boston, a committee of three will be appointed to investigate the subject and report at some future meeting of the Society.

Dr. John Byrne, of Brooklyn, then read a paper on

THE TREATMENT OF PROCIDENTIA UTERI BY THE GALVANO CAUTERY.

It is not unreasonable to conclude that kolpo- and perineo-plastic operations can affect uterine prolapsus only in so far as they create obstacles to vulvar protrusion, and only when amputation of a portion or the entire cervix is added to such measures can we look for permanent and satisfactory results. The sole object of the paper was to direct attention to the important gain obtained by the inflammatory processes which necessarily follow such operations and the tension of the parts directly engaged in supporting the uterus, to which the success obtained by many surgeons is to be attributed. This consequence is developed to a remarkable degree by the use of the galvano-cautery in performing amputation of the cervix. An illustrative case was related, taken from the three in which procidentia had been treated in this manner. In six other cases, nine in all, linear cauterization were required. In the case reported, the entire womb and vesical wall protruded. After the operation the vesical and uterine prolapse disappeared totally, and the result, together with its rational explanation, opened up a wide field of inquiry.

Dr. George J. Engelmann, of St. Louis, then read a paper on

ELECTRICITY IN GYNECOLOGICAL PRACTICE,

in which he gave the reasons why this agent had not been used more successfully than it had been, and described in detail the instruments of precision, and also gave some of the rules which should regulate its use if definite results would be obtained and the full value of the agent in gynecological practice be secured.

Dr. W. H. Baker, of Boston, then read a paper on

ELECTROLYSIS IN GYNECOLOGICAL SURGERY,

in which he spoke of the use of the galvanic current in the treatment of uterine fibroids, and also in promoting cure in cases of chronic pelvic cellulitis. The conclusions which were reached were the following: (1) Electrolysis is a useful agent in the treatment of certain cases of fibroid tumors of the uterus as well as chronic circumscribed perimetritic affections. (2) When applied to fibroid tumors of the uterus electro-puncture is the most reasonable and efficient method. (3) In the treatment of fibroid tumors of the uterus by this agency it is not necessary to apply it often. (4) Cases of perimetritic affection treated by this agent should be selected with care concerning the absence of acute symptoms.

The discussion which followed was on these three papers, and was participated in by Dr. Chadwick, of Boston; Dr. Engelmann, of St. Louis; Dr. Sutton, of Pittsburg; Dr. James B. Hunter, of New York; Dr. M. D. Mann, of Buffalo; Dr. Byrne, of Brooklyn; and by Dr. Baker, of Boston.

THURSDAY, SEPTEMBER 23D—THIRD DAY—MORNING SESSION.

The Society was called to order by the President.

Dr. James B. Hunter, of New York, read a paper on

PERSISTENT PAIN AFTER ABDOMINAL SECTION,

in which he spoke of the causes of pain before the operation, referrible to the ovaries, the tubes, and the peritoneum; of the causes after the operation, and referrible to former peritonitis, peritonitis following the operation; and also that referrible to some defect in the abdominal wall, as hernia, painful cicatrix, etc.

Among his conclusions were the following: 1, That abdominal section done for the relief of pain should be carefully followed up and made the subject of inquiry for at least two years; 2, peritonitis of any degree is to be treated for its remote consequences as much as for immediate dangers; 3, secondary operations are generally of no avail, only occasionally afford temporary relief, and rarely effect a cure; 4, a guarded prognosis should be given in all cases of abdominal section for the relief of pain.

The paper was discussed by Dr. A. J. C. Skene, of Brooklyn; Dr. Sutton, of Pittsburg; Dr. W. Gill Wylie, of New York; Dr. Robert Battey, of Rome, Ga.; Dr. H. P. C. Wilson, of Baltimore; Dr. M. D. Mann, of Buffalo; Dr. J. Taber Johnson, of Washington, and the discussion was closed by Dr. Hunter.

Dr. James R. Chadwick, of Boston, then read a paper on

THE BLUE DISCOLORATION OF THE VAGINAL ENTRANCE AS A DIAGNOSTIC SIGN OF PREGNANCY.

The color varies from a violet to the bright color seen toward the close of pregnancy; is seen upon the anterior wall of the vagina, more particularly about the urethra, just below the meatus and on either side of it; is absent in perhaps one-third of the cases during the first three months. He would claim for it a decided value in the early months of pregnancy when it was present; but the absence could not be accepted as evidence that pregnancy is not present.

The paper was discussed by Dr. Emmet, of New York; Dr. Parish, of Philadelphia; Dr. Wilson, of Baltimore; Dr. Engelmann, of St. Louis; Dr. Skene, of Brooklyn; Dr. Johnson, of Washington, and the discussion was closed by Dr. Chadwick.

THE PRESIDENT-ELECT.

Dr. A. J. C. Skene, of Brooklyn, was then introduced and made a few appropriate remarks, after which the Society adjourned to meet at three o'clock.

THIRD DAY—AFTERNOON SESSION.

The Society was called to order by the President.

Dr. R. Stansbury Sutton, of Pittsburg, presented specimens removed by

SUPRA-VAGINAL HYSTERECTOMY

in three cases of uterine fibroids. When fibroids were rapidly growing and the life of the patient was seriously threatened on account of hemorrhage, this operation was probably justifiable; and also in cases in which the woman was unable to earn her living, and it became a question whether or not she would become an inmate of the almshouse, the question of performing this operation should receive careful consideration. There are but few cases in which the operation is justifiable.

The communication was discussed by Dr. J. C. Reeve, of Dayton, O.; Dr. H. P. C. Wilson, of Baltimore; Dr. Wylie, of New York, who believed that the curette, when properly used, will arrest the hemorrhage in most of these cases; and by Dr. Reamy, and the dicussion was closed by Dr. Sutton.

Dr. William H. Parish, of Philadelphia, then read a paper on

THE HIGH MORTALITY OF RECENT CÆSAREAN OPERATIONS IN THE UNITED STATES.

According to statistics prepared by Dr. Harris, of Philadelphia, this operation, performed in good season, when the condition of the woman is favorable, has saved seventy-five per cent. of the mothers and eighty per cent.

of the children in this country. But the number of operations has increased gradually, and the results within the last five years have been steadily becoming worse and worse. The causes for this high rate of mortality were: 1, Delay in performing the operation; and 2, attempts at delivery before making the section.

The paper was discussed by Dr. A. Reeves Jackson, of Chicago; Dr. Baker, of Boston; Dr. J. Taber Johnson, of Washington; and the President, Dr. Reamy.

Dr. Parish, in closing the discussion, said that it could not be decided yet whether Porro's operation or Cæsarean section should be the method for the future.

The President then made a few remarks concerning the work of the present meeting, and thanked the resident members, the physicians, and the citizens of Baltimore for the bounteous hospitality which they had extended to the Society.

On motion of Dr. Wilson, of Baltimore, the Society gave Dr. Reamy a vote of thanks for the able and impartial manner in which he had discharged the duties of president.

"In Memoriam—Albert H. Smith, M.D.," by Dr. Theophilus Parvin, of Philadelphia, was read by title.

The Society then adjourned to meet in New York on September 15, 1887.

OFFICERS FOR THE ENSUING YEAR.

President—Dr. A. J. C. Skene, of Brooklyn.

Vice-Presidents—Dr. John C. Reeve, of Dayton, O.; and Dr. Ellwood Wilson, of Philadelphia.

Secretary—Dr. Joseph Taber Johnson, of Washington, D. C.

Treasurer—Dr. Matthew D. Mann, of Buffalo.

Other Members of the Council.—Drs. W. H. Baker, of Boston; Charles Carroll Lee, of New York; A. Reeves Jackson, of Chicago; and Thomas M. Drysdale, of Philadelphia.

NEW MEMBERS.

Drs. Charles M. Green, of Boston; A. F. A. King, of Washington; E. C. Dudley, of Chicago; A. W. Johnstone, of Danville, Ky.; H. Marion Sims, of New York; B. F. Baer, of Philadelphia; and Joseph E. Janvrin and W. Gill Wylie, of New York.

The following were elected

INVITED GUESTS,

and were invited to participate in the discussions of the present meeting: Drs. G. W. Mittenberger, F. E. Chatard, F. E. Chatard, Jr., P. C. Williams, Henry M. Wilson, Robert T. Wilson, Thomas F. Murdoch, John Morris, A. F. Erich, Thomas Opie, G. L. Taneyhill, Wm. P. Chunn, Thomas A. Ashby, Charles O'Donovan, Wm. E. Moseley, Charles H. Riley, and L. E. Neale, all members of the Baltimore Gynecological and Obstetrical Society; S. Van Ness and A. P. Dudley, of New York; F. O. Donoho, S. S. Adams, Thomas E. McArdle, J. J. Sumner, N. S. Lincoln, and A. Y. P. Garnett, of Washington; X. O. Werder, of Pittsburg; Albert Whiteley, of Delaware; Dorsey Cullen, of Virginia, and P. J. Murphy, of Philadelphia.

RESOLUTIONS AND COMMITTEES.

Dr. John C. Reeve, of Dayton, O., offered the following:

Resolved, That this Society expresses an opinion favorable to the formation of the proposed Congress of American Physicians, but that the Committee be instructed not to favor any plan looking toward a surrender of its distinctive title, character, or that will interfere with the full and entire management of its own affairs in every respect.

The following amendments were offered and accepted, and the resolution was adopted:

1. That this Society does not favor meetings of the Congress oftener than biennially.

2. That the Committee oppose as far as possible the holding of meetings of the Congress in the month of June.

The President appointed the following *Committee on the Congress:* Drs. S. C. Busey, of Washington; Fordyce Barker and T. A. Emmet, of New York; J. R. Chadwick, of Boston; and Joseph Taber Johnson, of Washington.

The following was adopted—

Resolved, That the annual dues be *fifteen* dollars (instead of twenty-five).

MEMBERS IN ATTENDANCE.

W. H. Baker, of Boston; Fordyce Barker, of New York; Robert Battey, of Rome, Ga.; B. Bernard Browne, of Baltimore; S. C. Busey, of Washington; John Byrne, of Brooklyn; James R. Chadwick, of Boston; Thomas M. Drysdale, of Philadelphia; Thomas Addis Emmet, of New York; George J. Engelmann, of St. Louis; Walter R. Gillette, of New York; William Goodell, of Philadelphia; William T. Howard, of Baltimore; James B. Hunter, of New York; A. Reeves Jackson, of Chicago; Charles Jewett, of Brooklyn; Joseph Taber Johnson, of Washington; Charles Carroll Lee, of New York; Matthew D. Mann, of Buffalo; William H. Parish, of Philadelphia; Theophilus Parvin, of Philadelphia; Thaddeus A. Reamy, of Cincinnati, O.; John C. Reeve, of Dayton, O.; William L. Richardson, of Boston; John Scott, of San Francisco; Alexander J. C. Skene, of Brooklyn; R. Stansbury Sutton, of Pittsburg; Ellwood Wilson, of Philadelphia; Henry P. C. Wilson, of Baltimore; W. Gill Wylie, of New York; and B. F. Baer, of Philadelphia.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 8, 1886.

John A. Wyeth, M.D., President, in the Chair.

NOTABLE ATHEROMA OF THE CORONARY ARTERIES AND THE ARTERIES AT THE BASE OF THE BRAIN—FATTY INFILTRATION OF THE PANCREAS.

Dr. Waldstein presented specimens, removed from the body of a man, sixty-four years of age, who died in the German Hospital. The patient had diabetes and albuminuria. The specimens were presented merely on account of the interest in the anatomical lesions, and without reference to the clinical history further than that there were no symptoms whatever which pointed toward disease of the heart, and that the man had suffered from persistent diarrhœa.

On making the autopsy Dr. Waldstein was surprised on finding calcification of the coronary arteries to a degree rarely met with; the calibre of the arteries, however, was rather larger than usual. There was also atheroma of the aortic valves. There was a patch of atheroma in the splenic artery. The arteries at the base of the brain were markedly atheromatous. In the aorta the atheromatous change was much less marked than in the smaller vessels.

The man was very fat. The *pancreas* was a mass of fat nearly throughout the entire organ. The *liver* was fatty and cirrhotic. The *kidneys* were large and of a pale grayish-yellow color.

The President remarked that, according to his recollection, in the cases in which atheromatous coronary arteries had been presented to the Society there had been prominent cardiac symptoms, and there was almost complete occlusion of the vessels.

Dr. Prudden thought that, of the specimens which had been presented within the last year and a half, belonging to this group, there had been localized atheroma in many of the cases, with lesion of the heart-muscle in a good proportion of them.

Dr. Eugene Hodenpyl presented a specimen of

DERMOID CYST OF THE OVARY AND BROAD LIGAMENT.

It was removed from the body of a woman, aged forty-five, who died of pneumonia. The uterus and left ovary

were normal. The right tube (Fallopian) was elongated, measuring 130 mm. The left ovary was enlarged, being 43 mm. in length and 22 mm. in thickness, and it was lower down in the pelvis than normal. Occupying nearly the whole of its substance were three communicating cysts filled with a white semisolid material, composed of fat droplets, epithelial scales, and a considerable number of short, fine hairs. The cyst-wall was formed of dense connective tissue. In the substance of the ovary were a number of very small masses of calcareous material. Within the folds of the broad ligament, and extending from its outer attachment as far as the uterus, was a multilocular cyst, which communicated with those in the ovary. It measured 120 mm. in length, 40 mm. in depth, and 18 mm. in thickness. It contained the same elements as the cysts of the ovary, but its contents were softer and darker in color, and the hair and epithelial scales less numerous.

DR. PRUDDEN said that he saw the specimen when it was fresh, and it was a matter of interest as to what connection there was between the two cysts; that is, whether they were originally entirely separate, or not. This could not be determined definitely. The specimen showed well the amount of epithelial scales that might collect in such cysts.

THE PRESIDENT presented two

URETHRAL CALCULI,

removed from a patient on whom he had operated in 1882 and 1883, and removed five calculi from the urethra, which he had already presented to the Society.

Last winter the man came to him again with symptoms of obstruction, after having had three years of a fair degree of comfort. On examination a stone was found four or five inches from the meatus, and Dr. Wyeth determined not to cut any more strictures as he had done at the previous operations, but to enter the urethra directly from below, remove the calculus or calculi, and leave the patient with a urinary fistula. He performed the operation under cocaine, and without pain to the patient. The two calculi presented were removed, and there were no others within sight or feel in the urethra; there were some within the bladder. The patient had a chill after the operation, followed by high fever, went from bad to worse, and died ten days afterward. An autopsy could not be obtained. Whether or not the patient had diseased kidneys he was unable to say, but Dr. Wyeth had inferred that he did, because prior to the former operations his urine contained large quantities of albumen, although there were no casts, and after that performed in 1883 the patient had almost complete suppression of urine, with chill, etc.

The Society then went into executive session.

A COOL SUICIDE.—A young man recently killed himself in Paris, leaving a letter in which he alleged his reasons for the act, and also gave an account of how he passed his last day. He said that he had tried to be a journalist, but failed, and he was generally disgusted with life. He rose at 11 o'clock on the last day of his life, breakfasted at the Café Duval, and then went to Longchamps to the races. He bet all the money he could spare, for he did not want to die on an empty stomach, and lost. Then he engaged a room at a hotel, took dinner and a few glasses of beer, and went to the theatre to see "A Midsummer-Night's Dream." After this he devoted a few minutes to "un divertissement galant," and then went home, wrote his letter, and killed himself. He asked, as his dying request, that his body might be cremated.

A LUCRATIVE PRACTICE.—The average fee of a Chinese physician, in his native country, is in the neighborhood of five cents.

Correspondence.

THE PAROCCIPITAL FISSURE.

To the Editor of the Medical Record:

SIR: Referring to your editorial of September 4th, "A New Brain Fissure," I beg space for the correction of some errors, and for remarks upon the subject of encephalic names.

Permit me first to express my gratification at the admission of the probable soundness of my conclusion, that the fissure commonly called "interparietal" embraces two integers, a true parietal and a paroccipital, of which latter the "transverse" of Ecker is only a part. This conclusion, opposed as it is to an almost universally accepted view, was based upon the study of many brains, and the suggestion of a new name was made with great hesitation, and only from the conviction that, in the end, students and teachers of anatomy would find a single word easier to remember and use than a variable phrase like "posterior part of the interparietal." Contrary, then, to the order in which the words occur in the editorial, my "treatment of the fissure" was primarily monographic and only secondarily neuronymic.

The editorial says, as if on my authority, that "the paroccipital fissure is 'yoke-shaped.'" Then follows the remark that "we have never seen a yoke like that figured," and an astronomical comparison which, in view of the weight accorded to THE MEDICAL RECORD'S editorial page, might well tend to discredit my generalization as to the typical form of the paroccipital and some other fissures, especially the orbital. I must be allowed, therefore, to say that I, too, "have never seen a yoke like that figured," but also—and this is the essential point—that the term *yoke-shaped* does not occur in my article. On the fourth page, zygal fissures are defined as "H-shaped or quadradiate, presenting a pair of branches at either end of a connecting bar or yoke, the zygon." A zygal fissure *contains* a bar or zygon, a yoke in the most general sense, but that does not imply that as a whole it resembles the specific form of yoke which connects a pair of oxen. If a geometer should name a certain figure *quadrate*, a carpenter would not be entitled to say that it was "square-shaped," and ridicule the geometer because neither of them ever saw a "square" so shaped.

Even if, however, the Greek ζυγόν was applied exclusively to an ox-yoke, the use of a derivative like *zygal* would not necessarily imply that a part so designated resembled the article, or justify a translation into *yoke-shaped*. I am strenuous upon this point, because it exemplifies a distinction which I have insisted upon repeatedly since 1880 (and especially in the article "Paronymy," etc., in the *Journal of Nervous and Mental Disease*, July, 1885), between classical and vernacular terms. The latter are presumably *descriptive* and literally correct; but the former are merely *designatory*, and need not apply with absolute accuracy. For example, no one objects to the retention of *vertebrate* for a group of animals, but the use of the vernacular equivalent, *backboned*, at once arouses the objection that several "vertebrates" have no backbone at all. Again, in speaking of a great French naturalist, who thinks or cares that one of the meanings of *Cuvier* is *wash-tub?*

In the second paragraph of the editorial, *stipes* should be *stipe*, the English singular of the Latin word, which is *stipes* in both numbers. I hope the time may come when, so far as possible, we shall employ English forms or paronymes of Latin words, and distinguish the latter by italics, just as we now distinguish French words. For example, *callosum* is the same in both languages, but would be italicized if used in a Latin sentence or on a figure; the plurals *callosums* and *callosa* would be distinguished not only by the italics, but by the distinctly Latin form of the latter. This matter is also discussed in the paper above referred to.

The statement that, "Ithacally speaking," *fissure* is *gyre*, is probably due to inadvertence, since *gyre* is given on the second page as the synonym of *convolution*, and on the fourth and fourteenth pages *paroccipital gyre* is suggested as a briefer and more appropriate name for *superior annectant gyrus*, and other synonyms of Gratiolet's "*pli de passage supérieur*." The mistake is here corrected, lest it be hastily inferred that my efforts to improve anatomical nomenclature involve a complete revolution in the use of commonly accepted terms.

So far from this, as may be seen by anyone who will read my papers carefully and without adverse prepossession, I have taken things as they are, as they have come down to us from *patres anatomici*, who, apparently, were not pressed for time and never imagined that the structure of the human body would come to be of common interest in an age of less leisure, and, from the standpoint of an investigator and teacher of many years' standing, have tried to "make the best of it."

I have noted the general tendency toward the simplification of terms, and have endeavored to hasten what seemed to be the natural progress of reform. There are very few of my terms which do not occur in the writings of some anatomist of authority. I have selected what seemed to me the best, modified them, when desirable, in accordance with established etymological rules, and—with a consideration for my readers which surely no one will condemn, even if he does not take the trouble to follow the example—have *used always the same word for the same thing*.

My merit, or demerit, as it may be viewed, is essentially that I have done consistently and persistently what many others have done sporadically and spasmodically; my "case" is chronic, while theirs was only acute.

Nor are the new terms put forth without due consideration. They are first tested in the laboratory and lecture-room, and must endure the trenchant criticism of my colleague, Professor Gage, who will even abandon a cat for the sake of dissecting my propositions.

I am in no hurry, and have plenty of patience for those who hesitate. Already, however, there has been enough "aid and comfort" from working anatomists to warrant the prediction that, within twenty years, what my friend, Harrison Allen, calls the "dear old incongruities" will no longer encumber our books, prolong our lectures, confuse the anatomist of another nationality, hinder the progress of the student, and mystify the laity. With few exceptions each part will have but one name, and that a single word of classical derivation, co-ordinated with the names of related parts, applicable to all vertebrates, intelligible to all nations, and capable of inflection and of adoption into other tongues. Instead of *internal perpendicular*, *occipito-parietal*, *parieto-occipital*, and the host of synonyms in all languages, we shall follow Pansch in saying simply *occipital;* while Owen's unmistakable mononym, *subfrontal*, will replace Broca's *convolution*, *third frontal*, *first frontal*, and *infero-frontal*, etc. Instead of *corpus callosum*, we shall say *callosum*, adj., *callosal;* for *pia mater*, *pia* and *pial;* for *commissura anterior*, *precommissure* (Latin, *præcommissura*); for *cornu posterius*, *postcornu;* for *iter a tertio ad quartum ventriculum*, *iter* in particular, and *mesocœle* for the entire cavity of that segment of the brain; in place of *upper*, which means one thing in man and another in the cat, we shall say *dorsal* when we mean it; and instead of using *external*, and leaving the reader to guess whether we mean *superficial* or *to one side*, we shall say *ectal* in the one case and *lateral* in the other.

Admitting that there are questions not yet solved, and that some of the terms proposed by me will be modified, or even rejected altogether, by the committees appointed two years ago by the American Neurological Association and the American Association for the Advancement of Science, I am sufficiently sure of the general correctness of my position to join, perhaps with more than ordinary heartiness, in whatever merriment may be aroused by the editorial reference to "Wilderese," "Ithacan," or, as I would rather it should be called, *Cornellian*, as a medium for the communication of facts and ideas. "Let them laugh who win;" I mean to win, not in spite of THE MEDICAL RECORD, but, so long as its columns are open to me, by its help, even though that help is not intended as such.

Respectfully yours,

BURT G. WILDER, M.D.

SIASCONSET, NANTUCKET ISLAND, MASS.,
September [illegible], 1886.

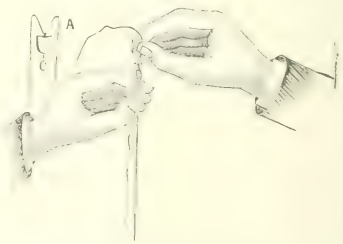
New Instruments.

A NEW OPEN-EYED SURGICAL NEEDLE.

EVERY surgeon has, no doubt, been inconvenienced by the difficulty found in threading needles of the ordinary type. This is particularly the case when twisted or braided silk is employed, requiring a steady hand and a keen eye to accomplish an object apparently very simple.

The needle illustrated promises to obviate all difficulty, and the threading can be accomplished with ease by simply pressing the thread or silk down the slot, as shown in the wood-cut.

This needle is so constructed that there is sufficient spring to allow the thread to enter the eye of the needle,



without cutting the thread, and when once threaded the suture employed cannot again be pulled out. The enlarged view on the left shows the construction of the eye. Below the large eye is a smaller one, connected with the upper eye by a slot. This lower eye and slot form a yielding spring that allows the suture to enter easily, yet it is sufficiently strong to close tightly after the thread enters the eye. A larger or thicker suture can thus be threaded in this needle than could be employed in the ordinary needle. Sutures, however, should be selected to suit the size of the needle employed.

The instrument, which is manufactured in the different shapes and sizes by F. G. Otto & Sons, of this city, is sold at the same price as the ordinary surgical needle.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 18 to September 25, 1886.

FISCHER, W. W. R., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, to take effect September 10th, with permission to apply for one month's extension. S. O. 88, Department of Arizona, September 1, 1886.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Concho, Texas. S. O. 131, Department of Texas, September 18, 1886.

Medical Items.

The German Hospital in Constantinople was founded in consequence of the death in that city of a German who was unable to obtain proper medical assistance. It was established first in a little wooden house, but recently the German government has erected a fine building on the heights of Pera at a cost of $90,000. The hospital is four stories high, surrounded with a large garden, and is beautifully situated on high ground, from which can be seen Stamboul, the Sea of Marmora, and the coast of Asia Minor. There are six general wards and twenty private rooms, with accommodations for one hundred patients, at a cost of from 75 cents to $1.25 a day. A separate building is provided for contagious diseases, which was erected by the former German ambassador, Prince von Reuss. There are three physicians attached to the hospital, and during the year 1885 over six hundred patients, of fifteen different nationalities, were treated.

Notification of Infectious Diseases in Austria.—The government of Austria has issued a decree calling upon the heads of families to inform the police authorities of any case of contagious illness occurring in their households; these illnesses include cholera, typhus fever, typhoid fever, small-pox, scarlet fever, diphtheria, dysentery, measles, whooping-cough, chicken-pox, erysipelas, puerperal fever. The following incident, related in the *British Medical Journal*, will show how strictly the above regulation is enforced. A man who had two children attacked with small-pox, and omitted to notify their illness to the police authorities, was condemned to ten days' imprisonment, during one of which he was deprived of food, and another was passed in a dark cell. A medical man, who had seen the children before the eruption appeared, was accused of negligence, but the charge was dismissed on the grounds that the duties of a medical man terminate when he receives his fee.

The Cultivation of the Willow for Medicinal Purposes has now, *The Medical Herald* states, become an important industry in some parts of this country. The switches, at the end of two years, are from four to seven feet long, and are cut and gathered in bunches like sheaves of wheat. In the stripping-building they are steeped in water, and the bark at the larger end is loosened for a couple of inches by machinery. One by one the switches are placed in a mechanical stripper, and with a pair of pliers are pulled through with a sudden jerk. They are then wiped off with a woollen cloth, bundled, and laid away to dry. All the leaves and bark are dried and baled, when they command a price of twenty-five cents a pound. On one farm in Georgia there are at present 400,000 willows growing, and 80,000 additional slips have recently been put in, it being intended eventually to devote sixty acres to this crop. The average yield is a ton to the acre. When dried, the willows command $200 per ton, and find a ready market.

A Blessing in Disguise.—Dr. Brandes, of Hanover, writes in a German medical paper that a water plant, the *Anacharis Alsinastrum*, which has always been regarded as a troublesome weed and utterly useless, really possesses valuable properties. He has noticed that in his neighborhood, where malaria and diarrhœa were endemic, these diseases became less prevalent as the weed began to infest the neighboring rivers and marshes, and since four years have totally disappeared. The plant nourishes itself on decayed vegetable matter, and grows with incredible rapidity. The inference is that it thus destroys the germs which produce malaria and diarrhœa. Dr. Brandes suggests that the experiment should be tried of planting the Anacharis Alsinastrum in marshy districts. It is also useful in protecting the young fish, and affords an excellent manure. The plant came originally from Canada, whence it was brought to England, and thence to Germany about 1840. In North Germany it spread rapidly, and this year appears in all parts in unusual luxuriance.

Remarkable Hypnotic Phenomena.—M. Luys stated at a recent meeting of the Biological Society of Paris that he had found certain hypnotized patients susceptible to the action of remedies which were inclosed in sealed glass tubes. The effects were always the same for the same distance, but varied according to the degree of separation of the tubes from the body. Thus a certain substance would cause the patient to become hilarious when the tube was placed in contact with the skin over the nucha, but would excite fear if removed a few inches. Some strange effects were observed. When essence of thyme, inclosed in an hermetically sealed glass tube, was placed near the thyroid gland, there followed an immense swelling of this gland, with exophthalmia and venous congestion of the face. A woman presented all the symptoms of alcoholic intoxication when a tube containing alcohol was placed on the back. Another exhibited signs of hydrophobia when a tube of water was held at a little distance from the body. The explanation offered by several members of the society, to which, however, M. Luys did not assent, was that the effects were due to mental suggestion, since the experimenter knew what substances the tubes contained, and what was their physiological action.

The Alcohol Question in France.—The Academy of Medicine of Paris appointed, some time ago, a committee to investigate and report upon the danger to the population from the increasing use of alcohol in that country. The committee reported that there were three ways of preparing wines so as to artificially increase or diminish their strength. One way was to mix two wines of different alcoholic strength, another was to add pure alcohol, and the third was to dilute with water. The first was considered allowable, but the other two processes were condemned as either injurious or fraudulent. The French government was requested to take stringent measures to prevent the importation into the country of artificially alcoholized wine. It was also asked that the number of wine-shops be largely reduced, and that the laws for the repression of drunkenness be more strictly enforced.

A Brutal Physician.—A French journal states that a physician was called in the night to see a woman in childbirth. The labor was complicated and an operation was necessary, for the performance of which the physician demanded 250 francs in advance. The husband was a laboring man and had but 100 francs, which he offered, with promises to pay the balance. The doctor refused in spite of the man's entreaties. Before another physician could be obtained the woman died in great agony, two lives having thus probably been sacrificed for the paltry sum of thirty dollars.

A New Subject for Experimentation.—A correspondent of *The Medical Age*, referring to the occurrence of abdominal pregnancy, asks whether there is anything in the nature of the female peritoneum that renders it more fit than its male analogue for furnishing nutriment to an attached ovum, and if not, why, under favorable circumstances, ova introduced into the male peritoneal cavity might not attach themselves and proceed to a viable stage of development. He also suggests that the young of one animal might be thus grafted upon a different species.

The Swiss Society of Natural Sciences held its sixty-ninth annual session this year at Geneva, commencing on August 11th. The meeting was a very successful one, and a number of interesting papers were presented.

The Pathologist: He hath made a covenant with death, for his heart panteth for a specimen.

MORPHINE IN POST-PARTUM HEMORRHAGE.—Dr. M. S. McMahan writes to the *N. Y. Med. and Surg. Journal* that he has successfully used the following plan in post-partum hemorrhage for the last fifteen years: On finding the surface of the patient pale, the extremities cold, with profuse hemorrhage, he at once injects hypodermatically from ten to fifteen minims of Magendie's solution of sulphate of morphine. This will invariably, and within a few minutes, produce a flushed surface, warm extremities, and a stopped or much diminished flow. He adopts no other means—no styptics, no cold compresses, and no foolish plugging.

HOW TO ADMINISTER COD-LIVER OIL TO INFANTS.—A good suggestion has been made by Yeldham, of a plan of administering cod-liver oil to infants. Let the nurse dip the end of her little finger in the oil, and put it into the child's mouth. This may be repeated five or six times in the twenty-four hours. In such small quantities, not only does it never disagree, but the child sucks it off the finger with avidity and evident pleasure. It may be administered in this way to the youngest infant. By this simple and inexpensive expedient Dr. Yeldham says many infants who were absolutely starving for natural foods became fat and plump, and happily in an almost incredibly short space of time. The oil has the effect of enabling the child to digest other food, which it could not retain on its stomach without it.

INFLUENCE OF THE FALLOPIAN TUBES AND OVARIES UPON MENSTRUATION.—In a paper on the Pathology of the Fallopian tubes, published in the *Deutsche Medicinische Wochenschrift*, Dr. A. Martin, of Berlin, says, with reference to the theory of Mr. Lawson Tait that the Fallopian tubes have an important influence upon menstruation, that he carries this very far when he argues that "castration performed with the object of diminishing uterine myoma should not imply removal of the ovaries, but rather of the tubes." And he (Martin) then relates a case where, in 1882, the right Fallopian tube of a patient and the diseased part of the right ovary were removed, the rest remaining. The patient was relieved for a year, then suffering began on the left side, and in February, 1883, a hæmato-salpinx was discovered on abdominal section, and the left tube was removed with the whole of the left ovary. Martin says: "I have often seen this patient since March, 1883. Although she had no Fallopian tubes, and only a part of the right ovary, which was left in February, 1881, she menstruates regularly." And he concludes thus: "As this patient menstruates regularly without tubes, and with only a small remnant of one ovary, she is a striking illustration of the Tait theory!"

DR. DACOSTA ON THE TREATMENT OF ACUTE PLEURISY.—In the early stage, when effusion has not yet taken place, the question arises, Shall we employ local bloodletting? In a young, vigorous adult it is good practice to withdraw from f ℥ viij.–xij. of blood. Follow the cups by a poultice, on which place sufficient laudanum. This is a comfortable application. If we do not employ venesection, poultice at once and use counter-irritants. Subcutaneous injections of morphia in small doses near the inflamed pleura are of great value. It is of importance to keep the patient under the influence of an opiate. Dover's powder is a convenient form. Control the circulation by the use of tincture of aconite, in drop doses every hour, as indicated by the heart. When effusion has taken place, do not cup; nor is aconite indicated, since the heart is displaced. At this stage the acetate of potassium and digitalis are of great value, ℥ ss. of the acetate to be given in liquor potassii citratis in the twenty-four hours. Digitalis may be advantageously combined with the above. In a strong man, when the effusion persists, jaborandi is often of decided value. The iodide of potassium is a most useful agent when the effusion tends to linger. During its use add small blisters, repeated occasionally. Often in these cases a gentle mercurial impression will start the effusion; then follow up with diuretics as well as diaphoretics. Sustain the strength, especially in lingering cases, by the use of stimulus. When the effusion is overwhelming, the question of paracentesis comes before us. When delirium begins, and circulation and respiration become irregular, then it is time to tap. If the effusion be double-sided, then aspirate; but, as a rule, a double-sided pleurisy occurs in tubercular patients, so that tapping will not materially lengthen life.—*Coll. and Clin. Record.*

MURRI-MURRI OR STRANGER'S COLD.—In two parts of the world, nearly at the antipodes of each other, there exists the singular belief that the presence of strangers brings on a "cold" indistinguishable from influenza. These places are St. Kilda, in the Hebrides, and Wharekauri, an island about four hundred and eighty miles east of New Zealand. A correspondent of the *British Medical Journal* says: "In order to be infected, a person need not know that a ship has come; indeed, the mere appearance of murri-murri is proof to the inhabitants—even at distant parts of the island, which is thirty miles long—that a ship is in port, inasmuch that, on no other evidence, people have actually ridden off to Waitangi to fetch their letters. There is a hill, whence one can see across the island into Waitangi Bay; and people are wont to climb this hill, and scan the bay for a ship, on no other evidence than the occurrence of murri-murri." There seems to be no doubt about the correctness in the main of the facts, which can be explained on the theory of a vaso-motor neurosis from mental impression, such as is seen in the production of a "rose-cold" from an artificial rose.

"EDUCATE A WOMAN AND YOU EDUCATE A RACE."—This is a saying full of promise if it be rightly interpreted, full of dire disasters if applied to the mind to the exclusion of the body. While it may be true that too much bodily labor may render women less prolific, it is very much more clearly shown that excessive mental labor is a cause of sterility (or infertility). "In its full sense," says Mr. Herbert Spencer, "the reproductive power means the power to bear a well-developed infant, and to supply that infant with the natural food for the natural period. Most of the flat-chested girls who survive their high-pressure education are unable to do this."

SULPHATE OF SPARTEINE.—Hans Voigt, says *The Lancet*, working in Nothnagel's clinic, has come to the following conclusions respecting the therapeutical action of sulphate of sparteine. In small doses the salt increases the efficiency of the cardiac contractions and raises the arterial pressure. The number of heart-beats is always increased. These effects are observed within an hour of the administration of the drug, and continue for twenty four hours. The author recommends the suspension of the administration of the drug for some days, but it may be given for a week without risk. The remedy does not always regulate the rhythm of the heart-beats. Its action on the respiration is variable. Diuresis appears to take place in proportion to the improvement of the cardiac action. A beneficial sedative action is often observed. Headache, vertigo, malaise, and other objectionable symptoms were but rarely met with as the result of the administration of small doses. The dose employed has been from one to four milligrammes. It will be remembered that in Sée's hands much larger doses (five to twenty centigrammes) were tolerated without cumulative or other objectionable effects.

NAPHTHALIN AS AN ANTHELMINTIC.—Dr. Coriander, of Samarkand, recommends naphthalin as a valuable and economical remedy, especially in country and military practice, for worms, both tænia and ascarides. He gives children of from one to three years of age two or three grains twice a day. In the case of adults he gives from twenty to eighty grains a day in powder with sugar.—*The Lancet.*

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Original Articles.

CEREBRAL PARALYSIS IN CHILDREN.

BY V. P. GIBNEY, M.D.,

FROM the title of my paper I would not have the practitioners assembled this evening infer that any attempt at cerebral localization is intended. I simply wish to present a short paper based upon a case in my own practice and one or two that I have seen in the practice of my friend, Dr. L. E. Holt. All are more or less familiar with the later results of inflammatory brain lesions as they occur in children. Few of us, I take it, are familiar with the manifestations at the time of the lesion, and hence my reason for placing on record a case that I was fortunate enough to observe from the beginning of the attack.

At six o'clock in the morning, on February 5, 1886, I found a child, to whose bedside I had been summoned at this early hour, in general convulsions, which had lasted for twelve hours.

My little patient was a boy four and a half years of age and he had been for nearly two years under my care for congenital equino-varus of both feet. His general health had been unusually good, and there was nothing in the family history that led me to believe that he would inherit any of the chronic diseases with which we are familiar.

The little personal history that I had learned on my way to the house that morning was this: For at least a fortnight, beginning say about the middle of January, he had been restless at night, gritting his teeth and showing some signs of fever. He had not been confined to the bed, or even to the house during this period. The family had been living in a house that was noticeably damp, and the plumbing was thought to be defective.

On the evening, then, of February 4th, about six o'clock, he was much more indisposed than usual, and was soon in general convulsions. A neighboring physician was called and his efforts during the night to control the attack had not been attended with success, and on my arrival in the morning the case was placed in my hands.

I found, soon after entering the house, a rectal temperature of 106.2° and lost no time in getting my little patient into a bath of 95°. At the end of ten minutes the convulsive movements ceased and he soon fell asleep in the bath. I did not remove him until forty-five minutes had elapsed, when I found the rectal temperature 102°.

He continued to sleep quite normally after being laid in the bed, and I left instructions to call me on the recurrence of convulsions or on the rise of temperature. I was not called, but visited him again at 6 P.M. of the same day, when I found the temperature 101°, and learned that he had slept until toward noon, when he awoke and appeared conscious all the afternoon. He had not made any attempt at talking, however. I thought it best to leave him undisturbed, and, in view of the history that I had obtained in the morning, jumped to the conclusion that he was suffering from malarial poisoning, and ordered quinine in five-grain doses.

Next morning, the 6th, he was quite comfortable, and the report was that he had passed a good night. Still he had not spoken, and I could not induce him to speak. When asked to show his tongue he would open the mouth wide, yet did not seem able to protrude the tongue. He did not use the right upper extremity, but did move the right lower quite easily, though not with the same degree of force that he used the left. The whole of the right side was hyperæsthetic, though the degree of hyperæsthesia was not measured. The temperature had not risen above 101°. I did not see him in the evening, but the next morning, the 7th, now the third day, he was still able to move the right lower extremity, but it required a much greater effort on his part than was required on the morning preceding. The tongue was still held tightly within the bottom of his mouth when he attempted to protrude it. It was reported that there had been during the night an occasional clonic spasm of the right arm, though without any loss of consciousness. A possible poliomyelitis high up in the cervical cord suggested itself to me, and I ordered a fly-blister to the nape. The temperature was still ranging about 101°.

February 8th, fourth day.—He was still unable to speak, the loss of power in the right upper extremity was absolute, while in the lower extremity, same side, it was nearly complete. At this time Dr. Holt, to whom I related the history of the case, suggested a polioencephalitis of Strümpel.

February 9th, fifth day.—I observed, for the first time, that the right face was paralyzed. He was unable to close the eye, could take food fairly well, was perfectly conscious, understood what was said to him, but was still unable to utter a word. The loss of power in the right lower extremity was now complete, and the same slight spasm on this side was reported as having occurred during the night. He had a movement of the bowels to-day for the first time in three days. Constipation had been a marked symptom from the beginning. The temperature still had not risen above 101°. The quinine had been discontinued a day or two ago, and his diet was now milk and bread, which he took quite ravenously.

February 10th, sixth day.—At noon to-day his temperature went up to 105°, and while it was thus elevated convulsive movements of a clonic nature affected the whole of the right side, face included. He was conscious during the whole attack. I administered fifteen grains of antipyrin by the mouth, and at the end of forty-five minutes, the temperature remaining unaffected, I employed the bath, at a temperature of 95°, and in half an hour the thermometer in the rectum registered 103°. The hemispasm subsided in the meantime, and at 10 P.M. of the same day Dr. Holt visited the patient for me, and reported as follows: Temperature, 104°; respiration, 24; pulse, 160; heart and lungs examined with negative results; opens mouth easily, but does not protrude the tongue; hemiplegia complete and hemianæsthesia quite marked; abdomen not retracted and quite natural: pupils equal in size, and respond well to light—normal, in fact; no strabismus; resting quietly; ordered potassium bromide, gr. xv., every two hours. Dr. Putzel saw the case at 5 P.M., but I did not get his report.

February 11th, seventh day.—I found him resting quietly; his temperature seemed normal and was not taken. At 6 P.M. I found the temperature 105°, and at 6.30 administered eighteen grains of antipyrin with eight grains of chloral. At 10 P.M. the temperature was 100.4°. The chloral was given because of hemispasm.

[1] Read before the Practitioners' Society, of New York, October 11, 1886.

I did not see him on the 12th, but he was reported to me as "doing well."

February 13th, ninth day.—There was nothing noted, save that his bowels were now moving regularly and naturally, and that the temperature had not reached 102°. On this day Dr. M. A. Starr, at my request, visited the patient, and reported to me his diagnosis as acute polioencephalitis.

February 14th, tenth day.—He was able to protrude the tongue to the margin of the lips, and the temperature was, for the first time, normal. The blistered surface at the nape had not healed, and was excessively irritating to the boy.

From this date to the 27th nothing of interest occurred. The temperature ranged from 98.8° to 102°, the curve being very irregular. On this date (27th) it was observed that he could protrude the tongue quite easily and to the full extent, and that the facial paralysis had nearly disappeared. He was still unable to talk, but made his wants known by very intelligible signs. He still takes the bromide of potassium and the slight attacks of hemispasm rarely occur.

March 9th.—I note that he is quite cheerful, but is still not talking. There is marked contraction of the fingers into the palm and of the flexors of the forearm. He can move the fingers a little, and there is still a trace of the facial paralysis. The patella tendon reflex on the right side is notably exalted and there is a slight foot clonus. The bromide is discontinued and he is ordered potassium iodide in fifteen-grain doses, three times a day. The change in medicine was not made until the 11th, however, and on the 13th it was reported to me that he was able to raise the arm from the side over a small arc, that he managed to creep across the floor, and that he said, "Mamma," "Nana," and "Mary Ann," quite distinctly. The iodide was soon pushed to half-drachm doses three times a day, and continued until the middle of June, when it was discontinued without my sanction.[1]

Dr. Holt's Case.—Andrew L——, aged four years, came under observation April 7, 1884, for a paralysis affecting the right side of the body. The following facts were gained of his history: An older brother has epilepsy. The patient had always been well until attacked by measles in the preceding January. About one month after this he was taken with severe acute symptoms lasting two weeks. During this time he had frequent vomiting, constipated bowels, and moderate fever. There was no delirium. At the end of this time, suddenly, while in bed one morning, he had convulsive movements confined to face, followed by complete right hemiplegia, face and leg being involved, and aphasia. There has been gradual improvement in the paralysis, most marked in the face and least marked in the arm. For a month he has walked alone.

Examination: General condition good. Face slightly drawn to left side when active. There is quite marked atrophy of the right upper extremity, especially in the shoulder muscles. Measurement gives three-fourths of an inch difference in the two sides over the deltoid, and one-half inch in both the arm and forearm. Cannot raise the arm beyond the shoulder; flexes and extends the forearm feebly; can scarcely move the fingers at all. There is marked drop-wrist; the flexor tendons are strongly contracted; the first row of phalanges is extended, and the second and third flexed; thumb flexed and adducted into the palm. Gait like that of a typical hemiplegic. Pretty good power in thigh muscles; those of leg are very weak; foot held in equinus with a rigid tendo achillis, which can be overcome by passive force; atrophy of thigh and calf one-fourth of an inch. Sensibility is normal.

Electrical reaction: There are good responses in all the muscles to a moderately strong faradic current. During electrization he cries out, "I don't want it," being the first words he has spoken since the attack, except "papa" and "mamma." No evidence of cardiac disease and no history of rheumatism.

A splint was applied to overcome the contraction of the muscles of the hand, and faradism was used faithfully three times a week for about two months without any apparent benefit.

The case then passed from my observation, and I did not see it again until March 11, 1885, when the boy was brought to me for epileptic attacks that began in January, but of late had grown more frequent until they were repeated six and seven times a week. They were described by the mother as follows: At first tonic, then clonic spasm, loss of consciousness for four or five minutes, no cry or biting of tongue.

His speech is steadily improved since last note. He can make his wants known quite easily. There has been little, if any, improvement in the arm or leg. Hand falls in drop-wrist, and neither it nor the fingers can be extended. Cannot clear the floor with toe in walking. Measurements show three-fourths inch atrophy of the arm, one-half inch of forearm, and one-half inch each of thigh and calf. He seems rather weak-minded.

He was ordered bromide of potash in full doses (gr. lxxv. a day, but rarely received more than gr. xlv. or lx). This was continued for two weeks, with the effect of controlling the epileptiform seizures.

He then became drowsy, gait at first unsteady, and later he was unable to walk at all. Complained of constant headache and was constipated. His respirations were at times quite irregular; temperature slightly elevated, usually about 99⅘°; pulse, 120; pupils dilated, tongue dry and brown. These symptoms passed away in about a week, with no treatment except moderate doses of the iodide of potash. The bromide was stopped when they were first observed. It did not seem that they were wholly due to the drug.

After this time the bromide was given irregularly, and in a month or so the seizures returned, though not with the original frequency.

March 8, 1886.—Patient was seen this date. Has had no treatment for a long time. The epileptic attacks continue at short intervals. The facial paralysis seems entirely gone. He walks firmly, though with very marked limp; uses the hand very little. There is now, however, no contraction. Speech improves slowly; while hardly feeble-minded, he is yet much below the other children in intelligence.

Strümpel read a paper before a meeting of the German scientists and physicians in September, 1884, describing a lesion of the brain analogous to poliomyelitis. The name he gave was polioencephalitis, and his cases corresponded closely with the cases whose histories I have detailed this evening. His paper was published in the *Jahrbuch für Kinderheilkunde*, vol. xxii., 1884.

On discussing my own case with some neurological friends, they have questioned the accuracy and the reliability of Strümpel's observations, or, rather, they have been unwilling to accept his conclusions.

Recently A. Wallenberg, in the *Jahrbuch für Kinderheilkunde*, vol. xxiv., 1886, pp. 384 *et seq.*, has published a valuable paper on "Cerebral Paralysis in Children," and has tabulated one hundred and sixty cases drawn from various sources. It was not possible to draw a sharp line of distinction between the congenital and acquired forms.

In eighty-seven cases no cause could be found. Asphyxia was regarded by Wuillemeier as a cause in the congenital spastic cases, six in number, though an investigation was not made even in these as to whether there was any meningeal or cerebral hemorrhage.

Among the causes given are: Traumatism in 8, syphilis in 2, the exanthemata in 21, endocarditis and secondary emboli in 5, diphtheria and croup in 3, cerebro-spinal meningitis in 6, some of which were very doubtful; pertussis in 3, and typhoid fever in 4 cases.

[1] The last note I had from the mother was [illegible]

As to *age*, 19 were developed at the time of birth, and were really congenital. Eighty-one cases occurred between the first and third years, distributed as follows: thirty-five in the first year, 29 in the second year, and 17 in the third.

Nine developed during the fourth year and the same number in the fifth, 13 in the sixth, 17 between the seventh and tenth years, and 12 after ten years of age.

It will be seen, then, that 60, less than one-half of the whole number, occurred in children over four years of age.

The sexes were about equally represented.

An analysis of the clinical histories gives *convulsions* as the initial symptoms in a great majority of cases. The invasion, too, was quite abrupt. In about one-half of these convulsive cases hemiplegia followed soon after the attack. Many die in this first stage.

The second stage is the stage of *paralysis*, the symptoms of the first passing off in a few days. Monoplegia is rare; the face frequently escapes, while the arm is generally the most seriously impaired. In the early part of this second stage the muscles are flaccid, and later they become rigid.

The tendon reflex at first is normal, later it is exaggerated.

In sixty cases *contracture* and post-hemiplegic movements were observed. Charcot regards these as depending on secondary descending degeneration.

Particular stress is laid by Wallenberg on the position of the arm when affected by these secondary contractures. The forearm is flexed and pronated, while the hand is flexed and drawn to the ulnar side. The fingers are flexed at the metacarpo-phalangeal articulation, while the rest of the phalanges are generally extended. The thumb is drawn into the palm, but is seldom extended. The lower extremity is not so severely affected, and is the sooner to recover. Sometimes the recovery is almost complete. When the foot is contractured the position is that of equino-varus.

Förster states that *atrophy* is especially noticed in the forearm and calf after a few weeks. Seeligmüller does not look for this until months have elapsed.

The *electrical reactions*, both to the galvanic and the faradic current, are normal. There is never any reaction of degeneration.

The *sensation* was diminished in nineteen cases on the paralyzed side, and the anæsthesia was more marked the more recent the paralysis. Later, it disappears.

In three cases the hearing on the side paralyzed was impaired, and in nine the sight was affected.

There was often increased tendon reflex in the sound limb as well. This was probably due to secondary degeneration.

Aphasia, according to Bernhardt, was observed in almost all the recent cases. This was thought to be generally motor. Of course no observation could be made in children not old enough to talk.

Wallenberg's statistics show right-sided paralysis in ninety-five cases, in forty-five of which aphasia or some disturbance of speech was observed. The greater number of these recovered speech.

Of sixty-six left-sided cases, anomalies of speech were noticed in seventeen. In only a few cases was there any impairment in *intelligence* connected with disturbed speech. The rule is, however, that the memory remains weak, and the children seemed backward in mental development. In some cases this increased to actual idiocy. In fifty cases it is stated that intelligence was affected before, or independent of, epilepsy.

In the congenital cases, or in those occurring in the first year, *flattening of the skull* on the affected side was observed. This is certainly an interesting observation, especially as it was absent in those developing after the first year.

Motor disturbance.—A large percentage of the cases showed, sooner or later, irregular movements, like athetosis. Twenty-seven cases presented hemiathetosis. In seven hemichorea was a late development.

Epilepsy developed in sixty-six of the whole number, and generally one year after the attack. Wuillemeier states that the seizures grow less frequent ten or twenty years later. With the epilepsy there is frequently associated idiocy and other grave disturbance of brain substance. This epilepsy belongs to the class of "cortical epilepsy" in the sense that the movements extend from one limb to the other.

Pathology.—Forty-eight autopsies, mostly from Goudard's Thesis, Geneva, 1884, were collected, but the larger number were made years after the attack.

There were twelve, however, in which death occurred soon after the attack, and these showed: Embolism of sylvian artery (mid cerebral) in four cases; a similar condition was found in three, *i.e.*, the conditions found in heart and other organs rendered the embolism theory highly probable. The source of the embolus was found in the heart in six cases. In one case there was thrombus of the pulmonary vein.

In the remaining five of the recent cases there was found hemorrhage into the substance of the hemisphere and into the ventricles.

In no single instance was inflammation found in the gray substance as an independent lesion.

The next thirteen cases showed secondary changes in the form of atrophy and sclerosis. In nearly all could be demonstrated a primary focus, as cyst or apoplectic cicatrix. In most of these it was probable that the hemorrhage or embolus had caused the paralysis. In only three of these thirteen was there evidence of pre-existing meningo-encephalitis in thes hape of thickening and adhesions of the meninges, with spots of softening and parencephalic defects in the gray substance. It could not be determined whether the meningitis or the encephalitis was the primary lesion.

In the third series of autopsies, fourteen in number, the original focus of disease was not clearly defined, but affected mostly the central convolutions and motor areas of cortex and cord. Just what the original nature of the process was could only be inferred. In some, encephalitis appeared more probable than hemorrhage. All the foregoing cases were connected with the exanthemata, trauma, difficult labor, or hereditary condition.

In the next nine autopsies there appeared a uniform atrophy of the hemisphere without especial localization about a focus. If such existed, it was found in the motor fibres and ganglia in the track of a descending degeneration of the pyramids. In all the cases where a long time had elapsed after the attack, there was found atrophy of the affected hemisphere, associated with sclerosis, and to this was added, in varying degrees, atrophy and sclerosis of the pyramidal tracts.

The conclusions that Wallenberg draws from this analysis are:

First.—Strümpel's clinical description does not depend on a special localization in the gray cortex of the cerebrum, but is seen in all cases in which a more or less sudden lesion occurs in the motor tract between the cortex and the medulla.

Second.—The lesion is frequently emboli, hemorrhage or thrombus, and can also be caused by meningitis and encephalitis. All these causes have this in common, viz.: that they lead to atrophy and thickening of all the elements of the brain. In this atrophy the motor region most frequently participates, but is seldom exclusively so affected.

Third.—The name, polioencephalitis must be discarded, as there is no single anatomical lesion at the bottom of these cases of cerebral paralysis in children.

CANCER POWDER.—The following powder is said to kill the fetor of cancerous ulcers, and to stop the pain: ℞. Iodoform, 18 grammes; quinie sulph., 3 grammes; essence of mint, 40 drops; charcoal, 15 grammes. To be dusted over the ulcer daily.

SOME CONSIDERATIONS ON HYSTERIA.

By MARY PUTNAM-JACOBI, M.D.,

NEW YORK

(Continued from page 374.)

THE following case illustrates the mode of development of these cerebral paræsthesias, in a way all the more interesting because it is analogous and not identical with cases previously quoted.

CASE XIXA.—Boy, aged twelve; mother anæmic and hysterical, father healthy. Said to have suffered during five years from headache; become most intolerable during last two years, worse in the morning. Head seems to patient to be very large, hollow, affected with constant, diffused, dull pain; this frequently exasperated into violent paroxysms. During last year has great disinclination to walk; feels as if he would fall, becomes exhausted, often with increased pain in head; will stand and hold on to a railing. Was seen by several eminent physicians, being under the care of one excellent neurologist for two years with little benefit. Finally the mother consulted a surgeon, who discovered a phimosis and operated. The boy suffered from violent nervous agitation and headache for ten days, then recovered. The inability to walk was entirely relieved; the headaches markedly so, with progressive improvement.

In predisposed persons depressing moral emotions may suffice to induce headache of several years' duration.

CASE XX. and CASE XXI. were both extremely anæmic young women. In each, after severe moral strain associated with disappointment in marriage, almost constant headache; most severe at the occiput, frequently exaggerated into the most violent paroxysms. In one case these headaches lasted seven years; in the other, four or five; yielding to no remedy, but finally to time.

The generation of hallucinations of pain in cortical centres, like the hallucinations of visional and auditory centres in insanity, in the entire absence of alteration at the periphery or root of nerves, would imply that the ordinary impressions which passed upward from peripheric nerve-terminations were registered in excess, on account of the hyperexcitability of the registering apparatus. In a photographic apparatus, rays of light of the same intensity produce chemical decompositions which vary in amount (depth) according to the chemical preparation of the receiving plate, *i.e.*, according to its sensitiveness. This may represent one analogy. The hallucinations of insanity furnish, by another analogy, indications of the truth of the proposition maintained earlier in this paper, namely, that excitability of the sensory centres is increased in proportion as the functional activity of other portions of the brain is depressed or inhibited.

Hysterical pains are cerebral hallucinations.

Visual hallucinations.

Visual hallucinations are by no means uncommon in hysteria. Dr. Hammond has referred visual hallucinations to disease of the thalamus, and thinks that they are precursors of a special form of epilepsy, called by the author "thalamic." The numerous connections of the thalamus with the optic tract[1] render extremely plausible the suggestion that a morbid process in this ganglionic mass may generate impressions which shall be referred by the optic tract to the retina. Of such impressions, however, the cortical visual centres must, since they rise into consciousness, be the spectator and registrar. Further, the hallucination is composed of elements drawn from memory, *i.e.*, from secondary impressions previously registered in the cortex. It is certain, therefore, that the cortex is involved in the disorder, even if its original starting-point be in the thalamus. It seems more probable that the morbid impression is thus first carried by fibres of the optic tract to the cortical visual centre in the cuneus,[2] thence "referred" by the usual mechanism of illusion[3] to the retina and outside world. Apart from the coexistence of sequence of epileptic convulsions—or else of proof of organic disease of the thalamus—there is, however, no proof that visual hallucinations originate in it rather than in the visual centres themselves.

The two following cases illustrate the effect of a prolonged excess of sensory impressions conveyed through upper nerve-tracts to the brain-centres:

CASE XXIV.—Aged thirty-four. From fifteen to twenty-eight engaged in excessive playing on the piano as accompanist to singing-teacher, sometimes ten to twelve hours a day. Six years ago begun to suffer with nervous diarrhœa, and this lasted a year; still liable to attacks of it. Five years ago began to have distress in nape of neck, and after a month, while playing on the piano, arms suddenly "gave out." The patient was "prostrated" in bed for two months, and has never since been able to touch the piano. Even the placing of the fingers on the keys—or on a table in the attitude of playing—causes sensation of nausea, and of distress at nape of neck. The same is caused by touching finger-tips, which are excessively sensitive. There is no pain in track of the nerves; the morbid response to touch is felt immediately near the roots of the cervico-brachial plexus. There are often sensations of numbness in the right arm, and occasional pains. The act of turning the head or lifting the eyes causes nausea, and even "great anguish." When the nape of the neck is supported, the patient feels "perfectly comfortable." The head is the seat of many distressing sensations, though rarely of distinct pain. It sometimes seems enormously big, sometimes perfectly empty (sensations analogous to effect of cannabis indica). Inability for mental exertion marked.

On one occasion patient had been to the Catskills, and had immediately begun to suffer from "frightful dizziness," and was obliged to leave. On another occasion, at the Clifton Water Cure, had attack of incomplete paraplegia. This was cured by the Swedish movement treatment. During the five years that the patient had been more or less subject to these symptoms there had been many intervals of comparative health, but never of complete recovery.

This case approximated to the great class of functional neuroses which usually express themselves in localized convulsions on the attempt to execute certain co-ordinated movements. There were no convulsions, however, and very little pain; apparently no psychic symptoms, except the inability for mental exertion. The attack of paraplegia was characteristically hysterical.

The etiology of this morbid state in an excess of function demanding complex muscular co-ordination, together with the predominance of symptoms of nausea and vertigo, and the degree of relief afforded when the back of the head was supported, all point to functional exhaustion—exhaustion of power to store force—of the co-ordinating mechanisms of the cerebellum, probably associated with a similar condition of the thalamus through the medium of the recurving fibres passing between thalamus and cerebellum, through the tegmentum and pons. The cortex of the cerebrum was only occasionally, and secondarily, involved; and, correlatively, hysterical symptoms proper were few and transitory; there was but a slight degree of mental inhibition; no noticeable psychic pain, but, however, an attack of paraplegia. The case is quoted here, not as an example of hysteria, but of a morbid state lying on the border-line of hysteria, but distinct from it.

CASE XXV.—This case has already been mentioned while speaking of hysterical amblyopia. It has just been related in full by Dr. Osgood Mason.[2] A large train of neurotic symptoms, which, after fifteen years, finally culminated in incoercible vomiting and death by inanition, were caused by a neuritis of the median and musculo-spiral nerve. The neuritis was due to a splinter

[1] [illegible]

[2] [illegible] Infirmary for Nervous Diseases, [illegible]

[3] Whatever that may be.

[2] Am. J. Med. Sciences, July, 1886.

run into the palm of the hand at the age of two and a-half years, and not removed until the age of twenty two, when the first symptoms of neuritis developed after a blow on the hand in which the splinter was embedded. The patient was operated upon several times,[1] by section of the median nerve for the intense pain in the arm, and recovered from this; so, indeed, that between 1878 and 1885, the date of her death, she had no local suffering. But, as the autopsy showed, the neuritis continued to progress in the central segment of the divided nerve; the patient suffered from several severe attacks of pain in the neck in the course of the cervical plexus, but much more frequently from violent headaches and a series of disturbances which, as quoted from me in Dr. Mason's paper, I have thus classified:

First period.—Mental depression, with religious excitement, followed by severe facial acne. Duration, four months.

Second period.—Utero-ovarian congestion, followed by retroversion, ovarian prolapse; then recovery after eighteen months.

Third period.—After three months' good health, attack of pseudo-meningitis, with violent headache, vomiting, profound prostration, retraction head, rigidity cervical muscles, intense vertigo, amblyopia, dilatation and insensibility of pupils, absence fever. Duration, eight weeks.

Fourth period.—Headache, with localized tenderness of scalp, some local rise of temperature at same spot, sensations of bursting in head, nausea, stumbling gait, heaviness in limbs. Relieved by cauterization of head; then by iodide sodium.

Fifth period.—Severe nervous dyspepsia; relieved by faradization.

Sixth period.—Mental depression approaching to melancholia.

Seventh period.—Increase of dyspepsia, alternating with headache, vertigo, and prostration, and once transitory diabetes; finally, the attack of violent dyspepsia in which the patient lost her life.

The autopsy was completely negative of result, except as regards the nerves in the brachial plexus. Signs of neuritis were found high up in the plexus, in the musculo-spiral and median nerve; but nothing in cord, medulla, or brain. The violent, long-continued, and finally fatal disturbance of the central nervous system was therefore purely functional.

The phenomena of the disturbance were fourfold: 1. Mental (frequent attacks of mental depression bordering on melancholia, and which the patient distinguished readily from the "normal" effects of her prolonged sufferings).

2. Vaso-motor (expressed by the transient utero-ovarian congestion, the purple redness of face attending the pachymeningitic form of headache, possibly also by the severe acne).

3. Sensory (violent headaches, attacks of numbness in limbs, attack of amblyopia).

4. Visceral (gastric attacks, which, once begun, increased in frequency, duration, and intensity until the fatal issue).

Dr. Mason quotes me as ascribing all these phenomena to a series of vaso-motor neuroses. I should to day look for the fundamental conditions in the brain-cortex, so long the recipient of masses of irritating impressions coming from the diseased nerves.

When, after division of the nerves, these impressions could no longer be referred to their peripheric termination, they diffused into the cortical areas of the trigeminal and occipital nerves, causing the violent headaches referred to their termination in the dura and scalp. As a consequence of this excitation of the sensory centres, followed various degrees of cerebral inhibition. When this inhibition was generalized, the patient suffered from psychic pain. When the inhibition especially affected the visual centre, the patient had the attack of amblyopia coinciding with the most intense mental and motor prostration.

When the cortex was inhibited in the rest of its functional activities, its inhibiting control over the subcortical vaso-motor centres was proportionally weakened, a condition which left these centres to an exaggerated activity.

Stimulation of the vaso-motor centre is a known physiological result of sudden irritations of sensory nerves, and may be inferred to have existed during at least the exacerbations of the neuritis. The symptomatology of the case contained nothing positively indicative of exaggerated vaso-motor tonus. There were, however, many symptoms only explicable by vaso-motor paresis, which rarely comes on except as a consequence of previous excess of tonus.

The final illness, comprised of visceral symptoms, was evidently a neurosis of the pneumogastric. Preceded as it was by the attack of diabetes, it indicated an affection of the medulla, which we may most plausibly, however obscurely, associate with the long-standing sensory irritation of the medullary vaso-motor centre.

It is the theory of Meynert, in regard to vaso-motor excitation from withdrawal of the control normally exercised by the cortex of the brain, which explains hysterical vaso-motor neuroses as none other can. By it these neuroses are linked with the same fundamental conditions as underlie the sensory, motor, and psychic phenomena of hysteria.

Upon this theory (which has been already exposed), and in view of the many facts which justify the localization of hysteria in the brain, the vaso-motor neuroses of the disease might properly be called negative, because due to the withdrawal of the control over vaso-motor centres which should normally be exercised by the cortex. Positive vaso-motor neuroses, on the other hand, are those which are caused by excitation of vaso-motor centres through irritation of sensory nerves. These may be present in hysterical people, but are not the typically hysterical phenomena as are the others.

Vaso-motor neuroses of hysteria.

The irritability of the vaso-motor system in hysterics is indicated by an immense number of symptoms, among which "cold chills" and cold hands and feet, perhaps alternating with flushing and sweating,[1] are very frequent.

There are three other and more debatable phenomena observable in hysterics—the first occasionally, the other two very frequently—that I think may be also referred to the vaso-motor neuroses. The first of these is transient albuminuria.

Studies upon the albuminuria of fever, initiated by Cohnheim and ingeniously pursued by Mendelsohn,[2] have indicated that the initial event in this morbid process is irritation of the vaso-motor nerves of the renal plexus. In fever, the kidney, as measured by Ray's oncometer, was found to shrink in bulk coincidently with the appearance of the albuminuria. The shrinkage implied diminished blood-supply, which could only be attributed to contraction of the arterioles under the influence of vaso-motor irritation. With this fall of the arterial current and diminished supply of arterial blood, there would be a fall of arterial tension, consequently rise of venous tension, venous hyperæmia, venous malnutrition of the epithelium of the glomeruli, hence albuminuria, as a result of its anoxæmia and perverted action.

Albuminuria from vaso-motor irritation.

If such a train of sequences can be determined by the vaso-motor irritations of fever, it can be so also by others, including those of hysteria.[3]

[1] Once by Dr. Sayolini, of Naples; three times by Dr. Weir Mitchell, of Philadelphia, or rather in consultation with him and by his advice.

[1] Do which Prof. [illegible] gave a [illegible] Annual Journal of the Medical Sciences, Vol. [illegible]

[2] Or of lithæmia, as suggested by Dr. Kinnicutt, Archives of Medicine, February, 1882.

Case XXVI.—Delicate young lady. Subject to sick headaches, associated with gastric catarrh. The latter was being treated successfully by washing of the stomach, when a severe hysterical attack occurred, with much purely symptomatic emotional disturbance. Urine examined during this attack exhibited a trace of albumen; the tension of the radial pulse was high. Pilocarpine was given, and in twenty-four hours the albumen had disappeared, not to return. It had never been noticed before.

Case XXVII.—Extremely fragile and anæmic girl, with some endometritis and numerous neurotic symptoms, that, however, did not prevent her from engaging in steady work at a Government clerkship. On several occasions albumen appeared in the urine, without a trace of microscopical alteration. A physician diagnosed nephritis and prescribed a vegetable diet, upon which patient did not improve. On one occasion, while on this diet, I found considerable albumen, but nevertheless prescribed a meat diet. Two days later all trace of albumen had disappeared.

These discoveries in regard to vaso-motor irritation of the kidney suggest, by analogy, a vaso-motor explanation for the celebrated phenomenon, ovarian hyperæsthesia. It is certainly not at all impossible that the seat of this phenomenon, as of the extraordinary pelvic paræsthesias which may coincide with it, is in the cortex of the brain, at the final terminus of the centripetal fibres carried in the utero-ovarian nerve. But all of the fibres of the ovarian nerve whose termination has, so far, been traced pass to blood-vessels. These fibres must have vaso-motor functions, hence be centrifugal in direction, although there are, doubtless, others centripetal and endowed with functions of common sensibility. The facility of vaso-motor irritation in the ovary is obvious. May we assume, at least provisionally, that the vaso-motor nerves of the ovary are habitually controlled by those cortical areas in which the centripetal fibres of the utero-ovarian nerve terminate? Loss of inhibiting power in these areas would be felt as vaso-motor excitation at the point of peripheric origin of that nerve; that is, as spasm of the arterioles of the ovary. The result of such spasm is a diminution in the amount of normal blood sent to the ovary.

Ovarian hyperæsthesia by vaso-motor irritation.

Diminution of the arterial blood-supply causes dyspnœa of nerve-elements so exquisitely dependent upon oxygen; this, with or without consequent venous hyperæmia, must become a source of irritation to the ovarian nerve. This ovarian irritation has been rendered classical by Charcot, as a characteristic "stigma" of hysteria. It undoubtedly often exists in the absence of all appreciable lesion of the pelvic organs. But the pain and the diffused paræsthesias—the feelings of swelling, burning, etc.—do not differ in form from those which coincide with enlargement and prolapse of the ovary, with endometritis or displacement of the uterus. Such lesions, indeed, can only be excluded after a scrupulous local examination. As this was omitted in all of Richer's cases,[1] it is quite impossible to tell from the histories how far the symptoms were purely hysterical, how far the hysteria was symptomatic of utero-ovarian disease.

The third symptom to be considered in this connection is amenorrhœa. The discovery of the vascular wave in arteries, which has suggested so many fruitful considerations in regard to the arteries of the brain, may be applied to those of the uterus also. It is such a peristaltic wave that should propel blood through the uterus toward the endometrium during the menstrual hemorrhage. Vaso-motor irritation interfering with the regularity of this wave may determine cramps of the uterine muscle—hence dysmenorrhœa in the absence of uterine lesion—and is probably the *immediate* cause of such pain even when organic lesion exists, and is the ultimate cause of the vaso-motor irritation. In the highest degree of such irritation spasmodic closure of the arteries would arrest the flow and cause amenorrhœa. With an exaggeration of the peristaltic wave, which may be compared to the exaggerated peristalsis of the intestine which causes certain forms of nervous diarrhœa, there should be menorrhagia. Tait's ovarian menorrhagia is probably of this description, and the multiplication of follicles on the surface of the ovary observed after it has existed would be the consequence, and not the cause, of the hyperæmia These two opposite conditions—amenorrhœa and menorrhagia—are mentioned here because both are so extremely common in all grades of hysteria, and because both, by the theory of the vascular wave, are traceable to derangements in the vaso-motor apparatus of the utero-ovarian system. Either the entire series of vaso-motor centres, or, more especially, that located in the lumbar cord is at fault.

Amenorrhœa by vaso-motor irritation.

The over-excitability of such vaso-motor centres, which, on this theory, should exist in many cases of amenorrhœa, would be explained by Meynert's theory of loss of control over them when the activity of the brain-cortex was enfeebled. Thus would be explained the frequency of amenorrhœa in hysteria and in melancholia, where it is, indeed, the rule, and is associated with many other signs of vaso-motor disturbance. Kraft Ebing enumerates tendency to amenorrhœa among the signs of the neurotic constitution which constitutes the predisposition to insanity.[1]

Case XXVIII.—Girl, nineteen years of age. Subject to periods of amenorrhœa, lasting six months at a time. As soon as the amenorrhœa begun patient fell into a state of mild melancholia, which lasted until menstruation returned. During three years the menstruation, once arrested, did not return, except under the influence of a sea voyage, which after a while was regularly resorted to.

The melancholia was attributed by a distinguished gynecologist to the amenorrhœa. It is much more probable that the amenorrhœa resulted from negative vaso-motor excitation, due to loss of cortical control through hysterical cortical inhibition, the latter being the immediate cause of the psychic symptoms.

Case XXIX.—Girl, aged twenty-two, who until twenty only menstruated once or twice a year, and had been the subject of several hysterical disorders. The last was an hysterical arthralgia, which confined her to her room for an entire year. During this time, however, the patient was, apart from the arthralgia, perfectly well, free from headaches, and menstruated regularly. A few months after recovery from the arthralgia she received news while menstruating which caused a severe shock and moral distress. The flow was at once arrested, and the patient begun to suffer from rather severe pain in the left ovarian region. Two or three weeks later the uterus was found retroverted, the left ovary accessible and tender. The physician consulted replaced the uterus and applied ice over the ovarian region, with a view of lessening ovarian congestion and thus restoring the menstrual flow. The theory of the treatment was erroneous, and the treatment certainly unsuccessful, for the amenorrhœa persisted for a year, accompanied by almost entire inability to walk. Menstruation finally returned after a visit to Franzenbad. The ovarian hyperæsthesia and pain on walking persisted for three years longer, then the patient entirely recovered.

Recovery in such cases, as well as the previous occurrence of regular menstruation, proves that the amenorrhœa cannot be due to arypoplasia, or defective development of the aorta or pelvic arteries. In another place[2] I have endeavored to set forth a special view of menstruation, which claims that the blood lost in the menstrual hemorrhage is determined to the pelvis by the rhythmic growth of the great utero-ovarian plexuses in which it accumulates. This view is

Comparison with theory of menstruation.

[1] Psychiatrie, Bd. i

[2] American Journal of Obstetrics, 1886.

not, however, at all incompatible with such a function of the uterine arteries as has here been suggested in the discussion of their peristaltic wave. For, while the accumulation of blood in the peri-uterine veins is the necessary preliminary, as I have claimed, to its evacuation on the free surface of the uterus, a rise of tension in the uterine arteries has been shown to be necessary to initiate the flow through the rupture of endometrial capillaries (Leopold). A rise of arterial tension has been demonstrated to precede menstruation, first, I believe, by myself, but afterward by a pupil of Hegar's, Reine,[1] and by Fancourt Barnes, of England. In such an increase of tension, in which, nevertheless, normal rhythm was preserved, it is probable that a peristaltic vascular wave would be intensified, and blood aspired more abundantly to the uterine arterioles at the same moment that it had reached its maximum of accumulation in the peri-uterine veins.

I think the hysterical character of at least many cases of amenorrhœa is often overlooked. I have myself often mistaken it, until the prolonged observation of the patient has detected the successive evolution of many undoubted hysterical symptoms. It then becomes clear that the amenorrhœa is itself an hysterical neurosis. It is putting the cart before the horse to think that these symptoms are the *consequence* of the amenorrhœa. As well say that acute melancholia was such a consequence; and, indeed, gynecologists are not infrequently guilty of the latter absurdity. The pathogeny of the cases in question, moreover, is made very clear by the fact that hysterical symptoms may be discovered, if looked for, in the history preceding the amenorrhœa as well as in that following it.

It is not claimed here that the vaso-motor spasm which is suggested to explain the absence of the menstrual flow, and consequent arrest of other menstrual processes, is necessarily the only disorder at the basis of the amenorrhœa. There may be some direct influence of the nervous system upon the processes of reproductive growth at the endometrium, ovaries, and plexuses. But of such direct influence of the brain upon growth there is at present much less known than of its indirect influence through the induction of vaso-motor spasm, and the latter explains the phenomena. The numerous vaso-motor or sympathetic nerve disorders which accompany hysterical amenorrhœa, and which are absent in purely anæmic or cachectic amenorrhœa, are not consequent upon, but coincident with, the disordered uterine function. They are the common expression of the same fundamental cause.

Case XXX.—Unmarried woman, aged twenty-six. Began to suffer from dyspepsia, and simultaneously to exhibit profound depression of spirits and hypochondriacal preoccupation about her health. While at Salisbury's Health Establishment, following rigid diet for dyspepsia, menstruation ceased, and remained absent for two years. Persistence of dyspepsia, very severe for eighteen months, then relieved considerably by diet and stomach-washing. Then treatment by health-lift, and soon improvement in dyspepsia. In two months menstruation returned; coincidently dyspepsia disappeared, patient felt quite well, and able to eat ordinary diet. A month later symptoms of approaching menstruation occurred, but there was a delay of a day or two in flow. A single local application of galvanism (made to cavity of cervix) was followed on same day by flow. Previous to use of the health-lift, electrical applications had caused nausea without the slightest effect upon menstrual symptoms.

Case XXXI.—Well-developed young woman, aged twenty-five. No appearance of anæmia, but to hæmitametre blood-corpuscles always below four million; hæmoglobine, sixty per cent. Menstruation always irregular, often at intervals of six months, finally of an entire year. During seven years almost constant suffering from headaches of all description. For a year, ovarian hyperæsthesia, aggravated by walking. Numbness and inability to use arms. Often inability to use eyes in reading, etc., for several weeks at a time, though eyes quite free from organic defect. Inability for mental exertion; frequent attacks of mental depression. Finally return of menstruation—four times in eight months—under combined influence of change of scene and society and use of health lift. Coincidently headache, much relieved, began to disappear during long intervals; all other symptoms entirely disappeared.

Spasmodic tonus or contraction of the unstriped muscular fibre of the blood-vessels has its counterpart in the spasm of other unstriped muscular fibre, which is so common in hysterics. There is the spasm of the œsophagus (globus), of the intestine (cramps), of the uterus (dysmenorrhœa). There is, apart from spasm, the irregular and precipitate peristaltic contractions of the stomach, which result in vomiting; of the intestine, which result in the well-known nervous diarrhœa. It is generally accepted that both the tetanic spasm and the irregular clonic contractions of unstriped muscular fibre imply an excess of nerve-discharges through the sympathetic nerve, when this ceases to be sufficiently inhibited by the cerebro-spinal axis. The splanchnic habitually inhibits the intestine; its paralysis is followed both by exaggerated peristalsis and neuro-paralytic hyperæmia.[1]

vaso-motor spasms.

The facility with which diarrhœa follows, in certain persons, upon depressing emotions, indicates that the inhibition of cerebral activities suffices to remove this inhibitory influence of the splanchnic.[2] *Per contra*, it may be inferred that the splanchnic nerve habitually serves to convey inhibitory influences from the brain.

The constipation of hysterics, which is often so remarkably obstinate, could not, consistently with the theory advanced in this paper, be ascribed to an excess of cerebral inhibition such as causes the constipation of organic brain disease. It is more probably associated with deficient secretion on the intestinal mucosa, through deranged vaso-motor innervation. In severe hysteric attacks the stools, when procured, are apt to be singularly hard, dry, and black. Tetanic cramp, associated with flatulence, interferes with peristalsis.

Spasm of accommodation of the eye and spasmodic action of the muscles of the larynx are phenomena which seem to be intermediate between the disorders of other voluntary and of involuntary muscular fibre.

Hysteric aphonia certainly ranks among the hysteric paralyses, and is, in every respect, analogous to those of the limbs. If, as assumed by Delavan,[3] the cortical centre for the inferior laryngeal nerve be near the centres for articulation, it cannot be identified with them. Paralysis of the vocal cords only by exception accompanies aphasia;[4] and sounds, whose varying timbre would imply varying modulated contractions of the laryngeal muscles, can still be emitted when power of distinct articulation is lost. Conversely, in hysterical aphonia the power of articulation with the lips is preserved.

Variations in timbre of the voice are closely associated with the emotions. They vary, also, with the physical modifications of the reproductive organs, and with special mental emotions associated with these.[6] For all these reasons it seems probable that the cortical centre for the inferior laryngeal nerve is more closely connected than the articulating centre with areas for sensory impressions, and especially with the terminal areas for the centripetal fibres of the utero-ovarian nerve. Irritations transmitted in this nerve, or hyper-excitation of its cortical centre,

[1] See Volkman's Klinische Sammlung.

[1] Nothnagel: Studien über den Darm.

[2] Nothnagel (loc. cit.) co[illegible]ed only once a day. The fact that the typical [illegible] cortical inhibition is reduced to a minimum, the irritability of the intestinal nerves gradually rises until, upon the stimulus of the first meal, peristaltic [illegible] attain their m[illegible]

[3] On the Cort[illegible] Laryngeal Nerve.

[4] [illegible]

[6] Darwin points out that the prim[illegible]s for the [illegible]ration of the mates.

might, therefore, be expected to somewhat especially affect the cortical centre for the laryngeal nerve, altogether inhibiting it (hysterical aphonia), or partially so (causing irregular innervation of the laryngeal muscles).

Spasms of ocular accommodation in hysteria.

Spasm of accommodation of the eyes has attracted a great deal of attention lately as a cause of hysterical symptoms, and especially of headache. The neurosis of the motor oculi nerve, upon which such spasm depends, bears a threefold relation to hysteria.

1. It may be due to organic defect of the eye—uncorrected hypermetropia or myopia, astigmatism, etc.—and constitute the intermediate event between such defect and cerebral symptoms.

2. It may be due to a peripheric irritation, and then either coincide with cerebral symptoms simultaneously caused by this or be itself the immediate cause of them.

3. It may be directly caused by the cerebral conditions of hysteria, of which it is at once an expression and an aggravation.

The following case illustrates the second of these conditions:

CASE XXXII.—A girl of eighteen fell on the end of her back, and soon after developed coccyodynia. A year later, this still persisting, began to have intense spasm of the internal recti muscles, associated with visual hallucinations and mental excitability of undefined character. The coccyodynia was cured by galvanism, the spasms of accommodation treated by appropriate glasses; the hallucinations and mental disturbance then disappeared.

The numerous nuclei of the motor oculi nerve lie in the gray matter surrounding the aqueduct of Sylvius, and beneath the corpora quadrigemina. Through the medium of the latter they are connected with optic nerve-fibres; hence indirectly with the visual centre in the cuneus. The proximity of this to the terminal areas of the fibres in the sensitive fasciculus may render it peculiarly susceptible to centripetal irritations. Thus in Case XXXII. the irritation caused by the blow on the spine, and, later, the permanent irritation of Luschka's ganglion, must have been conveyed to this cortical region; thence to the visual centre, causing the visual disturbances; thence, probably,[1] to the third-nerve nuclei, with the effect of exaggerating nerve discharges to the internal recti muscles.

General consideration of hysteria.

From the foregoing considerations, hysteria appears as one of the most profound and far reaching of all constitutional diseases, or as one of the most serious accidents which can result from utero-ovarian disease or other form of irritation peripheric to the nerve-centres. It is allied to insanity, as being primarily a disease of the fore-brain; and, further, in many of its most peculiar (occasional) symptoms—as amenorrhœa, perversion of fundamental instinct—as that for food, the sexual, and the maternal instinct—in its sensory hallucinations, in the predominance of egotistic consciousness over external perception, in its purposeless excitability, depression of effective force, suspiciousness of others correlative with sense of personal inadequacy, etc. This relationship of hysteria to insanity is perfectly well recognized by alienists, but often overlooked by the general practitioners or specialists under whose eyes hysterical symptoms usually develop. It is also recognized that hysteria may accompany organic brain disease (Seguin), or epilepsy[2] (Gowers), or precede insanity; in such cases indicating the beginnings of cortical degeneration (Gowers). The relations of hysteria to the degeneration of stock are again indicated by its frequent family coincidence with tuberculosis.[3]

Profound as are the roots of hysteria, and although it be often as incurable as insanity accompanied by cortical wasting, though it be often as tenacious as life, or even occasionally fatal, it is, nevertheless, usually the lighter form of the neuroses and degenerations to which it is allied. It is, moreover, not infrequently symptomatic; that is, though the temperament may have pre-existed, the serious symptoms only date from some curable peripheric or moral irritation.

Is there any distinction between hysteria and neuræsthenia? A distinction is often made, based upon the sex and temper of the patient. If this be a female, and notably selfish, the case is pronounced hysteria. If a man, or though a woman, amiable and unselfish, the case is called neurasthenia.

Distinction between hysteria and neurasthenia.

It is difficult to see any reason for distinctions on this line; for, as already pointed out, notwithstanding the logical tendencies of the disease toward a most profound self-absorption, these tendencies are entirely resisted in a great many cases, simply because the mass, educated development, and wealth of organized associations in the fore-brain were such that it resisted sensory inhibition sufficiently to maintain, though at expense of much suffering, high moral and mental character.

I think the diagnosis of hysteria rests upon two circumstances: the presence, in the status or in the history of the patient, of psychic symptoms; or the presence of, at a distance from a focus of irritation, symptoms improperly called reflex, and only explicable by the intervention of a cortical arc, either a sensory motor arc, or one exclusively sensory. Hysterical aphonia or paraplegia illustrate the first; all "irradiated" pains illustrate the second.

Apart from these cases are others in which the symptoms remain entirely within the sphere of the medulla and spinal cord, which are lacking the distinctive fore-brain symptoms of hysteria, which are usually attended with circumstances of exhaustion of the general nutrition, or localized exhaustion of certain nerves, and for which the name neuræsthenia might more justly be reserved.[1]

Treatment of hysteria.

The cardinal point in the treatment of hysteria should be the constant reference to the cerebral nature of the disease. This recommendation has indeed long passed into common parlance, though based on the most approximate estimate of the cerebral influence. That mental impressions and mental shocks were capable of dissipating entire trains of hysterical symptoms has often been pointed out. The inference has too often been drawn that the symptoms were "imaginary" and within the control of the patient, while the fact that the imagination, the consciousness, the very citadel of personal existence, has been invaded by a morbid process cannot fail to threaten paralysis of volition and self-control.

Prophylaxis.

It is in the prophylaxis of hysteria that the widest use may be made of moral impressions, and the most systematic effort made to organize these into the brain as an effective dike against threatened inhibitions. Early in life the ego must be, by habit, "decentralized," until impressions external to the body become as distinct a part of consciousness as those generated within it. Not less important is the cultivated habit of centrifugal impulses to balance the excess of sensibility. Otherwise, though removed from the tyranny of the physical sphere, the organism remains too predominantly under the influence of secondary sensory impressions associated with the motions. When hysteria develops, it implies that the mechanisms associated with the inmost individuality have succumbed to the accidents and calamities of life. The prophylaxis demands the construction of a personality so robust, the accumulation of resources so wealthy, that every misfortune may be resisted until the moment of real death.

Social influences.

In this connection the words of so distinguished a neurologist as Eulenberg carry all the more weight, because dwelling on facts whose significance seems to be so little recognized among his own countrymen. "The predominance of hysteria among women," he says, "depends, ultimately, far more upon the social

[illegible]

[1] At the [illegible] Beard's neurasthenia certainly included hysteria.

[illegible]

Epilepsy, p. 175.

[illegible] Pract., 1884. I have frequently had [illegible] of hysteria in phthisical families.

conditions to which they are subjected, than upon uterine catarrhs and erosions. These conditions combine to arrest energy of will and independence of thought in women; to suppress impartial comparison of their own individuality with external objects; to restrain or suspiciously supervise all impulses to free action; and especially to obstruct and oppose any attempt at emancipation from the limits of a narrow and trivial existence. To these circumstances are due precisely the most severe, extended, and incurable cases of hysteria."[1]

(To be continued.)

Clinical Department.

SPONTANEOUS RELIEF OF AN INCARCERATED UMBILICAL HERNIA.

Dr. H. L. Ellis, of Brooklyn, reports the case of a married woman, forty years old, who had an irreducible umbilical hernia, following upon a difficult labor ten years ago. One morning in April last, after having danced all night, wearing a tight corset, she fell to the floor in a faint. She was treated in the usual way, but the corset was not removed until the afternoon of that day. She then began to vomit violently, and was soon seized with sharp, colicky pains in the region of the umbilicus. She took successively Jamaica ginger, Epsom salts, and Brandreth's pills, but these only served to increase the pain and cause renewed vomiting, the character of which soon became decidedly stercoraceous. At the end of five days, during which every attempt to take nourishment was followed by vomiting, Dr. Ellis was called in, and found the hernia the size of a goose-egg, cold and hard, and irreducible. Believing from the apathetic condition of the woman that it was too late to operate, he inserted a long rectal pipe, and cleared out the lower bowel as thoroughly as possible. He ordered a discontinuance of all attempts to give food, allowing only a little ice, and quieted the vomiting by small injections of morphine night and morning. Under this course the patient went on without apparent change for about a week, at the end of which time the contents of the incarcerated intestine began to move, and gradually passed back into the abdomen, the bowels soon moving profusely. Dr. Ellis believes that the incarcerated fecal matter became liquefied by watery secretion, excited within the gut by the irritation to which it had been subjected, and was then washed away.

BALSAM OF COPAIBA IN GONORRHŒAL OPHTHALMIA.

Dr. S. Haynes, of Saranac, N. Y., writes that he was called to see an infant, four days old, who was suffering from conjunctivitis, contracted from the mother, who had gonorrhœa at the time. The inflammation had existed two days, and the cornea was found covered with thick pus, and the eyelids were so swollen that they could be separated with difficulty even when the child was under the influence of chloroform. For several days the remedies used seemed only to hold the disease in check, and the infant meanwhile was rapidly losing flesh. Severe stomatitis was also developed. Applications were now made of balsam of copaiba to the temples, the external surface of the lids, and above the eyebrows, three times a day, a little being occasionally inserted between the lids. The pus was carefully removed every hour by pledgets of cotton, wet with solutions of alum or sulphate of zinc, and fresh butter was applied to the edges of the lids every night. From the commencement of the use of the balsam a marked improvement was noticed, and in three or four weeks the cornea was perfectly clear and free from disease, and the child had gained in flesh. The case had everything against it, as the parents lived six miles away and could be visited only occasionally, the mother was confined to bed for a great part of the time, and the family were ignorant and suffered from the want of many of the necessaries of life. Dr. Haynes states that the use of the balsam of copaiba was suggested by an article which he read some time ago, but he has forgotten both the name of the writer and the medical journal in which the article appeared.

NERVOUS SYMPTOMS FOLLOWING THE USE OF ATROPINE IN EYE DISEASE.

Dr. S. Haynes, of Saranac, N. Y., referring to a case of mania occurring after a cataract operation, reported by Dr. Letcher at the meeting of the Kentucky State Medical Society, relates a case seemingly strengthening the idea that the mania might have been caused by atropine. The patient had suffered from a cataract due to traumatism, and had undergone an operation in Montreal, but without any improvement in the vision. The surgeon had given him some "eye drops," but their use had caused so much local irritation, nervous excitement, and insomnia, that he was compelled to discontinue them. Upon the advice of the surgeon he resumed the drops some time later, but was again obliged to stop on account of the reappearance of the nervous symptoms. Soon after this the patient visited Dr. Haynes, who found total loss of vision in the injured eye, and well-marked symptoms of sympathetic ophthalmitis in the other eye. He advised enucleation, and ordered a solution of atropine for use until such time as enucleation could be performed. The patient reported that this produced the same unpleasant effects as the former application ordered for him by the Montreal surgeon.

ENUCLEATION FOR THE CURE OF SYMPATHETIC OPHTHALMITIS.

Dr. S. Haynes, of Saranac, N. Y., relates the case of a man who had lost the sight of one eye from a traumatism, and was suffering from sympathetic inflammation of the other eye. He advised enucleation, but a surgeon in Montreal, to whom the man applied, counselled against the operation, saying that the injured eye might prove to be the best in the end. In support of the advice then given, Dr. Haynes relates the following case in which he performed enucleation with good results:

"In March, 1876, while Mr. Rell was chopping, a chip flew up and struck him on the eyeball, cutting through the cornea. Severe inflammation set in in the injured eye, and in a short time the other became diseased also. I first saw Mr. Rell in the following July, and advised prompt removal of the injured eye as the only means of saving the other, which was suffering from reflex ophthalmitis. No encouragement from any other treatment was held out. Mr. Rell could not decide on having the eye removed, and insisted on medical treatment first, which was reluctantly given for a month, with no improvement, but constant deterioration of vision, so that it was impossible for him to recognize his nearest friend by the sense of sight. On August 1st his friend called to learn what could be done for Mr. Rell's relief. The opinion given was that nothing short of enucleation of the exciting eye would be of any use, and that at the present advanced stage of the disease it was exceedingly doubtful if this or any other treatment would improve the sight of the sympathizing eye. However, it was our duty to give him this chance. Mr. Rell consented to the operation, which was performed by the writer, assisted by his son, Irving S. Haynes, and nephew, Dr. C. S. Haynes, on August 6, 1876. The operation was a success. The remaining eye began to mend at once, and continued to improve under alterative and tonic treatment, so that in about twelve months Mr. Rell resumed his accustomed occupation, a well man, and with perfectly restored eye-

[1] Next communication.

sight, and he has been able to keep at hard labor to the present time. Other instances could be cited going to prove the propriety or necessity of resorting to an operation in similar cases of reflex ophthalmitis, but it is not necessary to introduce them here."

A NEW PRINCIPLE IN THE TREATMENT OF PARASITIC SKIN DISEASE.

Dr. Alfred W. Perry, of San Francisco, Cal., writes: "The disappointments and delays with which I have met in treating and curing even small areas of tinea circinata, sycosis, and tinea tonsurans have led me to investigate the cause, and I believe that I have discovered not a new remedy, but the true principle of the application of old remedies. The parasiticides are all active enough to kill the parasite when brought in contact. The cause of failure is in the vehicle used. The various remedies are used in alcoholic, watery, benzine, benzol, or oleic-acid solutions, or else mixed in fine powder in ointments. The parasite exists deep in the skin, in the hair or other follicles, or between the epithelial scales. The skin is so charged with the natural fatty sebaceous secretion that it repels watery and alcoholic solutions; these cannot penetrate a follicle filled with fat. The oleic-acid solutions and ointments are not repelled, but they only penetrate the skin after much rubbing and kneading, with simultaneous epilation. A vehicle must be used which will dissolve the sebaceous matter of the skin, and also the remedy. Ether dissolves bichloride of mercury and iodine. Iodine is soluble in turpentine and benzine. I prefer the bichloride of mercury in ether, two grains to one ounce. Iodine oxidizes quickly in turpentine and slowly in benzine, while the bichloride always remains active.

"Any of these solutions, holding a parasiticide in solution, when applied to the skin, will wet or adhere to the skin perfectly, will penetrate between the epidermic epithelial scales, and into the hair and sebaceous follicles, carrying the parasiticide and dissolving the fatty secretion.

"Theory has led me to this line of treatment, of which practice has shown me the great benefit. To apply the bichloride solution in ether, use a small brush over the affected surface, two or three consecutive days, then wait for the slight irritation to subside, applying any bland ointment. There are many remedies which dissolve in the fat solvents—naphthaline, thymol, carbolic acid, chloral, salicylic acid—and these may be suited to individual cases or circumstances."

LOCAL ANÆSTHESIA FOR ELECTROLYSIS.

Dr. Franklin H. Martin, Professor of Gynecology in Chicago Polyclinic, writes: "Where it is necessary to use a very strong current of electricity for purposes of electrolysis, or any other purpose, and a reliable means of measuring the current, other than by the sensations of the patient, is at hand, it is very desirable, oftentimes, to have some means of producing anæsthesia. Especially is this the case with women who have been brought to an anæmic and nervous condition from menorrhagia coincident with a fibroid growth of the uterus. In these cases where electro-puncture is used as a means of removing the growth, or, even where the somewhat milder electrolitic current is employed for the purpose of causing absorption of inflammatory exudates, there is a very disagreeable burning sensation experienced at the positive sponge electrode. By utilizing the properties of the galvanic current, discovered by Haertner, viz., the direct transference by the galvanic current of particles in solution through permeable bodies in a direction from the positive to the negative pole of the battery (the *cataphoric* action of Du Bois-Raymond), a very satisfactory condition of local anæsthesia can be accomplished. The method adopted is as follows: Before applying the positive sponge electrode to the surface, moisten the sponge with a one-fourth of one per cent. solution of muriate of cocaine. As the current is turned on, it will be found that the absorption of sufficient amount of the cocaine is immediately promoted to produce a complete state of anæsthesia of the surface beneath the electrode. This, of course, does not affect the point of application of the negative pole—the point of introduction of the needle. Cocaine can still further be utilized here by injecting hypodermatically a small quantity of the aqueous solution at the point of introduction of the needle through the skin, or by applying a solution of the oleate upon the mucous membrane of the vagina or uterus, if the needle is introduced in this location. By bearing these simple facts in mind, electrolysis for fibroid tumor can be made familiar without the necessity of administering a general anæsthetic."

A CASE OF SACCULATED ANEURISM OF THE THORACIC AORTA.

Dr. J. A. Hobson, of Flushing, O., writes: "The patient, Mrs. S——, aged forty, American, married, mother of two children, the youngest ten years of age, has been in feeble health for the last year, but stated that she had been able to work most of the time. Her family history is good; she has never had syphilis or other venereal disease. Applied for treatment August 15, 1886. Complained of pain in her chest and back, and of difficult and painful deglutition; the pain was severe and constant, situated at the junction of the left third costal cartilage with the sternum. She said she felt as if there were a lump in her throat, referring this sensation to the episternal notch. A careful physical examination of the chest at this time failed to elicit anything of importance, except that the heart-sounds were indistinctly heard. She had slight cough with very little expectoration. She was a spare, pale woman, and looked over-worked. The bowels were constipated; respiration, temperature, and pulse were normal, except that the pulse was weak. Prescribed liquid diet, rest, and a laxative to open the bowels. I saw her again on the 21st, the patient having walked to the office, a distance of one mile. She said that she felt a little better, but had the difficulty in her throat yet. She still complained of pain in the chest and back. I then examined the throat with laryngoscope, but found larynx and trachea healthy as far as seen. The patient was directed to return home and continue diet and rest. On the 24th, in the evening, she was suddenly taken with cough, urgent dyspnœa and expectoration of blood; the difficulty of breathing was extreme, and continued with intervals of comparative comfort until 11 A.M. of the 25th, when she suddenly expectorated a large coagulum, moulded to the shape of the trachea, and containing shreds of membranous character: this was followed by very great relief. During the intervals between the attacks of dyspnœa the chest was examined carefully by the stethoscope, but no bruit could be heard; the respiratory sounds, however, were peculiar. The normal vesicular murmur was obscured by a loud, harsh, tracheal râle, that could be heard over all parts of both lungs. The pulse was weak and rapid, but the same in both wrists; the pupils were normal. The muscles of the throat were unaffected, as far as could be observed. She continued to be quite comfortable, conversing with her family and friends for several hours. About 8 P.M. of the same day she began to cough, expectorated a small amount of pure blood, and suddenly expired. There was no vomiting of blood at any time during her illness. The dyspnœa was so extreme before she threw up the coagulum that serious thoughts of tracheotomy were entertained; but the uncertainty as to the real condition deterred me from attempting the operation. While a positive diagnosis of aneurism could not be made, the friends were informed of the probable nature of the case and an unfavorable prog-

nosis was given. Tincture of hyoscyamus and bromide of potassium gave some relief to the difficult breathing.

"The autopsy was made eighteen hours after death, in the presence of Dr. J. G. Howell and others. On opening the thorax the lungs were found to be distended with air, completely overlapping the heart. They were free from disease. The pleural cavities were healthy, except for slight adhesions at the base of the left cavity.

"The heart was small and flabby, its surface covered with a moderate amount of adipose tissue which did not extend into the heart-muscle proper. Its valves were free from disease. The ascending and transverse portions of the aorta were slightly dilated, the walls thinner than normal, but free from atheromatous change.

"At the termination of the transverse portion of the arch, and about three-fourths of an inch from the origin of the left subclavian on the posterior wall, was the opening to a large false aneurism. The opening was circular, and readily admitted the point of the index-finger; the tumor lay upon the body of the second dorsal vertebra, of which it had destroyed the periosteum and eaten away a part of its substance. The tumor was about the size of an orange, and what appeared to be a projection from the main sack had destroyed the lateral wall of the œsophagus, making a circular opening about half an inch in diameter.

"The trachea and œsophagus and the walls of the tumor were united by firm adhesions, through which a small channel had been dissected forward to the posterior surface of the trachea, producing in its walls an erosion, perhaps one-fourth inch in diameter. Through the centre of this was a small, jagged opening, containing a small portion or shred of the aneurismal sac; the opening was just above the origin of the left bronchus. The sac was lined with a quantity of well-organized coagula, except at the point corresponding to the body of the vertebra and at the opening into the œsophagus. The trachea and bronchi were full of clots, and the stomach was distended with blood; no blood was found in the œsophagus. There was also a small false aneurism on the anterior aspect of the arch, at a point nearly opposite to the opening to the large sac, into which the terminal phalanx of the index-finger could be passed. The left vagus entered the mass of adhesions, and could be traced beyond apparently uninjured; the left recurrent was not found to be involved.

"The cavities of the heart and of the large vessels were empty. The openings into the trachea and œsophagus must have been simultaneous, and had evidently occurred at the moment of death. The expectorated blood, of course, came from the erosion in the tracheal wall."

TREATMENT OF PSOAS ABSCESS BY ASPIRATION.

Dr. John H. Bradshaw, of Orange, N. J., sends the following communication: "Mr. Edmund Owen, in his address on the above subject before the British Medical Association (reported in The Record of September 4th), tells us that aspiration of a psoas abscess is useless. One year ago a stout Irishman came to my office with a fusiform, fluctuating swelling in the right groin. He gave a history of a severe fall upon his sacrum some months previously. From that time till the night I saw him he had complained of much pain in right hip, and had been treated for sciatica. The hypodermatic needle revealed the fact that the tumor contained pus. I at once removed thirty ounces of pus by aspiration, and in one week repeated the operation, the second time obtaining two ounces less and emptying the sac completely. One month after this, the patient complaining of pain in back and difficult locomotion, I sent him to Dr. V. P. Gibney, who said he found the patient suffering from lumbo-sacral Pott's disease, and that there was no abscess or any pus remaining. From that time to this—a period of thirteen months—there has been no return of signs of abscess, and the man, weighing one hundred and seventy pounds, is following his occupation of gardener. There is little doubt that this case was one of psoas abscess, arising from the injury to the spine. I report it because of the frequent statements that aspiration of such abscesses do no good. Granted that a cure of psoas abscess by aspiration is rare, yet if they do occasionally obtain, is it altogether time thrown away if we first try this simple and comparatively harmless procedure before opening a large suppurating cavity and exposing it to the action of the air? I should certainly first try aspiration myself, although I knew that the chances of its resulting in a cure were slight."

DISLOCATION OF THE STERNAL END OF THE CLAVICLE WITHOUT RUPTURE OF THE COSTO-CLAVICULAR LIGAMENT.

Dr. E. C. Carter, Assistant Surgeon United States Army, of the Columbus Barracks, O., reports the following case: "While wrestling, a stout negro man, aged twenty-three, was thrown in such a manner as to strike the front aspect of his right shoulder against a stone. The sternal end of the right clavicle was dislocated forward and downward. The costo-clavicular ligament appeared to be unbroken. An attendant was directed to make strong traction on the extended right arm, and the right shoulder was pushed forward at the same time. The sternal end of the clavicle revolved around the attachment of the costo-clavicular ligament as a centre, and slipped easily into place. It was necessary to keep the patient in bed, with his right shoulder somewhat elevated, in order to prevent renewed dislocation—bandages and pressure were inefficient."

SWALLOWING A CENT.

Dr. L. E. Borcheim, of Atlanta, Ga., writes: "Remarking a case of copper-coin swallowing, reported by Dr. J. L. Gardner in a recent issue of The Medical Record, I can answer his question by reporting a similar case occurring in my practice. The three-year-old child of V. W—— swallowed a two-cent piece; it lodged in the œsophagus, and in the efforts made to dislodge it the coin was pushed into the stomach. I was consulted, examined the child, and found no objective symptoms whatever. I thereupon advised feeding the child as usual, ordered that absolutely no cathartics should be given, and counselled the parents to wait, assuring them that the coin would do no harm if left alone. My advice not being sufficiently active, the parents dosed the child with castor-oil *ad nauseam*, but no results following they finally concluded to do as I bade them, and at last, after three months, the coin was passed per anum. I examined its surfaces carefully with a strong hand-lens, but found absolutely no corrosive action to have taken place. The child was perfectly well throughout."

WHAT IS IT?

Under the above heading a correspondent, M. C., sends us the report of the case of "a gentleman, forty years of age, who, for the last six years, has practically been disabled from walking by a sensation of 'throbbing' accompanied by a peculiar and intense feeling of weakness in both insteps—greatly aggravated by exercise, and virtually prohibiting locomotion. No swelling or change of external appearance has ever been noticed. The condition of hyperæsthesia or tenderness exists over a surface of about one inch and a half by one inch. When touched, the feeling is of a dull blow, but not that of injury to a nerve. Burning sensations were formerly much

noticed, but never in both feet the same day. It hurts to go more than one step at a time in descending stairs. For the first three years the suffering was extreme and intensely annoying, constantly attracting his attention, although never interfering with sleep. During the last three years a gradual improvement has been taking place. The original cause is believed to have been a few days' wearing of tight boots."

A CASE OF IMAGINARY HYDROPHOBIA.

Dr. J. Mount Bleyer, of New York City, reports the following case: Miss P——, aged fifteen years, a well-developed and intelligent girl, was bitten through the nasal septum, on the evening of March 4th, by a pet terrier dog. At one o'clock on the morning of March 7th Dr. Bleyer was called, and found the patient lying in bed, feeling chilly, suffering from malaise, and with embarrassed respiration. The wound was congested, and there were painful sensations in the neighborhood of the bite. Suddenly spasms of the muscles of the neck, pharynx, and œsophagus occurred, and other psychical disorders made their appearance. The patient was ordered to take ten grains of chloral hydrate and twenty grains of potassium bromide every hour, and to inhale a fifty-per-cent. solution of the latter through a steam atomizer; general electrization was also practised. By these means the patient was made to sleep for about one hour and a half. The dog was examined and was found to be in perfect health. In about six hours new symptoms made their appearance. There were pains radiating from the wound, and difficulty in deglutition. Then the muscles of the jaw were seized with a tonic spasm, which afterward extended to the temporal muscles, changing from one side to the other, and the limbs became extended. During these spasms the features assumed an expression of pain, there was a frown upon the face, the gaze was fixed, and the lips were drawn apart, exposing the teeth. The tongue was bitten several times, and later some opisthotonus was observed. Even in the intervals of the spasms the hyperæsthesia was so extreme that the slightest touch, a movement of the bed, or even ordinary tones of the voice, caused fresh convulsions. This stage continued for twenty hours without any improvement in the condition of the patient. The amount of bromide and chloral was doubled and given by enema, as the patient could not swallow. She could not sleep by reason of the frequency of the paroxysms. The respirations were difficult, and from 14 to 18 per minute during the convulsions, but normal in the intervals. The pulse was frequent, 90 to 120, and often intermittent. The voice was hoarse, the mouth dry, and the tongue coated. The temperature was 100° F., the face and eyes were injected, and the pupils dilated. During the paroxysms the patient acted with insane violence toward everyone about her. In these fits she would use every available weapon to injure those about her, and would even snap the jaws, imitating the action and motions of a dog; but when the spasm was over she expressed regret, and warned those about her to be on their guard when the next paroxysm should come on. She had a feeling of abhorrence for water, and this increased to such a degree that a convulsion was excited by contact, by sight, or even by the sound of water poured from a pitcher into a glass. She became so violent on hearing the dog bark that it became necessary to remove the animal from the house. Inquiry elicited the facts that there was a marked hereditary tendency to nervous affections; that the child had read all the newspaper accounts of hydrophobia, and knew all the symptoms as given in these reports, and had also been much interested in the controversy concerning the efficacy of Pasteur's preventive inoculations. The diagnosis was made of lyssaphobia, or hysterical hydrophobia. Many remedies were tried without success, and the only thing that controlled the spasms at all was extract of opium, in grain doses every hour, and this was effective only so long as the patient was kept profoundly under the influence of the drug. Finally, Dr. Bleyer determined to try the effect of psychical impressions. He ordered a pill to be made, and as he entered the patient's room it was handed to him. He gave it to the patient, asking her to take it, and she did so, swallowing it at once. In fifteen minutes he entered the room again, and told the patient that the pill she had taken was a very strong one, and that if she had another convulsive attack it would kill her, but otherwise it would effect a perfect cure. From that moment the patient never had another paroxysm.

A SINGULAR CASE OF ROUND WORM.

Dr. H. E. Merkel, Assistant Surgeon to the State Hospital for Injured Persons, at Ashland, Pa., writes that a man, aged twenty-one, applied there for admission, saying that he had strained himself by lifting a heavy piece of timber in the mines. On examination, the muscles just above Poupart's ligament were found very hard and considerably swollen. A blister was applied to the right side of the abdomen, and one-fourth grain of calomel was given every two hours. The blister had but little effect on the swelling. As soon as the skin was in proper condition another blister was applied, but with no better results. Applications of iodine ointment were then made, and continued for four weeks, there being still no noticeable change. Blisters were again used, but with no better result; in fact, the swelling and pain on both sides of the linea alba increased. The patient's temperature had been normal, until one evening, about seven weeks after admission, he was seized with a chill, and the temperature rose to 103° F.

Dr. J. C. Biddle, the surgeon-in-chief, on making his round the next morning, carefully examined the swelling with the exploring needle, and found that it contained pus. He made an incision, and removed about four fluid ounces of healthy pus. The cavity was then washed out with a solution of the bichloride of mercury, and poulticed. Twelve days later pus was discovered in the left side, the abscess was opened, and with about two fluid ounces of pus a lumbricoid worm nine inches in length appeared. The patient claimed that he had never been sick, nor did he suffer any pain, prior to the time he lifted the timber, and up to the time of the occurrence of the chill he had had very little pain, and that was of a dull kind, showing clearly that there could have been no perforation of the intestines, nor peritonitis.

Dr. Merkel offers the following theory in explanation of the appearance of the worm in this unusual locality: "The patient at some time must have had a rectal fistula below the mesorectum, and the worm passed through the fistula, and then worked its way up between the fascia and muscles, and was there lodged. My reasons for stating this case so fully are to show how easily one can be misled by a patient's story. This hospital is for the care of injured persons only, and, of course, had this man not attributed his trouble to an injury, he could not have been admitted. Having never seen or heard of a like case, I think I can justly claim the honor of reporting the first of its kind."

A New Journal in Cuba.—We have received the first number of the *Revista Enciclopedica de Ciencias Médicas, Fisicas y Naturales*, published in Havana. Although devoted chiefly to medicine, the review will contain articles on other scientific subjects, such as natural history, anthropology, agriculture, etc. The number before us contains several interesting articles, for the most part original, on various subjects, and if the future issues sustain the promise of the first we can prophesy a long and useful life for the *Revista*. The editor-in-chief is Dr. Carlos de la Torre y Huerta, and the New York correspondent is Dr. R. L. Miranda.

Progress of Medical Science.

Traumatic Tetanus without External Wound.—Dr. Acoulz relates in *Syphilis*, No. 4, 1886, the case of a healthy trooper who, having received a blow in the hepatic region, instantly fell insensible and remained so for two hours, by the end of which time trismus suddenly appeared. A venesection was performed, and leeches were applied to the hepatic region. Both of these means, however, failed to rouse the patient. He came round only after a hypodermic injection of five centigrammes of hydrochlorate of morphia. The further treatment was expectant. The man improved from day to day, and after a ten days' stay left the hospital quite well.

Prevention of Miscarriage.—Dr. W. J. Strother reports the case of a married woman, thirty years old, who had had six or seven miscarriages, these generally occurring from the third to the fifth month. Hemorrhage would begin about the second month, and recur every four days until the fœtus was expelled. At the last miscarriage Dr. Strother was in attendance, and remembering having read of a case of abortion reported as being due to fatty degeneration of the placenta, in which tincture of chloride of iron and chlorate of potassium were employed with success in the succeeding pregnancy, he examined the placenta and found it almost one mass of fat. At the beginning of the patient's next pregnancy, therefore, he ordered a mixture of tinct. chloride of iron, ℥ iij., and chlorate of potassium, ℥ iij., in water, ℥ vj., of which a teaspoonful was given three times a day. She took this regularly almost every day until she was delivered, at full term, of a healthy male child. About the third month she had a slight "show," but the hemorrhage never returned. *Gaillard's Medical Journal.*

The Kidney in Diabetes.—In a memoir lately published ("Le Rein dans ses Rapports avec le Diabète") Dr. P. S. Inglessis gives the results of his investigations upon the renal changes that accompany diabetes mellitus—changes which he avers are more frequent than is commonly admitted. The most constant is hypertrophy of the kidney, a condition doubtless related to the polyuria that is mostly the chief indication of the functional derangement of the organ. This hypertrophy is, according to the writer, characterized not only by obvious enlargement of the kidney, but histologically by a notable increase of the cells of the convoluted tubules. While renal hypertrophy characterizes the earlier stages of the disease, renal inflammation is more common in the advanced period. Parenchymatous nephritis is the usual type, but it is difficult often to eliminate all other causes besides diabetes in many cases. In some, however, there is no question of the direct relation between the two affections.—*The Lancet*, August 28, 1886.

Treatment of Syphilis by Intramuscular Injections of Mercury.—In a recent lecture Mr. J. Astley Bloxam stated that over fifteen hundred patients had been treated by this method, at the Lock Hospital and elsewhere, during the past eighteen months, with the best results (*The Lancet*, August 21, 1886). The solution for injection contains six grains of the bichloride to the ounce of distilled water, and of this twenty drops constitute a dose. The sore generally begins to heal very promptly after one or two injections, the secondary symptoms are markedly modified, and after a course of treatment extending over a year, more or less, the patient is enabled to discontinue his attendance. Toward the latter end of the course of treatment the injections may be given less frequently, and, as a general rule, not more than from eight to twelve grains of the perchloride are injected in all. It is undesirable to repeat the injections oftener than once a week, as otherwise salivation might be induced, and the quantity injected each time (one-third of a grain) is found to be quite sufficient until the next time. There are several advantages attending this method of exhibiting mercury. In the first instance, it is only necessary to see the patient once a week, when sufficient mercury is injected to last until the following week; secondly, salivation is not produced, as was apt to happen when the patient continued to take mercury for a whole week away from the supervision of his medical attendant; thirdly, the gastric derangements which are so apt to follow the administration of mercury by the mouth are by this means avoided; lastly, the ease and certainty of the administration, which enable the surgeon to do his own dispensing with a minimum of trouble. A little quinine is generally given during the course as a tonic, but no other form of mercury is administered. The injections are made preferably deep into the muscular mass of the glutei; the pain following is slight and soon passes away, and there is no danger of an abscess. It is desirable that the patient should not take active exercise immediately after the injection, as it has been noticed that blood may be effused at the point of injection, giving rise to the sensation of a severe bruise of the part, which lasts for a few days. The same effect has followed the puncture of a large vessel, but in any case the result is only transient, and disappears after the lapse of a few days.

A Case of Voluntary Starvation.—Dr. A. Voelkel, in the *Deutsche Medicinische Wochenschrift*, No. 31, 1886, reports the case of an old toper, of a very obstinate disposition, to whom the landlords finally refused to supply any more liquor. The man said then that he would live no longer, went to bed, and refused to take any food. He lived for twenty-four days, taking nothing but a little water and brandy. He died in a deep stupor, without convulsions. At the autopsy the body was found not to be greatly emaciated, a considerable layer of fat still remaining on the chest and abdomen. The stomach and intestines were filled with gas, but the intestines were otherwise entirely empty, and the stomach contained only about three ounces of a brownish fluid, the walls of both stomach and intestines being very thin and pale. The kidneys were normal, but rather soft; the bladder was empty. The spleen was very small, the liver fatty, and the gall-bladder was filled with about an ounce of thick brown bile. The heart was small, fatty degenerated, and empty; the lungs contained air, but were dry on section. All the organs were very anæmic.

Conservative Surgery of the Finger.—Mr. Charles Tanner reports the following case, illustrating the value of conservatism in the surgical treatment of injuries of the fingers, in the *British Medical Journal* of August 7, 1886. A domestic servant while chopping meat had nearly amputated her left forefinger. The bone was completely severed, and both digital arteries were divided; the only parts uninjured were the skin and subcutaneous tissues, and the flexor tendons on the palmar aspect of the finger. The wound was carefully cleansed with carbolic-acid lotion (1–20). Both digital arteries were ligatured, and the edges united with deep silver-wire sutures. Iodoform was dusted on, a piece of protective placed round the wound, the finger enveloped in salicylic wool, and the arm placed on a pistol splint. The sutures were removed in a fortnight; the wound, with the exception of a granulating surface on the cased side of the finger, had healed by first intention. Within a short time after the removal of the dressing the patient could move this finger almost as well as the others.

An Old Woman.—A woman, named Mrs. Dietrich, recently died at the good old age of one hundred and twenty-six years in Savoy. She was born in Basle in 1760, was married for the first time in 1783, and for the third and last time in 1798. Up to the age of one hundred and nine years she could see perfectly well and was in the possession of all her faculties, but during the last years of her life was in a semi-stupor most of the time.

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HOT WATER AS A HÆMOSTATIC.

THE August and September numbers of the *Edinburgh Medical Journal* contain a most interesting article, by Dr. R. Milne Murray, on the effect of hot water when applied to the unstriped muscular fibre of the uterus, particularly with reference to checking hemorrhage. Dr. Murray combats the well-known view of Emmet on this subject. This view is essentially this, that while the primary effect of hot water is to cause a relaxation of tissues, this is speedily followed by a reaction, that is, a tissue-contraction. This conclusion Dr. Murray characterizes as an attempt to "square a preconceived idea with an observed fact."

The paper alluded to is a recital of a series of experiments regarding the effect of thermal stimuli on the uterine fibre and unstriped muscles generally. Water was the medium generally used. Three different gradations were employed—cold (32°–60° F.), intermediate (60°–100° F.), and hot (100°–120° F.).

The animals experimented on were rabbits, both pregnant and non-pregnant. The mode of procedure was as follows: A median abdominal section was made just above the symphysis. The vaginal tube or uterine cornu was drawn out through the incision, and adjusted to a clamp at the vaginal end firm enough to prevent slipping but not so tight as to damage the tissues. A similar arrangement was made of the vaginal tube, except that the latter was so arranged as to allow the vessels to lie in the spaces between (not directly under) the clamps. In the end of the tissue was inserted a fine steel hook, connected with a silk thread running under a pulley, and attached to a lever which moved in a vertical plane on a revolving drum.

The contraction of the muscular tissue consequently caused the lever to move in an up-and-down direction on the drum.

"When the vagina or uterine horn of the rabbit is arranged as described, evidence is invariably afforded of the existence of regular contractions of the muscular wall, resulting in a rhythmic shortening of the tube. It will be found that the lever describes a series of up-and-down movements, representing regular contractions and relaxations of the portion of muscular tissue under observation. The rate at which this movement occurs is somewhat variable in different animals." The nature of the movement is distinctly peristaltic. In the uterine horn they are less ample than in the vagina, but occur at the same rate. They can be abolished by deep chloroform narcosis, but not readily by ether.

In the adult rabbit they will go an hour after—a contraction occurring about every two minutes. They can be traced by the gradual travelling over the muscular tissue of an "anæmic segment," that is, the seat of maximum contraction at any given instant, when and where the vessels are, of course, constricted, causing a temporary anæmia. The movements are not notably affected by temperature, are different from those produced by thermal and other stimuli, and are the same after the return of the uterine cornu to the abdomen.

Dr. Murray thinks that "the whole uterine apparatus of rabbits, and presumably of other animals, is the seat of regular rhythmic contractions independent altogether of pregnancy." In the case of a pregnant woman (primipara) the experiment was made of placing in the vagina a Barnes bag containing, but not distended with, water. The tube was connected with a water manometer, and the latter gave evidence of distinctly rhythmical variations of pressure.

In the experiments on rabbits each tracing on the drum showed, first, a period of contraction; second, one of quick relaxation; and third, one of slow relaxation. Water at varying temperatures was allowed to drop on the muscle under experiment in the following manner: A glass pipette containing 5 c.c. was immersed in water of the temperature to be used. It was then filled, held in the clamp over the muscle, and at a given signal allowed to discharge its contents on the latter. It is evident that any variation in the contraction would be registered in the tracing on the drum. The time of application was just at the close of a natural contraction, so as to eliminate as far as possible the natural rhythm.

In the application of water at various temperatures it was necessary to note, first, the latent period, *i.e.*, the time elapsing after the application before the effect began, and, second, the modification on the three elements of a rhythmic contraction. With water at 42° F. the latent period was thirty seconds; of quick contraction, twenty-five seconds, and of slow (gradual) contraction, three minutes and fifteen seconds. With water from 50° to 60° F. the latent period was lengthened, the contraction less and more brief, and the relaxation shorter, but the same in character. Repeated applications at the latter temperature diminished both the latent and relaxation periods, and there was a diminution in the maximum rise—that is, "the repeated application of cold water rapidly exhausted the excitability of the uterine muscle." It will be understood that the period of relaxation represents the gradual subsidence of the muscular "tonus."

With water above 100° F. three important facts were noticed: the total abolition of the latent period (instant contraction), the rapidity with which the contraction developed and attained its maximum, and the long duration of relaxation (prolonged tonus). Continued applications at 100° showed that the latent period shortened slightly, the contraction period was nearly constant, while the period of relaxation was enormously lengthened, and the maximum intensity increased.

Dr. Murray continues: "In speaking of the action of

cold water, I pointed out that repeated applications of cold failed to reproduce a reduction of the contraction until a period of rest had, first of all, intervened. The action of warm water presents a contrast to that of cold in this respect. If a second application of hot water be made to the portion of muscle undergoing relaxation, it will at once respond, and contraction will immediately ensue; and this can be repeated indefinitely." The vitality of the muscle-fibre was not exhausted by the hot water as with cold. "Not the remotest evidence is afforded of Emmet's statement, that hot water always induces relaxation first and contraction afterward. Water at 110° F. and upward invariably induces contraction from the very first, and that much more rapidly than cold water does."

Bearing in mind that muscular contraction is synchronous with, or rather signifies, an anæmia of tissue, the application of hot water in hemorrhage is at once obvious. Dr. Murray gives it high praise, both in post-partum hemorrhage and in any pelvic congestion. His experiments show that it is serviceable even after cold has ceased to have any styptic effect. In cases of inevitable abortion he recommends its use for purposes of expulsion of the ovum. It does not withdraw bodily heat, as does cold water, but rather supplies it. His article is a valuable and most interesting contribution to current medical literature.

CAN SCARLATINA ARISE SPONTANEOUSLY?

It is very generally admitted, and indeed insisted upon by most authorities, that scarlatina can never arise *de novo;* there must be a contagium of some sort, whether it be a micro-organism or some other influence of unknown nature, carried directly or indirectly from the body of the sick person to a healthy one. Without the agency of some product of the disease, it is claimed scarlet fever would never occur. There are some, however, who oppose this view, and believe that, while the most usual mode of origin of the disease is by contagion, yet under certain conditions the virus of the scarlatina and similar affections may be elaborated within the body independently of any influences from without.

Dr. G. De Matheis, writing in the *Gazzetta degli Ospitali* of August 25, 1886, reports some instances of apparently spontaneous origin of scarlet fever, which will doubtless be accepted as conclusive by those whose views they tend to strengthen.

The following are the circumstances of the cases cited: A boy, fifteen years of age, was taken with scarlet fever. He lived in a little hamlet called San Lorenzo, a portion of the commune of Demonte, way out of the world. None of the inhabitants of the place had left Demonte for over a month, and in all that time no letters nor papers had been received, and no parcels had been brought into the place. There was no scarlet fever within a radius of very many miles around San Lorenzo. The only arrival had been a young man who returned from hospital in the French town of Barcelonette, where he had been under treatment for arthritis. But there was no scarlatina in this town, nor anywhere along the route taken by the young man in his journey home. Several other children contracted the disease from this case.

While this little epidemic was running its course in San Lorenzo, at the extreme eastern end of Demonte, another case occurred at Perdione, lying at the western limit of the commune. There had been no communication between these two localities. Some three weeks later two more cases occurred at a little settlement situated on the other side of the Stura River, opposite Perdione, and between which place and the other localities there had been no communication.

The conclusions which the writer drew were that the first case at San Lorenzo was undoubtedly of spontaneous origin; that the case at Perdione might have been of like origin, or the virus might have been carried by the air across the commune from one extremity to the other; and lastly, that the cases occurring on the opposite side of the river from Perdione probably arose from transportation of the contagium by the atmosphere.

The weak point in the first case is, of course, the fact of a man having come to the place from abroad. Although he did not know of any case of scarlet fever in the town from which he came, it is not impossible that he may have met some one on his journey who had come from attendance on a case of the disease, and was carrying the virus in his clothes. This would seem to be the only possible explanation of the outbreak of the disease, unless the theory of spontaneous origin be accepted.

THE LONG-BEARD HABIT.

It has been observed that a large proportion of the members of the American Medical Association are bald-headed, and a thoughtful contemporary has tried to establish some philosophical relation between loss of hair and the art of medicine. Such speculations are likely to be fruitless, and we shall not attempt to pursue them. A much more practical and definite problem is that relating to the doctor's beard. It is a well known fact that American physicians, in many parts of the country, have a tendency to raise long beards. In fact, we may call it an almost exclusively American practice, if not actually a national institution.

It is, of course, a delicate thing to venture comments upon the personal characteristics of the sensitive *savants* who make up American medicine. But we feel it a duty to say that all the long beards now ornamenting our profession ought to go, and this on sanitary and æsthetic grounds, as well as for certain important practical reasons which we shall presently set forth.

It has been fully demonstrated that the hair is a frequent carrier of contagion, and that nothing is better adapted to catch up all kinds of germs, and to form a culture-ground for infective poisons than a well-developed, long-flowing beard. This appendage may be, indeed, a veritable sickle of death, and we have no doubt that in the medical history of the past the beard has been no mean agent in the distribution of epidemic and infective disease. On sanitary grounds, therefore, long beards should not be tolerated among physicians, unless the proud possessors are willing to give them antiseptic dressings every day.

It will be admitted, we think, by the student of historical ethnology, that indulgence in long beards is a characteristic of an undeveloped civilization. They were greatly esteemed among the patriarchs and the Druids, and in the early days of the world, when clothing was more scanty and the amenities of the table less

thought of. But the pride which is taken nowadays in the length of the hair or of a finger-nail is, in reality, an atavistic feeling that is dying out in civilized races, and ought to die more rapidly. Hercules was bearded, but Apollo was smooth-faced. And the god of medicine has been instinctively imitated by his most successful followers. Hardly a doctor of the first eminence in the world's history ever wore a long beard, and he who possesses one may as well concede at once that he will never rise above mediocrity. In the long list of distinguished English and American physicians, from Linacre and William Harvey to John Hunter and Benjamin Rush, there are only beardless or short-bearded faces. Among distinguished Frenchmen, Paré wore a short beard; but in later times we find that Dupuytren, Nélaton, Andral, Laennec, Cuvier, Bichat, Ricord patronized the barber, and turned the physiological energies that might have been lost in making hair into the making of brain.

Reviewing the history of medicine, it almost seems that the greatness of medical men is inversely proportional to the amount of hair grown upon the chin! At any rate, we trust that we have successfully shown that long beards are not the things for doctors, but are unhygienic, barbaric, and inconsistent with great historic precedents and the attainment of the highest professional eminence.

We cannot construct at present a "long-beard" map, with darkened areas showing the prevalence of the "Beard-Habit" in this country, but if it could be done we are quite sure that it would prove this habit to be a morbid one, and, like malaria, highly antagonistic to scientific progress.

THE PROPOSED CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE meeting of the representatives of the several special national organizations which was held in Philadelphia on September 24th has resulted in satisfactorily arranging for the organization of a National Medical Congress. The nine special societies, a list of which we have already given, practically agreed that such a meeting shall be held in 1888, at Washington, D. C., during the month of September.

The meetings are to be held every three years; the autonomy of the special societies is not to be disturbed, and each society can withdraw at any time if it so desires.

The special feature of the meeting will be the conjoint assemblage of the special societies on two evenings during the session; on one of which there will be an address delivered by the president of the conjoint meeting; on the other communications will be made by a referee and a co-referee on some subject of general professional interest. Each special society approving the arrangement is invited to appoint one representative (with an alternate), and the representatives so appointed will constitute an executive committee to serve for one year, with power to elect such officers for the first conjoint meeting as may be deemed necessary; to prepare a programme for the meetings; and to make other necessary arrangements.

The preliminary arrangement thus agreed upon is one which commends itself as moderate and sensible. The adoption of a triennial session and the complete autonomy of the special associations will give to the Congress a distinctive character.

News of the Week.

ANOTHER OFFICE SNEAK-THIEF.—We warn city practitioners against an Irish girl, about twenty years of age, dressed in well-worn finery, who is anxious to have them call at once at a house in West Fifty-sixth Street. She is dressed in black and white skirt and black jersey, frayed under the right breast so as to show corset beneath. She tells a plausible story about a child with paralysis, the weak point being that her dress does not indicate that she is the niece of a lady living in the best part of the city. Several physicians have been victimized by this sneak-thief.

RECEPTION IN HONOR OF DR. SHAKESPEARE.—A reception was tendered, September 29th, by the medical profession of Philadelphia, to Dr. E. O. Shakespeare, on his return from official medical service in Europe and Asia. It was largely attended by the leading medical men of Philadelphia and other cities.

PROFESSOR SCHROEDER, of Berlin, was recently called to Kiew to perform an operation for myofibroma. For this he received 10,000 marks (about $2,000).

THE AMERICAN RHINOLOGICAL ASSOCIATION held its fourth annual meeting at St. Louis on Tuesday, Wednesday, and Thursday last. The number of papers read was larger than ever before.

DEATH IN A DENTIST'S CHAIR FROM ETHER.—We learn from the daily press that an unknown woman entered the office of Dr. C. H. Moseley, a dentist of Brooklyn, suffering from toothache. Ether was given and the tooth extracted. The patient recovered consciousness for a moment, then sank back unconscious and died.

THE AMOUNT OF GREEK NEEDED BY MEDICAL STUDENTS.—At the Berlin Congress of German Naturalists and Physicians, Professor Schwalbe, director of a Berlin *Real-Gymnasium*, in speaking of the knowledge of Greek necessary for the understanding of medical and scientific terms, said that he was preparing a Greek primer for equipping students with that knowledge. After a careful consideration of the subject, he had come to the conclusion that for the purpose in question it was sufficient to know about one hundred Greek nouns, twenty to twenty-five adjectives, fifteen to twenty pronouns, fifty verbs, the cardinal numbers, and a few adverbs and particles. All this could easily be acquired during the first semester at the gymnasium.

THE BROOKLYN CHARITIES COMMISSIONERS have been indicted by the grand jury for neglecting to provide for the care of the insane. This indictment is the result of recent occurrences at the Flatbush Asylum.

THE CHOLERA HAS REACHED Austro-Hungary and seems to be surely spreading.

A PLEA FOR RATIONAL MEDICINE.—A good man struggling with adversity is a sight which ought to awaken lively and sympathetic interest. Such a sight is presented by the *New York Medical Times*, which, for

some years, has been manfully endeavoring to rid homœopathy of its sectarianism and distinctive name, while still claiming that it represents one of the most important of therapeutical principles. In consequence of its course it is receiving severe criticisms from many of its quondam brethren, while it gets a very unappreciative hearing from the regular school. For example, one of our contemporaries prints the following, apparently unaware that *The Times* has been saying this same thing for several years: "Homœopathists Getting Their Eyes Open.—The following remarkable passage appears in a recent issue of the (homœopathic) *New York Medical Times:* 'Go on in your sectarian course, ultra-devotees of Hahnemann, if you will, be loyal to the teachings of your master if you must, but shut not your eyes to the fact that science has rendered obsolete many tenets of his system and removed the last vestige of an excuse for maintaining an organization of physicians under an exclusive title, distinct and separate from the medical profession at large. The ultra-school of medicine has fulfilled the complete measure of its usefulness as a separate organization. Loyalty to truth and progress now demands that it shall drop its narrow, sectarian name and no longer seek to keep its members in leading strings. In the nature of things there can be but one system of medicine recognized by science. Either homœopathy must absorb the old school or be absorbed by it.'" It would be better, we think, to give to such sentiments a hearty endorsement, with success to those who utter them.

New York's Medical Societies.—Thirty-eight different medical societies begin their nine or ten months' work during the present month in this city. These societies meet, as a rule, monthly; but seven of them meet twice a month, so that there is an average of seven or eight meetings every week. This appears to be an excessive number, and one likely to lead to the production of too much shallow talk and superficial work. Still, it is to be remembered that many of these societies are small, private, and unambitious; their objects being as much social as scientific. The serious work is chiefly done in about half a dozen societies, and as these have over two thousand physicians to call upon, they ought all to do some creditable work.

The Coming Substitute for Carbolic Acid.—D. F. Hueppe believes, as the result of extended experiments, that aseptol (orthophenol-sulphate, $C_6H_4(HO)SO_2HO)_2$ is destined to take the place of carbolic acid as a disinfectant and antiseptic. It is a syrupy brown fluid of aromatic odor, and soluble in alcohol, glycerine, and water, and is not irritating in as strong as ten per cent. solutions. As an antiseptic it equals carbolic acid, while having the advantage of pleasanter odor, more solubility, and of being less irritating and toxic.

Not a Believer in Preventive Inoculation.—"Bacteriological therapy, as practised by its adherents, has given little or no positive results; and Dr. Koch does not look forward with any degree of confidence to inoculation ever being available as a therapeutic agent or as a preventive measure, but holds that, by reason of the advance in our knowledge regarding the etiology of disease, we are able to establish better hygienic conditions and thus prevent the spread of disease." So writes the Berlin correspondent of the *Philadelphia Medical Times.* But there may be a little race prejudice in this view.

A Case of Accidental Spontaneous Combustion.—A fire broke out in a cigar shop in Hulme, England, not long ago, and on the arrival of the fire brigade there were found to be three distinct fires in different parts of the shop and house. The two firemen who first entered were nearly suffocated by a dense white smoke, and applied to Mr. Heslop, Divisional Surgeon, Manchester police force, a day or two after, complaining of a rawness of the throat and chest, very different from anything they had experienced before. On account of what they told, Mr. Heslop burned some phosphorus in their presence, and they at once recognized the smell. Some phosphorus was then placed in some shavings, and it ignited spontaneously in about eight or ten minutes, and in sawdust in about twenty minutes.

A Monster Child.—Dr. N. E. Davies writes in *The Lancet*, that a thin little woman gave birth to a male child sixteen months ago, at the village of West Camel, Somerset. When born the infant was of ordinary size in every way; it now weighs and measures as follows: [illegible]; chest, 30 in.; thigh, 17 in.; calf, 11½ in.; neck, 15½ in.; arm, 10 in.; and face, 17 in. Its weight is 64 lbs. The father is a man of ordinary size. The infant seems very intelligent and happy, but on account of its enormous weight it cannot be lifted without expressing pain.

Statistics of Color-blindness.—Dr. [illegible] having examined 11,175 persons in respect of color-blindness, has communicated his results to the French Academy of Medicine. Of the above number he found two only incapable of distinguishing one color from another; three were blind for red and six for green, eighteen could not distinguish green from red, fifteen saw no difference between green and blue or gray, and fifty-two had a peculiar weakness in color vision in general.

Deaf-mutism in Spain.—There are, according to Señor Navalon, principal of the National Deaf-mute College in Madrid, over ten thousand persons so afflicted in Spain. For the care of these there are five institutions, all, with the exception of the National College, supported by private charity.

Vicarious Menstruation.—Puech has collected the statistics of 200 cases of vicarious menstruation, with a view to determine the parts of the body most liable to be the seat of vicarious hemorrhage. Bleeding occurred from the roots of the hair in 6 cases; from the auditory canal in 6; from the lachrymal gland in 10; nose, 18; [illegible]; 32; mammary glands, 25; axilla, 10; umbilicus, 5; bladder, 8; intestines, 10; hands, 7; inferior extremities, 13; various other regions, 8. In girls who are the subjects of vicarious menstruation, the genitals are always moist at the menstrual periods, and give rise to a muco-[illegible]. *Medicine.*

THE PASTEUR INSTITUTE.—The Paris Municipal Council has extended the concession of the site for the proposed Pasteur Institute, in the Rue Vauquelin, from thirty to ninety-nine years. The proposal gave rise to a heated discussion, but was finally carried by a vote of about three to one.

A NEW SWISS LAW AGAINST EPIDEMICS.—A law has been passed in Switzerland making it compulsory upon the keeper of the house where the patient is and upon the attending physician to report every case of contagious disease to the local authorities and to the health officers. A penalty of 1,000 francs is imposed upon anyone who neglects to comply with the law. The responsibility of disinfection and isolation of the sick rests upon the cantonal authorities.

TRICHINOSIS IN GERMANY.—Many cases of trichinosis have occurred recently in Zittau and Lyck in Germany. The origin of the epidemic was traced to some sausages eaten raw, made from meat obtained in a neighboring town.

CHANCRE OF THE EYEBROW.—A man, aged forty-two, was admitted into the Lariboisiere Hospital, under the care of M. Siredey, for paralysis of the fingers, probably due to lead-poisoning. On examining the skin, he was found to be suffering from a secondary syphilide. The patient said he had not had sexual intercourse for a year, that he had been in another hospital six weeks before, when the doctor there said he had mucous patches on the scrotum and examined the penis, but found no trace of a sore. On examination, an indurated cicatrix was found on the left eyebrow, and the corresponding pre-auricular gland was enlarged. Afterward syphilitic erosions appeared in the mouth. The man stated that, during a quarrel, three months previously, he had been bitten by his antagonist on the left eyebrow.—*London Medical Record.*

DEATH FROM THE BITE OF A CAT.—A man has died in Grenoble from hydrophobia resulting from the bite of a mad cat. He was bitten on April 30th, and was under Pasteur's care from the 4th to the 10th of May. He died on July 31st. This was the fourth death of those inoculated by Pasteur, leaving out of the count the Russians who were bitten by mad wolves.

APPROVING PASTEUR'S METHODS.—The President of the Local Government Board, Mr. C. T. Ritchie, reported in the British House of Commons on August 26th, that the committee appointed by the Government to examine into Pasteur's method of inoculation for the prevention of rabies, were fully satisfied that his treatment for hydrophobia was effective.

THE TURPENTINE TREATMENT OF DIPHTHERIA, of which much has been said of late, was the subject of a paper by Dr. Delthill, of Nogent, at the recent meeting of the French Association. M. Delthill has treated 134 patients, of whom 126 were cured. He employs the fumes of turpentine and coal-tar, with local applications of turpentine. The same method is an efficient prophylactic only 3 cases occurring among 670 persons exposed.

POST-GRADUATE INSTRUCTION IN NEW YORK.—The winter sessions at the Polyclinic and the Post-Graduate Medical School in this city have now begun. The class at the latter institution during the last year numbered 185. No changes have been made in the faculty, except that some additional instructors have been appointed. The hospital attached to the school offers facilities for clinical instruction in the performance of many of the major surgical operations. At the Polyclinic the class during the session of 1885–86 numbered 240. Dr. Leaming has been made Emeritus Professor of Diseases of the Chest and Physical Diagnosis, and remains as President of the Faculty. A department of Otology has been established and placed in charge of Dr. O. D. Pomeroy. With these exceptions the list of professors remains almost as it was at the organization of the institution.

THE CHARLESTON MEDICAL RELIEF FUND.

CHARLESTON, S. C., October 1, 1886.

TO THE EDITOR OF THE MEDICAL RECORD:

SIR: At a meeting of the medical profession of the city of Charleston, held September 30, 1886, the following preamble and resolutions were adopted:

"*Whereas*, A letter to the editor of THE MEDICAL RECORD (September 25th) has caused surprise and mortification to the medical profession in Charleston, inasmuch as the statement is made that the profession *en masse* are anxious for immediate pecuniary aid; and

"*Whereas*, The profession have suffered from the recent earthquake in no greater degree than their fellow-citizens, and are unwilling to be placed in a false position; be it therefore

"*Resolved*, That in making our acknowledgments to our professional brethren for their sympathy, we desire to inform them that we are not applicants for their bounty, and deeply regret that a call should have been made on them. That the profession *en masse* are not anxious for immediate pecuniary aid, nor would they consent to receive it, except in possibly a very few individual cases of necessity, when no shame could attach to the full knowledge of the facts as they are.

"*Resolved*, That they unmistakably and clearly state, that the medical profession refuse to assume the singular position of special distress, in any sense requiring other assistance than the kindly charity of the generous, which is being outpoured for the needy of the city of Charleston.

"*Resolved*, That a certified copy of the above resolutions be sent to THE MEDICAL RECORD, with a request for publication."

The following resolution was unanimously adopted:

"*Resolved*, That we commend to the large-hearted liberality of our professional brethren elsewhere the condition of our medical college, with the assurance that their generous aid to rebuild its ruined walls will be worthily bestowed and fully appreciated."

H. W. DE SAMPSON, M.D.,
Chairman of the Meeting of the Medical Profession of the City of Charleston.
MAZYCK P. RAVENELL, M.D., *Secretary.*

A NOTE FROM DR. MICHEL.

CHARLESTON, S. C., October 2, 1886.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In my letter, which you published in your issue of September 25th, the following paragraph occurs:

"That the profession *en masse*, while anxious for immediate aid—some to rebuild their homes, others for their daily necessities, since no bills are collected—are decidedly opposed to having their names mentioned, or to having a special rehearsal of their losses recounted."

This should have read:

"The physicians *en masse* are decidedly opposed to having their names mentioned, or to having a special rehearsal of their losses recounted, while some are anxious for immediate aid to rebuild their homes, others for their daily necessities, since no bills are collected."

In the hurry of a delayed reply to a letter which you wrote me, stating that you had voluntarily made a call upon our Northern brethren in behalf of the suffering physicians and their families in this city, and asking me to suggest my views on the subject, I intended, in the above paragraph, to convey the sentiment of a large meeting held at Professor Prioleau's house, at which the profession *en masse* refused to solicit aid; and, at the same time, to express my individual opinion that there were some who certainly required assistance to rebuild their homes, and others until collections could be made.

My particular suggestion, however, was that our urgent need, at present, and what we "look for, is the means to rebuild our poor old college, and in this direction you must move with others to help us."

To the circular which your committee has addressed to each physician, several have already accepted your generous kindness.

Very truly your obedient servant,

MIDDLETON MICHEL, M.D.

[These letters speak for themselves. While apologizing to "the profession *en masse* of Charleston," we are glad to learn that "there are only a very few individual cases of necessity." To the latter the funds will be distributed by the Relief Committee, which is empowered to use its discretion. If even these individual cases decline to be assisted, the Committee can return the money through THE MEDICAL RECORD to the original donors.—ED.]

The following subscription has been received since last acknowledgment:

W. H. Bryant, M.D., Savannah, Mo..... $5

Reviews and Notices.

HYGIENE OF THE VOCAL ORGANS. By MORELL MACKENZIE, M.D. 12mo, pp. 223. London: Macmillan & Co., 1886.

DR. MACKENZIE is too well known to need any introduction. This, his latest work, is a practical handbook for singers and speakers. The author claims "no pretension to speak with authority as a musician, or even as a physiologist," but endeavors to treat of the relations of voice production to the "well-being and functional efficiency of the vocal organs." Dr. Mackenzie is a specialist of the extreme type. His writings are accurate and his style clear. Here and there, however, the mercantile rather than the professional tone crops out in his literary work. Of this spirit the present volume shows numerous examples. However, it is well worth reading.

TOKOLOGY: A BOOK FOR EVERY WOMAN. By ALICE M. STOCKHAM, M.D. Pp. 371. Chicago: Sanitary Publishing Co. 1886.

"TOKOLOGY," which, being interpreted, is a talk on midwifery, is a mixture of sense and nonsense, which hardly comes within the pale of medical criticism, since no physician, glancing at it, would think of putting in the hands of his patient so unscientific and quackish a presentation of the subject.

CARLSBAD AND ITS ENVIRONS. By JOHN METTLER. 12mo, pp. 199. New York: Charles Scribner's Sons. 1886.

THIS is a concise, well-written guide-book for English-speaking people who contemplate a visit to the famous German Spas. A short medical treatise on the use of the waters is added. Its author—Dr. B. Loudon—a resident physician at Carlsbad, gives in a popular and interesting way an account of the diseases favorably affected by the waters, with full directions for taking the latter.

DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD. With Chapters on the Investigation of Disease and on the General Management of Children. By LOUIS STARR, M.D. Pp. 385. Philadelphia: P. Blakiston, Son & Co. 1886.

AMONG the many books and treatises which constantly appear on children's diseases we could scarcely expect in the latest comer anything especially new or unheard of. Dr. Starr's work does not claim attention from this standpoint, but from that most commanding of all, experience. He devotes himself to those disorders of childhood which form, as he says, a large proportion of their ailments. He is thorough, concise, and practical, dealing with the hygiene as well as the therapeutics of his subject.

LECTURES ON DIETETICS AND DYSPEPSIA. By SIR WILLIAM ROBERTS, M.D. London: Smith, Elder & Co. New York: G. P. Putnam's Sons. 1886.

DR. ROBERTS' lectures are exceedingly interesting, both in matter and in style. The record of experiments to show the retarding influence of tea, coffee, liquors, and the condiments upon the digestion, if not offering conclusive proof of the effects of the same in the body, is at once instructive and suggestive. These dietetic accessories are proven by him to hinder starch digestion, a not undesirable result, he thinks, since, he says, the preparation of food of civilized races has been carried to a high degree, rendering it so digestible that it is better to retard digestion, which man has come instinctively to do by means of these articles. The theory is an ingenious one, if not plausible.

PUERPERAL CONVALESCENCE AND THE DISEASES OF THE PUERPERAL PERIOD. By JOSEPH KUCHER, M.D. New York: J. H. Vail & Co. 1886.

THE author of the unpretentious little volume before us has rendered an unequivocal service to the medical profession of this country. Within the narrow compass of 311 pages he has succeeded in presenting to the reader an excellent and reliable account of the management of normal childbed, as well as of the various disturbances that may complicate the lying-in period. Avoiding as much as possible the discussion of theoretical problems, he proceeds at once to give us all those practical details of managing the critical period in question, upon which ordinary text-books insist so little, and upon which success so much depends. Dr. Kucher has absolute faith in the utility, nay more, in the necessity of strict attention to cleanliness and asepsis. And certainly, if we examine the results obtained by him in an extended experience, including four years' service at the Vienna lying in hospital, we are compelled to admit that his system makes an excellent showing. The cardinal point of Kucher's simple plan of preventing puerperal diseases consists in painstaking local disinfection of the genital organs and everything that is to come in contact with them. Experience has shown that complete disinfection can be effected by cleanliness, and the use of any ordinary antiseptic lotion. Personally, the author still favors a three or five per cent. watery solution of carbolic acid, but we are pleased to perceive that he does not insist upon this, nor any other particular all powerful and no-safety-without-it kind of fluid or antiseptic apparatus.

Dr. Kucher does not believe in allowing nurses too much rope. When sponging is needed, he himself does it. For the nurse, the patient's genitals are a *noli me tangere*. Dr. Kucher never forgets that the practitioner must shoulder the responsibility of his cases, and he, therefore, permits no [illegible] strictly his personal affair.

We heartily recommend this volume to the study especially of the younger members of the profession. They will, it is to be hoped, not fail to make the methods of the author their own, and in so doing they will act with justice to their patients, and doubtless also with benefit to themselves, so far as concerns their reputations as successful practitioners.

Illustrations of Unconscious Memory in Disease. Including a Theory of Alteratives. By Charles Creighton, M.D. Pp. 212. New York: J. H. Vail, & Co. 1886.

Memory, which used to be described as a special faculty of the mind, is now known to be in reality a general function of all organized matter. Our organic functions are carried on automatically by virtue of this power of memorizing possessed by their controlling centres, and our personal habits as well as tissue habits are similarly the results of unconscious memories. Disease may, and does often, result from the establishment of a bad habit in the tissue, and this bad habit is contracted because an abnormal impression, made perhaps many times upon it, finally is memorized and made permanent. Alterative, drugs break up this bad tissue-habit, and destroy the memory of the impressions made. Alterative drugs, are therefore, habit-breaking drugs. Such are the main features of Dr. Creighton's book, which is an extremely interesting and suggestive one. For our part, we believe that the author has more than a theory, he enunciates a doctrine, and it is one which medical men should understand.

Fifth Annual Report of the State Board of Health of New York. Pp. 483. 1885.

This voluminous public document contains much interesting information, and affords evidence that the public servants to whom are intrusted the matters which pertain to the health have not been idle during the past year. Indeed, they must have been very diligent. They have inspected car stables, malarial swamps, fever districts, infected rags, looked after trichinized hams, planned systems of drainage for small towns, and prepared for the cholera epidemic. The book is well larded with diagrams and elevations, showing all sorts of things in connection with hygienic affairs. The grubbers for statistics will find here their annual rations. All this great and varied work has been done for New York State for $21,071.30.

Second Annual Report of the Board of Health of Syracuse, N. Y.

This report shows that great diligence in sanitary matters is being exercised by the city of Syracuse and its health officers.

A System of Practical Medicine, by American Authors. Edited by William Pepper, M.D., LL.D., assisted by Louis Starr, M.D. Volume III. Diseases of the Respiratory, Circulatory, and Hæmatopoietic Systems. Volume IV. Diseases of the Genito-urinary and Cutaneous Systems. Medical Ophthalmology and Otology. Philadelphia: Lea Brothers & Co. 1886.

The third volume of Pepper's System, covering the subjects of diseases of the respiratory and circulatory organs, we regard as one of the best, and perhaps the most uniformly excellent, of the series. The number of gentlemen concerned in producing this volume is quite large, and embraces many who are widely known as experts in their departments. Among the articles which one will turn to with special interest is that on Phthisis, by the lamented Flint. It reveals the judicious mind, and the painstaking methods of labor characteristic of all that author's writings. It contains, however, nothing new, and is deficient in its references to the recent modes of treatment by inhalations and "cramming."

One of the best series of articles is that by Dr. Frank Donaldson, on diseases of the pleura; and another very complete series is that on diseases of the heart and blood, by Dr. William Osler.

The subject of diseases of the nasal passages and larynx occupies nearly two hundred pages, and we should have consequently a tolerably complete and compact treatise on rhinology and laryngology. We fear the reader may be a little disappointed, however, on account of the limited space devoted to technique. Dr. Allen will be accused also of laying too little stress upon the value of the Jarvis snare, cocaine, and the galvano cautery in chronic nasal disease. Dr. Jacobi treats of the subject of pseudo-membranous laryngitis with thoroughness and good judgment. He is, of course, a unicist in the question of croup and diphtheria. He doubts the utility of the present "intubation" fashion.

Volume fourth covers the subject of genito-urinary diseases and the specialties of gynecology, ophthalmology, otology, and dermatology.

Dr. Edes writes an interesting article on functional albuminuria, and Dr. Delafield's presentation of the subject of Bright's disease is as concise, clear, and practical as it is possible to make that still much obscured topic. Nearly four hundred pages are devoted to gynecology, the contributors being Drs. Goodale, E. C. Dudley, Engelmann, Reeve, Thomas, E. W. Jenks, Byford, Baer, and Skene. Dr. Dudley has given a very good description of uterine displacements, but his attempt to introduce the clumsy terms "anti-location," "retro-location," etc., we regard as unnecessary and unfortunate. Dr. Goodale's articles on diseases of the ovaries and oviducts give a very sensible presentation of this subject. We cannot, however, agree with the roseate view taken by the author regarding the condition of the women who have been spayed. Battey's operation, he says, in nowise unsexes a woman, or changes her appearance or character. "Her sexual organs continue excitable," and "she is no less a mother or a wife." Dr. Baer devotes two long articles to perimetritis and parametritis, diseases which he thinks can, and should be, distinguished. A very useful and much needed chapter is that by Dr. Jaggard, on the disorders of pregnancy. Dr. Engelmann's article on abortion also collects together a good deal that is of interest, and supplies a gap in our literature.

Under the head of "Diseases of the Muscular System" we find articles on myalgia, progressive muscular atrophy, and pseudo-hypertrophic paralysis. It was, perhaps, subsequent to the projection of this system that the insufficiency and incorrectness of such a division has been shown. It can, therefore, be excused. Dr. Tyson's article on progressive muscular atrophy is an excellent one, and only lacks in this, that it does not bring out so sharply as it should the fact that this disease is one of the spinal cord, and not of the muscles. On the other hand, it is known evidently to Dr. Putnam-Jacobi that pseudo-hypertrophic paralysis is only one of the forms of progressive muscular dystrophy. Dr. Jacobi's article is probably the most learned and complete monograph on the subject extant.

The articles on diseases of the skin, by Drs. Duhring and Stellwagon, do not call for any criticism, and the same can be said of the articles on medical ophthalmology, by Dr. Norris, and that on medical otology, by Dr. Strawbridge. As will be seen, the last half of this volume is a Philadelphia product, and eminently creditable to that modest city.

The Laws and Mechanics of Circulation, with the Principle Involved in Animal Movement. By William H. Triplett, M.D. Pp. 510. New York: J. H. Vail & Co. 1885.

Upon the title-page the author has inscribed the sentiment:

This absolves the reader from giving an assent to much that is discussed in this book, for many problems considered by Dr. Triplett are from their very nature well-nigh impossible to prove, though it must be confessed that he attacks them in a doughty manner and with a positiveness which does much to carry conviction with it. The student of biological and physiological science will find much to instruct, to interest, and to entertain in its well-illustrated pages.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, October 1, 1886.

GEO. F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIBNEY read a paper (see p. 393) on

CEREBRAL PARALYSIS IN CHILDREN.

DR. L. EMMETT HOLT reported a case as follows:

Charles K——, fourteen months of age, an inmate of the New York Infant Asylum, a healthy, well-nourished child, began, on July 17, 1886, to have loose green movements from the bowels, accompanied by vomiting and quite marked drowsiness. This attack was practically over in four days, during which he had a febrile movement ranging from 99° to 101.2° F.

On July 22d he was asked to see the child, as it seemed very drowsy and stupid without evident cause.

The child lay very quietly in the nurse's lap and made no resistance to the examination. The pupils were a little irregular but responded to light; slight rigidity of the muscles of the back of the neck; face seemed to be drawn to the right side, noticed now for the first time; active movements of the right arm, this used more freely than the left; pulse and respiration regular; temperature, 99° F. No diagnosis was made. There seemed, however, very little ground for believing in any serious brain disease. The child had always been very quiet and good-natured. Ice-bag ordered to be kept to the head.

July 23d.—Temperature, A.M., 99° F.; P.M., 101° F. Drowsiness not quite so marked; pupils a little irregular still; convergent strabismus; eyes bloodshot and watery; right hand and foot in almost constant motion; left side being quiescent. Potass. iodidi, gr. ij., every two hours.

July 24th.—Morning temperature, 100° F.; afternoon, 101.5° F. During the past night at times quite irritable, screamed out, slapped its face, and moved right hand and foot much. At noon Dr. Holt made the following observations: There is complete left hemiplegia. The muscles of the left lower extremity are contracted and rigid. This condition is scarcely noticeable in the upper extremity. Left foot distinctly colder to the touch than the right. Face still drawn to the right side. Pupils more normal, and respond to light. It was difficult to determine the condition of sensibility; anæsthesia certainly was not marked.

When left alone the child was quiet, in a semi-stupor; when disturbed it became quite restless. No coma. Muscles of the neck still rigid; pulse, 120, regular but weak; urine passed freely, bowels open, but no diarrhœa and no vomiting. The child takes nourishment fairly well.

Ordered sodii brom., gr. iv., every two hours, in addition to the iodide.

July 25th.—Temperature, A.M., 100° F. Is not so well; does not use the *right* hand so well; rested quietly during the night; takes nourishment poorly. During the day more restlessness, twisting about the crib; face drawn as if in pain; respirations, 32, regular; pulse, 120, regular and weak. The left foot is moved when pinched, but not voluntarily.

Late in the evening the restlessness became much increased, almost constant motion of the right arm and leg. Still marked rigidity of the muscles of the neck, less marked of the left leg, and only slight in those of the left arm. The respiration was much disturbed, a complete cessation for about ten seconds, then three or four violent efforts, in which the whole body seemed to participate.

July 26th.—Much worse. Temperature, 104.2° F. at 10 A.M.; deglutition quite difficult. He sank from this time, the respirations being at times rapid and irregular. The temperature continued high, unless reduced by antipyrin, and he died on the morning of July 27th, comatose.

No convulsions were present at any time. The hand and arm continued to be rigid, but it was thought that some voluntary movements were seen in the left leg on the day before death. Dr. Holt did not see the case during the last two days, nor the autopsy.

Only the brain was examined. The following were the observations made: The fontanelle was rather more widely open than usual; not bulging. Cerebro-spinal fluid considerably in excess of the normal, estimated at six ounces. This came mostly from the ventricles. The whole brain-substance was very soft, and on the right side the frontal and parietal lobes broke down into a soft, pultaceous jelly mass. Similar changes were seen over the left hemisphere, though very much less marked. There was no evidence of hemorrhage, and no lymph or pus was seen. The base of the brain was firm and healthy, except the medulla, which did not seem quite as firm as the other parts.

DR. C. L. DANA remarked that Eustace Smith had stated that this condition, as the result of *embolism*, is very rare in children.

DR. L. PUTZEL had had no pathological experience on the subject, although he had seen a large number of these cases, and had always been puzzled as to what they should be attributed. The clinical history had been somewhat like that in the first case reported by Dr. Gibney. He remembered one case occurring in a child eighteen months old, that had a convulsion, became comatose, and at the end of twenty-four hours was hemiplegic on the right side. Dr. Putzel saw the child when it was six years old, and at that time it was extremely bright, although it had exhibited the usual symptoms, such as contracture, etc., and at that time had hemichorea, also epileptic seizures which were quite severe, appearing first upon one side and afterward becoming general. The child was under observation until the age of ten years, and its condition remained practically unchanged. There was also marked atrophy of the limbs; the right arm was an inch shorter than the left, and there was apparently atrophy of the bones of the face as well as the soft parts covering them. In quite a number of cases imbecility or idiocy has followed such acute attacks. In one case, that of a negro child, there was paralysis upon the right side, epileptic attacks developed, and then a peculiar condition in which the child refused to talk. Whether or not the child was aphasic he was unable to say. The child remains irritable, bites at everyone, but at nothing except a human being; is apparently in a rage most of the time, but never talks, although it has a bright expression of the face. Other cases have terminated in idiocy. These have generally developed post-hemiplegic chorea with epilepsy, usually unilateral at first and general afterward. Gowers notices the disease briefly, and says that it is due to thrombosis of the veins which go from the convexity of the brain and empty into the longitudinal sinus. He also claims that this is a frequent lesion; that it is generally secondary to thrombosis of the longitudinal sinus. Dr. Putzel said that, so far as his experience went, he had not seen this condition except in one case, and that was in an adult with acute mania; there was a thrombus in one of these veins.

So far as reading goes he had seen no reference to this lesion, and, moreover, Gowers gives no authority to sustain what he says.

Dr. Putzel thought that it was rather hazardous to attribute these cases to embolism, as the most frequent cause of embolism is not very common in children of that age, yet the disease occurred quite frequently.

DR. KINNICUTT said that his experience of such cases had been wholly a clinical one. He had seen a number during the past ten years, and while in doubt in regard to the exact nature of the lesion, he was inclined to be-

lieve that the clinical phenomena were not due to the same pathological condition in all cases.

He had occasionally seen cases where there was a condition of the heart, *i.e.*, marked valvular disease, which, if it antedated the onset of the attack, might reasonably be considered as the cause of embolism.

He had seen one case, occurring in an adult, in which, at the autopsy, there was a thrombus in a similar situation to that described by Dr. Putzel; the patient was in a condition of dementia at the time of his death.

Dr. E. Darwin Hudson, Jr., said, with reference to the general cause of temporary hemiplegia in children, that he had not been prepared to regard it as due to either cerebral embolism or actual cerebral hemorrhage; but had supposed that the cause was a disturbance of the cerebral circulation, a congestion or hyperæmia, which modified the nutrition of the brain-substance. His reasons for entertaining this view had been that children so exceptionally have any cardiac trouble. Then as to cerebral hemorrhage being the cause, the history, in almost all the cases, is that of the occurrence of initial convulsion, either a single one or a period of continued convulsions, from which the patient has recovered, or following this is a period of partial coma, but not so definite as that produced by an effusion of blood with laceration of the brain-substance. He had been of the impression that the chief etiological factor was congestion.

Dr. Kinnicutt asked if there was any pathological evidence that circumscribed congestion was capable of producing the symptoms met with in this class of cases.

Dr. Hudson said that he was unable to refer to any.

Dr. Kinnicutt said he believed that simple congestion was quite incapable of producing the permanent conditions described by Dr. Gibney.

Dr. Hudson said that he referred to congestion such as might be attended by punctate hemorrhages without rupture of vessels of very much size. The clinical symptoms had not impressed him as being the result of a large effusion of blood.

Dr. Kinnicutt supposed that many had seen cases of cerebral apoplexy where the initial symptoms were not very pronounced, but had been followed by very pronounced hemiplegia, with subsequent contracture, etc. He had, at present, several patients under observation, in whom most pronounced hemiplegia followed slight initial symptoms.

The President remarked that hemiplegia sometimes occurred after traumatism of the skull, developing six or eight days after the injury, where the patients gradually passed into coma with the development of hemiplegia, and he had usually regarded it as due to an inflammatory condition.

Dr. C. L. Dana had records of several cases in which hemiplegia came on gradually without any pronounced seizure. There is one interesting etiological point, and that is with reference to the occurrence of so many of these cases in the convalescence from infective diseases; for instance, after diphtheria, typhoid fever, etc. In such cases there would be a tendency to the occurrence of thrombosis, which would support Gowers' theory that many of these cases are due to thrombosis.

In one case he had seen, the child had a convulsion, and it was probable that the convulsion caused the hemorrhage which subsequently developed the spastic symptoms. A child may from some cause have a convulsion, or convulsions, which produce the congestion that determines meningeal hemorrhage. The statistics published by Dr. McNutt show that all the autopsies gave evidence of meningeal hemorrhage, although her cases were nearly all in very young children.

Dr. Putzel remarked, with regard to the etiology spoken of by Dr. Dana, that is, convulsion producing hemorrhage, that he had seen quite a number of autopsies on children who had died while having a hundred or a hundred and fifty fits daily, and he still had to see cerebral hemorrhage under those circumstances. All that he had ever seen was a slight bloody effusion into the meninges and slight hemorrhages under the capsule of the liver.

Dr. Dana thought that the conditions present in these cases occurring in infants were somewhat different from those which existed in cases of convulsions taking place in children eight or nine years old.

Dr. Holt spoke of the uselessness of electricity in the treatment of these cases.

Dr. Dana had seen one case in which the spastic symptoms were very much improved while the child was taking ergot and iodide of potassium.

Dr. Gibney said, with regard to congestion or hyperæmia being a cause, as mentioned by Dr. Hudson, that he was inclined to agree with Dr. Kinnicutt, that it was not a lesion which can produce these symptoms and the subsequent conditions; the hemiplegia must be dependent upon some other cause.

With regard to convulsions producing cerebral hemorrhage, mentioned by Dr. Dana, he was aware that that was very often suggested and had been so stated, but he was unable to see why an infant's brain should be much more susceptible to such an injury than the brain of a child six or eight years old.

In making up his paper he had omitted the proper mention of Dr. McNutt's valuable contribution, and this had arisen from the fact that his attention had been occupied with the question of polioencephalitis.

So far as treatment was concerned, he did not know of anything which could materially affect the progress of the case. He had had considerable faith in the efficacy of large doses of iodide of potassium, but exactly how it was to act he was unable to say.

The aphasia, according to his experience, passes away after a period varying in length from a few months to a year or so, and finally the patients recover speech very fully.

The Society then went into executive session.

Correspondence.

OUR LONDON LETTER.

From our Special Correspondent.

DOCTORS AND THE HOLIDAY SEASON—THE PURIFICATION OF LONDON SEWAGE—DIRECT REPRESENTATION OF THE MEDICAL PROFESSION AND THE BIRMINGHAM FIASCO.

London, September 18, 1886.

The dull season continues, most of the medical notabilities being away. I saw Sir James Paget, however, yesterday. Perhaps he is the exception that proves the rule. October will witness the return of most practitioners to town. Some, though, take a more prolonged holiday, as, for instance, one distinguished gynecologist, who leaves town in July not to return till November. One year I saw a written notice on his door to that effect. He has now discontinued this, and perhaps makes arrangements for stray patients, arriving during the holiday season, to be sent on to some junior colleague or friend. This is a very common arrangement on the part of consultants, and many of the younger physicians and surgeons thus derive, if not much pleasure, at any rate some profit, from their stay in London during August and September. It is not uncommon either for their seniors to ask them to undertake their hospital work for them during their own absence, and the experience thus gained in positions of responsibility is not without its value. Of course, only gentlemen approved by the hospital authorities are allowed to take charge, and in the case of in-patient work the selection is usually restricted to the junior members of the hospital staff. I heard a curious story some time since anent the holiday season. A patient came to town to consult a

distinguished medical baronet and found him absent. His butler informed the patient that his master was absent from town. He did not refer the patient to any junior, but remarked, with great indifference: "There's a very good man over the way; his name's ——," indicating, by a jerk of the thumb, the residence of a not less distinguished and titled physician. It can scarcely be supposed that the first physician had given his butler orders to act thus, but from what I have seen of medical flunkeys, I can readily credit the story.

After much preliminary talk the purification of London sewage, before its discharge into the Thames, is, it seems, at last about to be undertaken by the Metropolitan Board of Works. A process of precipitation is proposed. It is estimated that it will be necessary to treat one hundred and fifty million gallons of sewage per day, the weight of the residual pressed sludge being about eight hundred and fifty tons. The sewage effluent is to be further purified by means of permanganates. The Board is about to spend three-fourths of a million (=$3,000,000) in the erection of the necessary works, and it is estimated that the annual cost to the ratepayers will be nearly a hundred and twenty thousand pounds.

Her Majesty's Privy Council have just issued their regulations under the new act for the election of representatives of the registered practitioners in the General Medical Council. Three members are to be elected for England and Wales, one each for Scotland and Ireland. The returning officer is ordered to issue his precepts for election during the week preceding November 13th, and the election must take place within twenty-one days after the receipt of the precept. A certain languid interest in the election has already been elicited, and one or two of the candidates have contrived to secure a considerable number of promises, though others have simply expressed a willingness to serve or published an address. What has excited more attention, and in many quarters indignation, though perhaps much more widely, simple contempt, is an attempt of a party in the British Medical Association to convert themselves into a caucus, with the object of controlling the election. At the Brighton meeting, as already reported in your columns, the members of the Association, when the matter was brought before them, decided that they would not interfere or in any way attempt to use the Association for the purpose of influencing the result. Thereupon certain members of the Council of the Association held a private meeting in their hotel, and formed themselves into a committee for the purpose of doing that which the meeting had refused on their invitation to do. Not much notice was taken of this, save that the Association's journal gave prominence to a report of this proceeding, while an independent journal denounced it as a trick, and pointed out that all those concerned in it were officials of the Association. Nevertheless, the self-elected committee persisted in their action, but, stung by the taunts of cliquism, they issued a circular inviting the co-operation of others, and called another meeting of all willing to join them, for last Tuesday, at Birmingham. They say from upward of a thousand circulars were issued, but I have not been able to see one, nor to find anyone who received it. I fancy, therefore, they were all distributed to country gentlemen of whom the promoters felt sure. At length the day of meeting arrived, and the muster in the Birmingham hotel, in response to the circular as well as advertisements, amounted to the magnificent number of thirty-two! But these did not remain all the time. After a good deal of desultory talk the meeting began to thin, and toward the conclusion, when the only important vote was taken, there were fourteen souls present, of whom eleven voted for, and three against, the proposal before them. This was to take a *plebiscite* of the three hundred and forty persons who had condescended to reply to the circular. These are to be asked, by a post-card, to say which three out of ten, or a dozen, names mentioned at the meeting, shall be supported by the committee. Surely no more complete fiasco could be imagined. The thirty-two persons who met at Birmingham can have no pretence to represent the profession, and have utterly discredited themselves by attempting to put forward their candidates in this unauthorized and underhand manner. There was an attempt to throw dust in the eyes of the few independent men who put in an appearance, by casually mentioning the names of other candidates, but it was obvious that the fourteen who stayed to vote were only concerned to foist upon the profession three members of the Council of the British Medical Association, and to secure for them a position which would make them appear to numerous members as official nominees of the Association. This pretty little conspiracy, although it has been thoroughly joined in by the journal, has so far failed, and has only proved that the wire-pullers in question have utterly discredited themselves.

THE USE OF ANTIPYRETICS IN VIENNA.

SIR: Having observed pretty carefully for the last few months the extent to which the above remedies are used here, in Vienna, I send you this brief communication somewhat as a reply to Dr. H. P. Chace's letter, contained in THE MEDICAL RECORD of July 31st. I would say then, first, that after an extended trial antipyrine has been entirely and absolutely discontinued in Professor Nothnagel's wards in the treatment of typhoid fever.

Thallin is being used in a few cases, but only in the milder ones, as he is afraid of it in the more severe forms of the disease; although it has been lately greatly lauded, and even claimed by some writers to be a specific in this disease.

Dr. Gaksch, Professor Nothnagel's assistant, one of the brightest teachers of clinical medicine in Europe, says that we are trying thallin as a simple experiment, and so far it has been of no use in shortening the course of the disease or ameliorating its prominent symptoms.

As a pure and simple antipyretic, he says that the remedy is more powerful than antipyrine, controlling the temperature and at the same time disturbing the patient less. But of the use of antipyretics in general, in the treatment of abdominal typhus, he uses this very strong language:

"During the time we used them here, not only was this disease not shortened in its duration (though we controlled the temperature of the patient), but, on the contrary, it ran a more protracted course, and convalescence was more likely to be complicated by the intervention of a hypostatic pneumonia and other untoward symptoms that arise from a weakened heart."

The antipyrine Nothnagel especially condemns in all febrile diseases that run a protracted course, and that require the patient to be supported.

During some weeks spent in his wards I only saw the remedy prescribed a few times, and that was in cases of acute articular rheumatism of a sthenic type.

Nothnagel says that since Vienna's new water-supply, typhoid fever is nearly unknown here in the city, and says that *all* our cases this spring and summer have been brought here from the surrounding towns. The treatment of typhoid fever, both by Bamberger and Nothnagel, is in the main one of expectancy.

If the temperature does not go above 39° R., there is almost no medicine used. If it runs above that point an occasional cold bath is used, and frequent cold sponging.

Quinine, to the extent of one gramme in the twenty-four hours, given in two doses during the exacerbation of the fever, is about the sum total of drugs given. Nourishment is given freely, consisting of milk and meat soups. No solid food is allowed until the patient is well on the road to convalescence. Stimulants are used after the first week. As bearing on this subject of anti-

pyretics, I cannot refrain from giving you a very brief epitome of a series of articles that lately appeared in the *Wiener Medizinische Blätter*, from the pen of Dr. Weinstein, on the action of thallin. He tried the remedy in croupous pneumonia, erysipelas, tuberculosis, acute rheumatism, and the puerperal processes.

It was especially to test the virtues of the remedy in typhoid fever that the experiments were made, as Ehrlich and Laquer had lately published their views, putting forward the opinion that the remedy was a specific for this disease. He claims that the lessening of temperature is more imaginary than real, the error coming in this way:

The agent acts by paralyzing the heat-producing centre in the brain; that such paralysis acts most potently on the peripheral nerves, and hence, though you have a decided lowering of the *axillary* temperature, if you test the vagina or rectum you will find the temperature of these parts far less influenced.

The cases of pneumonia treated did especially badly, and he leaves the impression on the reader's mind that two of the cases that died might have recovered under more favorable and rational management. He winds up by saying that he believes that antipyretics should be stricken from our pharmacopœias. He says:

"Observe the calm, easy quiet of your patient whom you have sponged or bathed in case of typhoid fever, as contrasting with his condition after you have lowered his temperature by giving either thallin, antipyrine, kairin, resorcin, and the like. In the last case you will be likely to see him with an anxious look, bathed with a cold sweat, and perhaps have to give him stimulants to prevent an impending collapse."

Professor Breisky, after a fair trial, condemns in most positive terms the use of antipyrine in childbed fever. The case of Dr. Chase, cited in THE MEDICAL RECORD, can only be explained on the supposition that his patient had some peculiar idiosyncrasy that is certainly very uncommon, but in this case causing the antipyrine to act as a hypnotic. I have used the remedy in my own practice extensively, in most forms of disease that have fallen under my observation, and which are accompanied by a high temperature. The remedy in my hands has never appeared to act as a curative agent, and has often been followed, even when given in moderate doses, by such unpleasant symptoms as to oblige me to discontinue its use.

W. S. CALDWELL, M.D.

VIENNA, AUSTRIA, August 16, 1886.

WHAT CAN WE CURE?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: After reading the article of Dr. Dewey, in the issue of THE MEDICAL RECORD of August 21st, one might, if he accepted the theory therein implied, conclude that the above query can be answered in one word—nothing—and that the thousands who have the honor to pursue the noblest calling that God vouchsafes to man, have been hitherto, and are still, following an *ignis fatuus*.

Happily, however, the majority of the profession will not accept this teaching without a word of dissent.

"A doctor's faith in physic" may be "the measure of his intellect," but it is by no means always in inverse proportion thereto. There is a limit to this rule of measurement, and the line of limitation must be drawn at scientific and judicious medication, which is practised by the better class of physicians of the day, and does not eschew the intelligent use of the products of physiological research and clinical experience.

That "countless millions" live and die "undoctored and undrugged" is no evidence that drugs are a delusion; nor is the fact that "we give out at threescore and ten" proof positive that physic is a farce.

There is, indeed, a great difference between the medical text-books of the present time and those published a hundred years ago, and it is true that the portion devoted to the therapeutics of disease is but meagre compared to the lines relating to diagnosis and pathology. This is as it should be, but it does not follow that our ability to cure disease has decreased commensurately with the literature descriptive of the treatment thereof.

Specifics innumerable have ceased to work their noxious influences on the human race, and been buried with the ignorance of past ages, but that fact does not detract from our power of cure. On the contrary, it greatly enhances it.

Lithotriptics are defunct, 'tis true, and so, perhaps, are many of the poor unfortunates upon whom they were used; but their decease does not lessen our control over "stone in the bladder," which to-day is readily cured by the surgeon.

Emmenagogues have followed in the wake of lithotriptics, and it is now universally acknowledged that no drug has power *per se* to produce the menstrual flow. Science, in its ever onward march, has taught us that the condition for which emmenagogues were formerly employed—amenorrhœa—is but a symptom, and it is relegated to the domain of gynecology, where it is treated with intelligence, skill, and generally success

> By men who have, as yet, not come
> To fear the use of speculum;
> Which, wisely used, it may be said,
> Is naught of harm to any maid.
>
> But e'en though specula have the power
> A modest maiden to deflour,
> 'Tis better far thus to escape,
> Than be the subject of a rape.

Though there is no evidence that the so-called expectorants have any inherent power of "lung hunting" and loosening the products of inflammation, it is a pretty well established fact that the ammonium salts are eliminated by the lungs, and it is not at all improbable that in escaping they greatly aid nature in her efforts to liquefy and expel such products.

Medicine was never intended to be at strife with nature, but rather to supplement and aid the latter in her efforts; and surely, if by the use of drugs we can enable nature to effect a cure which she could not have accomplished unaided, we may justly claim the honor of the cure for the remedy employed.

Of the inutility of the majority of the drugs described in "The United States Dispensatory" there can be no doubt, and the probability is that we would get along just as well if nine-tenths of them should find a resting-place in the sea; but, while we have no elixir vitæ by the use of which we can promise eternal life and immunity from all disease, we have certain medicines which can, and do, cure diseased conditions, and, because of their comparative scarcity, they should be the more highly esteemed and extolled.

If we accept this reasoning we have an incentive to work, and are encouraged to pursue that research which has already given to us opium, quinia, ether, chloroform, and other medicines which have enabled us to mitigate suffering, calm excitement, induce repose, and perform, without a particle of pain to the patient, such operations, followed by cure, as would have been impossible without them; and it is not unreasonable to hope that future investigation may reveal to us remedies as potent against typhoid, measles, scarlatina, and others of the exanthemata as quinia is in ague. If, on the other hand, convinced of the fallacy of the old system of large and frequent dosing, we descend to the opposite extreme of allowing nature, undisputed and unaided, to continue on in "the even tenor of her way," we are nursing an error equally pernicious as the former, and might better return to the old days of "ten and ten," and indiscriminate bleeding, or else take in our signs, cast our knowledge to the winds, and end the calling to which we have become apostate.

J. H. CARMAN, M.D.

PLAINFIELD, N. J., August 25, 1886.

A FEW MORE WORDS REGARDING THE DEATH PENALTY AND THE MODE OF INFLICTION.

To the Editor of The Medical Record.

SIR: I have read with much interest the articles of July 24th, and August 21st, regarding capital punishment.

The "conclusions" in the article of August 21st are what I desire to consider in the present article.

We should never forget the fact that most of the juries in murder trials (as well as in all jury cases) are composed of (not medical men) men of no great intelligence, and those who believe vivisection to be a crime when nothing but cats, useless dogs, rabbits, or guinea-pigs are used. Now if, therefore, we judge as his words say, "by the horror which people in general have of vivisection," would such a jury be liable to convict a man of murder in the first degree when they realized the penalty was death by such "a terrible ending" as the article in question designates the *murderer's* idea of it to be? It would seem, from public opinion as daily expressed, that the majority of juries in murder trials would convict a man of murder much quicker were the penalty "that he be drawn in twain in the stocks," than if it were that he be "turned over to the mercy of vivisectionists."

We will now turn to the murderer.

It cannot be possible that men contemplating murder can ever stop to think of the penalty. Did they do so, how many would commit the foul deed?

Further, those who have committed murder do not have time to think of the penalty, or if they did think of it would drop that part of their thoughts at once and turn their whole attention to a means of release. But then, what person contemplating murder, or who may have committed the crime, should he ever think of the penalty, would not prefer that his sentence (provided he had to suffer the extreme of the law) be that he "be placed on a table, and at the hands of three or four physicians and in the presence of a government committee of three or four, he be quietly put to sleep and the anæsthetic finally carried to the extent of producing death," rather than that he "hang by the neck till he is dead, dead, dead." Though a man ought to care but little for his own body when he can be so vile as to mutilate the body of another human being and destroy life, when the work on his own body is to be done when he is, to all intents and purposes, dead.

I can but believe that all means that lessen pain, torture, publicity, and disgrace of capital punishment will tend to increase the number of murders. It is therefore apparent, if chloroform were to be the means of inflicting the death penalty, there would be more murders; and if vivisection were to be practised on a criminal, there would be less murderers sentenced to death, and that the average jury would look at the death penalty carried out in that way as a crime against a criminal.

F. E. MAINE, M.D.

AUBURN, N. Y.

ICE-CREAM POISONING.

To the Editor of The Medical Record.

SIR: After reading several articles in THE MEDICAL RECORD on ice-cream poisoning, I would like to take exception to Dr. Morrow's "vanillism," and Dr. Kales' "gorging himself and best girl"—in the first instance, because I have known patients to have precisely the same symptoms from eating lemon ice-cream, and in the second, I have seen very sick patients from eating only part of a plate of the cream, or ice-cream with a glass of lemonade or a cup of coffee.

My experience seems more in accord with Professor Vaughan's tyrotoxicon.

On the evening of July 6th, the M. E. Society in this place held a lawn festival with ice-cream, coffee, cake, etc. About two hours later, some seventy-five persons were suffering more or less from some gastro-intestinal irritant; the symptoms were about the same as described by Dr. Moffit, except that there were less bone pains, and more cramping and griping; and in severe cases, after throwing up the contents of the stomach, they vomited a slimy matter with a decided odor of fresh fish. This fish odor was not the exception, but the rule in bad cases. Two of the patients I attended vomited blood and passed blood in the stools; there were no fatal cases.

The amount of cream eaten, and the flavoring, seemed to make very little, if any, difference with the degree of illness, and one great peculiarity was that a few were not affected in the least. I ate a plate of the cream in the evening, and about two o'clock the next morning, after seeing a very sick patient who had had some of the cream brought to the house, and of which the family had eaten not a great while after their regular tea, I ate five or six teaspoonfuls of the same cream, which was then warm, and felt no bad effects whatever.

Now, as to how the cream was made. I would first say July 4th, 5th, and 6th were very warm. Monday evening, July 5th, the custards were cooked, made from Monday morning's cream, and Monday night's milk boiled in a tin pan that had had the bright tin worn off. It was noticed that one pan of cream was *not sweet*, but thinking it would make no difference, it was used; the freezers were thoroughly cleaned and scalded, and the custards put in the same evening while hot; the cream was frozen Tuesday afternoon, having stood in the freezers since the night before, when the weather was very warm; the flavoring used was the same as is used every week by the ice-cream maker in this village; the cream when frozen was poor stuff.

To my mind, that cream had undergone some chemical change, and if it was not tyrotoxicon it was something else of the same nature; it was not vanillism, for some ate lemon cream, and it was not gorging with indigestibles, for some had eaten nothing but cream, and but very little of that.

Why a few were not affected I do not pretend to explain.

CHARLES S. ALLABEN, M.D.

GILBERTSVILLE, N. Y.

IS THERE AIR WITHOUT GERMS?

To the Editor of The Medical Record.

SIR: In your issue of July 24th is an article by Dr. G. W. McCaskey, of Fort Wayne, Ind., who seems to be surprised that any one should think there is air without germs. He was, furthermore, thrown into a fit of professional horror on account of my antagonism to the present extreme theories of the bacteriologists. Dr. McCaskey has been put to considerable trouble to tell us what has been freely published in the medical and lay press for many years, viz., that experiments in the polluted atmosphere of London, Liverpool, and Paris had proved beyond question the existence of germs in large numbers. I do not care to go into the *various text-books* to make an article, but I simply want to say just what my clinical experience has led me to believe to be a fact. I distinctly stated in my paper on cataract, that I thought some form of antisepsis in the hospitals was absolutely demanded; but that, in the air of an ordinarily healthy country locality, I believed disinfection to be unnecessary, and, as far as the eye is concerned, sometimes even harmful. In using the expression, "there is bread that hath leaven, and air as well, without germs," of course I employed it in a figurative sense, and in saying that there was "air without germs," I supposed the intelligence of the profession would construe it in a relative way. I do not argue that there is not in *all air a microscopic character of some kind* (call it a germ if you wish), but I deny that there *exists in all space a special pyogenic germ*, which, if allowed to come in contact with cut surfaces, will lead to a special disturbance. Is it possible that the atmosphere of the entire world is filled with myriads of

germs of the latter description? I do not believe it. The plain question to be discussed is not to be evaded by parading the high-sounding polysyllabic terms of the microscopists as an answer. Common-sense observation of the behavior of wounds under various conditions, and the practical results of such wounds are worth more in determining the value of the different modes of treatment than all the theoretical bombast that Dr. McCaskey can compile. Theories, however plausible, are not to be weighed against judicial conclusions drawn from a series of cases. Let every surgeon keep a record of his cases and the mode of treatment, and it will not be long before statistics will settle the question whether there is, outside of the hospitals, in all ordinarily healthy localities, a poison in the air, which, if brought in contact with wounds will be either the cause of their sickness or their death. Again, I say that my clinical experience in this part of the country leads me to believe that such a poison does not exist. Dr. McCaskey says in one place, "It is also certain that if there is any germinal matter in the air, its introduction into wounds may vary from the slightest disturbance to the death of the patient." A little farther on he says: "Of course all germs are not pyogenic." Why, certainly not; and this is a part of my argument, for who cares for a non-pyogenic germ. Yet I guess he will contend that these are the kind of germs that surrounded my patients. "Were it not for the introduction of germs all wounds would heal without suppuration," says Dr. McCaskey. Indeed; but I reported twenty-five successive extractions of cataract without a failure, and all performed in an atmosphere in which, according to the doctor, there must have been millions of germs to the square inch, with no precaution except clean hands and clean instruments. There was not the slightest suppuration in any case, and as there can be "no pus without a microbe," I must ask where was the microbe? Is it possible that each and every time the omnipresent microbe lost a splendid opportunity to slip into the wound, or is it just possible that each and every time it so happened that a eunuch—the non-pyogenic microbe—was the only unlucky invader. Pooh-pooh to the eunuch microbe.

Now let us be honest with the microbe, but honest as well with ourselves, and in observing and recording our cases do let us tell just how they appear to us, unbiassed by the opinion of anyone else. Honest observations, courageous expressions of opinion, and accurate tabulation of results will do a great deal toward putting surgery on a strictly reliable basis. For my part, I intend to tell it as I see it. Dr. McCaskey refers to the brilliant results obtained by Mr. Lawson Tait, and says this shows what is possible by a strict and scientific regard for cleanliness. Undoubtedly true, and this is the fundamental rock of my argument. Dr. McCaskey, however, does not have the courage to admit that Tait's success is an irreparable blow to disinfection and the germ-theory. Cleanliness will not keep a microbe out of the abdominal cavity if the air which circulates in it (through the incision) is laden with millions of them; but perhaps this is another instance where only the eunuch microbe gained access. Tait had one hundred and thirty-nine ovariotomies without a death, and he not only let this deadly air into the abdominal cavity, but he washed it out with ordinary lukewarm Birmingham water. Oh! horrors! horrors! Was the air which circulated through the abdominal cavity disinfected? No. Did the water, which touched every part of this sensitively lined cavity, contain any germicide? No.

Another blow to the microbe. What will Dr. McCaskey think of Le Fort, who has lately left amputated surfaces exposed to the air in the Hôtel Dieu and Beaufort without the slightest interruption of the process of cicatrization, or the development of any constitutional disturbances. Rose, of Zurich, has also lately left amputated surfaces exposed to the air without the slightest detriment; while Billroth, at the same time, and with identical hygienic conditions, had results less fortunate, although he invoked every possible antiseptic precaution. These are facts which the bacteriophobists must solve. Now, I don't care what the bacteriologists claim, for they claim a special bacterium for every disease, but I do insist that they bring forward clinical facts to sustain their fascinating theories. I, for one, do not care to swallow, without masticating, each new-hatched theory of the German laboratory. I do not underrate the grand achievements of those prodigious workers, but many of their theories have been so fleeting and fast-coming that it is more practical to wait until they have been reliably accepted as established facts. A few years ago it was all carbolic spray; now it is something else; next year will it not be another? The ephemeral character of the popular germicide is in itself an argument against its usefulness, a proof of its instability. It reminds me very much of the reign of a society belle at a fashionable watering resort, who, after flirting with her admirers leaves for other fields, and is supplanted by one of her kind, who, at her first coming is considered just as beautiful, equally attractive, and serves fully as well.

A few years ago I attended, one night, while in London, the famous old London Medical Society. Many of the distinguished men of that great city were present. Listerism was in its glory. Hissing, bubbling, carbolized steam filled the rooms and wards of every hospital. Keith feared no more deaths from ovariotomies; Sir Spencer Wells was happy; while Hutchison, Bryant, and others were content in that they saw no more suppuration and no more surgical death. The discussion struck, finally, the absorbing question—Listerism (the spray)—and was conducted in an honest, brilliant, spirited, and aggressive style. The brave and distinguished Gamgee was the target toward which a vigorous argument was directed. Gamgee said he did not believe in Listerism, and predicted its death in a few years. To him Listerism was as a tankard of ale, mustard, and spice to a piece of roasted English mutton. "It gave a flavor, tickled the palate, and pleased the fancy." Where is Listerism now? Was Gamgee right? It seems so. There are others very high in authority, I must inform Dr. McCaskey, who do not accept every claim of the bacteriologists. What does he think of M. Peter and his followers, in the Academy of Medicine of Paris, who regard the microbes of all shapes incapable of setting up diseased action in any of the tissues. What of the distinguished and zealous worker, M. Michel, who says: "They who thus ascribe the origin of disease to these micro-organisms are constrained to find a special bacteria for every particular disease. So far from doing harm, I believe them to do good. They stand like sentinels on the confines of organic life." What of Hiram Corson, of Conshohocken, Pa., who says, in closing his admirable monograph on three thousand and thirty-six cases of labor (only losing six out of this number from anything like septicæmic trouble): "Puerperal fever is a disease exceedingly rare in the country. If it is caused by the germs, which are so guarded against in cities, and especially in hospitals, they are inactive, if they exist at all, in the country; and, therefore, the directions so urged by Dr. Elliott, Carl Braun, and others, are not needed with us." Let us know the truth about the microbe, but let us know the whole truth. *When that is known, I am satisfied the verdict will be that there is air without harmful germs.*

BENJAMIN J. BALDWIN, M.D.

Montgomery, Ala., August, 1886.

THE ANTIQUITY OF INGLUVINE.—Dr. Lambuth states that ingluvine, which at one time threatened to enjoy quite a popularity as a specific for vomiting, has been in use in China for over a thousand years. It is, however, still used in the same crude form in which it was first prescribed.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 26 to October 2, 1886.

BACHE, DALLAS, Major and Surgeon. Granted leave of absence for twenty-five days, to take effect on or about October 2, 1886. S. O. 143, Division of the Atlantic, September 24, 1886.

GIBSON, JOSEPH R., Major and Surgeon. Granted leave of absence for two months, from September 25, 1886, on Surgeon's certificate of disability, in lieu of the unexpired portion of the ordinary leave of absence granted him in S. O. 158, A. G. O., July 10, 1886. S. O. 227, A. G. O., September 30, 1886.

GARDNER, WILLIAM H., Major and Surgeon. Ordered from Department of Texas to the Department of the East. S. O. 227, A. G. O., September 30, 1886.

APPEL, DANIEL M., Captain and Assistant Surgeon. Assigned to duty at Fort Davis, Tex. S. O. 133, Department of Texas, September 22, 1886.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon. Leave of absence extended to include November 5, 1886. S. O. 226, A. G. O., September 29, 1886.

KENDALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 81, Division of the Pacific. September 24, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Ordered for temporary duty at Fort Verde, Arizona Ter. S. O. 90, Department of Arizona, September 20, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 2, 1886.

GUITERAS, D. M., Passed Assistant Surgeon. To Receiving Ship Franklin for temporary duty. October 3, 1886.

WENTWORTH, A. R., Assistant Surgeon. Detached from Navy Yard, League Island, and to the United States Ship Galena. October 1, 1886.

SCOTT, H. B., Assistant Surgeon. Ordered to Navy Yard, New York. October 1, 1886.

ASHBRIDGE, RICHARD, Passed Assistant Surgeon. Detached from the United States Ship Swatara, October 1, 1886. Granted six months' leave.

BERRYHILL, T. A., Assistant Surgeon. Detached from the Museum of Hygiene and ordered to Receiving Ship Minnesota.

ARTHUR, GEORGE, Passed Assistant Surgeon. Detached from the Navy Yard, New York, and ordered to the Museum of Hygiene.

PERCY, H. T., Passed Assistant Surgeon. Detached from the United States Ship Galena. Proceed home and wait orders.

SHAFER, JOSEPH, Assistant Surgeon. Detached from the United States Ship Minnesota and ordered to the United States Ship Swatara.

STEELE, J. M., Passed Assistant Surgeon. Detached from Naval Academy, and granted six months' leave.

BIDDLE, CLEMENT, Passed Assistant Surgeon. Ordered to Naval Academy, Annapolis, Md.

THE NICOLAS MILITARY HOSPITAL in St. Petersburg has now a special department for the treatment of diseases by massage, and also a training-school for the instruction of nurses in the method of giving massage.

Medical Items.

CONTAGIOUS DISEASES WEEKLY STATEMENT. Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 2, 1886:

	Cases.	Deaths.
Diphtheria	[illegible]	2
Typhoid fever	[illegible]	13
Scarlet fever	[illegible]	[illegible]
Cerebro-spinal [illegible]	[illegible]	3
Measles	[illegible]	[illegible]
Diphtheria	[illegible]	[illegible]
Scarlet fever	[illegible]	[illegible]
Yellow fever	[illegible]	0

THE USES OF CREASOTE.—Creasote is the subject of a very interesting paper in *La France Médicale*. After treating of its history and chemical nature, its therapeutics as an antiseptic, parasiticide, and caustic are enumerated, and several formulæ are given, from which the following are taken:

℞. Creasote ..... 1 part.
Water ..... 100 parts.
M. Ft. sol. As a wash for ulcers.

℞. Creasote ..... 1 part.
Lard ..... 15 parts.
Ft. ungt. An ointment for fetid ulcers.

℞. Creasote ..... 2 drops.
Water ..... 60 grammes.
Orange-flower water ..... 30 grammes.
Essence of citron ..... 2 drops
M. Ft. mist. A teaspoonful every two hours, in typhoid fever.

℞. Creasote ..... 1 part.
Cod-liver oil ..... 150 parts.
M. Ft. mist. A teaspoonful daily in phthisis.

INFANT LIFE AND THE NEW YORK FOUNDLING ASYLUM.—In the New York Foundling Asylum every effort is made to employ wet-nurses for the foundlings, but a considerable number are necessarily bottle-fed. These are placed in a ward which is known among the employés of the asylum as the ward of the "*dying babies.*" Many agents of proprietary foods have been allowed to make trial of their preparations in this ward, but no one has thus far published the result, for it has been uniformly one of failure. In all the institutions in and about New York where infants are bottle fed the result has been similar, establishing the fact that an inappropriate and faulty diet is the common cause of indigestion and diarrhœa in infants.—DR. J. LEWIS SMITH in *Archives of Pediatrics.*

POLITICAL METHODS OF MEDICAL CANDIDATES.—There is to be an election in November of three representatives of the medical practitioners of England and Wales in the General Medical Council. Several candidates have already appeared in the field. One of them is going to work as for a parliamentary election. Not only has he formed a large committee and issued an address, but committee-rooms have been hired and a treasurer appointed. The expenses incurred already are large, and the object of appointing a treasurer is doubtless to have some one to take charge of the proceeds obtained by "sending the hat round," a process which will probably be soon resorted to.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE has just held its meeting at Birmingham, and in some of the sections matters of medical interest have been discussed. A rather striking paper was read by Mr. Crookes, F.R.S., in the chemical section. He stated, in definite terms, a speculation which has doubt-

less passed through the minds of many chemical students, viz., that the elements might all be traced back to a single substance from which they have been gradually developed. He proposed to call the one primordial substance "protyle," a word coined by him to correspond with the protoplasm of the biologists. Professor Carnelley read a paper on the air of dwellings and schools in relation to diseases. He had found the organic matter and carbonic acid of outside air much lower in suburban than in town air, and the organic matter and micro-organisms less during the night than the day. In dwellings he found the air became more and more impure, and the death-rate greater, as he passed from four to three, two, and one-roomed houses. This is what studies in sanitary science would have led us to expect.

The Status of Dentists in England. — The recent meeting of the British Dental Association has drawn the attention of members of the medical profession to their dental cousins. Dentistry and medicine are much nearer together now than they were before the passing of the Dental Act. That Act of Parliament, although (by the clause recognizing as dentists all those in actual practice as such at the time the Act passed) it admitted an army of irregulars to the dental register, yet did good for the future by providing that henceforth no dentist should be allowed to practise until he had not only been through a proper course of study (including apprenticeship to a dental practitioner and attendance at a dental hospital), but passed satisfactory examinations. Dentistry as a profession may be said to be "looking up" in Great Britain. The status of its practitioners is decidedly better than formerly, and by a dentist the public now understand someone who knows something besides how to "draw teeth." Among the dental practitioners in the metropolis are several highly-qualified medical men, who, originally designed for the medical profession, afterward forsook it to restrict themselves to dental work solely. More than one university graduate in medicine has done this, and among the odontologists are several Fellows of the College of Surgeons. It is by no means uncommon now for a dental student to prolong his curriculum somewhat and obtain a surgical, as well as a dental, diploma. (None of our universities give a degree in dentistry like the D.D.S. of the States.) At the recent Dental Congress it was strongly urged in one of the papers read that not merely a few, but all dental students should be encouraged to go through a full course of medical study, and become qualified in medicine and surgery.

The Unsanitary Condition of a London Hospital.—St. Mary's Hospital in London was inspected in 1875 by a distinguished authority on hygiene, and many defects were detected and corrected, and it was then supposed that the building was in as nearly perfect a sanitary condition as it was possible to make it. But now it has been found that the drains were badly laid. Some of them are so placed that in flowing round from the back to the front of the building the sewage has to turn two awkward corners in the pipes, and what is perhaps worst of all, the fall is utterly inadequate—only about a foot in the whole distance. On opening the pipes stagnation of sewage in them has naturally been found. It is proposed to remedy this fault at once, but it is thought strange that it was not detected and removed eleven years ago.

An Example for Other Doctors to Follow.—An amusing story is told of two practitioners in a small town in England who held radically opposite views concerning the hygienic management of typhoid fever. While Dr. A. closed all the windows in his patients' rooms so as to obviate the slightest danger of a chill, Dr. B. held that fresh air was absolutely necessary. An epidemic broke out in the neighborhood, and each doctor regulated the ventilation of his patients' rooms on his own theory. There were often in one street patients belonging to each doctor. A walk down the street sufficed to point out the houses where each had patients. Where Dr. A. had a patient the windows were all closed, where Dr. B. had one they were all open. Nevertheless, the doctors were very good friends and agreed to differ. Dr. A., if asked whether he did not consider Dr. B.'s plan of opening all the windows very bad practice, would reply that it was all very well for Dr. B. to do so but that it did not do for him (Dr. A.) to adopt the plan. At last Dr. B. fell ill himself with the fever, and sent for his colleague to attend him. "There, now," said everyone, "there's a patient who won't shut his windows for Dr. A.—Dr. B. won't, I'm sure." However, on visiting his patient, Dr. A. quietly ordered all the windows to be closed, and closed they were during Dr. B.'s illness. When the latter was reproached for abandoning his theory in his own case, he said: "Well, it didn't do for his own patients to have all their windows shut, but it did for Dr. A.'s patients, and he was one of the latter and must act accordingly."

This story is vouched for by a correspondent as having been of actual occurrence.

A Chinese Substitute for Cocaine.—In the third annual report of the Soochow Hospital Dr. W. R. Lambuth relates a case in which he used cocaine in an operation for extraction of a foreign body from the eye, much to the amazement of the friends of the patient and others. A native surgeon who happened to be in the hospital under treatment at the time was not so much impressed, and said that the Chinese had a similar anæsthetic the chief ingredient of which was "frog-eye juice." Upon his recovery he endeavored to make his assertion good, and, after a long search among the wholesale drug-stores of Soochow, returned with a small, hard cake resembling beeswax, but harder, darker, and semi-transparent. This cake was cut into pieces and soaked some hours in water, together with a small white woody excrescence found growing upon the knot of some tree. After twenty-four hours the preparation was ready for use, and upon trial, Dr. Lambert says it was certainly found to have anæsthetic properties. The tongue and lips became quite numb when it was applied to them, and a finger immersed for some minutes in the solution lost sensation to the extent that a needle could be thrust into the end of it without pain. The surgeon, as well as others, insisted that the anæsthetic property lay in the juice of the frog's eye, and did not depend so much upon the other ingredient. The writer states that he has since found that the drug is widely known in China, though little used.

Ship Island Quarantine.—Dr. C. Beard, of Boston, referring to a recent item in these columns concerning yellow fever at Ship Island Quarantine, New Orleans, writes: "This is quite as *good* as would be the information that a vessel similarly conditioned had invaded Fire Island, Brooklyn, and nearly as instructive. Ship Island, the seat of the United States Quarantine Station, is situated about sixteen miles off the coast of Mississippi, in the Gulf of Mexico, and is eighty miles as the crow flies from New Orleans. Surely that city is unfortunate enough as to sanitary reputation abroad, without 'piling on' all the infectious diseases that fate or a fair wind may cause to lodge at the extreme end of such a radius."

Antipyrine in Pneumonia.—Dr. W. A. Howard, of Waco, Tex., writes: "I desire to call attention to the analgesic and other beneficial effects of antipyrine in pneumonia. I have found it relieve the pain in every instance in which I gave it, and in the majority of cases convalescence commenced from that date. I am confident I have cut short the disease in several instances where it was given during the first stage. The patient usually falls into a deep sleep, awaking much refreshed and improved generally. The soporific effect I had attributed to the analgesia. I find it is, also, an excellent diuretic."

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Original Articles.

SOME PHASES OF CEREBRAL SYPHILIS.

By L. DUNCAN BULKLEY, M.D., M.R.C.P.

IT is to me a source of the greatest possible gratification to meet in this noble hall, and in the first city of your great continent, so many representatives of American medical science as are assembled here to-night; and you must allow me to thank you most heartily for the very kind and flattering reception which you have accorded to me. For many years past I have wished to cross the Atlantic, in order to make the personal acquaintance of many eminent colleagues who were already well known to me by reputation, and to learn something of the aspects of American medicine in your hospitals and universities. I am not one of those who consider the old world to be effete and played out—sclerosed as it were through loss of nerve-cells and the undue proliferation of the lower tissues—unable to do much further original work, either in our own field of labor or in other cognate departments of research; yet I have felt at once, on my arrival among you, that in this new world of yours, of which I have as yet such a short experience, the air is fresher and keener, the minds more open and unprejudiced, the desire for greater and better knowledge more eager—in fine, the gray matter of the cortex more on the alert than in some parts of Europe, where the old conservative notion of "Rest and be thankful" prevails to an undue extent, and where anything that is new is pretty sure to be looked upon with suspicion in leading circles, simply on account of its being new. Personally, gentlemen, I cannot help feeling it a special privilege to address you to-night under the presidency of my old friend and fellow-student, Jacobi, whom I first met, now thirty-six years ago, in Germany, at the University of Bonn-on-the-Rhine. I trust that on this occasion your eminent president, as well as yourselves, will extend to me that kind indulgence which I now make bold to claim at your hands as your visitor to-night.

The fact that the structure and functions of the brain may be peculiarly and specifically affected by the syphilitic virus seems to have escaped the acumen of the old masters in our profession. When syphilis first appeared in Europe, toward the end of the fifteenth century, and for a very long period afterward, the terrible external manifestations of this appalling disease engrossed the attention of medical practitioners to an unusual degree; nor were these symptoms of the malady of France unknown to the laity. Thus Shakespeare's *Timon* says to the two courtesans, *Phrynia* and *Timandra*:

> "Consume the marrow; . . . bring [illegible]
> In hollow bones of man; strike their sharp shins,
> And mar men's spurring. Crack the lawyer's voice,
> That he may never more false title plead,
> Nor sound his quillets shrilly; hoar the flamen,
> That scolds against the quality of flesh,
> And not believes himself: down with the nose,
> Down with it flat; take the bridge quite away
> Of him that, his particular to foresee,
> Smells from the general weal: make curl'd-pate ruffians bald,
> And let the unscarr'd braggarts of the war
> Derive some pain from you: plague all;
> That your activity may defeat and quell
> The source of all erection."

While the clown in "Hamlet," in the grave-digging scene, says, in answer to the question how long a man will lie in the earth ere he rot, that he will last for eight or nine years,

> "[illegible]
> [illegible]
> [illegible]"

While, therefore, impotence and disease of the cranial bones was thus early stated to be a result of syphilis, yet nothing was known for a long time about any specific disease of the viscera, and more especially of the brain and spinal cord, as arising from venereal infection. When it, however, eventually became obvious that some nervous complaints, such as paralysis, epilepsy, and insanity, frequently occurred in those who had previously suffered from the more ordinary forms of constitutional syphilis, this was explained by that convenient figment, a metastasis having taken place from the skin and mucous membranes to the brain, whereby the latter suffered without being actually diseased.

This fantastic view of the matter, however, did not commend itself to the clear intellect of such men as Hunter and Astley Cooper, who, on the contrary, stated plainly that the brain as well as the other internal organs were insusceptible to the venereal poison. This latter doctrine held the field for a very considerable time, as may be seen from a perusal of the works on diseases of the nervous system, which appeared in the first half of the present century. Thus I find that Abercrombie, in his work "On the Diseases of the Brain and Spinal Cord," which was for many years the great authority on nervous affections, and the first edition of which appeared in 1828, never once mentions the word syphilis at all. In speaking of the causes of brain disease, the Edinburgh professor alludes to continued fever and the exanthemata, injuries to the head, suppressed evacuation of certain secretions, such as the catamenia and the urine, scrofula, passions of the mind, stimulating liquors, and exposure to the intense heat of the sun. *Voila tout.*

The same remark applies to the works of Sir Charles Bell, Marshall Hall, and Romberg. In the latter's clinique at Berlin, which I frequented assiduously in 1853 and 1854, and where I had the opportunity of seeing a large number of cases of all kinds of nervous diseases, I remember only a single instance where that great master allowed syphilis to have been the cause of the patient's illness; and that was a case of paralysis of the third nerve, which was stated to be due to syphilitic periostitis at the base of the skull. In 1854 and 1855 I likewise attended the syphilitic cliniques of Von Baerensprung, at Berlin, and of Sigmund, at Vienna, and saw numerous cases of primary and secondary affections, but not one of cerebral or spinal syphilis. Nor did the great leaders of the Vienna school of medicine, such as Skoda and Oppolzer, whose teachings I followed in the winter of 1855–56, draw attention to this subject in their otherwise admirable clinical lectures. Canstatt's text-book on "Special Pathology and Therapeutics," which was at that time in the hands of almost every student of medicine in Germany, and also constituted the principal guide of the practitioner, was likewise absolutely silent on this subject in the chapter on nervous diseases; while in that on syphilis the practitioner was actually cautioned not to believe in such a thing as syphilis of the brain—a most astounding statement when we consider that perhaps eighty per cent. of all cases of brain disease, which occur

[illegible] New York Academy of Medicine, [illegible] October 7, 1886.

in patients between twenty-five and forty years of age, are actually owing to that distemper. The same ideas prevailed in France, where Trousseau and other masters, whose wards I frequented in the summer of 1855, never mentioned cerebral syphilis at all, and invariably attributed any nervous symptoms in syphilitic patients to cranial periostitis.

The only man who about that time knew that the brain was liable to specific disease was Professor Waller, of Prague, whose lectures I attended in the summer of 1856. He told his hearers then that he had seen red and white softening, and a deposit of solid effusions in the white as well as the gray matter of the brain. According to him the symptoms during life were indistinct, and we could only diagnose cerebral syphilis where the patient suffered at the same time from external manifestations of the distemper. He had known patients in the later stages of the disease to suffer from epilepsy, paralysis, and mental hebetude; but the brain might also suffer at an early period, synchronously with the ulcerated throat, and he had seen cases in which a most violent form of headache was the principal symptom, and where, in spite of active treatment, the patients had died comatose. I believe that these observations of Waller's have never been published, and what I have just mentioned is culled from notes which I took at the time his lectures were delivered.

With this solitary exception, then, all that was taught until a comparatively recent time on this subject was that syphilis might produce an affection of the dura mater analogous to that of any external periosteum; that the membrane might become inflamed, and an intracranial node be formed, which would irritate the surface of the brain, and might give rise to neuralgic, convulsive, and paralytic symptoms. Cases of this kind have been described among others by Sir Philip Crampton, Graves, and MacDowell, of Dublin; by Reade, of Belfast, and by Todd, of London.

A new era in the history of our subject began with the great impetus which was about that time given to the study of pathological anatomy. Among the many successful workers in this most attractive field of research two men stand forth conspicuously, as far as our subject is concerned, viz., Virchow, whose investigations cleared up the nature of syphiloma of the brain and its membranes (1869), and Heubner, who gave us a clear insight into the syphilitic alterations which are apt to occur in the cerebral arteries (1874). These researches may, each in its own way, be considered as landmarks in the history of cerebral syphilis. The foundations of the doctrine were now securely laid, so as to be beyond cavil; and it became clear that, although subsequent work might amplify our knowledge in this respect, it could no longer reverse what was once firmly established.

The salient feature of this work is that the peculiar and specific alteration which occurs in the brain as a consequence of constitutional syphilis is not inflammation, but that it bears throughout the character of a neoplasma. A foreign tissue is apt to be deposited in the dura mater, the subarachnoid space, or the cerebral substance, and forms the several kinds of tumor known as syphiloma or gumma. Apart from this, however, there occurs a special disease of the cerebral arteries, which likewise appears in the form of a neoplasma, inasmuch as a deposit takes place between the endothelium and the elastic fibres of the vessel, whereby its diameter is at first reduced, and the lumen eventually completely blocked up by thrombosis, causing ischæmia, starvation, and softening of the area of cerebral tissue which is supplied by the suffering vessel. Syphiloma and arterial thrombosis cover, indeed, the immense majority of causes of cerebral syphilis which are met with in practice. There remains a residuum of cases in literature in which no structural change could be discovered after death, and in which the symptoms were generally attributed to congestion; it is, however, a suggestive fact, that during the last ten or fifteen years, during which the finer methods of microscopic research have been so much improved, the record of such cases has almost ceased; and it therefore appears probable that one or the other of the two fundamental lesions which I have just mentioned, and their consequences, may, in the future, be generally found to exist in fatal cases of this description, while in many of those which do not prove fatal I believe anæmia rather to be the cause of the symptoms than congestion, to which it is usually attributed.

While, therefore, Virchow's and Heubner's work must be looked upon as epoch-making in the pathology of cerebral syphilis, correspondingly good clinical work has been done elsewhere. I shall probably not be contradicted when I say that Fournier's book, "La Syphilis du Cerveau," which appeared in Paris in 1879, has very greatly extended our acquaintance with the more common, as well as the more unusual, forms which brain-syphilis is apt to assume at the bedside. Fournier has distinguished six different forms of it, viz., the cephalalgic, the congestive, the convulsive or epileptiform, the aphasic, the mental, and the paralytic; and his description of the symptoms which occur in these several forms is more minute and exhaustive than any other which has been given before, and will on that account always remain a monument of able and painstaking industry. A disappointing feature of Fournier's work is that he does not generally point out clearly the connection which exists between clinical signs and pathological lesions, and appears to be only slightly acquainted with the modern doctrine of cerebral localization, which just in this department of clinical medicine finds its most interesting and striking practical applications.

I now proceed to the more particular object of my paper, which is to draw your attention to some manifestations of cerebral syphilis with the peculiarities of which we are as yet imperfectly acquainted. Time, that most unsparing of tyrants, will only allow me on this occasion to revert to two among the numerous subjects which crowd on one's attention in thinking of brain-syphilis, and those which I have selected are: syphilitic coma and syphilitic hemiplegia.

That coma, coming on more or less suddenly in an apparently healthy man, or in one who shows at the time unmistakable symptoms of venereal disease, may be a manifestation of this latter distemper, is not generally known in the profession. We are all familiar with uræmic, alcoholic, and diabetic coma; with the coma of cerebral hemorrhage and that of opium-poisoning; with that which occurs after the epileptic fit, with or after severe hysterical, and hystero-epileptic convulsions; after prolonged exposure to extremes of temperature, whether heat or cold; after erysipelas of the face and head from compression of the brain by a depressed fracture of the skull, by extravasated blood, meningitis, and the presence of pus and other products of inflammation. Nor must we forget that several chronic affections of the nervous system, more especially tabes spinalis, and general paralysis of the insane, are apt, toward their termination, to be attended by attacks of coma. Most of these conditions are described in the text-books, while syphilitic coma is not even mentioned. Fournier is almost the only author who has pointedly, although shortly, alluded to this condition, and related an example of it which occurred in his practice. A knowledge of syphilitic coma is, however, of great practical importance, inasmuch as it requires an entirely different treatment from that of other forms of coma, and an incorrect diagnosis is in such a case likely to seal the fate of the patient.

I have seen, altogether, eight unmistakable cases of syphilitic coma. They all occurred in males between twenty-five and forty-two years of age. In every one of them was there a definite history of primary and secondary syphilis; in four there was at the time a specific rash on the scalp and other portions of the skin; and in one an ulcer in the tongue. In one case the coma ap-

peared eight months after infection; in six between three and five years, and in one case seventeen years afterward. In two cases no other cerebral symptoms had occurred before the coma, while six other patients had at various times suffered from giddiness, epileptiform convulsions, and transient loss of power in the limbs.

Among the exciting causes of the attack I have noticed overwork, anxiety, trouble, and sexual and alcoholic excesses. In two cases no exciting cause whatever could be ascertained. Six of the patients were professional men, and two were men without any regular occupation.

The symptoms of syphilitic coma I venture to classify as, first, premonitory signs; second, symptoms of the initial stage; and third, symptoms of the final stage of coma.

1. I have noted the following premonitory symptoms of the attack of coma: headache, a feeling of confusion and drowsiness, indistinct utterance, a perception of black specks floating before the eyes, with sudden loss of sight for a short time, numbness in the limbs, and some loss of muscular power. In six cases such symptoms occurred either a few hours, or a day or two, before the attack, while in two other cases they appeared to have been entirely absent.

2. The initial stage of syphilitic coma appears to set in habitually during sleep, the patient being discovered by his friends or servants in the morning in a state of apparent insensibility from which he cannot be roused. He is lying quietly on his back, apparently quite unconscious, and, as it were, in a profound sleep. He is evidently not suffering any pain; he does not moan, throw himself about, or put his hands to his head. The face is absolutely devoid of expression; there is a complete blank, and no distortion of the features. The complexion is generally pale. Sometimes he can be roused by shouting to him; he may speak a word or two, and appears to recognize the voice of a friend better than that of a stranger. When asked whether he can see you, he may answer that he is blind. When requested to put out his tongue, he is seen to make an effort to do so. Sometimes the only response is a movement of the lips, at other times the tip of the tongue is protruded, which is then seen to be dry, and covered with a whitish fur through which some few red papillæ are seen to project; but it is not deviated to the side. When food is put into his mouth, the patient makes an effort at deglutition, and generally succeeds in swallowing small quantities of fluid. The eyes are closed. On opening the lids the eyeballs are seen to be deeply retracted into the orbit, one sometimes more so than the other; and they are seen to diverge somewhat in their direction, which imparts to them a particularly dazed and stupid expression. The deeper the coma, the greater is, *cæteris paribus*, the degree of divergence. The pupils are small and insensible to light. On account of the position of the eyes, an ophthalmoscopic examination is generally not practicable, but reveals nothing unusual when practised. The reflex excitability of the conjunctivæ is either very much blunted or entirely gone. The breath is sometimes offensive.

The muscles of the limbs and the body are in a state of perfect relaxation. The body will retain any position which is given it. On lifting the arms or legs, no resistance is encountered; and on dropping them, they flop back heavily by their own weight, like inanimate matter, as in a dead body from which rigor has disappeared. There is no difference at all between the two sides of the body; no appearance of hemiplegia, or rigidity, or tremor, but a dead level of paralysis, with complete loss of muscular tone, everywhere.

Sensibility and reflex excitability are greatly diminished, or quite gone. I have already mentioned that the conjunctival reflex is lessened or absent, and that there is no light reflex in the pupils. Tickling the soles or the knees produces no withdrawal of the legs; but on smartly pricking the skin with a pin, there is generally a slight response. Where the coma is not very deep, the patient may express, by a groan, an [illegible]. The deep reflexes or tendon phenomena are either absent, or can only be elicited with considerable difficulty, and then appear slight and sluggish.

There is, either from the first or very soon, incontinence of the excretions, especially of the urine, which is apparently secreted much in the usual manner, and dribbles away as it reaches the bladder, through paralysis of the sphincter. The fæces are also apt to come away involuntarily, but occasionally there is obstinate constipation, which only yields to powerful purgatives or enemata, and the evacuation then takes place into bed, the patient having no sensation of its coming away and being unable to give a warning.

The pulse is habitually slow, beating at the rate of forty, fifty, or sixty in the minute. In one case I have known it to go down to thirty-six, while in another it was eighty-six. The quality of the pulse varies in the different cases; it may be hard and wiry, showing the sphygmographic signs of increased tension, or tolerably full, or small and feeble, when the sphygmograph indicates low tension.

Respiration is slow and shallow, the excursion of the chest-walls and diaphragm being insignificant. The rate of inspirations varies like that of pulsation, but is generally less than in health. The average rate appears to be from eight to ten.

The temperature is below the average, and ranges habitually between 96° and 97°. In one case I have known it to go down to 95°.

In two cases there was an eruption of herpes in the face, large groups of vesicles being formed on inflamed patches on both cheeks. On the first day the liquid was clear; on the second it became opaque, and the epidermis then gradually peeled off in small patches. Otherwise the skin is generally dry, there being little or no perceptible perspiration.

What is the condition of the brain in the cases which I have just described? It is evidently a complex one, for while we have, on the one hand, symptoms of paralysis, there are, on the other hand, signs of irritation of the nervous centres. The loss of consciousness, and of voluntary motion and sensation, shows that the function of the cineritious substance of the hemispheres, and notably that of the frontal and temporal lobes and of the central convolutions, is in abeyance; while the state of the pulse, the respiration, and temperature shows that the cardiac, vaso-motor, respiratory, and thermic centres in the medulla oblongata and the pons Varolii are in a state of irritation. Such a coincidence of paralysis and irritation is by no means so singular as it might appear at first sight, if we consider the various degrees of excitability which exist normally in different portions of such a highly complex organ as the brain is known to be. Of all parts of the encephalon, the gray cortex is the most highly vitalized, and the one that requires the most active circulation of the blood, the most incessant supply of oxygen, in order to be able to properly discharge its function. Any interference with the supply of arterial blood to the cortex, however temporary, acts like a blow with a hammer on a magnet, that is to say, it destroys its function for the time being by suddenly disturbing its molecular condition. In poisoning by carbonic acid, there is at first a short stage of irritation of the cortex, shown by headache, giddiness, and noises in the head; but this is rapidly succeeded by depression, consciousness being lost and a state of coma induced. At this time, however, there is still irritation of the medulla, shown by a slow pulse, increased blood-pressure, and convulsions, and this stage is only eventually succeeded by paralysis, when respiration becomes feeble, the blood-pressure falls, and death results from apnœa. That in patients suffering from syphilitic coma there may be a short stage of cortical irritation, is rendered probable by the premonitory symptoms which I have mentioned, such as headache, giddiness, and a feeling of confusion.

A coincidence of depression and irritation may be observed in much less complex structures than the brain. Thus we have, in the early stage of an acute attack of sciatica—whether of rheumatic or traumatic origin—on the one hand, symptoms of depression, viz., numbness in the foot and loss of power in the muscles supplied by the sciatic nerve; and, on the other hand, concurrently with them, symptoms of irritation, viz., acute pain in the whole or part of the limb, and convulsive twitches in the muscles which are under the influence of the suffering nerve.

That there is irritation of the lower centres in the first stage of syphilitic coma seems to me to be proved by the slow pulse, the increase of blood-pressure which is present in the majority of cases, the retarded respiration, the lowered temperature, and finally by the state of the pupil and of the ocular muscles. There is a centre for these latter parts in the posterior portion of the floor of the third ventricle and the aqueduct of Sylvius, and, therefore, an intimate connection with the upper portion of the pons Varolii, which has by Hensen and Voelcker been shown to have definite relations to the iris and the other muscles of the eye. Irritation of this centre would explain the contraction of the pupil and the different forms of ocular spasm which are found to be present in syphilitic coma; just as paralysis of the same centre is known to lead to the different forms of ophthalmoplegia.

The initial stage of syphilitic coma lasts in general from two to five days, and is followed either by recovery, or merges into the final stage which leads to death. In the former case the patient gradually begins to show signs of returning consciousness; he opens his eyes from time to time, moves them about in different directions, and recognizes the people about him. He regains his command over the sphincters, and calls the nurse when desiring to pass his excretions. The power of swallowing is improved; he begins to take food with some amount of relish, recovers his muscular power, sits up in bed, has natural, refreshing sleep followed by wakefulness, and presently wants to get up, and begins to go about again. In ten days or a fortnight he may apparently be well, and able to resume, at least to some extent, his previous occupations.

In other cases recovery is more slow and imperfect. The speech remains indistinct and halting, the memory is weak. An hour after having seen a person or read a newspaper, the patient remembers nothing about it. The power of moving the eyes freely remains impaired. He does not seem to take much interest in his affairs, or show much affection for his family. At times, however, he appears to realize his position acutely, and bursts out crying, while at other times he is absent-minded and drowsy.

[illegible]
Is left this vault to brag of."

Eventually, however, even in these less favorable cases the brain power may be more or less restored, showing but little deterioration compared with what it was previous to the attack.

This is the bright side of the picture; and, as recovery generally takes place in consequence of an energetic specific treatment, the doctor may well take credit to himself for having saved his patient's life or reason. But there is also a darker side, since in some cases all the resources of our art prove unavailing. The patient then, after having been for a few days in the condition previously described, gradually sinks into what I propose to call the *final stage* of syphilitic coma.

3. This stage is characterized by an intensification of the symptoms of unconsciousness, loss of voluntary power, sensation, and reflex excitability; while the signs which I have referred to irritation of the pons and bulb now pass into such as denote a paralytic state of these organs. The face is livid and cyanosed; the conjunctivæ are injected, covered with shreds of mucus, and insensible to touch or irritation. The mouth is wide open, from paralysis of the masseter muscles, causing the lower jaw to drop. The breath is fetid; the power of swallowing lost. There is either excessive secretion of buccal mucus, or great dryness of the lips, tongue, and cavity of the mouth, which are often covered with sordes. The surface of the body is bathed in clammy sweat. The pulse, where it has been hard and wiry, rapidly loses that character, and becomes small, feeble, and very quick, going up to 140, 180, and more. It eventually cannot be counted, and shows sphygmographically the characters of collapse, there being only a very slight elevation followed by a proportionate depression, but without waves, aortic notch, or dicrotism. Respiration, from having been retarded, is now accelerated, with thirty to forty and more inspirations per minute. It may become stertorous, and pass into Cheyne-Stokes type; or neurolytic catarrh of the air-passages sets in, with excessive secretion of bronchial, tracheal, and laryngeal mucus, while on auscultation râles are heard all over the chest. This may pass into hypostatic pneumonia, when the mucus becomes tinged with blood. At the same time the temperature is found to rise from 95° and 96° to 104°, 106° and 108°. The pupils become enlarged, and show their maximal dilatation at the moment of death. Eventually the face assumes the Hippocratic expression, and is occasionally so altered within a few minutes that the patient's friends have a difficulty in recognizing him. This stage generally lasts from twenty-four to thirty-six hours, and terminates in dissolution; the patient passes away to

"The undiscovered country from whose bourne
No traveller returns."

Of the eight cases of syphilitic coma which have fallen under my observation, six ended in recovery, and two in death, in the first attack. In three of those who recovered from the first attack, however, relapses took place after some time, and one of these latter patients eventually died after having survived five such attacks in three years.

I regret to say that I was not allowed to make a necropsy in either of the two fatal cases, and I am, therefore, unable to describe to you the exact lesion which caused the illness and the final result. Reasoning from analogy, however, it seems to me highly probable that we have in these cases to do with an affection of an important cerebral artery, which becomes gradually occluded by specific deposit in the way so clearly described by Heubner; and that the vessel principally implicated is the basilar artery.

The basilar artery gives branches to the cerebellum, pons, and medulla oblongata, and terminates in the A. cerebri profunda, thus supplying the vitally most essential parts of the brain; and it is obvious that an interruption of the blood-supply by this vessel must lead to a profound alteration of the parts nourished by it. Sudden occlusion of this artery by acute inflammation or deposit leads rapidly to a fatal result, the principal symptom being profound coma from the beginning of the illness. Hayem has recorded the case of a woman, aged thirty-three, who was brought into the hospital in a comatose state, in which she had been found at home shortly after having been seen engaged in her usual occupations. This patient died in twenty-one hours. The autopsy showed acute inflammation of the basilar artery; all the coats of the vessel, but more especially the internal one, being much thickened, and in one place so much so that the lumen of the vessel was entirely occluded. There was hyperæmia, swelling, effusion, and abundant production of young cells and nuclei. Where the vessel was not occluded by inflammation, it was filled up with a thrombus, part of which was soft and pinkish, while another part was hard and resisting, the clot being apparently due to rupture of the internal coat of the artery through the effusion, after which the blood had become coagulated and mixed with the broken-up structures. The brain-matter

was firm, with the exception of the pons, which had a pasty consistency, more especially in the lower portion, which is in direct connection with the basilar artery; but there was no actual softening. Indeed, there had been no time for the production of such a change. Similar cases have been seen by Vulpian, Martineau, Gouguenheim, and Bastian. The case of the last-named observer was that of a well-born, well-built man, who [illegible] apparently in his usual health, and was suddenly taken with coma, which proved fatal in less than six hours. After death there was found an aneurismal dilatation of the posterior half of the basilar artery, which was perfectly occluded by a soft, colorless clot, uniformly adherent to the aneurismal walls. The middle cerebellar arteries were in connection with the aneurismal swelling, and likewise occluded. Otherwise, nothing of importance was discovered in any one of these cases, and the symptoms which were present are indeed well explained by sudden anæmia induced in the vasomotor, cardiac, and respiratory centres, in the pons and bulb, through the basilar artery becoming impervious. The only difference between the cases of acute inflammation and of sudden coagulation on the one hand, and those which I have described as such of syphilitic coma on the other hand, appears to be the extreme rapidity of the course of events in the former class, while this is much slower in the latter. When a specific deposit takes place in the basilar artery, therefore, it seems that much more time is required for producing occlusion of the vessel than is the case in ordinary inflammation or thrombosis. For the same reason I should expect that, in addition to the occlusion of the vessel in a fatal case, there would also be found some degree of softening in the pons and bulb. While, therefore, there appears good reason to believe that syphilitic coma is owing to specific disease of the basilar artery, I admit that this view still stands in want of corroboration by actual inspection.

The diagnosis of syphilitic from other forms of coma is sometimes easy, and sometimes extremely difficult. The history and attendant circumstances of the case must guide us in the recognition of such conditions as coma from exposure to extremes of temperature, from injury to the head and meningitis, from erysipelas of the face, etc. The coma which accompanies ingravescent apoplexy from cerebral hemorrhage occurs habitually in men past fifty years of age, while syphilitic coma occurs either in young men or in those in the prime of life. Moreover, there are in the former, habitually, the well-known symptoms of hemiplegia, which are absent in syphilitic coma. The cases most likely to be confounded with the latter are those where hemorrhage takes place into the pons, causing great contraction of the pupils, retraction of the eyeballs into the orbit, and paralysis of all four of the extremities. In such cases the question likewise arises whether we may not have to do with opium-poisoning. In endeavoring to decide these questions we must remember that in syphilitic coma the pupil is not extremely contracted, while in opium poisoning and hemorrhage into the pons it is so to the utmost possible limit. Where laudanum has been taken, this may be smelt in the breath; and if the unconscious patient be seen to scratch himself vigorously, we would conclude for opium, itching being a frequent symptom of poisoning with it. Finally, in opium-poisoning there is retention of the urine, with a full and often greatly distended bladder, which sometimes reaches up into the epigastrium, while in syphilitic coma the bladder is empty, and the urine found to dribble away as it is secreted.

The coma which follows an epileptic fit, and severe hysterical and hystero-epileptic convulsions, is habitually of a much shorter duration than syphilitic coma. Moreover, the epileptic fit, even where it has not been witnessed, leaves evidence in a bitten tongue, foam at the mouth, and petechiæ of the face. The history of the case may also be of use. A young woman was admitted a few months ago into the hospital under my care in a comatose condition, and the mother stated that the girl had had fits and had for some time past been unable to feel anything in her left side. Here we had, therefore, to do with hemianæsthesia in a young woman and fits, which led me as such to suspect hystero-epilepsy; and this was confirmed by the further progress of the case. In this instance the coma lasted for thirty-six hours.

Alcoholic coma occurs frequently in the London Dock, where the men who are employed there are apt to develop a craving for sucking raw spirit from a barrel through a straw, until they fall down dead drunk; and if discovered near the barrel in this state, the diagnosis is indeed ready-made. But under other circumstances difficulties may arise. The smell of alcohol in the breath is of very little diagnostic use, as a man beginning to suffer from the first effects of cerebral hemorrhage is apt to take brandy for reviving himself, or is given it by sympathetic by-standers. More trustworthy information may be obtained from the urine. When small doses of alcohol are taken, this is eliminated partly by the breath, and partly undergoes combustion in the blood and tissues, and can, therefore, not be discovered in the urine; but large doses, such as are sufficient to produce coma, are eliminated unchanged by the urine; so that, if the latter be found to have an alcoholic smell, this is enough to establish the diagnosis. The temperature is generally lowered in alcoholic coma, but rarely more than one or two degrees, so that, for instance, a temperature of 95 would speak against it. Another important sign is that the pupil is enlarged in alcoholic coma, while in syphilitic coma it is small.

The diagnosis of uræmic coma will be easy where the history of the case is known; but where it is not, difficulties may be experienced. This kind of coma may occur quite suddenly, without any premonitory signs, for the patient may fall down unconscious while writing at his desk or driving in a carriage. In general, however, it is preceded by headache and vomiting, and occasionally by defects of sight and hearing; after this, epileptiform convulsions set in and leave the patient comatose. Breathing is stertorous, and the pupils are dilated. The patient may recover for a time, but is again seized by a fit, and becomes once more comatose. It is therefore seen that in uræmia we have to do with fits and remissions, and that there is not that dead level of unconsciousness as in syphilitic coma. Anasarca is frequently present; there is generally no incontinence, but retention of the urine, which is scanty, and if a specimen be obtained, it is found to contain albumen and tube-casts. Finally, the presence of urea can be shown in the blood by raising a blister, evaporating the serum which is effused, treating the residue with alcohol, and then adding a few drops of nitric acid, when crystals of nitrate of urea will be formed.

Finally, how are we to distinguish syphilitic from *diabetic coma*, or, as it is sometimes called, Kussmaul's coma, or acetonæmia? About one-half of the patients who succumb to diabetes die comatose; and as the coma sometimes sets in quite suddenly, and apparently without any warning, Prout, and Frerichs after him, were quite justified in saying that the diabetic lives habitually on the brink of a precipice. There are three different kinds of diabetic coma. The most common is that with which Kussmaul's name is connected, and which occurs chiefly in young persons, and where the course of the disease is rapid. This is sometimes ushered in by epigastric pain, vomiting, diarrhœa, or obstinate constipation. The patient is then seized by a peculiar form of dyspnœa; he lies gasping for breath, respiration being very much accelerated, while the respiratory movements are free and the air-passages pervious. The breath has a peculiar odor, like cider, apples, or chloroform, which is owing to the presence of acetone in the expired air. The urine is abundant and contains sugar;

in almost all cases it likewise shows a peculiar reaction with perchloride of iron, which imparts to it a deep red-dish or Burgundy color, which disappears on heating or acidulation. This reaction is generally owing to the presence of aceto-acetic acid in the urine. This acid, however, is a very unstable compound, and easily splits up into acetone and carbonic acid, so that acetone is also habitually found in the urine. It appears probable that besides these two substances there are other poisons present in it, more particularly diacetic ether, trimethylamine, and bata-oxy-butyric acid, which are formed in the blood in consequence of the abnormal tissue-changes, and poison the nervous centres unless they can be quickly eliminated. In consequence of this the patient becomes drowsy, and there may be at the same time a restless delirium. There are sometimes remissions, but eventually the coma deepens. The pulse is quick, the temperature normal, subnormal, or very low indeed, down to 90° in the rectum. The pupils are sluggish, the surface of the body is cold, and death is sometimes preceded by convulsions. The peculiar form of dyspnœa and the presence of acetone and its allies in the breath and urine are sufficient to guide us in our diagnosis of these cases.

There are, however, two other forms of diabetic coma the knowledge of which we owe chiefly to Frerichs and Dreschfeld. The first of these is what may be properly called diabetic collapse. It occurs more in elderly persons, especially when they are stout, and subject to gout and nephritis, and after they have been diabetic for some considerable time. There are the usual symptoms of collapse, which soon passes into coma and death; and the condition is probably owing to fatty degeneration of the heart and sudden failure of its action, especially after over-exertion or excess.

The last form of diabetic coma, and which is only rarely met with, is that where there is a first stage of excitement resembling that of alcoholic intoxication, and which is after a time succeeded by coma and death. In these cases acetone has also been discovered in the urine, and in one of them large quantities of alcohol were found in it, although it was ascertained with certainty that the patient had not taken alcohol in any form or shape. These latter two kinds of diabetic coma cannot therefore possibly, on account of the great dissimilarity of symptoms, be confounded with syphilitic coma.

The prognosis of syphilitic coma is always grave. Although it is not by any means as hopeless as that of uræmic and diabetic coma, which latter almost invariably prove fatal, yet there is proof that that terribly subtle and rancorous poison of syphilis has insinuated itself into the cerebral arteries; and, even if neutralized by treatment for a considerable time, will probably sooner or later return to the attack, and eventually overcome all resistance. The prognosis of the individual attack is, however, on the whole not very unfavorable, more especially if specific treatment is resorted to in the beginning. My two cases, in which the first attack proved fatal, had been treated simply with stimulants until symptoms of paralysis of the pons and bulb had supervened, so that they were practically hopeless at the time the specific treatment was commenced. What is likely to occur after the patient has recovered from the attack depends to a great extent upon the degree of perseverance with which he may allow a specific treatment to be carried out. Some patients are averse to swallowing medicine unless they are at death's door, and give up treatment as soon as they feel tolerably comfortable. For these the prognosis is of the worst description; for they are certain either to succumb to a similar attack sooner or later, or to end their days in the madhouse as general paralytics. Where, on the contrary, a patient will submit to two years' consecutive treatment for the distemper under which he is laboring, he appears to have a fair chance of escaping further trouble from this source.

The treatment of syphilitic coma should be partly symptomatic and partly specific. Systematic feeding with easily digestible substances, more especially milk, chicken-broth, beef-tea, and small doses of alcohol, is of the greatest importance. The food may be peptonized if considered advisable. If the patient should appear in imminent danger of death, hypodermatic injections of ether sometimes turn the balance in his favor. I once injected forty minims at a time, with the result that the patient rallied almost immediately. The average dose is twenty minims, three or four times a day. Ammonia has appeared to me of little use in this condition. Blistering the back of the neck or the forehead, however, seems sometimes to be beneficial. Ice or other cold applications to the head are unnecessary where the temperature is normal, and hurtful where it is diminished; while in the later stages of the complaint, where the temperature runs up very high, I have found them quite useless. The cold douche, which is often so beneficial in the coma of meningitis, has appeared to me to do more harm than good in some of the cases now under consideration, while in others it scarcely seemed to warrant the trouble which was required for administering it.

The principal part of the treatment is the specific one by mercury, which should for obvious reasons be administered either by inunction or by hypodermatic injection. For inunction we may use the old-fashioned blue ointment, which is probably after all the most effective of all external applications, as mercury appears in the urine after a single inunction of one drachm, which contains twenty grains of metallic mercury; or the oleate may be used, containing ten, fifteen, or twenty grains of the yellow oxide for an application. Three inunctions of this are, however, required for showing mercury in the urine. The yellow oxide may also be rubbed up with lanoline, and seems to be rapidly absorbed in this combination. For hypodermatic injections I consider the perchloride to be the most effective preparation, and this should be injected deeply into the substance of the glutæi muscles, in order to avoid irritation and the formation of abscesses, which is so apt to occur when this medicine is injected into the subcutaneous areolar tissue. We may, however, also use the albuminate, the peptonate, the cyanate, and the formamidate of mercury, in doses of one-sixth to one-third of a grain, once a day.

Time warns me that I shall soon have to bring my remarks to a close, and I will therefore at once proceed to the second portion of my discourse, which will treat of some of the clinical peculiarities of syphilitic hemiplegia as compared with ordinary hemiplegia.

The symptoms of the ordinary attack of hemiplegia, owing to hemorrhage into the central ganglia or embolism of the Sylvian artery, are rarely reproduced in the attack which is owing to syphilitic infection. While in the former we meet with the well-known symptoms of apoplexy, to which more or less complete motor paralysis of one side of the body is added, we find in the latter a number of different types which all show great variations from one another, as well as from the non-specific attack of hemiplegia! There are, however, some features which all these several types have in common, viz.:

1. The immense majority of the patients are males, according to my experience ninety-five per cent., while both sexes suffer about equally from ordinary hemiplegia.

2. The patients are young, or comparatively young, subjects, viz., between eighteen and forty years of age—

[illegible]
Contagious blastments are most imminent.

3. They show a peculiar behavior of the deep reflexes or tendon phenomena, which has not been previously described, and to which I shall have presently to refer in a more pointed manner.

One of the several types of syphilitic hemiplegia is shown by the case of a clerk, aged twenty-eight, who was under my care at the hospital in November, 1884. This young man tells me that he comes from a healthy stock,

but has for years past committed excesses in drinking, smoking, and sexual indulgence; that he has had gonorrhœa half a dozen times, and at last contracted blood-poisoning by specific eruptions four years ago. After that he continues apparently quite well for three years; but unquestionably that terrible bacillus is breeding in his lymphatic system all the time, for he finds one day that his left eyelid droops, and that he has a difficulty in seeing with the left eye. At that time he happens to be in Australia, and six months afterward takes his passage home. He has been on board ship for a fortnight, and never thinks that there is anything the matter with him, when, one day, while sitting quietly on deck, he experiences a feeling of faintness and giddiness; there is no loss of consciousness or language, no headache or sickness, no incontinence of the excreta, but he has a strange feeling of loss of power gradually stealing over his right side, and in half an hour finds that he cannot use his hand, and walks lame. The paralysis is incomplete, for he has always been able to move the arm and hand in different directions, although slowly and sluggishly, and has not been obliged to take to his bed for a single day.

Such an evolution of symptoms points very plainly to brain disease of syphilitic origin; indeed, the diagnosis might in this case almost have been made without inquiry about a previous specific sore or secondary symptoms. This man had had a stroke of paralysis of the right side at twenty-eight years of age, without any other systematic affection which could account for it; and we may take it for granted that if hemiplegia occur in a patient between twenty and forty years of age, who has no heart disease, diabetes, tabes, kidney disease, alcoholism, etc., and in whom there has been no preceding acute illness, such as pneumonia, typhoid fever, etc., there is the strongest presumption that the affection is venereal. Another characteristic sign was that there had been no apoplexy at the time the stroke took place; for while the ordinary attack of hemiplegia from softening or hemorrhage is habitually accompanied by loss of consciousness and incontinence of the excreta, the syphilitic patient, when struck by hemiplegia, often assists, fully conscious, at the invasion of the paralysis. Then, again, the palsy had been incomplete from the beginning, and had remained so throughout its further progress. This incomplete character of the paralysis is another peculiar feature of syphilitic hemiplegia; for, while in the idiopathic form there is complete loss of motor power, at least for the first few days or weeks of the illness, this is somewhat exceptional in the syphilitic variety, which is more frequently paresis than paralysis.

I have stated that the first nerve-symptom which occurred in this patient was drooping of the left eyelid, and difficulty of seeing with the left eye. On examining the eye I found that there was external as well as internal ophthalmoplegia, owing to paralysis of the third, fourth, and sixth nerves. This paralysis was complete in the superior and inferior recti, and the inferior oblique muscles; and incomplete in the levator palpebræ superioris, the internal and external recti, and the superior oblique. There was also paralysis of accommodation, and of the sphincter and dilator of the iris. The pupil was large, of ovoid shape, insensitive to light, and only slightly influenced by atropine. Dr. Laidlaw Purves reported the ophthalmoscopic appearances of the fundus of the eye to be normal, the tension likewise normal, no bulging or tenderness to pressure, vision $\frac{15}{20}$, color vision fair. The right eye and eyelid were quite normal, and there was no sign of disease in the other cranial nerves. The complication of hemiplegia of one side with ophthalmoplegia on the other side is, again, most significant for syphilis. In the ordinary form of hemiplegia the only cranial nerves which are affected are the portio dura and the hypoglossus of the same side. In syphilitic hemiplegia, on the contrary, we frequently meet with palsies of the nerves of the eyes, more especially the third, but also the fourth and sixth. Such palsies, indeed, were long ago called by Ricord the signature of syphilis on the eye of the patient. Ptosis alone is very common; and still more common is ptosis combined with paralysis of the rectus superior or the rectus internus. Besides these there are all possible varieties and combinations of ocular palsies, occurring in about three out of every four patients suffering from cerebral syphilis.

A second type of syphilitic hemiplegia is that in which the paralysis is preceded by headache of a peculiar character, and of this the following is a good instance:

An architect, aged thirty-seven, single, consults me in December, 1881. He has not inherited any neurotic tendency, and has been in excellent health—saving an attack of small-pox when quite young—until 1873, when, after impure connection, he is troubled with a chancre, which is soon followed by roseola, sore-throat, and ulceration of the tongue. These symptoms continue for about twelve months, but eventually yield to mercury and Zittmann's decoction. The patient now remains apparently in good health for six years, when he is seized with headache of extreme violence, which occupies the very centre of the head, and comes on periodically three or four times in the course of the twenty-four hours. It lasts for about an hour each time, and is so severe as to drive him nearly frantic. It is not like neuralgia, rheumatism, or megrim, but more deep-seated and inside the head, as if blows from a heavy hammer went right through the substance of the brain. The patient is, singularly enough, all the time treated with quinine, which does no good, and the pain continues with the same maddening violence for six months, when the patient one day falls down in a fit, speechless, but not unconscious, paralyzed on the right side, but retains full control over the excreta. From that day he never has had any more headache. In ten days he recovers his language, but the paralysis of the side remains. After a time he is seized with such severe pain in the spine that as many as five hypodermatic injections of morphia per diem are required to ease him; and shortly afterward he loses the power over the left leg, the bladder, and the bowels. The bladder is at the same time so irritable that the patient has to introduce the catheter, which he does with the left hand, every hour, by day and night. His speech and his intellectual faculties are normal, there is no ocular paralysis, but paralysis and rigidity of the right arm and both legs, paralysis of the bladder, and great sluggishness of the bowels. No similar evolution of symptoms ever takes place in cases of idiopathic disease.

A third type of syphilitic hemiplegia is that where both sides of the body are affected in succession, the attacks following one another either within a few days, or weeks, or months. A case of this kind is that of an officer, aged forty, single, who came under my care in April, 1880. He had enlisted in the British army when seventeen years of age, and served chiefly in India. His health had on the whole been good, but in 1875 he had gonorrhœa and syphilis, and was treated with mercurial inunction. Rather more than three years after this he is told off to take part in the campaign in Afghanistan, and suffers a good deal from exposure to the extreme cold prevalent at that time. Presently he begins to suffer from headache, giddiness, and general malaise, which continues for about a week. One night, being too restless to sleep and feeling very unwell, he gets out of his tent, and begins to walk about in camp, but finds that he has great difficulty in moving. He therefore goes back to his tent, and after awhile falls asleep. On waking in the morning he is surprised to find himself paralyzed—the left side—and that the excreta have passed under him. He cannot put out his tongue, has great difficulty in speaking and swallowing, and his pupils are very large. Five days afterward he feels that he is losing power in the right side of the body, and this becomes worse day by day, so that at the end of ten days he is completely paralyzed and has lost his language. During the whole of this time he has never once lost his consciousness, but

has constantly suffered from faintness, giddiness, and headache. He is now put on iodide of potassium, and within a month from the commencement of the illness begins to improve. The speech returns, although there is still difficulty of articulation; he recovers a degree of motor power, more especially in the right side; is invalided and sent home, and bears the journey pretty well. I have seen him quite lately; he remains in much the same condition, is totally disabled as far as locomotion is concerned, but his intellectual faculties have remained quite clear.

In other patients months may intervene between the successive attacks of hemiplegia. Such was the case of a woman, aged thirty-four, whom I saw at the hospital in December, 1883. She had been quite well up to the time of her marriage, five years ago. Her husband was a soldier, had served in the British army in almost every quarter of the globe, and notoriously led a very wild life. A month or two after her marriage the wife was seized with ulcerated throat, and an obstinate skin eruption. Three years afterward she suddenly found that her left eyelid drooped; and there is now ptosis and paralysis of the rectus internus. Six months after that she had a stroke of right hemiplegia with aphasia, and four months after this, left hemiplegia.

She made a good recovery as far as the aphasia and the paralysis of both sides was concerned, but the ptosis and palsy of the rectus internus remained unaltered.

The last type of syphilitic hemiplegia to which I will draw your attention to-night is that where the paralysis comes on, not more or less suddenly, but quite slowly. In February, 1885, I was consulted in the case of a young man, aged twenty-three, who, after infection only eight months before, was taken with insidious symptoms of gradually increasing hemiplegia of the left side. As he was in a highly nervous condition, and so depressed in spirits that he would often burst out crying, apparently for no earthly reason, his affection had been diagnosed as hysterical, and he had been treated with iron and phosphorus, and shower-baths. The loss of power had appeared at first in the left leg, the patient being unable to lift his foot well from the ground, and scraping it when walking. After a time the fingers of the left hand had likewise become affected; the patient was very clumsy in dressing and eating, and had to give up playing on the piano. Paralysis of the lower branches of the portio dura eventually came on, causing deformity of the face when laughing, and difficulty in whistling. Headache and drowsiness then intervened, and the intellect became clouded.

This case was peculiar for the unusually early appearance of so-called tertiary symptoms, viz., eight months after the primary sore; and this had at first no doubt prevented a due appreciation of the cause of the illness. Treatment by inunction was now resorted to, and showed the disease to have been truly specific, for there was manifest improvement in a few days, and the patient eventually made a very fair recovery.

You will readily admit that the several types of syphilitic hemiplegia which I have just sketched differ *toto cælo* from the ordinary form of hemiplegia which occurs in the aged from hemorrhage or softening, while they differ no less considerably from one another. Indeed, while twenty cases of ordinary hemiplegia, taken quite promiscuously, are very much alike, there is hardly a single case of syphilitic hemiplegia which exactly resembles another; and it is this extraordinary variety in their clinical aspect which constitutes one of their most characteristic features. But is this peculiar grouping of symptoms sufficient to render the diagnosis of specific brain disease certain? Such is not the opinion of Fournier, who states that there is not a single pathognomonic symptom whereby we can distinguish idiopathic from syphilitic hemiplegia, and that we must rely for our diagnosis not only upon the peculiar development of the nerve symptoms, but also on the presence of venereal affections in other organs, such as the skin, the testicles, the bones; on the fact that syphilitic hemiplegia occurs not so much in the aged as in persons in the prime of life; and that we can arrive at certainty only by the results of specific treatment, as the latter may cure the syphilitic variety, while mercury and iodide of potassium remain ineffectual in ordinary hemiplegia.

I am bound to say that I consider this latter test, viz., by the results of treatment, a very fallible one, as specific treatment fails to cure a very considerable number of cases of hemiplegia where there can be no doubt whatever about the specific nature of the complaint. I have, however, for some time past been of opinion that there exists one truly pathognomonic symptom whereby we are able to distinguish at a glance the syphilitic from the ordinary form of hemiplegia, and this symptom is an excessive exaggeration of the deep reflexes or tendon phenomena, which is present in syphilitic cases and wanting in idiopathic cases.

In 1882 I showed a syphilitic patient at the Clinical Society of London, in whom this symptom was so characteristic that it attracted my special attention. In that case the tendon phenomena were so much increased in the paralyzed leg that it shook fearfully on the least provocation, such as a sudden noise, opening the door, introducing the catheter, sneezing, coughing, etc. Percussion of the patellar ligament, of the tibia, and, in fact, of almost any point of the limb, induced violent so-called spinal epilepsy, which lasted for a considerable time, and was very greatly in excess of what is seen in ordinary hemiplegia.

Another patient, when his patellar tendon was only touched, stamped the ground so violently as (according to his own saying) almost to bring the house down; and it is an interesting fact that this excessive exaggeration of tendon reflexes is not at all in proportion to the degree of the paralysis or muscular rigidity which may be present. Indeed, I have seen it in cases of syphilitic hemiplegia as well as of monoplegia, where the loss of power, although quite definite, was yet comparatively very slight; and it is a symptom on which I now chiefly rely in my diagnosis of these cases. Of course, it can only be utilized where the reflexes on the healthy side are normal, for there are patients, more especially of the neurasthenic type, and also those suffering from the various forms of spastic paralysis, in whom these reflexes are everywhere greatly exaggerated, and in whom, therefore, such an appearance would not have the same significance. The exaggerated response occurs in the upper as well as in the lower extremity with equal force and readiness; but the symptom is habitually not quite so marked in cases where the paralysis has come on gradually, than where there had been a sudden stroke.

I regret I have no time left to speak of the influence of treatment in this and similar conditions. It is, however, a singular fact that, while the therapeutical results in syphilitic nervous affections are sometimes exceedingly gratifying, they should in other instances be just the reverse. There is a general impression in the profession that the prognosis in specific lesions is altogether better than in ordinary idiopathic disease; but this is only partially true, for many patients suffering from cerebral affections on a syphilitic base, even if energetically treated on a specific plan, do not recover, and either remain stationary or undergo a rapid process of further deterioration, ending habitually in general paralysis of the insane. This apparently incongruous fact is, however, well accounted for by the circumstance that we have, in brain-syphilis, to do not only with specific lesions, but also, with the secondary consequences of such; and that these latter cannot, in the nature of things, be expected to yield to anti-syphilitic treatment. No doubt a gumma in the subarachnoid space may be absorbed, and thickening of the dura mater reduced; but where a gumma has already caused wasting of cranial nerves by strangling their substance, or where the occlusion of an important cerebral artery has led to softening of a certain

area of cerebral tissue, such secondary and non-specific lesions cannot be cured, for no amount of mercury and iodide of potassium, or, in fact, any other drug, can restore nerve-cells and fibres which have once perished. It is, therefore, only possible to cure those patients in whom the primary specific lesions have not as yet conduced to secondary ordinary lesions. The lesson which we have to learn from this should therefore be to subject patients, as soon as they show the slightest definite symptoms of specific brain-disease, at once to an energetic anti-syphilitic treatment, so as to disperse the primary and truly syphilitic lesions, and to prevent, as far as possible, the formation of secondary ordinary lesions, against which latter our remedies are known to be powerless. What occurs in syphilis of the brain thus affords a striking illustration of the truth of the old Hippocratic maxim, ὁ δὲ καιρὸς ὀξύς—the opportunity is fleeting. Let us, therefore, always endeavor to make use of it before it is too late.

SOME CONSIDERATIONS ON HYSTERIA.

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(Concluded from page 401.)

WHERE the social conditions are favorable, the intellect normally active, yet for a time inhibited under the tyrannous influence of a sensation or an association, change of scene certainly has a most extraordinary influence upon hysterical patients. The hyper-excitability of their cerebral sensory centres renders them morbidly susceptible to the influence of visual as of other centripetal impressions, and to the associations generated by these. Hence the material objects in a locality where painful events have transpired constitute real sources of peripheric irritation, incessantly renewing the first. In one case that I knew, a young French lady received, at six o'clock one afternoon, the news of the result of a criminal trial, which, in deciding adversely to her step-father, broke off a project of marriage for herself. Every day for a year at the same hour, when a certain bell struck, the girl had an attack of fever.

Change of scene.

In another case (Case XXXIV.) a woman of considerable intelligence, but who, for several years, had exhibited distinct hysteric symptoms, was thrown into a condition of profound mental and physical prostration by the death of her mother. This condition was complicated by insomnia, and attended by a degree of psychic pain which the patient subsequently described as "the tortures of hell." At the end of two months the symptoms were unabated, and the attending physician began "to suspect organic disease of the spinal cord." The patient was then sent to another city, and immediately began to improve. Without further treatment than a daily seance of faradization, which cured the insomnia, she rapidly recovered.

When change of occupation and change of interest can be added to change of scene the influence is still greater.

Psychic resistance to sensory inhibition.

The more areas of the cortex that can be awakened to functional activity, the more chance there is for resisting sensory inhibition; the more vaso-motor inhibiting power is restored to the cortex, the more the intracerebral circulation of impressions is quickened, centrifugal currents established, and, if we may hazard again the hypothesis already enunciated, the more the surcharged sensory centres may be discharged.

The foregoing influences all bear upon the mental processes of the brain, finally elaborated (it is probable) in its "latent zones." By affecting these, visceral disorders are frequently relieved, not because they did not exist before, but because the visceral functions of the brain in controlling vaso-motor spasm have been indirectly modified, and the disorders resulting from vaso-motor excitation are therefore controlled. After the psychic, the second great function of the brain which sustains inhibition in hysteria is the motor. Treatment directed to the stimulation of this function may be expected to be beneficial in the same way, and for the same reason, as the moral treatment briefly alluded to. Many special modes of treatment are already in use for hysterical symptoms, whose real value probably consists in their common power to modify the fundamental condition of hysteria. Thus faradization, massage, Swedish movements, active gymnastics, horseback, and other non-systematic exercise, the health-lift, all energize the cerebral motor centres.[1]

Treatment to increase motor resistance to sensory inhibition.

Early in this paper has been quoted Meynert's ingenious theory of the development of the power for voluntary action, through registration in the brain-cortex of impressions or images of movements which have been effected involuntarily, through subcortical reflex arcs. Now, when a muscle is contracted involuntarily by the application of a faradic current, an impression of the movement may similarly be expected to be registered in the motor centres of the cortex. An accumulation of such impressions should so stimulate these motor centres as perhaps to enable them to escape from the inhibiting influence of the sensory areas.

Faradization was first used in treatment of hysterical paralysis. But there is no hysterical symptom to which theory, confirmed by experience, does not show it to be adapted. In the severe Case XXIV. insomnia was relieved by it, after having resisted poisonous doses of narcotics.

Faradization in hysteria.

When the current is applied over the surface of the body without contracting the muscles, the effect of registrating a muscular contraction cannot be obtained. The effect is, however, often beneficial, except where there is hyperæsthesia of the surface, which is usually aggravated by faradization. Can it be inferred that in this case the ingoing electrical current, or rather the nerve-current it excites, inhibits the excitation of the sensory centres of the brain?

CASE XXVII.—This fragile patient has already been mentioned as the subject of transient albuminuria. While feeling very weak and wretched, with pains in back, bowels, and uterus, she had a seance of faradization lasting half an hour. One electrode was placed at the nape of the neck, the other passed over the abdomen. The patient at once began to feel better, and during two days following was most remarkably improved, all pains disappearing.

Such cases could easily be multiplied. They are in everyone's experience, but the results are very variously interpreted. Weir Mitchell[2] only mentions the local effect upon muscles supposed to become better nourished when forced to contract by electricity. The common idea seems to be that the electrical current in some way takes the place of nerve-force when the latter is deficient; an idea that is certainly erroneous. The faradic current can replace the nerve-current in liberating energy from a muscle-cell, just as, under certain circumstances, mechanical stimulus can do the same thing. The improvement of non-paralytic symptoms noticed in the hysterics who do respond favorably to faradization implies, however, central stimulation. The current directly stimulates the negative, indirectly the positive, work of the nerve-centres to which it is brought. The "strengthening" effects noticed, therefore, partly indicate increased negative work throughout nerve-centres (in the foregoing case, probably chiefly in the medulla), but there is also partly increased positive work consequent on this; thus, in sensory centres, liberation or discharge of energies in a centrifugal direction.

[1] Other effects are, [illegible] and muscular nutrition, [illegible] consideration.

[2] Fat and Blood.

Massage, the Swedish movement-cure, and systematic gymnastics are all directed toward the exaltation of deficient motor force. In passive massage, while the surface friction increases the mass of centripetal impressions, in a manner analogous to surface faradization, the passive contraction of the muscles by the movements of the limbs may be supposed to register impressions in the cortex, as in the performance of reflex acts.

Massage and gymnastics.

When the patient is incited to resist impassive movement by voluntary effort, as in the Swedish movement-cure, a higher degree of stimulus of cortical centres is affected. The intracerebral nature of this higher stimulus approximates the action more to normal action. Finally, in active gymnastics, the stimulus is entirely voluntary, the action entirely normal. The method, which cannot be utilized at the beginning of treatment of hysterical paralysis, is inestimable in the treatment of all other conditions. Theoretically, voluntary muscular effort, the physical correlative of mental volition, should be, with it, the cardinal resource in the treatment of hysteria; for it addresses itself to the fundamental condition of the disease—the depression of motor function below the level of sensory function; and it tends to restore the normal centrifugal direction of intracerebral nerve-currents.

Fundamental treatment of hysteria.

I was led to formulate the above statement thus precisely from observation of the special mode of muscular exercise afforded by the Butler Health Lift. I first tried this in some cases of amenorrhœa, not at all with the view I at present entertain, but for the purpose of increasing blood-pressure in the pelvis and thus restoring the menstrual flow. The two cases in which this method received a fair trial have already been mentioned.

Health lift.

Case XXX. and Case XXXI.—In Case XXX. the menstruation had been absent for two years, although up to that time it had been quite regular; the patient was only moderately anæmic, and retained excellent muscular strength, as shown by her capacity to speedily attain a lift of ninety pounds. The patient was also constantly occupied in family duties, especially in waiting upon a sick father, so that moral and even motor centrifugal currents might seem to exist in sufficient abundance. But she suffered from prolonged dyspepsia (though, as shown by the stomach-washing, very rarely from gastric catarrh), from constipation and flatulence, and the psychic symptoms of depression and hypochondria had been extremely marked. It was while these were at their maximum that the amenorrhœa began; they had much subsided when I first had charge of the case, and the dyspepsia was a good deal relieved by the stomach-pump treatment. This was interrupted, however, and by my advice the patient hired a health-lift and exercised on it regularly. At the end of a month the dyspepsia was much improved, and the patient felt in every respect better. At the end of two months she menstruated. She then was able to return to a mixed diet. The third month there was a little delay, only a day or two, in the return of the menstrual flow; a single local application of galvanism brought it on. This had previously been tried with no effect but the production of nausea.

In Case XXXI. the first improvement in the patient's health, after three years of almost constant suffering, was observed during a summer spent at Lake Mohonk, where the patient practised rowing. During these three years menstruation had occasionally occurred spontaneously, and had several times been brought on by local applications to the uterus of laminaria tents and iodine, internally. These applications, however, often failed, and when they succeeded in determining a uterine hemorrhage, the patient usually felt worse after them, with more headache and prostration. The month preceding the visit to Lake Mohonk an iodine application had been followed, not by menstruation, but by a four weeks' leucorrhœa. It was noticeable that during this period, as with any other peripheric irritation which lasted a short time, the patient was relieved from headache; but she claimed to feel "wretchedly," and expressed the greatest horror of the experience. In September the health-lift was begun; in October the patient menstruated, exactly a year from the last date. She subsequently menstruated in February, April, June, and July. Coincidently, the headaches greatly diminished in frequency and intensity, ovarian hyperæsthesia entirely disappeared, and the patient felt distinctly and "immensely better."

That in this last case the improvement was not due to the fact of menstruation was indicated by its absence when the menstruation was brought on by other means. The spontaneous appearance of the flow during the use of the lift was an indication, not a cause, of improvement. The patient always felt better during two or three weeks preceding a spontaneous menstruation, and always worse after one, whether spontaneous or artificial. During the month which followed the second menstruation after the health-lift the patient was wretched, with severe headache; but after the last two menstruations remained well.

I think the details show in this case, as in the other, that with the revival of the motor function of the cortex its inhibiting power over the vaso-motor centres was revived, the vaso-motor fibres in the utero-ovarian nerve were restrained from their excess of action, and an arterial afflux of blood permitted to the endometrium. Probably, also, the nutritive processes of growth on the endometrium, the ovary, and the plexus were coincidently permitted to resume their course.

In another case (Case XXXII.) there was no amenorrhœa, but the patient, who had been excessively hysterical previous to the replacement of a retroflexed uterus, continued after this to retain some hysterical symptoms. She remained rather weak, and her power of walking was much interfered with by a pain occupying a limited area of the right vaginal wall, apparently in a branch of the pudic nerve. This pain was ascribed by the patient to the pessary, an instrument which had greatly excited her imagination. It seemed, indeed, to be the last remnant of the multiform distress that had first attended the most careful use of the pessary, and certainly had nothing to do with the latter. Under the use of the health-lift this pain entirely disappeared, the patient became able to walk, and was in every respect well.

It is noticeable that in all three of these patients electricity, however applied, invariably aggravated whatever symptom it was applied for.

I am prepared to believe that the health-lift will prove an invaluable remedy in the cases in which it can be tried, and when it is used efficiently. It is rare that this can be done by visits to a physician's office; the patient should buy or hire a lift, and have it at home for daily use. Each session occupies an hour, since the lift must be handled four times, at an interval of fifteen minutes between each lift, occupied by complete repose. Either one or two sessions a day, according to strength of patient, should be prescribed.

Sphygmographic tracings were taken of several patients, not always with uniform result. Figs. 1 and 2 were taken from a woman, aged thirty-seven, suffering from hysterical pain at epigastrium, hypogastrium, left ovarian region, in track of ilio-hypogastric nerve, over left hip, and at point of emergence of two upper sacral nerves. Pelvic organs perfectly healthy.

The trace just before the lift is irregular in the individual pulsations; shows numerous elasticity oscillations, almost absence of respiratory curve. This was taken after the patient had already used the lift several times, the last half an hour before. The trace taken immediately after shows an enormous development of the percussion stroke, part of which may be due to increased force of cardiac contraction, but part certainly to diminished tension, as the line collapses (in the first three figures) almost immediately from the summit. The respiratory line rises, showing the increased depth of respiration.

Figs. 3, 4, and 5 (from Case XXXII., with persistent neuralgia in branch of pudic nerve) show a decided increase of tension from use of lift.

Figs. 6 and 7 show a marked development of the percussion stroke and a rise of the respiratory base-line. This patient had a (corrected) retroflexio uteri, and was recovering from a prolapse of the ovary, but was rather free from hysterical symptoms.

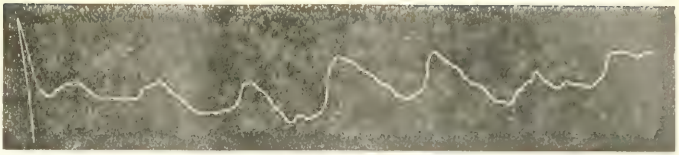
Figs. 8 and 9 are from a girl, aged sixteen, who had never menstruated, and was suffering much from headache. The pulse developed considerably by the lift, tidal wave and tension increasing. The girl's health improved very much during the fortnight she used this, coincidently with walking, but she then, for some unknown reason, ceased attendance.

The increased heart-action noticed in all these traces was the direct result of the muscular effort. The collapse of the line in Figs. 1 and 2, as well as the increased tidal wave in the other figures, both imply diminished vaso-motor tension—in the first case simply lowering the resistance, in the others permitting dilatation of blood-vessels.

It is to be noted that if this is not accomplished, and the arterioles remain contracted while the energy of the cardiac contraction is increased, there will be fatigue, cardiac distress, and palpitations. Undoubtedly such cases will present themselves in practice. The danger can be avoided by the careful graduation of the weight to be lifted, avoiding such as shall too suddenly increase the force of the cardiac contraction.

I have known horseback riding to restore an interrupted menstruation as efficiently as the health-lift. Between the latter, active gymnastics, and horseback exercise, it is possible that there may be little to choose. Still, as with all other remedies, a case which resists one will often be found to yield to another apparently quite analogous. The health-lift is much cheaper than horse back riding, and it has this advantage over calisthenics, that the amount of force exercised is much more independent of the patient's will. When the movement to lift has begun, it must be finished, and with the same weight; must always be performed with the

Horseback and other exercise.



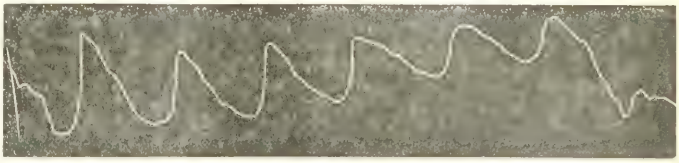


Fig. 3.—Before lift.

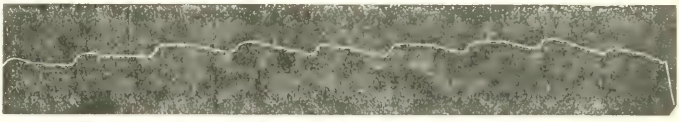


Fig. 4.—After [illegible] lift at five pounds. [illegible]

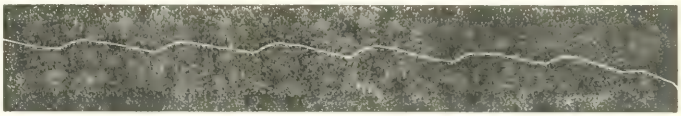


Fig. 5.—After third lift at fifteen pounds. [illegible]

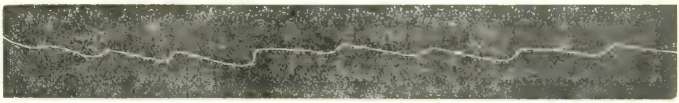


Fig. 6.—Before lift.

Fig. 7.—After lift.

Fig. 8.—Before lift. After walk just before lift.

Fig. [illegible]—After three lifts. One at five, two at ten pounds.

same degree of force. But it is very possible for dumb-bell and other calisthenic exercise to be carried out so listlessly and feebly that no effect is produced at all. All the foregoing methods of motor treatment are much superior to walking; of which, in a great many cases, the patient is quite incapable. Walking may be found to increase ovarian hypéræsthesia, or headache, or backache, or any other symptom. The effect of the health-lift in increasing the force of the circulation, and hence the amount of oxygen carried to the tissues, and especially the brain, may be secured by another physical apparatus—the Waldenburg machine for compressed air. I have obtained the most prompt and marked relief to hysterical dyspnœa and intercostal pains by this method, where there was not a trace of pulmonary disease. One patient purchased an apparatus, and to her daily use of it, for a year, seemed chiefly attributable the relief, not only of the respiratory symptoms, but of many others from which the patient had suffered for seven or eight years.

Waldenburg apparatus.

This winter I have applied the same treatment to an anæmic girl (Case XXXV.), a subject for many years to slight epileptiform attacks, resembling petit mal, and also to neurotic symptoms, such as Gowers calls "post-epileptic hysteria;" the principal during severe nervous headaches, mental inability, and sense of universal fatigue. The inhalations did not diminish the number of epileptiform attacks, though these were greatly controlled by nitrite of amyl. But the improvement in the hysterical symptoms was very marked, so much so that the patient was ready to believe herself on the high road to complete recovery. The relief was always immediate, and especially after a petit mal attack.

It is to be presumed that the increased amount of oxygen forced into the lungs under pressure relieves the "dyspnœic" condition of the brain-tissues induced by vaso-motor spasm.

The effect of electricity upon hysteric pain has been already discussed. In this discussion has been pointed out the variableness of this influence. This might be inferred from the complex action of electricity, part of which may fall in the desired direction, another part just in the reverse. Thus the passage of the constant current through a nerve tends to lower its excitability, and ultimately paralyzes it; the anode depresses, the cathode exalts, the excitability of same nerve; the centripetal impression sent to nerve-centres first increases their negative work, chemical synthesis, and storage of force; muscular contractions by faradism or interrupted galvanism divert nerve-energy from sensory centres. It is evident that some of these effects tend to antagonize pain, yet the centripetal excitation of the sensory centres should tend to increase both pain and its cause in the existing hyper-excitation of these centres. Where the latter is very great, any form of electricity does harm. In proportion to the more localized diffusion of the pain, electricity seems to do good, though with many exceptions. For general action faradism is decidedly preferable to galvanism. Galvanism may sometimes locally overcome vaso-motor irritation.

All modern studies of hysteria tend to relegate drugs to the background in the treatment. The array of antispasmodics—musk, assafœtida, valerian, ammonia, etc.—which figure even in Briquet's treatise, are to-day utilized only for occasional and symptomatic treatment. This really still leaves a large sphere of usefulness for these remedies in the management of these often exquisitely unfortunate patients. The treatment of vaso-motor dysmenorrhœa especially calls for suitable "antispasmodic" remedies, while musk has extraordinary value in the attacks of profound prostration which are common. The value of opium in hysterical vomiting, of digitalis in hysterical irregularity of the heart's action, of ergot in the pelvic congestions which so often initiate or maintain hysterical conditions, need only be mentioned here.

Drugs.

The internal use of strychnine should be classed among agents which act directly on the motor system. It diminishes resistance to the transmission of impressions through the cord.

It is a matter of course that the treatment of anæmia by meat, iron, cold pack, shower-bath, mountain air, is often indicated in the management of hysteria, and when indicated becomes of the utmost importance. A richly meat diet is nearly always indicated, for the reason that the ingestion of albumen in abundance is the most powerful agent for increasing the absorption of oxygen. Yet the same persons who habitually require meat may from time to time require to completely abstain from it for a few days, during attacks of (liver?) indigestion associated with copious deposits of sand in the urine. There is an hysteria whose basis is lithæmia—form not infrequent in men as well as women. But there is also an intercurrent gastro-hepatic indigestion that seems to be associated with vaso-motor congestions of the liver, and consequent interference with the functions of the gland in the elaboration of urea. It is probable that transient diabetes would often be discovered if looked for, as in the case of severe neurosis already mentioned.

The association of obesity with hysteria is very frequent. Weir Mitchell observes that it is much more difficult of treatment than the hysteria of thin people. The necessity for meat diet, with restricion of liquids, is here as great as in the cases where the obesity is associated with organic heart and kidney diease.[1]

The nutrition of the nerve-centres is impaired in proportion to the deposit of nutritious material in cellulo-adipose tissue, and the permanent hyperæmia of this.

The two following cases strikingly illustrate the effect upon hysterical symptoms, in one case including amenorrhœa, of appropriate diet, with massage and hydrotherapeutic treatment.

Case XXXVI.—Married, three or four children; large and very fat woman, weighing two hundred pounds. Since increase of weight, during a year, profound prostration of strength, with hysterical depression, crying, trembling of limbs on walking, palpitations on exertion. Heart probably overlaid with fat; no other disease. Placed on meat diet, gluten-bread, liquids restricted; tincture nux vomica, cold pack, with massage and cutaneous faradization three times a week. Great improvement in a month. In six months patient had lost forty pounds and was feeling quite well. Diet continued for a year.

Case XXXVII.—Married woman, aged thirty; three children. Rather short woman, but weighed two hundred and forty pounds. Psychic depression, palpitations, amenorrhœa for seven months. Packs, massage, meat and gluten-bread diet. Immediate and striking improvement. Reduction in weight averaged three pounds a week. Menstruated six weeks after beginning treatment, and thence regularly. Spirits improved at once. Treatment continued five months; patient then quite well. At close of year weighed one hundred and fifty-eight pounds.

The *removal of the ovaries* for intractable hysteria is indicated in two different classes of cases: (1) Where their diseased condition is a source of masses of nervous impressions, improperly called reflex, which irritate the sensory centres of the brain and determine the series of consequences which follow on this irritation; (2) where the ovaries are normal, but the irritability of these same centres, acquired in other ways, has become such that the normal impression generated in the menstrual processes causes intolerable irritation. I have known of two cases where Battey's operation was performed with entire relief to an immense train of morbid symptoms, which in one case included eight years' paraplegia, besides untold pains, dysmenorrhœa and other. In neither did the ovaries appear abnormal to the naked eye; in one which I was able to examine by the microscope the morbid changes were very slight.

Oöphorectomy.

[1] See Oberst, Hemiplegie und Krankheit, Stuttgart, 1884.

The first case has been reported by Dr. Mundé,[1] who performed the operation, and has been already mentioned in this paper.

Theoretically, it is perfectly logical, in cases of hyperexcitability of cerebral sensory centres which have resisted all other means of treatment, to remove the ovaries in order to cut off from these centres the large mass of centripetal impressions which reach them when the rhythm of menstrual processes is going on. It has been abundantly shown that this operation is not often immediately successful; either because menstruation persists or because the nervous phenomena persist in the absence of menstruation. Both, however, tend to subside with the lapse of time, and I think that it is only after two years that we should, if at all, call the operation a failure. I have known several cases where the morbid symptoms persisted nearly to this time, but disappeared afterward.

The facility of abusing the operation is, however, obvious; but the statistical discussion of its value does not lie within the scope of this paper.

A CASE OF PISTOL SHOT WOUND OF THE SMALL INTESTINE AND MESENTERY—LAPAROTOMY.

By CHARLES A. JERSEY, M.D.

R. G. B——, aged forty-four, very fleshy, and of poor physique, was brought from his home to the Manhattan Hospital in an ambulance on July 1, 1886, at about 8 P.M. About twenty minutes before admission to the hospital, he had shot himself with a pistol, calibre .32.

On admission he complained of intense pain in his abdomen, particularly localized about the umbilicus, "screwing" in character; great tenderness on the left side of the abdomen on pressure, no swelling or tympanites. Examination showed a blackened bullet wound about one and a half inch to the right of the median line, and one inch above the umbilicus; the wound was not probed. The abdomen in the region of the wound was washed with a one-twentieth solution of carbolic acid, the wound stuffed with iodoformized gauze, covered with borated cotton, and an abdominal binder applied.

The patient was perfectly conscious, very restless, surface cold and covered with a profuse perspiration, pulse very rapid and feeble, temperature 98° F., respirations shallow, rapid, and feeble. Majendie's solution of morphine, and whiskey and digitalis were administered hypodermatically, and the hot-air bath applied. Urine examined and found normal.

July 2d, A.M., pulse, 134; respirations, 34; temperature, 101° F. The patient recovered very slowly from shock; he has had no vomiting, and no movement from the bowels; he complains of abdominal pain and tenderness, and is very restless. He presents no recognizable symptoms of internal hemorrhage. He has had ten minims of Majendie's solution every three hours since his admission to the hospital, because of pain.

Twenty hours after admission laparotomy was performed, with the assistance of Drs. W. T. Bull, L. A. Rodenstein, and Drs. Wilkie, Hathaway, and Aymé, of the House Staff. All the instruments and appliances used, excepting the black Snowden's silk, had been soaked or boiled in a 1 to 20 solution of carbolic acid; warm water, at about a temperature of 100° F., was used for the towels and sponges during the operation. Ether was administered; an incision was made in the tract of the bullet wound, showing its direction to be downward and inward, a finger introduced, and the intestine felt, proving conclusively the entrance of the ball into the abdominal cavity.

[1] New England Medical Monthly.

An incision was then made in the median line, extending from about three and a half inches above the umbilicus to about four inches below the same point. On entering the peritoneal cavity a small quantity of bloody serum flowed out, probably an ounce. The small intestine was now carefully removed from the abdominal cavity, each portion being thoroughly examined as it was withdrawn. A few patches of fibrinous exudation were removed from the gut; there was no adherence of the intestinal coils; the portion of intestine removed was enveloped in towels wet with warm water, and drawn above and to one side of the abdominal incision. Small quantities of bloody serum, and a few clots of coagulated blood, escaped through the abdominal wound from time to time as the gut was being removed, probably amounting in the aggregate to six ounces.

The following wounds were discovered:

First, a ragged, irregular hole, about three-fourths of an inch in diameter, situated on the free border of the intestine, from which, while handling, a small quantity of fecal matter escaped; a small amount of fæces escaped from all the other wounds in the intestine, but not into the peritoneal cavity; from this wound the contents of the gut escaped directly into the abdominal cavity before sponges could be applied to prevent this mishap. The intestine in the neighborhood of the wound was thoroughly sponged off with warm water, the edges of the wound inverted, and the hole in the intestine closed by seven sutures according to the method of Lembert.

Second, a small hole near the mesenteric border was closed by three sutures.

Third, a bullet wound exactly opposite the previous one, evidently the point of exit of the ball (it having passed directly through the gut), was about three-fourths of an inch in diameter; this was closed by seven sutures.

Fourth, a small wound on the free margin of the gut was closed by four sutures.

Fifth, in the mesentery, near its attachment to the gut, was an abrasion about one inch long by half an inch wide; this was simply dusted over with iodoform.

Sixth, a large, irregular, perforating hole in the mesentery, close to its attachment to the intestine, through which the index-finger readily passed, and in which a bleeding vessel was ligated; the hemorrhage from this artery had stopped, but was renewed while manipulating the wound. The wound was thoroughly dusted with iodoform, and its abraded surfaces and edges drawn together by four sutures passing directly through the mesentery.

Seventh, a perforation of the mesentery, two inches from its attachment to the gut; this was also dusted with iodoform, and its edges drawn together by two sutures on each side of the mesentery. The sutures were not passed directly through as in the previous wound.

The peritoneal cavity contained a small quantity of bloody serum and numerous clots of coagulated blood, which were sponged out. The intestine and peritoneal cavity were washed thoroughly with warm water, dried, and carefully sponged. The gut was returned to the cavity, and the abdominal wound closed by numerous sutures of silver wire and heavy silk, both wire and silk being passed through the peritoneum. The wound was dressed with iodoform, the bullet-wound stuffed with iodoformized gauze, absorbent cotton, and an abdominal binder applied.

The patient suffered severely from the shock of the operation and recovered slowly. Hypodermics of whiskey and digitalis were administered, and the hot-air bath applied.

July 3d.—9 A.M.: Pulse, 130; respirations, 28; temperature, 1[illegible] F. [illegible]; temperature, 102° F.

The patient complained of no pain; he vomited continually during the day; given whiskey and digitalis, cracked ice, and hypodermics of Majendie as required. In the evening the vomiting continued; he has had no

particular pain, but slight tenderness on pressure over the abdomen. A cold coil was applied.

July 4th.—9 A.M.: Pulse, 134; respirations, 30; temperature, 102° F. The patient has had constant retching and vomiting, which could not be controlled. He complained of little pain during the night, but was very restless. This morning he is very restless and delirious; is given whiskey and digitalis and morphine as required. During the afternoon he failed rapidly, became comatose, and died at 3.10 P.M.

Autopsy. — The abdomen contained a quantity of flocculent serum; the intestines were distended, slightly adherent and congested, and covered with patches of fibrinous exudation. The wounds in the gut were all impervious, and covered with heavy patches of exudated fibrin. The abrasion in the mesentery was covered with fibrin. The edges of the two perforating wounds in the mesentery had separated, and their surfaces were covered by a blackened, softened slough, discharging pus into the peritoneal cavity. All the wounds had been discovered when the operation had been performed. The bullet was not found. An extended autopsy was not permitted by the patient's relatives.

The point particularly worthy of attention in this case is the condition of the perforating wounds in the mesentery. The result of the autopsy showed conclusively that a mistake had been made in the treatment of these wounds. The portion of mesentery surrounding the bullet-holes should have been excised, all the contused border removed, and then the healthly surfaces brought together by sutures. This is the procedure I should follow should a like occasion again present itself. The question of excision of the bullet-holes was discussed at the time of operation in this instance; but, unfortunately, was not done because of the fear of interruption of the circulation, and consequent gangrene of the gut.

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AN IPMROMPTU STOMACH-PUMP.

DR. CHARLES N. DIXON JONES, of Brooklyn, writes: "Apropos of the article on 'An Impromptu Pump for Stomach Irrigation,' by Dr. S. E. Post, allow me to relate the following instance of inventive ingenuity. About four months ago I provided a patient, suffering with gastric catarrh and dilatation, with the simple siphon apparatus and a cocaine solution, for stomach irrigation. From experience he found that the siphon did not at all times act as satisfactorily as was desirable, so he resorted to the following modification: He obtained a three-way stopcock, made from gas-pipe. To one limb of the stopcock he attached the stomach-tube; to the opposite limb a large fountain-syringe was attached by means of rubber tubing; the outlet was connected with a rubber tube, to the extremity of which could be attached a large rubber-bag syringe, such as is commonly used for a flower sprinkler. The apparatus is worked as follows: The stomach-tube is introduced, and then the stopcock so manipulated as to allow the fluid to flow directly from the fountain-syringe into the stomach. After sufficient fluid has flowed into the stomach the stopcock is turned, so that the fluid may flow back through the outlet. If it does not flow readily, the bag syringe is attached, and by compressing this a few times a powerful suction force is induced. At the same time compression of the syringe a few times in rapid succession will cause a swashing and churning of the fluid contained in the stomach, so that the walls are thoroughly cleansed. Of course, such an instrument is capable of numerous modifications and improvements, but this gentleman constructed it to meet a special indication, and, as far as I know, independently of any knowledge of the use of the principle involved in medicine."

NÆVUS VASCULARIS MATERNUS OF THE EAR.

DR. WILLIAM C. PIPINO, of Des Moines, Ia., reports the following case: "In November, 1882, Gilbert P——, aged two years, of Montgomery City, Mo., was brought to me to be treated for a 'cancer on his ear,' as his father expressed it. His history was, that a few days after birth his mother noticed a slight discoloration or purplish spot on the helix of his right ear, which did not occasion any alarm until after the first year, when it began to increase in size until it reached the dimensions as depicted in the figure.

Fig. 1.

Fig. 1.—A, tumor; B, line of incision.

"The family physician, understanding the nature of the growth, advised immediate treatment, but, with the reluctance that usually attends such cases on the part of parents, they deferred treatment until the growth had attained sufficient weight to cause the ear to lap over. Being assured that the removal of the growth would not be followed by evil results, they reluctantly consented to have it removed. I endeavored to remove the nævus by electrolysis, and, after inserting the needles on two different occasions without any perceptible diminution or change in the size of the growth, it became evident that other means must be resorted to. The operation of Kipp, so strongly recommended by Burnett, was next attempted, viz., to make an incision along the border, and dissect the skin off the tumor, and when the latter is fully exposed, carry the knife behind it and sever its connection with the subcutaneous tissue. This failed, for the reason that the skin was also involved in the growth. An incision was then made in the direction of the dotted lines, B, through the skin and cartilage; in other words, the growth was amputated, care being taken to go beyond any involved tissue. The cartilage was trimmed with curved scissors and the edges of the skin brought together by a sufficient number of sutures. Union was brought about by first intention. The case is interesting: 1, From the size of the nævus, which was 2½ inches long, 1 inch thick, ⅝ inch deep; 2, from the fact that its seat involved the whole of the helix, the lobule being the favorite site for these vascular growths. It may be well to mention in this connection, for the benefit of those who believe in 'maternal impressions,' that the mother declares that, when she was carrying this child, she had occasion to separate a dog from his hold on an old sow's ear, which was left lacerated and bleeding."

NEW METHOD OF TREATING THE VOMITING OF PREGNANCY.—At the Medical Congress at Nancy, M. Gairal, Sr., presented an apparatus which he called a uterine basin, the object of which was to check uncontrollable vomiting in pregnant women, and to support the womb, which had become too heavy, by bringing it in permanent contact with a liquid which would cause local anæsthesia.

Progress of Medical Science.

Stimulants as Retarding Digestion.—A correspondent writes, in the *British Medical Journal*: The extended consumption of one or the other of this class of substances points to the existence of some beneficial effect to be derived therefrom, although what this consisted in, it has been difficult to say, judging otherwise than subjectively. Sir William Roberts, of Manchester, has lately suggested an ingenious hypothesis, which offers a plausible explanation of their use. Man, in a state of nature, would derive his sustenance presumably from materials which, from their being raw, or at any rate imperfectly cooked, would be necessarily but slowly digested and assimilated. With civilized communities, on the contrary, everything is done with the view of facilitating digestion, by the removal of indigestible parts of the food, or by submitting them to processes which favor the action of the juices with which they are to be brought into contact. Under these circumstances, it is quite possible that digestion and assimilation may proceed at a speed not only unnecessary, but even disturbing, to the equilibrium of the organism, and provocative of waste. The employment of alcohol, tea, coffee, etc., would tend to correct this undesirable acceleration of the assimilative processes; for Sir W. Roberts has proved, by a series of carefully conducted experiments, that their effect is powerfully to retard the action of the various digestive ferments on the foods; and it may be that the instinctive sense of the benefit thereby derived lies at the root of the yearning of all civilized nations for such substances. Again, some condiment, such as common salt, is added to restore sapidity to articles from which the salts have been removed in the process of cooking; and, taken in excess, it only throws extra work on the organs of excretion.

Colloid Cirrhosis of the Liver.—Dr. Mattei, in making a post-mortem examination on the body of a woman seventy-seven years old, found a liver presenting externally all the appearances of atrophic cirrhosis. On microscopic examination numerous globules were found in the interlobular spaces, and some also in the substance of the hepatic lobules. These globules were of varying size, shining, translucent, colorless, and homogeneous. Further examination showed that these bodies were made up of colloid material. The author is of the opinion that a granular condition of the liver may depend solely on the presence of colloid globules and of embryonal cells in limited points of the interlobular spaces, and accordingly gives the name of colloid cirrhosis to the condition found.—*Rivista Clinica e Terapeutica*, September, 1886.

Artificial Respiration in Suffocative Catarrh.—Dr. B. Morpurgo reports two cases of suffocative catarrh in which great service was rendered by rhythmical compression of the thorax. He found that every compression of the chest was followed by more abundant fluid râles, and that a deeper spontaneous inspiration followed every forced expiration. The author finds that the effects are twofold—mechanical or direct, and automatic or indirect. The first consists in the direct expression of the fluid as a consequence of the pressure exerted upon the infiltrated lungs. The second effect is a strengthening of the respiratory centre in the medulla, by reason of the inspiratory stimulus which succeeds the forced expiration, and of the supply which it receives of blood less charged with carbonic acid.—*Il Raccoglitore Medico*, Vol. 2, No. 6, 1886.

A Peculiar Affection of the Lower Lip.—Dr. O. Moretti describes an unusual condition which he has met with several times in the neighborhood of Recanati, in Italy. It attacks especially the poorer classes, males rather than females, and rarely those under twenty years of age, and is observed only during the summer months, from April to September. It consists of superficial ulcerations of the lower lip, the greater diameter of which is usually parallel to the buccal aperture. The formation of the ulcers is preceded by pain, swelling, and heat, and not infrequently there is considerable attendant fetor. The ulcerations are very painful, and the pain is increased by eating or by any movements of the lip. Many facts would seem to show that the disease arises from contagion, and sometimes it recurs in succeeding years at about the same time. That it is of parasitic origin would seem to be demonstrated by the uniformity of the symptoms, the mode of transmission, and the results of specific treatment. When antiseptics are used a cure is obtained in a few days, but when treated by ordinary means the ulcers usually persist for many weeks.—*Il Raccoglitore Medico*, Vol. 2, No. 6, 1886.

Hemorrhagic Syphilis of the New-born.—Dr. Andronico reports the case of an infant born of a woman who, in the second month of pregnancy, had a chancre on the vulva. From the first days of life the child had coryza and marked icterus; soon after numerous points, of a copper-red color appeared on the skin, and obstinate hemorrhage took place from the umbilical cord. The child died on the ninth day. Another case is reported by Dr. De Luca. A woman acquired syphilis from her husband, and some years later gave birth to a child. The infant suffered from pemphigus, and soon after the bulli became filled with blood and petechiæ appeared on the legs. Finally uncontrollable hemorrhage took place from the gums of the lower jaw, the umbilical cicatrix, and the intestines, and the child soon died.—*Giornale Italiano delle Malattie Veneree e della Pelle*, August, 1886.

Hysterical Apoplexy.—M. Debove relates the case of a man, thirty-one years of age, of good physique, who, on rising from the table suddenly lost consciousness and remained in a comatose condition for two hours. There was at first complete motor paralysis of the left side, but the next day there was only a slight paresis accompanied with hemianæsthesia. The author based his diagnosis of hysterical apoplexy upon the absence of the ordinary causes of an apoplectic attack, and on the existence of other signs of hysteria. M. Debove believes that the anæsthesia met with in subjects suffering from poisoning by alcohol, lead, or mercury, is not always due to the direct influence of the poison, but is often hysterical in character, although it is true that the hysteria itself may be symptomatic of the poisoning. The anæsthesia which accompanies organic brain lesions is usually seated in the same regions as the motor paralysis. Irregularity in the intensity of the anæsthesia, and its change in location under the influence of the magnet, are arguments in support of the hysterical nature of the affection.—*Le Concours Médical*, No. 34, 1886.

Salicylic Acid in Diphtheritic Coryza.—Dr. Domingo Gonzalez has employed salicylic acid with excellent results in diphtheria with invasion of the nasal mucous membrane (*Gaceta Médica Catalana*, September 15, 1886). The following are the conclusions which he formulates concerning the treatment of this affection: 1. Diphtheria is a local disease, always grave, but often curable if energetic local treatment be employed from the first. 2. Cauterization with nitrate of silver in strong solution, or with hydrochloric acid, is the treatment from which the best results may be expected. 3. When diphtheria invades the nasal fossæ, cauterization of the affected parts being no longer possible, treatment must be limited to the local application, by either insufflation or irrigation, of antiseptics. 4. Among the agents comprised in this category salicylic acid is the most efficacious, since, in addition to its properties as an acid, it is a powerful antiseptic, and is devoid of toxic effects. 5. Spraying the parts with a four per cent. solution of chlorate of potassium and borate of sodium is a valuable aid to the treatment by salicylic acid.

Hydrate of Chloral in the Vomiting of Pregnancy.—Dr. Federico Leon relates the case of a woman who had always suffered so severely from vomiting during her previous pregnancies, that it was several times proposed to bring about premature delivery. In her sixth pregnancy the vomiting was just as severe, and in addition there was a most alarming ptyalism. Cold was applied externally and internally without the least effect, and equally useless were opium, bismuth, alkalies, pepsin, blisters over the stomach, and subcutaneous injections of morphine. The patient became delirious, not recognizing any members of her family, was greatly emaciated, and seemed to be nearing dissolution. Finally, after all other remedies had proved ineffectual, a trial was made of rectal injections of chloral in doses of thirty-five grains four times a day. The evening of the day in which this treatment was begun, the patient slept well, and on the third day the vomiting ceased, and the woman begged for food. She was allowed to take whatever she wanted, and chose the most indigestible substances. But the vomiting did not return, and the cure was complete.—*Nouvelles Archives d'Obstétrique et de Gynécologie*, No. 8, 1886.

Assafœtida in Habitual Abortion.—Professor Paolo Negri reports in *Lo Sperimentale* for August, 1886, two cases of habitual abortion successfully treated by assafœtida. The first case, seen in consultation with Dr. Bianchetti, was that of a lady, young and in apparent health, who had been married seven years. The first pregnancy was arrested at the third month, the second went on to term, and then followed five more which were interrupted at periods ranging from the second to the seventh month. Both the lady and her husband were free from disease of any kind, and nothing abnormal could be detected on examination of the genital organs to account for the repeated miscarriages. Various measures had been tried in previous pregnancies, but without relief. Upon the appearance of symptoms indicating the beginning of another pregnancy assafœtida was ordered, the patient took the remedy regularly, and though there were occasional slight hemorrhages, the pregnancy went on to term and the woman was delivered of a living child. The second case was that of a lady who had had four miscarriages in succession, none of her pregnancies ever having gone on to term. When in the third month of her fifth pregnancy she was seen by Dr. Negri. No signs of syphilitic disease could be discovered in herself or her husband, nor was there any other apparent cause for the repeated abortions. Assafœtida was at once ordered, and the patient persevered in the treatment, taking toward the end of her term as much as eighteen grains of the gum resin per diem. The pregnancy was uninterrupted by any accident, and went on to full term. Although the number of cases was so small, the results were nevertheless so good as to warrant the author in advising a trial of assafœtida in all cases of habitual abortion for which no cause can be assigned.

The Pathogenesis of Pseudarthrosis.—Dr. A. Bonome contributes to the *Archivio per le Scienze Mediche*, vol. x., No. 17, 1886, a study, based chiefly upon experiments on animals, of the causes which contribute to the formation of pseudarthrosis after fractures and resections. These causes, he says, are chiefly comminution of the bones, the interposition of soft parts between the opposing fragments, separation of the divided ends of the bones, the abolition of nervous function, and diminution or temporary suspension of the arterial circulation. The interposition of soft parts, not associated with any other complication, facilitates the formation of fibrous tissue, which, uniting with that arising from the periosteum and from the medullary portion, gives rise to fibrous pseudarthrosis. In fractures with separation of the opposing fragments, the connective tissue which unites the ends of the bone is derived in part from the medulla and in part from the periosteum. In fractures made experimentally in long bones, soon after paralysis of the limb caused by resection of the nerves, there is usually a formation of callus, though it is slight. But after a certain time, not over thirty to thirty-six days, a rapid absorption of the callus, with necrosis of the newly-formed osseous trabeculæ takes place, in consequence of which the bone at the point of union becomes very friable. In fractures occurring while there is present a notable diminution in the arterial circulation of the limb, there is very little regeneration of the periosteum and medulla, and a somewhat extensive necrosis of the ends of the divided bone takes place. The place of the necrosed portion is taken by connective tissue, starting from the medulla and periosteum, which constitutes the fibrous connection between the fragments and forms the pseudarthrosis.

The Function of the Cochlea in the Organ of Hearing.—In a young man who was suffering from otorrhœa, and from whose ear during syringing a piece of bone (the upper turn and a half of the cochlea) came away, Dr. Stepanoff instituted a number of experiments to determine the function of this part. (*Meditsinskoye Obozreniye*, No. 3, 1886.) As a result of his studies he came to the following conclusions: After destruction of the upper portion of the cochlea the perception for deeper tones (contrary to Helmholtz's theory) is not lost, nor is there any defect in tone-perception, either in whispering or in loud talking. This, however, does not prove that the cochlea plays no part in tone-perception, just as the retention of the power of hearing in rudimentary development or necrosis of the semicircular canals is no evidence that these have no part in the perception of sound. The author concluded that we have as yet no facts which would warrant us in localizing the perception of various sounds, such as tones, noises, and speech, in different parts of the labyrinth.

The Nature of the Pigment in Addison's Disease.—In the *Correspondenz-blatt für Schweizer Aerzte*, Nos. 15 and 16, 1886, Dr. Ernst Kummer, assistant to Professor Kocher, of Berne, ably details two cases of Addison's disease, in one of which intense urobilinuria was present. Professor Nencki was able to isolate (by evaporating an amyl-alcoholic solution) about 0.4 gramme of urobiline from the patient's urine, collecting during twenty-four hours. Indican was nearly absent. The author dwelt on the question of the origin of the pigment which caused a "bronze" discoloration of the integuments in Addison's disease. As is known, Professor Nencki and Dr. Berdez have succeeded in isolating the coloring matter of human melanotic sarcoma, the so-called phymatorhusin, which has no relation whatever to hæmoglobin, since it contains more than eleven per cent. of sulphur (*Archiv für Experim. Pathol. u. Pharmac.*, vol. xx., p. 346), but is closely related to hair-pigment, as Dr. Nadjeda Sieber's researches have shown (*ib.*, p. 362). It would be possible to admit that the pigment of Addison's disease is either phymatorhusin, or hair-pigment; but then the urine should contain an increased amount of non-oxidized sulphur. Since nothing of the kind is observed in the disease in question (Lichtheim), the author comes to the conclusion that the "bronze" pigment is a product of hæmoglobin. He supports his view by pointing to a universal diminution of red blood-corpuscles, and an absolute reduction of hæmoglobin in Addison's disease.

Electric Baths in Eye Diseases.—Professor Denti states that he has found electric baths and douches very valuable in several ophthalmic affections, especially in those which refused to yield to more ordinary methods of treatment. His apparatus consists of a vessel of water placed at a height of two metres above the patient's head, a constant current battery of thirty cells, and a glass or ivory box without a bottom. This box is fitted on to the eye. It contains a metal pipe communi-

cating by an india-rubber tube with the water-vessel, from which the box can be filled with water; an efferent non-metallic pipe is also provided. The metal pipe is connected by wire with one pole of the battery, the other electrode being placed on the forehead or crown of the head. The sittings are of from four to six minutes' duration. For baths eight or ten cells are used, for douches twenty or more. No unpleasant effects have ever been observed, the stimulating action being only sufficient to produce a slight degree of hyperæmia. The author finds that the baths are best in deep-seated affections, such as those of the vitreous or of the optic nerve; the douches are useful in more superficial affections, such as those of the conjunctiva and cornea. Dr. Denti tried the electric baths in six cases: four of atrophy of the papilla in different stages, one of disseminated cloudiness of the vitreous, and one of double ulcerative blepharitis. The papillar atrophy was benefited most when it was slightest. In one case of atrophy accompanying disease of the spinal cord, the intra-ocular affection was, or appeared to be, arrested. The patient with the cloudy vitreous was so much improved that, though at first he could scarcely distinguish large objects, after thirty sittings he was able to read ordinary print. The patient with blepharitis was completely cured. The douches were employed six times: in three cases of paralysis of the eye muscles, and in three of exudations remaining after ulcerative keratitis. One of the cases of paralysis was entirely cured, the other two being improved; and in the cases of keratitis the success was most marked, the exudation being completely absorbed.—*The Lancet*, July 17, 1886.

Successful Extirpation of the Spleen.—*La Gazzetta degli Ospitali* (May 23d) reports a case from the surgical clinique of the University of Genoa in which Professor A. Ceci removed a greatly enlarged spleen. The patient, an imperfectly developed and very thin girl, aged seventeen, with very small pulse, had had an abdominal tumor from birth. The anterior surface was smooth and convex, the margins sharp and fissured. The posterior surface presented a large lobe on the left. The abdominal walls were very flaccid, so that the tumor could be completely rotated vertically and transversely, and also be pushed into the left hypochondrium, whence, however, the respiratory movements soon caused it to advance to the front of the abdomen. The liver was in normal position. The enormous size of the floating spleen interfered with the patient's movement and nutrition, and was an occasional source of very severe attacks of pain, radiating from the left hypochondrium to the præcordial region and the left upper limb, and attended with violent dyspnœa and insensibility. Extirpation having been resolved upon, it was performed on March 20th, with strict antiseptic precautions. The incision in the linea alba from above downward through the umbilicus was nine and a fourth inches in length. On opening the abdomen, serious signs of suffocation compelled the suspension of the operation for nearly thirty minutes. Anæsthesia having been commenced with bichloride of methylene, chloroform was substituted for it. A triple catgut and carbolized silk ligature having been applied to the pedicle, it was dropped in. The peritoneum was sutured separately. The abdominal walls were brought together by three metallic points, after Billroth's method. The splenic artery was larger than the subclavian. The whole operation, including the interruption, lasted an hour and a quarter. Violent delirium and nervous phenomena simulating angina pectoris soon followed. For two days the pulse could not be counted, and the respiration varied from 70 to 80 per minute. The treatment was by oxygen and nutritive clysters. The wound was first dressed on the eighth day, and almost the whole of the wound-tract suppurated. In spite of strict antiseptic treatment erysipelas supervened, and yet the patient recovered. On April 22d (thirty-one days after the operation), her condition was reported as excellent, only a small superficial wound remaining. The extirpated spleen, with the contained blood, weighed 77.16 ounces. A courteous note just received from Professor Ceci states the patient is in good health; pulse 80; respiration 22; weight increasing rapidly; complexion florid.—*Lancet.*

Sub-pleural Laceration of the Lung.—Mr. Timothy Holmes has recently related a case in which a girl, aged fourteen, had fallen and severely bruised the right breast. There was no fracture of the ribs. The leading symptoms were hæmoptysis, great dyspnœa, and entire absence of breathing in the right lung. The right chest did not move in respiration; it was natural on percussion. These symptoms, with the history of her having a piece of biscuit in her mouth at the time of the accident, led to some suspicion of the impaction of a fragment in the right bronchus; but the progress of the case negatived this idea. The dyspnœa was at first so alarming that tracheotomy almost seemed indicated. Next day, amphoric breathing was heard under the angle of the right scapula, and this developed into the physical signs of a large cavity in the lung, but without any sign of fluid or air in the pleura. This cavity gradually contracted, and the girl quite recovered. It is noteworthy that subcutaneous emphysema appeared at the right side of the root of the neck on the third day. When last seen, the girl, though in perfect health, had evident physical signs of considerable consolidation of the right lung. In commenting on this case, the author quotes Nélaton's description of the symptoms of sub-pleural laceration (including emphysema at the root of the neck) as exactly verified by the symptoms here observed. He remarks on the slight attention which is bestowed on this form of injury in most of our text books, and the doubts which he has himself expressed in his own work as to the possibility of diagnosing the sub-pleural form of laceration. These considerations, together with the comparative rarity of such cases would, he believes, justify the publication of this case, but it also contains a feature of its own, which has not hitherto been noticed in the history of the lesion, viz., the entire suspension of respiration in the injured lung. The cause of this phenomenon was discussed, and reference made to other cases of sub-pleural laceration.—*Provincial Medical Journal.*

Melanotic Whitlow.—Mr. Jonathan Hutchinson writes, in the *British Medical Journal*: When melanosis fungates, and when it affects the glands, we must not expect the larger growths to be of a black color. The power of producing black pigment appears to be, in most persons, very limited. The original growth, beginning, it may be, in the rete of the skin, or in the choroid of the eye, is coal-black, but the later and larger growths are white, or show only here and there a pigmented streak. To make the diagnosis at these stages it is necessary to look carefully at the skin near the margin of the fungus. Here a little colored border may often be found, looking as if lunar caustic had been applied, which tells the tale. There is a rare form of disease of the nail-bed which is malignant, and usually takes the type of melanotic sarcoma. It is generally attributed in the first instance to injury, and its diagnosis is always missed in the early stages. Because it resembles whitlow, and is usually so named at first, I prefer to give it that name. It is, however, from the beginning, malignant. Careful observation will find at the edge of the inflamed nail a little border of coal-black color, and this, however slightly marked, must be allowed to make the diagnosis. I have seen at least half a dozen of these cases. Early amputation is demanded.

M. Bouchard has managed to induce cataract in rabbits by introducing naphthaline into the digestive canal. The quantity required for the purpose was a daily dose equal to a thousandth part of the animal's weight.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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AN ALLEGED SUCCESSFUL TREATMENT FOR TUBERCULAR MENINGITIS.

TUBERCULAR meningitis is the most fatal of the acute diseases of childhood, and though serious in character it is by no means infrequent. In France it destroys annually twenty-five thousand children, while in large cities like New York it makes up about two per cent. of the death-rate.

Medical art will probably never be able to achieve any great therapeutical triumphs with this disease, and its main efforts must be directed toward its prevention. Still, there are undoubtedly recorded cases of cure after the disease has developed; such, for example, are the cases reported by Bókai and cited by Steffen. It behooves the physician, therefore, never to despair of success, even in well-marked cases. The main reliance in tuberculous meningitis has been the use of potassium iodide, cold, and counter-irritation to the head. Traube has claimed much for inunctions of gray salve in very large doses.

Recently there comes from several sources evidence of the value of inunctions of iodoform ointment in large amount.

In the *Revue Internationale des Sciences Médicales* for October, 1885, Dr. Eug. Martel cites a case of tubercular meningitis treated successfully by Dr. E. Nillson, by the use of iodoform ointment. Dr. Martel tried the method temporarily in one case, with the result of producing marked alleviation of symptoms. But he was not able to follow up the patient, who, eight days later, died.

Moleschott, in the *Wien. Medicin. Woch.*, 1878, Nos. 24 to 26, reports five cases of tubercular meningitis treated by iodoform, one of these being a complete cure. He simply painted the neck and mastoid processes with three to four grammes of iodoform collodion, one to fifteen.

Dr. Souden, of Stockholm, treated a case diagnosticated as tubercular meningitis by himself, Dr. Waern, and Professor Abelin, with inunctions of iodoform ointment, one to five. The patient, a girl three years of age, got completely well.

Dr. F. W. Warfvinge, however, if his observations can be trusted, has had the most brilliant results. He reports five cases of tubercular meningitis, all of them cured under the use of iodoform inunctions. The cases are reported in full (*Hygeia*, 1886, p. 499; *Revue Internationale des Sc. Méd.*, August 31, 1886) and certainly some of them were typical illustrations of tubercular meningitis as it is ordinarily seen. In one of the cases iodide of potassium was also used, and in all various symptomatic remedies, such as ice-caps, chloral, antipyrin, etc., were employed when indicated.

The method of treatment followed by Dr. Warfvinge, consists in shaving the head and anointing it with an ointment consisting of iodoform, one gramme; vaseline, five grammes. This is done twice daily, the head being covered afterward with an impermeable cap. The inunctions were employed in one case for seventeen days, in another for nineteen, in a third for thirty, a fourth for thirty-two, and in the fifth case for nine days.

RECENT EXPERIMENTS WITH PASTEUR'S INOCULATION METHOD IN VIENNA.

SOME time ago Dr. Ullmann, of Vienna, went to Paris and studied Pasteur's method of preventive inoculation for rabies. He brought virus and all the necessary materials for establishing a laboratory in Vienna, and the work of manufacturing the rabbit's cords has been successfully going on. He finally undertook preventive inoculations upon men, and up to a recent date had operated upon sixty-one persons supposed to have been bitten by rabid dogs, so far without a death.

As an offset to these practical results, Professor v. Fritsch has been making some experiments, which appear to show that the Pasteur method is inefficient upon persons who have, beyond any doubt, received the virus into the system.

He took sixteen rabbits and, having trepanned them, inserted the rabic virus directly beneath the membranes. He then began at once to perform the preventive inoculations, as done by Pasteur. Despite these, every one of the rabbits died of hydrophobia, as was shown by inoculating other healthy rabbits with bits of the medulla of the dead animals. Another series of rabbits, for a control experiment, was trepanned and inoculated, but did not subsequently receive preventive inoculations. These also all died. A second series of experiments was performed with similar results, except that one rabbit did survive. A similar experiment with a similar result was performed upon five dogs.

Thus it seems that in cases in which the virus is, beyond all question, deposited in the nervous system the results of preventive inoculations are *nil*. But it must be admitted that Professor Fritsch's tests were very severe, and it cannot be said that they prove that the preventive inoculations are futile when the virus is only deposited in the superficial soft tissues of the body.

A BURIED TREASURE.

MANY have doubtless felt a regret that the valuable collection of books known as the Toner Collection should have been given to the Congressional Library rather than placed in some more accessible location. The Congressional Library has a poor collection of medical works, and its librarian does, or did, not attempt to develop that field, consequently the Toner Collection seems a little out of place. A correspondent of the *Maryland Medical Journal* gives some facts showing the interesting character of Dr. Toner's laboriously gathered treasure:

"Toner's Collection embraces medical and historical books, which number 28,299 volumes of books and 18,615 pamphlets. Besides these, it comprises some 1,500 portraits of medical men, and 3,000 to 4,000 medical biographies in MS., and some 1,500 in print, all arranged for easy reference, in alphabetical order. There are also check lists (similarly arranged) affording references to more than twenty thousand physicians."

As books belonging to the Congressional Library cannot be loaned to physicians throughout the country, unless some special arrangement exists, Dr. Toner's Collection appears to be a good deal of a buried treasure. If it were placed in some large medical centre, like Philadelphia or New York, it would be consulted hundreds of times where it is now consulted once. We make these comments with all respect to Dr. Toner, to whom the profession is already greatly indebted and whose wishes in such a matter must of course be final.

THE SEVENTH VOLUME OF THE INDEX-CATALOGUE OF THE SURGEON GENERAL'S OFFICE.

THE seventh volume of the Index-Catalogue of the Surgeon-General's Office has just been issued, and adds another to that remarkable series with which our readers are already familiar. Each volume is a monument by itself. The present one contains fourteen thousand six hundred and eighty-eight author titles, representing five thousand nine hundred and eighty-seven volumes, and twelve thousand three hundred and seventy-two pamphlets. It also includes six thousand three hundred and seventy-one subject-titles of separate books and pamphlets, and thirty-four thousand nine hundred and three titles of articles in periodicals. Dr. J. S. Billings, of Washington, D. C., still has the work in charge. And why not! For who could take his place?

DEATH AND BURIAL AT SEA.

SEVERAL times during the past season the press has chronicled the death and burial at sea of passengers on the transatlantic steamers. Lately, the name of a most honored member of the medical profession was added to the list. Many have been led to ask if such a burial is at all necessary. Is it not rather, in the present age of civilization and Christianity, barbarous?

It is now about half a century since steam-vessels began to cross the ocean. Until that time transportation of passengers was in sailing vessels, which required at least a month for an ordinary passage. After that time sailing vessels long carried the great bulk of human freight. It is only during the last twenty-five years that the number of vessels has so greatly increased, and the length of the voyage so shortened, that the trip has become merely a ferriage across the sea. Now one can cross the ocean at little greater expense than is required to go to Chicago. Then medical service was very unsatisfactorily performed on board ship. Now it is, at least, fairly efficient. The length of a voyage was formerly calculated by weeks. It is now a matter of seven or eight days, and with the fastest steamers even less.

In view of all these improvements the question arises, Is burial at sea ever necessary in case of the transatlantic vessels? We do not think it is. There are two sides to every question, but we can anticipate some of the arguments of the advocates of burial. We can at once dismiss, as unworthy of serious consideration, the fact that sailors are reluctant to have a dead body on board. This is not an age of superstition. There are no more shipwrecks in case of vessels leaving port on Friday than on any other day. A craft does not go to the bottom simply because it is deserted by rats. Furthermore, the class of men employed on the steamers are not of the typical "old tar" order, and are not easily affected by sailors' yarns. In former years a vessel was at the mercy of wind and tide. Now the length of a voyage can, barring accidents, be accurately ascertained. The hygiene of vessels is attended to. No such crowding is allowed as before, though it is bad enough as it is, and hence the care of a dead body is no longer such a difficult task.

Every steamer carrying passengers should have a separate air-tight room, which may serve as a morgue. It should be so arranged that it can hold ice enough to thoroughly congeal a body. It should also contain a metallic box of some kind for use in case of death from a contagious disease. After each occupancy it should be thoroughly disinfected. Every ship's surgeon should be required to possess a knowledge of embalming, so that, with persons dying from non-contagious diseases, at least, the body could be suitably cared for. It matters not whether the deceased person be a poor emigrant or a wealthy cabin passenger. On arrival at port the latter's friends could be communicated with. If no friends could be found, a decent burial could be procured at a small cost to the company. If an emigrant dies in Castle Garden immediately after landing, the body is cared for by the Commissioners of Emigration. Simple humanity would demand the same treatment of the remains of those who die on the voyage.

It may be urged that the steamship companies will not take all this trouble. They are, however, common carriers, and are under certain obligations to the public. Law is stronger than the erroneous opinions, or even prejudices, of directors.

ANOTHER CEREBRAL TUMOR SUCCESSFULLY REMOVED.—The patient was a man who had been absolutely hemiplegic for a month, and had passed into a semi-comatose condition. Before these symptoms developed he had endured terrible pain in the head, and had suffered from fits. On Thursday, September 23d, Mr. Victor Horsley trephined over the motor region of the right hemisphere, and, after enlarging the aperture made by the trephine, succeeded in removing a large tumor from the brain; the tumor weighed four and a half ounces, was three inches long, two and a half inches broad, and two inches deep. On the day after the operation the patient was perfectly rational, and even amusing, in his conversation, and said that he was quite free from pain. On September 27th the wound was entirely healed, and the man had recovered some power in his leg. This is the fourth case in which Mr. Horsley has operated successfully on the motor area of the cortex of the brain; the three earlier cases were described to the Section on Surgery at the last meeting of the British Medical Association.

News of the Week.

The Eighth Semi-annual Meeting of the Association of the Surgeons to the Pennsylvania Company will be held at the Seventh Avenue Hotel in Pittsburg, on October 19th.

Dioptry or Dioptric.—The quietness of the fall season has been disturbed by two considerable controversies: viz, that over the Jones River, by the *Times* and *Sun*, and that over the question of "dioptric" or "dioptry," by Drs. Loring and Burnett, in the columns of the New York *Medical Journal*. There is no doubt about the Jones River; but whether the ophthalmologist of the future will say dioptry (Burnett) or dioptric (Loring) is a question that still hangs trembling in the balance, the prevailing feeling being: "How happy could I be with either were t'other dear charmer away."

Detroit has no Free Hospital, but it is now expecting one. The reports are that the sum of $220,000 has been promised for this purpose.

The American Association for the Advancement of Science contains a membership of 2,108, of whom 280, or about thirteen per cent., are physicians.

The Queen and the International Medical Congress.—We are credibly informed that Dr. Pancoast, of Philadelphia, has invited Queen Victoria to attend the next meeting of the International Medical Congress.

The American Cholera Commission.—Dr. E. O. Shakespeare, who was sent abroad by the Government to investigate cholera, returns a convert to the doctrine of Koch.

A Model Cholera Hospital at Rome.—The London *Globe* gives an interesting account of a new cholera hospital at Rome, which the Pope has caused to be built. Contact with the outer world is carefully guarded against by grated windows, telephones, and by a revolving barrel, with half its circumference open, by which provisions are taken into the hospital. The water-supply is drawn from a well, and is quite separate from the city supply. The drain is formed of an iron tube sixteen inches in diameter, the joints being hermetically sealed with lead. There is a disinfecting boiler in which corrosive sublimate is placed. There is a room called the "chamber of observation," which has a staircase leading up to the first floor. In this room dead bodies are placed for a given time, as it is well known that cholera patients often show signs of being quite dead when really only apparently so. The room is, by means of an electric apparatus, in communication with the director's office. The body being laid on a bed, both hands are put into a sort of copper muff; between the hands is put an instrument so sensitive that, should there be the slightest movement of the hands or any other part of the body, this instrument would instantly close the electric circuit, and the bell in the director's office would be set ringing; at the same moment another instrument registers the number corresponding to the bed upon which the body is lying. The chamber is warmed by steam so as to facilitate resuscitation. The laboratory is provided with a gasometer for the storage of oxygen, which is taken to the wards for administration in gas-bags. On the ground floor are four wards for doubtful cases; should they get worse they are sent up in the lift to the cholera wards above, their clothes and bed-linen being immediately burned. Another room is set apart for women in childbirth, and there are two more for undressing patients, so that the infected clothes may be destroyed, the Pope furnishing new clothing for all recovered cases. The cubic space allowed for each bed is thirty-six cubic metres. The ventilation is carried on by means of funnels with gas jets below. The chapel is in communication with the sacristy of St. Peter's, so as to form an easy access for the Pope should he wish to visit the hospital; but before returning into the sacristy, His Holiness and suite would have to go into a room near it for disinfection.

A Curious Medico-ethical Question.—The Paris and London press are commenting upon a delicate question in medical casuistry raised by the over-zealousness of a Paris doctor. It appears that a certain Frenchman contracted marriage with a lady without completely disentangling himself from the meshes of another woman. As frequently occurs in France, the deserted one, without any unnecessary delay, proceeded to inflict several rather serious wounds on her lover by means of a revolver. Anxious at any price to preserve silence on a matter so prejudicial to his domestic relations and menacing to the perpetrator of the outrage, the victim contrived to reach home, where he allayed possible suspicions by a story of having been "nocturnally assaulted." The explanation was believed until a medical man was called in, who, not satisfied with acting in a purely professional capacity, subjected his patient to a searching cross-examination, with the result of eliciting the real facts of the case. He then felt himself obliged to take the district *commissaire de police* into his confidence, with the most disastrous effect so far as the happiness and peace of mind of his patient were concerned. The arrest of the woman, and her confrontation with the victim, followed as a matter of course, entailing the publicity which the injured man had so sedulously endeavored to avoid. The question raised is, naturally, whether medical men are obliged, morally or legally, to communicate to the police suspicious facts which may have come to their knowledge in the exercise of their profession. It will be very generally agreed that the doctor in question was unnecessarily prying, and that the interests of society were not helped by his conduct.

To Relieve the Itching in Ivy-poisoning.—Dr. J. W. Little, of Washington, D. C., writes: "Having tried everything I could think of for the intense itching caused by poison ivy, I was at a great loss to know what to do for a patient who was becoming dissatisfied. I concluded to try the following original prescription: Bromo chloralum, ℥ iv.; vinum opii, ℥ ij.; aquæ, ℥ vj. My patient was ordered to bathe the parts freely with this, and informed me that it 'acted like magic' and relieved the itching at once. I have tried the same in other cases, and also in urticaria, with relief."

Inoculation for Hydrophobia.—Hydrophobia inoculation is being practised in Buenos Ayres, with, of course, the usual results.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 22, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. T. MITCHELL PRUDDEN presented, in behalf of a candidate, specimens illustrating *the lesions of typhoid fever*, with perforation of the intestine, on the nineteenth day, and suppurative peritonitis.

Dr. H. N. HEINEMANN presented, in behalf of a candidate, a specimen of [illegible] *duct.*

MULTIPLE FRACTURE OF THE ILIUM, ISCHIUM OR THE BLADDER; UPRAE EDEMA; MEDIAN CYSTOTOMY WITH THREE-QUARTERS OF AN HOUR.

DR. GEORGE F. SHRADY presented specimens taken from the body of an Italian laborer on the aqueduct, who had his pelvis crushed bilaterally by becoming engaged between two moving cars. He was taken to the hospital about twenty-four hours after the accident, when fracture of the pelvis, and rupture of the bladder attended by extravasation of urine were recognized. Dr. Shrady operated immediately for the relief of extravasation of urine by making perineal section. The operation was begun as an explorative one, the steps being taken in accordance with the conditions which successively presented themselves. He performed median cystotomy, and found the bladder contracted, with rupture on the right side. Passing his finger through this rupture it entered a cavity apparently filled with fluid blood, urine, and broken down tissue. Rectal examination revealed a boggy feel at the right side of the bladder, which led to the conclusion that extravasation of urine had taken place through a rupture of the viscus, situated below the peritoneal line, and in order to obtain free drainage and to further explore the bladder he performed the supra-pubic operation. A perforated india-rubber drainrge tube was then passed through the bladder from one opening to the other, and also perfect drainage of adjacent parts was accomplished by the same means. There was distinct overlapping of fragments at the junction of the pubic and ischiatic bones, and a false point of motion could be obtained, apparently at the right sacro-iliac synchondrosis. He was unable to demonstrate positively the line of fracture on the left side of the pelvis. The patient did well for forty-eight hours. On the third day the temperature began to rise, and death took place on the fifth day, from septic infection. The specimen showed multiple fractures through the ischio-pubic rami and bodies of the pubes, but also a fracture, not at the sacro-iliac synchondrosis, as he had supposed, but through the foraminal line of the sacrum. He had never before seen or heard of a fracture in this locality.

The immediate effect of the operation was very gratifying, but the chances of recovery were overbalanced by the length of time the extravasation had existed, and the nature and extent of the bony lesions. There was a small rupture in the left side of the bladder, which was suspected, but not demonstrated ante mortem. The urethra was torn completely across. The autopsy was performed by Dr. Hodenpyl.

DR. FRANK FERGUSON presented specimens illustrating

CHRONIC DIFFUSE NEPHRITIS AND CARDIAC HYPERTROPHY.

They were from the body of a man fifty-eight years of age, a native of the United States, and a clerk, who was admitted to the New York Hospital August 29, 1886. His mother, father, and one sister died of heart disease.

During the past eighteen years he had had repeated attacks of rheumatism. He never suffered from malaria.

He had a hard chancre twenty-five years previous to his admission, followed by sore throat, eruption, and falling out of the hair, and pains in his legs at night.

He had always been a moderately heavy drinker of spirits.

On the ninth of last February he woke up in the morning with his legs so swollen and stiff that he could not walk. This subsided, and he remained comparatively well up to three weeks before his admission, when he began to suffer from dyspnœa, which increased on the slightest exertion.

He could not lie down, and when he slept he soon awoke with alarming dreams and very great dyspnœa.

Œdema of his legs commenced at about the same time with the dyspnœa, and soon afterward his scrotum became œdematous.

On his admission his temperature was 97° F., pulse 116, and his respirations were thirty six to the minute.

His urine was acid, had a specific gravity of 1.014, and contained fifty per cent. of albumen; it also contained hyaline and granular casts. There was a large quantity of fluid in the right pleural cavity, and on the 15th of September he was aspirated, and thirty-four ounces of straw-colored fluid withdrawn. After the aspiration the quantity of urine at first increased, and after five days again returned to thirty ounces daily; the specific gravity fluctuated between 1.004 and 1.012, hyaline, granular and epithelial casts remained, with reduced quantity of urea and abundance of albumen. On the 22d he had a slight tonic convulsion and died suddenly.

The peritoneal and pleural cavities contained large quantities of blood-stained fluid. There was very great hypertrophy of the left ventricular wall of the heart, with slight dilatation of the cavity; the muscular tissue was yellowish; the valves were competent; the coronary arteries were normal. Microscopically, the muscular fibres were granular, contained a few fat granules, and the transverse striæ were obscured; more marked on the left than on the right side.

The aorta was atheromatous. The lungs were compressed and pigmented, and were congested and œdematous. The kidneys were very much diminished in size, the capsules were adherent, the surfaces were granular, and the cortices were thin and fatty. The tubes of the pyramids near the apices contained large masses of the urate of soda crystals. The liver was small and stained with bile-pigment. The stomach was intensely hyperæmic, with fatty and granular degeneration of the cells of the gastric tubules. The pancreas was fatty, macroscopically and microscopically. The supra-renal capsules were fatty. The cells of the renal plexus of the sympathetic ganglia were unusually pigmented. The vessels at the base of the brain were markedly atheromatous, and it was on account of this striking appearance that the specimen was presented, as well as the condition of the heart, the kidneys, and the intense hyperæmia of the mucous membrane of the stomach, the organ being quite fresh.

CEREBRO-SPINAL FEVER.

DR. J. LEWIS SMITH presented a specimen with the following history. It was taken from the body of an infant of twenty-seven months, who belonged to the New York Foundling Asylum, and was returned to the institution by the family who had charge of her, on August 23d. The history obtained was as follows: Three weeks previous to admission, she had an attack of eclampsia, and the day before admission another attack. Her state between the attacks was not ascertained, but she was probably well or but slightly ill.

After the second attack the movements in the left arm were impaired, tonic contraction of the left leg remained, and occasional spasmodic twitching of the left arm and leg was observed. At the time of admission she was restless, the pupils were equal, of about the normal size, but her sight was apparently lost, and the pupils scarcely

responded to light; the muscles of the face appeared normal, the left arm was paralyzed, and both the left thigh and leg were flexed, but they could be extended with little force. The rectal temperature on the day of admission was 104° F., the pulse rapid and weak, the bowels constipated; no cough; respiration quiet. Two days later, August 25th, the records state that the *tache cérébrale* was marked, the pupils did not respond to light, and were moderately dilated; temperature 104.5° F.; apparently no rigidity of the muscles of the neck; 4 P.M., temperature, 105° F.; 6 P.M., 107° F. Death occurred at 7 P.M.

Autopsy.—Upper and lateral surfaces of the brain normal; at the base of the brain the pia mater was cloudy, and streaks of fibrinous exudation were observed, especially in the right Sylvian fissure; in the left Sylvian fissure minute whitish points were observed in addition to the cloudiness; the pia mater over a portion of the spinal cord was injected, but no fibrinous exudation was observed upon it.

DR. SMITH remarked that cerebro-spinal fever had been constantly present in New York City since the epidemic in 1871. It has also been endemic for some years past in Philadelphia, Jersey City, Chicago, and some other cities in the United States. The case presented, and another to which he referred, illustrated the difficulty which sometimes existed of differentiating between cerebro-spinal fever, tubercular meningitis, and other forms of meningeal inflammation. A diagnostic point of value was the presence of the *tache cérébrale*.

DR. H. N. HEINEMANN presented a specimen of

PELVIC HEMATOCELE WITH HEMORRHAGE INTO THE ABDOMINAL CAVITY.

T. W——, aged thirty-six, nurse, female, married sixteen years, entered Mount Sinai Hospital September 3, 1886. Her history presented nothing unusual. Three weeks previously she was suddenly seized with cramps in the abdomen, and since then she had had continued pains. Examination revealed a hard mass in the right iliac region, cystocele and rectocele, a uterus measuring two and three-fourths inches, and external os patulous; urine negative. The mass increased in size, casts appeared in the urine, and on September 10th the patient died.

At the autopsy, made with the assistance of Dr. Josephine Walter, the right pleural cavity contained a small amount of serum. The lungs and heart were otherwise negative.

In the abdominal cavity, just anterior to and below the promontory of the sacrum, projecting into the pelvis above the brim, was a firm mass bound down below and to either side, consisting of a blood-clot hemmed in below and laterally, but above extending behind the peritoneum, covering the kidneys, liver, lateral walls, mesentery, small and large intestine, and meso-rectum. In the right meso-colon a large accumulation of clotted blood weighing nearly two pounds was found. The blood about the right kidney had firmly coagulated, forming a cast of the organ. The kidneys were large, pale, and granular, with smooth surface. The uterus contained the remains of a forming placenta, and the mucous membrane was slightly lacerated.

CEREBRAL APOPLEXY [illegible] HEMORRHAGE AT THE BASE OF THE BRAIN.

DR. HEINEMANN also presented specimens accompanied by the following history: L. N——, aged twenty-one, United States, clerk, was admitted to Mt. Sinai Hospital July 9, 1886. That morning he was suddenly seized with convulsions and unconsciousness from which he gradually recovered. He had only at times complained of headaches. Upon admission patient was cachectic and had systolic cardiac murmurs; his urine was negative; he had no paralysis. On July 14th he left the hospital. Three or four days after leaving hospital he began to complain of frontal headache and pain in both eyes, and of vertigo. On July 27th he began to vomit; this continued for three days and he re-entered the hospital. He had had no convulsions, nor any paralysis, but complained of his headache; pulse 44; evening temperature 99.6° F. For a week, to August 8th, the patient lay quietly in bed, eyes closed, complaining of headache, but stupid and disinclined to answer. The left arm and leg were slightly weaker than right, and the reflexes diminished upon this side.

Ophthalmoscopic examination, by Dr. E. Gruening, showed neuritis descendens. Left pupil reacted more slowly than right. Both pupils appeared normal and responded to light. Had no facial paralysis, nor of tongue or of uvula. His pulse varied from 44 to 56.

He now, August 8th, became more stupid and irritable, and had a slight convulsion. Urine negative. Four days later, August 12th, he became much brighter, began to recognize those about him and to answer.

During these four days the slight loss of power on left side gradually disappeared and did not return.

From August 8th to September 3d the pulse varied from 50 to 80. On September 3d, pulse rose to 87, and on the succeeding day patient seemed to fail, had a pulse of 120, and evening temperature of 100.5° F.

During this interval of three weeks the patient lay in a semi-stupor, being delirious at night, but having no paresis. His urine was drawn by catheter.

On September 8th he had a chill lasting half an hour; his temperature rose to 104.6° F.; he was almost pulseless; heart-beats, 144; he developed symptoms of cystitis. He had a convulsion, had slight opisthotonos, was restless, pupils slightly dilated, conjunctiva slightly sensitive. He had râles over both lungs, and a systolic basic murmur. The patient remained stupid for four days, when he again brightened up, and on September 14th was able to eat by himself in bed. His headache never left him; was always delirious at night, and stupid at times, even when bright.

The succeeding day, September 15th, his pulse, which had meanwhile been depressed, again rose to 102, and his temperature, which in the evening had been only 100° F., rose to 102° F. He again became stupid, rallied again September 18th, when he could, after effort, be made to answer; but on September 19th died suddenly.

At the autopsy the calvarium was found thin; its inner surface dry. The pia mater was dull, with considerable serum beneath it over the base. The convolutions of the hemispheres appeared flat. In the left frontal lobe, above the gyrus fornicatus, was an ovoid mass, covered still with white brain-substance, which projected to the right of the median line. Upon section, this mass, which was one and a half by two inches, and egg-shaped, consisted of a clot, partly recent but principally of some duration, and quite firm. The brain-substance around about, but not involving the cortex, and extending to the roof of the left lateral ventricle, was involved in yellow degeneration. The lateral ventricles contained only a slightly increased amount of serum. Heart was normal. The bronchial glands were slightly enlarged, and one had calcareous cheesy degeneration at its centre. The bronchial tubes presented evidences of severe recent inflammation.

The spleen was enlarged. The liver was normal. The bladder presented marked symptoms of acute cystitis. The kidneys were swollen, congested, and presented signs of commencing pyelonephritis.

The aorta was narrow, and its walls were thin.

DR. FERGUSON remembered well Dr. Peabody's case, referred to by Dr. Heinemann, in which a man, not more than twenty-one years of age, had died of cerebral apoplexy, and the aorta was found to be not larger perhaps than half the normal size. About two years ago, Dr. Ferguson had presented to the Society a specimen illustrating death from cerebral apoplexy in a man twenty-two years of age, who had always been strong and well,

and Dr. Northrup remarked regarding the aorta that it appeared to be not more than a third of the normal size.

Dr. V. P. Gibney referred to the case of a young man, twenty-two or three years of age, who, on July 3d last, while diving over a railing, struck the head to the right of the occiput, and instantly became paralyzed on the left side. When taken out of the water he was still conscious. There was paræsthesia of various sorts on the right side; the right hand, arm, and leg felt clammy. The left side remained palsied about two weeks, when recovery began to take place. The patient had now regained almost perfect use of that side. There was still some anæsthesia on the right side. There was rotary torticollis on the left side. There was a distinct rheumatic history on both sides of the house. The question suggested itself to Dr. Gibney, may there not have been a hemorrhage into the upper part of the spinal cord?

The Society then went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 7, 1886.

A. Jacobi, M.D., President, in the Chair.

SOME PHASES OF CEREBRAL SYPHILIS.

Julius Althaus, M.D., M.R.C.P., London, read a highly interesting paper on the above subject (see p. 421).

The discussion was opened by Dr. R. W. Amidon, who directed attention to the influence which a *weak heart* may exert in the sudden development of coma in persons who have chronic disease of the arteries.

Dr. A. D. Rockwell referred to a case in which, together with spastic paresis of the lower limbs, the patient in the beginning had aphasia and hemiplegia which disappeared, but on the following day reappeared and continued for several months. Recovery took place under anti-syphilitic treatment.

Dr. R. W. Taylor thought that the historical part of Dr. Althaus' paper should be somewhat qualified, and that the renown of Virchow and Heubner, however bright it might shine, should not be allowed to obscure the valuable writings of Hildebrandt in 1848 or 1850, of French observers in 1863 or 1864, of the late Dr. Moxon in 1879 or 1880, and also of Von Ziemssen and Leyden, who had directed attention especially to the occurrence of syphilitic hemiplegia.

Dr. L. C. Gray, of Brooklyn, did not look upon the theory of occlusion of the basilar artery as sufficient to explain the supervention of coma; and, moreover, believed that the occlusion of any large vessel at the base of the brain might be sufficient to cause coma, and if it be profound there might be difficulty in determining whether or not it was associated with paralysis.

In the treatment of nervous syphilis he had given up the use of mercury, and had seen undoubted results, whether given early or late, of the supreme value of iodide of potassium; he thought that was the opinion held by most neurologists in this country.

Dr. L. Putzel agreed entirely with the author of the paper as to the value of mercury in the treatment of nervous syphilis. He had found that, after giving the iodide in large doses—large in the New York sense—the symptoms had either not yielded or had yielded very slowly, until mercury had been administered. He now begins with the inunction method.

With regard to syphilitic coma, he thought that all the conditions could not be explained on the theory of occlusion of the basilar artery; if purely the result of this lesion there should be more distinct symptoms of pons and bulbar trouble.

The resignation of Dr. Emil Noeggerath was accepted, and, on motion by Dr. S. T. Hubbard, he was nominated for Corresponding Fellow; referred to the Committee on Admissions.

The Statistical Secretary, Dr. A. B. Judson, announced the deaths of Frank Hastings Hamilton, M.D., LL.D.; Alfred Seymour Purdy, M.D.; Thomas Alexander McBride, M.D.; and John Burke, M.D.

The Chairman of the Committee on Library, Dr. John C. Peters, reported the donation of nearly five hundred bound volumes, together with a large number of pamphlets and medical journals.

The President gave notice that Dr. Althaus would read a paper on "Tetany and Tetanilla," before the Medical Society of the County of New York, Monday evening, October 18th.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

END OF THE VACATION—OPENING OF THE MEDICAL SCHOOLS, WITH INTRODUCTORY CEREMONY OR WITHOUT—LECTURES AT KING'S COLLEGE, ST. MARY'S, ST. THOMAS', AND ST. GEORGE'S HOSPITALS.

Medical London is waking up again after the sleep of the long vacation. For a week or more, members of the teaching staff for the several hospitals have been looking round the scene of their labors and preparing their new efforts; while even fashionable physicians, who have given up everything except seeing patients, are coming back to town and are ready to receive guineas. The first of October is the opening day of the winter session, and several of the schools seriously set to work yesterday. St. Bartholomew's and the London Hospital lead off without any ceremony, as they have now for some years discontinued the time-honored introductory address, and one or two others will follow the example. This is not, however, in the way of becoming general, and Dr. Bristowe, at St. Thomas' Hospital, yesterday entered into a defence of the old custom, which certainly finds favor with many of our older teachers. Younger men and students also like some sort of celebration and an opportunity of reassembling old friends.

The industrious example of the London and St. Bartholomew's Hospital is not followed by the majority, and some of our schools, thinking that to begin on Friday with the Saturday half holiday to follow is rather useless, boldly defer their opening until Monday. Others have taken advantage of the Friday to give the Introductory Address, and defer the real work until Monday, when it can begin in earnest. St. Mary's, St. Thomas', St. George's, and King's College are among these, and though I could only possibly be at one I have learned that all were successful, and some few particulars which will interest your readers. It is not very convenient for our London journals, when the opening day falls so late, as they cannot give any notice of the proceedings until it seems almost out of date as news.

Dr. George Johnson was the lecturer at King's College, and was well received by a large audience. He paid an appropriate tribute to his young colleague, Mr. Royes Bell, who had fallen in the race since the last opening day, and whose death I have already mentioned in your pages. Dr. Johnson spoke earnestly of the value of chemistry, not only for its practical use in a medical career, but as a most important means of training the faculties. Observation, memory, and reasoning power were all exercised when this delightful subject was pursued with energy. He also commended anatomy and physiology to the notice of the students. He then spoke of specialism, and said the only safe foundation for it was a thorough knowledge of disease in general—a proposition which all the best specialists are ready to indorse. Dr. Johnson is somewhat of a specialist himself, but he shines much more as a general physician.

At St. Mary's Hospital Mr. Malcolm Morris delivered the address, and urged the students to "work for work's sake," for the days of "walking a hospital," had long been succeeded by those of "work in a hospital" as the great necessary preparation for practice. He also urged them to avoid alike mysticism, scepticism, and materialism. He professed a hope that medicine would at no distant day destroy the last vestige of mysticism, and he seemed to look to a carefully educated public opinion to bring about this consummation. Though he recognized that medicine had already made wonderful progress, he did not seem fully to credit it with the remarkable strides it has made of late years.

Dr. Bristowe was, as already stated, the orator at St. Thomas', and he spoke warmly of the school and hospital with which he has been so long connected. He paid a cordial tribute to the memory of his late colleague, Mr. F. Mason, whose sudden death a few months ago deprived them of a surgeon who had won the affection and esteem of all who had the good fortune to know him well. In defending the old custom of introductory lectures, Dr. Bristowe said it was a good thing that the daily press gave some account of them, and thus reminded the public of the great educational work carried on in so quiet a way at our progressive schools. In referring to the history of the hospital, Dr. Bristowe, himself an officer of health and a sanitarian, had a sly hit at the "crotchet-mongers," who tried to get the hospital, at the time of its rebuilding, transferred to the country, and he congratulated himself that he had opposed such a notion with all his energies.

Dr. Wadham, senior physician, was the lecturer at St. George's Hospital. He welcomed the new students, and bade them never to be ashamed of the religious and moral principles which they had learned at home. He opposed the formation of medical colleges in which the students were to associate under one roof, and thought it a plan which might rather lead to idleness than otherwise. In a place like London, the university system could not, he thought, be carried out, on account of the impossibility of control being exercised outside the institution. He considered the success of a student depended on his early training more than anything, and that if they had been liberally educated, encouraged in industrious habits, and trained to self-control, they had the elements of success; and by following their work with diligence and acting up to the principles of religion, they could do more for themselves than any institution could accomplish for them.

The other addresses have not yet been delivered, and we are therefore indulging in mild speculation as to the subjects which may be taken up, and which is likely to be held the most successful.

PHYSICIANS' FEES.—The subject of "fees" is of perennial interest to physicians, and a recent discussion of the subject by a professor of medical jurisprudence in a New York college will be of interest. He says on the subject of large fees: "A physician is, of course, completely at liberty to establish a standard of charges as high as he pleases, and he may make it so high that none but millionaires will be able to employ him. No one can object to this. If, then, he does give professional attention to a person who is unable to pay such fees, and chooses to charge him at a lower rate than his custom would warrant, this, also, would be a simple act of charity, to which no one could object. But for a doctor deliberately to add to his usual rate of charges an amount based simply upon the supposed ability of his patient to pay, seems to me to be lowering your profession to the level of soulless usurers, and sacrificing all that is high and noble and philanthropic in it to the mere love of lucre. I do not know that the precise question has ever been presented in this country, but I doubt very much whether our courts would sanction any such practice."—*Henry A. Riley, in Med. and Surg. Reporter.*

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 3 to October 9, 1886.

BORDEN, WILLIAM C., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Bridger, Wyo., Terr., and ordered to return to his station, Fort Douglass, Utah. S. O. 126, Department of Platte, October 2, 1886.

FISHER, W. W. R., First Lieutenant and Assistant Surgeon. Leave of absence extended one month. S. O. 230, A. G. O., October 4, 1886.

HAMMOND, JOHN F., Colonel, U. S. A. (retired). Died at Poughkeepsie, N. Y., September 29, 1886.

MATTHEWS, WASHINGTON, Captain and Assistant Surgeon. Granted leave of absence for one month and twelve days, with permission to go beyond sea. S. O. 232, A. G. O., October 6, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 9, 1886.

BROWNE, J. MILLS, Medical Director, U. S. N. Ordered to report to President Medical Board, Oct. 6, 1886.

DEAN, R. C., Medical Director, U. S. N. Ordered to report to President Medical Board, October 6, 1886.

SUDDARDS, JAMES, Medical Director, U. S. N. Will convene Medical Board, October 6, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 2, 1886:

	Cases.	Deaths.
Typhus fever	1	0
Typhoid fever	14	12
Scarlet fever	21	4
Cerebro-spinal meningitis	1	3
Measles	15	4
Diphtheria	77	30
Small-pox	0	0
Yellow fever	0	0

NOTHNAGEL ON THE TREATMENT OF PERICARDITIS.—Professor Nothnagel, of Vienna, in a clinical lecture on the treatment of pericarditis, advises that in cases where there is pain in the cardiac region, fever, and the commencement of exudation, leeches, varying in number from three to ten, according to the gravity of the symptoms and the constitution and strength of the patient, should be applied. The leeches should be renewed every four or six days. Cupping may be substituted, but leeches are preferable. An ice-bag should be applied, or a directing apparatus through which cold water can be constantly supplied to the part. Cold compresses are of no use unless they are laid on ice, and then they must be changed every five minutes. Digitalis for internal use is indicated under certain circumstances. It is useful if the cardiac action is greatly increased, especially if there are signs of the heart-muscle becoming implicated, when it should be given in somewhat larger doses. Digitalis is not desirable in the earlier stages of the disease, but in the later ones, when there are signs of weakness of the heart-muscle and the pulse is weak, it is indispensable. Other internal remedies are useless. Mercurialization—viz., calomel in small doses of three-quarters of a grain internally, and gray ointment externally—has no effect. The pain is scarcely ever severe, and if it is persistent it may be relieved by cold and blood-letting. To this a high temperature is no drawback, as the fever subsides as the inflammatory appearances disappear. If effusion has begun, other

means must be used such as counter-irritation of the skin and the promotion of reabsorption. Ice and blood-letting are of no use in this case. The cardiac region must be painted with equal parts of gall and iodine tincture, or an ordinary cantharides plaster may be applied, which should be kept on from eight to twelve hours till a blister is raised. This is of greater use in subacute than in acute pericarditis. Digitalis does not directly promote reabsorption, but indirectly by its influence on the action of the heart. Should the patient's life be threatened by copious effusion, paracentesis of the pericardium must be performed. This operation is often employed, and with not unfavorable results. Great care must be observed; the pointed trocar of Dieulafoy's apparatus must not be used, but a blunt one like that of Dr. Fraentzel.—*The Lancet.*

The Cure of Traumatic Tetanus.—Dr. M. E. Alderson, of Russellville, Ky., referring to a newspaper report of a reputed cure of traumatic tetanus, writes: "To show, in addition to other reports I have seen, that this was not the 'only case of cure of traumatic tetanus in the history of the world,' allow me to refer to a case reported by myself in the *Therapeutic Gazette*, August number, 1881, page 287. It was a well-marked case of traumatic tetanus, which recovered under chloral hydrate and bromide of potash, twenty-five grains each every two hours, and gradually discontinued."

A Case of Mistaken Diagnosis.—A writer in the *Revue Internationale des Sciences Médicales* relates that he was called in haste one day to remove a chestnut from the œsophagus of a child aged eighteen months. The infant was screaming, and seemed to be suffering greatly. Examination of the mouth and neck showed nothing abnormal, and a sound introduced into the œsophagus passed readily into the stomach. It was supposed that the chestnut had passed into the stomach. On a visit made the next morning a large burn was seen on the child's hand, and the case was then clear. The baby had been playing with the nut alongside of a stove, had burned itself, had lost its chestnut, and its loud cries led the mother to believe that the plaything was lodged in the throat. The case emphasizes the necessity of a careful examination of a child suffering pain, and of not allowing a preconceived judgment to interfere with such examination.

"Go Up, Old Bald Head."—What is more pathetic than to see the simple faith with which a bald-headed man will buy an infallible hair restorative from a bald-headed barber?—*Detroit Free Press.*

Idiosyncrasies.—A number of instances of idiosyncrasy in regard to drugs are related in the *Therapeutic Gazette*. One case was that of a gentleman who suffered from violent diarrhœa whenever he took any morphine. This man's father was in the habit of taking paregoric as a laxative; one teaspoonful of this preparation, taken at night, would always produce soft evacuation in the morning. A resident surgeon at the Pennsylvania Hospital was obliged to resign, because whenever he went to work in the surgical wards he became afflicted with a crop of boils. He afterward found that this was due to emanations from the turpentine which was used for cleaning the skin of patients after adhesive plaster had been applied. Another curious idiosyncrasy was in a lady who suffered from fainting fits whenever she ate butter. She once took a tablespoonful of mashed potatoes, in the centre of which, unknown to herself, a piece of butter had been placed. In a few minutes she fell off her chair in a swoon.

Differences in the Blood of the Human Races.—M. Maurel asserts that the blood is of different degrees of richness in the different races, and gives the following as the result of his investigations on this subject (*Gazette des Hôpitaux*, August 28, 1886). The black race appears to have the richest blood (5,112,256 red blood-globules in a cubic millimetre), then come the Indo-Europeans (Europeans, 5,000,000, and Hindus, 5,008,222), and finally the yellow races (Khmers, 4,474,751; Chinese, 4,334,861; Annamites, 4,238,731). There are also marked differences in the number of white corpuscles. The Hindus have the largest number (5,549), then the Khmers (5,519), Europeans (5,000), Chinese (4,611), Annamites (4,123), and finally the black races (3,823).

A Handy Emmenagogue.—The common garden beet is said to act as an efficient emmenagogue if taken in sufficient quantity. An active principle is derived from it called betin, of which the dose ranges from two to four grains.

A Fee in Kind.—During the cholera epidemic in Nashville, Tenn., the late Dr. Bowling attended an old blind negro, who eked out an existence by playing the flute at the street corners. He recovered, and with a heart overflowing with gratitude he took his flute and sat under the doctor's bedroom window and played it the whole night long. Of all the large fees he ever received, the doctor said this was the largest.

A Noteworthy Celebration.—On the first of September there was celebrated in Bologna the centennial of the discovery by Galvani of animal electricity. A commemorative tablet was placed on the house No. 29 Via Ugo Bassi in the year 1858. The inscription recounts the fact that on September 1, 1786, Luigi Galvani first succeeded in causing muscular contractions in a dead frog by electrical action.

Ne Pastor ultra Pecudem.—With these words Dr. Lutaud concludes a short notice of four deaths, after inoculations by Pasteur, which the writer says is a true slaughter of the innocents by Herod the shepherd (*pasteur*), instead of by Herod the king. He concludes: "As long as M. Pasteur was occupied with fermentation processes in beer and wine he could deceive people; when he attempted preventive inoculation of malignant pustule he could conceal his failures and purchase silence by reimbursing the proprietors for the loss of their animals; but he is unable to do this now that he has passed from veterinary to human pathology. Decidedly, M. Pasteur did wrong to leave his beasts." Another sanguinary French duel is in order.

Women in German Universities.—It is stated in the *Cologne Gazette* that the Minister of Public Instruction has just decided that women shall not be admitted, either as students or as attendants, upon lectures in any of the universities in Prussia.

The Influence of Drugs upon Digestion.—Dr. Klikovitch has been conducting a series of experiments to determine the influence of certain common remedies upon artificial digestion, and gives the following as the results obtained: 1. Alcohol. The addition of five per cent. has no influence upon peptonization; from five to ten per cent. retards the process, and more than ten per cent. stops it entirely. 2. Antipyrine produces no effect unless in very large doses. 3. Iodide and bromide of potassium slow digestion slightly in doses of from fifteen to thirty grains. 4. Organic iron salts do not influence the process, but reduced iron and the inorganic salts retard it somewhat. 5. Calomel and sodium arseniate have little effect; sodium salicylate and sulphate and magnesia retard digestion when given in large doses. 6. Chloral hydrate does not influence digestion in doses of less than fifteen grains, but in larger amounts it exercises a very decided retarding action. 7. Sodium chloride, in whatever dose given, has no effect, neither hastening nor retarding the digestive process.—*Deutsche Medicinal-Zeitung.*

Dignity in Title.—A lady in advising a friend to seek medical advice said: "Be sure to see a doctor, not a 'doc.'"

The Tenth Census.—The report of F. H. Wines, special agent of the tenth census, on the defective, dependent, and delinquent classes, is full of interesting details. The number of males confined in prisons and workhouses in the United States in 1880 was 53,604, and of females, 5,005. The number of prisoners to each million of the population was 1,069; in 1870 it was but 853. There were 1,833 insane persons, 1,533 idiots, and 976 blind persons to each million inhabitants. There were 21,595 out-door paupers, and 66,203 inmates of almshouses, during the census year.

Obstetrics in Vienna.—According to Professor Braun's statistics, there have been during the past twenty-nine years at the Vienna General Hospital 108,889 confinements, with a mortality of 1,945, or an average of seventeen to every thousand. The death-rate has been reduced, by sanitary improvements and the introduction of the antiseptic system, from twenty-eight in every thousand in the first six years to seven, and in 1883 even to two in every thousand cases.

A Batch of New Remedies.—The museum of the St. Petersburg Botanical Garden has received a collection of herbs which are employed medicinally in Northern India. It is stated in *Vratch* that there are in the collection a large number of remedies wholly unknown to Europeans.

Pregnancy with Anteversion.—A correspondent writes for information as to the management of a case of labor complicated with complete anteversion. The pregnancy is now at the end of the sixth month. The writer asks what treatment is necessary in such a case, whether the danger attending labor under such circumstances is greater than ordinary, and asks what are the probabilities of cure of the malposition. The version has existed only about three years.

A Simple Apparatus for Determining the Impurity of Air.—Dr. A. E. Burckhardt, of Basle, warmly recommends a simple and small apparatus for determining the amount of carbonic acid in the air of schools, hospitals, etc., invented by Dr. Schaffer, of Berne. The apparatus is based on the fact that diluted lime-water gives a violet-red stain on phenolphtaleïn paper, which stain disappears in the air containing carbonic acid, and does so the more rapidly the larger the amount of the acid present in the air. It is only necessary to mark the time which has been required for the disappearance of the stain, and to consult an appended table which shows the amount of the acid corresponding to the time.—*British Medical Journal.*

A Remarkable Monstrosity.—A correspondent of the *Lancet* writes: "A more striking and, from the psychological point of view, more interesting monstrosity than the 'two-headed nightingale,' as the poor girl was called when exhibited in these islands some ten or twelve years ago, is described in the 'Historia Rerum Scoticarum' of George Buchanan. In the reign of King James III. of Scotland, there was born in that country, about the year 1460, a creature having the lower part of its body like that of a human being of the male sex, but from the umbilicus upward having a double trunk, double head, double arms, each limb and organ in duplicate, and all quite normally developed. King James was much interested in this phenomenon, the more so as it showed much aptitude for education. He accordingly put it under suitable masters until, among other acquisitions, it became quite proficient in music, for which it had all the taste of a born artist. It also learned to speak several languages, and as it had two wills or faculties of volition, it would sometimes have a quarrel with itself, and argue the point in dispute *pro* and *con*. At other times, when both itselves were in agreement, it would discuss what was best for the common interest. There was this notable circumstance about it, moreover, that when the loins or the lower limbs—any part below the umbilicus, in fact—were hurt, both upper bodies were sensible of the pain. But if either body above the umbilicus were pinched or otherwise made to suffer, one body only felt the lesion. The difference between the two was even more marked when death overtook one of the bodies. The survivor lived after the decease of its neighbor until decomposition began to show itself in the latter, and then it also gradually dwindled away. This took place in the administration of the Regent John, in the nonage of King James IV., about the year 1490, the monster having lived rather more than twenty-eight years. 'Hac de re scribimus eo confidentius,' says Buchanan, 'quod adhuc supersunt homines honesti complures qui hæc viderint.' (On this phenomenon we write the more confidently as there are still alive a great many respectable individuals who actually saw what I have been describing.) Buchanan himself was born in 1506, and acted as tutor to King James VI. from 1565 till within a few months of his death, in 1582. It was during the latter years of his life that he composed his great 'History of Scotland,' in Latinity, which was the envy of the Sorbonne."

Electrolysis for Nævi.—Dr. A. Mayor, of Geneva, published an interesting case of an erectile tumor (a nævus of the cutano-subcutaneous variety) on the back in a girl aged ten months, where he successfully tried electrolysis. The number of sittings was two; the duration of each about two minutes. The dose of the current was only two milliampères (from four cells of Leclanché's battery). On examination of the patient about four years later, not a trace of the nævus (which originally was of the size of a nut) was detected.—*British Medical Journal.*

Out of One Hundred Brain Tumors, Dr. Hale White finds that 10, or possibly 14, might have been treated surgically, provided, of course, a diagnosis could be made.

Toxic Nephritis.—According to Dr. Muerset, of Twann ("Berne Inaugural Dissertation," 1886), aloïn, oxalic acid, and chromium, on being injected (in a few large, or in frequent small doses) under the skin, in rabbits, produce nephritis, with the principal lesions in the convoluted urinary tubes; while cantharidin and bismuth cause nephritis with the principal changes in the glomeruli.—*Brit. Med. Journal.*

The Use of Sugar Solutions in Transfusion.—At a meeting of the Zurich Medical Society, Professor Gaule made an interesting communication on transfusion of a solution containing 3.5 per cent. of cane-sugar, 0.6 per cent. of chloride of sodium, and 0.005 per cent. of hydrate of soda. As his and Landerer's experiments show, the addition of sugar leads to a rapid regeneration of red blood-corpuscles. Thus, a dog with a maximal loss of blood (5.5 per cent. of the body's weight) showed a normal number of blood-corpuscles in eight days after the transfusion. According to the author, tranfusion is indicated —(*a*) when the filling of blood-vessels is altered; (*b*) when the nutrition of tissues is changed; and (*c*) when the function of hæmoglobin is disturbed (poisoning). The transfusion of saline fluids may be effective only in the first case; in the two latter cases transfusion of blood should be performed.—*Brit. Med. Journal.*

Treatment of the Salivation of Pregnancy.—Dr. T. Schramm, after trials of many drugs, including atropine, found that bromide of potassium was the best remedy in the severe salivation of pregnancy. Next to this came pilocarpine in doses of one-sixth grain hypodermatically.

Paralysis following the Application of an Esmarch Bandage.—Sir W. MacCormac not long ago removed a necrosed metacarpal bone, using an Esmarch bandage to prevent hemorrhage, and found paralysis of the arm resulting. The condition lasted some time without change, despite the use of galvanism and massage.

A Phase of the Jewish Persecution in Russia.—It is stated in *Dora* that two cultivated and wealthy Hebrews, man and wife, were sent by the government in June to the watering-place of Pyatigorsk. Upon their arrival the lady sent for one of the physicians of the place, who came and recognized the fact that she was in urgent need of medical treatment. But the next morning a police official appeared and informed the patient and her husband that without a special permit from the chief of the district of the Caucasus, or from the Governor-General of Odessa, they could not remain at Pyatigorsk. The physician's certificate of the necessity for treatment was not received, and the patient was obliged to seek relief at Kreuznach.

To Disguise the Bitterness of Quinine.—Eng. I recommends equal parts of ammonium chloride, and powdered extract of liquorice and quinine as very efficacious in disguising the taste of the latter. When it is desired to dissolve the powder in water, it should be first moistened and made into a paste, which is readily soluble; but if too much water is added at first, the liquorice will float on top of the fluid.

Professor Paul Vogt, of Greifswald, is dead. He held the chair of surgery at Greifswald, to which he was appointed after Hueter's death. He was the author of an excellent work on orthopedic surgery, and various papers on surgical subjects.

The "Notes of an Ambulance Surgeon," written by Sir W. MacCormac, has recently been translated into Japanese.

Excision of the Veins of the Leg.—A correspondent of the *American Practitioner and News* writes from England that a not uncommon operation there, and one which has proved very successful, is excision of varicose veins of the leg. It is considered especially applicable to the saphenous vein in the thigh and popliteal space. The incision necessary to remove a varix need not, of course, be as long as the vein itself, as the vein can be readily drawn out, when it is ligated above and below with catgut, the intermediate piece clipped out, and the wound dressed antiseptically. Of course no Esmarch bandage is used.

Biting off Threads.—Many ladies use their artificial teeth as substitutes for scissors; and such use of them soon renders repair necessary. When told that they should not bite threads with them, they are surprised. But they should be taught not to use even their natural teeth for such purposes. But few think that in biting off a thread the entire muscular force of the jaws in use is concentrated into the small space measured by the diameter of a thread. Besides, thread after thread is applied to the same place on the teeth, and thus the enamel is soon broken there.—*Ohio State Journal of Dental Science.*

Concerning a Case of Diabetes, with gangrene of one finger, Professor Bartholow says: "Withdraw all starchy and saccharine food from the diet, instead use acid fruits and vegetables; if the patient can stand it, skimmed milk is the best diet. Certain mineral waters are useful, as the alkaline waters of Michigan and the Bethesda of Wisconsin; large quantities are necessary, especially in good fat subjects. Ammonium carbonate and sodium phosphate, chloride of gold and sodium, and cod-liver oil likewise serve a useful purpose.—*College and Clinical Record.*

"The Effects of Tobacco on the Health of Men of Letters, and its Influence on the Future of French Literature," is the theme to be discussed in a series of essays, for the best of which the French Society for the Prevention of the Abuse of Tobacco offers a prize of 1,000 francs.

A Chair of Orthopedic Surgery at Naples.—[illegible] Minister of Public Instruction has officially established a chair of orthopedic surgery at the University of Naples, designating Professor D'Ambrosio for the first incumbent.

Who is Responsible for the Payment of the Physician's Fee?—Several years ago a man entered a restaurant in Berlin and was seen to take poison in a glass of beer. The police ordered the proprietor to summon a physician, and he sent his daughter for Dr. Wilde, who came, and after giving the would-be suicide an antidote, sent him to the hospital. The man recovered, but refused to pay the physician for his services, saying that he had not called him and did not want him. Dr. Wilde then presented his bill for four marks to the superintendent of police, but was told by him to get his pay from the one who summoned him. The restaurant keeper refused to pay, was sued and lost his suit. Then the society of restaurateurs took up the case for the defendant, and the Berlin Medical Society for the physician, and the case was retried, but resulted as before in favor of the prosecution. The society of restaurateurs is, however, not yet satisfied, and has appealed to a higher court. It is now nearly five years since the fee was earned, but the physician has not yet received it, and has spent many times its amount in seeking to recover it.

A Question of Diagnosis.—Some English physicians have been travelling in Northern Italy, and have written to the daily press to the effect that the supposed cholera which has been prevailing in the valley of the Po is really only a very acute form of typhoid fever. The Italian physicians who have treated the cases assert that the disease is true Asiatic cholera, and they are sustained in their diagnosis by another English physician who had been in the Indian military service. It seems more than likely that the latter are correct in their diagnosis.

The Water-supply of European Cities.—It is said that Rome has a more bountiful supply of water than any other city in Europe, there being 591 litres in the twenty-four hours for each inhabitant. Next comes London with 300 litres for each inhabitant. Paris comes third, with 227 litres, then Naples, with 200, then Berlin, with 140, sixth Vienna, with 100, and seventh Turin, with 98.

Experiments on Man.—It is proposed in India to petition the state to turn over the three hundred or four hundred criminals annually condemned to death to an authorized medical commission, for purposes of experimentation, primarily with the view to determine the transmissibility of cholera from man to man. As the subjects of the experiments, if they escape the disease, are to receive a full pardon, it is supposed they will willingly submit themselves to the proposed tests.

Small-pox in Marseilles.—The recent epidemic of small-pox in Marseilles, which has lasted the better part of a year, is now about at an end. There were 1,972 deaths from the disease, of which number more than one-half were in children under ten years of age.

Cremation in Holland.—The Rotterdam section of the Dutch Cremation Society has determined to petition the government to remove the legal difficulties which now stand in the way of incineration of the dead, in order, they say, that the inhabitants of Holland may enjoy the same privileges as those of other countries.

Deaths from Anæsthetics in England.—During the year 1885 twelve deaths were reported in England from chloroform, and three from ether. None is known to have occurred from any other anæsthetic.

Death from the Sting of a Wasp.—At an inquest held not long ago at Bath, England, respecting the death of an old lady, it was found that she had died from the results of a wasp sting.

A "Bush" Doctor's Experience.—Dr. F. O. Hodson died recently at Walgett, N. S. Wales, from a wound received by the accidental discharge of a pistol. The deceased gentleman was but twenty-seven years of age, but held many important offices in the district, and was a writer of no mean promise. Only three days before his death he wrote an account of some of his professional experiences, which we find published in the *Australasian Medical Gazette* for July, 1886. On one occasion, coming home late at night from a visit to the hospital of the township, he was informed that he was wanted at Bumbledumble, some fifty-four miles away. After a few hours' sleep he started before daybreak to ride to the distant town. After riding twelve miles the guide's horse gave out, and Dr. Hodson had to go on alone forty-two miles, without a single house and but one hut on the way. He at last arrived at the place, found a dead Chinaman, made the post-mortem examination, and started home. He returned in a buggy with the owner of the place, but at the fortieth mile the horse gave out, the two passengers were obliged to get out and walk, sometimes pulling, sometimes shoving the buggy along, for a distance of fourteen miles. When at last he arrived home, tired as he was, he had to do all his town and hospital work, without thanks, and with the certainty of having to wait long before receiving the Government pay. An Australian "bush practice" would not seem to be a sinecure.

The Wanderings of a Needle in the Body.—The Paris correspondent of the *Medical Press and Circular* relates a case, occurring in the practice of Dr. Delaire, of a girl who accidentally swallowed a stocking-needle. At first she did not suffer much, but in a few hours she felt great pain in the epigastrium, and soon after in the lower part of the abdomen. She thought she was going to die. Frequent desire to micturate was subsequently felt, and drops of blood were passed. At last, at midnight, fifteen hours after the accident, she felt, after a violent effort, something sticking her at the vulva, she put her hand down and drew out the needle; her suffering was immediately at an end.

The Mortality in Different Cities.—The annual death-rates per thousand in some of the principal cities of the civilized world, according to returns communicated to the Registrar-General of England, are as follows: Calcutta, 17; Bombay, 23; Madras, 34; Paris, 22; Geneva, 10; Brussels, 28; Amsterdam, 22; Rotterdam, 17; The Hague, 25; Copenhagen, 24; Stockholm, 23; Christiania, 31; St. Petersburg, 27; Berlin, 31; Hamburg, 27; Dresden, 32; Breslau, 35; Munich, 29; Vienna, 20; Prague, 30; Buda-Pesth, 33; Venice, 30; Cairo, 53; Alexandria, 57; New York, 34; Brooklyn, 29; Baltimore, 23; Dublin, 20; Edinburgh, 17; Glasgow, 19; Liverpool, 23; London, 18; Portsmouth, 20; Manchester, 18; Halifax, 19; and Newcastle, 20.

A Theory Concerning the Antagonism of Malaria and Phthisis.—Mr. Emerson E. Hasty, of Richards, O., sends us the following concerning the relations of malaria to pulmonary tuberculosis, saying that, although he is not a physician, he nevertheless considers it a duty to the world to suggest his theory on the subject. He writes as follows, explaining that, although the language of direct assertion is used in order to avoid needless verbiage, positiveness is by no means intended: "Malaria is the prevalence of organic germs in air, water, and food. These germs, if not checked in their development and multiplication, would speedily destroy all the higher forms of life. Nature secretes a poison expressly to combat these microscopic germs, to wit, the bile. The assistance which bile affords in digestion is merely incidental to its great mission of defending the body from destruction by animalculæ and fungi. The germs of these growths in the blood greatly stimulate the production of bile; their disappearance causes the production of bile to decline. As organic germs are rampant in summer and autumn, it comes about, in consequence, that people are bilious at that time of the year. Another phenomenon of malarious regions is disease of the liver. Beasts suffer as well as men. In such climates the livers of slaughtered beasts are very frequently so ulcerated as to be unfit for food. Why is this? The special demand for bile, instead of being confined to a few weeks in autumn, is so spread over the year that the liver is overtaxed, and becomes diseased. Now, as to the influence of malaria on consumption. Consumption is caused by the ravages of a microscopic bacillus that inhabits the lungs. As this organism does not circulate in the blood, the production of bile is not stimulated by it. *Therefore the system never becomes sufficiently impregnated with bile to destroy the bacillus of consumption, except when malarial germs in the blood stimulate secretion.* Here is the point where medicine should seek to force an entrance. Secure the impregnation of the whole system, or at least of the lungs, with bile. If the natural supply is inadequate, or unadvisable, cannot the gall of animals be used? And would not rubbing it into the pores of the skin, over the chest, be better than introducing it into the stomach? Man has already learned to destroy insects by means of poisonous soaps; and it is interesting to observe that bile is chemically a soap. It is a soap of soda and taurocholic acid, glycocholic acid assisting more or less. Common soap is potash with oleic acid, various other fatty acids assisting more or less. As a striking evidence that bile is meant for a poison, not quite all living creatures have soda for the alkaline base of the bile. All terrestrial creatures do, and all creatures living in fresh water; but in the ocean all living creatures, even the microscopic ones, must be inured to soda, because soda is so very abundant in sea-water. Soda will not poison denizens of the ocean; accordingly, we find that the bile of ocean fishes has potash for its base."

Medical Advice in the Daily Press.—The Chicago correspondent of the Philadelphia *Medical Times* writes that early in August one of the daily papers came out with a sure cure for diphtheria. The "cure" was spirits of turpentine, and the dose prescribed by the editor was a tablespoonful for adults, and a teaspoonful for children, frequently repeated. This criminal advice resulted in more than one narrow escape from death.

A Chinese Prescription.—A correspondent of the *Columbus Medical Journal* gives the following as the translation of a prescription which was written by a Chinese doctor for a man who had applied to him with chronic dysentery:

℞. Powdered gentian.
" catnip leaves.
" root of taraxicum.
" root of white ginger.
" smilax.
" black pepper.
" root of persimmon tree.

Of each, quantity sufficient to half fill a wine-glass.

Powdered rhubarb.
" digitalis.
Calomel.

Of each as much as can be held between the thumb and forefinger.

Three inches of umbilical cord, powdered.
One snake's skin, powdered.
One cat's head, fresh if possible.

Sig.: Boil all these in five quarts of water for three hours; cover the patient with many quilts, and cause him to drink all the medicine within thirty-six hours, as hot as it can be swallowed.

Mr. Sampson Gamgee, the distinguished Birmingham surgeon, died on September 17th, in his fifty-ninth year.

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HOW NEW YORK HAS REGULATED BY STATUTES THE PRACTICE OF PHYSIC AND SURGERY.

BY W. A. PUTNAM, ESQ.,

THE subtle charm of platitude, so dear to the Philistine heart, would have been lost to Davy Crockett's adage, and, probably, the adage itself would have been lost consequently to us, had that worthy left out his Tupperism and simply said, "Go ahead!" The preliminary, "Be sure you are right," was what lawyers call surplusage, a tub to the whale. As a general rule, men who go ahead with much vigor are cock-sure—and that is the zenith of assurance—of their own righteousness. This is fortunate; were it otherwise, chaplains in war time would have to resign. As doubt of the righteousness of one's course of conduct increases, vigor of action declines. While Pilate and Hamlet waste precious time weighing *pros* and *cons*, the high priest and wicked uncle move decidedly onward with no more compunctions of conscience than had Crockett himself when he died in the *Alamo*, like a magnificent free-lance, aiding the brave Neo-Texans to overturn the lawful authority of Mexico, as not suited to their Caucasian taste. Now, if it be true that the average man does not go ahead unless he considers his objective point a proper one, it is clear that Crockett would have made a better work-a-day rule if, instead of exhorting us to be sure we are good, he had urged the need of getting a clear idea of what is wanted and attainable before setting out on any course of action.

If legislatures were as wise in fact as they are in the theory of democratic government, we, in addressing them, might imitate with safety the quaint and pious fashion of Presbyterian conventicles; in which one often hears the pastor, after praying for all good things in a general way, ask the congregation to amend his petition by singing the stave:

[illegible]

And, in fact, laws are constantly passed at the instance of persons who, knowing in a general fashion that they want something—reform, for instance—have devoted little study either to the best method of enacting their desire into law, or to the limits within which the best results are obtainable. They plant melons in loam, and grain in sandy soil. And, inasmuch as legislatures do not know what we have need of before we ask it, the necessity is great that we ourselves should have clear notions of what we want before petitioning them.

It is not purposed here, therefore, to argue the ethical right of the State to regulate within her borders the practice of physic, the law, or any other profession or craft; the legal right so to do is established. Nor is it the object of this paper to discuss the mooted question of how far it is wise and politic to exercise that legal right; on the contrary, for the purpose of our present discussion, the wisdom and policy of exercising it to some degree are assumed. But it is the object of this writing to clarify and make definite our ideas of what is desirable in a law restricting the practice of physic and surgery, by an examination of what has been done in that regard by the Colony and State of New York, and of the condition of the present laws of the State on that subject.

For one hundred and twenty-six years the majority of the legislators of this body politic have considered it for the best interest of the citizen that men uninstructed in medical science should not tamper as physicians with life and limb. The efforts to stop such tampering within this jurisdiction have made a mess of the statute book. This is not surprising. A good statute, like a good man, is a growth, a result of development and experience. In one respect legislatures are like fond mothers who can never find heart to throw aside their boys' small clothes. But here the resemblance ceases, for the mother keeps the little garments for her own delectation only. She does not insist that her man-child of twenty-one shall stroll down the avenue rigged out in the pantalettes of infancy, nor does she keep his bibs and tuckers with his shirts. But the Legislature does something very like this when it keeps outgrown law on the statute-book. The lazy phrase, "All Acts inconsistent with this Act are hereby repealed," is a preservation of statutory bibs that renders it necessary to turn on the light and make careful search of the legislative chiffonier to make sure we have a fitting garment of law.

Very fortunately, the medical profession in our commonwealth was born a lusty infant and a single birth. It was not twins, or triplets, or any such mistake of fertility, but came into the world large-bodied and of long limb under the form of the general practitioner. We have been free from the complications that arose in England from the separation of those practising healing into classes accordingly as they treated the inner or outer man, and sold remedies or simply prescribed them. The straitened circumstances of a young community required the medical man to cut, bandage, and cauterize, as well as prescribe boluses and the nauseous draughts on which the colonists throve; he carried his own medicines, cups, and leeches; and his universal name was "doctor." It is true that the statutes place the disjunctive "or" between physic and surgery; but this has been done, not to disjoin what Galen joined, but rather to comprehend all manner of healing within the legal mesh. Our law has known until lately but two classes of medical practitioners: (1) Those who, by complying with its requirements as to age, study of medicine, examination, and record, have become licensed to practise physic and surgery; (2) those who, by failing in such compliance, have constituted the class of unlicensed practitioners. The schisms of homœopathy, hydropathy, electropathy, eclecticism, Perkinism, and many other 'pathies and 'isms which from time to time have arisen to benefit or bamboozle, or benefit by bamboozling, patient, suffering, and credulous man, have all been winked at by the eye of the law whenever their followers could show compliance with the prescribed term of study, etc.[1] We have said that until lately only these two classes of physicians and surgeons were known to the law; but within the last ten years a body of men, whose business it is to treat a particular region of the human body, have been incorporated on the model of the medical societies, although, in so far as they claim to constitute a profession they

[illegible]

s not, and cannot, supply any positive rules for the interpretation of medical

can differentiate themselves from other ministers to human infirmity, not by their method of treating the ailments of man but by the part of his body they treat. They are the men who laugh in our teeth if in pain we go to them for aid. They are dentists, and call themselves oral surgeons. Granting their associations all respect due to the undoubted talent, skill, and acquirements of their members, it is nevertheless glossologically undeniable that only in so far as they deserve the name of "tooth-carpenters" do the dentists form a class apart; in other words, it is only as mechanics, pullers, fillers, and, if one may so speak, falsifiers of teeth, that they are entitled to classification as a distinct body of workers. Plumbers, carpenters, ivory-workers, and dentists, in so far as they are a sub-species of the group last named, constitute respectively separate classes of artisans, differentiated *inter se* by the matter upon which their manual labor is performed and the method and object of their work. So chiropodists, manicures, and barbers, while confining themselves to their proper function, constitute distinct classes of manual workers. But when the dentists, ceasing to be mechanics, undertake the treatment of diseases of the mouth, they become practitioners of medicine or surgery, and as such have no more claim to legal recognition as a peculiar profession than have dermatologists, gynecologists, laryngologists, or any of the other 'ologists who fill an ever-increasing space in the ranks of busy life, notwithstanding Mr. Worcester's obstinate refusal to admit them to standing-room in his logical and prejudiced dictionary.

But without further allusion to this new class of quasi-medical men, or any attempt at prophecy [1] regarding their possible evolution, we may come directly to a short study of what the law concerning medical men in general has been and is, in the hope that we may gather some clearer ideas of what it ought to be. And by way of encouragement in our study, it may not be amiss to repeat what the chairman of a legislative committee, to which was referred one of last year's medical bills, said to the writer: "Whenever a bill is brought here that the doctors themselves agree on we will pass it." [2] In colony times, when George II. sat obstinately on his throne for the thirty-third consecutive year, which was the year of grace 1760, upon the tenth day of June the first New York statute regulating the practice of medicine, being Chapter CXCVIII. of that year's laws,[3] was enacted by his honor the Lieutenant-Governor, the Council, and the General Assembly. Its preamble ran thus: "Whereas, many ignorant and unskilful persons in physick and surgery, in order to gain a subsistence, do take upon themselves to administer physick, and practise surgery in the City of New York, to the endangering of the lives and limbs of their patients; and many poor and ignorant persons inhabiting the said city, who have been persuaded to become their patients, have been great sufferers thereby. For preventing such abuses for the future—Be it enacted," etc. The Act then went on to provide that no one should practise as a physician or surgeon in said city, unless first examined in physic and surgery, and approved and admitted by one of His Majesty's Council, the Judges of the Supreme Court, the King's Attorney-General, and the Mayor of the city for the time being, or any three of them, calling to their aid in making such examination such proper person, or persons, as they in their discretion should think fit. A testimonial, in a form prescribed by the statute, was given to a successful candidate, and

[illegible] physic, by making [illegible] elor, defended on [illegible] prescribe for any [illegible]

to give a liver pill if the trouble arose from the liver," [illegible]

But the court found him guilty.

[illegible] prior to the passage [illegible] before Parliament for the better regulation of the practice of medicine; the s[illegible]re before the Legislature of 1886. After hearing all parties in interest his [illegible]ip dismissed them, we are told, "with the comforting assurance that so soo[illegible]t sections of the profession will concur in the adoption of a plan of [illegible] to save the [illegible]

[illegible]

the penalty for practising without such authorization was £5 for each offence, one-half thereof for the use of anyone suing for the same, and the other moiety to the churchwardens and vestrymen of the city for the use of the poor. Exemptions were made of persons in practice before the publication of the Act, and persons bearing His Majesty's commission and in his service as physicians or surgeons. It will be noticed that no attempt is made in this statute to determine the range of examination or prescribe the term of study.

On March 27, 1792, another similar act [1] was passed, reciting in its preamble that "many ignorant and unskilful persons presume to administer physic and practise surgery within the City and County of New York to the detriment and hazard of the lives and limbs of the citizens thereof," and enacting that after its passage no one should practise physic or surgery within said city before he should have both attended the practice of some reputable physician for two years, if a graduate of a college, or for three years if not a graduate, and been examined, admitted, and approved by the Governor, Chancellor, Judges of the Supreme Court, Attorney-General, Mayor, and Recorder, or any two of them, taking to their aid three respectable physicians with whom the candidate had not "lived to acquire medical information." In addition to the penalty of £7 for practising without a testimonial of qualification, payable, half to the person suing for it and half to the use of the poor, it was also provided that no person so practising could bring an action to recover for services or medicines. Persons practising before the passage of the Act, persons rendering gratuitous aid in emergencies, practitioners of neighboring States or counties called in to consultation on a particular case, and persons having the degree of doctor of medicine from any college or university of the United States having authority to confer it, were all exempt from the provisions of the Act. The operation of this law was greatly limited by a provision that, before anyone became subject to its penalties, complaint must have been made of him in writing by three reputable citizens to the Mayor or Recorder, who, if he deemed it expedient, after inquiry, should notify the accused practitioner, whereupon he should "remain, with respect to his after-practice, exposed to the penalties of this Act," until he should obtain a proper testimonial as provided for in the statute. The recognition of diplomas as licenses, the exemption of consulting physicians, and persons giving aid in emergency, and the provision as to notice, were all new.

The foregoing statutes were local, affecting only the City and County of New York.

The first general law for the State was enacted on March 23, 1797.[2] It had no preamble, but, plunging *in medias res*, enacted that after the first day of October next following, no person practising physic or surgery at the time of the passage of the Act should *continue* to so practise without satisfactory proof to the Chancellor, a judge of the Supreme Court, a master in chancery, or a judge of the Court of Common Pleas, that he had practised for two years next preceding October 1st aforesaid, or had studied that time with a reputable physician or surgeon, and had filed a certificate to that effect with the County Clerk. The Act further provided that no other person should practise physic or surgery, without a certificate from one or more physicians or surgeons that he had studied medicine for four years under the preceptors signing the same, and that he was qualified to practise. The subscribers verified their certificate by oath before a magistrate, who endorsed on it permission to practise, and it was then filed with the County Clerk.

A penalty of $25, payable, half to the complainant and half to the county, was provided for persons practising without authority as aforesaid. The term of study for college graduates was made only three years. Diplomas were still recognized, but became licenses only

[1] 2 Greenleaf, chap. [illegible] 1[illegible]. [2] [illegible], Sess. [illegible] [illegible]

on being filed with the County Clerk. Students were allowed to practise under the immediate supervision of preceptors. Residents of another State might practise in New York on a particular occasion, at the special request of a practitioner qualified under the Act. Counterfeiting the certificate intended by the Act was punishable by a fine of $100 and the forfeiture of the right to practise. Gratuitous practice in emergency was still allowed. New features of the Act were its application to persons in practice at the time of its passage, the provisions for filing certificates and diplomas with the County Clerk, the permission to students to practise, and the punishment of counterfeiting certificates. The Act abolished the provision as to notice which by excessive formality destroyed the vigor of the Act of 1792.

In the revision of 1801 this Act was substantially re-enacted,[1] with some verbal modifications. The principal new matter was a provision that no person removing to this from another State should practise more than three months next following his removal, without qualifying under the State law.

In 1806 was passed the first Act authorizing the incorporation of medical societies,[2] with this preamble: "Whereas, well-regulated medical societies have been found to contribute to the diffusion of true science, and particularly the knowledge of the healing art, Therefore, Be it enacted," etc. This Act empowered the medical societies to examine, by their censors, medical students and confer diplomas, constituting a license to practise physic or surgery, or both, within this State. It further provided: "That from and after the first day of September next, no person shall commence the practice of physic or surgery within any of the counties of this State until he shall have passed an examination and received a diploma from one of the medical societies, to be established as aforesaid; and if any person shall so practise without having obtained a diploma for that purpose, he shall forever thereafter be disqualified from collecting any debt or debts incurred by such practice in any court of this State." Persons coming from another State or country, duly authorized to practise under the laws thereof and having diplomas from regular medical societies, were allowed to practise. The societies were forbidden to examine a student until the production by him of satisfactory testimony that he had studied physic or surgery, or both, as the case might be, "under one or more reputable practitioner or practitioners, for the term of three years." This Act specifically repealed the former Act regulating the practice of physic and surgery in this State.

It will be noticed that the only penalty for practising without license under this law was the inability to collect fees by action at law, and that the provisions of former statutes as to consultants from other States, gratuitous aid in emergency, counterfeiting diplomas, filing diplomas from other States with the County Clerk, and the practice of students under their preceptors' supervision, have been all omitted.

In the following year, 1807, this Act was amended,[3] and by the fifth paragraph of the Amending Act it was clumsily provided, "That if any person, not authorized to practise physic or surgery at the time of the passing of the Act hereby amended, or if any person since the passing of said Act shall have commenced the practice of physic or surgery, without being legally authorized, every person who shall so continue to practise unauthorized shall forfeit and pay the sum of $5 for every month such unauthorized practice is continued." If this provision is nothing else, it is what our old camp-cook used to call "langwidge." Like the ballad of the Jabberwock, it is not very clear, but it fills us with ideas. The rude forefather who conceived the Act went on to derange his parts of speech in this fashion: "Provided, that the penalty to be incurred by the preceding section of this Act shall not be considered to extend to any apothecary or to any person administering medicine who does not follow the same as a profession, nor shall any prosecution be commenced by virtue of said section unless it shall be within thirty days after the penalty incurred, nor shall a second prosecution be commenced or recovery be had in less than thirty days from the date of the first recovery; and provided, further, that nothing in this Act contained shall be construed to debar any person from using or applying for the benefit of any sick person, any roots or herbs the growth or produce of the United States." It would be a waste of words to point out the delightful humor of this legislative squib, in which such violence is offered to the poor mother tongue as she rarely suffers even in statutes. The "botanic" practitioner who framed it has handed down his grammar to his eclectic successors. He was own kin to the legal gentleman who, being called on to take the verification of an affidavit made "on the 1st day of April, A.D. 1850," affixed his jurat in this form, "Sworn to before me this said first day of April in the year of the aforesaid Lord 1850."

In the revision of 1813 the Act incorporating the medical societies was embraced,[1] but the revised law contained a bare provision empowering the societies to examine and license students.[2] No penalties were prescribed for practising without authority.

In 1827 the present Revised Statutes of the State were enacted, and in their notes the revisers set forth their reasons for making those provisions as to the practice of medicine which, as slightly modified by subsequent acts,[3] continued to be the controlling statutes down to 1880. It was clearly the intent of the framers of the law to forbid the practice of physic and surgery to anyone not a member of a county society, and not only to regulate the licensing of practitioners, but to provide for the good behavior of licentiates by prescribing a legal method of expelling members of county societies and forfeiting their right to practise medicine for "gross ignorance or misconduct in his profession or immoral conduct or habits."[4]

Title 7 of Chapter XIV. of Part I. of the Revised Statutes treats of the regulation of the practice of physic and surgery in this State. The first two sections of the title, which have never been expressly repealed and appear to be, *mutatis mutandis*, in force to-day, provide that every physician or surgeon shall join the county society of the county in which he practises, under penalty of forfeiting his license. The next four sections provide that upon proper cause shown by a county society the courts may declare a member of such a society expelled for gross ignorance, misconduct, or immorality, and his license forfeited.[5] The next twelve sections (8 to 20) regulate the licensing of medical men and provide (1) that no one shall be examined for a license who shall not have studied under a licensed physician or surgeon four years, or three years in the case of one, who after the age of sixteen, shall have pursued either the course of study usually followed in colleges of this State, or a complete course of all the lectures in an incorporated medical college; (2) that the regents' degree of M.D. should be conferred only on persons having studied three years under a preceptor and attended two complete courses of all lectures delivered in an incorporated medical college; (3) that no

[1] 1 Kent and Earl Stille, p. 11. [2] Laws of 1806, ch. 132. [3] Laws of 1807, ch. 150.

[1] Laws of 1813, ch. 125, [illegible] 1 Rev. Stat. 1829, 2d ed., p. 1[illegible] 1 Vol. 2, chapter [illegible] degree of M.D. [illegible] license to practise.

[2] Under the provisions of this [illegible] members; but it does not appear, unless by implication from the seventh section of the Act [illegible] to have been the intention of the Legislature, that the county societies should possess an effectual control over the conduct of the physicians in their respective [illegible] other learned professions may, by summary proceedings, be suspended or permanently degraded from their professional privileges, and the community have surely an equal interest in preventing the injuries that may result from the ignorance, or vices, of unskilful or unworthy physicians." Notes R. S., 2d ed., vol. iii., p. 527.

[3] Laws of 1827, ch. 159.

[4] This did not deprive a society of its common-law right to expel for abuse of franchise, *e.g.*, by refusal to pay dues.

[5] This did not deprive a society of its common-law right to expel for abuse of franchise, *e.g.*, by refusal to pay dues.

person should practise medicine unless he (*a*) had a license or diploma from an incorporated medical society of the State, or (*b*) had the degree of M.D. from the university, or (*c*), being authorized to practise in another State or country and having a license or diploma from a medical college or society in such State or country, should file a copy of his license or diploma with the County Clerk and give the '*medical society of the county*' satisfactory proof of having followed the plan of study prescribed for students in this State. There were also minor provisions relative to matters of record and second examinations. It was further provided that no one under legal age should practise,[2] that the degree of M.D. should not constitute a license to practise,[3] and that an unlicensed practitioner should not recover his fees at law, but should be guilty of a misdemeanor in so practising, punishable with fine or imprisonment in the discretion of the court.[4]

In 1830[5] the penal clause of the Revision (§ 22) was repealed, and in lieu thereof a penalty of $25 was prescribed against unlicensed practitioners, with the exception of any person "using or applying, for the benefit of any sick person, any roots, barks, or herbs, the growth or produce of the United States."

In 1836 it was provided by an amendment of § 17 of the Revision that the censors of the *State Society* should examine and license persons coming from without the State.[6]

In 1841[7] the last-mentioned Act was amended so as to provide that persons coming from another country should be examined by the censors of the State Society, while a person from another State should file a copy of his diploma with the County Clerk and exhibit satisfactory proof of his qualifications to the County Society.

In 1844[8] was passed an Act of which Judge Beardsley said, "Since the passage of the Act of 1844 quackery may certainly boast its triumphant and complete establishment by law."[9] In a very recent prosecution, conducted by the Medical Society of the County of New York, defendant's counsel argued very disingenuously to a jury, to whom the question of law was allowed to go, that the effect of this Act was to abolish the distinction between licensed and unlicensed practitioners. This is manifestly untrue, for the Act itself clearly maintains that distinction. It abolished all statutory provisions forbidding anyone from recovering fees for medical services rendered the sick, and provided that *unlicensed physicians* should be held to the same rule of the measure of damages in civil suits as *licensed physicians*, and that it should be a misdemeanor to *practise without a license* in case of gross ignorance, malpractice, or immoral conduct; such misdemeanor to be punished by a fine of [from fifty to one thousand dollars, or imprisonment from one to twelve months, or both. During the last session of the Legislature an effort was made to re-enact this law, and petitions containing many false statements were circulated in its favor.

Perhaps the most curious argument made in its behalf was the assertion by its friends, in their printed petition, that certain persons are born with peculiar gifts of healing, that these gifts are not recognized as entitling their possessor to a diploma, and that experience has shown that a *regular course of medical instruction does not increase, but does, on the contrary, materially diminish the mysterious innate powers*, among which we may fairly presume Voudoo is included.

The law of 1844 was undoubtedly specious. As a general principle, it is true that every man ought to be allowed to follow any calling he may choose, with no other responsibility than a liability for the consequences of his acts. But the reason of this is plain; it is generally easy to trace the effect of what is done by a person following an ordinary vocation. If a house falls because of defective building we can analyze the mortar, test the woodwork, examine the brick. If a lawyer misconducts a cause he works in the open and his errors are, for the most part, of record. But who shall tell in a given case of disease the precise cause of death or recovery? Dr. Perkins applies his metallic tractors, and the age of miracles comes again; Hahneman prescribes a dose of nomenclature, and the sick walk. Who is to say that *post hoc* is not in a particular case *propter hoc*, or *vice versa*? And what is to be the standard of knowledge and practice?[1] It is for the very reason that we have no certain test of the results of their treatment in the majority of cases that we fairly may exact by law of physicians a certain degree of study of our human economy.

With the exception of special college charters making the degree of M.D. a license, the general Act for incorporating medical colleges, and the indirect modification of the licensing laws resulting from the incorporation of homœopathic and eclectic State and county societies as new sources of license, no further legislation regulating the qualifications of practitioners of medicine was had until 1872. In that year was passed the Act, still in force, creating what are known as the Regents' Boards:[2] providing for the appointment by the regents of the university of one or more boards of examiners, each composed of seven licentiates in physic and surgery, with power to examine any person twenty-one or more years old, of good moral character, with a competent knowledge, in the chancellor's opinion, of the branches of learning taught in the common schools of the State and of the Latin language; such person having also studied medicine three years under the preceptorship of a licensed practitioner, or having been licensed after examination by a medical school or college. The law directs the regents to confer the degree of doctor of medicine of the University of the State of New York, constituting a license to practise, upon every candidate recommended by five members of the examining board. The Revised Statutes, as we have seen, recognized the degree of M.D. from the university as a license; the effect of this law, therefore, was not to increase the sources of license but to regulate one of them.

In 1874[3] was enacted one of the clumsiest, most inept, acts that has ever disfigured our statute-books. Its first section requires "every practitioner of medicine or surgery in this State, excepting licentiates or graduates of some medical society or chartered school, to obtain a certificate from the censors of some one of the several medical societies of this State, either from the county, *district*, or State society," showing that the person to whom it was issued is qualified to practise the branches of medicine enumerated in it, and to record the same with the County Clerk. Here we have intimation of new sources of licenses, district societies, whatever they may be, and extra-State societies. The second section requires the censors of "each medical society aforesaid" to notify "all practitioners" of the requirements of the act, and request them to comply with the law. By the dexterous use of the word "aforesaid" the framer of this act plunges us in doubt as to whether, after all, the first section intended to make extra-State societies sources of license; for the direction to censors to give notice of the law is clearly applicable only to officers of societies within the State. Passing to the third and last section we are surprised to find an entirely new source of license pop up, like jack-in-the-box, viz., State boards of medical examiners. It is therein "declared to be a misdemeanor for any person to practise medicine or surgery in

[illegible]

[7] Laws of 1841, ch. 64. This [illegible] to the State Society in 1880.

[illegible]

[illegible] knowledge in the particular system he professes to follow. A disciple of th[illegible] [illegible] Supreme Court of New York held that to pretend to cure disease without instrume[illegible] or physic was not practice of medicine.

[2] Laws of 1872, ch. 746.

[3] Laws of 1874, ch. 45[illegible]

this State unless authorized so to do by a license or diploma from some chartered school, State board of medical examiners, or medical society," or to practise under a diploma unlawfully obtained. The effort to enforce this wretched law is said to have resulted in the open bidding of disreputable societies for the fees of candidates plucked by more respectable bodies. A callow youth, once standing on General Grant's piazza, asked his host what were the good points of a horse. "Do you see that pretty horse coming down from the stable?" said the General. "Yes," answered the lad. "Well, study him," the General replied, in his dry way; "he hasn't a single good point." That about describes chapter 436 of the laws of 1874. It is a model of what a law should not be; and, nevertheless, the compiler of the Penal Code accepting it as stating existing law on its subject, cast its third section into section 356 of the Penal Code, and, having framed that section prior to the passage of the law of 1880, absolutely neglected to modify the Code to conform to the newer and better law; thereby he introduced into the statutes some of the confusion the Code ostentatiously purposed doing away with.

In 1880 the present registration law[1] was enacted. It provides that all persons lawfully practising physic or surgery in this State shall register with the clerk of the county in which they practise, or intend to practise, their authority for so doing;[2] that no person not licensed prior to its taking effect shall practise except by authority of a diploma from an incorporated medical school or college, which diploma, if granted by an extra-State institution, shall be indorsed by such a school or college within the State. An effort to make false swearing to the facts in the affidavit of registration punishable as perjury, was defeated by the unfortunate phraseology of the law, which is applicable in this regard only to persons duly qualified, and who have therefore no inducement to swear falsely. Practice of medicine without license, or under cover of a diploma fraudulently obtained,[3] is declared a misdemeanor, punishable on conviction of a first offence by a fine of from fifty to one hundred dollars, and on conviction of a second offence by a fine of from one hundred to five hundred dollars, or imprisonment for from thirty to ninety days, or by both fine and imprisonment. Persons licensed to practise before the taking effect of the act are guilty of a misdemeanor in practising without registration, but for persons licensed under the act registration is one element of the license, *i.e.*, a diploma is not a license until registered. Commissioned medical officers of the United States Army, Navy, or Marine Hospital service, are exempt from the application of the act. In 1884[4] an amendment was made to this law of 1880, whereby practitioners of medicine living in other States near the border of this may practise in the State of New York, if their regular practice is partly within our limits, provided they are licentiates in their own State. But they may not open offices or appoint places to meet patients in this State. As we have already pointed out, the Penal Code, which, though drafted before, took effect after the enactment of the laws of 1880, has accepted as its 356th section the third section of the law of 1874; this third section, and also section 2, ch. 126, laws 1830, and section 5, ch. 275, laws 1884, were repealed by the last Legislature in an act[5] intended to definitely remove from the statue-book all acts repealed by the Penal Code as inconsistent therewith. As the law of 1880 is not mentioned in this repealing act, it is to be presumed that the framers[6] of the latter do not regard it as inconsistent with, or repealed by, the Penal Code,[7] but as forming, with the Code, a consistent statute. What, then, is the effect of all this legislation? Briefly it is this. Every one of these statutes not specifically repealed is in force to day, except in so far as the repeal of an earlier statute is worked by its absolute inconsistency with a later one. It may be fairly argued that the eight sections of the Revised Statutes empowering county societies to institute proceedings against their own members with a view to expelling them, and forfeiting their licenses, are still in force; that the only persons licensed to practise prior to 1874 were the licentiates of the incorporated medical societies of the State and counties, and doctors of medicine with diplomas made licenses by the charters of the college conferring them. From 1874 to 1880 licentiates were persons with licenses or diplomas from "some chartered school, State Board of Medical Examiners, or Medical Society." Since 1880 duly qualified practitioners have been either those licensed as aforesaid, prior to the taking effect of the registration law of that year, or those licensed under that law, viz., those holding diplomas from incorporated medical schools of this State, or diplomas of foreign incorporated medical schools endorsed by such a school within the State.

Space does not permit more than a suggestion of what is needed to reform this jumble of law. First of all, every penal statute should be clear and definite. One law should be substituted for all now on the statute-book relative to the licensing of medical men, and every other act *in pari materia* should be specifically repealed by title and section. Provision should be made to stop the trade in diplomas, which, under our present law, are publicly advertised for sale in the columns of the daily press. False swearing under the law should be made perjury; counterfeiting diplomas should be made forgery; conviction of felony should work forfeiture of license; and civil actions against unlicensed practitioners, to recover fees paid to them, should be given to patients. Adequate regulations should be made as to aid in emergency and peripatetic nostrum-vendors. All these points were embodied in a bill that passed the Assembly of 1884–85, and the Senate of 1885–86. Either bill, if presented earlier in the session, would have passed. They failed because the early part of each session was lost in trying to get through the Medical Examiners Bill, a hopeless task, on account of the conflict of irreconcilable interests. If such a bill is carried to Albany early in January, 1887, there is every reason to believe it will become law. The fixing of a higher and more uniform standard of medical education might be better attempted in a separate act, which might also provide for the punishment by legal process of licentiates guilty of unprofessional conduct.

Lactic Acid in Laryngeal Phthisis.—Dr. Theodore Hering, of Warsaw, has recently published a memoir with this title, in which he relates his experiences with this remedy. He treated thirty-two cases of tubercular ulcerations of the vocal cords with lactic acid, and of these, four were completely cured, two were nearly so, four were much improved, and in six the ulcerations were not healed, but phonation was restored and the dysphagia was relieved. He uses a twenty to thirty per cent. solution, applied by means of a pledget of absorbent cotton, and preceded in certain cases by an application of cocaine. When greater tolerance is established, he employs an eighty per cent. solution of the pure acid, and the applications are continued until the eschar falls off. Such good results in so intractable an affection would seem to warrant a further trial of lactic acid.

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[1] Laws of [illegible]

[2] [illegible] registered [illegible] demurrer recently that two counts of an indictment, one stating practice without authority, the other stating failure to register, do not state separate offences. Nevertheless, on trial the people were directed to elect on which count they would proceed. This is a most annoying dilemma at times.

[3] The court, in the case of The People *vs.* Kahn, expressed the opinion that [illegible] diploma [illegible]

[4] [illegible]

[5] The [illegible] General [illegible]

[6] This [illegible] State of New [illegible]

A LIGATION OF THE COMMON ILIAC ARTERY FOR ANEURISM OF THE EXTERNAL ILIAC—DEATH ON THE SEVENTH DAY FROM ACUTE NEPHRITIS.

By WILLIAM F. FLUHRER, M.D.,

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H. T——, colored, a laborer, aged thirty-five, sent to me for an operation for an aneurism of the external iliac artery by Dr. F. M. Purroy, was admitted into Mt. Sinai Hospital May 3, 1886. Several years before admission into the hospital the patient had rheumatism. Four years ago he had a chancre, followed by a bubo in the left groin; later he had sore throat and pains along the shins, which were cured by the persistent treatment with iodide of potassium.

In September, 1885, the patient observed that the left lower limb and groin became somewhat suddenly swollen. Once the swelling in the groin was so great that he could hardly flex his thigh; on another occasion, after walking, he was obliged to cut off his boot on account of the great swelling of the leg and foot. Since September till the time of admission the swelling has diminished, but has never disappeared. After walking it was most noticeable at the upper part of the thigh and in the groin, but after a night's rest most marked about the ankle. Coincident with the appearance of the swelling there was pain in the limb. It was transitory, piercing, frequent about the knee, and aggravated by working.

Ten weeks before admission the patient noticed a small pulsating tumor deeply seated in the left groin. This tumor has steadily increased in size and the strength of its pulsations.

The patient has lost about twenty pounds in weight, but thinks his strength is as good as ever. He is in a fair condition of muscular development. His hands are always cold. The walls of the radial arteries are thickened. Under close observation he appears to be only fairly vigorous.

Upon examination the tumor in the left groin is scarcely visible, but by a light touch a fulness there is easily felt. A more decided palpation discovers a tumor apparently two-thirds the size of my clenched fist, and of the same irregular shape. It extends upward from Poupart's ligament to a point midway between the upper border of the pubes and the umbilicus, its upper boundary corresponding to the place of bifurcation of the common iliac artery. The lower portion of the tumor extends inward to within half an inch of the median line. Its pulsation is expansile and accompanied by a faint systolic bruit. The beat of the left femoral artery lags behind that of the right side and is weaker. It is difficult to control the pulsations of the aneurism by compression of the aorta. The circulation is good in the limb supplied by the diseased vessel. No enlarged veins or glands are visible. No tumor can be felt on rectal examination. After the patient had been much of his time in bed there was little swelling of the limb, it being only seven centimetres larger at the upper part of the thigh than its healthy fellow.

An examination of the viscera showed no departure from a healthy condition. The urine was of 1.020 specific gravity, and upon chemical and microscopical examination presented no abnormal features.

Upon consultation with my colleagues the diagnosis of aneurism involving the whole extent of the external iliac artery was concurred in, with slight reservations of opinion in favor of the existence of a malignant tumor.

Upon his admission the patient was given fifteen grains of iodide of potassium three times daily, but this treatment was soon stopped, and instead there was given, in addition to generous diet, a tonic of five grains of citrate of iron and quinine three times daily. He spent much of his time in bed, but in pleasant weather walked in the yard of the hospital.

Upon the morning of the day of the operation his urine was carefully examined and found to be normal.

In operating I proposed to open the abdomen, resolve any slight doubt as to the nature of the tumor, and, through an opening in the posterior layer of the peritoneum, tie the vessel.

Previous to the day of the operation his skin was thoroughly cleansed by baths and his bowels were freely moved by castor-oil. Every detail that would render the operative approach to the abdominal cavity antiseptic, and thereafter maintain the asepticity of the wound, was carefully attended to. After a thorough scrubbing with soap and water the skin of the abdomen was disinfected with towels wet with a one to thirty watery solution of carbolic acid, which were so arranged that, by the removal of a single towel, the antiseptically isolated field of operation, a strip two and a half by nine inches, could be exposed. The whole left lower limb was wrapped in a thick layer of cotton batting. An incision five and a half inches long was made in the median line skirting the umbilicus, from a point two inches above the upper border of the pubes to a point one and a half inch above the centre of the umbilicus. Subsequently this incision was extended upward half an inch. All bleeding vessels were tied and the peritoneal cavity was opened in the part of the incision below the umbilicus. As soon as the abdomen was opened the boro-salicylic acid solution was substituted for the bichloride of mercury solution that had been hitherto used. The hand washed in the former solution was introduced into the peritoneal cavity, and the diagnosis of aneurism, involving the whole extent of the external iliac artery, was established. The internal iliac artery was felt running down into the pelvis along the inner face of the tumor. The wound was then opened its whole length with scissors. Protruding coils of the sigmoid colon, somewhat distended with gas, were held back with a large flat sponge, wrung out of the warm antiseptic solution. A sheet of thin rubber, twenty-seven by thirty-six inches, of about the thickness of that used by dentists for the rubber dam, carefully disinfected, was rapidly spread over the abdomen, in such a way that its main portion was on the right side of the body and its left edge overlapped the median line for about five inches. The sheet was flushed with the warm antiseptic solution, and then cut from the middle of its left edge to a point opposite the middle of the wound. The assistant withdrew his sponge stopping the abdominal wound, and then the small intestines, which were nearly empty, were rapidly drawn from the abdomen through the slit cut in the rubber, and bunched upon the sheet over the right side of the abdomen. The rubber was quickly folded over the intestines, enclosing them as in a bag. By this device radiation of heat was checked; they were kept moist, and being fully under the control of the assistant, were easily held out of the operator's way. To insure warmth towels wrung out of the warm solution were wrapped outside the rubber. A troublesome coil of the sigmoid colon was covered with a thin, moist sponge, and held aside by a broad metallic retractor acting upon the left edge of the abdominal wound. The artery was easily identified, and did not roll under the finger, but was steadied by the tumor. Although a little more difficult of access on account of its greater depth and the mobility of the mesentery, I selected for ligation a place three-fourths of an inch from the tumor and one and a fourth inch from the bifurcation of the aorta. With two pairs of anatomical forceps I tore a clean slit, one-half an inch long, through the peritoneum, directly over the artery. Never letting go with the forceps of one edge of the opening till I had seized the opposite side, I worked my way down through the sheath to the vessel. Still holding with the forceps the tissue at the edge of the opening, and after feeling the artery with the tip of the little finger, I carefully insinuated round the vessel a blunt-pointed aneurism-needle of short curve, carrying a

fine thread of disinfected silk. In gently passing the needle its end was kept close to the vessel. The identity of the vessel was further confirmed by compressing it against the needle as it lay isolated in its curve. The needle was withdrawn, leaving the loop of silk in position, by means of which the heavy silk ligature was passed round the vessel. The ligature had been disinfected by boiling it for two hours in a five per cent. watery solution of carbolic acid. During the operation it had lain in a three per cent. solution of the same acid. The opening of the posterior layer of the peritoneum had caused no bleeding, not even enough to fleck a sponge. The ligature was firmly tied, and its ends, cut short, fell back out of sight.

In about a minute after tying the vessel, Dr. Purroy, who was watching, observed a slowing of the radial pulse of twelve or fifteen beats per minute, accompanied by a marked increase in its volume.

The ligation of the vessel having been accomplished, the intestines were transferred from their artificial peritoneal cavity back to the abdomen, upon the same method as in their reduction after an herniotomy. During the operation they were out of the abdomen about twenty minutes, but they were not exposed to the air more than one minute. The abdominal wound was closed by a continuous catgut suture for the peritoneum, a continuous silk suture for the linea alba, and interrupted silk sutures for the skin.

The line of incision was covered with a narrow strip of thin rubber tissue, over which was dusted iodoform. The wound was further dressed with sublimated gauze and a combined dressing of borated cotton between layers of gauze, which was fastened in place by strips of rubber plaster; the whole was made more secure by a cloth binder.

The patient was completely under the influence of ether for two hours.

He reacted well from the operation. One hour thereafter he was given a hypodermatic injection of ♏x. of Magendie's solution of morphia. At 7 P.M. his pulse was 84; respiration, 20; temperature, 98.8°. He had vomited once; at 11 o'clock he vomited again, and was given another hypodermatic injection of ♏x. of Magendie's solution. His urine was drawn every six hours. He was allowed to eat cracked ice.

May 21st.—The patient slept but little during the night. He complained of pains in the toes of his left foot. The circulation is returning in the three lesser toes. He perspires profusely. To quiet his restlessness hypodermatic injections of Magendie's solution are given every twelve hours. Milk and lime-water are allowed in small quantities. A.M.: pulse, 100; respiration, 17; temperature, 100.5°. P.M.: pulse, 104; respiration, 20; temperature, 100°. The urine is of light amber color, of specific gravity 1.019. It contains five per cent. of albumin, also a large number of hyaline casts, and some blood-corpuscles.

May 22d.—The patient slept at intervals during the night. He has no pain and feels cheerful. He passed twenty-nine and a half ounces of urine in the last twenty-four hours. He perspires freely. Restlessness is quieted by hypodermatic injections of Magendie's solution every twelve hours. He is encouraged to drink freely of water as well as milk. A.M.: pulse, 108; respiration, 17; temperature, 108°. P.M.: pulse, 112; respiration, 20; temperature, 101.4°.

May 23d.—The patient slept only four hours during the night. He still perspires freely and feels well and hopeful. He is very thirsty, and is urged to drink water freely. The circulation is good in the foot and toes. The dorsalis pedis pulse can be felt on the side of ligation. A.M.: pulse, 112; respiration, 20; temperature, 101.4°. P.M.: pulse, 128; respiration, 22; temperature, 102.

In the evening the patient was restless, but was calmed by a hypodermatic injection of ♏viij. of Magendie's solution, after which he slept three hours. He has passed twenty-five and a half ounces of urine in the twenty-four hours, of 1.026 specific gravity, heavily charged with albumin and containing a great number of hyaline casts and some blood-corpuscles.

May 24th.—The patient slept about eight hours during the night. In the past twenty-four hours he has taken thirty-six ounces of milk and some whiskey. He has passed only eighteen ounces of urine, which contained the same quantity of albumin and hyaline casts. His pulse is weaker and more frequent, ranging from 124 to 140. His temperature is 102.6°.

The wound is dressed. The abdomen is flat. The incision has united throughout its whole extent by first intention. The aneurism is hard and pulseless. There is no formation of pus, and only a slight bloody staining of the deepest dressings. In the favorable appearance of the wound there is nothing to be desired, but the general condition of the patient is very unsatisfactory. He shows a great loss of strength, and it is plain that the acute nephritis is telling fatally upon him. His treatment is so ordered that while he is nourished and stimulated he shall be washed out through the skin and kidneys by drinking copiously of water. His restlessness is controlled by hypodermatic injections of Magendie's solution.

May 25th.—The patient slept altogether nine hours during the night. He has taken an abundance of milk and seven ounces of whiskey during the past twenty-four hours. He has voided thirty-seven ounces of urine, containing a smaller proportion of albumin. The hyaline casts are disappearing in number, and granular casts and renal epithelia are appearing. A.M.: pulse, 124; respiration, 17; temperature, 101.3°. P.M.: pulse, 150; respiration, 24; temperature, 104.6°.

May 26th.—The patient slept but little during the night. The wound was again examined and the union found to be good. A slight eczema has been excited by the bichloride gauze. A.M.: pulse, 120; respiration, 28; temperature, 102.8°. P.M.: pulse, 138; respiration, 30; temperature, 101.6°. The patient's general condition is very poor indeed. He is sluggish, and being unable to swallow is given enemata of milk and whiskey. The urine is of 1.021 specific gravity, and contains about two per cent. of albumin, with renal epithelia and casts.

May 27th.—The patient is delirious. He passed thirteen and a half ounces of urine in the last twenty-four hours, of a specific gravity of 1.019. It contained about one per cent. of albumin, also granular and hyaline casts. At 11 A.M. he became unconscious, and died at 1 P.M.

Four hours after death I made a post-mortem examination. The healed abdominal wound was reopened and extended. Two coils of sigmoid colon were found adherent by their surfaces of contact, but the peritoneum elsewhere upon them, and covering the mesentery, was free from inflammation. Three short loops of the small intestine were in the same condition. With these exceptions the general peritoneum, in all its visceral and parietal reflections, was clean and bright, and devoid of any signs of inflammation. In other words, there was simply a local peritonitis, limited to the portions of the organs mentioned. While the parts were lying in position in the body, the left ureter could not be seen where it descended into the pelvis, and could only be traced after it had been exposed at a point nearer the kidney. The wound in the posterior layer of the peritoneum had healed, and there was no inflammation about it. The ureter crossed the common iliac artery at the place of ligation, and had I aimed to expose it, I could not have hit its position with more exactness. All the thoracic and abdominal viscera were healthy except the kidneys. These organs were enlarged, and their capsules were not adherent. The cortex of each organ was thickened and granular. Apart from the evidences of recent acute inflammation they were, from gross appearances, structur-

ally in good condition. Dr. W. H. Porter, curator of the Presbyterian Hospital, who examined them immediately after their removal, said that they showed all the characters of the acutely inflamed kidneys of pregnancy, in which the inflammation was subsiding.[1]

I dissected and mounted the specimen illustrating the operation, which presents for description the following features: The aneurism of the external iliac artery involves the whole extent of that vessel, and is of the shape and nearly the size of my clenched fist. It shows the tendency to the formation of pouches, especially on its outer and posterior aspects. A segment cut from the hardened aneurism shows it filled with a solid homogeneous clot. The end of the femoral artery, which was cut off two inches below Poupart's ligament, presents an empty calibre. The femoral vein is filled with a firm, hard thrombus. The external iliac vein is impervious and lost upon the surface of the aneurism. This condition of the vein accounts for the comparatively sudden œdema of the lower extremity and groin in the early history of the disease. The ligature was applied just above the bifurcation of the common iliac, three-fourths of an inch from the aneurism, and one and one-fourth inch from the bifurcation of the aorta. More clearly to show the relations, the sheath of the vessels has been dissected off down to the place of ligation. The healed slit in the posterior layer of the peritoneum, through which the ligature was applied, is clearly visible. The ligature is seen to have been passed round the artery without any injury to the great common iliac vein which lies mainly behind it, and without having implicated the ureter which just crosses in front. The application of the ligature around the artery, passing between the ureter in front and the vein behind, as shown in the specimen, emphasizes the importance of keeping the end of the aneurism needle within the sheath, and close to the wall of the artery. A portion of the sigmoid colon and the peritoneal covering of part of the surface of the aneurism are preserved, to show the absence of general peritonitis. In the dissected and mounted specimen, even by transmitted light, the course of the ureter crossing the artery cannot be seen through the peritoneum. The right common iliac artery and vein, and their branches, are normal.

There is also an aneurism of the aorta, commencing at the bifurcation and extending upward four inches. The aneurismal dilatation of the aorta is about four times the size of its neighboring healthy portion. Calcified plates can be felt in the walls of the aneurism. It is laid open at the back, and discloses in its interior a clot in marked contrast with that filling the other aneurism. The aortic clot is pale, firm, laminated, and appears adherent in places to the wall of the vessel. It does not wholly obstruct the calibre of the aorta, for in dissecting the specimen air could be blown through the vessel, and the day before death there was pulsation in the right femoral artery.

In a review of the case, it is clear that the operation caused death through effects wrought upon particular vital organs. There was no general shock, and no complication in the healing of the wound adequate to cause death. The result of the operative disturbance of the posterior layer of the peritoneum was too trivial to be considered, and the rest of the wound had healed with a slight local peritonitis. Upon the background of apparent health of the vital organs, there suddenly appeared disease of the kidneys.

The existence of the aneurisms and of other indications of widespread arterial disease are evidences of the profound changes wrought in the patient by the syphilitic poison, and make it probable that the reserve of vitality that separated the tissues from structural disease was nearly exhausted. Of the vital organs the kidneys had especially suffered in loss of energy from the administration of large doses of iodide of potassium, and it is reasonable to suppose that they were particularly vulnerable to depressing influences. It is conceivable that a laparotomy with a disturbance of the intestines, though it produced only a limited peritonitis, may also, as a kind of local shock, have exerted a depressing effect upon the kidneys. Granting this, it seems to me unwise, however, to lay much stress upon such a problematical element of causation in the face of other factors of known potency. The remaining operative conditions that favored the development of nephritis were the prolonged and complete etherization, and the change in the renal circulation.

Of the harmful effect of prolonged etherization upon the vital organs, the experience of careful and observant surgeons has afforded abundant evidence. Its injurious effect upon the kidneys has been especially noted. I have been so impressed with the danger of giving this agent that I limit its use as much as possible, and in some instances perform long operations under the partial narcosis of opium. In the case under review, to the depressing effect of the ether there was superadded the change in the renal circulation consequent upon the tying of the ligature. If the shutting off of the main arterial blood-supply to one-fourth of the body caused such a disturbance of the general circulation as to be noticed by a slowing and increase of volume of the radial pulse, surely there must have been a more intense effect upon the renal circulation, not only from the nearness of the renal arteries to the place of ligation, but also from the presence of the clot containing aneurism of the aorta reaching to within two inches of their origin, which must have been an obstacle to the free delivery of blood through lower channels. Through its effect upon the renal circulation the tying of the artery was a real traumatism of the kidneys, an effective blow to their tottering structure.

In choosing to tie the artery through an abdominal incision, I preferred to accept the definite and minimized risks of a laparotomy, and secure the vessel under the best mechanical conditions, rather than to encounter the uncertain risks and less advantageous mechanical conditions of an extra-peritoneal operation. By the latter procedure it is probable that the peritoneum would have escaped injury, and the patient would in great degree have been spared the extra local shock of the other operation. Assuming that in the extra-peritoneal operation the ligature had been applied with equal exactness, the effect upon the renal circulation would, of course, have been the same; neither is it probable that the depth and duration of the anæsthesia would have been less.

To discuss the comparative advantages of the two methods of operation, in reference to the treatment of a complicating nephritis, would be to enter upon considerations that are too speculative. A venesection, to have averted the effects of the increased renal blood-pressure, to have been effective, should have been performed immediately after the operation. To have let blood after the occurrence of the nephritis, which took place within twenty-four hours after the operation, does not ap-

[1] Since the above article was written, I have received from Dr. Porter, to whom the kidneys were given for examination, the following report: Macroscopic Appearances: Both kidneys were decidedly enlarged. They were paler in color than a normal gland. Their capsules were normal in thickness, and non-adherent to the underlying tissue, the surface of which was perfectly smooth after enucleation. The external surface of both kidneys was quite nodular from the incomplete obliteration of the fœtal lobulation. The cut surface in each showed that both the cortical and medullary substances were enlarged, the former being three times as thick as a normal cortex, the Malpighian pyramids were a third larger than normal. The vascular markings of the cortex were straight, but the parenchyma had the peculiar pale and granular appearance common to acute parenchymatous metamorphosis. Microscopical Examination: The epithelial cells of the straight and convoluted tubules were found to be in a state of granular transformation which had caused the epithelial cells to become swollen and finely granular. In several places the lumen was nearly occluded by this enlargement of the epithelial cells, at the other points the epithelium was becoming detached and desquamated. In some of the tubes the epithelial lining was fairly good, either not having been damaged, or it was again regaining its integrity. A few of the uriniferous tubules were found to have their lumen occluded by the retention of finely granular casts. The intertubular tissue and Bowman's capsule were thickened by an œdematous swelling, but there was no evidence of their becoming infiltrated with inflammatory products. There was a small amount of hyaline vascular thickening, but this change was evidently of long standing. The chief lesion, therefore, was that of an acute parenchymatous metamorphosis of renal organs, not an infrequent one after severe surgical procedures.

pear to me to have been advisable. The nephritis killed the patient not through a progressive increase of the local disease, but by its debilitating effect upon the whole system. It induced a profound exhaustion, to which the weakened constitution succumbed; and it was a fact, as shown by tests of the urine and by the post-mortem examination, that the nephritis was disappearing.

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AN IMPROVED METHOD OF PREPARING AND STAINING BACILLUS TUBERCULOSIS.

By HENRY L. TOLMAN,

[illegible]

THE latest authorities on the diagnostic importance of early microscopical examinations of the sputum in suspected cases of pulmonary phthisis, are so uniform and so emphatic in their advocacy of such examinations, that no excuse seems necessary for presenting a method somewhat modified from those generally given in works on bacteria, which will be found very reliable and practicable in the hands of the busy practitioner for whom it is specially designed.

Dr. G. Hunter Mackenzie, in his very recent work on sputum, says in the preface: "The study, and especially the microscopical examination of the sputum in pulmonary diseases, ought thus to be as much a matter of routine on the part of the physician as the practice of auscultation and percussion, or the examination of the urine in vesical and renal diseases." And again, "Certain it is that the bacillary test in phthisis far outweighs that dependent upon a combination of general symptoms and physical signs." In regard to the treatment by change of climate, the same author remarks: "The period of change of climate ought to be determined by the bacillary (microscopical) test, frequently applied, and by this alone; all others may prove fallacious."

Germain See declares that this mode of diagnosis "is so precious that it precedes all other methods of investigation by months and often years." The discovery, so modestly propounded a few years ago, has borne rapid fruit to justify these statements, and it is not to be wondered at that the rank and file of the profession do not as yet appreciate their importance.

The works on bacteria give a multitude of formulæ for staining the bacilli of tuberculosis, all apparently equally good, and a beginner is apt to try them all, ending finally by failing with all, through lack of thorough familiarity with any. The three requisites of any method are reliability, simplicity, and ease of manipulation, all of which must be present to a greater or less degree to make the method practicable.

The theory of staining is much the same as that employed in dyeing cotton and wool, and any dye can be employed which is easily soluble in water or alcohol. As a matter of fact, however, cellulose, whether in bacteria, wood, cotton, or flax, possesses a selective power to a considerable degree, retaining some colors without difficulty, and requiring a mordant to fix others. The principal dyes which have been found best for staining bacillus tuberculosis are gentian violet, methyl violet, and fuchsine, aided by aniline oil, a weak alkaline fluid which acts largely as a mordant. The dye should be dissolved in alcohol, partly because a stronger solution can thus be made, partly also because the alcohol renders the cellulose of the bacilli more permeable to the coloring fluid. The nitric acid solution which is used to clear the specimen, removes the superfluous stain and hardens the cellulose, thus preventing it from being acted on easily by the contrast stain. The latter, therefore, should be a comparatively weak aqueous solution. Of the three colors above mentioned, fuchsine is by far the best in many respects and is easily procurable. The Weigert-Ehrlich method is the most reliable, and though a little more troublesome than the Gibbes, is much to be preferred. The proportions of the various dyes need not be exact, but it is better in such cases to follow a rule exactly, so as to reduce the sources of error to a minimum. The following will be found a good formula:

1. Aniline oil, ♏ xxx.; distilled water, ℥ iij. Mix thoroughly by vigorous shaking for five minutes and filter.
2. Saturated solution of fuchsine in commercial alcohol, ninety-three per cent.

For staining take of No. 1, ℥ ij., and of No. 2, ♏xv., and mix. This is heated to about 50 C., and the cover-glasses dropped on the surface of the liquid and allowed to remain an hour. Watch-glasses are generally recommended to heat the mixture in, but they are liable to break, and a much better dish is one of the old-fashioned china "individual butters," or a toy-doll's saucer, or plate, three inches in diameter. Such plates are cheap and not liable to break. In preparing the cover-glasses, a small pinch of the thick portion of the suspected sputum may be taken up in a forceps and spread thinly and evenly over a clean, dry cover-glass. The latter is then heated fifteen seconds, by holding it over the flame of an alcohol lamp, moving it rapidly to and fro, and is then dropped on the staining fluid. The latter should only be prepared as wanted, as precipitation is apt to occur, or a film of fuchsine forms on the surface, which is insoluble in water, and interferes with the staining. The mixture may be used cold, but in such case the cover-glasses should be left in it at least twelve hours. Where time is an important factor, the staining fluid may be made a little stronger, and the preparations heated to 50° or 60° C., and the operation will be complete in twenty to thirty minutes, but the results are not so reliable. After the staining is complete, the cover-glasses are washed in pure water, and decolorized in a thirty-three per cent. solution of nitric acid until the sputum appears nearly colorless. A second washing in water follows, and if the red reappears, but rather pale, the process has been carried far enough. If, however, the specimen is entirely colorless after the second washing, it is an indication that it has been too long in the nitric acid, and on examination under the microscope the bacilli will be only faintly visible, if at all. Just here the greater number of failures occur, and only practice can determine how far to carry the decolorizing. It is, however, far better, in all cases, to decolorize too little than too much. In all cases of quick staining, the nitric acid solution should be much weaker, from five to fifteen per cent.

For general work, it is by no means necessary, nor even advisable, to use a double stain, but if one is desired, the best contrast to fuchsine will be found in methyl blue or iodine green. The latter is a better differential stain, but unfortunately is not permanent. A saturated aqueous solution of the methyl blue is made and the cover-glasses floated on it for from three to five minutes, and then washed.

The specimens should always be examined under the microscope mounted in some fluid—water, glycerine, or balsam—as the color in dry specimens is often deposited along the edges of the streaks of mucus, or irregular corpuscles, in such a way as to closely resemble bacilli, and easily deceive an unpractised eye. Glycerine is by far the best, as it is soluble in water, and can be washed off if it is desired to permanently mount the specimen in balsam. The glycerine, also, by its viscidity, will hold the cover-glass to the slide when an examination is made with an immersion lens.

A strong obstacle to the frequent examination of sputum is the difficulty of obtaining it in a fresh state when desired. A patient may not be able to furnish it when the physician calls, and the latter is forced to make his diagnosis by other means. After a series of experiments, however, I find that specimens of sputum can be

kept for from twenty-four to seventy-two hours in the following mixture :

Aniline oil solution, as above.....	ʒ ij.ss
Fuchsine stain	♏ xx.
Carbolic acid, ten per cent. solution ..	♏ v.

This can be poured in a wide-mouthed ounce bottle, and given to the patient with directions to preserve in it the sputum first coughed up in the morning. If, as often happens, there is no expectoration on rising, the products of the first coughing-spell during the day should be kept, though they will doubtless be contaminated with starch grains, and animal and vegetable fibres from the morning meal. This solution in hot weather will keep twenty-four to thirty-six hours, and in winter, in a cool place, three or four days ; but it is better if freshly prepared. The sputum should be left in the stain at least twenty-four hours, and if at the end of that time it is not sufficiently colored, it may be spread on a cover-glass, and treated in the usual manner as unstained specimens. If it is sufficiently stained, a small portion is placed on a cover-glass, pressed out, and cleared in a very weak five per cent. solution of nitric acid. After a prolonged immersion in a mass in the staining fluid, the sputum becomes very friable, and it is somewhat difficult to spread it out evenly on the cover-glass ; but this in no degree interferes with the other operations, nor with the accuracy of the results. I have repeatedly kept specimens a week in the fluid, and then examined them, the only change apparently being that the bacilli appeared slightly swollen by the long soaking. The experiments in this direction were made with a view of getting the morning sputum of patients, as the excuse often made by them is that they could not save it. Some physicians have recommended saving it in a pill-box, handkerchief, or piece of paper ; but anyone who has tried to soften up a dried specimen will only advise this as a *dernier ressort.* Another advantage of this new method is, that it materially saves the time of the physician, who has his specimen stained as soon as he receives it, and can at once proceed to make a microscopical examination.

Besides the Weigert-Ehrlich method, there are many other processes given in the numerous works on bacteriology, but none of them appear to be so good. The Gibbes double-staining method has been very much advocated, but it is lacking in the important quality of giving the most prominence to the first stain. The preparations should lie a long time in the fuchsine solution, but only a few minutes in the methyl blue, while by the Gibbes method they are subjected equally to the action of both colors. The result is that the tubercle-bacilli are insufficiently stained, or the sputum is over-colored. Methyl and gentian violet, which are also recommended, have the disadvantage of not being permanent, and also of being so diffusive as to stain other micro-organisms than the tubercle-bacilli.

As to the power required to study bacilli tuberculosis, a good immersion, eighth or tenth, is an indispensable requisite. They can be seen in mass with an inch objective, recognized individually under a student's fifth, but for clinical purposes it is reckless to base a diagnosis on any such examination. Thanks to the advance of optical science, a homogeneous immersion objective can now be bought for the same price that a dry fifth cost a few years ago. One of the best moderate-priced glasses in the market, amply sufficient for bacteriological work, is a first-class adjustable homogeneous immersion tenth, balsam angle 116°, made by the Spencers, which only costs $60. It has an ample working distance, and should be made specially to work with central light. By means of the cover correction, it can also be made to do fair work with water or glycerine as the immersion fluid. Another requisite is a high-angled sub-stage condenser, the Abbe being the best. The stand likewise should be firm, with a heavy base.

There is still a very large field of research in the study of tuberculous sputum. It differs greatly in different cases, in different stages of the same case, and it seems probable future discoveries will furnish data from which valuable conclusions can be drawn, by examination of sputa, as to the stage and severity of the disease. The number of the bacilli is by no means conclusive, for they appear and disappear, especially in chronic cases, without any cause, and unaccompanied by corresponding exacerbation or diminution of symptoms. Mackenzie, in his work above quoted, says he has even been unable to find them in the sputum of a patient, a chronic case, the day before death. They are much more numerous in acute cases, and always to be found to some extent, as far as my observation extends. Their number is sometimes almost incredible, a single tubercle, about one-tenth of an inch in diameter, containing on a careful estimate over one million. Acute cases, also, are to be distinguished by the presence, to a greater or less degree, of other micro-organisms, which are easily stained by the methyl blue. One very noticeable kind is a short, thick species of bacterium, sometimes nearly square, with a uniform breadth of about four micro-millimetres, always occurring either singly or as diplococci. Another kind is an extremely delicate bacillus, about two-thirds the length of the bacillus tuberculosis, and much slenderer, which stains blue very faintly, and only after long immersion in the coloring fluid. It will not take the fuchsine stain, and is, therefore, easily overlooked. Of course, in all examinations for these adventitious schizomycetes, freshly-distilled water must always be used, to prevent possible contamination. There are always present also numerous zooglæ of micrococci, probably having no diagnostic importance. As, however, they seem to be absent in chronic cases, especially where the patient is enjoying a fair state of health, it is not improbable they may serve as some indication of the comparative strength of the patient and the severity or acuteness of the disease. The fæces, at least in acute cases, frequently contain bacilli tuberculosis in considerable numbers. They appear somewhat swollen, take the stain diffusely, but lose it easily, and they, as well as the bacilli in the sputum, can be stained without the use of aniline oil, an alcoholic solution of fuchsine in pure water being sufficient.

Simulated Hyaline Casts.—Dr. F. Tilden Brown, of New York City, writes : "Dr. L. E. Armstrong calls attention, in a recent issue of The Medical Record, to a method of manipulation of the microscopic mounting devised by him to facilitate the detection of hyaline casts in the urine. I cannot refrain from making a decided objection to this method, because by it beautiful *fac-similies* of the hyaline cast are artificially produced. Although Dr. Armstrong closes with the warning to make sure that we have not rolled out a white blood- or pus-corpuscle to simulate a small hyaline cast, he fails to warn us against the same error with ropy mucus. Now, when this very common ingredient of the urine is present, and the fluid on the slide is allowed to gravitate in any direction by tilting, or when this cover-glass is pushed along, we find excellent examples of the hyaline casts of all sizes; such excellent counterfeits that the novice would be deceived, at the same time somewhat mystified, because his microscopic examination so often revealed casts, whereas the chemical examination was as often void of even a trace of albumin."

Treatment of Asphyxia of the New Born.—Dr. W. M. Trow, of Northampton, Mass., writes : "In view of recent articles in your journal upon the treatment of 'Asphyxia of the New-born,' permit me to say that, for more than twenty years, I have, with good results, treated those cases by elevating the hips so as to let the head hang down, and holding the child in that position for a few seconds, more or less, as the case might demand."

Clinical Department.

LYMPHADENO SARCOMA OF THE NECK—REMOVAL.—SARCOMATOUS PERIOSTITIS OF PETROUS PORTION OF TEMPORAL BONE.—DEATH.

William Stone Torrey, M.D., of Scranton, Pa., reports the following interesting case: "Henry F——, German, aged thirty, consulted me on April 15, 1886. The patient had led a somewhat checkered life, being at the time connected with a third-class travelling theatrical company. Six weeks prior to consulting me, and while in New Orleans, he 'caught cold.' Shortly afterward he began to suffer from pain in his left ear and in the temporal region of the corresponding side. At about the same time he noticed the appearance on the left side of the neck of a small tumor, which continued to grow rapidly until it reached the size of an English walnut. It then remained stationary. He travelled from New Orleans to Scranton, stopping at various places on the way and consulting a physician in nearly every place. During this time the pain in the ear and temporal region had increased in severity until it had reached a point where it was unendurable.

"When I first saw the patient he was on the verge of suicide, and he told me afterward, had he not at that time obtained speedy *temporary* relief, that he should have ended his life by his own hand. No syphilitic history was obtainable, and there were no manifestations of the disease present. *Examination* showed a tumor about the size of an English walnut, firm, tense, and slightly movable, situated in the left cervical region, a short distance posterior to the angle of the jaw, directly underlying the sterno cleido mastoid muscle, and apparently bound down by the deep cervical fascia. The overlying integument was stretched, somewhat reddened, but not otherwise affected, and was freely movable over the surface of the tumor. The pain in the ear was of a lancinating character, and accompanied by a roaring noise. The pain in the temple followed the course of distribution of the auriculo-temporal branch of the third division of the fifth cranial nerve.

Examination of the ear revealed a rudimentary fringe in place of the tympanum, ear dry and slightly congested.

"The patient also suffered from profuse diaphoresis, which was continuous and not paroxysmal. All of the various therapeutical indications were followed with the object of checking this symptom, but without avail. Counsel was obtained, and a diagnosis of lymphadenoma agreed upon. The pain was somewhat mitigated for a few days by large hypodermatic injections of morphia; but as the patient was clamorous for something radical, I proposed an operation for removal of the mass, which he gladly accepted.

"*Operation, April 28th.*—The patient being anæsthetized, was placed upon a table with his head turned to the opposite side from that on which the tumor was situated. The sterno-cleido mastoid muscle was made tense, and an elliptical incision three inches in length was made, with the convexity toward the angle of the jaw. The elliptical course was followed through the integuments, and then the muscle divided parallel with the long axis of its fibres. The deep cervical fascia was then opened, and when the tumor came into view I introduced my index-finger and enucleated it without difficulty.

"After enucleation three fingers could be introduced into the wound, in a direction upward, backward, and inward, to a depth corresponding to the metacarpo-phalangeal articulations, and the styloid process could be distinctly defined. The operation was performed under irrigation with a solution of bichloride of mercury, one part in two thousand.

"The wound was thoroughly cleansed, all bleeding checked, and a rubber drainage-tube inserted and secured at the bottom of the wound by means of a suture of carbolized catgut. The deep portions of the wound were approximated through the medium of two silver-wire sutures, introduced at a considerable distance from the edges of the incision. The superficial portions were closed by interrupted sutures of iron-dyed silk. Iodoform and a large Gamgee dressing were then applied. The patient rallied rapidly from the operation. I was hastily summoned the following night, and found upon my arrival some hemorrhage, which was effectually controlled by injecting hot carbolized water through the drainage-tube.

"After this the patient was apparently going on to speedy recovery without further complication, and was sitting up on the fifth day after the operation. The wound closed primarily, and a handsome cicatrix remained.

"Through the courtesy of Dr. D. Hayes Agnew, the tumor was examined by Dr. Henry Formad, Pathologist to the University of Pennsylvania Hospital. He reported that the tumor was a 'lymphadenoma, in which sarcomatous degeneration had just begun.'

"The condition of the patient for a period of ten days subsequent to the operation was very encouraging. The pain in the ear and temple was for a time entirely relieved. The diaphoresis, although it ceased for a short time after the operation, soon recurred. About the eleventh day it was apparent that the disease was returning. The pain in the ear and temple increased in severity, although at *no time* while the patient was under my care did it reach the degree which had existed prior to the operation.

"On May 18th I sent the patient to Dr. D. Hayes Agnew, at the University of Pennsylvania Hospital, Philadelphia. The tumor had steadily increased in size from the time of the recurrence, and at that time was quite as large as when I first saw it.

"Dr. Agnew had previously been placed in possession of a full history of the case, and, after examining the patient, offered to repeat the operation, with every probability of a like result. The patient refused a second operation, and returned to his home in Dayton, O. His medical attendant, Dr. James Hays, of Dayton, sent me the subsequent history of the case, which I append:

"'I was called to see Henry F—— on June 9th. I found him very weak, and attributed his prostration to loss of rest and travel, but soon learned that I was mistaken, for he never seemed to rally in the least. He said that the tumor had been growing faster since the operation than ever before, and it continued to grow very rapidly, until it extended from the spine to the larynx, and from the top of the ear to the clavicle, and so pressed upon the larynx that at times he was nearly suffocated. The tongue was pressed out of its place, and it was with great difficulty that he swallowed even small quantities of fluids. He suffered no pain except in the ear. The jaw became stiff. The tumor was very firm and very distinctly osseous. He was very much emaciated, having taken no solid food, and very little of any kind, from the time I first saw him until his death, July 16, 1886.'

"The rapidity of the process was, without doubt, stimulated by the operation. Had *no* operation been resorted to, the patient would have taken his own life or succumbed to the agonizing pain long before July 16th. Consequently, that his death was hastened by the operation, I doubt.

"The primary condition we *know* was a lymphadenoma in which sarcomatous degeneration occurred.

"Subsequent to the operation it seems probable that a sarcomatous periostitis of the petrous portion of the temporal bone was developed, with an accompanying perineuritis. Had the periostitis and perineuritis been a primary condition, the pain *would not have been relieved* by removal of the tumor.

"We regard the pain in the temporal region as due to irritation at the stylo-mastoid foramen of the communi-

cating branch from the seventh to the fifth cranial nerve, through the auriculo-temporal branch of the third division of the fifth.

"The profuse and continuous diaphoresis I regard as due to involvement of the cervical sympathetic.

"My object in reporting this case is to add something to the very meagre literature of a very important subject."

THE USE OF COCAINE IN MINOR SURGERY.

Dr. H. J. Schiff, of New York City, writes that he has never seen any constitutional symptoms from the use of cocaine in minor surgery. The principal danger, he thinks, is from parenchymatous hemorrhage coming on about an hour after operation. Another mishap which occurs in rare cases is sloughing of the soft tissues into which the injections have been made. He continues: "What operations can safely be performed under cocaine anæsthesia? is a question often asked. The answer is: 1. All operations which come under the domain of minor surgery. 1. All operations connected with the different mucous membranes of the body. The rules which are to be followed are these: 2. Never use less than a four per cent. or more than a ten per cent. solution, because less than four per cent. has no effect, and more than ten per cent. is unnecessary. 2. Have the number of injections as few as possible, and as far distant from one another as possible, as many injections, and near together, are not only unnecessary but are liable to cause large ecchymoses under the integument. 3. Never operate on inflamed tissues under cocaine, as the anæsthesia you get is almost nil. In these cases prefer etherization. 4. Cocaine should not be attempted to be used in children who are too young to have its use explained to them. 5. Never perform an operation which you think will take over fifteen or twenty minutes under cocaine. 6. Always use an Esmarch bandage where practicable, and have it placed on the part before injecting the cocaine. 7. Use as much cocaine as is necessary. I have used as much as two drachms of a ten per cent. solution without any ill effects. 8. Always use a very fine hypodermatic needle for the injections. 9. Avoid injections into veins. 10. Always use fresh solutions in operating."

PECULIAR CONGENITAL MALFORMATIONS.

Dr. J. C. Neal, of Archer, Fla., writes that he recently delivered a negress of a full-term child. The labor was difficult and the child was born dead. Its head was hairless, it had small grisly attachments in place of ears, and no external meatus. The eyes were very small, the nose flat and without nostrils, the mouth without lips, being a mere hole half an inch in diameter. The feet and hands lacked the ungual and second phalanges, and the skin was "webbed" between the remaining phalanges. The body of the penis was absent, though the glans was well developed. There were no testes in the scrotum. The abdomen was incurved on the right side and enlarged on the left. The gall-bladder was external and on the left side.

ANOTHER CASE OF CONGENITAL MALFORMATION OF THE EAR.

Dr. C. S. Caverly, of Rutland, Vt., reports the case of an infant with congenital deformity of the ear. The right auricle of the child was a shrivelled mass of integument and cartilage. The helix was present, as were also the lobule and a prominent antitragus, but the fossa of the antihelix, the concha, and the tragus were wanting. There was a depression beneath the antitragus that, at first sight, seemed to be an external canal, but which was found, by introducing a probe, to end in a cul-de-sac [illegible] from this false meatus which was similar to the normal wax. The child soon after birth showed signs of torticollis, the right sterno-cleido-mastoid muscle being affected. Five days after the cord had dropped off, leaving an apparently healthy navel, blood was seen oozing from the umbilicus; this continued for about ten days and then ceased definitely. The infant, although escaping all acute summer disease, is now very puny and is becoming emaciated. The parents are both healthy, and have two healthy children. The mother nurses the child, which shows as yet, at the age of nine months, no signs of teeth.

Progress of Medical Science.

Echinococcus in the Arm.—Dr. Nolte describes the case of a woman who, in April last, consulted him on account of a swelling in the inner bicipital furrow of the left arm. It had been present three years; it was small and painless, and grew steadily, but until lately did not prevent her from performing hard field-labor. She took no notice of it, and did not seek medical advice until it became troublesome. When seen, it had the size and shape of a goose's egg, and felt hard and distended; there was no fluctuation or murmur; the tumor was quite painless. At the lower part was a small opening, from which fluid escaped. The arm having been carefully cleansed, an incision was made under strict antiseptic precautions, when there escaped about fifty echinococcus cysts, varying in size from a pea to a walnut. The wound healed soon, and recovery was complete.—*Allgemeine Medicinische Central-Zeitung.*

Hyaline Degeneration.—Dr. H. Stilling, of Strassburg, has adduced evidence to show that so-called hyaline degeneration may pass on to amyloid degeneration, regarding the former as an early stage of the latter. To test this point it was necessary to show that in recent cases of amyloid degeneration areas of hyaline change are present, and that a transition between the two forms can be traced; and also to establish the fact that hyaline degeneration is met with in those diseases which are known to give rise to waxy degeneration, the hyaline replacing the waxy form in cases where the chronic disease has been cut short by some intercurrent affection. Stilling's researches were conducted upon the spleen, as being the organ which is the earliest to undergo amyloid change; and he employed for the detection of that morbid material, and distinguishing it from hyaline, the iodine and sulphuric-acid reaction mainly, various other staining reagents being used for the tissues. He says that he has quite abandoned methyl-violet as a test for waxy disease, because it has the property of reddening colloid, and is not so delicate in the detection of waxy material as iodine is. Details are given of a case of phthisis, where the spleen showed a combination of amyloid and hyaline change, and a number of other cases of acute and chronic disease, where the hyaline product was found, are referred to. Hyaline degeneration in the spleen is found in the walls of the arterioles as well as in the follicles themselves. It commences in the former in the muscular coat, destroying the fibres and their nuclei; not invading the intima, but sometimes involving the adventitia. In the follicle, bands and wedges of the material separate the lymph-corpuscles, and the change is most marked in the centre of the follicle, where it commences by the swelling and transformation of the protoplasm of the cells. Stilling regards it as a deposit, and not as a metamorphosis, and proceeds to point out the striking similarity, not only in appearance but in distribution, that this hyaline change bears to waxy degeneration of the same organ. The diseases in which the hyaline deposit was found were, with two exceptions, of the same class—viz., chronic inflammation of bone and joints, and chronic inflammatory (tubercular) disease of the lungs—

as those in which waxy disease occurs, the only distinction being that the hyaline change occurred in cases of shorter duration than the amyloid did. In one case the spleen appeared to be amyloid, but it did not yield the characteristic tests of that degeneration, and was found to be the seat of abundant hyaline changes. It is possible that the involvement of arteries in the change has something to do with its subsequent progress; but an explanation of the difference between the hyaline degeneration of tubercle and that which seems to be only the precursor of amyloid disease is, Stilling thinks, to be found in the lack of vascular supply in tubercle, as compared with that of the regions affected by amyloid degeneration. The degenerative process in a tubercle is thereby arrested at the hyaline stage.—*The Lancet.*

Papilloma of the Trachea Removed Laryngoscopically.—Dr. C. Labus relates the case of a man aged sixty-three, who had suffered for nearly two years from difficulty of respiration and other signs of obstruction in the air-passage. With the laryngoscope a tumor could be seen nearly filling the trachea and growing at the level of the fifth tracheal cartilage. By means of a peculiar forceps the tumor was torn away piecemeal. In seven sittings sixty pieces were removed. The patient experienced immediate relief, and four months after the operation, although he occasionally expectorated little pieces of the tumor, his respiration was easy, and he could run and ascend stairs without difficulty. On microscopical examination of the pieces removed, the tumor was found to be a papilloma.—*Monatsschrift für Ohrenheilkunde.*

Elimination of Mercury after Hypodermal Injections and Inunctions.—The system of treating syphilis by means of hypodermatic injections having been of late largely employed, any information on the subject of the rate of diffusion and elimination of the mercury thus introduced is likely to prove valuable. An elaborate series of observations on the elimination of mercury by the urine, after hypodermatic mercurial treatment, has just been published by Dr. Sukhoff, "ordinator" in the syphilitic clinic of Professor Tarnovski, in St. Petersburg. The preparations used were a solution of corrosive sublimate, a similar solution with the addition of common salt, Bamberger's albuminate of mercury, the same author's peptonate of mercury, Max Bockhart's sterilized "blutserum-quecksilber," a solution of bicyanide of mercury (recommended first by Cullingworth), a solution of the mercurial amide of formic acid, or Liebreich's hydrargyrum formamidatum, an emulsion of calomel, and, lastly, a solution of biniodide of mercury in iodide of potassium. The above solutions were mostly of the strength of one per cent., and the doses given usually corresponded to one-sixth of a grain of the salt used. Mercury was found in the urine about five hours after a single injection of any of the above, except the solution of the biniodide, which was not followed by any signs of mercury in the urine until after ten daily injections. During the course of treatment the amount of mercury in the urine gradually increased, but not at the same rate for all preparations. After the conclusion of the treatment the quantity eliminated continued for one or two weeks as great as it had been at the end of the treatment, and then declined, the fall being more gradual than the rise had been. There were no breaks in the elimination, and no difference was found in the quantities eliminated during different periods of the day. The organism gradually and spontaneously freed itself from all the mercury which had been introduced. Where mercurial stomatitis existed a much larger quantity of mercury was found in the urine than in other cases; the author therefore suggests that when stomatitis has been produced much smaller doses should subsequently be administered. The most active of all the preparations employed appeared to be the formamidate, for after a single injection the mercury was entirely eliminated in a couple of days. Another series of observations on the urinary elimination of mercury has been made by Dr. Michaelovsky, also an "ordinator" of Professor Tarnovski's clinic. Here the form of treatment employed was that of inunction. The observations agree with those of Dr. Sukhoff in regard to the uniform and gradual method in which mercury passes from the system. Several different ointments were employed for the purpose of comparison. Mercury was detected in the urine about twelve hours after a single inunction of half a drachm of ung. hydrarg. cinereum duplicis, which contains fifteen grains of metallic mercury, no difference being observed when the ointment was prepared with cacao butter instead of suet, as is usual. A similar effect was produced in the same time by an inunction with half a drachm of Oberländer's mercurial soap, which also contains fifteen grains of mercury. An inunction of a drachm of the simple ung. hydrarg. cinereum, which contains twenty grains of mercury, was required to produce as rapid an effect on the urine as half a drachm of the two former preparations. Oleate of mercury was also tried in quantities of half a drachm, which contained fifteen grains of the yellow oxide. In this case three inunctions were required. The least active of all the ointments employed was the ung. hydrarg. sublimat. corros., which contains eight grains of the sublimate to the drachm. Here eight inunctions of half a drachm, or even a drachm, of the ointment were required before the urine answered to the test for mercury.—*The Lancet.*

The Brain of Gambetta.—M. Duval (Director of the Laboratory of Anthropology) has recently given to the Society of Anthropology at Paris a detailed description of the external configuration of the brain of Gambetta. He draws special attention to the fact that the cortical structure in the neighborhood of Broca's convolution has become markedly augmented. Usually this part of the brain assumes the form of an M, the two vertical limbs or sulci inclosing a small, valve-like portion in the shape of a V. In the brain of Gambetta, however, as has been noted in other cases as well, this V-shaped portion has become doubled on itself, and assumed the form of a W instead of a V. When we recall the fact that Broca, in his memoirs, attributes to this part of the cerebral cortex (left or right sided, according as the individual is right or left-handed) the function of articulate language, the unusual development of this convolution in Gambetta and others confirms, to a certain extent, this opinion, now generally accepted. Gambetta was a great orator, his memory for words being most remarkable. He had acquired a rapid and most exact method of expressing his ideas. It is, therefore, somewhat admissible to associate his great oratorical power with this increased growth of cortical tissue in the neighborhood of Broca's convolution.—*The British Medical Journal.*

A Solvent for Sordes.—Dr. A. D. MacGregor speaks highly of boric acid as a topical application in the unhealthy condition in which we frequently find the mouth, tongue, and teeth in severe cases of typhoid fever. He says, in the *British Medical Journal*: The mouth is hot; the lips dry, cracked, and glued to the sordes-covered teeth by inspissated mucus and saliva; the tongue dry, or even glazed and hard, brown or black, crusted with a fetid fur. Under these circumstances a pigment containing boric acid (30 grains), chlorate of potassium (20 grains), lemon-juice (5 fluidrachms), and glycerine (3 fluidrachms), yields very comforting results. When the teeth are well rubbed with this, the sordes quickly and easily becomes detached; little harm will follow from the acid present. The boric acid attacks the masses of bacilli and bacteria, the chlorate of potassium cools and soothes the mucous membrane, the glycerine and lemon-juice moisten the parts and aid the salivary secretion.

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THE CAUSE OF URETHRAL FEVER.

MR. REGINALD HARRISON contributes a short paper on this subject to the July issue of the Liverpool *Medico-Chirurgical Journal*, in which he takes the ground that almost all cases of fever occurring after internal urethrotomy are due to poisoning from alkaloidal substances contained in the urine. His attention was first called to the urine as a possible cause when studying his notes of operations upon the urethra. He was struck, he says, by the fact that neither rigors nor fever showed themselves until after micturition had been naturally practised, or there was evidence that urine had found its way into the wounded urethra and was lodging there.

This view was afterward strengthened by the results of Bouchard's studies concerning the toxic elements of normal urine. This observer found that the urine contains a certain amount of the alkaloids formed in the intestines (ptomaines), which are absorbed by the intestinal mucous membrane and excreted by the kidneys.

To the objection urged against this theory that rigors and pyrexia are not produced when extensive subcutaneous extravasations of urine occur, Mr. Harrison replies that the conditions are very different in the two cases. A mixture of blood and urine, such as is found after internal urethrotomy, he thinks, is capable of producing very different compounds from those that extravasated urine alone is likely to yield. Again, when urine is extravasated into the tissues, its action is that of a virulent local poison, under the influence of which the contiguous tissues are killed outright, probably before they can exercise any power of absorption.

Another objection which might be raised is, that cases have proved rapidly fatal from urinary fever where there was no evidence that the urethra had sustained any appreciable lesion. The writer believes, however, that any statement that the urethra is free from injury, should be received with caution. Though the operator is not conscious of having inflicted a lesion on the urinary passage, with an instrument which he has been using, nor the patient show evidence of it immediately, this by no means implies that a structural lesion on the urethra has not been inflicted. As a rule, he says, it is not the most difficult cases of catheterism which are most liable to urinary fever. In those in which structural damage is inflicted, or false passages made, the injury is usually on the distal side of the stricture, and consequently well protected from urine infiltration or contact. In such cases the amount of shock must be greater than that caused by the slight wound of a urethrotomy knife, which, Mr. Harrison asserts, is almost invariably followed by rigors and fever.

That there are other forms of pyrexia, such as the so-called irritative and the malarial, following occasionally the mere passage of a catheter or a sound, the author does not deny; but these have nothing in common with the severe urinary fever which is usually referred to nerve-shock, but which the author regards as caused by the absorption of poisonous matters contained in the urine.

The practical point of these views is the bearing which they have upon the prophylaxis of urinary fever. This can be prevented, Mr. Harrison maintains, by providing for free drainage of the bladder and removal of the urine as rapidly as it is excreted. This drainage is to be secured by means of a perineal section performed simultaneously with the internal urethrotomy. The author says that he has never seen rigors and fever after combined internal and external urethrotomy, so long as the bladder drainage of urine through the external perineal wound was free and uninterrupted. Fresh urine flowing freely over the glazed surface of a wound is innocuous, but when it is pent up, as in a urethral wound, it is apt to be speedily converted into a most destructive and poisonous agent.

It is not improbable that Mr. Harrison's news of the causation of urethral fever are in the main correct; but the necessity of resorting in every instance to a perineal section is not so evident. The author's experience as to the frequency of this complication is certainly not that of most surgeons. He met with it so constantly that he was even led to practically abandon the operation of internal urethrotomy for a number of years, and resumed it only when he adopted the method of combined internal and external operation.

CASTRATION IN MENTAL AND NERVOUS DISEASES.

A SERIES of articles upon this subject appears in the October number of the *American Journal of the Medical Sciences*, from the pens of Sir T. Spencer Wells, Professor Alfred Hegar, and Dr. Robert Battey A medical symposium from persons of such eminence, and on a subject of such vital and present interest, will naturally attract much attention.

The opening article, by Spencer Wells, is a masterly and philosophic presentation of the subject. While the writer takes decidedly conservative views, these are presented with a force and earnestness which cannot but make a most lasting impression. The development of specialists, and with this the rise and spread of the laparotomy epidemic, are pictured in a graphic manner. "The growth of specialization," he says, "is at the same time a benefit and a peril." There should be great specialists, but there is danger in the rapid evolution of a multitude of minor specialists.

"And," he says, "herein is the danger with groups of gynecologists. It would not answer for all to run on in the same track. To be anything, each must hunt up his own little therapeutical quarry and keep to it. Groping among details is an absorbing and paralyzing occupation

and soon the curve of a pessary, or the lining of a speculum fills the field of vision, and great principles are lost sight of. With one such idea kept steadily running in the same groove, a man may quickly find his way down to the lowest level of routine womb-scaffolding or singeing."

Taking up the special subject of oophorectomy, a brief sketch is given of its development. The operation is not viewed by the writer with a sympathetic eye. It is at best, he thinks, a very sorry alternative, and not one to boast of.

"When a surgeon is obliged not only to put on the black cap, but to become the executioner, the only redeeming point in the business is the skill he may display in carrying out the sentence. The blot is the necessity for such a measure. As society is wanting in reference to crime, so the profession is wanting in reference to disease. There is too much law, and not enough gospel; too much doctoring and not enough philosophic pathology. It might be otherwise. With better principles and training, we should see less of crime and its consequences. With a keener estimate of the higher functions of medicine, more thinking, more research, and systematic dialectical reasoning, there would be more defiance of disease, more life-giving power, and less of surgery."

Further on the writer speaks of the danger from the increasing popularity of the operation of spaying.

"Now," he says, "the oöphorectomists of civilization touch hands with the aboriginal spayers of New Zealand. The ovary is, in fact, the nucleus of gynecological science and the source of gynecological practice. Its products give occupation to the obstetrical art. The disturbances it sets up in the system at large are the prairie grounds of its proletarians. The morbid structural changes, displacements, and accidents of it and its appendages are the arena of its operators. Wonderful, indeed, is the hydra-like tolerance of women of sections and mutilations under their hands!"

Sir Spencer Wells comes to the following practical conclusions:

"That the operation of oöphorectomy, or the removal of normal ovaries, is one which may be advised in some cases of uterine fibroids, and in uncontrollable uterine hemorrhages.

"That it is to be resorted to in certain malformations of the genital organs, deformities of the pelvis, and accidental obstructions of the vagina.

"That the right to use it is very limited in cases of ovarian dysmenorrhœa or neuralgia, and only when they have resisted all treatment, and life or reason is endangered.

"That in nearly all cases of nervous excitement and madness it is inadmissible.

"That it should never be done without the consent of a sane patient, to whom its consequences have been explained.

"That the excision of morbid ovaries and appendages should be distinguished from oöphorectomy, and ought not to be done without the authority of consultation, as in most other cases of abdominal section.

"That in nymphomania and mental diseases it is, to say the least, unjustifiable."

The contributions of Professor Hegar and Dr. Battey are fully worthy of careful reading, but they are especially technical contributions and quite lack the literary quality and philosophic character of the article by Sir Spencer Wells.

Professor Hegar holds that castration is indicated in a psychosis evoked or maintained by pathological alteration of the sexual organs, and in a neurosis originating from the same source, as soon as this imperils life or hinders all occupation and all enjoyment of life. The indication is also present when that disease represents only one causal factor in the genesis of the affection, without the removal of which a cure is not to be thought of. The remaining causes of suffering must be in this case accessible to treatment. Other milder methods of treatment must have been tried previously without success, or, as in the case of many small tumors of the ovaries and tubes, must from the outset give no promise of success. Castration must actually affect the cause which occasions or keeps up nervous irritation. The operation will thus be of use when a degenerated or dislocated ovary represents the irritative focus, or as soon as a greatly swollen and retroflexed uterus presses on the sexual plexus and the organ is brought into a state of atrophy. Castration promises success when the bleeding and anæmia occasioned by a fibroma play an important part in the maintenance of a psychosis, so that a cure does not appear possible without getting rid of that evil; but castration is absolutely no universal remedy for any neurosis originating from a genital-organ disorder, or kept up by the same. The cessation of ovulation will avail nothing if the irritation starts from the nerves which are compressed in a shrunken cicatrix of the broad ligament, or elsewhere in a cicatrix of the pelvic connective tissue.

Dr. Battey has performed castration for the relief of mental and nervous disorders, and these may be divided into three classes: Oöphoro-mania, oöphoro-epilepsy, and oöphoralgia. He uses the terms oöphoro-mania and oöphoro-epilepsy instead of hystero-mania and hystero-epilepsy, because clinical experience teaches him that these disorders are dependent upon a nervous irritation proceeding from the ovaries, and not from the uterus. He finds the disorders existing (*a*) in cases in which he recognizes organic disease of the ovaries, and is not able to recognize any organic disease of the uterus; (*b*) in cases of uterine as well as ovarian disease, when the diseased ovaries are removed, the nervous disturbance disappears, notwithstanding the fact that a displaced or diseased uterus may remain. In his experience the time required for the disappearance of nervous disorders, after removal of the ovaries, has been quite variable. In general, epileptiform manifestations have ceased at once. Some of the cases have required for a time the tranquillizing effects of the bromides to ward off threatening symptoms, while others have needed nothing. His cases of mania have all been quite chronic, and the improvement has been slow. In oöphoralgia, in a few instances, the cure has been immediate and permanent. In the majority it has been slow and gradual; and in others nothing has been gained for even two years after the operation. In a few the long-established opium habit has proved a complete bar to recovery.

In his cases, which have had two years or more to

test them, seven have been cases of oöphoro-mania, of these 1 was cured and 4 improved; 9 were cases of oöphoro-epilepsy, all cured; 20 were cases of oöphoralgia, and 13 were cured and 3 improved.

Dr. Battey inserts communications from several prominent American gynecologists, who give opinions regarding the indications for oöphorectomy which, in the main, agree with the distinguished originator of the operation.

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MEDICAL WORKS PUBLISHED AS ADVERTISEMENTS FOR DRUGS AND APPARATUS.

A CORRESPONDENT calls our attention to certain subterfuges, which, though perhaps not actually dishonest, certainly are the opposite of ennobling, and are not calculated to inspire the respect of the better portion of the profession. He refers particularly to the publishing, under the guise of legitimate medical books and periodicals, those which are really but advertisements of certain particular remedies or apparatus, in which the parties writing, or having them written, are financially interested.

For instance, a work on prescriptions, under the guise of an impartial treatise, contains remedies prepared almost exclusively by leading drug houses. Again, another so-called treatise on electricity has for its special object the indorsement of a particular apparatus, manufactured solely by an instrument firm, and does not make any reference whatever to other apparatus than that made by this company. There are also several periodicals, offered at low rates of subscription as being devoted to general or special medicine, which show the same deception. Our correspondent very truthfully adds: "All this seems to me to be unfair to the doctor who pays for, and expects to get, an unbiased exposition of the subject referred to by the title, and though they may indicate to what an extremity some clerically gifted members of the profession may become reduced, they certainly do not increase the reader's respect for them by accepting such propositions to increase their incomes, as must precede the sprouting of each one of these weeds in the medical garden of knowledge." The remedy consists in buying books from firms which make publishing their only business, and who are above the suspicion of catering to the interests of any advertising dodge.

TWO ARMS BROKEN DURING A GAME OF BALL.—Professor S. F. Baird vouches for the correctness of the following very singular coincidence: On September 13th, just before the commencement of a base-ball game, J. J. Corridon, of the United States Fish Commission nine, in throwing the ball from the catcher's position to second base, broke his right arm about midway between the elbow and shoulder. He was taken from the field in a carriage. At the beginning of the fourth inning, W. W. J. Murphy, who had been previously playing as short-stop, relieved E. Fish in the catcher's position. During this inning Mr. Murphy, in throwing the ball to the third base-man, met with an accident precisely similar to that which happened to Mr. Corridon. Both patients made a good recovery.

THE WELL-KNOWN PHYSIOLOGIST, Dr. Cyon, has succeeded Mme. Adam as editor of the *Nouvelle Revue*.

News of the Week.

MICROHÆMIA is the name coined by Rosenbach to designate a condition in which the blood is poisoned with micro-organisms.

OF SEVEN RUSSIANS bitten by mad dogs in May last, and subsequently treated by Pasteur, three have just died. —*Med. Zeitung*, August 23d.

THE CHARITY HOSPITAL TRAINING-SCHOOL FOR NURSES now occupies the beautiful stone building on the southern end of Blackwell's Island, formerly used as a small-pox hospital.

DR. JAMES ANDERSON, of this city, died on October 7th, in the eighty-ninth year of his age. He was one of the oldest medical practitioners in the city, having practised continuously from 1820, when he graduated at the New York College of Physicians and Surgeons, until a few years ago. He was born in this city, for several years was President of the New York Academy of Medicine, and was a member of several scientific and benevolent medical associations.

THE NUMBER OF INSANE IN NEW YORK CITY INSTITUTIONS is 5,237, distributed as follows: Men in city asylum, Ward's Island, 1,944; women in Lunatic Asylum, Blackwell's Island, 1,879; women in branch asylum, Ward's Island, 614; women in Homœopathic Hospital, 150; epileptics and idiots, Randall's Island, 650; total, 5,237. The Commissioners of Charities and Corrections have bought 1,000 acres of land in Suffolk County, Long Island, and it is hoped that before long about two-thirds of the insane on the Islands can be transferred to cottages on the Long Island farm.

HOW A RAILROAD DOCTORS ITS EMPLOYEES.—M. Gallard, in an argument in favor of the harmlessness of adding pure alcohol to wine, delivered before the Académie de Médecine, describes a novel method of wholesale doctoring. For more than twenty-five years the employees of the Orleans Railroad, to the number of 40,000, have been daily supplied by the company with an alcoholic mixture, to be used as a health beverage. The daily dose assigned to each person consists of alcohol, 44 grammes; tafia, 40 grammes; tincture of gentian, 4 grammes; water, 1 litre. This drink is served out for one hundred and fifty days, from May 1st to October 1st. Under its use the company has found the health of its employees to improve, and malarial troubles, which are the pest of the region, have especially diminished.

DR. WEIR MITCHELL has written a second novel.

AN INSTRUCTIVE CONTROL EXPERIMENT.—M. Duthil continues to report great success in the treatment of diphtheria by the use of vapors of turpentine and eucalyptus. He claims to have treated one hundred and thirty-four patients, with only eleven deaths. The method applied at the Children's Hospital in Paris, however, has given only deplorable results.

CHOLERA IN COREA.—The epidemic of cholera in Corea has assumed frightful proportions. It is said that the disease causes a thousand deaths daily in Seaoul, and has already swept away over a million of the inhabitants.

The Congress of German Naturalists and Physicians, whose annual meeting was held in Berlin lately, contains a membership of 2,224 persons, and the number of participants at the last meeting was 4,155. The work was done in thirty sections, of which the most active were that for Internal Medicine, and the least that for Pharmacology. There were one hundred and thirty-one sittings held. The most industrious sections were those of Pathology and of Physics, in which thirty-six and thirty-five papers, respectively, were read. The cost of entertaining the Congress was about fourteen thousand dollars. The next meeting is to be held at Wiesbaden, with Dr. Fresenius as President.

A Resignation from the International Medical Congress.—We are informed that Dr. E. Williams, of Cincinnati, has resigned the Presidency of the Section of Ophthalmology in the Washington Congress.—*Medical News*.

The late Dr. McBride was another illustration of the fact that doctors, even those having a large income, seldom accumulate money. Although Dr. McBride had a very large practice, from which he made fifteen or twenty thousand dollars annually, he died, it is said, in debt. His library and office equipment, however, are very valuable.

Proprietary Remedies can be Criticised.—The decision in the case of Dr. Carl Seiler, who was sued for condemning a proprietary medicine at a lecture before students, has been rendered, and it is a most important one. The *Philadelphia Medical Times* thus sums it up: "Two interesting points were made in the charge to the jury. In the first place, it was declared as the law of Pennsylvania that a scientific lecture before students or a Medical Association is not only privileged, but a highly privileged communication; that malice must be shown to exist in order to render the lecturer liable for an expression of opinion under such circumstances. Secondly, a druggist having been subpœnaed to bring some of Dr. Seiler's prescriptions into court, the Judge decided, without opening the question of ownership, that they could not be made public, as they were essentially confidential and private communications to the druggist. Judge Arnold also held that the plaintiff's attorney had no right to publish the weakness or maladies of patients of Dr. Seiler, and refused to allow him to examine the prescriptions."

Dr. W. A. Hammond gave a dinner on Tuesday evening in honor of Dr. Althaus. Several representative medical gentlemen were present, and enjoyed a delightful evening.

South Africa has reached the point that it has a weekly medical journal, the *South African Medical Journal*.

A New and Safe Remedy for Ratile-snake Bite is put forward by Dr. H. C. F. Myer, of Pawnee City, Neb. It is the tincture of echinococca augustifolia, and has been used by him successfully in eight cases. Dr. George C. Nichols, of Kansas City, reports in the *Kansas City Medical Index* a case successfully treated by this remedy.

Dr. Salem Pasha, physician to the Khédive of Egypt, attended the Congress of German Naturalists and Physicians at Berlin. Dr. Salem is said to be the leading Arabian physician in Egypt. He has translated Niemeyer's "Treatise on the Practice of Medicine" into Arabic.

Several of the State Boards of Health are following the practice of issuing regular monthly bulletins, in which the sanitary condition of the State is reported upon as fully as can be, and various instructive articles upon hygiene, etc., of general interest, are incorporated. Minnesota and Tennessee have such bulletins.

Mr. Gladstone is not a total-abstainer, but takes four glasses of claret and one of port daily. He consumes about seven gallons of alcohol yearly. M. de Flaix puts forward this and other facts as arguments against the present outcry against alcohol.

Dr. Fordyce Barker gave a reception to Professor Winckel, the distinguished gynecologist of Munich, on Friday evening, October 15th. A large number of medical gentlemen from this and other cities were present to enjoy the refined hospitality of the host.

Dr. N. S. Davis is an active worker in temperance circles, and for over thirty years has been prominent as a Methodist.

The State Board of Health of Ohio has issued an address to the medical profession of the State asking co-operation.

Bellevue Hospital will, it is said, soon have a new system of ventilation, adopted at the cost of $20,000. The plan is to have a system of air-tubes supplied by fans which will be run by electricity.

College Classes.—The colleges are getting settled as to number of students, for now is the time for the tickets to lectures to be paid for.

Dispensaries and Young Doctors.—The younger physicians about town are complaining again that the dispensaries and college clinics are robbing them of patients. The trouble appears to be that the professors who wish clinical material are even willing to pay patients to come to them rather than not at all. The time will come when the general practitioners who do not live by teaching will take pains to educate the people that dispensaries and colleges are not the best places in which to be treated. With the number of medical men who are willing to do their share of charity work in their offices it is safe to say that, if there were no dispensaries or college clinics in the city, none but the persons who are hunting for clinical material would suffer.

Cocaine Habit.—A promising young surgeon of this city is an inmate of one of the neighboring insane asylums, a victim to the cocaine habit.

Medical Society of the County of New York.—The annual election of this Society takes place on Monday evening, October 25th, in the Hall of the New York Academy of Medicine. Drs. Laurence Johnson, F.R.S., Drake, and Andrew H. Smith, all good men, are candidates for the presidency.

A New Hospital on a New Plan.—A small hospital, called the Lodge and Association Hospital, has just been opened at St. Mark's Place, in this city. It is supported by annual contributions from different lodges and clubs, mostly German and Jewish. Members of subscribing lodges have a right to be admitted, when ill, and to be treated at the hospital by their own physician.

The late Dr. Frank H. Hamilton.—At a stated meeting of the New York County Medical Association, held October 18, 1886, the following resolutions, offered by the Vice-President, Dr. John Shrady, were adopted:

Whereas, It has pleased the Almighty Disposer of Events to remove from the sphere of his usefulness our much respected co-worker, Frank Hastings Hamilton, M.D., LL.D., and

Whereas, The New York County Medical Association desire to express a sense of their bereavement, in common with the many organizations with which he was connected; therefore, be it

Resolved, That the fulness of his days has been a record of a well-spent life; and that his work has adorned the surgical annals of America, and added to the solid contributions to medical literature.

Resolved, That as a scholar in his chosen science he has won a place among the worthies of all tongues; and that he has conscientiously weighed all his statements, and given to the world the results of a ripe experience and a most painstaking discrimination.

Resolved, That his professional life has been gauged by the strictest regard to the right; that his loyalty, ever unimpeached, was never expended upon the unworthy nor his unswerving rectitude ever challenged, even by the captious multitude.

Resolved, That the memory of his many virtues will ever linger with us, and that we tender to his family our sympathies, assuring them that his valued counsels have not been unappreciated by those who had the honor of association with him.

P. Brynberg Porter, M.D.,
Secretary.

Reviews and Notices.

A Manual of Practical Therapeutics, Considered with Reference to Articles of the Materia Medica. By Edward John Waring, C.I.E., M.D., Fellow of the Royal College of Physicians, London; Surgeon Major (Retired) in Her Majesty's Indian Army. Edited by Dudley W. Buxton, M.D., B.S., Lond., Member of the Royal College of Physicians; Assistant to the Professor of Medicine at University College, London, and Administrator of Anæsthetics at University College Hospital and the Dental Hospital of London. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. 1886.

Even if Waring's Therapeutics were a new work, we should welcome it to the already long list of treatises on general therapeutics on account of its intrinsic merits. But it is no novice seeking for recognition, but is rather an old veteran by whose counsels more than one generation of medical men have been helped and have been strengthened in the belief that there is some virtue in drugs after all, although the Nihilists would have us think otherwise. But though an old work, it is not antiquated, and in the successive editions which have followed each other in the past thirty-two years extensive changes have been made, to keep up with the rapid increase in the number of tried new remedies and of the new applications of old ones, and the present edition will be found fully up to date. A copious index of diseases adds not a little to the practical utility of the treatise.

A Treatise on the Practice of Medicine for the Use of Students and Practitioners of Medicine. By Roberts Bartholow, M.A., M.D., LL.D., Professor of Materia Medica, General Therapeutics, and Hygiene, in the Jefferson Medical College of Philadelphia, etc. Sixth edition, revised and enlarged. 8vo pp. 990. New York: D. Appleton & Co. 1886.

The sixth edition of Professor Bartholow's work has made its appearance, with many important additions. Enough has been said of the peculiar merits of this treatise to render unnecessary any detailed reiteration. Suffice it to say that, from a practical and clinical standpoint, it has few equals in its scope of subject and directness of statement. The author is an acute observer, an accomplished clinician, and a faithful therapeutist. In fact, his resources in the treatment of disease appear to be almost without limit. In these days of lack of faith in special remedies this is certainly a commendable virtue. The error is on the side of progression, and if the reader is not prepared to admit all the conclusions, he is certain to be benefited by the number of valuable suggestions which are offered in explanation of therapeutical effects. The author makes his convictions felt, and the most doubtful student is led to take fresh courage in treating the most desperate cases. There is nothing novel in the arrangement of the subjects, nor in the description of the phenomena of disease. The style is plain, terse, and perspicuous, and no space is wasted in useless discussion. On the whole, it still continues to be a very good book.

The Healing of Arteries after Ligature in Man and Animals. By J. Collins Warren, M.D., Assistant Professor of Surgery, Harvard University; Surgeon to the Massachusetts General Hospital; Member American Surgical Association; Honorary Fellow Philadelphia Academy of Surgery. 1 vol., pp. 184. Illustrated with thirteen full-page plates in black and colors. Parchment muslin binding. New York: William Wood & Co. 1886.

In these days of many books, when the itch of writing is raging as an epidemic, and when, as would be expected, most of the productions are merely compilations, it is refreshing to meet with a book such as this, which bears within it evidences of honest original work. Although the labors of others have been by no means overlooked, as a bibliography containing nearly two hundred and fifty references amply proves, yet the ground has been carefully gone over again by the author, and his conclusions are his own and based upon his own observations. The importance of the subject of the healing of arteries to every surgeon is self-evident, and nowhere is the subject more clearly and fully treated than in Dr. Warren's modest-appearing little work. There are chapters on the history of the ligature, on experiments on animals and on the human subject, and on the mode of closure of the fœtal vessels. Finally, in the appendix the author describes the methods employed by him in his investigations, and a very complete index closes the book. The plates are beautifully executed, and add greatly to the value of the work.

Anatomiske Termini fra det Norske Landsmaal. Af Dr. I. O. Hennum. Kristiania: Det Steenske Bogtrykkeri. 1886.

This is a dictionary of anatomical terms in current use among the peasantry of the Scandinavian countries. It is doubtless of practical utility to physicians in those lands, and will also be of considerable value to students of comparative philology, as all dialectical glossaries are.

L'Année Médicale. Résumé des Progrès Réalisés dans les Sciences Médicales. Publié sous la direction du Docteur Bourneville. Paris: F. Plon, Nourrit et Cie. 1886.

This is the eighth appearance of this valuable annual. The volume contains abstracts of most of the important works and journal articles which have appeared during the year 1885. Especial reference is made to progress in microbiology and therapeutics.

Maladies des Organes Génitaux de la Femme. Par le Professeur Carl Schroeder. Ouvrage Traduit de l'Allemand sur la Sixième Edition par les Drs. L. Landwerlin et Dr. J. Heitzmann, Précédé d'une Introduction par M. le Professeur Léon Hugenet. Bruxelles: Vanderweyen. 1886.

The work of Schroeder on the diseases of the female generative organs is too well known to require any extended notice. The author's method of treating his subject is simple, and his descriptions are clear and easily understood. The work is well illustrated with nearly 200 fairly executed woodcuts, and seems to have lost nothing in its change of language. The volume before us has acquired some interest by having gone to the bottom of the sea in the Oregon, but it has also suffered somewhat, physically, from its prolonged bath.

Vorlesungen über Pharmakologie für Aerzte und Studirende. Von Dr. C. Binz. I. Abtheilung. [illegible] II. Abtheilung. 1885. Berlin: August Hirschwald. Lectures on Pharmacology for Practitioners and Students. By Dr. C. Binz.

This work contains the lectures on materia medica and therapeutics delivered in the University of Bonn by the well-known Professor Binz. The different drugs are taken up in order and discussed chiefly as regards their physiological action upon man and the lower animals, though the subjects of posology and the therapeutic application of remedies is by no means slighted. The treatise is a valuable addition to the literature of therapeutics, and we hope that an English translation will soon appear. The appearance of the third volume, which is promised for the present year, will complete the work.

Refraction and Accommodation of the Eye and their Anomalies. By L. Landolt, M.D., Paris. Translated under the Author's Supervision by C. M. Culver, M.A., M.D., formerly Clinical Assistant to the Author, Member of Albany Institute, N. Y. 8vo, pp. 597. Philadelphia: J. B. Lippincott Co. 1886.

Dr. Landolt, the well-known ophthalmologist, published some time ago a work in French (in parts) on the refraction and accommodation of the eye, which has just been translated into English by Dr. Culver. The author does not pretend to present it as a complete treatise upon all matters connected with the subjects indicated by the title, but the clinical element predominates in it. The work is divided into two parts, the theoretical and the clinical, and the author constantly reminds his readers of the bearing of theory upon practice, on both of which he is eminently qualified to dissertate. As a rule the theoretical portions, which are often necessarily rather intricate, are very plainly explained in the work, and are rendered available for those who are conversant with the higher mathematics. In several respects the author's theory and practice differ from those of other ophthalmologists. He takes the modern view that the amblyopia often met with in a squinting eye is primary and not secondary; and in performing tenotomy Dr. Landolt does not use a strabismus-hook, but raises the tendon by seizing it with forceps, and then passes one blade of the scissors beneath it. For paralyzing the accommodation of children, the employment of atropine in a solution of the strength of 1 part to 4,000 or 2,000 parts is recommended. The full correction of hypermetropia for distant vision is not recommended, even when the patient has diminished amplitude of accommodation. It is assumed that for a hypermetrope the constant use of two-thirds of his total accommodative power is the normal condition, and the correction both for near and distant vision is calculated upon this basis. Thus a hypermetrope of 5 D, having an amplitude of accommodation of 3 D, would be ordered 3 D (5—2) for distance; while for seeing at 33 centimetres (which would require a positive refraction of 8 D) he would be given 6 D (8—2). As regards myopia, Dr. Landolt enjoins the following rule: "A myope must be prohibited from wearing concave glasses for any distance at which he can see without using accommodation." This rule, however, is one that is not generally recommended by other ophthalmologists, but the author evidently attributes to accommodation an important part in causing an increase in the myopia. In this connection Dr. Landolt draws attention to a point which is certainly of importance, but which has never previously been noticed, and that is when, as in high myopia, objects are held very close to the eye, a very slight alteration in the distance necessitates a much greater change in the accommodative effort than is the case at greater distances. The work in its English dress forms a handsome volume, and the translation has been done in a clear style by Dr. C. M. Culver. The illustrations are numerous and excellent. The type and general style of the volume leave nothing to be desired.

Reports of Societies

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, October 18, 1886.

Daniel Lewis, M.D., President, in the Chair.

TETANY AND TETANILLA.

Julius Althaus, M.D., M.R.C.P., London, England, read an exhaustive paper on the above subjects, in which he said that probably the disease had always existed, but had only recently been recognized. Tetany does not occur frequently, but is occasionally so severe as to lead to a fatal result. Tetanilla, a kindred complaint, was first recorded by Friedreich, under the name *paramyoclonus multiplex*, although Dr. Althaus had recognized the affection prior to Friedreich's article, and had given it the name tetanilla, which he still regarded as more euphonious than [illegible].

Of tetany Dr. Althaus had seen ten cases—four in males and six in females. He then gave a short retrospect of the history of this disease, described first by Steinhein in 1830, and twelve months later by Dance, of France. The name tetany originated with Courvoisier. The clinical phenomena consist of a succession of attacks of tonic spasm, or rigidity of certain groups of muscles, mostly symmetrical, which follow one another at somewhat regular intervals, and are not accompanied with loss of consciousness, but with undue excitability of the motor nerves and muscles.

The chief causes are certain kinds of irritation acting upon an otherwise predisposed and enfeebled nervous system, such as persistent diarrhœa, half-starved condition of the children of the poor, obstinate constipation, intestinal entozoa, dentition (evidence not strong), irritation from diseases of the sexual organs in women, smallpox, typhoid fever, cholera, influence of wet and cold, etc.

It has been said to occur epidemically; probably these cases were either hysteria or cerebro-spinal meningitis. It has occurred after four cases of thyroidectomy, and this fact suggests a possible causal relation between these two facts worthy of consideration.

It has occurred most frequently between the ages of one and five years and ten and fifteen years, and females are rather more liable to it than are males.

A constitutional neurotic condition must be present in order that such causes as diarrhœa, cold, etc., may lead to an outbreak of tetany.

The evolution of the symptoms may be rapid, or more gradual. The premonitory symptoms are malaise, headache, dizziness, feeling of stiffness, and shooting pains in the limbs, slight rigidity or few twitches, and then the symptoms become gradually aggravated until the disease is fully developed. Both hands assume a peculiar position, not always the same; but in most instances the muscles supplied by the ulnar nerve suffer, bringing the hand into the conical shape adopted by the accoucheur. The position of the hand first described as belonging to this disease is not absolutely pathognomonic, but where spasm of the muscles supplied by the ulnar nerve is entirely wanting, the case is probably not one of tetany. Mostly there is symmetrical affection of both sides of the body. In a large number of cases the muscles of the extremities only are affected. The muscles of the face, neck, and trunk may become involved. A sudden impression of cold or heat may arrest the spasm, but it reappears as soon as these agents are withdrawn. The spasm can be produced by pressure upon the nerves and the arteries, quicker by pressure upon the vessel than by pressure upon the nerve. Faradic and galvanic excitability are much increased. Mechanical excitability of muscles and nerves is increased, but this is not always present, and it is sometimes present in other affections. There is loss of muscular power. Pain is sometimes experienced during an attack, and there is, generally, tenderness on percussion during an attack, particularly at the seventh cervical vertebra. Paræsthesia is occasionally present, but as frequently absent. The temperature may rise to 101° F., or more, in severe cases. In the majority of cases the secretions do not undergo any special change.

The duration of an attack is from a few minutes to half an hour; the attacks may occur at intervals, or they may be almost continuously.

The entire duration of the disease is rarely less than one month, and more commonly two or three months. Morbid anatomy has not furnished the precise nature of the change present. Dr. Althaus believes that tetany is a functional disease, produced by undue excitability of the giant cells in the gray matter of the anterior horn of the spinal cord. Why these cells should be particularly affected is inexplicable.

TETANILLA.

This affection occurs in neurotic subjects, frequently in those addicted to masturbation; occurs between the ages of fourteen and fifty-four years, and, so far, all his patients had been males, and, according to his experience, no particular exciting cause could be found.

It is a *clonic* convulsion, generally symmetrical, that ceases during sleep; does not impair motor power or co-ordination, and electro-excitability is normal, but reflex excitability is increased.

The *treatment of tetany* consists in building up the constitution of the patient, and the use of hydrate of chloral as a direct sedative. The iodide or the bromide of potassium in some cases is useful. For cutting short the paroxysm, which may threaten life by spasm of the respiratory muscles, the best remedy is the subcutaneous injection of pilocarpin.

The *treatment of tetanilla* is chiefly mental; allaying the fears of the patient with reference to the presence of progressive muscular atrophy and other diseases with which it has been confounded.

The discussion was opened by Dr. W. A. Hammond, who had recognized only four cases; two in the army, one in Baltimore, and one since he had been in New York. He was inclined to think that tetany was very common in the army, and that many mild cases of what had been called tetanus were really cases of tetany. He could recall at least forty cases which were regarded as cases of tetanus, but in which the patients recovered, a fact that favored the belief that the disease was not true tetanus.

With regard to the differential diagnosis between tetanus and tetany, in his four cases tetany manifested itself in the extremities but never about the jaw; there was none of the epigastric distress present in tetanus, whether traumatic or idiopathic; the excessive excitability present in tetanus is absent in tetany; in tetany there is disturbance of sensibility, but in tetanus there is no pain except that produced by muscular contractions.

With regard to *morbid anatomy*, he was somewhat inclined to differ with Dr. Althaus, and would place the lesion in the antero-lateral columns and the posterior horns of gray matter.

To arrest the attack and cure the disease he recommended bromide of sodium, in a dose of one hundred grains to an adult, in half a tumbler of water, followed by a thirty-grain dose at the end of two or three hours, and these continued three times a day for a week, or even longer, if there was any evidence of tendency to muscular contraction.

With regard to tetanilla he had not had any experience. Doubtless it existed, but he had not recognized it.

Dr. E. Darwin Hudson, Jr., wished for more conclusive evidence that the disease called tetany was entitled to a distinct name, according to the writings of Trousseau, Hughlings-Jackson, Hilton-Fagge, and others, who had described the affection, although not by the symptoms given by Dr. Althaus. The cases were numerous which bore the description given by Trousseau and Jackson, but the lack of uniformity in the symptoms, he thought, would lead the general clinician to the opinion that the entity of the disease had not been established.

Dr. C. Heitzmann said that he had an opportunity to examine the specimens in Weiss' case mentioned by Dr. Althaus, and that the motor ganglion elements in the anterior horns contained vacuoles filled with serous liquid. Weiss had made the diagnosis of myelitis to which Dr. Heitzmann objected, and called it œdema, a theory that would seem to be sustained by the results obtained by Dr. Althaus in the use of pilocarpin. He was not satisfied with the theory of functional disturbance, and no one, so far as he knew, had ever placed the lesion which produces disturbance of the motor apparatus in the gray matter of the posterior horns.

Dr. J. Leonard Corning regarded these cases, according to Trousseau's description, as merely cases of modified tetanus, and he had treated one by administering hypodermatic injections of the hydrochlorate of cocaine between the spinous processes of the eleventh and twelfth dorsal vertebræ, which diminished the excitability in a marked manner.

Dr. John C. Peters thought that Dr. Althaus' paper would throw light upon the subject of tetanus; some of the cases of which that had recovered were probably tetany. Benefit might be expected from the use, not only of chloral, but gelsemium and acetate of lead in these lesser spasmodic affections.

Dr. Althaus said it was altogether probable that many cases of recovery from tetanus were really cases of tetany. He was very much surprised at the enormous dose of bromide of sodium recommended by Dr. Hammond, as he had been at some of the doses of iodide of potassium said to have been given to children in this city; and he was quite sure that such doses in England would lead to either imbecility or to death. He had been much interested concerning the vacuoles described by Dr. Heitzmann, and hoped that microscopical study might soon reveal the true nature of these pathologically obscure affections.

On motion of Dr. Webster the Society gave a unanimous vote of thanks to Dr. Althaus for his highly interesting and valuable paper.

The Society then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 13, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. FREEBORN, from *the Committee on Microscopy*, reported on the tumor presented by Dr. E. N. Liell at the meeting held June 4, 1886. The interior of the tumor was soft, and contained a calcareous mass measuring two by two and a half inches. Microscopically the tumor was found to be composed of fibrous tissue and smooth muscle-fibres. The ovary and Fallopian tubes attached were normal. The examination was made by Dr. F. Ferguson.

DR. H. MARION SIMS presented, in behalf of a candidate, a specimen of *cancer of the ovaries, peritoneum, and liver.*

THE PRESIDENT presented, in behalf of a candidate, a specimen of *tuberculosis of the ovaries.*

CHRONIC DIFFUSE NEPHRITIS — CIRRHOTIC AND FATTY LIVER — SUDDEN DEATH.

DR. H. J. BOLDT presented the kidneys and liver taken from the body of a man, forty-five years of age, of whom it had been known that he had had chronic nephritis and cirrhosis of the liver at least eighteen months, yet had seldom been unable to work. Two weeks ago he began to drink spirits to excess. About nine o'clock on the morning of the 13th inst. he complained of colicky pains. An hour later the pulse was absent at the wrist, temperature subnormal, respiration fifteen, intellect clear. He died at twelve o'clock. There were no symptoms of uræmia. Autopsy revealed chronic diffuse nephritis, cirrhotic and fatty liver, and cardiac hypertrophy. The brain and the other organs were apparently normal.

DR. R. W. AMIDON presented a patient whose left leg exhibited

THE PECULIAR EPITHELIAL ULCER DUE TO THE PROLONGED USE OF THE BROMIDES IN LARGE DOSES.

The girl had been under his treatment for epilepsy for four years, during which time she took four or five grammes of bromide of potassium daily without the development of unpleasant symptoms. She then passed from under his care, and took about *six* grammes of mixed bromides daily for eighteen months; and when she returned, this peculiar lesion had invaded one leg and apparently was about to appear upon the other. This almost ulcerative lesion has not been described, except by A. Voisin in a monograph on the physiological and therapeutical effects of the bromides. It commences in a large-sized single acne spot, which takes on an apparently inflammatory process, with a large base, and afterward breaks down into what seems to be simple ulceration. About this ulcer there appear, in a circular form, vesicles, the contents of which become cloudy and purulent, and finally are covered with yellowish, dark-colored crusts. The centre of the affected surface takes on the reparative process and becomes healed, while the pathological process extends at the periphery sometimes to the distance of several centimetres. It may invade only one or both legs.

Microscopical examination has shown that it is not a true ulcer; for the process simply denudes the skin of its cuticle, with hypertrophic changes affecting the papillæ, but the true skin is not involved. The disease runs a slow and intractable course, and the only measure which seems to do much in way of arresting it is the thorough use of the actual cautery. Dr. Amidon exhibited photographs of two cases which he had seen before and had reported to the Society. Bumstead and Taylor's *serpiginous syphilide* describes the appearance of the lesion about as well as anything he had seen in writing.

DR. T. MITCHELL PRUDDEN presented four specimens which illustrated

DIFFERENT FORMS OF HEART-LESION IN ULCERATIVE ENDOCARDITIS.

The *first* was from a man, twenty-eight years of age, with a good previous history. After complaining for a few days of malaise and pain in the back, twenty-three days before his death, he was suddenly seized with a rigor, followed by intense headache and a continuous fever. Diarrhœa, lasting ten days, followed. He grew apathetic; there was pain and tenderness of the moderately distended abdomen, a little cough, headache, and sleeplessness. His temperature ranged irregularly from 98½° to 103⅘° F. A soft, blowing systolic bruit, at the apex, was developed sixteen days before his death, and five days before death a sound resembling a pericardial friction-sound was heard over the left ventricle.

At the autopsy there was marked congestion of the superficial cardiac vessels. One cusp of the aortic valve was much thickened, covered with thrombi and ulcerated at the edge, while at its base a necrotic area extended back into the heart-wall. No cultures were made in this case, but microscopical examination failed to reveal any bacteria in the heart-lesions. There were no other lesions of internal organs. This was apparently a case of *simple acute ulcerative endocarditis* without emboli.

The *second* specimen was the heart of a man who, some months before his last illness, had well-marked acute articular rheumatism, from which he apparently completely recovered. He was suddenly attacked with severe rigors, cough, pain on inspiration, and died, on the sixth day, of what seemed clinically to be acute lobar pneumonia on the right side.

The autopsy showed complete ordinary consolidation of the entire right lung. The edges of the mitral were a little thickened, as were the aortic valves. Each of the aortic cusps was perforated by a large rough-edged ulcer, from which hung voluminous ragged thrombi. There were no infarctions of internal organs and no other lesions. Microscopical examination failed to reveal bacteria, and careful cultures on gelatine-plates were made with negative results. This, then, was also a case of *simple ulcerative endocarditis* without embolic lesions; but it differed from the last in that there was old thickening of the valves, and the recent heart-lesion was associated with acute lobar pneumonia.

The *third* specimen was from a man, twenty-eight years of age, who, six months before his death, suffered from an attack of left hemiplegia, which, on account of his heart-murmurs, was supposed to be of embolic origin. After this attack he steadily improved, and was apparently nearly well when, two weeks before his death, purpuric spots appeared on his legs and he began to have obscure pains in his limbs. The next day, while sitting up in bed eating, he suddenly toppled over and became unconscious. He developed signs of right hemiplegia, and in this condition died. The heart was hypertrophied and dilated. The aortic cusps were all irregularly thickened by an old inflammatory process, and perforated by large ragged ulcers from which thrombi depended. One of these ragged cusps was partially calcified. There was a little roughening of the endocardium below the aortic valves, and a slight thickening. The lungs and liver were normal; the spleen was large and soft; while the kidneys showed, in moderate degree, the lesions of chronic diffuse nephritis. Brain: On the right side there was complete occlusion by obliterating endarteritis of two medium-sized branches of the middle cerebral artery, with softening and fatty degeneration of the corresponding area of brain-tissue. On the right side was an area of yellow softening, involving the island of Reil and the posterior portion of the opti-striate body. In the main trunk of the middle cerebral artery was a hard, irregular fragment of tissue, about two millimetres in diameter, which, on microscopical examination, proved to be a detached frag-

ment of one of the calcified aortic cusps. Neither by the culture method nor by morphological examination could any bacteria be detected in the heart-vegetations or thrombi. This, again, was evidently a case of *simple ulcerative endocarditis*, following a chronic thickening of the aortic valves, with non-infectious emboli, which were significant on account of their point of lodgment.

The *last* case, which would be reported in detail elsewhere, presented an entirely different phase of ulcerative endocarditis. A healthy girl, fourteen years of age, was operated on for club-foot, as was supposed antiseptically. She did well at first, but in about ten days developed pyæmic symptoms, and died thirteen days after the operation. The aortic and pulmonary valves were normal. The mitral and tricuspid valves were slightly thickened, and their edges closely beset with small irregular excrescences which rested upon ulcerated bases. There were small subendocardial petechiæ and small areas of superficial hemorrhage on the surface of the cerebrum. There were multiple abcesses of the kidney and infarctions of the spleen and liver. Enormous numbers of sphero-bacteria were found in the heart-vegetations, as well as in all the peripheral embolic lesions. Cultures were made from the heart-vegetations and from the renal abscesses, and the bacteria were thus identified as the staphylococcus pyogenes aureus, of which specimens in tubes and stained under the microscope were shown. This, then, was a case of true *malignant ulcerative endocarditis* complicating pyæmia. By the use of these bacteria, cultivated from this case, he induced the lesions of malignant ulcerative endocarditis in rabbits by the method of Wyssokowitsch. Of these rabbit-hearts he showed a series of specimens.

Dr. Prudden presented these four cases of human ulcerative endocarditis together, because he wished to emphasize the distinction which should be drawn between simple ulcerative and malignant ulcerative endocarditis. He thought that we should limit the term *malignant* to those cases in which bacteria are present as a causative factor. The specimens showed, furthermore, that the gross heart-lesion may be just as marked and extensive, or even more so, as in these cases, in the simple as in the malignant or mycotic form. He thought that there was a tendency among those who made autopsies to call all the cases in which there were marked ulceration and thrombosis of the valves malignant endocarditis, simply on account of their gross appearance. This was deception, as these specimens showed, and the true distinction between these etiologically entirely distinct lesions could usually be made only by a microscopical or, what was better, a microscopical in addition to a biological examination by the culture methods.

Dr. Van Santvoord presented a specimen which illustrated

MITRAL STENOSIS AND CARDIAC THROMBUS.

It was taken from the body of a boy, ten years and five months of age, who about two years ago had a mild attack of articular rheumatism. About eight weeks ago he became seriously ill, and was admitted to Randall's Island Hospital eighteen days before his death. When admitted he had general œdema, shortness of breath, double mitral murmur with marked purring thrill, and ecchymoses of the feet, hands, and legs. His scrotum was swollen, and ten days before his death it sloughed. During the period of sloughing the temperature was somewhat elevated, but for several days before death it was normal. There were petechial spots on different parts of the body, mostly of small size.

At the autopsy the brain was not examined. The heart showed marked narrowing of the mitral orifice—only half an inch long by one-eighth of an inch wide—the right auricle not materially dilated, but the endocardium thickened, and at the bottom was a thrombus which had softened and was evidently the source of the infection that gave rise to the petechial spots. On the right side both the auricle and the ventricle were considerably hypertrophied, and the auricle also contained a small thrombus. There were infarctions in the lungs, the liver was somewhat fatty, the spleen was normal, and the kidneys were those ordinarily seen with chronic heart disease.

The interest in the case centred in the symptoms. The diagnosis was ulcerative endocarditis, but the autopsy revealed the lesions described.

Dr. Frank Ferguson presented a specimen of

ULCERATIVE COLITIS, WITH ABSCESS OF THE LIVER,

removed from the body of a man, thirty-eight years of age, a German, married, and a salesman by occupation, who was admitted into New York Hospital September 22, 1886. He had just arrived from Maracaibo, and had been sick since twenty days prior to admission. His illness commenced as a profuse diarrhœa, which was attended with griping pain and soon followed by passage of blood with much tenesmus. He had not had any chilly feeling. He emaciated rapidly, had no vomiting, but suffered continuously from thirst.

On admission he complained chiefly of thirst. His temperature was 101° F. and pulse 110. He had fulness in the epigastric and hepatic regions, and the area of hepatic dulness was increased. He was slightly jaundiced. His voice was husky. His heart was weak. His mouth and pharynx were covered with an apparent false membrane, composed of epithelial cells, pus, blood-corpuscles, fibrin, and bacteria in large numbers. His urine was dark-colored, albuminous, and contained hyaline and epithelial casts.

The discharges from the bowels continued from eight to thirteen in number daily; his temperature ranged between 98° F. and 101.4° F., and he died on September 26th.

Dr. Ferguson also presented a specimen of

ANEURISM OF THE POSTERIOR BRANCH OF THE LEFT MIDDLE CEREBRAL ARTERY,

taken from the body of a man, thirty-eight years of age, a German, and a nurse by occupation, who was admitted to the New York Hospital September 20, 1886. He suddenly fell to the floor, at 8 A.M. of that date, had a unilateral convulsion—which side could not be ascertained—and became unconscious. Three hours afterward there was rigidity of the right side, both pupils were dilated—the right the most marked—and neither responded to light. His pulse was bounding, but of low tension, his breathing stertorous, his face flushed. From time to time clonic convulsions of the lower extremities occurred. He died at 11.10 P.M.

Dr. Ferguson also presented specimens which showed

THE PIGMENTED CONDITION OF THE ORGANS

in consequence of profound malarial poisoning. They were taken from the body of a man, forty-two years of age, a native of the United States and a sailor, who was admitted to the New York Hospital October 11, 1886. He had a well-marked alcoholic history. He had been subject to chills and fever, and had recently come from Pensacola. Six days ago he began to have chilly sensations, lost his appetite, and became very weak, which was the chief symptom complained of. He had no gastro-intestinal symptoms, backache, nor nose-bleed. Bowels rather constipated. Tongue became dry and cracked. On admission his temperature was 104° F., he was apathetic, and there was general pigmentation of the skin. The blood contained free pigment, and also pigment-granules in the white blood-corpuscles. His urine was albuminous, and was passed involuntarily. He died on the evening of the next day after admission. His temperature rose to 106° F. after death.

Autopsy.—Body emaciated; surface pigmented. Heart: valves competent, tissue dark-colored, muscle-cells granular, blood-vessels contained pigment. Lungs deeply

pigmented, congested, and very edematous. Spleen five to six times its normal size, very friable, and very deeply pigmented. Kidneys darker colored than normal, hyperæmic, cortices swollen. Microscopically the epithelia of the convoluted tubes was abnormally granular; pigment was seen in the vessels, and hyaline and granular casts in the straight tubes. The liver was very deeply pigmented. The pigment was in the connective tissue, in the cells, and within the blood-vessels. The stomach was pigmented; its mucous membrane was thickened. The pancreas was very deeply pigmented; microscopic examination showed the pigment within the vessels, and not in the connective tissue or in the parenchyma of the organ. The suprarenal capsules were pigmented. The pigment was within the capillaries and cells of the cortex, and in the tissue of the medulla. The cortex of the brain was unusually dark and intensely hyperæmic; it was slightly softer than normal, and the vessels contained a great deal of pigment. The pigment was free in the lumen of the vessels. The vessels of the white substance contained as much pigment as those of the gray substance. Microscopic specimens were shown.

Dr. Robert Newman presented a

CYSTIC TUMOR OF THE SCALP,

freshly removed. It was nearly three inches in diameter, contained sebaceous matter, and had no special nutrient vessel.

Dr. Newman also presented

THE STUMP OF A NASAL POLYPUS,

interesting only with regard to treatment. The patient was a girl, aged twenty. The polypus filled the nasal cavity completely. It was first treated by torsion, and afterward by the use of the galvano-cautery. Finally, Jarvis' snare did what neither of these methods had been able to accomplish.

The Society then went into executive session.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, October 5, 1886.

The President, Charles L. Dana, M.D., in the Chair.

CASE OF CONGENITAL ABSENCE OF THE FACULTY OF CO-ORDINATION.

Dr. G. H. Hammond presented a boy, four years of age, brought to his clinic on account of inability to walk. He was born at full term; labor was natural; he appeared to be perfectly healthy at birth, but shortly afterward he became sick, and continued more or less ill for six months. The attending physician diagnosticated colic. Since recovery from this attack the patient had had no sickness. The special senses were normal; the patient understood as well as other children of his age. Perhaps he did not speak as plainly as he should, but the other children in the family, perfectly healthy, talked in the same manner. There was no history of syphilis. The patient was well formed; the muscles of the limbs were well developed for a child who did not walk; muscular reaction to both electric currents was normal. The reflexes were normal. The only apparent reason for his inability to walk was want of power to retain his equilibrium. He could crawl on his hands and knees perfectly well, unless he attempted to go very fast, when he would fall, and he always fell toward the right. He could stand, holding to a chair, and walk pretty well, if held upright. There was also inco-ordination in the upper extremities. He widened his base in standing. Dr. Hammond had not decided whether there was congenital absence of sensory tract in the cord, or cerebellar disease.

Dr. Julius Rudisch had seen two similar cases, both in girls, one about eight years old, and the other about thirteen. The first was seen some years ago, was under observation but a short time, and his recollection of the case was indistinct. But he was impressed with what he took to be muscular weakness, not simply ataxia, but weakness in the back. The child, if sustained, could walk well; if not sustained, it would fall like the boy presented by Dr. Hammond. The older patient could walk, but in a peculiar ataxic way, and in the position of marked lordosis. The legs were well developed, and for that reason he thought the trouble was in the muscles of the back. The cases were not, in his opinion, congenital locomotor ataxia.

Dr. N. E. Brill thought such cases were not uncommon, especially among idiots. Rumpf reported a similar case, and found a rudimentary cerebellum. Dr. Brill thought he had to distinguish in these cases between locomotor ataxia and static ataxia. Dr. Hammond's case appeared to be one of static ataxia, due to rudimentary cerebellum.

VESICO-GENITO-POST-FEMORAL NEURALGIA AND NEURITIS.

Dr. Landon Carter Gray read a paper in which he described two cases, seen during the year, of a peculiar variety of neuralgia and neuritis that had not, so far as he had been able to ascertain, been hitherto described. The first patient was a man, aged forty, good general health, but marked lithæmic temperament, subject every summer to quasi-malarial attacks. Hitherto his neuralgia had been gastric or intestinal. He escaped his usual attack this year until in July the temperature fell in one night forty-eight degrees Fahrenheit, and on the second day following, when getting out of bed, the patient felt a sharp, tingling pain through the buttocks, perineum, scrotum, tip of the penis, and down the back of both thighs to somewhat above the knee. Some slight smarting was felt in urination. Toward the afternoon the pain began to lessen, but became much worse again, following a Turkish and Russian bath. The cutaneous pains became violent, urination scalding, the bladder became paretic, the urine had to be forced into the urethra. For four days the temperature was from one hundred degrees in the morning to one hundred and two or three in the afternoon, the neuralgic symptoms still existing.

The second case was that of a female, aged thirty-five, seen in consultation with Dr. Burge on September 6th. During the past two years the patient had had a good deal of sciatica; otherwise had had good health. In December last she was suddenly attacked with sharp pain in the buttocks, perineum, labia, and down the back part of the thighs to the knees. There was simultaneous retention of urine, requiring the catheter. Several weeks later Dr. Burge saw the patient, and found tactile anæsthesia of the buttock, perineum, labia, and the back part of the thighs to just above the knee. Dr. Gray saw the patient nine months after the onset of the trouble. She then had vesical anæsthesia, and voided urine without her knowledge. Over the area just mentioned, except the labia, which he was not allowed to examine, he found impairment of the tactile, temperature, and pain senses, but slightly less marked near the knee than above. There had never been any motor impairment.

These cases had a clinical interest, because a knowledge that such a neuralgia might occur would make us chary about diagnosticating a central affection, as we might well be inclined in the early stage, especially when there was vesical, motor, or sensory paralysis.

Dr. William H. Thomson referred to the case of a woman from the country, a locality said by her physician to be free from malaria. After a prolonged convalescence from an attack of pleurisy she began to suffer severe pain in the anterior part of the left thigh and from slight trouble with the bladder, the pains coming on certain days of the week, lasting one day and two nights. This continued five months, when she was free until the following fall. The medicine prescribed by Dr. Thomson had not prevented a return of the singular symptoms again the present fall. There was no indication of sciatica.

DISCUSSION ON THE USES OF HYOSCYAMINE IN NEUROLOGICAL THERAPEUTICS.

THE PRESIDENT stated that there were two preparations of the drug, the crystalline and the amorphous. The former seemed to be similar in property to atropia, while the latter seemed to have hypnotic properties. He had employed hyoscyamine in paralysis agitans, in chorea, and in a few cases as a hypnotic, and it had been employed as a hypnotic to a considerable extent in his service at Bellevue Hospital. The number of cases of chorea in which he had used it was six; in three it was noted to have been of prompt benefit. One of the cases was chronic, and had not yielded to other treatment. In three cases the results were very doubtful. He had employed it in four cases of paralysis agitans—in two, he thought, with unquestionable benefit. In two it seemed to produce no benefit. On the whole he thought that, unless given at rather an early stage of paralysis agitans, it did no good. The form employed in chorea and paralysis agitans was the crystalline, but he was not sure that the amorphous form would not be the better preparation in such cases. He did not, on the whole, place a high value on the drug, and thought we could get along perhaps as well without as with it.

DR. B. SACHS' experience with hyoscyamine had not been very extensive, but he had employed it in a few cases of paralysis agitans, acute mania, and the insomnia accompanying the neurasthenic condition. He had employed only the crystalline form. In contradistinction to what the President had said, that it was best to give it in the early stage of paralysis agitans, he remembered one case in which every other therapeutic agent had been tried without success, when hyoscyamine was administered in about one-hundredth of a grain doses, twice a day, with the effect of making the patient very much more comfortable, and of diminishing somewhat the annoying movements of the hand. In another chronic case it had been of no benefit. He had obtained no effect from the drug administered to allay the excitement of acute mania. It had also been disappointing in insomnia accompanying neurasthenia. It seemed to be of more value against insomnia from mental restlessness.

DR. W. M. LESZYNSKY said that about eight years ago it was quite fashionable to use hyoscyamine in asylum practice, and he had employed it in chronic mania, acute mania, and epileptic forms of insanity. First he used the amorphous, and later, sulphate of hyoscyamine. It was claimed that the latter form was easier absorbed, and produced its effects in smaller doses. The sulphate was also preferred for hypodermatic use, in which manner he had employed it in one-sixtieth of a grain doses. To patients with recurring attacks of maniacal symptoms the drug was given a few days before an expected attack, and continued until the attack was aborted.

In a state of exhaustion he would regard hyoscyamine as a dangerous drug to administer, but where there was no objection to its use on that ground, he had known it to produce sleep where chloral and morphine had failed. Given to patients subject to epileptiform convulsions before menstruation, it seemed to avert the attack. He had given it in small doses in two or three cases of chorea, and thought it produced some benefit.

DR. L. C. GRAY had been using hyoscyamine ever since it had been introduced to the profession, and he must say that, for certain purposes, there was no drug in the pharmacopœia that he could not better afford to dispense with. The most convenient form was in tablets—one one-hundreth of a grain. In some people hyoscyamine would produce seemingly serious retention of urine. It might also produce disastrous results if given to persons whose general strength was below par. In an old gentleman, with atheromatous arteries, hypertrophied and feeble heart, one one-hundredth of a grain of hyoscyamine caused a condition of collapse. He knew of one patient suffering from melancholia who was sent to Greenwood by hyoscyamine. He had given it in two cases of chorea, one being an exceedingly violent case, the child finally dying in a convulsion. To that patient he could never give a second dose of hyoscyamine, because of the alarming prostration which a first dose would cause. In another case, in which the child had to be held in bed, the drug proved an effective means of restraint, but the child was always prostrated to a marked degree the next day. In paralysis agitans it had been very useful, and came to be with him a routine treatment. He thought the reason why it had been of more benefit in his practice was that he combined with it some stimulant or tonic to prevent its depressing effect. He gave with it good food, one or two grains of quinine a day, and sometimes alcoholic stimulants. He had satisfied himself that it was the hyoscyamine in this treatment which had a restraining effect upon the movements in paralysis agitans.

But it was especially in cases of mental trouble where hyoscyamine was of great benefit. In insanity with hallucinatory symptoms, especially in the early stage before the patient could be taken to an asylum, hyoscyamine would do much toward restraining the patient, and, it would seem, it aided in cutting short the disease. He was very careful to give no more of the drug than was absolutely necessary; and he combined it with bromide of potassium, which increased its effect. He had never seen hypnotic effect from hyoscyamine.

DR. WM. H. THOMSON said that his experience with hyoscyamine, almost from the beginning, rather prejudiced him against it. One of the first cases in which he employed it was that of a judge troubled with insomnia. The next day he was unable to hold court, had bladder symptoms, etc. He found it useful in asthma with considerable dilatation of the right side of the heart, without bronchitis, but a congested state of the lungs. He had employed it in facial neuralgia, headaches, and various neurasthenic conditions, but had nothing definite to say about its effects. One patient with paralysis agitans was benefited by it among many with whom it was a failure.

DR. T. H. KELLOGG had used hyoscyamine in cases of mental excitement, but it had not proven the sedative he had supposed it would; but it controlled muscular excitement. He had failed to get any hypnotic effect from it. He had not been favorably impressed with its after-effect in acute mania.

DR. H. S. HINKLEY had found it serviceable in allaying maniacal excitement. Dr. Waitzfelde, of the Pennsylvania Hospital for the Insane, had used hyoscyamide of bromine, and spoke very highly of it.

DR. RICHARDS had given five to seven drops of a one per cent. solution in several cases of insomnia, without effect.

THE MAN WITH FETID FEET.—The *Cincinnati Lancet-Clinic* asks, What woman is there who enjoys a tobacco-smoker's breath, or a husband with bromidrosis or fetid feet? Yet Louis XIV., according to Fragon, suffered from the latter to such a degree that the worst courtesans in Paris fainted away at the first whiff of his perfumed feet. Henry IV. had the same redolent perfume, but this did not prevent the diplomatic Queen Marguerite from occupying the same couch; and she pardoned her liege lord's legendary infidelities, as well as the loud smell of his royal toes. One day he was so redolent that Madame de Verneuil, one of his court favorites, said to him: "Sire, it is fortunate you are king; without that your presence would not be tolerated—you stink worse than carrion." A woman may passionately love a humpback, a cripple, a legless, or an armless man, but she can never love a man with a bad breath, or smelly feet, and we may remark *en passant* that the German army have hereditary bromidrosis, and its soldiers are obliged by law to use a deodorant powder of salicylic acid on their odorous, tyrannical feet.

Correspondence.

THE CHARLESTON MEDICAL RELIEF FUND.

To the Editor of The Medical Record.

SIR: It affords your Committee pleasure to state that the sum kindly contributed through you, amounting to $561, has been distributed *pro rata* to sixteen physicians and their families, who have either made application or have replied to our communication inviting a statement of their losses.

We have, in addition, distributed from a sum generously contributed by the ladies of Oil City, Pa., through Dr. J. A. Ritchie, that was forwarded to Dr. F. Peyre Porcher, and which was turned over by Dr. Porcher, by the permission of these ladies, to this Committee.

It is gratifying to your Committee, as it will also be to the generous and sympathizing donors of these contributions, to learn that many of their brethren in the profession have accepted and have received the aid which was so kindly and voluntarily proffered them.

With great esteem, yours respectfully,

MIDDLETON MICHEL, M.D.,
Chairman of Committee.

Charleston, S. C., [illegible].

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 16 to October 19, 1886.

EVERTS, EDWARD, First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Grant, A. T., and there take station. S. O. 94, Department of Arizona, October 1, 1886.

FISHER, W. W. R., First Lieutenant and Assistant Surgeon. Ordered, on the expiration of his leave of absence, to report to the Commanding Officer at Fort Bidwell, Cal., for duty as Post-Surgeon. S. O. 93, Department of California, October 4, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 16, 1886.

WOOLVERTON, THEORON, Surgeon. Detached from the U. S. S. Shenandoah to proceed home and wait orders.

MEANS, V. C. B., Assistant Surgeon. Detached from the U. S. S. Shenandoah and ordered to Receiving Ship Independence.

PARKER, J. B., Surgeon. Detached from the U. S. Swatara to proceed home and wait orders.

SHAFER, JOSEPH, Assistant Surgeon. Detached from the U. S. S. Swatara to proceed home and wait orders.

SODIUM CHLORIDE AND GOUT.—Dr. Ferrán, of cholera-inoculation fame, has recently published an article on gout (*Revista de las Ciencias Médicas*), in which he insists upon the prejudicial effects of sodium salts in individuals predisposed to this affection. He says that the disease is most prevalent in cities on the sea-coast, and that persons sailing on vessels loaded with salt are very prone to gout. Alkaline waters are also injurious, in that they often bring on an attack, although the patient is afterward better for a time. He recommends nitrate of amyl by inhalation in the treatment of gout, in addition to the internal administration of the acetic extract of colchicum.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 16, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	[illegible]	[illegible]
Scarlet fever	[illegible]	3
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	8
Diphtheria	61	[illegible]
Small-pox	0	[illegible]
Yellow fever	0	0

THE LENOX MEDICAL AND SURGICAL SOCIETY is a private medical society organized a year ago, and now reported to be progressing. It meets on the second Monday of each month—Dr. W. A. Hume, President; Dr. J. Blake White, Vice-President; Dr. H. B. Conrad Secretary.

THE CHICAGO POLICLINIC.—We learn from its secretary that the Chicago Policlinic is not connected at all with the Chicago Ophthalmic College, as was intimated in our columns recently.

MISS HASTINGS, of England, aged one hundred and five, is the banner girl for recuperative power. At the age of a hundred and four she had a double pneumonia, from which she made a good recovery, according to Professor Humphrey, of Cambridge.

PROFESSOR CHARCOT is said to live in a superb mansion, the Palais Charcot, one quite worthy of royalty. "Troops of patients," writes a Vienna medical editor, "lay their offerings upon the table of his consultation room, so that he soon has a heap of gold before him." Charcot's fees are from four to thirty dollars.

WHAT BECOMES OF PANCREATIN?—It has been shown experimentally that pancreatin is always digested in gastric juice, hence its administration by the mouth can be of little use. M. Dufresne has, however, recently announced that pancreatin, on reaching the stomach, is absorbed into the blood as zymogen, and is again secreted by various glands as follows: 1, In the liver, where it becomes a diastase capable of turning glycogen into sugar; 2, in the salivary gland where it is secreted as ptyalin; 3, in the spleen, where it becomes a diastase which is carried to the pancreas and there secreted as the diastetic ferment of the pancreatic juice. How M. Dufresne arrived at these views we do not know, but they will be welcomed no doubt by the pharmacists who have invested so largely in the manufacture of pancreatic ferments.

THE COMPOSITION OF "CUTICURA."—The much-advertised cuticura ointment has been found to consist of petroleum jelly, colored green, perfumed with oil of bergamot, and containing two per cent. of carbolic acid.

TREATMENT OF ELEPHANTIASIS.—Dr. Neff had a case of elephantiasis in which the size of the legs was reduced one-half by the constant use of an ointment composed of nitrate of mercury ʒ j., to vaseline ℥ j., rubbed in well, and the wearing of rubber bandages on the feet and legs. —*College and Clinical Record.*

AN INTERNATIONAL COUNTY MEDICAL SOCIETY.—A society has been formed of the physicians in Brownsville, Tex., and Matamoras, Mex., and called the International County Medical Society. The president is Dr. McManus; vice-president, Dr. Cicero; secretary, Dr. Valls; treasurer, Dr. Combe.

Posterior Luxation of the Eyelids in a Dog.—Dr. Charles K. Cutter, of Charlestown, Mass., writes that a notice of a case of posterior luxation of the upper eyelid in a recent issue of The Medical Record reminds him of a similar accident occurring to a dog. Dr. Fuller owned a mastiff dog and a pug. One day the pug attempted to eat from the mastiff's dish, and the latter struck him a blow with his paw just over the left eye, which resulted in the complete protrusion of the eye from its socket, both lids slipping behind the globe. The owner was away from home at the time and did not return until six hours later. The lids were then pulled forward and the eye returned to its socket, and no damage to vision has resulted.

The Administration of Cod-liver Oil.—Dr. W. Washburn, of New York City, writes that he has long been in the habit of administering cod-liver oil in milk to both infants and adults. Milk is taken in the mouth and held there, and the spoon is first dipped in milk and then the oil is poured into it. Just as the oil is taken into the mouth the milk should be swallowed, and then another sip of milk taken. Children, if interrupted in nursing, readily swallow a teaspoonful of oil and then proceed with nursing as if nothing had happened. The oily nature of the milk seems completely to shield the mucous membrane of the mouth and throat from contact with the cod-liver oil.

Resuscitation of the New-born—A Reply to Dr. Noble.—Dr. J. S. Roberts writes that he has read the note of Dr. Noble in The Medical Record, claiming priority in the method of treating asphyxia of the new-born by suspension. The writer says that he had no intention of claiming priority for himself, but merely related his experience, which was confirmatory of that of Dr. Sharp. He had never seen any notice of Dr. Noble's method, although he is a regular reader of several medical journals, and his was a true discovery, made on December 7, 1885. He tried the method again in three other cases, each time with success, and then wrote an account of the same. He says, therefore, that he will leave the matter to Drs. Sharp and Noble to settle between themselves.

Dr. H. C. Dalton has been appointed by the mayor of St. Louis superintendent of the City Hospital, to succeed the late superintendent, Dr. D. V. Dean.

Sleeping in the Woods.—In one of the German health-resorts, the *Allgemeine Medicinische Central-Zeitung* states, the experiment was tried this summer of having patients with pulmonary disorders sleep all night in the open air in the pine woods. The hammocks, used to rest in during the day, were provided with pillows and bed-clothing, and a party of five, two ladies and three men, spent their nights in the woods with no roof over their heads. The experiment was very successful, the patients slept better than they had been able to do in their rooms, and all declared themselves as feeling much more refreshed by their sleep than usual. It is proposed next summer to provide accommodation for a large number of patients in the forest, so that the experiment may be tried on a large scale.

Illegitimacy in Paris.—The vital statistics of Paris show that twenty-eight per cent. of children born alive are illegitimate, while of still-born over thirty per cent. are illegitimate. Of the living children, however, a large number are legitimatized by the subsequent marriage of their parents, and the parents of a considerable proportion of the remainder are to all intents and purposes married, and would be so considered in most countries where the laws concerning marriage are less strict.

A Remedy for Hydrophobia.—Dr. Maldfinewitz, of Moscow, says that a decoction of the root of the meadow-sweet (Spiræa ulmaria, L.) is a remedy of great efficacy in the treatment of rabies in man.

Test for Bile in Urine.—A writer in the *National Druggist* directs attention to chloroform as a test for bile in the urine. It is ready, delicate, and certain. All that is necessary is to agitate a few drops of it in a test-tube, along with the suspected urine. If bile be present, the chloroform becomes turbid and acquires a yellowish hue, the depth of which is in proportion to the amount of bile present in the urine. If no bile be present, the test-fluid remains limpid.

Bicyanide of Mercury for Hypodermatic Use.—The employment of bicyanide of mercury hypodermatically in the treatment of syphilis has met with great favor, not only on account of its efficiency, but because there is little or no tendency to the formation of abscesses. One great inconvenience attending its use is that it produces an intense local burning sensation, which is extremely painful and lasts for an hour or two. By combining cocaine muriate with it, Dr. Ohmann-Dumesnil states, this pain is either totally abolished or diminished to a great extent.

Incongruence of the Retinæ is affirmed by Dr. A. D. Williams (*St. Louis Medical and Surgical Journal*) to be a frequent cause of squinting. Parts of the retinæ which physiologically ought to correspond do not do so, and consequently are not identical. The double vision thus caused is so confusing that it cannot long be tolerated, and one or the other eye is turned outward or inward so as to remedy the diplopia. In such cases the deformity can be greatly relieved by the usual operation, but binocular vision is impossible.

Calculus of the Tonsil.—At a meeting of the Beech-Fork Medical Society, in Lebanon, Ky., Dr. W. W. Ray reported a case of stone in the tonsil, in which he removed the concretions and then cauterized the crypts. Complete recovery followed the operation.

Permanganate of Potassium in Amenorrhœa.—Dr. B. Marshall, writing in the *Therapeutic Gazette*, adds his testimony to that of others concerning the efficacy of potassium permanganate in amenorrhœa. He has found it to act with certainty in about seventy per cent. in selected cases. It may be given at any time, but preferably one or two hours after eating, as it is then not so apt to cause nausea. The writer did not find it more efficient when given before meals. Its disagreeable effect on the stomach is best relieved, he states, by a powder consisting of cocaine hydrochlorate gr. $\frac{1}{2}$, ipecac. gr. $\frac{1}{10}$, cerium oxalate gr. j., and bismuth subnitrate gr. v.

The British Medical Association and Angry Critics.—The address of the president, Dr. Moore, and that of Dr. Billings seem to have stirred up considerable bad feeling in various parts of the world. A gentle correspondent has written a letter to Dr. Moore, in which she takes him roundly to task for his expressed views concerning women's work, and concludes with this horrid threat: "Therefore, before saying adieu, let me give you one piece of advice, which is that, in your future opposition to the progress of women, not at any rate to repeat the disgusting, and insulting, and ignorant remarks on my sex, or else you may, perhaps, find by bitter experience that, though women are, as you make them out to be, on a level with the beasts of the field, they may yet be capable of showing their resentment at being told so by administering a sound chastisement on the offender, even though he may occupy the important position of President of the British Medical Association, or of any other ridiculous and trumpery association." As for Dr. Billings, the papers of the Mississippi Valley have abused him with great unanimity, of which the following is but a tame illustration. After quoting a portion of his paper, one of our esteemed contemporaries says: "Why Billings should have singled out this great Valley (or any part of the country) to illustrate his tomfool notions of the alliance of malaria and ignorance, would be difficult to divine."

Malaria in Hoboken.—Board of Health reports a that 100 cases of malarial fever have been reported from West Hoboken, and that the disease is still spreading. The sewer that formerly carried the refuse of the district into the North River by way of Hoboken was broken some years ago. An act that gave permission to towns to build their own draining sewers has been repealed, and no action can be taken until it is re-enacted. Meanwhile, the putrid water and slush runs down Pavonia Hill in an open drain and empties itself into the meadows, where it lies on the surface, and the sun's rays cause continuous evaporation and putridity over a large area during the spring, summer, and autumn months.—*Sanitary Era.*

Cocaine in Tooth-extraction.—Professor Redard and his assistant, Dr. G. Andina, of the Geneva Dental School, have employed hydrochlorate of cocaine as a local anæsthetic in forty cases of tooth-extraction. They used a fifteen per cent. solution, injecting into the gum an average of fifty or seventy-five centigrammes of the alkaloid by means of an ordinary Pravaz's syringe. In all the cases, extraction, which was performed usually in ten minutes after the injection, was absolutely painless. No unpleasant accessory effects, except some nausea and heaviness of the head in young girls and children, were observed. The author's results, therefore, coincide with those published by Mrs. Helene Vongl-Sviderskara, of St. Petersburg (see the *London Medical Record*, July, 1886, p. 304), who, however, used far larger doses.—*British Medical Journal.*

The Proper Use of Ergot.—Dr. F. H. Porter gives the following rules for the administration of ergot in obstetrical practice, in a paper published in the *Buffalo Medical and Surgical Journal* for September, 1886: 1. Ergot is a drug which in any of its preparations tends to deteriorate rapidly, and should never be used excepting when prepared from a pure and fresh specimen. 2. It is a stimulant to the tubular and non-striated muscular structures of the body, causing them to contract. 3. It acts especially upon the muscular structure of the uterus, throwing it into a state of tonic spasm. 4. Its action on the uterus is, however, uncertain; sometimes it contracts the entire organ, at others only a small part of it. 5. If the entire organ is contracted, labor may be delayed through the rigidity of the os, and the child may be destroyed by the interference with the placental circulation. 6. Or the contractions may be so powerful as to force the child at once into the world, causing any or all of the lacerations of the soft parts of the mother. 7. The life of the child may be endangered also through absorption of the essential oil of ergot. 8. If given after the birth of the child and before the expulsion of the placenta and membranes, it may prevent the removal of the latter and thus be indirectly a cause of puerperal septicæmia. 9. It may act in a similar manner in cases of abortion, actual or threatened, and cause a similar result. 10. The proper use of ergot in obstetrical practice is limited to those cases in which, after the expulsion of the placenta, the uterus refuses to contract, or, having once contracted, shows a tendency to secondary relaxation. Even in these cases, however, reliance should not be placed upon it alone, but its action should be supplemented by the other means used to provoke uterine contractions.

Defects of Hearing among Railroad Employees.—Dr. Lichtenberg reported at the recent Congress of German Naturalists and Physicians, that he had examined 250 railroad employees and found defective hearing in 92, or 36.8 per cent. The defect was due to aural catarrh, disease of the labyrinth, or affections of the external auditory canal. As many of the signals on railroads are made by whistling or bell-ringing, the speaker thought that the existence of affections of the ear in the employees was a matter of considerable moment as regards the safety of the travelling public.

The Results of Railway Injuries.—At a recent meeting of the Chicago Medical Society, Dr. A. V. Park read a paper on railway injuries, in which he presented the following conclusions as the result of his observations in this class of cases: 1. Sloughing is the rule in contusions and lacerations. 2. Hemorrhage may be little, but is apt to be great in injuries to the head or extremities where large vessels are lacerated. 3. Examination of wounds should be thorough, and is best done during period of shock. 4. Shock may be excessive and death ensue rapidly, or reaction take place slowly with symptoms of collapse. 5. Amputations are attended by high rate of mortality, owing to liability of the stump being attacked by erysipelas, osteomyelitis, sloughing, or pyæmia ensuing. 6. Erysipelas may ensue rapidly and must be manfully combatted. 7. A large majority of persons injured by railway accidents recover but partially. The sequelæ may be paralysis, insanity, loss of memory, impaired vision, deafness, etc. These results may follow immediately, or may not appear until months or years after the injuries were inflicted.

Long Fasts.—Considerable interest has been manifested in Italy in the doings of a certain Signor Succi, who professes to have discovered a liquor a small quantity of which will enable a man to fast for thirty days, or even for two months, at a time. One of the most singular features of his fasting is said to be that, though he loses weight, the flesh becoming somewhat mummified and the skin reddish in hue, while his pupils are dilated, yet his muscular force does not seem to be diminished. Signor Succi has just concluded a fast of some weeks' duration, and it is now stated that he has been offered $30,000 if he will begin another fast of still greater length. It is probable that the plant which he claims to have discovered, the juice of which is possessed of such wonderful virtue, is something of the nature of coca in its tonic properties. The Italian Tanner has not yet, however, shown any greater powers of endurance than his American predecessor, who was supposed to have taken nothing stronger than water during his exhibition in this city. The Medico-Chirurgical Society of Bologna has proposed to make Succi a subject of special study, examining the fæces and urine, but he would not consent, so that he is probably something of a fraud. These fasters had a predecessor in the fourteenth century, who was accustomed to observe Lent so strictly that for the forty-six days he took no food and only occasionally a little water. Such an example of piety naturally attracted considerable attention among the faithful in Venice, where the man lived, and he was accordingly put under surveillance by the ecclesiastical authorities. In a royal chronicle, quoted by the *Annali Universali di Medicina e Chirurgia*, it is stated that he was shut up by the Bishop and closely watched by the Venetian authorities and the officers of the Inquisition, in order to make sure that the fast was a genuine one. More fortunate than another supposed faster of modern times, he survived the ordeal, and proved to the satisfaction of the authorities that he was no pious fraud. "But when his fast was over," the chronicle states, "he ate immoderately." The writer gives the faster, Paulozzo by name, the title of *homo simplex et bonus*, which would, perhaps, be a little too flattering a term to apply to his successors of the nineteenth century.

Tracheotomy for Hemoptysis.—Dr. Lucius Spengler recently performed tracheotomy in a case of profuse hemoptysis occurring in a phthisical subject (*Correspondenzblatt für Schweizer Aerzte*). The patient was nearly dead from suffocation when the trachea was opened and the blood removed by aspiration. The operation was successful as regarded the averting of immediate death, but the patient succumbed five days later from suppurative inflammation of the mediastinum starting from the tracheal wound.

MICA-SPECTACLES TO PROTECT THE EYES AGAINST HEAT.—Dr. G. C. Simmons recommends the use of spectacles with plates of mica for persons, such as cooks, who suffer from conjunctivitis through exposure to heat.

NAPHTHALINE IN CYSTITIS.—At the last meeting of the French Association, at Nancy, M. de Pezzer spoke of the use of naphthaline in the treatment of genito-urinary diseases. It had been used by Rossbach, in 1884, in doses of one and a half grammes to prevent intestinal putrefaction, and he has found in urinary troubles that the results are just as satisfactory. When the urine was fetid and there was difficulty in micturition the dose used was one gramme divided into twenty-five centigramme pills; but the eructations were found to be very disagreeable with this mode of preparation, and capsules of gluten were then substituted, with great benefit. Oil of turpentine had been tried, but it failed in several cases which subsequently improved under naphthaline. In all the cases where the urine was cloudy, purulent, alkaline, or full of microbes, it became limpid, neutral, or acid, after the remedy was given, while the quantity of pus, if any had been present, decidedly diminished or entirely disappeared. In cystitis or pyelo-nephritis, and in the many cases of old urinary diseases that so often occupy the beds in surgical wards for years, great improvement was found, and entirely without any digestive troubles; nor does it produce any increase in the acts of urination. Administration by the mouth was found to be preferable to injections.

THE CHOLERA IN HUNGARY.—In the latter part of the summer a number of cases of supposed cholera nostras were reported from Buda-Pesth and other parts of Hungary, but as the disease persisted and fresh cases were constantly being reported, an investigation was made which resulted in establishing the fact that the disease was true Asiatic cholera. This discovery has given rise to considerable apprehension in Vienna, and every effort has been made to improve the sanitary condition of the city.

THE STUDY OF LEPROSY IN THE SANDWICH ISLANDS.—Dr. Arning has recently returned to Germany from the Sandwich Islands, whither he had gone in the spring of 1883, at the request of the Hawaian government, to study the leprosy which is so prevalent in these islands. He had been quite successful in his investigations, and proposed to pursue his studies still longer, but owing to some disagreement with the authorities he abandoned the project and returned to Germany.

GRASS STAGGERS.—Perhaps some of our Western readers can say whether the account given below is a correct one. "A weed called 'loco' has of late years," says a writer on cow-boys in Texas in the September number of the *Cornhill Magazine*, "largely increased in some of the cattle ranges of Texas and the Indian Territory, owing probably to an increase in the rainfall. . . During the summer, when the prairie is a fair expanse of waving grass, both horses and cattle instinctively avoid it, but when, in the fall of the year, the grass becomes scarce in overstocked regions, and when all around assumes a brown and burnt-up appearance, it stands out conspicuously and temptingly green, its long, soft, velvety leaves rising in a bunch from six inches to a foot off the ground. Then the hungry creatures begin by nibbling suspiciously and stealthily at the seductive plant, but very soon become reckless, and greedily devour all that comes in their way. And now, if the mania cannot be nipped by a sufficiency of good, strong food, the animal is doomed, for he has become a confirmed 'loco-eater.' He will rapidly become thin, and lose all control over his movements; he will be subject to frequent fits, during which he lies on the ground groaning and foaming at the mouth; he throws himself about without reason; rears up or runs round in small circles when you attempt to mount him; his eyes turn dull and stupid; in short, he gives you the impression of being bereft of his senses. Specimens of 'loco' have been subjected to analysis by experts in Washington and in Edinburgh, but without anything injurious being discovered in it. It is possible that some minute animalculæ may be the cause of the mischief, but up to the present its disastrous effects only are known, for this pernicious weed causes periodically the death of thousands of horses and cattle."

STUDENTS IN GERMANY.—The number of students in the nine Prussian universities, during the summer semester just passed, was 13,106, as opposed to 12,823 in 1885, and 12,548 in 1884. Of this number, in 1886, there were 3,767 medical students. The greatest number (1,175) were in Berlin, then followed in order Greifswald, Breslau, Bonn, Marburg, Königsberg, Kiel, and Göttingen.

THE WOMEN'S HOSPITAL IN BOMBAY was formally opened by the Governor of Bombay, Lord Reay, on July 30th. The corner-stone of the building was laid in the fall of 1883, by the Duke of Connaught. The hospital, known as the Cama Hospital, is managed entirely by women. The first house physicians are Drs. Edith Pechey and Charlotte Ellaby.

THE UNITING OF SEVERAL DIGITS.—Dr. William P. Souther, of Worcester, Mass., writes to the *Boston Medical and Surgical Journal* as follows: "The following case is unique in my practice and may interest your readers. A young man in a neighboring factory had a finger cut off by a large paper-cutter. He brought the exsanguinated piece to me wrapped up in his handkerchief. It was three-fourths of an inch long, and included the nail and perhaps half an inch of the last phalanx. With little expectation of success, I adjusted the amputated piece to the stump, and now, after ten days, it is firmly adherent, the renewed circulation showing plainly at the finger tip. Perhaps you can inform me whether such an experience is common."

EMBALMING DEAD BODIES.—Dr. H. R. Tilton, Surgeon, United States Army, writes from San Francisco that he has read the request of Dr. Kennedy for information as to the best, simplest, and most ready method of preserving dead bodies. He has tried the Wickersheimer formula, and says that it is an impracticable method, at least for the general practitioner. "There is too small an amount of antiseptic material in the Wickersheimer formula to hold out any promise of success. It is impracticable for the average country practitioner to complete the process, by immersing the body, after injection, in a solution, and then enclose it in an air-tight case. Fortunately, this is entirely unnecessary. The following formula will preserve the body, if the injection is properly done: Take of the solution of chloride of zinc (U. S. Ph.), one gallon; solution of chloride of sodium, six ounces to the pint of water, six pints; solution of bichloride of mercury, one ounce to the pint of water, four pints; alcohol, four pints; carbolic acid (pure), one-half pint; carbolic acid dissolved in glycerine, one and a half pint. Mix all the ingredients and a clear solution of three gallons results, which is the proper amount for a body weighing one hundred and fifty pounds. The solution may be injected into the aorta, but it is much less trouble to inject into the brachial or femoral artery, or the femoral vein may be selected. If an artery is used, the injection should be toward the capillaries, and if a vein, toward the heart. To satisfactorily inject a subject a good anatomical syringe is desirable, but a gravity syringe can be improvised with rubber-tubing, a stop-cock, and a terminal glass tube with the tip drawn to a fine point. I would suggest to Dr. K—— that he experiment on a few animals, and then he can devise a formula to suit himself. I have found that a fluid drachm of the solution recommended is sufficient for each ounce of weight of the animal to be preserved. For preserving human bodies, two and a half fluid ounces for each pound is a safe estimate."

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PULMONARY EMPHYSEMA.

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NEW YORK.

MR. PRESIDENT AND GENTLEMEN: If we look over the text-books of medicine most in use at the present time, we find the subject of emphysema treated of somewhat as follows:

There are two main varieties: the interlobular and the vesicular. Vesicular emphysema is subdivided into the substantive, vicarious, senile, and acute forms.

Lesions.—In all the varieties of vesicular emphysema the characteristic lesion is a dilatation of the air-vesicles. This dilatation goes on until the walls of the vesicles are ruptured, and so a number of vesicles join to form a common cavity. At the same time there is atrophy and obliteration of the capillary blood-vessels. Chronic bronchitis, venous congestion of the other viscera, and hypertrophy of the right ventricle of the heart are frequently associated lesions.

Causation.—The dilatation of the vesicles is due principally to mechanical causes, such as the obstruction of the bronchi by inflammatory products, forcible expiration by playing on wind instruments, etc.; in a lesser degree by some error of nutrition in the walls of the vesicles.

The affection is often hereditary. Those who suffer from it are less liable than others to phthisis and to pneumonia.

Symptoms.—The disease is characterized by labored breathing, by attacks of asthma, by the symptoms of chronic bronchitis, by venous congestion of different parts of the body.

The development of the disease is slow and gradual, and it but seldom proves fatal.

The contours of the thorax are changed, and it assumes the barrel shape. Percussion elicits an abnormally intense resonance of vesiculo-tympanitic quality. The inspiratory murmur is shortened, and the expiratory lengthened. Sibilant and sonorous râles are present, according to the intensity of the bronchitis. The treatment is to be directed principally to the bronchitis and the attacks of asthma.

This short statement, I believe, represents about the ideas of a medical student concerning emphysema at the time when he graduates.

Sooner or later after graduation he begins to find that these ideas do not correspond with what he observes. He finds that compensating and senile emphysema are not matters of much practical importance, but that substantive emphysema is, and that it is a very common and a very serious disease. If he has the opportunity of making autopsies, he finds that the dilatation of the air-vesicles is not always in proportion to the severity of the symptoms, and he begins to wonder whether such a dilatation is really an essential part of the disease. If he injects the blood-vessels of the lungs artificially he finds that he can get a very perfect injection, and does not see exactly where the obliteration of the capillaries can be.

[1] A paper read before the Academy of Medicine, October 21, 1886.

He notices that very few of his patients have played on wind instruments, and that many have not had bronchitis, and he doubts whether expiration and inspiration theories were worthy of having been committed to memory.

That many of the cases are hereditary seems to him plain enough, but the immunity from phthisis and pneumonia is hardly all that could be desired.

Barrel-shaped chests do not present themselves as often as he had expected. Exaggerated vesiculo-tympanitic resonance is not as constant as it ought to be. The chronic bronchitis and the attacks of asthma he sees often enough, but he is occasionally puzzled by cases which seem to be cases of emphysema and yet have not the symptoms which he had believed to be characteristic of the disease.

As he goes on in his experiences he naturally consults his elders in the profession. To his surprise he finds that many of them have gone through the same experience as himself, and that each one, as a matter of practice, has an altogether different conception of substantive emphysema from the classical descriptions of the disease.

It seems to me that it is worth while to abandon the traditional descriptions of emphysema, and to state fairly what we do, and what we do not, know about the disease.

If we consider all the cases of vesicular emphysema, as we see them in practice and in the dead-house, they divide themselves naturally into the three classes, for which we will still use the old names of senile, compensating, and substantive emphysema.

Senile emphysema is of common occurrence, although not of great clinical importance. It seems to be simply a senile change in the parenchyma of the lungs. The walls of the vesicles are thinned, their cavities are dilated, they may rupture into each other. There is, however, no obstruction to the passage of blood through the lungs, no dilatation of the right ventricle of the heart.

This condition, when well developed, gives the loud vesiculo-tympanitic percussion-note said to be characteristic of emphysema.

There is no marked dyspnœa. Chronic bronchitis is often present. The disease has no decided effect on the general health.

I believe that in some persons substantive emphysema is first developed, and then, as they grow older, this is modified by senile changes into something resembling senile emphysema.

It is not always easy, during the life of the patient, to distinguish between senile and substantive emphysema, especially as chronic bronchitis may be present with both; and yet the distinction is an important one, for substantive emphysema is a serious matter, and senile emphysema is not.

Compensating emphysema, instead of involving both lungs symmetrically, involves one lung or part of a lung. We see it most frequently with phthisis, and with the compression of the lung following pleurisy.

In some of the cases the change in the lung seems to be simply an hypertrophy of the lung. In others there is a dilatation of air-vesicles and a thinning of their walls as in senile emphysema. In still others, the emphysema, although it may seem to compensate for the destruction or obliteration of lung tissue, is yet really a substantive emphysema.

The disease of the lungs commonly called *substantive*

emphysema is a form of chronic inflammation of the lungs —a pneumonia; and the dilatation of the air-vesicles is a mere result of this inflammation and not the essential lesion of the disease. The inflammation is of the same type as that which so often attacks the endocardium, the inner coat of the arteries, the liver, and the kidneys; a chronic inflammation attended with the production of new fibrous tissue, and at the same time with atrophy and disappearance of normal tissue.

The walls of the air-vesicles and of the air-passages are the parts of the lungs first involved in the inflammation. These walls are in some parts of the lungs thickened, in others thinned. Where the walls are thinned, there is apt to be dilatation. Such a dilatation affects the air-passages rather than the air-vesicles, and may be confined to the former. The degree of the dilatation varies very much in the different cases, it is not in relation to the severity of the symptoms, and the disease may go on to its fatal termination with hardly any dilatation. I do not mean that the condition of the lungs is not made worse by the dilatation, it unquestionably is; but on the other hand most of the symptoms of emphysema may be present, and the disease prove fatal, with but very little dilatation. In fact, I believe that many cases of emphysema are overlooked at autopsies because no dilatation of the air-spaces is visible to the naked eye.

In addition to the thickening of the walls of the air-spaces, and the dilatation of their cavities, we find in some lungs little holes in these walls. These little holes are formed in the spaces enclosed by the capillary blood-vessels. They are found both at the periphery and at the centre of the vesicular walls, usually several of them in a single vesicle. Some of them are very minute, others attain a considerable size. Their edges are sharp cut, and not degenerated. They are found as well in vesicles of normal size as in those which are dilated.

Although these changes in the air-spaces constitute the essential lesion of substantive emphysema, yet the inflammation, as a rule, extends and involves other parts of the lungs. The epithelial cells which line the air-spaces are increased in size and number. The mucous membrane of the bronchi becomes the seat of catarrhal inflammation.

The disposition to the formation of new connective tissue becomes more marked, so that the walls of the air-spaces are very much thickened, and their cavities deformed and obliterated; the septa between the lobules, the walls of the bronchi and of the blood-vessels, and the pulmonary pleura are all thickened, and very frequently there are extensive pleuritic adhesions, so that the entire lesion assumes the form of a well-marked interstitial pneumonia.

In the milder cases of emphysema there is no disturbance of the circulation of the blood, but in the severer cases such a disturbance of the circulation becomes the worst feature of the disease.

This disturbance of the circulation seems evidently to be due to some obstruction to the passage of blood through the lungs, for the right ventricle of the heart becomes dilated and hypertrophied, and venous congestion of the viscera and skin, and dropsy are established.

It has been said that the obstruction to the passage of the blood through the lungs is due to the dilatation of the air-spaces and the obliteration of the capillaries in their walls. This explanation certainly cannot be true for all the cases, for we find the most marked evidences of general venous congestion in cases in which the dilatation of the air-spaces is trifling, and a complete artificial injection of the blood-vessels can be easily made after death.

I believe that in a large number of cases the obstruction is due not to structural changes, but to a contraction of the smaller arteries, which exists during life and disappears after death.

The secondary lesions of emphysema are the same as those of valvular disease of the heart—chronic congestion of the pia mater, stomach, and small intestine, liver, spleen, and kidneys, and dropsy.

The complicating lesions are the atrophic form of chronic nephritis, chronic endocarditis, and chronic endarteritis, chronic miliary tuberculosis, and cirrhosis of the liver.

The disease is, in New York, one of the every-day diseases; it is of very common occurrence.

It is apt to begin in persons between the ages of forty and forty-five.

Hereditary influences are well marked. In general, one may say that the same causes which lead to the development of chronic endocarditis, chronic endarteritis, cirrhosis of the liver, and chronic nephritis, also lead to the development of substantive emphysema.

Symptoms.—In observing the cases of emphysema clinically, it is evident that the patients in whom the disease is but moderately developed are much more numerous than those in whom it is at its worst; and it is also evident that it is more important to recognize the moderate cases than the bad ones; for the moderate cases are to be benefited by treatment, the bad ones are not.

Physical signs.—In the lesser degrees of emphysema there is no change in the shape of the thorax. In the more advanced cases there is a prominence of the sternum and costal cartilages. In the very bad and old cases this deformation of the thorax may be developed until it reaches the so-called "barrel shape." The hypertrophy of the muscles which move the thorax, contrasting with the general emaciation, are also noticeable in the bad cases.

The pulmonary resonance may remain unaltered for a considerable length of time. When it is changed, the change is either to a rather dull note of wooden quality, or to exaggerated resonance of either vesicular or vesiculo-tympanitic quality.

The respiratory murmur is feeble, or there is feeble inspiration with longer, louder, low-pitched expiration, or both the inspiration and expiration may be exaggerated, loud, and high-pitched.

Bronchitis, when present, adds its sibilant and sonorous breathing and râles.

Rational symptoms.—There are many persons in whom substantive emphysema is developed and continuous for years without giving rise to any rational symptoms, and yet, even in such persons, it is often possible to be pretty sure of the presence of the disease, because they are persons whose general physical condition and age are such as are usually associated with emphysema.

There are other persons in whom the associated Bright's disease, or cardiac disease, give such marked symptoms that the emphysema passes unnoticed.

Of the regular cases dyspnœa is one of the most marked features. A dyspnœa at first only developed by exertion; later more constant, made worse even by slight exertion, by indigestion, and by attacks of bronchitis. At its worst, the dyspnœa is constant and most distressing; even in repose the patients have to make unnatural muscular efforts to satisfy the need for air. It is, I think, a question of importance, how much of this dyspnœa is due to the condition of the lung-tissue and the bronchi, and how much to the contraction of the pulmonary blood-vessels.

The complicating bronchitis gives rise to a variety of symptoms—cough and expectoration, hæmoptyses, a febrile movement, and night sweats.

General venous congestion is gradually developed—cyanosis of the skin, congestion of the stomach, liver, and kidneys, and general dropsy.

The nutrition of the patients suffers, they become emaciated, feeble, and anæmic.

The ordinary courses of the disease are somewhat as follows:

1. Some patients for years have a winter cough, with expectoration of mucus and sometimes of a little blood.

They are always a little short of breath when they exert themselves. After a time they have attacks of spasmodic asthma. Then the dyspnœa on exertion becomes more constant and more decided; the patients lose flesh and strength, venous congestion is established, dropsy, and death.

2. Other patients are fairly well, except when they have attacks of acute bronchitis.

Such attacks may be mild, lasting a few days or a few weeks, with cough, mucous expectoration, sometimes hæmoptyses, asthmatic breathing, a febrile movement.

Or the attacks may be severe and last for two or three months, and in addition to the symptoms just mentioned they develop venous congestion, albuminuria, and dropsy.

3. In some patients there is a history of attacks of spasmodic asthma for a number of years before the symptoms of emphysema make their appearance.

4. In some patients the evidences of emphysema are very slight for a long time. Then, rather suddenly, constant dyspnœa and venous congestion are developed, and the patients die in a few months. Or in the same sudden way they develop uræmic attacks like those of Bright's disease.

The behavior of the disease is very much like that of the atrophic form of chronic Bright's disease. A slow inflammation which gradually changes the structure of the affected organs. The organs, however, continue to perform their functions moderately well until their structure is a good deal changed, and in addition disturbances of the circulation of the blood are established. Then, either gradually or with a sort of explosion, the decided symptoms of the disease make their appearance.

Treatment.—There are only two points in the treatment of the disease to which I wish to call attention.

1. It seems probable that the same rules as to climate, diet, and mode of life, which apparently delay or arrest the progress of other inflammations of the same class, may have the same effect on the progress of emphysema. And it is almost as important a matter to delay the progress of emphysema as that of Bright's disease.

2. It is a question whether a large part of the dyspnœa on exertion, and some of the asthmatic attacks, are not due principally to a contraction of the small arteries of the lung. If this is the case we should expect that those drugs which dilate the arteries and capillaries would relieve the dyspnœa, and as a matter of fact, many of the drugs which are most efficacious in controlling the dyspnœa do belong to this class.

The views concerning substantive emphysema which I wish to urge on your attention, therefore, are these:

1. It is not a local chronic disease due to rarefaction of pulmonary tissue and dilatation of air-sacs, but a chronic inflammation of the lung.

2. It is not due to excess of inspired air over expired air, nor to fatty degeneration, nor is the dilatation of the air-spaces the essential part of the lesion; but the result of the inflammation is such an irregular thickening and thinning of the walls of air-spaces as would naturally be followed by the dilatation of some of them.

That excessive bodily exertion may render the dilatation greater than it would otherwise be seems probable. Just as in aneurisms of the aorta, we must have first the disease of the wall of the vessel, and then the excessive muscular exertion to produce the dilatation.

3. That the dyspnœa and the general venous congestion are not due to the dilatation of the air-spaces, nor to the obliteration of capillaries, but rather to a contraction of the pulmonary blood-vessels.

4. That the indications for treatment are to delay the progress of the chronic inflammation, and to overcome the contraction of the blood-vessels, as well as to care for the bronchitis.

That belladonna often cures sterility is the statement which has been made by several writers recently.

CARLSBAD, [illegible] MEDICAL [illegible] BASED [illegible] PERSONAL EXPERIENCE.

In view of the fact that Carlsbad is annually represented by a considerable number of American visitors, which is becoming larger every season, it may not be inappropriate to present a brief account of that justly celebrated watering-place, from a medical standpoint based upon personal experience. Information possessing no special medical value, but which might prove very useful to both physician and patient, may be found in the various guide-books. Of these the cheapest, and perhaps best, is a small pamphlet, entitled "Guide to Carlsbad," officially edited under the authority of the Mayor and Town Council (Aug. Siegle, 30 Lime Street, London, E. C.; Trübner & Co., Ludgate Hill, London, E. C.).

Carlsbad, Eger County, Bohemia, is situated 1,150 feet above sea-level, in a narrow, winding valley, with high hill-ranges on each side, and containing about 12,000 inhabitants. Through the middle swiftly runs an open creek, the Tepl Fluss (warm river), walled up on each side and bridged over at convenient crossings. It receives sewage from the town, but owing to the flushing of its channel from sudden rises to which it is subject after rains, the odor arising from it is not noticeably offensive except in prolonged dry seasons. Owing to the location in a bottom, the carbonic acid that collects between the hill-ranges naturally settles down on the town, producing, especially in foggy weather, more or less headache and depression of spirits, and aggravating cough and dyspnœa in those subject to bronchial affections.[2] For this reason, patients liable to such ailments should be directed to secure lodgings, if possible, on the more elevated localities of the Schlossberg.

Out-door life is the rule, few of the hotels having a dining-room or general sitting-room (one has the luxury of an elevator). Visitors secure their rooms and take meals at the various restaurants. North and west winds prevail, and the climate is subject to sudden and often violent changes. For this reason visitors should always have ready their overcoats and wraps, to put on or take off as occasion demands.

The official season commences May 1st, and ends October 1st, although patients are received there at all times of the year. July, perhaps, is one of the most popular months. The number of visitors in 1885 was 27,911,[3] "not including tourists and excursionists, and people making short stay for business purposes; of these 753 came from England and 735 from America." There is reason to believe that a much larger number of Americans visited Carlsbad during the past season of 1886 than in any previous year.

It is presumed that those who order their patients to Carlsbad have first informed themselves as to what physician will be employed upon their arrival; otherwise they will be forced to inquire of the hotel portier, or some friend who has been directed in that manner, which of the fifty-six practitioners in Carlsbad they should consult. The law, it is true, requires an alphabetical list of the names of all the physicians, with their addresses and office hours, to be placed in a conspicuous place in every hotel, but more definite information may be obtained from the Kurliste. Here are given the colleges from which they graduated, and the positions they hold, if any. Information on this point can doubtless be also had from leading physicians in such medical centres as Vienna, Berlin, and the like.

The treatment usually consists in, (1) a preparatory course of hygiene, which the patient is supposed to undergo before arriving; (2) the cure, which lasts usually four weeks, and includes drinking the waters, bathing, and hygiene (diet and exercise); (3) the after-cure, consisting chiefly in a gradual and prudent increase of diet after leaving Carlsbad, if necessary, and return by degrees to healthy occupation. The cure is a matter of routine in many cases, but it should never be undertaken without the advice of a physician, no matter how often the patient may have been to Carlsbad, or what the condition was upon leaving home. Changes may occur during the journey, and even while remaining at Carlsbad, that would utterly contra-indicate the cure. Hence, also, the necessity for repeated examinations during the cure, which may develop some weak spot before unsuspected.

The springs at Carlsbad, seventeen in number, are of the alkaline saline variety, and are all similarly constituted, their chief difference being in the temperature. The most popular, perhaps, are the Sprudel, which is also one of the warmest, 162.5° F.; Neubrunn, 137.75° F.; Mühlbrunn, 126.5° F.; Schlossbrunn, 122° F.; and Marktbrunn, 119.3° F.[1] and so on down to the lowest, 85° F. These figures are somewhat lower than those mentioned in the official guide,[2] which puts the Sprudel at 165° F., and the Felsenquelle, also a popular spring, at 141° F. According to Göttl's analysis,[3] 16 ounces of Sprudel water contain 45.8340 grains of solid constituents, as follows: sulphate of soda, 19.9606; carbonate of soda, 9.0624; chloride of sodium, 8.7245; and all other solid constituents, 8.0865 grains, as follows: sulphate of potash, 0.3696; carbonate of lime, 2.0198; carbonate of magnesia, 0.3994; carbonate of protoxide of iron, 0.0307; phosphate of alumina, 0.2150; and silica, 1.0520. It is seen, therefore, that the chief solid constituents are, respectively, sulphate of soda (Glauber salt), carbonate of soda, and chloride of sodium. All the springs contain free carbonic acid, the cooler more than the warm. The Sprudel, for instance, contains only 7.8033 cubic inches of carbonic acid gas in 16 ounces of water, while the proportion in the Schlossbrunn water is 17.3767 cubic inches.

In the Kurhaus and other bathing establishments, mineral (water) baths of required temperature are readily prepared from water conveyed by pipes provided with stop-cocks for hot and cold. Mud-baths (moorbäde) are also prepared by mixing the water with earth containing the sulphate of iron, and brought there from Franzenbad, some thirty miles distant. Physicians and their families, also clergymen, I believe, have the privilege of these baths free of charge.

Space allows only a brief mention of that part of the cure relating to diet. In general, starchy food, sweets, butter, fats and gravies, salads, pickles, condiments, and the like, are prohibited. Also alcoholic beverages, particularly champagne and Rhine wines, although a moderate amount at dinner of claret, or a glass or two of Madeira or sherry, may be allowed to the aged and infirm, or those in the habit of drinking. Ice-water is also forbidden, and in place of it is used the Gieshübler, an excellent table-water that comes from the Gieshübler simple acidulous spring in the neighborhood. Tea is generally used instead of coffee, with little or no sugar in either, especially in cases of gout or uric-acid diathesis. Eggs are poached or soft-boiled. Bread is thoroughly roasted in slices, called rusks or zwiebacks, besides which at dinner is allowed in most cases a moderate amount of untoasted bread made up with or without butter (Kaiserbrod, Wasserbrod). Fish, except salmon, which is thought to contain too much oil, and such meats as roast beef or mutton, beef-steak, mutton-chops, and poultry without dressing, are allowed in moderate quantities. Also, green vegetables, such as string-beans, spinach, cauliflower, and cabbage.

Included in the cure is exercise of some sort, chiefly walking. For this purpose a variety of delightful walks have been constructed and are kept in thorough repair. In this respect, and in the thorough system used regarding all the factors of the cure, managers of many of our American watering-places would do well to take lessons from their Bohemian friends across the water.

At the expiration of the cure the average patient will have lost somewhat in weight, and experiences a certain amount of a feeling of debility. These conditions will be marked in proportion to the severity of the treatment, as sometimes occurs, especially when patients take upon themselves the responsibility of directing their own cure, ordering baths at a temperature higher than is necessary or prudent, and taking them too frequently; drinking excessive quantities of waters from various springs; overfatiguing themselves with walking; and not eating a sufficient quantity of such diet as is even allowed. Such a reckless abuse of the cure is not without danger of producing organic change in some important organ, especially in those past middle life.

Let us now examine the three factors of the cure more in detail.

First, with regard to drinking the waters. According to Leichtenstern,[4] the old idea that the effects of mineral waters were the joint result of all the numerous constituents has no longer any supporters. One or a few of these constituents determine the character of a spring and its therapeutic action. Hence only the chief constituents of the Carlsbad water need be examined, which, as already stated, are the sulphate of soda (Glauber salt), carbonate of soda, and the chloride of sodium.

Artificially prepared Carlsbad salts,[5] when taken in warm water, act very much in the same way as the natural Carlsbad water. But, according to Harnack,[6] the so-called natural Carlsbad Sprudel salts, manufactured from the Sprudel water under the Carlsbad civic authorities, are practically nothing more than Glauber salt (99.33 per cent.), which is very much cheaper. It appears that the sulphate of soda crystals, forming first and having a fine appearance, are collected, while the carbonate of soda and chloride of sodium are thrown away in the mother-lye.

The sulphate of soda is purgative, and it also, according to Seegen,[7] increases the consumption of fat—which effect, according to Voit, has not been proved. The carbonate of soda is decomposed by the gastric acids, forming the chloride of sodium and setting free carbonic acid. The alkali, chloride of sodium, and the carbonic acid all tend to increase the secretion of gastric juice, as has been proved by experiments made with stomachs having fistulæ. They all excite peristaltic action, especially when taken cold. The chloride of sodium in addition, favors the formation and absorption of peptone, and is also diuretic. According to Leichtenstern, it also promotes the circulation of fluids through pathological products and favors their absorption. Hence its theoretical indication in various exudations and hyperplasias.

Cold water quickly leaves the stomach, and, stimulating peristalsis besides diluting the contents of the alimentary canal, is aperient; while warm water, being quickly absorbed, is diuretic, and may even constipate, though it contains some slightly aperient salts.[8]

While, therefore, the general action of the Carlsbad water is both purgative and diuretic, the former effect is better produced by the cooler springs, the latter by the warmer ones. Indeed, when constipation is marked, a glass or two of cooled Sprudel water may be taken at

[1] [illegible]

[2] [illegible] op. cit., p. 440.

[3] [illegible]

[4] [illegible]

[5] [illegible]

[6] [illegible]

[7] [illegible]

[8] [illegible]

bedtime. Seegen [1] regards the waters as laxative, not purgative, especially the first few days, and states that they are not diuretic in the true sense, as the solid ingredients of the urine are not proportionately increased. As digestion does not take place in alkaline gastric juice, the waters should not be drank near meal-times, but preferably before breakfast, the last glass being taken at least an hour before eating.

We can now form some idea of indications for drinking the Carlsbad waters. They are useful in gastric catarrh with acid stomachs, and for washing out collections of mucus, as in the stomachs of high livers, gluttons, tipplers, and topers. By increasing peristaltic action and facilitating the flow of blood through the liver, they are, according to Leichtenstern, serviceable even in chronic gastro-intestinal hyperæmia and catarrh dependent on anatomical changes in the liver. Hence they are valuable in many liver affections, such as cirrhosis, venous hyperæmia, and obstruction of bile-ducts from various causes, hæmorrhoids due to portal obstruction, fatty liver, and the like.

Their curative effects in catarrhal jaundice depend on the favorable influence they exert on catarrh of the duodenum, and removal of obstacles to the flow of bile caused by the swollen mucous membrane. The waters have no specific effect on the bile itself, but merely render it thinner and more abundant, and increase its flow as any other water would do.

According to Leichtenstern, it has been often proved "that saline soda-waters, in public and private practice, as well as at renowned watering-places, assist in the removal of gall-stones." By some this is attributed to the dissolving power of the water, which is supposed to saponify the cholesterine so that the stone breaks up into detritus, though supposed alkalescence of the bile produced by the waters has not been proved. Moreover, those stones which have a covering of carbonate of lime cannot be thus affected. Seegen [2] states that the method of cure in these cases is not known, and favors the idea of the waters being preventive rather than curative, and agrees with Leichtenstern in the opinion that, owing to the increased flow and pressure of bile and increased activity of the gall-bladder, due to general reflex peristalsis, a cure is effected by expulsion of the stones instead of their being dissolved.

The loss of fat by patients cannot be accounted for by drinking the waters, except from their purgative effect, which cuts short, so to speak, complete digestion and absorption of the ingesta. The loss is due more to the use of hot baths, as we shall see, but chiefly to the diet and exercise.

In gout, the so-called uric-acid diathesis with or without dependent catarrh of the pelves of the kidneys, bladder, and urethra, renal calculi, and the like, it is a matter of common experience that all alkaline waters, including those of Carlsbad, are beneficial by lessening the irritation caused by the acid, but chiefly, according to Leichtenstern, by their washing out that which stagnates in the tissues and joints, their oxidation of uric acid into urea in the body having no proof.

Regarding diabetes mellitus, authors differ as to the effects of drinking the Carlsbad waters. Alkaline remedies in the treatment of this disease were introduced by Willis. About fifty years ago Mialhe employed them because he supposed that they would accelerate the decomposition and combustion of sugar in the organism,[3] and hence the supposed therapeutical value of the Carlsbad, Vichy, and other alkaline waters in this disease. Braun [4] states that not only in cases of lesser, but greater, diabetes has he observed improvement and a check to the progress of the disease effected by the Carlsbad waters. Seegen [1] observed in twenty cases, including both forms of the disease, that the symptoms in all were alleviated, the glycosuria remaining at a minimum during forty-six weeks. But the results were not lasting, although some remained in fair health for a number of years, even on a mixed diet. On the other hand, Leichtenstern [2] states that improvement or cure in these cases is due rather to strict attention to anti-diabetic diet and other concurring incidents of a bath cure than to the drinking of the waters. P. Guttmann, Riess, Külz, and others have shown by a long series of experiments on several patients that the use of the Carlsbad water has not the least power of diminishing the amount of sugar in the urine in diabetes mellitus. "I have been myself, for many years," says Leichtenstern,[3] "convinced of the uselessness of Carlsbad waters in diabetes, and have confined their use to cases only where it was an object to overcome obstipation or stomach disorders." Such in brief are some of the principal diseases in which the Carlsbad waters are usually indicated.

Secondly, with regard to the Carlsbad baths. Speaking in general, baths (fifteen to twenty-five minutes) at the point of thermal indifference (93.2 -95° F.), approximating the temperature of the body, cause no change in the production or giving off of heat from the body, and have little or no effect on the heart or circulation, but are beneficial in certain diseases, as chronic rheumatism, in connection with the rest of the cure. Hot baths, however, which increase the temperature of the body, cause proportionately redness of the skin, increased frequency of the heart's action and respirations, increased consumption of oxygen and exhalation of carbonic acid, the conversion of fat, and decomposition of the constituents of the body containing nitrogen, with corresponding increase of urea in the urine. These changes are produced by reflex action through the nervous system, and occur in baths of indifferent thermal waters (those in which are found a very small amount of solid or gaseous constituents—as Teplitz, Gastein, and probably the Virginia and Arkansas Hot Springs—and differing from artificially warmed simple water not in effect but in the mode of heating only), as well as those containing salts and gas like the Carlsbad springs. The presence of salts or gas in a bath may slightly stimulate the skin, but are not contained in sufficient quantity in natural mineral waters to materially alter the above-mentioned effects; nor has it been proved, though subjected to innumerable experiments, that the healthy skin absorbs substances contained in a bath except they be volatile or corrosive.[4] This being the case, it is not exactly known why the Carlsbad mud-baths should be made especially of earth containing sulphate of iron and brought there from Franzensbad. It cannot be because the iron is absorbed through the skin, nor does it appear to possess appreciably corrosive qualities. It is, however, free from animal and vegetable substances, and is very readily washed off. For these reasons it is to be preferred to some other materials for making a pultaceous bath. Owing to their warmth, pressure, and friction, thus stimulating the skin and peripheral circulation more than the mineral (water) baths, according to Seegen,[5] they favor more the absorption of exudates, and relieve abdominal congestion. Braun [6] states it as a clinical fact, though unsupported by any rational theory, that the mud-baths do not over-excite so easily as other warm baths, this being the only difference. Applied locally they are simply warm poultices.

If the increased conversion of fats and albuminates produced by hot baths would extend itself to similar substances contained in pathological products, to a relatively greater degree than they exist in healthy organisms, their therapeutic value could easily be estimated. Such effects, however, have not been proved.[7] But, ac-

[1] Op. cit., p. 358.
[2] Reynolds' System, vol. iii., p. 611. H. C. Lea
[3] Op. cit., p. 369.
[4] Curative Effects of Baths and Waters, p. 391. Edited by Henry Weber, M.D., F.R.C.P. London,

cording to Leichtenstern,[1] it has been shown by multiplied experience that the products and residue of chronic inflammation and hyperplasia of tissue can be favorably influenced by warm baths, even of indifferent temperature, when supported by a corresponding change in diet, mode of life, bodily exercise, and the use of laxative and other mineral waters. Hence good results are often obtained from their use in the treatment of chronic rheumatism of the joints and muscles, false anchyloses, effects of previous attacks of gout, prostatitis from gonorrhœa, or instrumentation for stricture, and the like. Pains in the lower extremities, however, dependent on unsuspected stricture of the urethra, and resembling rheumatism, should not be mistaken for the latter, as they may be treated with much better and more permanent results by properly treating the stricture, in connection with the cure or not, as the case may require.

Thirdly, the hygienic elements of the cure, especially with reference to diet and exercise. "Although these are recommended," says Leichtenstern, "by every careful physician in his daily practice, often with good results, it is a fact well known that there are those whose occupation and habits do not admit of this treatment." Hence the necessity for their removal from injuriously-working home influences, for rest and freedom from professional work, residence in a new neighborhood, change of climate, increased bodily exercise, and a judiciously changed mode of life and diet, "since the use of the cure at the place and site of the spring usually leads the most incorrigible sinners at table to a little self-respect."

Let us now look at some of the contra-indications of the Carlsbad cure. In cardiac diseases in general, for obvious reasons. In cases of gastric catarrh with dilated stomach, the more so if there be pyloric obstruction, since fermentation of gastric contents would still more dilate the stomach. In gastric catarrh and dyspepsias of the anæmic, which are attended by deficiency of acid in the gastric juice. Small children should not be taken to Carlsbad, as croup and diphtheria prevail there in winter, and sometimes attack the children of visitors in summer. Owing to the tissue-changing and more or less devitalizing effects of the cure in general, it is contra-indicated in the cases of patients having any disorganizing or wasting disease, as carcinoma, pulmonary consumption, or those who have inherited a strong predisposition to such diseases; debilitated, anæmic, and infirm persons in general, even women at the menopause; and, finally, Bright's disease of the kidneys.

During the month of July last, while on a visit to Carlsbad, I met the late Dr. Thomas Alexander McBride, of this city. Though but slightly acquainted with him, I took the liberty of calling on him at his rooms at the Westminster Hotel. I then learned for the first time that he had albuminuria and gouty kidney. I at once urgently suggested to him the danger of remaining at Carlsbad, the more so as the weather during the season had been unusually bad. But he stated that the albuminuria was only temporary, and believed that he would be benefited by the cure. I was shocked, a few weeks later, to read of his death, from uræmic coma on board ship, but I was not wholly unprepared for it.

In conclusion I would say: 1. There are patients affected with certain diseases who may be benefited, and even cured, by the Carlsbad course. 2. This benefit or cure should not be attributed to the drinking of the waters, the baths, or the hygiene alone, but to all of these factors combined. 3. If such patients would follow out the same hygienic rules at home, there would be no necessity of their going to Carlsbad, since the mineral waters and baths identical in effect may be obtained elsewhere. "Nor are there facts or reasonable grounds," says Leichtenstern, "for believing that a mineral water used systematically at home is less efficacious than at the spring under the eye of the bath physician." 4. There are patients who will not, do not, and cannot, observe such hygienic rules, and must therefore be sent to Carlsbad or some other place, where the concurring incidents of a cure and the pressure of surrounding circumstances will be likely to cause them to do so. Moreover, the benefits or disadvantages of an ocean voyage are to be considered, and the preferences of patients, other things being equal. 5. There are patients affected with certain diseases for whom the cure would be dangerous, if not fatal.

There are many other questions involved in the subject of hydro-therapeutics, pharmaco-dynamics, and hygiene (diet and exercise), in connection with Carlsbad and watering-places in general, which want of space prevents being brought forward. If I succeed, however, by this brief allusion to a vast and growing subject, in calling the attention of the profession to an earnest and intelligent consideration of the question as to what patients may be sent to Carlsbad, if any, with due precautions against the reckless abuse of the cure, and of the importance of discriminating between them and such as should not be permitted to go there, my object will have been accomplished.

31 West Thirty-third Street, October 1, 1886.

[1] [illegible]

NOTES ON THE CLIMATIC AND SANITARY CONDITIONS OF SOUTHERN CALIFORNIA.[1]

By W. M. CHAMBERLAIN, M.D.,

NEW YORK,

[illegible] TO CHARITY HOSPITAL, [illegible]

The increase and the diffusion of wealth, the extension of railroads, and the greatly increased comfort of travel, have made us a travelling people.

For pleasure or for health, a great multitude are moving in all directions over our vast territory. Fine hotels and sanitaria are multiplying at an equal rate. Such are found, distant from each other by only a few hours' travel, all along the Atlantic coast from Mount Desert to St. Augustine; all along the pine forests and sandy plains from Lakewood to Thomasville; and all along the mountain ridges from the Adirondacks to Asheville and Marietta. The slopes and parks of the Rocky Mountains in Colorado and New Mexico are as well provided, and even the far-off waters of Puget Sound are set with hotels which compare very well with the finest of the Catskills.

Notably within the last few years this tide of travel has turned toward California, and during the last winter the southern part of that State was fairly inundated by it. For two months the Southern Pacific Railroad alone brought to Colton an average of more than a thousand west-bound tourists daily.

There are five completed transcontinental railways now in operation, and two more in progress of construction; and there is good reason to think that the Pacific slope will be colonized and occupied at a rate more rapid than heretofore.

The city of Los Angeles, which in 1880 had a population of 14,000, claims now to have 42,000; and a similar, if less marked, increase is seen at several other points.

The writer spent five months of the last winter in California, travelled several hundred miles by wagon through some of its less frequented regions, and was greatly interested in the physical and social conditions there observed.

It was very evident that by far the largest portion of the travellers came from the prairie States of the West and Northwest. From Chicago, Milwaukee, St. Paul, Minneapolis, Omaha, Lincoln, Kansas City, and the country about these towns, there seemed to be a veritable exodus.

The motive was to escape from the long, harsh winter,

[1] Read [illegible] New York Academy of Medicine, October [illegible].

from the snows and the fierce winds, and the mud, which there enforce a long imprisonment on all those of feeble vitality or impaired health.

And [illegible] abandonment to the pleasures of an open-air life, amid novel and beautiful scenery, with unrestricted locomotion. The man from Winnipeg made haste to lay aside his furs on New-Year's Day, and to roll in the breakers on the beach at Santa Monica; and the girl from Duluth delighted to ride or drive through the groves of sycamores, the avenues of eucalyptus, and the orchards of oranges.

Among our fellow-travellers was one who had spent two winters on the Italian Riviera, one at Tangier, one at Cairo, two in Florida, one in Nassau, and was now, for the sixth time, returning to Santa Barbara. Almost everyone was ready to say that here was indeed the most attractive and the most salubrious of all winter resorts.

Allow me, then, to ask your attention to the physical facts in the case.

California is a very large State; Texas alone is larger. The area of California is about twenty-three times larger than that of Massachusetts.

The parallel of 42° north latitude forms its northern boundary; in its eastern course it intersects the Atlantic coast a little south of Boston, crosses the south of Europe through Rome and Constantinople, and cuts the Pacific coast at Hakodadi, Japan. The parallel of 32° 30′ forms its southern boundary; there are nearly eight hundred miles of coast between these two parallels, equal to the distance between Boston and Savannah—in fact, the thirty-second parallel passes near Savannah—crosses the north of Africa through Morocco and Alexandria, and enters the Pacific near Shangai, in China.

So far as latitude determines climate, then, California should have the same as that of Spain and Syria, which, in fact, it does in some degree resemble, but with important variations.

It is remarked, I believe, by Von Humboldt, that the climate of the adjacent coasts of continents in the northern hemisphere differs, and that of the remote coasts agrees. Thus the climate of the eastern coast of America corresponds with that of the eastern coast of Asia, and that of the western coast of America with that of western Europe and Africa. Some of these may be indicated by the rude outline map on the wall.

The Kuro-siro, or Pacific Ocean current, corresponding to our Gulf Stream, issuing from the China seas, pursues a northwesterly course across the Northern Pacific and strikes the American continent on the coast of Alaska, which it covers with clouds and rains, as the Gulf Stream does the western coast of Great Britain, Ireland, and the Orkney Isles. It also raises the temperature remarkably, so that the mean winter temperature of Sitka is nearly the same as that of Baltimore.

The return current, together with a deflected portion of the original current, passes down the coast of Oregon and California, at a distance from the coast increasing as it goes southward. It is desiccated as it goes, by precipitation. It gives Oregon from 50 to 60 inches of rain annually, Northern California from 30 to 40, and Southern California from 10 to 20. At Point Arguello, having now lost most of its force, it is shouldered off the coast, leaving the embayed shore of Southern California washed by the warmer waters of the subtropical sea, driven thither by almost uniform southwest winds, of little force in winter but strong in summer.

The winds are mostly from the west along the whole coast of California—west and northwest in the northern, west and southwest in the southern portion.

Thus, of 14,612 consecutive observations at San Diego, 878 were reported calm; 1,730 were reported north wind; 1,044 were reported south wind; 2,879 were reported easterly; 8,146 were reported westerly; and the mean average velocity 5.9 miles per hour, as compared with 7.7 miles per hour at New York, and 15.8 at Cape Hatteras.

As the winds move inland, they lose force and humidity, and at the base of the foothills comparative calm prevails. The ratio of decrease may be stated as about one per cent. for each five miles of distance from the sea; a ratio which may be much varied by mere topographical peculiarities.

The relative humidity of the air decreases in the same way. Thus, at the seaside stations it is from 70 to 72, about the same as on our coast; at one station fifteen miles inland, 66; at one station twenty-three miles inland, 59.

The mountain system of California divides the State into three sections, differing very much from each other. From Mount Shasta, in the north, 14,140 feet high, two chains at first diverge there, are nearly parallel, and then converge and unite. A system of parallel ranges runs from north to south along the coast, and is called the Coast Range.

From fifty to one hundred miles inland another system of ranges, parallel to each other and to the Coast Range, is known as the Sierra Nevada.

The two systems are united in the north by Mount Shasta, and in the south in San Antonio, San Bernardino, and San Jacinto.

The crest of the Coast Range may be about 3,500 feet high, with summits of 4,000 and 4,500 feet, and the crest of the Sierra Nevada about 8,000, with summits of 12,000 to 16,000 feet. The great valley lies between them, 450 miles long and about 50 broad, narrow at the upper end and broader at the lower. From the great mountain masses at the southern end of the valley a system of parallel ranges runs nearly due west, to be fused in the Coast Range, and south of this range is the triangular area of Southern California, separated on the north and east from the remainder of the State by lofty mountains, whose minor spurs cross it in a southerly course to the open Southern Sea. The general slope is about seventy feet to the mile, and it is traversed by many torrential streams, running in straight and shallow beds, full in the season of rains, and almost dry at other times—often fuller near the foothills than in their lower course, as the water sinks through a gravelly soil to reappear as springs on lower lands, or sometimes runs in underground currents into the sea. This is perhaps a kindly provision of nature, for if it ran entirely upon the surface it might be mostly evaporated in the long, bright summers; whereas, in fact, it runs underground, shielded from the sun's rays, but still within reach of human needs and devices.

The soil of this territory varies often and much; strips of clayey loam, ranging in color from a friable chocolate to a waxy black, indigitate with strips of gray, gravelly shingle and shale, and there are many grades of mixture between the two; but all are very rich in organic remains, phosphates, carbonates, and silicates, derived from the tertiary rocks.

It will be understood from the above that the drainage of the region is very perfect, there is little wet land, and no standing water. The surface, having different hygroscopic qualities, will be damp or dry, but the subsoil is always porous. This rapid and complete drainage accounts for the fact that there are no paludal miasmas. The class of miasmatic diseases is almost unknown. This statement I heard from all.

The only military post of the United States in Southern California is at San Diego, which, in its general aspect, would not seem a pre-eminently choice location, for sanitary advantage, as compared with some others in the region. The report of the Surgeon-General of the Army for 1885 says of it: "The military post showing the highest rate of non-effectiveness from sickness was San Diego. This station is the sanitarium for the Division of the Pacific, and as such its exceptional rate is sufficiently accounted for. The general salubrity of the station caused its selection for the purposes indicated."

Surgeon Summers, of the post, writing of the period from 1866 to 1873, says: "In this vicinity a case of in-

termittent or remittent fever is seldom, if ever, seen, unless contracted elsewhere, and the tabulated report of diseases reads in part as follows:

Enteric fever	0
Typho-malarial fever	0
[illegible]	1
[illegible]	12
Other miasmatic diseases	0
Rheumatism	5
[illegible]	1
Bronchitis	0
[illegible]	0
Pleuritis	0
Phthisis	3
Other respiratory diseases	0

This seems to me a remarkable showing. So far as I have been able to extend the comparison, it is without a parallel among the army posts as to these diseases, and it is certainly in strong contrast with the reports from the military posts in Florida, where the climate is in some respects similar.

There are but two seasons to the year in Southern California, the wet and the dry; the wet season, beginning in November, continues until May. During that period all the rainfall of the year occurs, amounting to from ten to twenty or twenty-two inches. This usually falls in periods of three or four days at a time, and at intervals of from four to six weeks.

From January 27th to March 6th of the present year there was no rain at Pasadena and Los Angeles. Apparently there is less rainy weather in the California wet season than in our Eastern summer.

Less rain falls upon the seashore than in the foothills. The cool and water-laden air of the ocean, when it first strikes the land, seems to be rarefied by the increased radiation and reflection, and the power to carry moisture is increased until it reaches higher lands or meets the cooler air floating down from the hills. Thus the mean annual rainfall at San Diego is between nine and ten inches, and at Poway, twenty miles inland, is from seventeen to twenty inches. Occasionally, where from the local topography a cool current comes down upon the shore, the local precipitation is greater there. In dropping its water, as before said, the relative humidity of the air becomes less.

From the small amount of rainfall the question of the water-supply becomes important. Nowhere has the whole scheme of hydraulic questions been studied more generally, carefully, and to better results than in California. Mining, and, at various stages, most departments of agriculture are dependent upon an artificial supply of water.

The country is fairly endowed with springs, which break out, sometimes in large volume, along the foot of the terraces and in the ravines. About them are located the headquarters of the isolated farms and ranches.

Wherever there is an organized scheme of a fruit-growing colony, or other town, water for irrigation and domestic uses is provided by acequias, or aqueducts from the cañons of the mountains, often built with great labor and expense. Mountain water, thus obtained, is generally very soft, clear, and uncontaminated. Sometimes it is exceptionally pure; at others it carries more or less clay and other more positive mineralization.

The distribution of the ground-water is peculiar and interesting. You may enter a basin-like depression in the hills, containing perhaps several square miles of alluvial plain. It may not be traversed by any stream; there is no visible inlet or outlet for water, and you wonder what becomes of all that falls on the long slopes which surround it. It has, in fact, sunk into the surface where it fell, and descended, to underlie the plain at a depth often of not more than eight or ten feet. Such plains, except in the rainy season, look dry and parched; still they are set with great sycamores, evergreen live-oaks, and rapidly growing groves of eucalyptus, as well as orchards of fruit-trees. The young plants may require to be irrigated for a year or two, but soon their roots reach down to the unfailing streams below, and thenceforth they require no artificial water. After the third year the vineyards in such localities are full of lush leafage and succulent fruit-and the wells about the farm are full to within ten feet of the surface.

The facts which characterize the climate are best seen by comparison. For that purpose I have prepared the rude chart, on opposite page, and have taken the details from the Report of the Chief Signal Officer of the United States for 1881, with the exception of those for Aiken, S. C., which is not a Signal Service station. The figures for this locality I have derived in part from the papers of Dr. Geddings, whose able and interesting papers have done much to extend the reputation of Aiken as a sanitarium; and in part from the report of the nearest Signal Service station, at Augusta, seventeen miles distant.

New York is chosen for one point, because it is our standard of comparison; Aiken, as a southern inland, and Jacksonville as a seaside, sanitarium; San Antonio, to represent the elevated Texan plateau; Los Angeles, Southern California; and St. Paul the interior Northwest. Other points—on the Florida coast, for example—might have been chosen, but not being Signal Service stations, the data are not at hand.

The first vertical column gives the elevation above sea-level. This is to be borne in mind for the comparison, as it modifies all other conditions.

The second vertical column gives the number of days in the year in which rain fell—the least appreciable quantity, namely, one-hundredth of an inch, constituting a "rainy day."

The third column gives the mean average per cent. of cloudiness, no day being called clear if at either of the three observations any clouds were observed.

Column fourth gives the mean relative humidity, saturation being 100.

Column fifth, the rainfall in inches.

The first column on the right gives the mean temperature of January and February, the two coldest months; the fourth on the right, the mean temperature of the two warmest months, July and August.

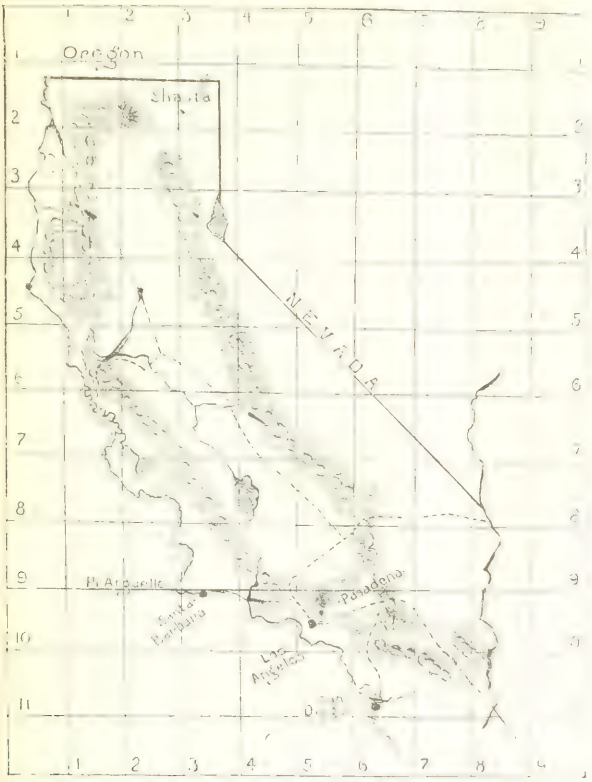
The last column, the mean annual temperature, which is not of much importance, since a place where the thermometer has a great range may have the same mean as a place where the range is but a few degrees.

A much more instructive indication is obtained by noting the difference between the mean temperatures of the hot and cold months, which is indicated graphically by the black lines, and arithmetically by the figures attached. It thus appears that Los Angeles has fewer rainy days, less cloudy weather, less rainfall, a much more equable temperature, closely approximating the ideal mean of sixty degrees. In dryness of the air Aiken exceeds it, but it must be remembered that Los Angeles is ten times as far from the sea as Aiken, and considerably lower in level, and is, in fact, not an average point for Southern California.

I esteem the comparative cloudlessness, taken in connection with the mild and equal temperature, as most significant. Weber,[1] quoting from the "Proceedings of the British Royal Society for 1877 and 1878," says: "Light is inimical to the development of bacteria and the microscopic fungi associated with putrefaction and decay; the preservative quality of light is most powerful in the direct solar ray, but can be demonstrated to exist in ordinary diffused sunlight; and the actinic rays of the speculum have the greatest effect. . . . In the higher animal organisms, when deprived of light, oxidation does not take place so energetically, tissue change and nutrition are impaired. . . . In winter an invalid in southern lands enjoys the sun and daylight for several hours longer than in high northern latitudes."

The long, bright day of Southern California, with unclouded sky, mild and even warmth, and gentle winds,

invites the invalid to live in the open air and protects him while there.



From many sides we gather the inference that there is something in the air and soil of Southern California which nourishes, improves, and prolongs organic life to a remarkable degree.

The eucalyptus tree adds from eight to twelve feet annually to the length of its trunk. In a grove twelve years old there are many trees over one hundred feet in height. About Mr. Cooper's ranch, at Santa Barbara, are groups of live-oaks which are thought by good judges to be three or four thousand years old, and the Sequoias of Calaveras, the giants of the vegetable world, are of untold date. It is commonly said that the domestic animals live longer and are more prolific than at the East.

The California racing stables, particularly the Santa Anita stable near Los Angeles, have been brought East for the last two racing seasons, and have taken more prizes than any others of equal size. Since Fremont's great ride in 1847, the endurance of the Californian horse has been well known. I have never seen elsewhere more fresh-colored, strong-limbed, bright-eyed children.

The question of high and low altitudes for the treatment of thoracic disease has been widely debated. So far as it concerns diseases of the heart, all will recall the careful and comprehensive paper of our President. As to diseases of the respiratory organs, Dr. Denison, of Denver, has written papers which show great research and ingenious argument. It is not my purpose, at present, to enter into this discussion, further than to say that the influence is so positive that the choice or refusal of it cannot be an indifferent matter. Having spent a portion of [illegible] Colorado, I have certainly seen a number of [illegible] vigorous subjects, who have apparently been benefited by residence there; while I have also been more intimately conversant with a series of cases in which the results were clearly disastrous.

In Dr. A. N. Bell's work,[1] on the "Climatology of the United States," may be found a series of reports from the surgeons of the United States Army, stationed at many points in the mountain region of the West, which, with great uniformity, and sometimes in very strong language, assert that the particular form of climate which is there found, while it may promote immunity from consumption among the natives and in the well, is very unfit for those in whom the disease has been already recognized.

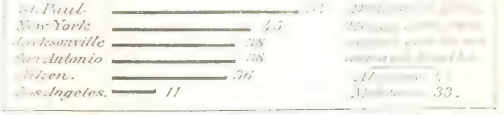
It is possible in Southern California to find more or less comfortable abodes up to the level of four thousand feet, where the other and greater advantages of the climate are not lost. Such are San Marcos Pass, Smith's Mountain, San Gorgonio, and Arrowhead Springs. In my judgment, however, the lower levels, from eight to fifteen hundred feet above sea-level, will be found adapted to a far larger number of cases.

The food-supply in Southern California is very good. Fish in variety and of good quality are abundant. The Eastern man, however, will miss our oysters. Game, fowl, and poultry are also abundant. In particular, excellent milk and butter abound, and good beef and mutton. In these particulars Southern California has great advantage over our own southern seaboard, Florida especially. Of fruits, grapes, oranges, pears, apricots, peaches, melons, guavas, etc., are of the best and cheapest. Apples are abundant, but inferior.

It remains to speak of the special points which are generally sought by invalids; and since so much of the comfort and well-being of the invalid depends upon how he is lodged and fed and amused, I shall be excused if I allude to the various hotels and other accommodations.

San Diego is the most southern—a town of 7,000 inhabitants, possessing the best harbor on the coast except that of San Francisco. The town is placed on the slope of a hill which rises to a height of three hundred feet in

	Elevation	Rainfall	Cloudiness	Humidity	Barometer	Temperature						
						Mean annual	Mean summer	Mean winter	Mean spring	Mean autumn	Annual range	Summer range
New York	—	122	41	71	44	[illegible]	[illegible]	32	[illegible]	[illegible]	[illegible]	[illegible]
Akron	887	102	37	58	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Jacksonville	32	52	56	68	61	68	82	54	65	70	28	7
San Antonio	654	133	29	63	34	68	84	51	[illegible]	[illegible]	[illegible]	[illegible]
Los Angeles	350	51	38	67	16	61	70	53	[illegible]	[illegible]	33	[illegible]
	85	90	41	64	29	49	[illegible]	66	[illegible]	[illegible]	[illegible]	[illegible]



the distance of a mile from the shore of the bay. The ambition of the place is maritime commerce. The present town is only ten years old; a great many unfinished projects are outlined upon its surface and in various stages of progress, giving to the place an unfinished look. There are some good hotels, some handsome public buildings, a few fine, and a great many small and temporary, dwellings. The lack of water-supply has hitherto been a cause of embarrassment and an unsanitary element. That, I believe, is soon to be remedied. The local climate, in the matter of temperature, is unsurpassed, for its winters are warm, and its summers, except for a few days when the north wind blows, are very cool and uniform. The climate is, however, damp. The rains are few but fogs are frequent. The social conditions are not yet far advanced.

Two hundred and fifty miles northwest, and at the other end of the coast of Southern California, is Santa Barbara, a town of 5,000 inhabitants. It may be called the Newport of the Pacific, widely known for its charms and attractions. Until, in the last decade, railroads were built, it was one of the few places which were accessible by sea. It has been long occupied, is much frequented by invalids, has a highly developed social life, good hotels, libraries, studios, clubs. The mountains and the sea come close together here, and the landscape has a very varied and enduring charm. It has now no railroad facilities, and communication with the rest of the world is, in the rainy season, apt to be irregular and sometimes infrequent. Like San Diego, it is very damp, as the moss-covered roofs and lichen-encrusted fences indicate. More than San Diego it is windy, for it lies in a trough between the hills, opening to the southeast and northwest; up this valley the fogs roll in the early hours of the day, and whatever winds there may be are compressed and accelerated to an unusual force. The channel, twenty-five miles wide, is separated from the open sea by a chain of islands, large and small, low and lofty, and the beautiful bay affords fine sailing, fishing, and surf-bathing, while the cañons of the Santa-Ynez range offer to the equestrian many picturesque winding trails, which he may follow as far as he will. The water-supply is abundant and excellent. The older parts of the town and some of the hotels are not in good sanitary condition, but there are enough satisfactory accommodations. The young are sure to be enthusiastic about Santa Barbara, and to all who have no occasion to fear a damp and somewhat windy spot, it is very attractive and eligible.

Midway between San Diego and Santa Barbara, but twenty miles back from the sea, is Los Angeles, which has been mentioned as a rapidly growing town. As the focus of all the railroads and the entrepôt of the best agricultural region, in the geographical centre of Southern California, with no serious commercial rival nearer than San Francisco, which is as far as Buffalo is from New York, it is destined to become a large and rich city. The business town is on a low plain environed on three sides by hills. The soil is a tenacious clay, giving abundance of mud in wet weather and dust in dry. The water-supply is not good, although it is in a way to be improved. The surrounding hills, which are already crowned by many fine residences, are beautiful and salubrious, but the more compact portions of the city are liable to typhoid and zymotic disease, and the general sanitary condition has the defects which are generally found in a rapidly growing town. It does not depend upon the company of invalids, for it has its hands full of industrial and speculative interests. Hitherto the hotels and boarding-houses have left much to be desired, but better accommodations are promised and in progress. In schools, churches, societies, theatres, hospitals, and medical men, it is well endowed.

Seven miles east of Los Angeles and from five to six hundred feet higher, on an elevated triangular plain, at the very base of the Sierra Madre, whose crest, though four thousand feet higher, is not five miles away, is Pasadena, "Crown of the Mountains." It is a suburban town of 4,000 inhabitants; originally a fruit-growing colony occupying about fifteen thousand acres of land, laid out like a park, and now covered with groves of oranges, lemons, apricots, walnuts, and figs, defined by lines of tall eucalyptus, avenues of pepper-trees, hedges of cypress, and set with villas embowered in the fragrance and bloom of all sub-tropical plants and flowers. A terrace six miles long and perhaps sixty feet high, divides it from the long and wide valley of San Gabriel. Along the terrace fresh streams burst forth and groves of stately oaks and sycamores are scattered. The valley below is covered with vineyards and grain fields. The Sierra Madre, carved by innumerable ravines, culminates in the southeast in the snow-capped domes of San Antonio, Cucumonga, San Bernardino, and San Jacinto, from nine to eleven thousand feet high. Beyond the plain is the blue and shining sea, and the whole landscape has a charm of grandeur and of beauty which prolonged contemplation still increases. The community, now mostly made up of exiles from ruder climes, is very cosmopolitan in its character; culture, taste, and wealth are not wanting, and social pleasures are many and varied. There is a good public library, many boarding-houses, of many grades, sanitaria of various kinds, and among the adjoining foothills is the picturesque villa—Sierra Madre Hotel, which has long possessed an excellent reputation and custom. Within the last year parties who have large and long experience in the charge of invalids have built, on an elevation in the plain, the Raymond Hotel, with capacity for from three to four hundred guests. In location, construction, and appointments it is very superior, and for the management one of the best-known hotel-keepers of the East has been secured. The soil of Pasadena is light and dry, the roads are good, livery is good and cheap, and the excursions are many and delightful. The water-supply is of the best quality. There will be communication with the neighboring city by almost hourly trains.

In my judgment Pasadena is the point of election for, by far, the larger number of invalids. Especially do the conditions before enumerated fit it for all cases of renal disease, all cases of pulmonary trouble attended with free secretion, for enteric, rheumatic, and neuralgic affections.

It is not to be forgotten that for many invalids, home, with its comforts, its social and moral support, must still be the best place; that acute cases, and those far advanced in disease of the heart and lungs should not undertake a long journey, except under sufficient medical advice—which also should be allowed to control the conditions and extent of movement.

Did time allow I would speak of the mineral springs and baths. The sulphurated and chalybeate waters at various places compare in constitution with those of Central New York and Virginia. In accommodations and general resources they are, of course, not yet developed. I should mention beautiful Riverside, comparable with our Lenox, the theatre of most successful orange culture and of a highly advanced social order. Its altitude and dryness commend it to some invalids. It is, however, a windy place, with more than usual variations of temperature.

In these days of mind-cure, faith-cure, and subjective medication generally, one of the best things that can be said of Southern California is that it is an eminently cheerful region. Nostalgia and hypochondria cannot well continue there; there is too much enterprise, too much pleasure abroad. I have never seen so many contented people so far away from home.

It is common among the older residents to speak of it as "God's Country," which may sometimes be a way of complimenting the Elysian climate and the bountiful soil, but is oftener, I think, a more serious recognition of the Power and the Light which builds and adorns the Cosmos

> "Which wields the world with never-varying love,
> Sustains it from beneath and kindles it above."

INTUBATION OF THE LARYNX—THREE CASES, WITH COMMENTS.

By WILLIAM P. NORTHRUP, M.D.,

INTUBATION of the larynx for diphtheritic croup is [illegible] a recent resource, and is so much under discussion at this time, that it is thought best to add as rapidly as possible to the recorded cases.

In the New York *Medical Journal* of April 3 and September 18, 1886, the writer has recorded nine cases of intubation, and he desires to number the present additional cases X., XI., and XII., and comment on the twelve together.

Of the twelve cases five have recovered. Of the five which recovered all had diphtheritic exudate in the pharynx; all had albuminuria; all had, before intubation, these conspicuous symptoms, viz., croupy cough, croupy inspiration and expiration, dyspnœa, recessions, and absence of vesicular breathing over the lungs behind.

Each case has been examined by two or more physicians, who are prepared to vouch for the accuracy of the observations here recorded.

Of those which died, one, aged five years, died of malignant diphtheria on the third day of its illness, and twenty-nine hours after intubation.

One, aged seven years, died of sudden heart failure on the third day of illness, and eight hours after intubation.

One, aged six years, died of well-marked pneumonia of one side on the tenth day of illness, and five days after intubation.

The four following cases died of extension of membrane into the finer bronchi, and before the development of physical signs of pneumonia.

One, aged five years and three months, died on the fourth day of illness, and thirty-six hours after intubation.

The second, aged four years, died on the ninth day of illness, and four days after intubation.

The third, aged five years, died on the fourth day of illness, and twenty hours after intubation.

The fourth, aged two years, died on the fourth day of illness, and twenty-four hours after intubation.

In these cases the days of illness count from the first observed symptoms, of whatever kind, and the tube has been inserted only when dyspnœa was urgent.

CASE X.—Katie M——, aged five years and two months, a patient of Dr. E. C. Harwood. Died.

On September 16th the patient was suddenly taken with convulsions; temperature, 104½°. The bowels were thoroughly evacuated, and no further convulsions followed. Temperature sank to 99°.

On the second day the temperature was again 99°, a croupy cough had developed, diphtheritic exudate had made its appearance in the pharynx, and by afternoon the respirations had become croupy. Ipecac produced emesis, but no relief of laryngeal symptoms.

Third day.—Patient had a comfortable night. Temperature in the morning was 99⅗°. The exudate of fibrin and pus on the walls of the pharynx had spread, and by 5 P.M. dyspnœa showed that the exudate in the larynx had likewise more fully developed. Five hours later the condition demanded mechanical interference.

At this time the writer saw the case with Dr. Harwood, and made the following observations: Child's face was pale leaden color, with an anxious expression. There was dyspnœa, urgent, and causing marked recessions. Respirations were loud and stridulous, pulse strong and regular. Pharynx contained pseudo-membrane over tonsils and adjacent mucous membranes. There was absence of vesicular murmur over both lungs behind; no râles. Temperature, 101⅗°.

At this time the child was becoming exhausted, and cyanosis was just beginning.

The tube was promptly inserted, and the relief, after moderate coughing, was effectual. In five to eight minutes the child dropped into a tranquil sleep, and breathed quietly and regularly.

On examination of the chest, a few moments later, the vesicular murmur was distinct, low-pitched, and without râles.

Fourth day.—Slept well all night. Took milk with but little laryngeal irritation and little cough. At 10.30 A.M. the temperature had reached 103° in the rectum, the respirations 43 per minute. By 4 P.M. temperature was 105°, and by 6 P.M., twenty hours after intubation, the child's bronchi had become so narrowed by invasion of the membrane as to cause most horrible suffocation, stupor, and at last exhaustion and death.

In this last dyspnœa the inspiration was quick, the expiration prolonged, loud, and labored.

CASE XI.—Eddie V——, aged seven years, a patient of Dr. George D. Bleything. Recovered.

Saturday, September 18th, patient was overtaken with convulsions and symptoms of indigestion, to which he had been subject. On the following day Dr. Bleything observed diphtheritic patches in the pharnyx, and a croupy cough.

On the fourth day I saw the patient. The history was of slow and gradual development of croupy symptoms, unremitting. Respiration was mostly quiet, especially after coughing. Air was entering both lungs freely; vesicular murmur low-pitched; no râles, no bronchial element.

On the sixth day it was reported the child had been restless for twenty-four hours; sleeping for a few moments, then tossing about; having a harsh, dry cough.

Inspiration and expiration were croupy, the former more marked; recessions were distinct above and below; breathing labored. The action of the heart was good. Exudation upon the pharynx disappearing. The examination of the lungs was most interesting. There was entire absence of vesicular murmur everywhere over the chest behind. Over the lower fourth of the left lung were crepitant râles. Over the upper third was rude, or broncho-vesicular, breathing. Over the root, and a little below, much exaggerated bronchial breathing; no dulness. Over the right lung was simply absence of vesicular murmur, and increased bronchial element over the root. The condition of the left lung was very suggestive of beginning inflammation, beyond simple collapse.

Dr. W. A. Hume, who was present, also made an examination, with a like report.

The tube was inserted, and as soon as the coughing paroxysm (five minutes later) subsided, examination was again made. Good, low-pitched, vesicular breathing, free from râles and all bronchial element, was heard over both lungs everywhere, except at the roots of the lungs.

During the cough a large piece of pseudo-membrane was ejected.

The boy seemed large for his years, and it was thought best to insert a larger tube than his age called for. The tube was inserted.

Ten minutes later he was sleeping quietly, his respirations noiseless. At this time his pulse was 120; his temperature, 103¾°, rectum.

After four hours of sleep he was given milk. At each attempt to swallow this he was overtaken with severe coughing, and seemed unable to swallow any of it. During the night the result was much the same. On the seventh day it was thought best to remove the tube for a time, in order to allow the child to swallow food, and, if necessary, reinsert it after two to four hours. The patient was near at hand, and in convenient hours for finding a physician.

The tube was accordingly removed, after having been in the larynx sixteen hours, and relieving the laryngeal symptoms fully. Milk was again offered, and the child eagerly grasped the glass and tried to drink. This time it regurgitated through the nose, and but a small portion reached the stomach. Twelve hours later rectal temperature was 101½°; pulse strong and regular; mod-

erate laryngeal obstruction, cough very hoarse, but in respiration no marked stridor. Vesicular murmur behind was diminished; no râles. It was a question at this point whether or not the tube should be inserted, to relieve the tendency to congestion in the lungs. Patient took two pints of milk in twelve hours; general condition was good. Pulse was 112 to 120, and the respiration 24.

Eighth day.—Pulse, 110 to 128; respiration, 28 to 38; temperature, 100⅘° to 101⅘°, rectum. Larynx became narrowed and gave rise to dyspnœa. After severe paroxysms of coughing, during which occasionally pseudo-membrane was ejected, the breathing was temporarily relieved. Exudation upon the pharyngeal walls was no longer to be seen.

P.M.—To quote from the notes: "Dyspnœa increasing. Larynx seems dry and irritated, and the child makes persistent effort to clear the larynx. Tube reinserted to relieve the dyspnœa and the exhausting cough. Diminished vesicular murmur gives place at once to full, low-pitched, vesicular breathing, and the child becomes tranquil and drops into a peaceful sleep." Opium had been administered, to relieve the cough, without effect.

Ninth day.—Pulse, 112 to 120; respiration, 32 to 36; temperature, 100⅘° to 101⅕°, rectum. Breathed quietly all day; and good, low-pitched vesicular murmur, free from râles, could be heard over both lungs. He swallowed milk with difficulty. Different semi-solids were tried—scrambled egg, frozen milk, corn-starch pudding, etc. These he found much less difficult to manage with a tube in his larynx, and they, together with enemata, nourished him satisfactorily. General condition at this time was very good.

Soon after our evening visit patient coughed out the tube, and after it a piece of pseudo-membrane "the size of a finger."

Tenth day.—At the morning visit the patient was thought to need the tube again. Cough was hoarse (coarsely) and exhausting, dyspnœa moderate, yet sufficient to keep the air from filling the lungs. The left lung again seemed to get less air. At this late date the fear of pneumonia was so great that it was deemed best to facilitate as much as possible the entrance of air, and therefore a tube was again inserted. This time a smaller tube was selected, hoping it might sink deeper into the larynx and not interfere with the act of swallowing so much.

Air entered through it quite as well as through the larger, but swallowing was no more successful.

Eleventh day.—Tube again coughed out after a sojourn of ten hours in the larynx.

Pulse, 100; respiration, 32; temperature, 99⅘, rectum. At first the lung did not fill well, and again the tube was considered. However, the temperature was low (99⅘°), the general condition excellent, and, while we were considering, the child coughed out a large quantity of mucopus, and respiration was thereafter free. I have not seen the patient since.

Albuminuria was present on two examinations in large quantities. From this point the child went on to recovery. There was never complete aphonia during the intervals in which the tube was out, and after its entire removal the voice gradually became more clear for three weeks.

Case XII.—Rose (foundling), aged twenty-five months. Died. Dr. R. J. Stanton kindly assisted in the case of this patient, which was with its paid nurse in Harlem. The nurse reports the general condition of the child as fair; has always had a "bad temper," "been cross-like," but never sick. While out for a walk in the park she caught cold and that night was croupy—*coughed croupy*. Two days later she appeared at the out-door department of the Foundling Asylum, when the diagnosis of membranous croup was made, and the progressive laryngeal stenosis was thought to be in need of the tube.

At 9 P.M., October 9th, the writer saw the patient with Dr. Stanton, and made the following observations: Child was sleeping lightly; head thrown back; face pale and anxious; eyes not fully closed; breathing sixty times a minute, with a harsh, dry, croupy sound, more marked on inspiration; pulse rapid and feeble, and wanting at the moment of inspiration; recessions moderate; entire absence of vesicular murmur over lungs behind; no râles. Diphtheritic exudate over tonsils and margins of uvula.

After a little stimulation the O'Dwyer tube was inserted. This was followed by severe coughing for three to five minutes, during which time a large piece of pus and fibrin exudate was thrown out on a towel, and in seven minutes the child was sleeping tranquilly and breathing quietly. The nurse was directed to allow the child to sleep four hours before offering it milk, in order to allow the larynx to become accustomed to the foreign body. On the following morning, eleven hours after the insertion of the tube, the pulse was 144 per minute, weak and irregular; respiration, 74, noiseless; temperature, 104°, rectal. Nurse reports that the child slept two hours, asked for a drink, which she gave it, and which it swallowed well, and went to sleep again for two hours. Since then she has been restless.

Thirteen hours after the insertion the temperature reached 104⅘°, rectum; respiration, 76; pulse, 144, intermittent and feeble. Examination of chest showed the vesicular murmur less distinct, fine râles at base of left lung, bronchial element at root more marked. Just before mid-day the child coughed up a piece of pseudo-membrane, size of a ten-cent silver piece.

From noon to night the restlessness increased, breathing became more rapid, the temperature crept up, cyanosis and asphyxia, with great restlessness, were soon followed by death.

The tube was in twenty-four hours, relieving effectually all laryngeal obstruction, and on removal after death was found clear and clean. Urine was not examined.

To briefly summarize: The child became croupy on Wednesday night and died on Sunday night. Membrane developed in larynx first, and spread up and down. Tube was inserted twenty-four hours before death.

Clinical Department.

A CASE OF BELLADONNA-POISONING.

Dr. J. B. Kent, of Putnam, Conn., reports the case of a lady, about thirty-six years of age, of rather delicate constitution, who took by mistake one teaspoonful of the fluid extract of belladonna. Dr. Chapin was sent for at once; but not being at home at the time, did not arrive at the bedside of the patient for more than an hour after the dose had been swallowed. Finding an alarming state of things he called Dr. F. G. Sautelle in consultation, and Dr. Seth Rogers was also present. The attending physician had administered, hypodermatically, a dose of apomorphia on his arrival, but without very satisfactory results. One-third of a grain of morphine was then given subcutaneously, and was followed soon after by a second dose of the same amount. Brandy was also given freely by the rectum and subcutaneously. Dr. Kent was called to the case about three hours after the belladonna had been taken, and found the patient very thoroughly narcotized—unable to move a muscle—pulse, 120; respiration, 14 in a minute; pupil fully dilated, and skin thoroughly cyanotic. He suggested the use of oxygen gas by inhalation; but as he was then five miles from home, more than an hour elapsed before the oxygen could be obtained.

The inhalations were begun about four hours and a half after the poison had been swallowed. The patient was then breathing four times in a minute; pulse, 140; entire surface of body a deep purple color. Dr. Sautelle,

who sat near, and watched the pulse and respirations, remarked that the respirations were dropping off at the rate of one every fifteen minutes. After the patient had inhaled about four gallons of the gas a slight change was discovered. The pulse became fuller, breathing deeper and a little more frequent; then soon followed a slight improvement in the color of lips, a slight reddish tinge taking the place of the purple. By this time the eight gallons contained in the bag had been exhausted, and a brief interval was necessary in order to generate another bagful. During this period, of perhaps ten minutes, the pulse and respirations dropped back to where they were when the inhalations began. After about twenty-four gallons of oxygen had been inhaled, however, the improvement was permanent; the pulse at this time being 120, and the respirations about six in a minute. The inhalations were continued as above from this time on, with a perceptible and most satisfactory improvement in all the symptoms. At 10.30 P.M., eight and a half hours after the poison had been taken, the patient had inhaled, in all, sixty gallons of oxygen gas, and was so far restored that it was thought unnecessary to continue the remedy any longer. The patient was now breathing about fifteen times in a minute, and deeply, as though in a profound sleep, though she was yet entirely unconscious; pulse about ninety per minute, and the cyanosis had entirely disappeared.

All those who saw the case were at one in the conviction that the patient would not have survived another hour had it not been for the oxygen gas, whereby it was rendered possible to oxidize the blood, and thus furnish a stimulus to the failing heart and lungs.

SIMS SPECULUM IN DELAY OF THE AFTER-COMING HEAD.

Dr. Robert McC. Lord, of Kansas City, writes: "In pelvic presentations when, after the birth of the body, the head cannot be immediately delivered with safety, and death of the child from asphyxia is imminent, air may be freely admitted to its mouth and nostrils, and pulmonary respiration established, by gentle traction on the posterior vaginal wall with a Sims speculum."

IS RHUS-POISONING A PURELY LOCAL AFFECTION?

Dr. George White, of Chicago, writes: "During the past summer a lady patient of mine, while progressing in her first gestation, suffered from ivy-poisoning; it was the second time she had been so afflicted. The eruption of papules and pustules was confined to the abdomen, arms, and dorsal surfaces of the hands. Fresh butter (the prescription of a neighboring gardener's wife) seemed to be most effective in allaying the inflammation. One of the pustules on the left arm attained the proportions of a well-developed boil. About the time the disease was disappearing labor came on, and a healthy male child was born. On the sixth or seventh day after birth there was noticed on the child's belly an eruption which was identical with that from which the mother had suffered. The rest of the body was clear. Incisions into the pustules and the application of oiled cloths restored the skin to its normal condition in four days. I do not believe the disease was communicated from the mother's arms and body to the child. The nurse had a slight 'washing-soda' rash on her hands and forearms, but at no time were there pustules. The father and mother are young, temperate, and healthy. Both are light in complexion, the lady's flesh being especially delicate. We know how readily a mother can extend constitutional disease to her child in utero. In this case there seemed to be no source of external communication of the malady. Hence the question occurred to me, 'Is rhus-poisoning merely a dermatitis or a constitutional ailment?' If it is a local trouble and communicable only by immediate contact, how could the child's head, neck, arms, breast, back, legs, feet, and hands escape? Is it not probable that with the mother it became constitutional, and then was communicated to the child in utero, and developed in it afterward? Have any of your correspondents had any like experience in this line?"

ASPHYXIA OF THE NEW-BORN.

Dr. R. W. Erwin, of Bay City, Mich., writes: "I wish to add a suggestion to those already given upon the treatment of asphyxia of the new-born. Place the baby over the arm or on the bed with the head and shoulders lower than the rest of the body. Then apply the hand, with the palm full of brandy, to the navel, and rub briskly, carrying the hand over the stomach and heart, thence over the face. Usually there will remain enough in the hand to moisten the lips, nose, and face. The moment the brandy comes in contact with the navel an effort at inspiration follows, which should be further encouraged by light spanking and artificial respiration if necessary. If the one handful of the spirits is not sufficient, apply more. I have succeeded when no response came from suspension of head downward, by alternately dipping the child into hot and cold water, or through artificial respiration. So long as the infant has color, resuscitation is almost certain, if no serious lesions exist. The marbled skin means death. If the face is very livid, do not suspend long. Clear the throat from mucus, and, if necessary, wet the finger with brandy and carry it into the pharynx and draw the tongue forward, so as to uncover the air-passage. The physician should always keep cool, and use any or all the rational measures which the nature of the case may indicate."

QUININE AS AN ANAPHRODISIAC.

Dr. John A. McKinnon, of Selma, Ala., has found in his practice that the continuous use of sulphate of quinine will reduce the venereal desire, and in cases of old age it will destroy the animal propensity completely. He says that he has had cases under observation for several years who took from five to twenty grains daily, not for antimalarial purposes, but because they had formed the quinine habit, and he has found on inquiry of such patients that the venereal desire in them was diminished, impaired, or destroyed. In most cases the subjects would become alarmed at their condition and ask for relief. In the treatment of gonorrhœa in this malarious section, Dr. McKinnon often administers quinine in the inflammatory stage, for the dual purpose of counteracting any malarial complication and to control chordee. It must for this purpose be administered in not less than ten grain doses at proper intervals, and it acts, he writes, in this respect more satisfactorily than camphor, lupuline, or the bromides.

Antipyrine in the Treatment of Ulcers.—Dr. Bosse states that antipyrine is an excellent agent for promoting granulation in old ulcers of the leg (*Berliner Klinische Wochenschrift*). He covers the surface of the ulcer with antipyrine, over this places a layer of salicylated cotton, and retains all in position by means of a tight bandage. The dressing is changed every day. After the ulcer has commenced to granulate well it is treated by touching with nitrate of silver, and then dusting with iodoform.

Cocaine in Angina Pectoris.—Lashkevitch recommends cocaine in doses of one-third of a grain three or four times a day for the relief of angina pectoris. In addition, inhalations of oxygen during the attack are advised.

Progress of Medical Science.

Hemorrhagic Apoplexy and Miliary Aneurisms.—In a series of clinical and pathological memoranda published by Dr. Byrom Bramwell, we find some interesting observations on the above subject (*Edinburgh Medical Journal*, September, 1886). The author's views are in accord with the statements of Charcot and Bouchard, that the immediate cause of the ordinary form of cerebral hemorrhage is usually the rupture of minute (miliary) aneurisms, and that these aneurisms are, as a rule, the result—a late, and, as it were, a secondary result—of a lesion which is widely spread throughout the arterial system of the brain. This lesion, which they have termed diffuse periarteritis, chiefly affects the minute arteries (arterioles), but may also invade the large arterial trunks at the base, and their branches in the meninges, on the one hand, or may extend to the capillaries of the brain on the other. All three coats of the vessel may be involved, but, as a general rule, the lesion progresses from without inward, the outer coat being first and most affected. In this, and also in some other respects, periarteritis differs essentially from ordinary atheroma (sclerotic endoarteritis), which, up to the time when Charcot and Bouchard published their observations, was thought to be the lesion with which cerebral hemorrhage was associated. When an artery affected with diffuse periarteritis is examined microscopically, the most common condition is found to be an enormous multiplication of nuclei in the lymphatic sheath and adventitia, with atrophy and disappearance of the muscular elements of the middle coat, and it is important to note that this atrophy of the muscular fibres is unattended with fatty degeneration. In some cases—and these are probably old-standing cases in which the multiplication of nuclei has at one time been present, but has disappeared—the irregularly heaped-up masses of nuclei in the lymphatic sheath and adventitia are not seen, but the layers of the arterial coat are simply thickened, and present a striated, fibrous appearance, the adventitia being more or less closely dotted over with fusiform nuclei arranged longitudinally with the canal of the vessel. The inner coat is only affected in the later stages of the process; it may, indeed, be quite unaffected even when the other coats are extensively involved. Implication of the inner coat is manifested by multiplication of its nuclei, which lose their ovoid shape and regular arrangement. In the earlier stages of the process the lymphatic space between the lymphatic sheath and the adventitia may remain patent, containing, perhaps, some cellular elements—fatty particles or granules of hæmatoidin—a condition which is by no means peculiar, and which is seen in many other morbid states. When the lesion is more extensive the lymphatic space is often obliterated, and the thickened lymphatic sheath and adventitia are, as it were, fused together. In consequence of the atrophy of the muscular fibres of the middle coat, the resisting power of the wall of the vessel is diminished, and the blood-pressure tends to produce dilatations which may be of various forms—cylindrical, fusiform, moniliform, and saccular—and it is to these dilatations that Charcot and Bouchard have given the name of miliary aneurisms. The fibrous thickening of the lymphatic coat and adventitia, which is seen in some cases, seems to be attended with some compensatory advantages; for it increases the resisting power of the arterial coat, supplying the place, as it were, of the muscular elements which have disappeared. Charcot states that miliary aneurisms are scarcely ever observed where the external coat has reached a certain degree of fibrous metamorphosis. This rule is not, however, without exceptions, as some of his own specimens clearly show. Charcot and Bouchard have detected miliary aneurisms in every case of cerebral hemorrhage (cerebral hemorrhage *par excellence*) which they have examined. The number of miliary aneurisms which are present in any given case varies considerably. In some cases only two or three have been detected, even after the most careful examination, while in others more than one hundred have been counted. These miliary aneurisms, which are distinctly visible to the naked eye, having a diameter of $\frac{1}{125}$th to $\frac{1}{4}$th of an inch, occur most frequently, according to Charcot and Bouchard, in the optic thalami and corpora striata, then in the pons, the gray matter of the convolutions, the claustrum, the cerebellum (especially the parts in the neighborhood of the rhomboidal body), the cerebellar peduncles, and, lastly, the centrum ovale. Miliary aneurisms are most easily observed in the convexity of the cerebral hemispheres. After removing the pia mater from the surface of the convolutions, they are seen as little, spherical, shining grains, not unlike the glomeruli of the kidney, on the summit and sides of the gyri or at the bottom of the sulci. When the aneurisms are situated in the substance of the gray matter, or at the junction of the gray with the white matter, they are best detected by making sections through the brain-substance at right angles to the surface of the convolutions; but even when completely buried in the gray substance, they may often be dimly seen through the brain-tissue as ill-defined, bluish spots on the free surface of the convolutions. Their detection in the walls of recent hemorrhagic cavities is more difficult. The cavity should be laid open by a free incision, and the blood and clot which it contains allowed to escape; the brain should then be placed in a basin of water, which should be frequently renewed, without shaking, by simply inclining the vessel from time to time. In this way the clot, which is adherent to the walls, is gradually detached, and a number of fine, flocculent, vascular filaments are seen attached to the edge of the cavity. On careful examination little globular swellings will be seen on the free extremities of some of the fine vascular filaments. The majority of these swellings are found, on microscopical examination with a low power, to be blood-clots, but some of them may be little globular aneurisms. In some cases the miliary aneurisms, which have been detected adhering to the walls of recent cavities, have been found to be ruptured, and the actual source of the bleeding has in this way been demonstrated. The miliary aneurisms are sometimes round and globular swellings springing from the lateral wall of the vessel; in other cases, fusiform or spindle-shaped, and consisting of a more or less uniform enlargement of a minute artery.

The Vitality of Pathogenic Micro-organisms in Water.—The study of micro-organisms in water is receiving a continually increasing measure of attention, since the impulse which was given to this and all other branches of bacteriology by Koch's now well-known method of gelatin-plate cultivation. For several years past a large number of observations have been made upon the relative abundance of micro-organisms in natural waters of different origin, and upon their removal by various agencies, both natural and artificial. These researches have resulted in the accumulation of a large amount of information concerning the value of filtration and other processes of water-purification; thus the monthly examinations of the London water-supply, made by Dr. Percy Frankland, and published in Sir Francis Bolton's reports to the Local Government Board, show that the river-waters, in the process of storage and filtration, have the micro-organisms which they contain reduced on an average by ninety-five per cent. before reaching the consumer, and a similar reduction has been observed in the case of the Berlin water-supply, which is periodically examined under the superintendence of Dr. Koch. The biological examination of water has hitherto only in very exceptional cases resulted in the identification of pathogenic forms; nor is there much prospect of such forms being discovered, owing to the enormous preponderance of non-pathogenic organisms which must almost invariably exist. This fact does not, however, in any

way diminish the hygienic value of the results referred to above, as, especially in the case of mechanical processes of purification, there can be no doubt that pathogenic micro-organisms are subject to precisely the same influences as the non-pathogenic. The inquiry into the bacteriology of water has not, however, been allowed to rest here; and, since pathogenic organisms are not, under ordinary circumstances, to be found in water, they have, for purposes of experiment, to be introduced into this medium in such quantity that they can be readily detected by plate cultivation; and then their subsequent fate, under varying conditions of temperature, etc., can be observed by the same method of examination. Dr. Percy Frankland calls attention to the results which have been already obtained in connection with this subject, and which shows that, new as is this field of research, a large number of important facts have already been collected by various investigators. The results which have been obtained show that different organisms are endowed with very different capacities for enduring the conditions afforded by waters of various kinds; nor is it surprising to learn that the greatest contrast is presented by the different forms of one and the same organism, as, for example, the bacilli of anthrax and its spores. Just as in their resistance to antiseptics, to temperature, and to desiccation, so in their endurance in water the spores exhibit a vitality far greater than that which is possessed by the bacilli. Thus we learn that Dr. Meade Bolton has shown that the spores of anthrax remained alive in distilled water for upward of ninety days, and in polluted well-water for nearly a year, while when bacilli alone were introduced into some kinds of potable water they perished in the course of a few days. Koch's "comma-bacillus," again, may survive for some days in potable water of the best quality, and in sewage it would appear to find an excellent culture-medium. This organism, moreover, seems capable of adapting itself to the aqueous medium, for when introduced into water a large proportion of the bacilli are generally destroyed, but the remaining ones then undergo multiplication, and Dr. Wolffhügel has found that when these adapted organisms are further transplanted into fresh water, they do not undergo this preliminary reduction in their number, but commence multiplication at once. These results clearly show how some zymotic diseases may be communicated by potable water of even the best quality, more especially if the micro-organisms, which are the causes of the disease, are capable of forming spores, but even in the absence of such spores. This power of adaptation to a particular medium greatly extends the possibilities of vital activity for organisms which are not known to produce spores.—*The British Medical Journal*.

Stenosis of the Descending Aorta.—Dr. Barié (*Revue de Médecine*) has collected all the cases of contraction of the descending aorta of which records were accessible to him. Added to his own observations, these make a total of ninety-two cases, in eighty-seven of which the facts were verified after death by post-mortem examination. He points out that the localization of the disease is invariably in a position intermediate between the ascending and descending aorta, which corresponds to the aortic isthmus of fetal life, and that the constriction is usually single, but at times double, while it may be gradual or abrupt. When very much developed, the contracted portion resembles a funnel with the narrow end downward. The constriction is formed by a simple fibrous thickening of the walls, by thickened folds of the internal tissue, with swellings projecting into the lumen of the vessel; under other circumstances by a transverse septum perforated by a central or marginal opening, or the narrowing may be by two segments of the artery terminating each in an infundibulum, and joined by a fibrous cord, like two cæca in juxtaposition united by a single patent vermiform appendix. The dimensions of the constriction vary greatly. The proximal part of the aorta is generally much dilated, and has several times led to aneurism and rupture; on the distal side of the constriction it is also sometimes dilated, but this is not constant. Usually the large vessels springing from the transverse aorta participate in the dilatation of the proximal part. The ductus arteriosus is almost always obliterated. In eight cases it was patent as in fetal life, and in one case it was aneurismal. Certain lesions of the heart and great vessels result as a consequence of the stenosis, such as dilatation and hypertrophy of the heart, congestion of the head and upper limbs, with diminution of the blood-supply to the body and lower limbs, which latter is obviated by the increase of the anastomoses between the upper and lower parts of the body. In about thirty-eight per cent. of the cases observed, congenital or developmental anomalies were recorded, and the majority of the cases were of the male sex. There is nothing pathognomonic in the physical signs—evidence of dilatation and hypertrophy of the left side of the heart, with murmurs propagated along the aorta, and distention of the superficial vessels of the thorax being most common. The pulsation of the arteries is increased in the neck and upper extremities, and diminished or absent in the lower limbs, where it is always retarded. The course of the disease depends on the state of the cardiac muscle; the progressive is not grave, and the average age at death in the cases observed is thirty four. The diagnosis is difficult, and depends on the presence of the dilated vessels aforesaid, and on the difference between the upper and lower circulation; it must be distinguished from mediastinal tumors, aneurisms, and all causes of intrathoracic pressure. All the theories of the origin of the disease involve, on final analysis, an arrest of development of the aortic isthmus, and this appears to be an effect of premature obliteration of the ductus arteriosus, which causes traction and consequent contraction of the aorta.

Case of Sudden Death from a Blow on the Testicles.—Dr. Ivanoff has placed on record the following case: A man, aged between forty-five and fifty, fought with a woman on the street. During the fight the woman dealt a violent blow on his genital organs. The man shouted, "I am dying," staggered, and fell insensible. The author, who was almost immediately fetched to the spot by a policeman, found the patient lying on his back, motionless, pulseless, and breathless, his face, neck, and scrotum being very red. Not a trace of ecchymosis or any other sign of injury was detected anywhere in the man. Since there seemed to be heard a slight cardiac murmur, and a slight tremor to be felt in the carotids, Dr. Ivanoff, without any delay, resorted to artificial respiration. But neither forty-five minutes' manipulations, nor electrolization, could establish the man's breathing. The congested parts soon became livid, and every sign of life extinct. At the post-mortem examination there were found only intense congestion of the meninges and brain, congestion of the lungs, with numerous punctiform ecchymoses, accumulation of dark-red fluid blood in the cardiac cavities, congestion of the stomach, liver, kidneys, and testicles. Everything else was quite normal. Basing his conclusions on all the facts as sketched above, the author stated (forensically) that death followed from syncope, which had been brought about by sudden, violent pain, caused by a blow on the testicles.—*London Medical Record*.

A Large Infant.—Dr. R. C. MacDonald, of Boston, writes that on October 5, 1884, he delivered a woman of a female child weighing eleven pounds. On March 13, 1885, several measurements were taken, giving the following dimensions: Circumference of head, 17 inches; of chest, 19; left arm, 9¼; forearm, 6½; thigh, 11½; leg, 8; and waist, 20¼. The length of the child was 26 inches. The weight could not be ascertained. The child was perfectly healthy, and though but five months old, could walk pushing a chair before it, and could say "papa" and "mamma."

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INTESTINAL LESIONS DUE TO THE ACTION OF CORROSIVE SUBLIMATE.

SINCE the general adoption of corrosive sublimate as an antiseptic in surgical and obstetrical practice attention has been called to the intestinal lesions attributable to the action of mercury, and numerous instances have been cited in which injurious effects were supposed to follow the external use of bichloride solutions. When, however, as in the case of surgical operations or in childbed, so many injurious causes are at work, it is not always possible to determine with certainty to which any particular symptoms or lesions may justly be attributed.

Some experiments on animals, instituted for the purpose of settling this question, have recently been conducted by MM. Charrin and Roger, and the results were embodied in a paper presented at a meeting of the Société de Biologie (*L'Union Médicale*, No. 117, 1886). These gentlemen employed aqueous solutions of corrosive sublimate of the strength of 1 to 1,000 and 1 to 4,000, introduced subcutaneously or into a vein. They found that a single dose of moderate size was more productive of injurious effects than was a much greater quantity given in the course of several days in divided doses. The animals presented no special symptoms indicative of intestinal lesions. They became emaciated, had albuminuria, and in rare instances diarrhœa, but there was never any hemorrhage from the bowel. None of the animals died from the effects of the drug, but they were killed at progressive intervals so that the course of the intestinal lesions might be more readily determined. These lesions were always located in the large intestine, and more particularly in the ascending colon and cæcum, though in exceptional cases the proximal face of the ileo-cæcal valve was also affected. The first toxic effects were shown by minute petechiæ, which were also found in the mesentery and peritoneum, on the surface of the kidneys and in the lungs. At a later period the hemorrhage was visible as small areas of ecchymosis, and as submucous streaks of blood, about half a line in width and from several lines to an inch in length, corresponding in direction to the long axis of the intestine. Finally the ecchymoses became more extensive, and ended by breaking down in their central portions, forming black-looking eschars, which became gradually detached, leaving shallow ulcers. In the latter case traces of inflammation were often observed in the corresponding portions of the peritoneum, but perforation of the intestine was never seen.

The principal lesion would thus seem to be hemorrhage, which separates the mucous membrane from its attachments to the other coats, and deprives it of its nutrition. The ulcerations are not due to alterations of the glands, caused by the elimination of the poison, but, as seen above, to defects in nutrition of portions of the mucous membrane and the consequent death and separation of these areas.

In order to produce these results in man a single dose of three and a half grains, or the larger dose of nine grains, given in divided amounts in the course of five days, would be required. It could scarcely happen that so large a quantity of corrosive sublimate should be absorbed from the surface of a wound during irrigation with solutions of the ordinary strength. It is not improbable, however, that man is much more susceptible to the action of mercuric chloride, in proportion to his weight, than are the smaller animals. But even admitting the possibility of hemorrhage under the mucous coat of the intestine, caused, under certain circumstances, by absorption of sublimate solutions, nevertheless the chances of such an accident are slight, and would not warrant the rejection of so valuable an antiseptic in the treatment of wounds. It is well, however, to remember that carbolic acid tends to retard the elimination of the bichloride of mercury by the kidneys, and hence it is better not to employ these two antiseptics at the same time. For, although the lesions are not glandular, nevertheless increased excretion of the mercurial through the intestine would doubtless tend to aggravate the submucous hemorrhages.

NOT A GOOD OPENING FOR A PHYSICIAN.

THERE are not many places in this country which may be said to present very promising openings for physicians, but some would seem to offer even less inducement to the young medical aspirant than others. A correspondent writes us from Southern Kansas that that portion of the world is already only too amply supplied with doctors of all sorts and conditions, and of all grades of talent and experience. Not only, it would appear, are the cities and settled parts of the State crowded, but even the open prairies are overrun with doctors, where as yet a grasshopper with a broken leg affords the only opportunity for the exercise of the healing art.

Our correspondent writes: "As a result of our rapid railroad building, new villages are being located every few days, and it is not the rarest of sights to see one or two physicians hovering like shadows around a town which for the time being exists only on paper. These 'too previous' aspirants frequently board at country houses, daily visiting the patch of waving prairie-grass, the site of the prospective metropolis, and waiting sometimes for weeks before buildings are erected in which offices can be had. The other day I overheard a travelling man urging a physician to move *at once* to a new town just located on an extension of the Santa Fé Railroad. The town at present is a prosperous cornfield—the railroad will reach it in three months. By that time, perhaps, half a dozen buildings will be in process of erection."

There is no law in Kansas which properly regulates the practice of medicine, and consequently quacks driven out of other States find there a welcome refuge, where they may practise their self-taught art in peace, if not in plenty. Some of these men will examine the patient and furnish all the necessary medicines for from twenty-five to fifty cents, and will make a visit at a distance of three or four miles for a dollar. But as no time or money has been spent in the acquirement of the knowledge which is by some deemed necessary for a physician, they probably receive all or more than their services are worth. They are undoubtedly able, however, to write a prescription for spiritus frumenti, which we understand is now the most popular drug in Kansas, and consequently they are not wholly without their use to the community.

The following is a picture of one of these ornaments of the profession, drawn not wholly from the imagination:

"His education evidently never cost him anything, for usually he hasn't any. His library might most likely be stowed away in his trousers pocket, and still leave room for the indispensable pipe and twist of home spun tobacco. His whole armamentarium consists of half a dozen bottles, of all sizes and shapes, poked into various nooks and crannies about his clothing. He has no instruments or appliances, and he disdains surgery, on the same principle that the negro regarded the rabbit he couldn't get, as 'dry meat anyhow.' He scorns 'book larnin',' knows how to look very wise and oracular when occasion requires, and is never tired of relating wonderful cures, and boasting of his 'extensive experience.' He has few financial embarrassments. Most likely he is living on the 'quarter' he 'entered' years ago; and while he is dangling his heels against a dry-goods box and retailing medical lore to his admirers, his wife is probably at home herding the cow or digging the winter's supply of potatoes."

But in addition to the sharp competition with quacks there are other drawbacks which physicians are compelled to meet in Kansas. The country is healthy much beyond the average of adjoining States, and the farms are large—from one hundred and sixty acres upward—making the rural districts comparatively thinly settled. "The incomes obtained by even sober, industrious, reputable physicians are, outside of the large cities, small. Probably seventy-five per cent. do not obtain five hundred dollars a year from their professional work."

This is, indeed, a discouraging picture which our correspondent draws, and it is one that is not calculated to incite many physicians to emigrate to Kansas. Yet many in the East would esteem themselves fortunate were they in the receipt of an income as large, proportionately to the cost of living, as that of the bulk of the profession in Kansas. The fact is, as is well known, the profession is overcrowded everywhere. Even of educated regular physicians there are too many in proportion to the population, and when to this number are added the hordes of quacks, with or without diplomas, the competition is too great, and some must go to the wall, while others struggle along, barely earning their daily bread, and regretting when too late that they had not fitted themselves for some other more lucrative calling.

DISPENSARIES THAT ARE NOT NEEDED.

New York City has over forty free dispensaries, in which about 350,000 patients, or one-fourth the population, receive treatment annually. The number of dispensaries is continually increasing. Within the last three or four years we recall the establishment of four institutions, each of which treats already not far from 5,000 patients annually. Besides this a large number of smaller dispensaries are continually cropping up, to lead a more or less thriving existence.

We need not say, in view of these facts, that the dispensary system is being overdone, and that it is working injury both to the poorer classes and to the profession.

An excellent illustration of how these new dispensaries originate is shown in the present attempt to organize an "Out-patient Department" in connection with the Presbyterian Hospital. This hospital is situated in the brown-stone district, at least half a mile from a tenement-house population, and with no easy means of communication. The sick must either walk to the place or come in carriages.

In the neighborhood are already two large dispensaries, Mt. Sinai and the Northeastern, and several smaller ones, treating annually over 65,000 patients. The establishment of another dispensary is most unnecessary, and is an entirely gratuitous offer to the poor of free medical service. While it is established in the name of charity, it is in reality meant as a "feeder" to the hospital, so that at the time of the annual report the managers can "point with pride" to the larger number of patients treated and "benevolent work" done, with a request for correspondingly larger subscriptions. Such unnecessary dispensaries as this are simply for the glorification of hospital managers, and to the injury of the poor. They are already discountenanced by the profession, and it is quite time that charitable people understood the true inwardness of the matter. In the case of the Presbyterian Dispensary that is, or is to be, there is not even the excuse of a need for clinical instruction. It is another of the too numerous charities that are conceived in hypocrisy.

FERRAN'S LATEST WORK ON CHOLERA.

We have received a volume of upward of 350 pages, entitled "La Inoculacion Preventiva contra el Colera Morbo Asiático," written by Dr. James Ferrán, with the assistance of Drs. Gimeno and Pauli, in which is contained the complete history, from the author's point of view, of the so called preventive cholera inoculations. The work is divided into six parts, in which are discussed the doctrine of parasitism, the nature of microbial infection, the effects upon the organism of attenuated virus, the nature of the symptoms caused by cholera inoculation, the mode of procedure employed in "cholerization," and the value of the same in preventing the disease. The last part contains the reports of the various commissions sent to study Ferrán's method, and of the individual investigators who visited Spain at the time of the cholera epidemic, to satisfy themselves concerning the value of inoculation. The volume ends with an appendix containing the statistics of cholerization as practised in the different towns visited by the scourge.

These statistics were presented to our readers at the time when they were first published in separate form, and we expressed our conviction then that they were not sufficiently strong to warrant us in accepting without further proof the author's assertions. We need not refer to these again, but will review briefly Ferrán's conclusions concerning the present state of the question, leaving the reader to judge as to the soundness of the author's argument.

It is time, he thinks, now that the period of heated discussion has passed, to review the subject calmly and judicially, and to pass upon its merits without bias and without passion. He recognizes the fact that his theories have not met with the universal acceptance which he would wish that they might, and he is fully aware that he is looked upon by many as a "vulgar charlatan;" yet he believes that an impartial study of his methods, and of the results obtained, will convince anyone not blinded by prejudice or jealousy that he is right. The statistics are before the world, and they can be denied only by impugning the credibility of the physicians, municipal authorities, and parish priests who have certified under oath to their correctness. The whole question, he maintains, rests upon the acceptance of two propositions, viz.: 1. Does preventive inoculation by cultures of the comma-bacillus rest upon a rational scientific basis? 2. Do the results thus far obtained warrant the belief that Ferrán's prophylactic method is the true one? Naturally the author himself would answer these two questions in the affirmative, and he believes that no impartial critic can do otherwise.

Whatever may be the final judgment of the scientific world upon this method, we believe that Ferrán is sincere in his convictions, and we only wish he were as scientific in his methods as we believe him to be honest in his intentions.

TREATMENT OF PHTHISIS BY RECTAL INJECTIONS OF SULPHUROUS GAS.

M. L. Bergeon has communicated to the Académie des Sciences the description of a new therapeutic measure, from which, he informs us, he expects great results. The measure is based upon the physiological fact established by Claude Bernard, that the introduction of toxic substances by the rectum does not offer so much danger as when introduced by the mouth, so long as pulmonary elimination is not interfered with.

M. Bergeon also established the fact that a current of pure carbonic acid gas can be safely introduced in very large, and indeed almost indefinite, amount by the rectum, provided it be done slowly and with proper precautions.

After trying various agents, such as balsams and antiseptics, the experimenter finally settled on the sulphurous waters as promising to do the most. A current of four to five litres of carbonic acid gas was passed through from half a pint to a pint of sulphurous water, and then introduced twice daily into the intestines.

The results of applying this method in phthisis were: (1) after some days a diminution, amounting almost to suppression, of cough; (2) a profound modification of the quality and quantity of the expectoration; (3) a suppression of the sweating, and a gradual disappearance of moist râles; (4) an improvement in the general condition, both in the early stages and in confirmed phthisis.

M. Bergeon thinks that his results have been sufficiently encouraging to warrant his asking that they be "controlled" by other physicians.

CUTTING THE DIAPHRAGM IN OPERATIONS FOR EMPYEMA.

In the *Archives generales de Médecine* for September Dr. F. Lagrange, of Bordeaux, calls attention to an accident that may occur in connection with the operation for empyema. As the tendency to open the chest in severe empyema is growing, under the stimulus of antiseptic surgery, the lesson of M. Lagrange's case and of the others which he has collected is timely. The patient in question had suffered from acute purulent pleurisy, and had been aspirated several times without producing any improvement in his condition. An incision was therefore made in the eighth intercostal space on the left side, and a large accumulation of pus was removed. The patient died next day with symptoms of peritonitis. A post-mortem examination showed that the incision had penetrated through the diaphragm into the abdomen.

The author collects a number of cases in which a similar accident has happened, and this not only when simple incisions were made, but also when the trocar had been used or a rib resected. The diaphragm has been cut through by Hanot in a puncture and incision in the eighth intercostal space, by Girgensohn in an incision in the sixth intercostal space. Brunnische drove a large trocar through the tenth interspace into the abdominal cavity. Reynaud and Dieulafoy did the same, making the puncture in the ninth space. Jaccoud drove a trocar through the eighth intercostal space directly into the heart (*Cliniques Médicales de la Pitié*, 1884). In resecting the rib the diaphragm has been incised by Kirmisson (tenth rib), Bouilly (ninth), Leeseman (fifth), and Wagner (tenth).

It appears, therefore, that the diaphragm in suppurating pleurisy is not always depressed, but may even be elevated and adherent to the chest-wall. Authorities differ diametrically as to whether this condition can be diagnosticated by physical signs before the operation.

At any rate, the practical conclusion drawn is that in the operation for empyema the incision should never be below the fifth intercostal space. It should be remembered that French writers have almost uniformly recommended low incisions, *i.e.*, in the ninth, tenth, or eleventh intercostal space, Moutard-Martin being the only author quoted as recommending even the eighth interspace. American physicians have generally made the incisions somewhat higher.

THE LESIONS OF THE SKIN IN SCARLATINA.

It is generally supposed that the anatomical changes in the skin in scarlet fever are confined to the superficial layers; but a Russian physician, Dr. Mandelstam, of Kazan, has recently made a series of investigations, quoted in *El Sentido Católico*, the results of which would seem to show that the lesions are much more deeply situated. He examined microscopically numerous sections of skin

taken post-mortem from children with scarlatina, who died from collapse, intercurrent diphtheria, or nephritis.

As a result of these investigations the author states that the pathological process is of an inflammatory character, and involves the horny layer, the rete mucosum, the papillæ, and the connective tissue of the corium. It is manifested by a more or less intense hyperæmia, accompanied, in certain cases, by œdema of the subcutaneous connective tissue, and infiltration of the lymphoid elements. The sudoriferous glands are also affected. Their limiting membrane is swollen and their ducts are obstructed by detritus, formed by the destruction of the epithelial cells. There is also an abundant infiltration of leucocytes in the periglandular tissues. In no instance did Dr. Mandelstam find the verticillium candelabrum, asserted by some to be the specific micro-organism of scarlet fever.

This is an interesting subject for further investigation, for the cutaneous lesions have not hitherto been regarded as so important or so extensive as this observer has found them to be.

PROGRESSIVELY INCREASING MORTALITY OF THE CÆSAREAN OPERATION IN THE UNITED STATES.

Dr. Robert P. Harris states, as a result of the study of statistics collected by him, that he finds the mortality, in this country, of the Cæsarean operation is greatly increasing. In the decade 1846 to 1855, for example, there were 25 operations, with 12 women and 13 children saved. These figures have gradually grown worse, until in the years 1876 to 1886 the record is 37 operations, with only 8 women (?) and 16 children saved.

On the other hand, during the past year European operators have saved 18 out of 20 women, and 19 out of 20 children. Dr. Harris thinks that our obstetricians lack in a knowledge of pelvimetry.

Dr. Harris got his European statistics presumably from journals only, while of his American statistics nearly one-half were communicated privately. Hence his comparison is perhaps not quite fair.

ADVERTISING OPERATIONS IN THE PAPERS.

The suggestion of the Committee on Ethics, of the Medical Society of the County of New York, concerning repression of the growing tendency to publish surgical operations in the newspapers is timely, and should receive the unqualified support of every practitioner of medicine and surgery. The names of everyone of those who have heretofore winked at this breach of propriety and good sense are well known, and whenever the subject is brought up they are promptly enumerated as the recognized violators of what honorable professional gentlemen endeavor to sustain and maintain. These trenchers upon the good name of the profession can, with perfect safety, assure themselves that they do not occupy an enviable position.

THE QUESTION OF ADVERTISING A SPECIALTY.

A correspondent writes: "Will you please inform me, as soon as convenient, whether the American Medical Association, at their last meeting, changed the Code of ethics, so that a specialist can state on his card or sign his specialty."

The American Medical Association has made no change in its Code of Ethics, but the fountain-centres of ethical knowledge connected with the Association in question have declared that physicians may print on their cards the announcement, "Practice limited to ——," whatever specialty the physician does limit himself to.

This practice, however, is not sanctioned by the profession in general, and fortunately is not widely adopted. It opens the way to a great deal of abuse, and may speedily bring the physician to the level of the ordinary advertising charlatan.

News of the Week.

The Cholera in New York.—Asiatic cholera has reached New York at last, but fortunately it was brought in the luggage of an enterprising mycologist, hermetically sealed, and confined to the innutritious surface of sterilized agar-agar.

A Game of Baseball was played last week between the students of the College of Physicians and Surgeons and those of the Homœopathic College of this city. The disciples of regular medicine were sadly beaten by their light-pellet opponents.

The State of Tennessee hopes to have a law regulating the practice of medicine. A committee of the State Society has been appointed to prosecute the matter, and a circular presenting the subject has been issued to the medical profession of Tennessee. Dr. F. M. Sim is the efficient chairman of the committee.

Massage.—Dr. Octavius Sturgis thinks that the massage agitation is going rather too far, and that the field of usefulness of this measure is not wide. He especially ridicules the idea of having massage schools, and thinks that persons with any natural aptitude for the practice can learn it in a few lessons.

Venereal Infection Pronounced a Crime.—Some consternation may be caused among a certain class by a recent judgment of Justice Wills, of the Central Criminal Court, England. The charge against the prisoner was on two counts, one with having had carnal knowledge of an imbecile woman, aged eighteen, and another, under 24 and 25 Vict., c. 100, s. 47, for a "fraudulent assault" upon the same woman, occasioning her actual bodily harm. The harm done was the wilful infection with syphilis. The prisoner was found guilty on both heads, and sentenced to two years' imprisonment for the first, and five years for the second. The more remarkable piece of information is that a man who has immoral sexual connection with a woman, knowing himself to be suffering at the time from gonorrhœa or syphilis, is liable to prosecution and penal servitude.

Hydrophobia does not exist in Lapland; but two dogs brought from that country having been inoculated by M. Pasteur, contracted rabies, proving that Lapland dogs are not refractory to the disease.

South Africa is agitating the question of establishing a Frontier Medical Association.

Officers of the Washington Obstetrical and Gynecological Society for the ensuing year are: A. F. A. King, M.D., President; S. C. Burey, M.D., and W. W. Johnston, M.D., Vice-Presidents; H. M. Cutts, M.D., Recording Secretary; S. S. Adams, M.D., Corresponding Secretary; George Byrd Harrison, M.D., Treasurer.

New York Post Graduate Medical School and Hospital.—Dr. David C. Bryan of the Almshouse Hospital, New York, has been appointed Demonstrator of the Normal and Pathological Anatomy of the Nervous System in the New York Post-Graduate Medical School and Hospital.

Chloral Hydrate as a Vesicant.—Dr. Ivanovski recommends chloral hydrate as a vesicating material. He takes a piece of adhesive plaster and puts in the centre of it some powdered chloral, taking care to leave an uncovered margin. The plaster is then held over a flame until the chloral is melted, and is then applied to the previously oiled skin. In from ten to fifteen minutes a large blister will be formed, at the expense to the patient of only a slight burning sensation. The chloral should not be allowed to remain in contact with the skin longer than fifteen minutes, as there is then danger of causing ulceration.

Inter-State Notification in Infectious and Contagious Diseases.—The following resolutions, presented by the National Conference of State Boards of Health, were adopted by the American Public Health Association at Toronto, October 8, 1886:

Whereas, It is necessary for the protection and preservation of the public health that prompt information should be given of the existence of cholera, yellow fever, and small-pox; be it

Resolved, That it is the sense of the National Conference of State Boards of Health that it is the duty of each State, provincial, and local board of health, in any locality in which said diseases may at any time occur, to furnish immediately information of the existence of such disease to boards of health of neighboring and provincial States, and to the local board in such States as have no State board.

Resolved, That upon rumor or report of the existence of pestilential disease, and positive definite information thereon not being obtainable from the proper health authorities, this Conference recommends that the health officials of one State shall be privileged and justified to go into another State, for the purpose of investigating and establishing the truth or falsity of such reports.

Resolved, That, whenever practicable, the investigations made under the preceding section shall be done with the co-operation of the State or local health authorities.

Resolved, That any case which presents symptoms seriously suspicious of one of the aforenamed diseases, shall be treated as suspicious, and reported as provided for in cases announced as actual.

Resolved, That any case respecting which reputable and experienced physicians disagree as to whether the disease is or is not pestilential, shall be reported as suspicious.

Resolved, That any case respecting which efforts are made to conceal its existence, full history, and true nature, shall be deemed suspicious and so acted upon.

Resolved, That in accordance with the provisions of the foregoing resolutions, the Boards of Health of the United States and Canada represented at this conference, do pledge themselves to an interchange of information as herein provided.

Irving A. Watson,
Secretary American Public Health Association.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 25, 1886.

Daniel Lewis, M.D., President, in the Chair.

The *Comitia Minora* reported that the delay in the publication of

THE MEDICAL DIRECTORY

was presumably due to causes which could not be controlled by either the editor or the publishers, and that it was believed that, in the light of the experience now obtained, the book can be published next year so as to be satisfactory to the large majority of its readers.

THE TREASURER'S REPORT

showed a balance in the treasury of $385.41.

THE REPORT OF THE BOARD OF CENSORS,

together with the report of the Counsel, W. A. Purrington, Esq., showed that the work of prosecuting illegal practitioners has been carried on with unabated success, and that over two hundred cases have been investigated, and all who have been guilty of violation of the law have been convicted and punished.

THE REPORT OF THE COMMITTEE ON HYGIENE

showed that, aided and sustained by the Health Department, the Committee had obtained the system of drainage of the whole Croton area, and the removal of all the nuisances which polluted the Croton water-supply.

However imperative it might be to have more water, the committee insisted that the *new* supply should be as pure as money and skill could make it, and that the purity of the old supply should be improved.

THE REPORT OF THE COMMITTEE ON ETHICS

suggested that some action be taken by the Society *to repress the growing tendency to report surgical operations in the lay press.*

The Committee on Prize Essays reported that no essays had been submitted.

OFFICERS FOR THE ENSUING YEAR.

President—Laurence Johnson, M.D.; *Vice-President*—Frederick R. S. Drake, M.D.; *Secretary*—Wesley M. Carpenter, M.D.; *Assistant Secretary*—Charles H. Avery, M.D.; *Treasurer*—Orlando B. Douglas, M.D.

Censors—Daniel Lewis, M.D., H. T. Peirce, M.D., W. E. Bullard, M.D., W. O. Moore, M.D., and J. S. Warren, M.D.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Drs. L. B. Bangs, S. S. Burt, A. N. Brockway, C. E. Bruce, J. L. Corning, H. E. Crampton, A. F. Currier, W. B. De Garmo, O. B. Douglas, E. D. Fisher, G. M. Hammond, N. J. Hepburn, L. E. Holt, H. P. Loomis, W. M. McLaury, J. A. Moore, W. O. Moore, P. A. Morrow, H. T. Peirce, W. C. Phillips, C. C. Rice, F. W. Ring, S. O. Vander Poel, R. Van Santvoord.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 21, 1886.

A. JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THIRTY THOUSAND DOLLARS FOR THE ACADEMY.

Dr. GEORGE A. PETERS, Secretary of the Board of Trustees, reported that the Academy had received five thousand dollars from the estate of [illegible] that it had received, through the President, a check from MRS. ANNA WOERISHOFFER for twenty-five thousand dollars in memory of her husband, Mr. C. [illegible].

THANKS TO MRS. WOERISHOFFER.

DR. FORDYCE BARKER offered a series of resolutions extending the warmest thanks and gratitude to Mrs. Woerishoffer for her most generous gift, and also providing for the entry of the names of Mr. and Mrs. Woerishoffer in the books of the Academy, as benefactors.

In the course of a few remarks on the resolutions Dr. Barker said that only *thirty-nine* more such subscriptions as this were required to furnish the *million of dollars* which he bespoke for the Academy in his address on retiring from the presidential chair, and he felt quite sure that it was entirely through the influence of the present incumbent, Dr. Jacobi, that the munificent donation just received had been obtained.

The Statistical Secretary, DR. A. B. JUDSON, announced the death of

JAMES ANDERSON, M.D.,

ex-President of the Academy, at the advanced age of eighty-seven years. He was continuously in office from the years 1849 to 1875, and was a generous contributor to both its library and building fund.

THE PRESIDENT wished to state that neither the Secretary nor the President received a personal notice concerning the death of his distinguished predecessor in office, Dr. Anderson, and thus no official notice of his death and funeral appeared in the newspapers.

The Secretary also announced the death of Dr. William Henry Dudley, of Brooklyn, N. Y.

DR. JOHN C. PETERS, Chairman of the Library Committee, reported that

THE LIBRARY HAD RECEIVED

since the last meeting three hundred and five bound volumes, of which two hundred and thirty-four were from the library of the late Dr. Alfred S. Purdy.

PULMONARY EMPHYSEMA.

DR. FRANCIS DELAFIELD then read a paper on the above subject (*vide* page 477).

DR. E. DARWIN HUDSON, JR., regarded the paper as essentially a pathological presentation of the subject. He had seen and studied a large number of sections of emphysematous lungs, but the illustrations which, to his mind, gave the most definite description of the disease had been those of Waters, of Liverpool. Uniting the clinical with the pathological history of the affection, he was still of the opinion that emphysema is essentially a dilatation of the terminal bronchi and air-vesicles, and rarefaction of pulmonary structures. He thought that certain cases of rapidly developing emphysema gave an instance that could hardly be explained by the theory of chronic inflammation. Also, the results of treatment had confirmed the theory that emphysema is associated with mechanical causes. The positive results of treatment by the pneumatic cabinet, he believed, had shown that emphysema is a disease, in a large number of cases, in which there is a loss of resiliency in the structure of the air-sacs. Certainly, there was no more perplexing disease to treat than pulmonary emphysema. It seemed to him that the illustrations given by the author of the paper showed a complication of diseases—dilatation of air-sacs with mucus, and submucous inflammation and tubercles.

DR. HEITZMANN said that it is now about fifty years since the history of pulmonary emphysema was made out exactly, through the efforts of Rokitansky. The clinical features are just as well known, and he learned them exactly as Dr. Delafield had given at the beginning of his paper, and as they exist in text-books. He had also examined a large number of lungs in the condition of emphysema, and it seemed to him, from what had been shown upon the screen, that Dr. Delafield either had not seen cases of pure substantive emphysema, or had not demonstrated it; for there was no substantive emphysema at all in most of the sections, but merely a combination of emphysema with chronic interstitial pneumonia, tubercle, etc., as Dr. Hudson had said. Dr. Heitzmann said that he had specimens which would show pure substantive emphysema without the least trace of inflammatory process, and he therefore thought that there was not the least reason for discarding the old views as to its origin. He did not see why resort should be had to something that could not be proved, that is, contraction of arteries, to explain the disease.

DR. VAN SANTVOORD had recently had two cases which appeared to bear out Dr. Delafield's views with regard to the exceeding gravity of the affection, and which overturned his student ideas concerning its trifling importance. The only point to which he would refer was the use of caffein as a cardiac stimulant. The right heart, in both cases, was very much embarrassed, and secondary venous congestion occurred, as it frequently does long before tricuspid regurgitation exists, mentioned by Dr. Heitzmann, so as to be recognizable by auscultation. In these cases caffein had served him better than any other remedy that he had employed.

THE PRESIDENT asked if the change which Dr. Delafield had described was at all analogous to what occurred in the larger bronchial tubes with bronchiectasis. What occurred there as the result of inflammation had taken place, in the specimens which he had seen, near and around the air-cells.

Again, are all cases of emphysema of the same nature? Some cases occur acutely, a part of which are transient and a part become permanent.

With regard to treatment, he would say that the iodides would be proper remedies to use in those cases which result from chronic interstitial inflammation, because they act as absorbents.

DR. F. A. CASTLE referred to the possible utility of the calcium chloride in promoting absorption of connective-tissue formations, and also to the value of remedies that relax involuntary muscular fibre present in the coats of the blood-vessels. For example, since the use of nitrite of amyl patients had experienced such relief from the distressing symptoms of pulmonary emphysema, as would seem to indicate that the seat of the trouble was in the blood-vessels.

DR. DELAFIELD, in closing the discussion, said he intended that his paper should have a clinical standpoint, as he thought it hardly possible to disassociate the two conditions, the clinical and the pathological. His clinical ideas of pulmonary emphysema coincided with the conditions of the lungs which he had found after death, and the results of his treatment of the disease seemed to him to be fully compatible with the views which he had advanced and the conditions of the lungs that he had illustrated, and the specimens were taken from cases in which the diagnosis was perfectly plain.

With regard to caffein, he regarded it as a good drug for the purpose mentioned by Dr. Van Santvoord, as it stimulated the right much more than the left side of the heart. Convallaria acts very much as does caffein.

The condition of bronchiectasis, referred to by Dr.

Jacobi, was quite analogous to the change which he had described as involving the parenchyma of the lung. In his paper reference was made only to *chronic* emphysema; the cases of sudden development did not enter into his consideration of the subject.

With regard to iodide of potassium, which is one of the most reliable drugs, it may be supposed that it does part of its good by its effect upon the blood-vessels. One of its effects is to relax the smaller arteries and capillaries. Still further, there is another drug of the same class which acts in the same way, by dilating the smaller arteries and the capillaries, and that is chloral hydrate; in large doses it will check the asthmatic attacks, and in small doses it will very much moderate the constant dyspnœa.

The Academy then adjourned.

SECTION IN PRACTICE.

Stated Meeting, October 19, 1886.

ALFRED L. LOOMIS, M.D., LL.D., CHAIRMAN.

CARLSBAD FROM A MEDICAL POINT OF VIEW.

DR. R. C. M. PAGE read a paper (see p. 479) on the above subject which was discussed by DR. T. MUNSON COAN, who endorsed the view that the beneficial results obtained by treatment at Carlsbad were due to the combined effect of the waters and the hygienic measures. He thought it was an error, perhaps, to assume that the combined influence could be obtained at home. In theory it could, but practically it had not and could not at present be applied, for the patients would not adopt at home the plan of treatment which they would willingly subject themselves to at these watering-places.

The discussion was continued by DR. A. JACOBI, who said that patients would not obey the physicians' orders while at home, but would go to Carlsbad or elsewhere, and get their money's worth in a certain degree of recovery. He related a case of diabetes, occurring in a woman who was fond of good living and would not restrict her diet. She went to Carlsbad under his directions, and, although during the last twelve years her urine had contained sugar in quantities as high as five and seven per cent., she returned to New York with only a trace of sugar in the urine, but with the admission that the physician at Carlsbad had her do just what her physician at home had been trying to get her to do for years, and had not fully succeeded.

In a large number of cases sugar in the urine is temporary, and, when occurring in fat persons with gouty tendency or habit, is due to hepatic disorders, which can be benefited by treatment at Carlsbad. The fact remains, however, that patients will not do at home what they will do there. As a substitute for these natural mineral waters he had used, with good results, sulphate of soda with sulphate of magnesia, well diluted with plain water or Apollinaris, given before meals in cases of acid dyspepsia, to neutralize acids other than those belonging to normal digestion. Benefit may be derived in this way, even though pepsin with muriatic acid may be required after meals to complete the digestive process.

DR. CHARLES A. DOREMUS said that he had analyzed Carlsbad salts prepared and sold at Carlsbad, and also Carlsbad water, and had found that the salts were almost wholly sulphate of soda, and that the proportion of salts to the proportion of alkaline carbonate is very much greater in the water than exists in the Sprudel salt. The salts, therefore, do not represent the water. If pure Glauber salt be added to the alkaline carbonate and common salt, it will more nearly approach the natural water than the Carlsbad salts sold in the drug stores.

DR. KINNICUTT had found a very good formula to consist of 50 parts of sulphate of soda, 20 parts of bicarbonate of soda, and 10 parts of chloride of sodium.

He had not seen any benefit whatever arising from the use of the Carlsbad waters in diabetes.

DR. PAGE, in closing the discussion, said that he did not believe that Carlsbad waters cured diabetes in any form. The special points which he wished to make in his paper were that patients should not be sent to Carlsbad indiscriminately, and that if they would obey orders they could get just as much benefit here as there.

DR. WILLIAM M. CHAMBERLAIN then read a paper (see p. 482) on

THE SANITARY AND CLIMATIC CONDITIONS OF SOUTHERN CALIFORNIA.

DR. AGNEW was invited to open the discussion, and said that while his journeying had not been beyond New Mexico, and, therefore, he was unprepared to speak from personal observation, yet he regarded Dr. Chamberlain's paper as one of the best contributions to our knowledge of the subject which he had ever heard.

DR. W. R. BIRDSALL had had some experience in the region of country included in Dr. Chamberlain's paper, and while he would agree with him on many points, there were some on which he would differ with him most decidedly. This difference of opinion was the result of personal observations and repeated communications with those residing in that locality.

He objected to sending cases of pulmonary phthisis to Southern California, because of the lack of two important elements, namely, altitude and dryness.

For nine months in the year there is a relatively greater humidity at San Diego and Los Angeles than in New York, notwithstanding the slight amount of rainfall. He believed that the greater number of cases of pulmonary phthisis, in the early stages, do better under conditions of extreme dryness and higher altitude than can be obtained in most of the towns mentioned in Southern California. It is a delightful place to live in, but he did not regard it as favorable for diminishing expectoration and the development of bacteria, and would prefer the arid region of New Mexico and upward to Colorado.

With reference to the absence of malaria, he had become convinced that there was more of malarial diseases in Southern California than had been generally supposed. He had seen the inhabitants laboring under well-marked chills of intermittent fever, and he believed also that the system of irrigation would so modify the climate that malarial fever would prevail.

DR. LANGMANN would advise against sending consumptives to Southern California, because he regarded the climate as neither dry nor warm, and while he did not wish to dispute the figures given, he was unable to understand how there could be less cloudiness at Los Angeles than in New York, while it was a uniform law that cloudiness is less upon the eastern than upon the western coasts of continents. Equable climates are necessarily moist climates. Another significant fact, concerning pulmonary phthisis, was that the State Sanitarium for Consumptives had been located to the north of San Francisco.

DR. CHAMBERLAIN said that he quite agreed with Dr. Birdsall, that cases of phthisis characterized by free expectoration did not do well upon the *coast* of California. But he had entertained the opinion that cold dampness was something different from a comfortably warm moisture. His observations certainly differed very broadly from Dr. Birdsall's concerning humidity, for while Dr. Birdsall's observations, like his own, might relate to a single season, certainly during last winter the relative humidity of the air was not more than 55, average, while the mean on the coasts all over the world is between 70 and 76.

He agreed with Dr. Langmann that an equable climate, in general, must be a moist climate; but in this particular he thought that Southern California formed a remarkable exception, because when the air of the sea reaches the bare rocks of the foot-hills, which rose

precipitously, the reflected heat drove out the moisture very largely.

The fact that the State Hospital for Consumptives is not located in Southern California may be accounted for by the constant and declared purpose to separate and set up as a new State. None of the State institutions, he believed, are located in the southern part of the State, far remote from centres of business and population of the State as a whole.

He also agreed with Dr. Birdsall, that cases of phthisis with free expectoration would do better at Banning, but, on the other hand, those marked by a dry cough of bronchial irritation will be benefitted by a climate as moist even as that of San Diego.

With regard to the prevalence of malarial diseases, he quoted the statements of the post surgeons at San Diego and Los Angeles, and the record of the Signal Service Bureau, which is presumed to be scientific truth without prejudice or favor. He heard of cases of house malaria, and of endemic malaria from bad municipal conditions, but of malaria from paludal conditions he was inclined to believe that there was but very little in Southern California.

He could not agree at all with the view that a high, rocky region would be found to be good for phthisical patients, because the diurnal variations in temperature are too great, being between 30° and 40°; besides, the dust storms load the atmosphere with material which, he believed, would be found to be productive of serious mischief.

The Section then adjourned.

Correspondence.

OUR LONDON LETTER.

MORE INTRODUCTORY LECTURES—THE MIDDLESEX HOSPITAL—WESTMINSTER HOSPITAL—UNIVERSITY COLLEGE—PROFESSOR ACLAND AT THE SCHOOL OF PHARMACY—THE PHARMACOPŒIA—PRIZES AND SCHOOL DINNERS.

I SENT you last week some notes on the introductory lectures which had so far been delivered. The remainder duly came off according to announcement, and have furnished pabulum for conversation through the week. Of course, most of them had remarks to make on the curriculum, but as this became more and more straightened, and the examinations more frequent, students have less and less power to vary it.

At the Middlesex Hospital the address was given by Dr. Biss, who spoke in most favorable terms of the new residential college which has just been opened, and congratulated new-comers on the profession they had chosen and which is continually rising in public esteem, at the same time urging upon them thrift of time, on account of the growing impossibility to make up for any loss or waste. He said there was in medical study a special faculty to be trained, viz., that of close observance and the power of correct reasoning upon the facts observed. Without this faculty no one could be a really able physician or surgeon; the senses must be trained in observing facts. Students were advised to learn their anatomy from the structures themselves, and by noticing the grouping of its facts they would render them suggestive and interesting. As an illustration, nerves which supply muscles enter them at the point where they are the most secure from pressure, as the phrenic nerves—the threads on which our lives hang—pierce the diaphragm to be distributed upon its under surface where the influence of gravitation is to relieve them from the pressure of adjacent organs. Facts of this kind naturally grouped do not burden the memory like ridiculous "tips" and jingling rhymes, and are of use elsewhere than at the examination table. Dr. Biss expressed a fear that with all our progress the precious hours devoted to physiology are too often swallowed up by that fascinating thief of time, section cutting and staining, while problems of pure physiology are not considered as they ought to be in view of their future application. He believed the day will come when the relations of pathological to normal functions will be more constantly studied together, the result being more useful. He warned his hearers against routine and the danger of degenerating into mere distributers of drugs.

At the Westminster Hospital the address was delivered by Mr. James Black, who offered some practical advice to beginners and some suggestions as to their future. He held that there ought to be time for out-door exercise and recreation in order to develop the student's body as well as his mind, and he commended those who carried off prizes and appointments. He also recommended everyone to have a favorite pursuit apart from his medica study, and suggested music and drawing as well worthy their attention, remarking that the discoverer of vaccination whiled away many a weary hour with his flute or violin; and he quoted Dr. Oliver Wendell Holmes as saying: "Literature is a good staff to walk with, but not to lean upon." To those, however, who could not play, or could not help working, even at the expense of their bodily powers, he urged the duty of systematically taking a good night's rest and strictly observing the Sabbath. As to future prospects, he congratulated them on the prospect that the conjunction of the two colleges would shortly enable them to take their M.D. in London on the same conditions as at other places—an expression which, coming from a Cambridge graduate, exemplifies the injustice from which London students have too long suffered. Not only Mr. Black, but most other teachers, will shortly be crying out more energetically, unless relief speedily comes, for I hear in various directions that the new entries are very unsatisfactory, many men having migrated to schools where they can crown their curriculum with the M.D.

At University College Mr. A. E. Barker delivered the address, and opened by defending these lectures on the ground that they afford an opportunity of offering new students a hearty welcome from their teachers.

But nobody doubts this welcome; for fresh students bring fresh fees, and most of the young men are worldly wise enough to understand that their teachers have no objections to increase their incomes. Mr. Barker devoted a good deal of attention to the relations of medicine to society and to the State. He said the public need to be reminded that their lives are protected and protracted, and their happiness increased, by the discoveries of medical science. Referring to charges sometimes made against our profession, he said that none was less liable to the reproach of being carried on in defiance of reason, while the opposite aspersion of materialism is just as baseless in view of our devotion to pure charity. He gave some illustrations of how some of the best doctrines are confirmed by medical teaching, and then went on to show that society treated medicine with coldness and discouragement. Public thanks and public funds were given by parliament to commanders, diplomatists, and others, but the great medical discoverers, whose work affected the lives and happiness of successive generations, were ignored. Even the minor State honors were seldom bestowed by the crown, and peerages were denied even to the most eminent. Our present gracious queen has several times exhibited some sympathy with the medical profession, but her ministers have not advised her to offer that rank which has often been the price of political support.

The School of Pharmacy is nearly enough related to call for a word, and this year Sir H. W. Acland, President of the Medical Council, and Professor of Medicine in the University of Oxford, came up and delivered an introductory address to the students. His subject was

the "Pharmacopœia and its History," which he sketched in an interesting manner, and he advocated the publication of a small international code which should lay down the mode of obtaining with certainty the best and most important remedies, prepared in the most efficient way, with rules for distinguishing them and for preserving them in all climates. Other useful advice was pleasantly offered by the accomplished professor, and well received by his audience.

Besides lectures, we have most of us been occupied with other celebrations of the commencement of the *annus medicus*. In some schools the distribution of prizes has been made an event of some importance; in other cases a dinner or other entertainment has marked the new epoch, and now, having welcomed our friends and indulged in congratulations, we have settled down to a winter's work.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE THEORY AND REAL EFFICACY OF PASTEUR'S PREVENTIVE METHOD — THE INCREASE OF SUICIDE IN FRANCE—THE RELATIVE FREQUENCY OF THE DIFFERENT METHODS.

PARIS, October 15, 1886.

A VERY interesting conference was held on Sunday last at the Sorbonne, to which the public were admitted and which was presided over by M. de Lesseps. The object of the conference was to explain the theory and the real efficacy of M. Pasteur's preventive method in the treatment of hydrophobia. Dr. Chautemps, Vice-President of the Paris Municipal Council, who was the speaker on the occasion, set himself up as the champion and apologist of M. Pasteur, as the learned biologist has been greatly maligned in and out of the profession. Dr. Chautemps addressed a crowded audience in the most eloquent terms in favor of M. Pasteur's method, but I doubt if he had fully convinced his hearers of its efficacy, as the plaudits he received during his oration were a good deal mingled with hissing. He based his arguments on the following statistics, which were drawn up at M. Pasteur's laboratory: To the 1st instant, 1,583 French or Algerian subjects were submitted to the antirabic inoculations, among whom 367 were bitten after August 1st, and in whom the period of incubation of hydrophobia had not terminated. There remained then 1,216 persons, of whom ten per cent. had been bitten by dogs, experimentally proved to be mad. Seventy per cent. were bitten by dogs, certified by a veterinarian to have been mad; twenty per cent. were bitten by dogs presumed to be rabid. If the 243 subjects belonging to the last category be eliminated, there remain 973 individuals inoculated, of whom, including the two deaths which could not be imputed to the method, 10 only died. According to the statistical report furnished by M. Leblanc to the Council of Hygiene, there ought to have been among the 973 inoculated, 155 deaths. In considering the results obtained not only among the French, but among individuals of other nationalities who presented themselves at the Pasteur laboratory, it is found that to the date, October 1, 1886, 2,323 persons bitten had been submitted to the antirabic inoculations. The mortality among the individuals bitten by mad wolves was fourteen per cent., and that among persons bitten by other rabid animals, allowance being made among individuals bitten by dogs simply presumed to be mad, or those who were bitten subsequent to August 1st, has been 12.5 per cent. The statistics anterior to the employment of Pasteur's method show, for the first category, sixty-seven per cent., and for the second, one hundred and sixty per cent. In concluding his discourse, Dr. Chautemps stated that, owing to a certain number of failures, M. Pasteur has thought proper to submit his patients to a treatment much more intensified than he had hitherto done. For instance, in starting his method, he commenced by inoculating with spinal marrows of fourteen days old, and stopped at those of the fourth and even the third day; he did not venture to inoculate with that of the second day, still less with that of the first. Very rarely the patients submitted to more than one course of the treatment. Now M. Pasteur ventures to inoculate with the virulent spinal marrow of only a day old, and recommences the treatment several times.

Homicides and suicides, particularly the latter, are greatly on the increase in this country. The Paris Morgue is daily filled with corpses, the greater number of them being suicides. In one day I saw no less than seven corpses laid out of persons who had destroyed themselves, one of them by a revolver, a second with a knife, a third by asphyxiation from coal-gas, and a fourth by throwing himself from the sixth floor on the pavement in the street. The other three corpses were found in the Seine. Drowning appears now to be the method preferred for suicidal purposes in Paris, whereas formerly it used to be the casting one's self from an eminence. The "Official Report of the Minister of Justice," for the year 1884, shows that 7,572 individuals voluntarily put an end to themselves during that year, of whom 1,420, or more than a sixth, belonged to the Department of the Seine. Of these 7,572 suicides, 5,964, or about eight-tenths, were men, and 1,608, or twenty-one per cent. were women; 2,623 were married, 2,623 were unmarried, and 1,620 were widowers. As regards professions, cultivators and work-people are the most numerous, there being thirty-two and twenty-eight per cent. respectively. Then follow proprietors, and people of independent means, and those belonging to liberal professions, thirteen per cent.; then trades-people, twelve per cent., and finally, domestic servants, six per cent.

As for the season of the year, the general impression is that more suicides are committed in the winter than at any other time, owing to the misery that then prevails. But this does not seem to be in accord with the Minister's Report, for, in the total number of suicides during the autumn and winter of 1884, there were 3,367 against 4,205 for the spring and summer of the same year. Among the means of destruction chiefly employed in all France, hanging comes first, principally in the provinces; then comes drowning as at Paris; fire-arms, knives, coal-gas, and poisoning come next. Two hundred and nineteen persons committed suicide by throwing themselves out of their windows or from the tops of public monuments. Age is an interesting item to be considered in the subject of suicides. It has been noted that they are more prevalent at the two extremes of human life, those among children being on the increase. In the year 1884 there were sixty-seven of the latter. But the great majority of persons who had committed suicide were composed of those aged from forty to fifty years (1,394); from fifty to sixty years (1,508), and particularly sixty years and after (2,255). What the cause may be for this sad state of social life, I must leave to your psychological readers to consider.

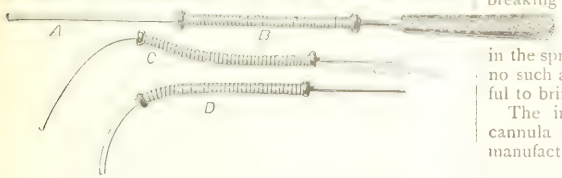
ANTISEPTIC SOLUTIONS FOR THE MOUTH.—Dr. Muller finds as the result of numerous experiments that a solution of corrosive sublimate, 1 to 2,500, is the most effectual in preventing the decomposition of food-particles in the mouth and consequent caries of the teeth. But a solution of such a strength may produce unpleasant symptoms by absorption, and it is therefore preferable to use benzoic acid, 1 to 175, salicylic acid, 1 to 300, thymol, 1 to 1,500, or boracic acid, 1 to 30. A very good mouth-wash is the following: Thymol, four grains; benzoic acid, forty grains; tincture of eucalyptus, three drachms; water, twenty-five ounces. The mouth should be rinsed thoroughly with this solution for a period of half a minute every evening.

New Instruments.

A NEW THROAT APPLICATOR.

By WENDELL C. PHILLIPS.

THE above cut illustrates an instrument that has been so useful in my hands that I do not hesitate to recommend it to the profession, more especially to those who treat diseases of the throat and nose to any extent.



It is the uterine applicator, modified in length, size of handle and stem, and in the material used, being made of sterling silver, filed down at the distal end so as to be flexible enough to be quite easily bent into any curve or angle required to make applications successfully to the interior of the nose, pharyngeal vault, or larynx. *A* represents the instrument straight, with the spiral slide (*B*) for removing the soiled cotton. It can be used for a nasal probe, cotton-holder, or applicator. *C* and *D* show how, by a little manipulation it may be curved so as to fulfil the indications for successfully applying the different medications to any portion of the pharyngeal vault or to the vocal cords.

The remainder of the stem or shank is inflexible, giving the operator better control over the instrument.

I have used this instrument in my throat practice for a year and a half, and during that time have never been obliged to use a brush in any case. I have found it more convenient, because I can give it just the curve required for each individual case, and the pledget of cotton answers all the requirements fully as well, and in many cases better, than the brush.

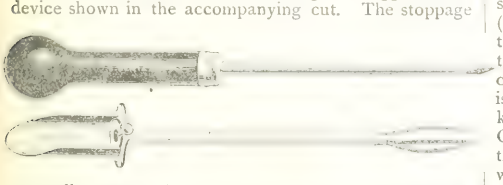
Absorbent cotton should be used, and so wound around the end of the instrument that the distal portion will be loose, and the remaining portion tightly wound, to prevent it from slipping off when the instrument is withdrawn, an accident that will never happen if the cotton is properly adjusted.

This instrument is especially useful and economical in hospital and dispensary practice, and prevents the danger of communicating disease by using the same brush in many different throats.

A CANNULA FOR TAPPING.

By JOHN S. MILLER, M.D.,

THE frequent occlusion of the cannula by intestine or omentum, in the operation of tapping, has suggested the device shown in the accompanying cut. The stoppage



generally occurs when about a pint of fluid has been withdrawn, and various manœuvres are resorted to—such as the endeavor to float away the obstruction by changing the patient's position, or the dangerous one of introducing a probe through the canula—and generally without success.

The device to which reference has been made is a smaller and longer cannula, introduced into that already in position, in case there is a cessation of flow. It is blunt, and provided with two long fenestra. In the latter there are springs, which expand and push away the obstruction on emerging from the original cannula, and which are so solidly soldered as to offer no danger of breaking off in the abdominal cavity.

In reply to the query whether or not the gut can become incarcerated and wounded in the springs, it may be stated that in several operations no such accident has occurred, nor were efforts successful to bring such about upon the *recent* cadaver.

The instrument can be used with any trocar and cannula above calibre 16, French. The instrument is manufactured by Charles Lentz & Sons.

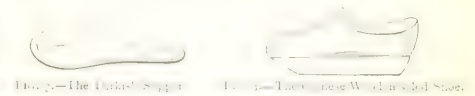
A SHOE FOR LAME FEET.

By FREDERICK A. CASTLE, M.D.,

I HAVE had several cases of sprained or other forms of disabled feet within the past two years, for the relief of which I have used a simple contrivance for placing the

tender joints at rest, without interfering greatly with locomotion.

When the metatarso-phalangeal joints are lame and tender, motion is usually arrested either by the use of



some form of splint or by voluntary avoidance of movement on account of pain, and walking becomes very clumsy and laborious. Generally the toes are turned outward as far as rotation of the hip will permit, and when the opposite foot is advanced, rotation of the entire disabled foot takes place in its long axis, and thus motion of the toe-joints is avoided.

In normal locomotion, without shoes, or with such as have a flexible sole, as the knee is advanced and the heel is raised, the toes remain in contact with the ground, and flexion of the foot takes place as shown in Fig. 1. When a shoe with a rigid sole is worn, however, this bending cannot occur, and it becomes necessary to "break in" the sole so that it acquires a curve (as shown in Fig. 2), unless this shape has been given to it by the maker, which is seldom done in this country, although it is uniformly the practice in oriental countries. In Turkey, especially, this curving of the sole is carried to an extreme degree, as illustrated in the well-known slipper with curved and pointed toe (Fig. 3). The Chinese, with characteristic ingenuity, overcome this trouble by cutting away the under side of the toe of their wooden-soled shoes so that the angle of the forward slope with the surface in contact with the ground comes about opposite to the ball of the great toe (Fig. 4). When such a shoe is worn the toe-joints remain at rest when the heel is raised, the thickness of the sole and the slope at its

forward end giving freedom of movement without the necessity for throwing the entire weight of the body upon the opposite limb before the knee can be advanced.

When Chinese shoes can be had I have used them for such cases in preference to home-made substitutes; but an ordinary slipper or shoe, with a piece of wood screwed to the bottom, will answer quite as well, although not so comely. Fig. 5 shows the shape of such a block. As before intimated, I have used this contrivance in sprains, bruises, gout, and other troubles which

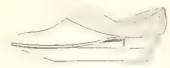


Fig. 5.—Slipper with Block of Wood Attached.

disable the feet, and have had most favorable opinions, from those who have worn it, respecting the comfort derived, and the ability to walk without aggravating the joint trouble.

October 9, 1886.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 17 to October 23, 1886.

WEBSTER, WARREN, Major and Surgeon. Leave of absence on account of sickness further extended one year on account of sickness. S. O. 244, A. G. O., October 20, 1886.

WEISEL, DANIEL, Captain and Assistant Surgeon. Relieved from duty at Fort Fred. Steele, Wyo., and ordered to proceed to, and take station at, Fort McKinney, Wyo., reporting to the commanding officer of that post for duty. S. O. 135, Department of the Platte, October 15, 1886.

TAYLOR, B. D., Captain and Assistant Surgeon. From Department of the East to Columbus Barracks, O. S. O. 244, A. G. O., October 20, 1886.

TESSON, L. S., Captain and Assistant Surgeon. From Department of Texas to Department of the East. S. O. 244, A. G. O., October 20, 1886.

BARROWS, C. C., First Lieutenant and Assistant Surgeon. From Department of Arizona to Department of the East. S. O. 244, A. G. O., October 20, 1886.

EGAN, P. R., First Lieutenant and Assistant Surgeon. From Department of Arizona to Department of Texas. S. O. 244, A. G. O., October 20, 1886.

WALKER, F. V., First Lieutenant and Assistant Surgeon. From Department of the East to Department of Texas. S. O. 244, A. G. O., October 20, 1886.

CARTER, E. C., First Lieutenant and Assistant Surgeon. Granted leave of absence for six months, with permission to apply for an extension, and to go beyond sea, to take effect when his services can be spared. S. O. 244, A. G. O., October 20, 1886.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Having returned from detached service in Department of Arizona, will join his station at Fort McIntosh, Tex. S. O. 144, Department of Texas, October 13, 1886.

BLACK, CHARLES S., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months on surgeon's certificate of disability, to take effect when his services can be spared. S. O. 244, A. G. O., October 20, 1886.

CHAPIN, ALONZO R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Laramie, Wyo., and ordered to Fort Washakie, Wyo. S. O. 137, Department of the Platte, October 19, 1886.

IVES, FRANCIS J., First Lieutenant and Assistant Surgeon. In obedience to instructions received from the Division Commander, ordered to report in person at Headquarters Department of the Platte for duty. S. O. 146, Department of Texas, October 16, 1886.

KENDALL, WILLIAM P., First Lieutenant and Assistant Surgeon. Leave of absence extended fifteen days. S. O. 239, A. G. O., October 14, 1886.

BANISTER, W. B., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Wingate, N. M. F. O. 97, Department of Arizona, September 29, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Verde, Ariz. Terr., and ordered for duty at Fort Huachuca, Ariz. Terr. S. O. 99, Department of Arizona, October 12, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 23, 1886:

	Cases.	Deaths.
Typhus fever	[illegible]	0
Typhoid fever	[illegible]	5
Scarlet fever	[illegible]	2
Cerebro-spinal meningitis	[illegible]	1
Measles	[illegible]	[illegible]
Diphtheria	[illegible]	11
Small-pox	[illegible]	0
Yellow fever	[illegible]	0

THE NATIONAL SYSTEM OF PHYSICAL TRAINING IN GERMANY.—Dr. Mary T. Bissell, of this city, writes: "The recent exhaustive report on Physical Training, made by Dr. Hartwell to the Bureau of Education at Washington, is very suggestive to all who are interested in this branch of hygiene. The work which is being accomplished in our American colleges for both sexes is carefully reviewed; but perhaps the most instructive portion of the report is concerned with the national system of physical training so long in use in Germany. It shows us that Germany, so easily at the front in scientific research, has had the sagacity to apply science to the physical education of her children, as evinced in the elaborate system in use in her public schools and turnhallen. Originating, as the systematic cultivation of the body has in every country, from a desire to maintain the army in a vigorous condition, the German government quickly apprehended the fact that a system which could produce strong bodies in one class of citizens might yield equal results in the training of her people at large. Accordingly, we find in Germany the most elaborate system of physical training known at present in any country. This system is general, *i.e.*, applies to both sexes, with careful adaptation to age and sex. It is compulsory in schools, unless the student is excused by physician's certificate. It is on a scientific basis, the teachers (or turners) being graduates of a normal school, where they receive instruction from a medical faculty in anatomy, physiology, and hygiene, as well as practical training in exercises proper. Dr. Hartwell says of the Prussian system: 'As a rule, each school has its turnhalle (indoor gymnasium), and, in very many cases, its own turnplatz (outdoor gymnasium), furnished with appropriate machines. Frankfort provides special play-grounds and swimming-baths for the use of school children.' Frankfort spends yearly about twenty-seven thousand dollars for the gymnastic training of these children. Berlin, alone, has ninety-eight turnhallen erected for the people's use at the city's cost. In the largest of these, more

than thirteen thousand persons exercise weekly. In the public schools each class has its special time for gymnastics, and so it has special hours set for [illegible] and reading, and the gymnastic course is graded, beginning with simple and light movements, gradually advancing to more elaborate series. It is said that nearly a fifth of the population of Prussia is, through its various facilities in public and private, receiving systematic physical training. It is impossible to avoid comparison between this elaborate system of body-training, carried on under government patronage abroad, and the entire absence of any such national work in America; or to resist the conviction that the establishment of some similar system in our own country would result, in time, in the production of a hardier class of children and adults than the flat-chested, unevenly developed American of the present day. Since heredity is an acknowledged factor in the development of the race, any work which tends to improve the bony skeleton, to increase the vital capacity, and to promote the bodily vigor of the individual may properly be classed under the head of 'preventive medicine.'"

Subcutaneous Injection of Salt Solution.—Dr. Albert H. Tuttle writes from Vienna to the *Boston Medical and Surgical Journal*: "I lately witnessed the subcutaneous injection of 50 c.c. of a salt solution into the body of a boy seven years old, by Professor Monti, and believing it may be of interest to your readers, and perhaps at some time useful, I send you this brief description of his method. The requisites are: A piece of rubber tubing about six feet long, a large hypodermic needle, and a graduated beaker containing a solution of salt. The salt solution is heated to 100° F., and then placed about four feet above the patient, on a stool that rests on the top of a table. The hypodermic needle is attached to one end of the rubber tubing. The tubing is filled with water and one end is inserted into the salt solution, then the needle end of the tube is lowered and the contents are allowed to run off until the stream becomes warm from the salt solution in the beaker. The needle is now inserted into the subcutaneous tissue while the stream is flowing. At this moment an assistant reads the level of the fluid in the beaker. This done, one can tell exactly, by means of the scale on the beaker, how much of the solution has been injected. The tissue is distended by the fluid, forming a tumor which disappears in the course of an hour or two. In the case I saw, the injection was made an inch and a half below the navel, and a half inch to the right of the median line. The swelling was an inch and a half in diameter, and about half an inch in height. The whole time occupied in giving the injection and making the necessary preparations, did not exceed twenty minutes. The method has been employed in the collapse of cholera infantum, and may further be found useful in some of those cases where intravenous injection has formerly been resorted to."

Posology and Use of Some New Remedies.—*Osmic acid:* Best administered in pill form (made up with Armenian bole). The dose is $\frac{1}{60}$ grain, which may be repeated several times a day. Used in epilepsy and sciatica. *Agaricine:* Best administered in combination with Dover's powder. Dose $\frac{1}{15}$ to $\frac{1}{6}$ grain. Used for night-sweats. *Aloin:* From $\frac{1}{3}$ of a grain to $3\frac{1}{2}$ grains, in pill form. *Antipyrine:* Dose from 75 to 90 grains, divided into three portions, one of which is to be taken every hour. *Bismuth salicylate:* Dose from 5 to 7 grains, in pill form. In typhoid this dose may be doubled and repeated every hour, up to 10 or 12 times. *Canabinone:* From $\frac{2}{3}$ to $1\frac{1}{2}$ grain. Best administered mixed with finely ground roasted coffee. Sedative and hypnotic. *Colocynthin:* Used subcutaneously. The dose is from $\frac{1}{6}$ to $\frac{1}{3}$ grain. It may also be administered in pill form, by the mouth, the requisite dose being from $\frac{1}{3}$ to 1 grain. *Convallaramine:* Internally, in pill form. The dose is from $\frac{2}{3}$ to $1\frac{1}{2}$ grain. *Asarone:* Best given in pill form, combined with extract of belladonna or hyoscyamus. The dose is from 3 to 10 grains. *Nitroglycerin* is best given in alcoholic solution. The dose is from $\frac{1}{150}$ to $\frac{1}{60}$ grain, repeated several times a day. Rossbach prefers ether as a solvent. His formula for its use is as follows: Dissolve $1\frac{1}{2}$ grain of nitroglycerin in sufficient ether, and add the solution to a mixture consisting of two ounces of powdered chocolate and one ounce of powdered gum arabic. Mix very thoroughly and divide into 200 pastilles. Each pastille will thus contain $\frac{1}{133}$ grain of nitroglycerin. Used in angina pectoris, and as a diuretic. *Picrotoxine:* In aqueous solution. Dose from $\frac{1}{8}$ to $\frac{1}{6}$ grain. Used in epilepsy. *Sulphate of thalline* may be given dissolved in wine or water (with some corrigerant). The dose is from 4 to 8 grains, or 1 grain every hour. The above is taken in part from the *Rundschau Leitmeritz.*

A Laxative and Tonic Wine.—℞. Tincture of calisaya, tincture of simaruba, tincture of gentian, tincture of bitter-orange peel, of each f℥ ijss.; tincture of ignatia bean, ℥ ss.; sherry wine enough to make Oij. Mix and filter. The wine is tonic, carminative, and laxative. The dose is from one to two fluid ounces.—*Prog. Médical.*

Spongio-piline for Varicose Ulcers.—Dr. F. B. Carpenter has found spongio-piline an admirable dressing in inflamed varicose ulcers of the leg, because with it one can combine compression and a poultice at the same time; also for specific ulcers, moistened by bichloride of mercury solutions, etc.; also an excellent application in brawny indurated buboes, where poultices are indicated and where the patient is compelled to be on his feet. In healing obstinate sinuses (the remains of old buboes), when ordinary applications, such as nitrate of silver, etc., have failed, he had good results from applications of saturated solutions of iodoform and ether.—*Bulletin of New York Post-Graduate Med. School.*

Helenin in Chorea.—On account of its alleged antispasmodic properties, Dr. C. L. Dana has used helenin in three cases of chorea. The patients all reported themselves improved under its use, but the drug was too expensive to be extensively tried. It was given in alcoholic solution, one-third grain, three to four times daily. It now costs about fifty cents a gramme. It has been successfully employed by French physicians in bronchitis and spasmodic cough.—*Bulletin of New York Post-Graduate Med. School.*

The Dietetics of Pulmonary Phthisis.—Dr. A. L. Loomis formulates the following rules to govern the dietetics of phthisical subjects (*Journal of Reconstructives*, October, 1886): 1. Every phthisical patient should take food not less than six times in the twenty-four hours. The three full meals may be at intervals of six hours, with light lunches between. 2. No more food should be taken at any one time than can be digested easily and fully in the time allowed. 3. Food should never be taken when the patient is suffering from bodily fatigue, mental worry, or nervous excitement. For this reason mid-day naps should be taken before, not after, eating. Twenty to thirty minutes' rest in the recumbent posture, even if sleep is not obtained, will often prove of more value as an adjuvant to digestion than pharmaceutical preparations. 4. So far as possible each meal should consist of such articles as require about the same time for digestion, or, better still, of a single article. 5. Within reasonable limits the articles of any one meal should be such as are digested in either the stomach or intestine alone, *i.e.*, the fats, starches, and sugars should not be mixed with the albuminoids, and the meals should alternate in this respect. 6. In the earlier stages the amount of fluid taken with the meals should be small, and later the use of some solid food is to be continued as long as possible. 7. When the pressure of food in the stomach

excites cough, or when paroxysms of coughing have induced vomiting, the ingestion of food must be delayed until the cough ceases, or an appropriate sedative may be employed. In those extreme cases where every attempt at eating excites nausea, vomiting, and spasmodic cough, excellent results are attained by artificial feeding through the soft-rubber stomach-tube. 8. So long as the strength will permit assimilation and excretion must be stimulated by systematic exercise, and when this is no longer possible the nutritive processes may be materially assisted by passive exercise at regular intervals. The following may serve as a sample menu for a day in the earlier stage. The meat soup is made by digesting finely chopped beef (1 lb.) in water (O j.) and hydrochloric acid (m 5) and straining through cheese-cloth. Menu: On waking, One-half pint equal parts hot milk and Vichy, taken at intervals through half an hour. 8 A.M., Oatmeal with abundance of cream, little sugar; rare steak or loin chops with fat, cream potatoes; soft-boiled eggs, cream toast; small cup of coffee, two glasses of milk. 9 A.M., Half-ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk. 10 A.M., Half-pint raw meat soup; thin slice stale bread. 11–12, Sleep. 12.30 P.M., Some white fish; very little rice; broiled or stewed chicken; cauliflower; stale bread and plenty of butter; baked apples and cream; milk, kumyss, or Matzoon, two glasses. 2 P.M., Half-ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk. 4 P.M., Bottle kumyss or Matzoon; raw scraped beef-sandwich. 5.30–6 P.M., Rest or sleep. 6 P.M., Some thick meat or fish soup; rare roast beef or mutton; spinach; slice stale bread; custard pudding; ice-cream. 8 P.M., Half-ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk. 9–10 P.M., Pint iced milk; cup meat soup. 1–2 A.M., Glass milk, if awake.

German Hospitals in St. Petersburg.—There are two German hospitals in St. Petersburg, the oldest of which is the Evangelical Hospital, founded in 1859 by Karl von Mayer. It is of a distinctly religious character, and receives only women as patients. The Alexander Hospital for men was established as a memorial of Czar Alexander II., and was opened for the reception of patients in 1884. Dr. E. Moritz was the founder, and is the present director. The hospital is exclusively for men who are not of Russian birth, and is under the care of no particular religious denomination. It commenced with twenty-five beds, but its capacity will soon be increased to sixty beds, which is the number at present in the Evangelical Hospital.

Intussusception in Children.—According to Dr. W. E. Forrest, three courses of treatment may be pursued in cases of intussusception in children. First, an operation by laparotomy, opening the abdomen and attempting to reduce the invagination by traction on the intestine; Second, leaving the case to nature, with the chance of a cure by spontaneous elimination of the invaginated portion of the intestine; or, third, the use of a more forcible injection, even though there be the possibility of rupturing the intestine by so doing. The author would recommend the following course in all cases of intussusception in children: A pressure of six pounds to the square inch having failed to reduce the tumor after a lengthened trial, I should cautiously raise the pressure to seven and eight pounds, and even nine pounds, to the square inch, depending on the acuteness of the attack and the length of time the invagination had continued. This having failed, what course should then be followed? If the child be under two years of age, open the abdomen at once, and resect the intestine. The child will probably die; but, if left to nature, the case is absolutely hopeless. If the child be between two and three years of age, and injections have failed, chances of cure by sloughing or from laparotomy are about equal, and the surgeon will be justified in following either course. Remember that the invagination probably cannot be reduced even by traction, and the principal object in opening the abdomen is to resect the intestine, or to perform enterotomy. If, however, the child be over five years of age, and the tumor has resisted a pressure of eight or nine or ten pounds to the square inch without being reduced, we must conclude that it is irreducible. Now, according to statistics, the operation of laparotomy in these cases shows a greater death-rate than the cure by sloughing, the "spontaneous cure;" therefore, nature's operation, nearly hopeless as it is, should be preferred to laparotomy.—*American Journal of Obstetrics.*

Tulipine.—This alkaloid was extracted by Serrard from the ordinary garden tulip. It appears to exist in all parts of the plant, in the flowers as well as in the stems. Its therapeutical action has not yet been very carefully studied, but from experiments thus far made it would seem to act especially upon the spinal cord and sensory nerves. Frogs poisoned with tulipine present toxic symptoms similar to those caused by veratrine, and they die with the heart in systole. Ringer regards the alkaloid as a very active sialagogue. It has no effect upon the pupil, even when given in toxic doses.

The Disinfection of Books.—The health authorities of Aberdeen have ordered that all books taken from the public library, which are known to have been in the hands of those suffering from any contagious disease, must be sent to a disinfecting establishment before being returned to the shelves. The librarian is provided with a list of the families in the town where there are any cases of contagious disease.

The Sale of Hopein in Austria has been forbidden by the Minister of the Interior and of Commerce. No preparations alleged to contain hopein are permitted to be sold, and apothecaries have been forbidden to dispense them, even on a physician's prescription. It is stated, as the reason for this prohibition, that the hopein said to be prepared from American hops is not made from hops at all, but is for the most part morphine.

For the Detection of Blood-spots.—A suspected spot is to be washed with the tincture of guiac and then with ozonized essence of turpentine, and if the spot is blood it will immediately assume a brilliant violet color. The value of this sign is, however, negative rather than positive, for many other substances will give the same reaction; but, according to Professor Sestini, if the violet color is not produced it may be asserted positively that the spot is not one of blood.

The Fathers of Great Men.—The father of Demosthenes was a blacksmith, of Euripides a dealer in vegetables, of Socrates a mediocre sculptor, of Epicurus a shepherd, of Virgil an inn-keeper. Columbus was the son of a wool-carder, Shakespeare of a butcher, Luther of a miner, Cromwell of a brewer, Sixtus V. of a swineherd, Linnæus of a poor country minister, Franklin of a soap-boiler, Rousseau of a watchmaker, and Murat of an inn-keeper. The mothers of these men may have been the source from which their genius was derived, and indeed it is known that some of them were women of more than ordinary excellence.

The Medico-Legal Aspect of Hypnotism.—M. Liégeois, Professor of Law of the Faculty of Nancy, calls attention to the possibility of crimes being committed by hypnotized individuals at the suggestion of those who have put them in this condition, and argues very justly that in such a case the punishment should fall on the author of the criminal suggestion rather than upon the irresponsible agent.

A Good Measure.—The police authorities in Zürich have made an excellent rule to the effect that no one shall be permitted to play upon the piano after ten o'clock in the evening, unless the windows of the room are tightly closed. The Swiss seem to have some regard for their sick or sleepy fellow-citizens.

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THE RELATIVE INFLUENCES OF MATERNAL AND WET-NURSING ON MOTHER AND CHILD.[1]

BY JOSEPH EDGAR WINTERS, M.D.,

NATURE has so manifestly decreed what should be the food of infants that one might suppose that there would be no occasion for writing on the subject.

The theories of man, however, have so far superseded the natural mode of feeding that it has become a question of great practical importance to every practising physician how to feed a baby.

The reports of the Bureau of Vital Statistics for New York alone prove that the present modes of infant feeding are grievously, calamitously wrong. Of 35,682 deaths in New York City during the year 1885, 9,303, or nearly one-fourth, occurred in the first twelve months of life! During the same year there were, exclusive of still-births, 30,030 children born. The deaths in infants less than one year old were equal, therefore, to nearly one-third of the number of births.

If we inquire into this mortality, we find it chiefly traceable to faulty feeding. If such mortality arose from epidemic influences, there would be immediate and importunate demands for health boards or some organized exertion to check it. But an unnatural and unjustifiable system of infant feeding, which yearly sacrifices thousands of infants, excites but little comment—moreover, it is encouraged by a large number of the medical profession.

In the following pages I propose to show that every attempt to depart from maternal suckling, *even when a hired breast is resorted to*, increases infant mortality.

Very few children nursed exclusively at the mother's breast die during the first year—even in institutions and among the poor in tenements in New York. Very few children artificially fed, in institutions or among the poor, survive the first year. Children put out to dry-nurse by mothers who take the situation of wet-nurses almost invariably die.

In the upper classes, where there is intelligence and good care, with the feeding properly directed, a bottle-fed baby rarely dies during its infancy. It follows, therefore, that the poor, but especially the ignorant poor, should be urged to raise their children at the breast.

In institutions, breast- not bottle-feeding must be had, if attainable. Where intelligent, scrupulous care can be had, bottle-feeding may be undertaken with every prospect of success.

We have for consideration: I. Maternal Nursing; II. Wet-Nursing.

I. MATERNAL NURSING. 1. *Importance to child.*—According to the last printed report (1882) of the Infants' Hospital on Randall's Island, the death-rate among infants nourished at the breast was less than sixteen per cent., while among those that were bottle-fed it was more than seventy-five per cent.[2]

At the Country Home of the New York Infant Asylum (Flushing), during the year 1878, of 37 infants wholly nourished by mothers, none died; while of 40 wholly hand-fed, 8 died.[3]

"Out of 37 infants under one year of age suffering with entero-colitis, but 6 nursed exclusively at the breast; only 1 of the 6 was seriously sick—20 of the 37 sick children had artificial food; of the 20 thus fed, 16 were seriously sick."[4]

In Boston, out of 200 infants with diarrhœa, only 33 were breast-fed, and in 10 of these it was a complication of an acute disease. Among these 33, only 6 were seriously ill, and *none* died.

Out of 69 artificially fed infants with diarrhœa, *where the result was known*, 22 were seriously ill, and 6 died.[5]

"In the institutions nearly every bottle-fed infant under the age of four, or even six, months dies in the hot months, while the wet-nursed of the same ages remain well."[6]

"The mortality of those suckled compared with those hand-fed was as 19.2 to 53.9."[7]

"Of those that were nursed, 13.5 per cent. died; of those that were *not* nursed, 42.7 per cent died."[8]

Dr. Denis-Dumont gives mortality of children at breast, 10 in 100; mortality of children at bottle, 30 in 100.[9] He adds: "The mortality among those artificially fed *does not apply to those in favorable surroundings*."

In Munich 7.6 per cent. of those nursed died, while 24.7 per cent. of those hand-fed died. In Bavaria, where a nursing mother is an exception, 50 per cent. die; while around Kronach, where nearly *all* children are nursed, only 25 per cent. die.[10]

In 1868, nursed by mother, 10.6 per cent. died, while not nursed, 89.4 died; 1869, nursed by mother, 16.1 per cent. died, while not nursed, 83.9 died; 1870, nursed by mother, 17.6 per cent. died, while not nursed, 82.4 died. Average nursed by mother, 14.8 per cent. died; average not nursed, 85.2 died. This out of a total number of 8,329 cases.[11]

At Rheims all are hand-fed, mortality, 60.9 per cent.; at Lyons all are suckled, mortality, 33.7 per cent.[12]

Besides the high death-rate which artificial feeding produces, as it is ordinarily carried out among the poor and in institutions, there is another, and not less serious result to be looked to. I refer to its influence on the development, future health, and usefulness of the children so fed.

The report of the Hospital for Children at Manchester, England, shows the injurious influence upon the infant constitution from want of breast-milk. Children who had breast-milk alone to the ninth month, or longer, and some to the age of two years, 62.6 per cent. were well developed, and 14 per cent. were badly developed. Of children fed exclusively by hand there were 10 per cent. well developed, and 64 per cent. badly developed.

Bouchut found that rickets is remarkedly more common in children not nursed. This accords with the experience of every physician who sees much of dispensary

[1] Read before the New York Academy of Medicine, October 28, 1886.

[2] New York Academy of Medicine, October 28, 1886. Discussion on Infant-Mortality.

[3] Archives of Pediatrics, July, 1886, p. 497.

[4] Dr. Holt, Discussion on Infant-Mortality, New York Academy of Medicine, October 28, 1886.

[5] Dr. Reuben Peters, Discussion on Infant-Mortality, New York Academy of Medicine, October 28, 1886.

[6] Dr. Lee, Discussion on Infant-Mortality, New York Academy of Medicine, October 28, 1886.

[7] Dr. Peabody, Discussion on Infant-Mortality, New York Academy of Medicine, October 28, 1886.

[8] Dr. Lee, Discussion on Infant-Mortality, New York Academy of Medicine, October 28, 1886.

[9] Dr. Denis-Dumont, Discussion on Infant-Mortality, New York Academy of Medicine, October 28, 1886.

[10] William Burke Ryan: Infanticide, p. 111. 1862.

tient-houses, in children "put out" to dry-nurse, and in institutions.

children in cities. We also find it to be common in children who are nursed too long.

In Swabia 44 per cent. of the Christian children, who are frequently artificially fed, die in the first year of life, while only 8 per cent. of the Jewish children die, who are invariably nursed by their mothers.[1]

2. *Importance to mother.—Its influence in preventing disease of the pelvic viscera.* While everyone appreciates the advantages of maternal nursing to the child, many physicians fail to understand the importance, the *necessity* almost, to the mother of suckling after parturition, so as to insure a speedy and complete recovery. It will be shown that a healthy mother who does not nurse her child prejudices her prospects of a good recovery from her confinement, and is liable to entail upon herself permanent ill-health. A nervous nexus establishes a close sympathy between the breasts and the womb, and the stimulation of suckling, by reflex action, induces uterine contraction. This contraction is promotive of uterine involution. When this reflex stimulus to the uterus is neglected, the retrogade metamorphosis is delayed, and sometimes the organ remains permanently large, with its manifold consequences. Suckling, then, by promoting uterine resolution, becomes preventive, to some extent at least, of uterine congestion, subinvolution, displacement, chronic metritis or areolar hyperplasia, menorrhagia, metrorrhagia, and leucorrhœa, which often follow childbirth.[2]

Arrest of involution, delayed involution, and subinvolution are the prime factors in the majority of the diseases of the uterus and its appendages which are now so prevalent.[3]

In women who do not suckle, the lochia are more abundant and last longer than in those who do.[4] Secondary inflammatory processes by extension are also more common in them.

Every form of uterine and pelvic disease is more frequent among women who *do not* than among those who *do* nurse their children. Utero-gestation and delivery are to the mother but half of the process of generation; to complete this process lactation is supplementary, and it is essential in its beneficial influence on her health. That suckling contributes to preserve and promote the mother's health is shown by the fact that many women are more robust and stronger while nursing than during any other period of their lives. Go where you will, the healthiest and the youngest in appearance (where they have been free from worry and anxiety) are women who have borne children and have nursed them. One of the most eminent obstetricians of New York, whose experience has for the last twenty years been exclusively among the upper classes, told me that patients of his who had borne six or eight children, and had nursed them, were all women who looked ten or fifteen years younger than they actually are. The wife of one of the best-known politicians in this country has had twelve children, all of whom she nursed successfully. The lady to whom I refer is as strong and active to-day as a woman of forty.

Women who have backache, headache, local disease rendering their existence miserable, and those who fill the reception rooms of the gynæcologists, are in a large number women who have interfered in some way with the natural process of generation. I have made this the subject of careful study and investigation for years, and further experience confirms my earlier observations. Recently I have had extensive recourse to the experience and the writings of others to corroborate and confirm my own inquiries.

Scanzoni says: "For many years I have noticed, and I can affirm, that nothing more restores the uterus to its normal size than maternal nursing . . . I do not go too far in attributing the frequency of chronic metritis among the wealthy class to the bad custom of not nursing their children."[1]

Of 54 women with uterine flexions, having had 196 children at term, only 57 of these children were nursed by their mothers.[2]

Verriet-Litardière (*loc. cit.*) gives the histories of fifteen women who had twenty-nine children. In every one of the twenty-one times in which the mothers did *not* suckle they had, subsequent to first or second menstruation, some uterine or ovarian complaint—leucorrhœa, dysmenorrhœa, pelvic cellulitis or peritonitis, ovaritis, uterine displacement, etc. In nearly every case there was subinvolution. After these twenty-one confinements the menses appeared in four to eleven weeks, generally the seventh week. In the eight times that the children *were* nursed, recovery and health subsequent to confinement was excellent, with no uterine complaint.

The following are instructive cases:

Case 2.—Suckled first child and made an excellent recovery; second child ditto; third child died the second day. With first period the woman had pain; leucorrhœa and dysmenorrhœa followed. On admissoin to hospital uterus was large, and there was pelvic cellulitis.

Case 5.—First child not nursed; menses appeared at end of six weeks, accompanied with pain, from which she continued to suffer at subsequent periods. Second and third children suckled for nine and eight months; health afterward good. Three subsequent children *not* suckled, and the menses returned at end of sixth week. The writer says: "During these last eight years she has suffered severe abdominal and inguinal pain, with other symptoms of uterine trouble. Examination showed an enlarged anteverted uterus."

Case 8.—First two children not suckled; she had much trouble after second confinement from an enlarged displaced uterus. She nursed the third child, with return of health; gain in flesh; no leucorrhœa and no abdominal pain as before; had not menstruated at end of fourth month, and was in excellent health.

Case 14.—Suckled first child two and one-half months; not the slightest after-trouble. Second child not nursed; menses appeared sixth week, with pain, etc. Third child died on the sixteenth day; menses fifth week; following she had dysmenorrhœa, pelvic peritonitis, uterine displacement.

Case 15.—First two children nursed, and mother continued in good health. Third child not nursed; menstruated fifth week; dysmenorrhœa and leucorrhœa subsequently. Uterus on examination found to be much enlarged, with mucous discharge.

The experience of Dr. René Blache corresponds closely with that of Dr. A. Verriet-Litardière. He states[3] that in 12 observations in which the mothers had *not* nursed their children, and became sick, all regained their health on nursing their later children. Of 20 other mothers who nursed their children, *all* remained free from puerperal diseases. We could follow these 12 cases with the 20 others, all taken among the upper classes. *Not one* of these 32 women had any puerperal accident. *Not one* of them had any serious uterine affection—neither displacement, congestion, hypertrophy, fibroma, peritonitis, ovaritis, nor cyst of the ovary.

[1] Journal für Kinderkrankheiten, vol. iv, [illegible].

[2] "I have observed that in women who [illegible] involution is generally more rapid and complete. The flow of blood is less toward the uterus and its appendages. Are not the chances of inflammatory action and of morbid products diminished?" (R. Blache: L'Union Médicale, p. 950, 1880). "Women . . . who do not nurse their children . . . are extremely liable to congestion of the uterus, . . . and it sometimes is the commencement of a disease the most loathsome, and unhappily the most rebellious, entailed upon woman—cancer" (Bedford, Gunning S.: Clinical Lectures on Diseases of Women and Children, pp. 473–74, New York, 1876). "Women who have never nursed their children are more exposed than those who have to chronic affections of the uterus and its appendages" (Brocard, p. 63).

"[illegible] the morbid chain is subinvolution" (Thomas, T. Gaillard: A Practical Treatise on the Diseases of Women, 4th ed., p. 219, Philadelphia, 1878). "The most prolific source of areolar hyperplasia, the so called chronic metritis, is interference with involution of the parturient uterus" (Ibid., 5th ed., p. 312, 1880).

[4] "The lochia are less abundant in women who suckle than among those who do not" (Torrent, A. J. C.: Les Avantages de l'Allaitement Maternel, p. 8, Paris, [illegible] and Ternier: Obstetrics, 7th Am. ed., p. 433, Philadelphia, 1884).

[1] Scanzoni, from Verriet-Litardière: Les Avantages de l'Allaitement Maternel, pp. 9–11, Paris, 1880.

[2] Verriet-Litardière and Scanzoni, F. W.: A Practical Treatise on Diseases of the Sexual Organs of Women, 4th Am. ed., p. 109.

[3] Schmidt's Jahrbucher, etc., 1881, Band 192, p. 165, and De l'Allaitement Maternel Lue à l'Association [illegible], Novembre [illegible], 1880, pp. 7–8.

Aran states[1]: "In 70 of 100 uterine cases which have come under my observation, the women have not suckled."

Gubian, Sr., showed[2] from numerous observations that unmarried mothers suffered from uterine affections from not having nursed their children, and, on the contrary, mothers of families, who, having nursed their children, had no lesion of the uterus, though among a number of the latter were some women who had had ten, seventeen, and even twenty confinements.

"I have long ago confirmed Aran's assertion," Tilt says, "respecting the frequency of uterine disease in those who do not suckle."[3]

Dr. Vedeler states[4] that of 38 women who, while nursing their children, had retroflexion of the uterus, only 5 had objective changes that could be ascribed to the flexion.

Duges, physician of the Maternity Hospital of Paris, states[5] "that in an epidemic of puerperal fever, which had many victims in his wards, women who nursed their children alone escaped the influence of the epidemic."

Ability to nurse. It is said that many women living in cities and large towns are too delicate to suckle, that their milk would be insufficient, and that the health of both mother and child would be injured.

A. Schoeff-Mereri, in a communication to the *British Medical Journal*[6] on the histories of upward of eight hundred nursing women with nurslings, stated that there was "abundant milk in thin and delicate constitutions. Some of the women were very healthy, not in the least affected by suckling, and the milk had excellent effects."

It has been shown that lactation does not induce anæmia, as has been generally supposed. "In a perfectly healthy nursing woman, with good hygienic surroundings and abundant nutritious food, the number of red blood-globules is not diminished."[7]

Influence of physician and monthly nurse in inducing women to suckle. The proportion of mothers who nurse their infants depends largely upon the influence exerted over the patient by the physician and the monthly nurse in charge. For instance, obstetricians whose practice has been exclusively among the upper and middle classes have given me the following figures with regard to the proportion of women who in their practice have nursed their babies. One physician stated that not more than 1 in 10 nursed; two, 1 in 5; three, 1 in 4; one, 1 in 3; one, 1 in 2.

One of the oldest and best-known obstetricians of New York, and one whose practice for the past twenty years has been exclusively among the wealthy classes, told me that nineteen-twentieths of his patients nursed their children. One nurse of large experience tells me that about one in five of her patients nurses the baby. Another has had twelve patients in succession among the upper and middle classes, all of whom have suckled. Still another example is that of a widow, who has had children of her own and nursed them, and who has for the past twelve years been an obstetric nurse among the upper classes, and has never had a patient who could not nurse successfully.

On the other side, a monthly nurse who has been much employed by physicians who recommend wet-nursing will almost invariably succeed in inducing a young mother, with her first child, to engage a wet-nurse. I have become so positive of this that I never have a woman with such a propensity care for a patient of mine in her first confinement.

Night nursing. One of the reasons why so many mothers have an insufficient milk-supply is the exhaustion consequent upon night nursing. Women of average health and robustness, living in cities and large towns, should not attempt to nurse at night, nor even have the child in the same room with them. This will insure their having the necessary eight or nine hours of uninterrupted repose and refreshing sleep. This ought to be an invariable law, and cannot be too strenuously insisted upon.

With good hygienic surroundings, invigorating open-air exercise, exposure to sunlight, early hours, and abundance of nourishing food before confinement and during the lying-in period, most women not actually diseased can supply part nourishment, at least, for their infants.

Mixed feeding. The deficiency may be made up by judicious hand-feeding. The notion that breast- and bottle-feeding should not be alternated, or combined, is not founded on fact.

Paramount importance of nursing during first weeks. Even where a mother's health will not permit her to nurse her child up to the usual time for weaning (eight to ten months), it is *peremptorily* important that she should do so during the period of uterine involution—this process of resolution occupies from six weeks to two months. We have already seen that suckling during this period is not only preventive of immediate accidents to the mother, but also of chronic, incurable disease.

Out of 575 confinements at the dispensary at Lyons, France, there was only 1 death. The Committee on Confinements, in their report, state: "It is, indeed, remarkable that the dangers due to confinements, and especially embolism, rarely occur except during the first three weeks."[1] In case of some hindrance to lactation, the committee think it important to induce the mothers to nurse their children fifteen days, or three weeks, on account of the beneficial influence that the flow to the mammary glands has to prevent congestion of the pelvic organs.

Charles West says: "The mother who nurses her little one, even for a month, avoids thereby almost half the risks which follow her confinement."[2]

It is precisely at this time, also, that the tender age of the child renders the mother's milk most necessary for its safety. Infant mortality is greatest during the first months of life.

The following figures show the high death-rate in infants during the first two months, and consequently the great risk incurred by a precarious mode of feeding, and the importance of giving the child its natural nourishment during this critical period.[3]

	Deaths per 1,000.
One month [illegible]	[illegible]
One to [illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Of 100,000 children, 13,825 died during the first three months, and 3,649 during the succeeding six months.[4]

3. *Abstention from suckling one great cause of criminal abortion.*—Another consideration of supreme importance which ought to induce physicians to pertinaciously urge mothers to suckle is its influence in preventing frequent pregnancies and abortion. Conception rarely occurs in a nursing woman who does not menstruate. If the patient has given due attention to hygiene and diet, and her health is kept vigorous, menstruation is almost always checked for several months during lactation.

Of 1,327 women, only 125 (9.5) menstruated while nursing. Of these, 40 were married and 85 not married. Among the latter, at least, it is reasonable to presume that many had insufficient care.

Of 312 multiparous nurses, 18 menstruated during first six months; 18 during first six to eight months; 22 during first eight to ten months; 29 during first ten to twelve

[1] V. A. Aran. Traité des Maladies, p. 25.
[2] M. Gubian, Jr. Gazette Méd. de Lyon, 1867, p. 1.
[3] Tilt, Edward John. London Lancet, August 1, 1868, vol. [illegible], p. [illegible].
[4] Schmidt's Jahrbücher, 1862, Band [illegible], pp. 42, 43.
[5] Brochard. L'Allaitement Maternel, p. [illegible].
[6] February 29, 1868, p. 213.
[7] Observations with the Hæmacytometer upon the Globular Composition of the Blood and Milk, Cartwright Prize Essays, 1870.

[1] Report of [illegible] Confinements, [illegible] Gazette Méd. de Lyon, 1867, p. [illegible].
[2] The Mother's Manual of Children's Diseases. London. 1885.
[3] Paper on Infant Mortality, Report of Boston Board of Health, p. 53, 1876.
[4] Des Changes [illegible] tisme, p. 29. Paris, 1859.

months; 28 during first twelve to fifteen months; 197 did not menstruate till after fifteen months.[1]

Those who do not suckle generally have frequent pregnancies, and this is one of the causes of a crime not very uncommon around us—abortion. In the days when a mother who did not suckle was the exception, abortion was almost unheard of. Even now, in any locality where mothers, as a rule, nurse their children, abortion is rare. In localities where wet-nursing and artificial feeding are the prevailing modes of bringing up children, it will be found that women frequently solicit abortion.

4. *When should a woman not nurse her child?*—There are, however, many cases in which a woman should not nurse her child. Pulmonary phthisis, well-marked scrofula, and cancer are contra-indications to nursing; an epileptic mother must not suckle her child; and women who are of a nervous temperament and are easily excited will frequently have to be induced to give up nursing. When it is clearly shown that the mother's milk disagrees with the child, she should abstain from suckling; but not until every effort has been made to alter and improve the quality of the milk, such as attention to kinds of food and drink used by the mother, change of scene and air, tonics, and perhaps dilution of the breast-milk by giving to the infant barley- or lime-water just before nursing. If all these are tried and found unavailing, then artificial sources should be resorted to. Acute illness of the mother does not always necessitate separating the child from the breast. I attended a patient with a severe attack of acute articular rheumatism, which in time involved nearly every joint, and lasted several weeks, and her infant was nourished from her breast only, during the entire period, and he remained in excellent health. I have seen two mothers ill with diphtheria nurse their children—one four, and the other seven and a half months old—and these children did not contract the disease, and both thrived. In all such cases, however, it is advisable to take the child from the breast, if the mother will consent to it; and it is the duty of the physician to apprise her of the danger incurred in suckling the child; but we should not be too persistent, nor have the child separated from the mother in violation of her continued determination to exercise her sacred privilege, even at her own risk.

These cases do not in the slightest conflict with the law that the great majority of women can and should suckle their own offspring. It follows that it is incumbent upon the physician to instruct every mother that, for her own safety during the lying-in period, and for the sake of her future health, she ought to nurse her child. It is a duty which she owes to her family as well as to herself.

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II. WET-NURSING.—1. *Its influence in increasing infant mortality.*—When a mother cannot nurse her child, shall we recommend it to the perilous care of that most remarkable and incomprehensible of creatures, the wet-nurse; or shall we have recourse to that method over which we have complete control, of which we can have no distrust, and which involves no hidden ways—hand-feeding? In New York physicians generally recommend the former.

Wet-nursing is a many-sided subject, and it has not received that conscientious consideration which its importance demands. In the first place, the employment of a wet-nurse, and the consequent desertion of two children by their proper mothers, is the main cause of the high rate of infant mortality. Wet-nursing, in its influence on infant mortality, is a two-edged sword, as the probability of death during the first year of life is materially increased in both the *foster-* and the wet-nurse's child. One would naturally suppose that the health and life of an infant would be equally safe, whether nursed by its own mother or by a healthy wet-nurse; but the following pages will show that this is not the case.

Mortality among maternal and wet-nursed children. Below will be seen the results of maternal *versus* wet-nursing in 422 infants, covering a period of five years; Mortality among infants nourished by mother, 16 in 100; mortality among infants nourished by wet-nurse in family, 28 in 100.[1]

Later observations, from 1872 to 1879, on 600 infants: Mortality among infants nursed by mother, 10 in 100; mortality among infants nursed by wet-nurse in family, 26 in 100.[2]

In Montpellier, France: Mortality among children nursed by mother, 10 in 100; mortality among children nursed by wet-nurse in family, 15 in 100.[3]

Süssmilch says that the mortality among children nursed by the mother and those nursed by a wet-nurse is as 3 to 5.[4] Ullersperger differs but little from Süssmilch in his conclusions. He says that the mortality among children nursed by the mother and those nursed by a wet-nurse is as 4 to 5.

In Paris: Mortality of infants nursed by mother, 10 in 100; mortality of foster-children placed and watched over by Directory of Nurses, 1839–58, 29 in 100;[6] mortality of foster-children placed and watched over by Directory of Nurses, 1859–64, 33 in 100.[6]

In one of the foundling hospitals of France: Mortality of children nursed by their mothers, 6 in 100; mortality of children nursed by workhouse nurses, 36 in 100.[7]

A confirmatory fact applies to 6 twins (twelve children): 6 were nursed by their mothers, and all did well; 6 were wet-nursed—3 died, and of the remaining 3, 2 at twelve months were looking puny and delicate, as if they could not live long, the 6th was quite healthy.[8]

The results from different foundling asylums, compiled by Friedman, show the following: If nursed by mothers, 18 in 100 die; if nursed by wet-nurses, 30 in 100 die.[9]

In Lyons, France, children nursed by their mothers, the mother receiving aid from city authorities, 21 in 100 die; children given out to nurse and watched over, 35 in 100 die.

"Dr. Benoiston de Châteausneuf has shown that the mere substitution of a hired wet-nurse's for a mother's milk increased the mortality 10.6 per cent." [10]

This increased death-rate in foster- over maternal-nursed children does not reveal all the evil done to the wet-nursed baby. His future health and development are affected thereby. "These children [nursed by mothers] were incomparably better-looking and healthier than those who were intrusted to wet-nurses." [11]

2. *Causes of increased death-rate in foster-children.*—It has been distinctly and definitely proved that there is a higher death-rate among wet-nursed babies, even under the most favorable circumstances, than there is among those who have had the care of their mothers. To one who has attentively observed the devious and irregular methods put into practice by nineteen-twentieths of these women, there is ample explanation of this increased mortality. The milk of a hired nurse, whose passions, emotions, nervous organization, and whole constitution are totally different from those of the mother, often proves to her child an unwholesome diet. While the milk of a wet-nurse may agree perfectly with her own offspring, it does not follow that another child will thrive upon it. He frequently suffers from indigestion, colic, and other disorders.

Andral, Soemmering, and others have related curious

[illegible]

[1] [illegible] vol. ix., p. 321.
[2] Ibid., 1880 (2d series), vol. ix.
[3] De l'Alimentation Vicieuse dans ses Rapports avec la Mortalité de la première [illegible]
[4] [illegible]
[5] Des Avantages et des Inconvénients de ses Rapports avec la Mortalité de la première [illegible]
[6] Dr. Denis-Dumont: Archives Gén. Méd., vol. ii., p. 105, 1867.
[7] [illegible]
[8] Ibid., Jan. 16, 1858, p. 50. [9] Journ. für Kinderkrankheiten, vol. liii., p. 163.
[10] [illegible]
[11] Report on [illegible] the Dispensary at Lyons, Gaz. Méd. de Lyon, [illegible]

instances in which the milk of a nurse is well digested by her own children, and not by others.

Andral relates that "the milk of a woman who suckled her own children without inconvenience, produced convulsions in other children." [1]

"The milk of a woman, which agreed very well with her own children, caused convulsions to others who partook of it" (Soemmering).[2]

"The milk of a woman may be perfectly good for a particular child and exceedingly bad for another." [3]

"A lively-looking, stout child, with firm muscles, and fat, cannot certainly have been fed on bad milk; but you must not imagine that the foster-child of such a nurse will likewise become strong. The individual peculiarities of children play an important part in this respect, and often upset all prophecies and all calculations, however reasonable they may appear." [4]

"It is an often-observed fact that the child of a feeble mother will prosper at the maternal breast and grow excellently, while a strange child . . . would thrive under no circumstances." [5]

Every physician who has had much experience with wet-nurses, and has been in the habit of jotting down his observations on them, has noted many, if not all, of the incidents here related.

Wet-nursed babies are usually colicky, have irregular bowels, and restless nights, when not tampered with. This is one reason why many nurses have to be tried in succession, but what becomes of the poor baby who is nursed by a dozen nurses in as many days, all of whose milk disagrees with him? "It is seldom that the first nurse suits. Often a large number have to be tried. I know of an instance where a change had to be made thirteen times in two weeks." [6]

There appears to be a general impression among physicians that it is a matter of indifference how frequently the wet-nurse is changed; some practitioners say that they would discharge a wet-nurse as they would any other servant. It is a common saying that you may with impunity have a "new one every day in the week, and two on Sunday." In the individuality of woman's milk, in the idiosyncrasies of the child, and in the change of nurses, we have, then, some explanation of the augmented mortality in foster-children.

Mental condition of wet-nurse. Most authorities recognize the influence of violent emotions in a woman giving milk upon a nursing child. The following incidents will show how grief or other mental disturbance will affect the mother's milk. I was asked to go in great haste one evening to see a dispensary child, whom the mother believed to be dying. While in this distressed state she placed her eight months' old infant to her breast; the baby had been perfectly well up to the moment of the mother's nursing it. While nursing it had a convulsion, and when I arrived to see the older child the infant was dead.

Another case is that of a child of Mrs. M——, the mother of seven children, all born healthy. When the last child was twenty-four hours old Mr. M—— died suddenly. The first time the infant was placed at the mother's breast after this sad occurrence it had a convulsion, and has been subject to them ever since. The six other children are living and are well. All were nursed by the mother; none of them ever had a convulsion. Family history good in every detail.

One Sunday afternoon I was hastily summoned to a child in convulsions. Upon entering the room I saw the child on its mother's lap, the convulsion having subsided; it appeared well, and a careful examination elicited no cause for the convulsion. The spasm had come on immediately after nursing. I told the mother that her milk was the cause of the fit; further inquiry brought out the fact that, immediately before nursing, the husband and wife had quarrelled.

A nursing woman, then, should be of a contented and cheerful mind, as that which frets or excites her will morbidly affect her milk. How much more apt is a wet-nurse, who usually is an unmarried woman from the country, home-sick, and looked down upon by the servants of the house, to have a sudden change of temper and her milk to be injurious to the nursling.[1]

She is apt to have frequent disputes with the other servants, and after such disturbances the baby has colic, restlessness, and sometimes convulsions.[2]

Beside the novelty of the nurse's new surroundings and her most unnatural position, if her child is living, and she is possessed of one spark of moral feeling, she is constantly a prey to anxiety on its account.

This state of mental depression must alter the quantity and the quality of the lacteal secretion.[3]

Many a sleepless night of unknown origin, many attacks of vomiting, diarrhœa, and colicky pains have as their source some mental disturbance in the nurse, who is wholly unsuspected as the cause.[4]

Influence of food and habits of wet-nurse. We select for a wet-nurse a strong and robust-looking woman, generally from the country, one who has previously been accustomed to hard work and fresh air and whose diet has been most simple. Suddenly she is transposed from a life of toil to one of comparative inactivity and confinement, usually to a close and overheated room, with an abundant supply of food, largely animal, and often an allowance of wine or porter, in order that there may be a copious flow of rich milk. The natural result is that the woman eats and drinks to excess, and this, in connection with her idle life tends to produce not a healthy, but an unwholesome fluid.

It has been proved that the sedentary life of the nurse alters the chemical properties of her milk, that instead of being neutral or alkaline, it becomes excessively acid, as does the milk of stall-fed cows.[5] The skin and liver of the nurse become torpid, her bowels constipated, and her lacteal secretion contaminated with waste matters.

It has been shown that the rate of infant mortality is less during a time of trade panic, when provisions are high — but not deteriorated in quality — employment scarce, and wages low, than it is during an epoch of prosperity and abundance.

"Faulty diet and repletion, together with the intemperance of parents, both in eating and drinking, are much more pernicious in their effects upon infantile health and life than the spare and simple regimen which straitened circumstances impose." [6]

A mercenary nurse is usually so anxious to keep her situation that she is generally the first to perceive that the child is not thriving, and she is apt to give artificial food surreptitiously, or, finding that she has insufficient milk, or that it disagrees with the child, making it fretful

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[1] Andral, Lectures on Clinical Medicine, Philadelphia, 1844, p. [illegible]

[2] Soemmering, [illegible]

[3] Trousseau's Clinical Med., vol. ii., p. [illegible]

[4] [illegible]

[5] [illegible]

Co., 1885.

[illegible] ed. after choosing nurses with abundance of milk, to find the secretion [illegible] Theoretical and Practical Midwifery, p. [illegible], Philadelphia, 1869).

[illegible] mentally excited soon after begin to cry violently, suffer from colic, get diarrhœa, and are sometimes attacked by convulsions" (Vogel, p. 37, D. Appleton &

[illegible] t for [illegible] haste to see an infant in a convulsive fit, and on in- [illegible] found tha [illegible] this mental agitation the infant was [illegible] killed by her. And that occurrence was followed by the convulsive attack referred to. The late Sir Richard Croft, who had [illegible] cases." (Mr. Wardrop, in London Lancet, July 24, 1833, p. 522.) Baumes remarks that he was informed by one of his professional brethren that his child died [illegible] lently exasperated (North, John, Convulsions of Infants, pp. 98, 99, London, 1826).

[2] Journal des Connaissances medico-chirurgicales, 1834. De l'Alimentation de la première enfance et du rachitisme. Paris, 1839, p. 33.

[3] Med. Times and Gazette, 1863, vol. i., pp. 676, 677.

and restless at night, it is more than probable that she will fall back upon another of the evils of wet-nursing —the artful use of stimulants.

Stimulants and narcotics. One would suppose that neither of these devices could be resorted to without a watchful mother detecting it at once. The following instances show, however, that such a thing can occur: A young woman, obtained from the New York Maternity Hospital, was with Mrs. R—— as wet-nurse for four months. During this time the family physician told the parents that he suspected her of using stimulants. The mother thought the suspicion groundless, until one day, after having received her wages, the nurse went out and became so intoxicated that she was arrested. A similar case occurred in Dr. M——'s family in this city. The nurse was from the first month suspected of using stimulants, but nothing could be proven against her until she had been in her situation six months, when she came home one night very much inebriated.

This practice of the nurse taking stimulants and then placing the child to the breast, is more common than is generally supposed. There can be no doubt that alcoholic stimulants, in any form, injure a young child; when taken by the nurse they are, in effect, administered to her nursling, and it will at once fall asleep. Vernay relates a very striking case of the mischievous consequences which may result from the abuse of wine-drinking in a nursing woman. A child was taken with convulsions, and during five days every possible means was uselessly employed to relieve it. Vernay learned that the nurse drank six or eight glasses of French wine during the day, and often several more at night. The convulsions ceased as soon as she was no longer allowed to drink wine.[1]

Dr. Amarion cites the case of a child, three weeks old, who had convulsions without discoverable cause. After careful investigation by the physician, it was shown that the wet-nurse secretly drank four bottles of wine daily. The physician had the nurse watched, and allowed her only half a bottle of wine, and one bottle of beer a day. After a few days the child was entirely well.[2]

A similar case came under my observation, where all the symptoms of excitability in the child disappeared after the woman was taken to the country, where she could not obtain stimulants.

"On one melancholy occasion I was called out to see a lady's *dhye*,[3] who was taken ill; indeed, she was supposed to be dying of the cholera. When I arrived I found the woman in a state of inebriation. She was a wet-nurse to a lovely infant, who was taken suddenly ill on the following morning, and died a few hours after."[4]

Opiates. "We have known," says Dewees, "a *number* of cases where laudanum was administered with so much cunning as to elude detection for a long time, even after suspicion had been excited."[5]

The author then relates the following striking instance: On visiting a child, nine months old, he noticed the sleep to be that of opium. The mother and nurse both asserted that the infant had had no opiate of any kind. The nurse was never for a single instant alone with the child. When the mother left it, she placed a young woman in the room—this person had never seen the nurse give the child anything. Dr. Dewees, still confident that an opiate was given, requested the mother to make an examination of the nurse's pockets when she was asleep. The result was the finding of a small vial of laudanum in a pocket made within the larger one, for the express purpose of holding it. The young woman had seen the nurse apply this vial to her nipples every day, and had been told by the nurse that it contained tincture of myrrh, which she used to harden them.

Recently I saw in consultation a wet-nursed baby, seven months old, with obstinate constipation, there having been no movement on one occasion for ten days. Everything had been tried with no effectual relief. After careful questioning I became convinced that it had been given some preparation of opium by the wet-nurse, as the constipation dated from the time of her appearance in the household, when the baby was about a month old. Directions were given that the nurse should be watched, and never left alone with the child. There was no recurrence of the constipation after this.

I have seen many wet-nursed children treated by excellent physicians for liver complaint, or for derangement of the stomach, where the nurse alone has been responsible for the symptoms, having given spirits or opiates to the child.

Apropos of this, Keating says of the wet nurse: "She must be watched and guarded as the sacred cows of India; watched in her diet, in her habits, in the control of her feelings."[1]

I do not doubt that the wet-nurse, in her ignorance, finds reasons sufficient to her conscience for administering these poisons to her foster-child. Is she more to blame than the woman who has robbed her child of its mother's bosom, and left it to die of neglect and starvation?

On the transmission of disease by the wet-nurse. In choosing a wet-nurse it ought to be known from personal and family history if there is any disposition to mental derangement, scrofula, consumption, cancer, or syphilis. These diseases are hereditary from parent to offspring, and they may be conveyed to the nursling through the milk. Every ramification of the nurse's family should be made familiar to the physician who takes the responsibility of recommending her. It may be said that a physician can detect the presence of these diseases. One who is about to furnish a patient with a wet-nurse may claim that he has learned her history clearly, fully, and accurately from the doctor who attended her in her confinement; but the following instances refute this:

Physicians who have been connected with the Maternity Hospital, on Blackwell's Island, tell me that women who are not allowed, on account of disease, to go from there as wet-nurses, have frequently, to their personal knowledge, obtained such positions through agencies for wet-nurses in the city.

Syphilis. I recall several striking instances of this kind; one, that of a syphilitic woman, who brings her infant, suffering from congenital syphilis, to my clinic at the Demilt Dispensary. She is generally accompanied by her foster-child, whom she obtained, from a public institution in New York, immediately after the death of her first-born child. A proof that the woman had syphilis when she procured the child to wet-nurse, is that the little girl does not now contract it from being in contact with the infant, who has the worst form of syphilis—mucous patches, etc.

A physician, connected with a public institution in New York, furnished me with the following particulars: He treated a woman for syphilis, who, after the disappearance of outward symptoms, discontinued treatment. Later, she came to him for a letter recommending her as wet-nurse, which he refused to give, explaining that she would endanger the life of a nursling. Some weeks after, she reappeared, bringing with her a child she had obtained from a hospital to wet-nurse. These women had been examined, and were selected as healthy wet-nurses by physicians who are, by training, experience, and skill, as competent as any in this city to detect syphilis in a nursing woman.

Syphilis contracted during pregnancy may leave no mark or symptom by which it can be detected. I am constantly seeing mothers of syphilitic infants who give no history of syphilis, have never had any outward mani-

[1] Am. Jour. Obstetrics, 1873-74, vol. vi., p. 676, from Lyon Médical, 1873.

[illegible]

Children, pp. 57, 58, 59, first edition. Philadelphia, 1825.

[1] The Care of Infants, p. 25. Philadelphia, 1881.

festation of the disease, and in whom the most thorough examination will not bring to light any evidence of previous or existing disease. These mothers nurse their own infants with impunity. An infant does not commonly present any symptom until a month or six weeks after birth, and during this period any physician is liable to select its diseased mother as a suitable and healthy wet-nurse. A child with such a foster-mother is ill-nourished, anæmic, feeble, with flabby muscles and a listless expression, and sometimes the healthiest infant born will gradually atrophy and die.

Dr. Donné relates the following instance: "A certain family had taken all the ordinary precautions to procure a good nurse for a first-born child. The woman was young, ruddy, and apparently in perfect health. At the end of one month several pimples were observed on the child's body." The child had syphilis, from which it ultimately perished.[1]

Professor J. Lewis Smith says: "Constitutional syphilis is common in the class of women who present themselves for wet-nursing; it is often latent, or its symptoms are easily concealed, and it is communicable by lactation. The cases which have accumulated in the records of medicine are numerous in which infants, born of healthy parents, have been fully syphilized by lactation from diseased nurses."[2]

Scrofula. A scrofulous nurse will generally taint her charge, and it will not thrive; yet many scrofulous women, or those of a scrofulous family, are selected as wet-nurses.

In the spring of 1884 a young woman, with the following remarkable history, came to my office to be treated for a scrofulous neck: About two years and four months before coming to me for treatment she gave birth to a child which died when five weeks of age. She then became wet-nurse to a baby whose mother was ill. At the end of six weeks, the mother having recovered, the nurse was discharged. A second situation was secured, where she nursed a baby for eleven months, when it died. A third position was easily obtained; here she nursed the baby thirteen months, when it too succumbed. Of four children nursed by this woman only one survived, and this one was returned to the breast of a healthy mother after six weeks of separation, owing to an acute illness. This woman acted in the capacity of wet-nurse for two years and three or four months after one pregnancy. Her milk was fourteen to fifteen months old when she went to her third foster-child, an infant aged a few days. Her cervical glands were much enlarged during the entire period. She had been examined by four physicians, two having examined her before she went to her second situation. Not *one* of these physicians, nor *one* of the families, ever *suspected* that she had scrofula. The deceptive creature told me that she had always taken great care so to dress her neck that the swellings could not be seen. She was most anxious to be "cured quickly," before her milk dried, that she might continue wet-nursing! I asked her how she would manage about the age of her milk, as no one would employ her to nurse a young baby? Her reply was that she could borrow a baby from some acquaintance!

In June, 1884, baby N——, aged eight weeks, was brought to me at the Demilt Dispensary, gradually dying from scrofula and starvation; the mother was a wet-nurse in a family who lived on Fifth Avenue. Baby N—— died about three weeks after I first saw her, and I have since learned that the unfortunate foster-child subsequently died also.

In these cases there certainly was scrofula, which was not detected by the physicians who selected the wet-nurses. Dr. Donné says: After having selected a nurse, a model in appearance, coming from one of the healthiest families—a nurse to whom one of the most celebrated physicians of Paris had entrusted one of his children, and who had nursed another in a good family—after having received the assurance that she did not have upon her body the slightest trace of any affection whatever, there were found, on examining her, three scrofulous scars on one of [illegible]

In consideration of the ease with which these women obtain the situation of wet-nurse, and the carelessness with which many physicians recommend them, there must be many who are either grossly ignorant of the risks incurred by wet-nursing or shamefully indifferent to them.

Fate of wet-nurse's child. What becomes of the child that is thus deprived of its birthright? It is very difficult to obtain information regarding this question. The subject has not received the attention which it deserves, for the reason that those who are most and directly concerned will not, or dare not, consider it. Not one of the institutions in New York City from which wet-nurses are obtained is prepared to furnish definite statements, but by patient investigation much may be learned. I have had a large experience with these children at the Demilt Dispensary and at the University Medical College; all have been followed to their homes, and all have died. Not *one* child of a wet-nurse that has come under my observation at these institutions has survived the first few months. These cases are numerous, and their appearance has become to me so singular and so striking that I have, in many instances, as they were brought into the examining-room, pointed them out to physicians present "as a wet-nurse's starved baby." In each case the history has borne out the opinion thus cursorily formed, and the observation, "that death would be its fate," has in every instance proved lamentably true.

That mine has been the experience of others is shown by the following: In February, 1854, two ladies made inquiries of a leading physician as to the fate of wet-nurses' infants. His answer was: "As a rule, all infants of wet-nurses die, and generally from neglect."[3]

W. Tylor Smith said: "Recalling my own experience as an obstetric physician, I can scarcely remember an instance, in the course of twenty-five years, of the child of a wet-nurse, who was a single woman, living beyond infancy."[3]

Dr. Clarke says:[4] "In some families six, in others eight, wet-nurses had lost their own children."

The following interesting history has just come to my knowledge. Four healthy children were born to a woman. She nursed the first and third child; they are both living and are well. The second and fourth child she put out to nurse, while she took the position of wet-nurse; the one lived two months, the other three weeks, after it was deprived of its mother's breast.

Below is given a clear case of deliberate infanticide. "Not long ago a mother left us to nurse in a private family. Her child, unusually strong and healthy, left the institution, and was given to the ignorant and superstitious care of a woman so foreign to our ways that she could not even speak our language. Her abode was a rear tenement-house. The child lived a week, dying from an ailment the cause and chief danger of which depended upon faulty feeding."[5]

I myself know that this method of infanticide is put into practice in New York many hundred times annually. Many wet-nurses who apply at agencies have been confined by midwives who keep lying-in-establishments, and are sent out as wet-nurses by these women to earn money to pay the expenses of confinement. The children are left at the mercy of the heartless hags who desire their death. Numerous instances of this kind have come under my observation.

[1] Mother and Infant, Nurses and Nursing, by Dr. Donné, p. [illegible] 1859.

[2] J. Lewis Smith, [illegible]

[3] [illegible]

[4] [illegible]

[5] [illegible]

According to the last printed report of the Infants' Hospital on Randall's Island (1882) there were 263 children that were nourished at the breast, of whom 41 died during the year; and there were 375 that were bottle-fed, among whom there were 286 deaths. In the former the death-rate was less than 16 per cent., and in the latter over 75 per cent. Though all the mothers of these hand-fed babies were not wet-nursing, many of them were. In 1874 the deaths in Tours, France, in wet-nurses' children deprived of breast-milk, was 87 per cent. Dr. Carpenter, of Croydon, England, in the *Public Health Journal*, 1873, says that 90 per cent. of the children which are put out to dry-nurse by wet-nurses die after a few weeks of hand-feeding. The published mortality of foundlings in the Philadelphia Almshouse, a few years ago, was 100 per cent.! At the State Almshouse, Mass., the death-rate among infants deserted by their mothers sometimes amounted to 90 per cent.[1] Dr. Routh, in speaking of an infant nursery where the children of wet-nurses were taken to be dry-nursed, says: "The mortality was certainly four out of five, if not more."[2] In the Grey Nuns' Foundling Hospital at Montreal 73 per cent. died in 1860.[3]

The following is an instance of the shocking results of wet-nursing: "In the Department of the Gironde are two communes under similar hygienic conditions. In one the mothers suckle their own children; in the other a number of mercenary wet-nurses take in children from Bordeaux in large numbers to wet-nurse. In the first the mortality is thirteen per cent., in the last it is eighty-nine per cent."[4]

It is a noteworthy fact that during the siege of Paris, 1870–71, when it was impossible for wet-nurses to go from the country into the city, the death-rate in infants in the country fell from thirty-five to seventeen per cent., on account of the wet-nurses being obliged to remain at home, thus attending to their own children.[5]

The wet-nurse's child, then, usually lives in a starving condition until death releases it from its miserable existence. As many physicians know, these heartless creatures often witness the gradual languishing and final death of their children; they know the cause and the remedy, but are unmoved. The unnatural mother, who by force of her purse has robbed this dead infant of its birthright, turns to its mother and comforts her by saying that "the poor little thing is better off." But has anyone a right to make himself responsible for the death of a defenceless infant? Do not the people who employ wet-nurses instigate and encourage this stupendous crime?

If these foundlings do live in spite of being neglected and mismanaged, their constitutions are often irreparably injured, and in time they become a public charge.

That wet-nursing weakens the constitution of our adult population is shown by the following instances: At Château-Chinon, France, where the mothers go out as wet-nurses, thirty-one per cent. of the recruits for the Franco-Prussian war were found unfit for military service; while at Nevers, where the mothers nurse their own children, only seventeen per cent. of the recruits were unfit for service.[6]

If the investigations of others verify these statements this despicable evil should be checked, for "society ought to watch over children with the anxiety of the father of a family."

[illegible] A large proportion of the women employed as wet-nurses in New York are single women, and from the country. After an investigation extending to all the agencies and institutions from which they are obtained, and inquiries of physicians and monthly nurses, I am sure that more than four-fifths are from the country, and nineteen-twentieths, at least, of all wet-nurses are unmarried.

Some people think that the influences and surroundings of a virtuous home will bring these fallen women back to a sense of morality. But is the comparatively short period during which every luxury, comfort, and flattery are poured upon them calculated to work reform upon creatures in whom weakness of character is their very life? How can these women believe that the families who employ them care for their moral condition, when they have no regard for the lives of their children? The following incidents show the indifference to infant-life which these circumstances create. My friend, Mrs. A——, seeing Mrs. W——'s baby being nursed by a wet-nurse, she turned to Mrs. W—— and asked her where the foster-mother's baby was? "Oh, it died—fortunately," was the light reply.

My friend, Dr. E——, has given me these details: The mother of a healthy infant went as wet-nurse in the family of Mrs. G——. Three weeks later the wet-nurse's child was suffering from inanition. The family being notified, they refused to take any interest whatever in the child whose life-blood was being drawn by their own babe, even refusing to furnish medicines and proper food.

A woman brought a baby, aged one month, to the Demilt Dispensary, October 22d, for treatment. Its mother is a wet-nurse in the family of Mrs. K——. The baby was suffering from congenital syphilis. I requested the woman to notify the family that the nurse might infect her nursling. The foster-child's grandmother was interviewed. She replied that *their* baby was doing well, and that it would be impossible to inform the nurse of her infant's illness! October 26th the baby died. The grandmother was seen again. This lady would not authorize a simple burial, but told the woman who had boarded the baby to get a certificate of death from me, and then take the dead baby in her arms to the Morgue! This is the most revolting of many shocking occurrences which have come to my notice. Here, again, the mother of a syphilitic child was selected as a healthy wet-nurse.

Very often these poor little waifs do not receive a decent burial, but are placed in a coffin of unplaned boards, and are carried away in a wagon and buried—who knows where? Perhaps nowhere! As far as I have been able to learn the mother is never allowed to attend the funeral of her child; she is not even informed of its death until after its remains are disposed of. This alone is most demoralizing.

It is almost unknown for one of these women to be retained in the family as an ordinary servant after her duties as wet-nurse have expired. It stands to reason that the indolent life which she has led, accompanied by every attention, almost always unfits her for the position of a common servant.

Thus she is not only bribed to forsake her child but she is unfitted to occupy that position in life she formerly held. None of a wet-nurse's experiences tend in the least degree to work reform in her. During the nine months to a year that she is acting as wet-nurse her only companions, when away from the house of her employer, are other wet-nurses whom she meets in the public parks, or girls with whom she was thrown in the institution or at the house of the midwife where her confinement took place. Thus in this capacity the facilities for acquiring knowledge of crime are so great that it is the very life to be avoided. By the time she is discharged from her position she is generally ready for another experience, and looks upon nursing as a business. Many of these women return to the institutions for a second and third confinement, with the expressed intention of going again as wet-nurse.

People make the employment of wet-nurses a charity? It is said that these fallen women *must* take the situation as wet-nurse in order to support their children.

[illegible]

p. 169, Paris, 1877.

This motive is put in the foreground in order that the selfishness of the real motive may be hidden.

In the Thirty-second Annual Report of the Nursery and Child's Hospital, 1886, I find the following: "One great difficulty we labor under is the want of wet-nurses. . . . Women, in the station they occupy, are seldom found with the maternal instinct strong enough to induce them to remain and nurse their own infants, when they can obtain high wages and enjoy the luxurious life of a wet-nurse in a private family." At Randall's Island Hospital the physician in charge said: "Practically we have not a wet-nurse for the foundlings, though we use every effort to have the children suckled."

Artificial feeding in institutions is the natural outcome of wet-nursing in private families. There should be no prejudice against the employment of women from institutions as wet-nurses in private families; every healthy woman so placed should nurse, if necessary, two children, and the death-rate in infants would then fall more than fifty per cent. within the first year.

The following extracts prove that the nursing of two babies may succeed: "Each generally nurses one, and takes care of two babies in *addition* to her own. . . . Some of these have had enough breast-milk to be able to feed two babies without giving artificial food at all, and others have had to give but *very little* artificial food in addition to their breast milk."[1]

The Fourteenth and Fifteenth Annual Reports of the institution (Massachusetts Infant Asylum) show that this plan continues to be successful.

If people will have a wet-nurse, they should have her bring her own child with her. This would give the two children an equal chance for life. The wet-nurse having her own baby at her breast, it would be an inducement to her to take care of her health; in fact, I believe that the death-rate of foster-children would be less if this plan were adopted than it is when the wet-nurse is separated from her child. If the wet-nurse's child is to be artificially fed, the mother of the foster-child ought to see and know that it is properly done, and she should make herself personally responsible for its life.

In speaking of reforming these women, a lady of large experience with them writes thus: "These women should be made to nurse their own infants."[2]

There are institutions where these unfortunate girls will be received with their children, provided they will assist in the care of other children until such time as they are able to support their children as well as themselves by honest labor. The child then becomes the mother's strongest moral tie. If the woman wishes to relinquish all claim to her child, there are institutions where it will be received, and no questions asked; and she is free to return to her home, where she is far more likely to reap the benefits of moral reform than she would be if she were to take the uncertain and degrading position of a wet-nurse.

Influence of wet-nurse in family. The wet-nurse is generally a young woman who has become illegitimately pregnant. Should we receive such a person as an upper servant in our family, and give her the care of, and allow her to become the foster-mother to, our child? Is this a proper example for the other servants? Their mothers would not allow them to associate with this woman, but in our houses they are made to feel that she occupies a place superior to theirs, with much higher wages, better clothing, and no heavy work; they must wait on her, in fact, everybody must acquiesce in her every whim, "for the sake of the baby." Is it not an incentive to vice to treat them thus? Is not this discouraging virtue and rewarding prostitution?

Influence on foster-child. Has the individual character of the nurse an influence on the future disposition and character of the child? If the milk of a woman under the influence of unusual emotion will induce restlessness, and even convulsions, in her nursling, do not all her feelings, passions, and emotions affect it? Apart from, and beyond this, the life of the foster-mother is the child's life. The formation of character begins at birth. One who has lived with children, and carefully studied the development of character in them, will not fail to perceive that the influences of the first year are of as much, or perhaps more, importance than any other in their lives. Impressions then made, and feelings then formed, are ineradicable.

The following cases show that the individual character of the wet-nurse influences the future habits and character of the child. A medical student gave me this instance: His brother has four children, all boys; the first two and the youngest were nursed by their mother. The third was nursed by a young Irishwoman. He is entirely different in habits and in character from any of his brothers, exhibiting very decided Irish traits, which are so marked that they are noticed by all the friends of the family, even though they do not know of his having been wet-nursed. A second case is one in which a mother had four sons. She nursed three, but had an Italian wet-nurse for the youngest, who suckled the child for over a year. The four brothers are now men. The mother says her youngest son is different from his brothers, that he is of a more secretive disposition, and that he has traits acquired from his Italian wet-nurse. Another case of particular interest that has already been recorded[3] is that of twins, one nursed by the mother, the other wet-nursed. These children showed traits of character diametrically opposite, the evil habits of the child who was wet-nursed being clearly traceable to the foster-mother.

The practice of wet-nursing is now becoming so customary that even before the child is born the wet-nurse is spoken of; and the physician, who too readily falls in with his patients' unnatural and unfeeling impulse, makes inquiries and arrangements for the fulfilment of it. This has actually occurred in the practice of reputable physicians in this city, where the mothers were in excellent health.

It was decided before the birth of the infant king of Spain that the royal mother should not nurse her child. The London *Lancet*, commenting on this, says: "The royal mother was not to be allowed the natural privilege which is properly so prized by most mothers of lower degree—would that we could say so of all! But when royalty sets the fashion, what wonder is it that others, with no public or extra domestic duties whatever to attend to, and so entirely without excuse, hasten to depute the mother's duty to a stranger."[4]

That noble woman, the Queen of England, was nursed by her good German mother, the Duchess of Kent; and Victoria, in her turn, has watched and guarded over nine children as a true and loyal mother should.

It is an historical fact that the mother of Louis IX. of France suckled and brought up all her children. During an illness under which the queen labored, her infant son was placed at the breast of one of her ladies of honor; upon seeing it, the royal mother called for the young prince, put her finger into his mouth, and caused him to vomit the milk he had just swallowed, exclaiming, "Do you suppose that I shall suffer any one to take from me the title and office of mother, which God has given me?" She then placed the child to her own breast, and nursed him, notwithstanding her illness.

With these and other salutary examples before her, the unnatural mother of to-day will stand unconcerned-

[1] [illegible] and moral habits. Cheerfulness, affection, veracity, and a proper appreciation [illegible] Not less important are habits of temperance and cleanliness. *I could cite* [illegible] Smith, p. 47, 1882.

[2] London Lancet, 1867, vol. ii., p. 30.

[3] [illegible] May.

ly by and watch her child while it draws the breast of the lowest grade of her sex.

The cry, "I have no milk ; I cannot nurse my baby ! " is not limited, as it once was, to the upper classes ; it is found in the mouths of the poor as well, owing to the force of example, and it is common for women in blooming health to bring to my dispensary class their sick babies, with their bottles, all giving this same excuse.

The lives of nine-tenths of the wet-nursed children are purchased at the expense of the lives of other children. The practice, therefore, of placing children to dry-nurse, either in families or in institutions, in order that the mother may go as wet-nurse, is iniquitous.

It is inexcusable and indefensible under any circumstances. It is the deliberate starvation of one child that another may live.

It is lamentable that a system so pernicious and injurious to the best interests of society should be tolerated, and even encouraged, by the most eminent and honorable members of the medical profession.

Briefly, then, we usually select a hireling to perform the mother's most sacred duty ; one who occupies the lowest place in the social scale and in whom there is an absence of the moral qualities ; usually one who has been, in some degree at least, a prostitute ; one who can forsake her own child and take a stranger's to her breast ; one who can witness the gradual starvation and death of her own child, and who may be a double murderess by poisoning her foster-child with opiates or alcohol ! If, after being nourished from such a fountain, our child is perverse, froward, insolent, and has no regard for truth, who is accountable ? Is not the mother who deprived him of her own pure, untainted breast, and who purchased for him instead a polluted and debauched stream ?

It has been said that wet-nurses are a necessary evil. I believe them to be an *un*necessary and unmitigated evil ; moreover, I believe, with certain rare exceptions, their employment should be suppressed.

CASES OF SOMNAMBULISM—THEIR CONSTITUTIONAL CHARACTER AND TREATMENT.

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SLEEP-DISORDER, in all its varying phases, may exist, and yet the health of the individual remain apparently perfect. This, however, is believed to be true only within limits.

Excessive sleep or morbid somnolence is frequently observed in those whose brain-activity is below the average standard. In this respect persons of defective intelligence are like many of the lower animals, and to eat and sleep fill up the measure of their wants. It cannot be said that epileptics are, as a rule, subject to this morbid condition, but sometimes, as I have had occasion to observe, when the intelligence has been materially affected by repeated and long-continued attacks, the sleeping greatly exceeded the waking hours. An instance of this once fell under my observation so notably as to deserve almost the name of the "sleeping sickness."

The patient was a young lady aged about twenty. The attacks began when she was fifteen years of age—increasing in frequency until she was eighteen. Her memory became impaired, her speech less fluent, and in other respects she evinced a positive mental decadence. Her sleep began to be heavy and prolonged, and when I saw her she was accustomed to go to bed at five in the afternoon and sleep uninterruptedly until ten the next morning—a period of seventeen hours.

Strong coffee nor tea, nor any drug had the slightest influence in this case. The only measure that availed anything was the starvation method. Her appetite was voracious, and she ate greedily immediately on awakening and before retiring ; if, however, she was compelled to go to bed supperless she slept neither so heavily nor so long. Sleep of a more positively unnatural character, such as somnambulism and somniloquy, is entirely consistent, up to a certain point, with a high degree of mental and physical vigor, but it may be, and frequently is, indicative of profound constitutional disturbance, sometimes inherited and sometimes acquired.

The phenomena that we observe under the name of hypnotism bear a very intimate relation to those of somnambulism.

In both conditions there seems to be a remarkable concentration of mental and physical energy. The powers of the mind in their entirety cease to act, and in their stead there exists an unerring intensity and directness of purpose.

In somnambulism, as in hypnotism, we have, therefore, a state of unconsciousness only partial in its area. The greater portion of the brain is in profound abeyance, and, physiologically, a condition of affairs may be supposed to exist similar in both states, arterial contraction and consequent anæmia prevailing throughout the larger portion of the brain, while the extraordinary mental acuteness in certain directions points to some definite localization of arterial activity. In both somnambulism and hypnotism, sight, so far as it relates to the dream or to the special direction given to the thought, is perfect ; but, as is well known, unrelated visual impressions are taken cognizance of in neither condition. Notwithstanding all that has been written upon morbid somnolence and somnambulism, the fact that they not only lead to constitutional disturbance, but are, in the beginning, frequently symptoms, and symptoms only, of some obscure, deep-seated, constitutional susceptibility of the nervous system, has not, it seems to me, been sufficiently emphasized.

Especially suggestive of this statement relating to the constitutional origin of the symptoms are the recorded histories of several cases in which there existed a very interesting alternation of symptoms. The constitutional susceptibility remaining unchanged, the attacks would alternate from seasons of sleep-walking, insomnia, and neuralgia. A case in point was related to me only lately by the mother of the patient, a girl fifteen years of age, who had been the subject of periodical attacks of somnambulism for four years past. For nearly a year she was accustomed, almost every night, to get out of her bed in her sleep and walk around the room, and sometimes would open the door and go to distant parts of the house.

Finally she ceased these nocturnal rambles altogether, but in their place were developed a severe facial neuralgia, great tenderness along the spine, and marked hysterical symptoms.

After six months, or more, of this form of suffering, the neuralgia and spinal irritation disappeared altogether, but the habit of sleep-walking returned as of old ; this alternation being repeated several times. It will be observed that this interesting alternation from one condition to another was nature's own work. During all the periods of change, from sleep-walking to neuralgia and spinal irritation, there must have been some vice of constitution acting as a causative force, and the symptoms from which she suffered were simply the varying manifestations of one and the same cause.

Admitting, then, that the various sleep-disorders—somnambulism especially—are in many instances merely special manifestations of some constitutional disturbance, it becomes evident that our efforts for the relief of these annoying symptoms must be general, and not local. More specifically, our efforts should be in the direction of imparting tone to the system generally, especially to the central nervous system—brain, sympathetic, and spinal cord.

Drugs alone are, as a rule, insufficient, and need be

used only so far as they aid in correcting associated symptoms, such as a constipated habit, indigestion, etc. In a very considerable experience with this class of cases I have found electricity in some one of its forms, or by some one or more of its methods of application, to be in several cases a most effective remedy. The following case came under my observation and treatment, for a variety of nervous symptoms, during my service at the Woman's Hospital some years ago. I give it in some detail, since it illustrates, as very few cases do, the constitutional character of the symptom we call somnambulism, and the marked benefit that may accrue from the treatment that has been indicated.

Miss K——, thirty-four years of age, began to be a somnambulist when six years old, and until 1876, a period of nearly twenty years, had been in the habit of walking in her sleep nearly every night. When at boarding school this habit continued for some time without discovery. Her room-mate had several times noticed that she got out of bed and moved about, without suspecting the true condition, and the patient herself hesitated to make a confidant for fear she would be avoided. She regarded the habit in the light of a disgrace. It was only when on one occasion she opened the window and rushed to the roof, impelled by the fear of fire, that her real condition was discovered by her room-mate. As a child at home she was not infrequently punished, in the hope that the habit would thereby be broken, as if the rod could cure a pathological condition. With the same end in view she had been doused in cold water while still asleep, with no other effect than to increase a very decided nervous susceptibility. When the character of her nocturnal wanderings became apparent, she was, as a rule, closely watched, and led back to bed or accompanied in her movements. Occasionally, however, she would awaken and find herself alone on the stairs or in the hall, when she would be immediately seized with a severe nervous chill, and sometimes with dizziness. In 1877 she arose one night while her companion was sleeping, went to the roof, and slid down a long slender pillar to the ground. She was found walking along a narrow fence and was immediately carried into the house.

Persistent efforts were made to awaken her, but without avail. She would answer "yes," but did not become thoroughly conscious until morning. From that time onward, singularly enough, she never, so far as was known, arose from her bed while asleep, but immediately she began to suffer from nausea, from occasional vomiting, and from paroxysms of intense headache, which continued with varying intensity until I saw her. These paroxysms of pain and nausea occurred every week or ten days, during which time she could keep nothing upon her stomach. I subjected this patient to tri-weekly applications of the galvanic current, by the method of central galvanization, and the benefit accruing from their use was as prompt and as marked as in any case that had come under my observation. From the date of the first application until she left the hospital, a period of two months, she suffered no more from these paroxysmal seasons of intense pain. For the nausea much relief was obtained from the administration of oxalate of cerium. The patient promised to write and inform me of her condition, and especially if there should be a recurrence either of the somnambulism or the more distressing symptoms of cephalalgia, nausea, etc., that supervened upon the cessation of the sleep-walking habit. I have heard nothing from her, and infer that the recovery was permanent. Another case kindred in character was brought to me in October, 1885. The patient was a girl sixteen years of age, possessing a fine, sensitive organization, and unusually bright and precocious.

Physically she was well proportioned, and her nutrition seemed to be fair, but a decided anæmia was observable, more especially as manifested by the appearance of the mucous membrane. She was nervous, painfully excitable, easily moved to tears, and complained of great lack of endurance.

The menstruation was regular enough, but was much too profuse, and attended by acute pain.

Since the age of seven this person had, without lengthened intervals, been the victim either of somnambulism or incontinence of urine. She was never annoyed by both at the same periods of time, but either one or the other symptom always existed. Incontinence was the first to appear, and continued until the ninth year. As suddenly as it came it ceased, and somnambulism took its place. The patient would not always attempt to get out of bed, but would sometimes simply sit up, remaining quiet, with eyes wide open, or would automatically take down or put up her hair. Until her twelfth year she was affected in this way, when, for the time being, the tendency to sleep-walking left her, and for nearly a year nocturnal incontinence was the annoying symptom. When this ceased, she began again immediately to walk in her sleep, and had continued the habit with great frequency until I saw her.

She was not a resident of the city, and as it seemed impossible for her to remain for treatment at that time, I prescribed the bin-oxide of manganese for the menorrhagia, together with iron. Three months after, she came again, but reported no improvement, agreeing, however, to remain for a time and submit to such treatment as might be necessary.

Her anæmia and weak condition, and decided nervous state, seemed to me to indicate general faradization, and, stopping all medication, I began this form of treatment. Up to this time she had been more or less somnambulistic every night for many months. During the first six days of treatment her symptoms were as usual. The seventh night she slept throughout the night quietly. On this occasion the application was given at her home and just before retiring, the others having been administered during the day and at my office.

Influenced by this suggestive result, I administered subsequent treatment in her own room and at bedtime, with most satisfactory results.

During the succeeding two weeks she arose from her bed but twice, and as the lateness of the hour was exceedingly inconvenient for me, I returned to the morning applications. Singularly enough, the patient was disturbed in her sleep three times in the course of the subsequent week, causing me to once more resume the night treatment, not to be again changed until the cessation of all treatment.

The menstruation which now appeared was far less profuse and entirely painless. During the four following weeks that she remained under treatment she showed evidences of somnambulism but twice, and at the end of that time there was manifest improvement in health and strength.

Six months after the cessation of treatment by general faradization, and within a few weeks, the patient called upon me, reporting that the habit seemed to be permanently broken, as in no instance had she arisen in her sleep. Her menstruation had continued normal in every respect, and her health was in every way excellent.

Not to burden this paper with further long clinical recitals I will simply say that, out of five other cases of similar character, three responded admirably to treatment, which to my mind clearly illustrates the constitutional character of the nervous derangement as well as the utility of the treatment adopted.

The pathological condition prevailing during the somnambulistic state can in the nature of things only be conjectural. As before remarked, many things point to a disturbed circulatory equilibrium, probably arterial contraction with anæmia over large areas of the brain, associated with some definite localization of arterial activity. The rationale of electrization is, that by one method of its application—central galvanization—the central nervous system is directly brought under its influence. It is, of course, impossible to exclusively localize the galvanic current in any special portion of the brain-structure, or

the pneumogastric or sympathetic, and even if it were possible, it would be just as impossible to know where to localize it, for in very many so-called functional diseases there is no well-defined local pathological state, the whole central nervous system rather being invaded by a condition of exhaustion and irritability.

By judiciously influencing the entire nervous system with the galvanic current its nutrition may be wonderfully improved, and to this improvement in nutrition, brought about by the tonic and sedative action of the current, is due the many excellent results that follow its application, not only in sleep disorders, but in hysteria, neuralgia, chorea, and many other conditions. By the other method (general faradization), although the brain and cord may not to any great extent be brought directly under the influence of the current, yet we are warranted in believing that the powerful action of the current upon the superficial sensory and motor nerves exerts a decided reflex effect even upon remote nerve-centres. General faradization is to the whole body what localized faradization is to an individual part or organ. From localized applications we obtain certain physical, mechanical, chemical, and physiological effects. These effects resulting in localized increase of the processes of waste and repair, and improvement in nutrition, are, through general faradization, followed by the same results, with the difference that they are appreciated by every part of the system, instead of a certain restricted portion."

Clinical Department.

SYPHILIS FROM VACCINATION.

Dr. J. S. Prettyman, Jr., of Milford, Del., reports the following case: "Mr. N. T——, aged thirty, has been married nine years. His wife is healthy, has never aborted, and is entirely free from skin disease. They have two robust children, aged six and eight, who have always been well, but are subject to 'a breaking out.' Ten years ago the patient vaccinated himself directly from the arm of another, who, it was said, had been cured of a 'bad disorder.' In about two weeks an eruption appeared over the entire body and continued three months, disappearing and reappearing several times since. From time to time lumps have been noticed over various parts of the body. He has never had ulcers in the throat, but the glands have been enlarged, and several times chronic abscesses have formed. He received no treatment except such remedies as he would apply locally. He came to my office, October 13th, with nodes, bullous syphiloderm, and ulcerations upon the neck, arms, back, and legs. He denied all possibility of contagion from any other source, and affirmed that previous to the vaccination and appearance of the eruption he had not even once indulged in sexual intercourse."

SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

Dr. F. A. Lewis, of Brooklyn, writes: "Several weeks ago a strong, healthy mechanic, about thirty years of age, applied to me for relief, saying that a piece of meat was stuck in his gullet. He could take one swallow of water and retain it. Two swallows he held with difficulty. Three swallows were instantly regurgitated, and sometimes regurgitation (not vomiting) followed the taking of two swallows of any fluid. He said he was hungry and thirsty, and wanted to be relieved. I passed an œsophageal bougie into the stomach without meeting the slightest resistance, but the patient could not retain fluid any better after it. The regurgitation occurred as before. As he could not swallow, or rather retain, anything, of course I could not give him medicine of any kind by the mouth. I tried apomorphia, hoping to make him vomit, but it failed. I gave him an anodyne mixture, of which he was to take a few drops every half-hour. About two hours after leaving my office he felt something give way inside of him, as he said, and immediately proceeded to eat a hearty supper. He was perfectly well before and has been since. Was it spasm of the lower part of the œsophagus?"

A CASE OF COIN SWALLOWING.

Dr. J. L. Latta, of Millerton, Kan., writes: "I have just dismissed a case of coin swallowing similar to the one reported by Dr. Gardner. I report it as illustrating a somewhat different method of treatment. A child two years old swallowed a small copper coin, a cent of the modern type. An hour later the patient was brought to me, looking rather cool and unconcerned; but the parents were considerably alarmed, and desired that active purgatives might be given in order to get rid of the 'poison thing.' I calmed their fears and directed them to do nothing beyond feeding the child freely with coarse food, such as corn-bread with butter, and mush and milk, and allowing him the privilege of piecing freely between meals. Two days later the coin passed from the bowels, and was changed from a dingy brown to a bright metallic hue, as if fresh from the mint. There was not the slightest noticeable disturbance local or constitutional. This makes the fifth case of coin and button swallowing that has come under my observation; all have been treated in a similar way, and without any bad results following the somewhat ostrich-like diet."

ACCIDENTAL CURE OF HYDROCELE.

Dr. W. E. Satlee, of Monticello, Ky., relates the case of a man, forty-five years old, of regular habits and good family history, who received a severe blow on the testicle some five years ago. Orchitis resulted, and was followed by hydrocele after the inflammation had subsided. The writer tapped the sac a year ago, and injected tincture of iodine, but the fluid soon reaccumulated. In January last the operation was to be repeated, but was delayed until the patient should have returned from a journey which he was obliged to make on horseback. As he was on his way home his horse stumbled, throwing him against the pommel of the saddle. The scrotum was strongly compressed and the sac was ruptured. In the words of the patient: "It made me powerful sick for a time, and then my bag began to sweat and the water oozed out of it until one leg of my drawers was wet clean down to my foot." He was unable to continue his journey until the following day, in the afternoon of which he was examined by Dr. Satlee. At this time there was considerable ecchymosis, with tumefaction of the scrotum, but no orchitis. After the swelling had subsided the scrotum was normal in appearance, though the testicle on the affected side was slightly atrophied. There has been no return of the hydrocele since the fortunate accident occurred.

PAINFUL HYPERTROPHY OF THE BREAST DEPENDENT UPON UTERINE DISEASE.

Dr. L. N. Sharp, of Minneapolis, Minn., writes: "In November, 1882, I was consulted by a lady for a painful tumor of the left mamma. She had been cared for by several medical men in a city sixty miles distant. She came to me, by advice of friends, with the diagnosis of cancer, and said her attendants had advised amputation of the breast as her only chance for recovery, but she recoiled from such an alternative. I looked the case over. She was thirty years of age, the mother of three children. She was well-built and fleshy; digestion good. The left

breast was hypertrophied, the right one well developed, but only half the size of the left. The pain in the enlarged gland was excessive and constant, and the patient said she had not a good night's sleep for more than two years because of the painful condition. The trouble began about three years before, the breast gradually enlarging and becoming more painful. On [illegible] I found she had uterine trouble, and I came to the conclusion that the hypertrophy was due to the uterine difficulty. I explained my views to her and suggested an examination of the uterus. She declined an examination, and I declined prescribing. She then went to a city one hundred and fifty miles distant to consult a 'cancer doctor,' who told her he had never seen anything like her case and dared not do anything for her. When she returned to her home she was advised again by her friends to place herself under my care, and after some time concluded to do so. On examination I found endo-cervicitis and erosion. She came under treatment in December, 1882, and as the uterus returned to its healthy condition the pain of the breast declined, the hypertrophy began to lessen, and by the following June the breast was about the size of its fellow and entirely free from pain."

ETHER SPRAY IN THE REDUCTION OF HERNIA.

Dr. Geo. R. Fellows, of Moose River, Me., writes: "About two years ago was called to see a case of strangulated hernia of two days' duration. Two physicians had been called, but were unable to reduce the hernia by ordinary means. The patient was suffering terribly, but was unable or unwilling to take opiates of any kind. Thinking to relieve the pain, I sprayed the hernia with ether, using a common hand-atomizer, and was greatly surprised to find the hernia disappearing spontaneously. Since that time I have used ether spray in strangulated hernia in several cases, always with the best results, the operation being painless, and reduction occurring spontaneously or with slight pressure."

Progress of Medical Science.

The Care of the Skin.—The *Southern California Practitioner* quotes Professor Auspitz, of Vienna, as follows: "1. A healthy integument is not necessarily beautiful. Even if all requirements concerning diet, residence, atmospheric and climatic conditions, etc., are carried out, the complexion is often extremely bad. The general condition of health has no influence upon the beauty of the complexion, though it has upon the health of the skin. 2. Cleanliness is a *sine qua non* of the beauty of the complexion, though it does not play a great part in the health of the skin. 3. Water is serviceable to the skin in only moderate amounts and at moderate temperature. Very cold or warm baths, when used to excess, diminish the elasticity of the skin and its power of resistance to external irritants. 4. Distilled and so called soft waters are more suitable for washing, and less irritating than hard water. 5. The hard soda soaps are usually preferable to the soft potash soaps for toilet purposes. The quality of soaps depends upon the quality of their constituents and the thoroughness of their saponification. Good soaps must not contain free alkali, or any foreign irritating substance. The addition of moderate quantities of perfume does not materially change the quality. 6. Simple, finely ground powders, such as starch, magnesia, etc., are entirely innocuous, and often act as a useful protection against external irritants. 7. Frequent application of alcohol abstracts the water of the skin, makes it dry and brittle, and impairs its nutrition. This is also true of glycerine. All toilet washes containing alcohol to any considerable extent should be avoided. 8. This is true to a still greater extent of other additions to washes, such as corrosive sublimate, mineral acids, certain metallic salts, etc. 9. Camphor acts merely as a bleaching powder. This is also true of benzoic resin, sulphur flowers, and substances containing tannic acid. 10. The use of sweet-smelling oils and fats should be employed to a greater extent than is now done for toilet purposes. 11. This is particularly true with regard to the growth of the hair. The nutrition of the scalp should be increased by the rational application of fat (for example in the form of oil baths by means of the application at night of a sponge soaked in oil upon the scalp), and the greater use of simple pomades. These should be applied to the roots of the hair rather than the shafts. 12. Substances should be avoided, or sparingly used, which abstract water from the skin and the roots of the hair."

Spontaneous Cure of an Ovarian Tumor. The following curious case of spontaneous cure of a large cystic tumor of the ovary is reported in the *Hospital Gazette* for September 11, [illegible]. A woman, twenty-nine years, was admitted to the Mater Misericordiæ Hospital, in May, suffering from ovarian tumor, which caused her great inconvenience and was undermining her health for some months past. She had been married two years, but had no family. Three months ago she consulted Dr. Duke, of Steeven's Hospital, Dublin, for a swelling over the right ovary. It was excessively tender and painful, and gradually increased in size until it extended over the abdomen. She was taken into the hospital, and seen by Dr. More Madden, Obstetrical Physician, who considered the case one for immediate operation, in consequence of the delicate state to which the woman was reduced in a short period, and the intense degree of pain caused by the tumor. A few days after her admission, the patient was seen in consultation by four physicians, all of whom agreed that the case was one for ovariotomy—the diagnosis being a thin walled, globular, well-marked, unilocular ovarian tumor. The abdomen then measured forty-three and a half inches in girth. Being close on the menstrual period, it was decided not to operate until this should have passed, and it was accordingly postponed until the 15th of June, tonics being administered to get up the woman's strength. She was up and going about the ward, but on the 9th of June she took to bed, complaining of intense abdominal pain. After some hours the pain was followed by incessant diarrhœa and profuse diuresis, which lasted four days. At the expiration of this period the abdomen was found to have considerably decreased, and no trace of the tumor was discernible. The patient was again seen in consultation by the same physicians. All agreed and concurred that the cyst had been spontaneously ruptured, and the effusion of the ovary fluid into the peritoneal cavity, its absorption thence and evacuation by the bowels and kidneys. After this the patient gradually improved. An examination was made on the 16th of June. Some fluid was still discernible in the peritoneal cavity, but the abdominal pain and soreness were greatly reduced. To relieve the pain and help the absorption an ointment made up of extract of belladonna and unguent hydrargyri was rubbed over the abdomen, and a mixture of iodide of potash given, which she had been taking some time previously. The patient remained in bed about fourteen days, recovering both health and strength. The abdominal swelling had gone down to twenty-nine inches. The woman finally left the hospital on the 15th of July, and was again seen after a week, when she was in excellent health and spirits, being about to take a journey to the country."

Eulyptol is the name given by Schwetz to a combination of salicylic acid and eucalyptus, for which peculiarly valuable antiseptic properties are claimed.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE CONSUMPTION OF FOWLS AS A CAUSE OF PHTHISIS.

It has been established on very good evidence that tuberculosis can be communicated to certain of the lower animals by direct inoculation, by food, and by inhalation of tuberculous matter. There is a considerable amount of clinical evidence showing that man may be infected with tuberculosis by inhaling the breath and exhalations of phthisical patients. Some facts apparently show also that phthisis may be communicated to man, or rather to infants, by tuberculous milk. We do not regard this point as clearly demonstrated, however, and the announcement recently made by Dr. de Lamailerée, in the *Gazette Médicale de Paris*, that the flesh of tuberculous fowls will cause consumption, must be accepted with much reserve. Dr. de Lamailerée bases his opinion upon the following occurrences, which are of so interesting a character that we give a description of them in full. He says:

"The little village of C—— is a most healthy spot, being about two thousand feet above the level of the sea. Epidemics are there unknown, and the inhabitants of this village generally die of old age or pneumonia. In 1872 a young man, who had contracted bronchitis while a prisoner in Germany during the war, settled down in this village. He married a strong, healthy girl; soon afterward he began to spit blood, and died of consumption two months after the birth of a son, and within a year of his marriage. Soon after his death his wife, who had nursed him, had bronchitis, which became chronic, and in a little while tuberculosis of the lungs was manifested. The child had successive attacks of bronchitis and rapidly developed consumption. Cavities formed in the woman's lungs, and she expectorated abundantly. A short time ago the physician attending her was called to a young woman in the same village who showed evident signs of pulmonary phthisis. The house was at some distance from that of the first female patient. The second patient was a woman, twenty-nine years of age, and of a robust constitution. A careful examination revealed that she rarely went to the house of her neighbor who had contracted consumption, and never ate nor slept there, but that she had eaten the flesh of eleven fowls which had died at her invalid neighbor's during the space of four months. She had eaten them very underdone, believing that they were most nourishing when but slightly cooked. It was discovered that these fowls had swallowed some of the sputa expectorated by the first patient. The birds had been seen to collect round her whenever she coughed. On making a necropsy of one of the fowls which had just died, it was found that the intestines and liver were filled with tubercles. The fowl had become very emaciated, and could hardly move; the purulent liquid found in the tubercles contained in the liver was filled with bacilli tuberculosis. It was probable that the other birds had perished from the same cause. These fowls must, therefore," says Dr. de Lemailerée, "have been the means of conveying contagion to the second woman who had eaten them. In this case there is the triple contagion of tuberculosis: First, from man to man; second, from men to animals; third, from animals to men."

It will be seen, however, that there are two very weak points in this argument. First, it is not shown that the patient did not have phthisis before she ate the fowls; and, second, it is not proved that the particular fowls she ate were tuberculous.

LUDWIG'S ANGINA—INFECTIOUS SUBMAXILLARY CELLULITIS.

LUDWIG'S angina, or infectious submaxillary angina, is a disease little heard of at the present time, and not mentioned at all in ordinary text-books. It seems to have been comparatively frequent, however, in some parts of Europe forty years ago, and even to have appeared in epidemic form. It was believed by Professor Ludwig, of Würtemberg, who first described the disease, to be a specific and separate morbid entity. Some of the later writers have, however, denied this, and claimed that it was only a severe cellulitis of the submaxillary region, having peculiar characters, on account of the anatomical arrangement of the parts affected. Ludwig's view, however, is still in the main sustained, although not every case of submaxillary cellulitis, even when severe, is Ludwig's angina.

A very elaborate review of this whole question, together with a report of two cases, has recently been made in *Le Progrès Médical*, 1886, Nos. 35, 36, 37, 38, by Dr. Paul Tissier. As defined by this author the disease is an infectious process of a specific and septic character, secondary to a lesion in the buccal cavity, by which the pathogenic germ enters the submaxillary tissues. It is characterized by a very acute inflammation of the tissue beneath the chin and above the hyoid bone. This inflammation tends to suppuration, and even gangrene, and it is accompanied with very severe constitutional symptoms. The disease is a grave one, a considerable portion of the patients dying.

The disease attacks persons of from twenty-five to thirty years of age, and seems to be brought on by frequent exposures to cold. After a few days of prodromal symptoms the neck begins to swell and become painful. By the fourth day the condition is one of seriousness and suffering. The tongue is swollen and immovable, there is great salivation, the buccal mucous membrane is reddened, the neck is swollen so that the mouth can hardly be opened, and the line of the chin is obliterated. The swelling may increase and press upon the trachea, so as to cause great dyspnœa. The temperature continues

high, without great oscillations. Finally, at the end of the week, suppuration or gangrene usually takes place.

The features of the disease are so marked that it can not easily be mistaken. Still, as submaxillary phlegmons do not rarely occur after infectious fevers or from periostitis of the lower jaw, a distinction is not always to be made at first sight. Some cases have been reported as Ludwig's angina which, apparently, were not the real disease.

THE MEDICAL REGISTER AND THE COUNTY SOCIETY.

The editors of "The Medical Register," of New York, New Jersey, and Connecticut, continue to refuse to publish as physicians, the names of several gentlemen who are members of the New York County Medical Society. That is an injustice to the members in question, and a direct impertinence to the County Society. We admire and commend the general spirit of conservatism shown in editing "The Register," but conservatism is a very different thing from the unreasonable procrusteanism of self-righteous jurisdiction. The Medico-Historical Association should remember that there is not only a Past, but a Present and a Future—particularly a future.

FURTHER CONTRIBUTIONS TO THE TREATMENT OF PHTHISIS.

We have already referred to the ingenious device of a Frenchman, by which he proposes to treat and cure phthisis through the agency of rectal injections of sulphurous gas. Two other methods of combating this dread disease have recently been suggested. M. Sciler, of Paris, has been using inhalations of fluoric acid, a substance which, if we mistake not, has recently been recommended also in the treatment of diphtheria. The method is as follows: A mixture is made of water, 150 grammes; acid hydrofluoric, 50 grammes. This is sprayed into the air of a room, so that the atmosphere to be breathed contains about ten litres of the vapor to one cubic metre. The patient sits in the room and breathes this medicated air for an hour daily for twenty, thirty, or more days.

The results obtained are those usually recorded of all new treatments for phthisis, viz.: First, oppression and dyspnœa disappeared after from one to ten séances; second, the sharpness of the cough was lessened; third, nocturnal sweats disappeared after from six to fifteen séances; fourth, sleep was restored, the appetite improved, expectoration modified, and the weight increased.

M. le Docteur Roussel, of Paris, has a method for which much more than the above results are claimed. He has noted twenty cases of phthisis, in whom, while under his treatment, the bacilli tuberculosis gradually disappeared from the sputa. The time occupied in accomplishing this varied from two to three and a half months. Meanwhile all the symptoms became correspondingly ameliorated. The method by which he obtained these results consists simply in the hypodermatic injection of eucalyptol. That this may be done effectively and without pain, however, M. Roussel submits the eucalyptol to a certain somewhat mysterious process of "aging," by which a certain bitter and acrid resin is removed. During the first week he makes a daily injection of from three to five minims. The dose is then gradually increased up to twelve minims. M. Roussel describes the *modus operandi* of his cures in a way that shows him to be doubtless a very accomplished quack, although considerable space is devoted to his method in the columns of the *Lyon Médical*.

VITAPATHY.

There exisis in this country a peculiar system of healing called vitapathy, which has a college, an annual National Convention, and a number of professed followers. Vitapathy is a mixture of mesmerism, medicine, and religion, or of what pretends to be such, and its more advanced followers call themselves ministers, and even solemnize marriages.

The system was gradually evolved by one Dr. John Bunyan Campbell, a person who describes himself as having been successively a regular physician, an eclectic, a homœopath, a hydropath, and a mesmerist. Out of his experiences there finally blossomed the perfect flower of "vitapathy."

The vitapathic system is a compound especially adapted for quacks to make use of, and naturally some of its followers represent the topmost feather of charlatanry. Some of the disciples are, however, no doubt perfectly sincere in their belief in the potency of their methods. These consist in certain vitalizing processes, very nearly equivalent to the ancient practice of wearing charms and amulets. For example, to cure epilepsy the vitapath writes backward the words, "It is done," on a piece of paper, which the patient wears around his neck. In fact, to cure any disease, one has only to write the name of the disease on a piece of paper, also telling it to depart—for instance, "Dropsy, depart"—and have the patient wear the paper next his kidneys in dropsy, or any part of the body afflicted with any disease. Of course, the main thing is to have the paper well magnetized for the person and purpose intended.

All medicines are discarded. One remedy for whiskey-drinkers is somewhat novel. It consists in directing the patient to put into a jug, or (in Kentucky) a keg, all the amount one generally drinks in two months; "then," says Dr. Campbell, "when you take a portion out for a drink, put in its place as much water, and do so every time you drink, and thus keep in the jug the same amount of liquid. Take out the same size drink each time, and every drink will become weaker and weaker, until you get down to clear water, then you will be effectually cured."

It can easily be seen that vitapathy is only another of the manifestations of these mesmeric cures, mind-cures, and "Christian" science, so called. These systems, we believe, as a whole, do serious harm to the public health. They work upon the fancies of the sensitive, they mislead, deceive, and pervert. Persons who have been through these vitapathic, or faith-cures, cannot fail to be somewhat injured mentally by the process. They promote hysteria, hypochondriasis, and enfeeblement of the will, with all the personal and domestic perturbations that follow. Among a nervous, over-sensitive people, like the Americans, especial harm is done, and it would

be wise public policy to put some strict limitation upon the practice of all these various forms of mental therapeutics. Along with other reforms there might well be established "A Society for the Total Abolition of Vitapathy, Faith-cures, Mind-cures, Mesmeric Shows, and 'Christian' Science."

A MISREPRESENTATION OF AMERICAN DOCTORS.

The American medical profession would be glad to know something about one Dr. Pohlmann, of Buffalo, America. He appeared as a representative of our profession, and the International Medical Congress, at the meeting of the German Congress of Naturalists and Physicians, in September last, and made a speech of a somewhat extraordinary character. The object of his remarks appears to have been, first, to apologize for the medical profession of America, and next, to urge the members of the German Congress to come over to this country next year. After setting forth his credentials as a delegate, Dr. Pohlmann says that "already for a long time German science has occupied the first place in America!" He then goes on to admit, and apologize for the fact, that Americans are "too practical. We are," he says, "a heterogeneous people, where God is for us all, but each one is for himself, and the devil takes the hindermost. Naturally," he adds, "it happens that ideals cannot take root in America." For all this, Dr. Pohlmann assures his audience that the Americans desire some ideals, and one of them is to organize a successful international congress. He then pictures, with much fervor, the welcome which the American profession will give all German physicians who come over to the congress next year.

No doubt Dr. Pohlmann's position was a delicate and difficult one; but we hardly think he acquitted himself with distinguished credit. We doubt whether American physicians have any fewer ideals than do their brethren across the water. They are actuated by as warm sympathies, and stimulated by as lofty impulses as any class of professional men anywhere. Selfishness is a universal quality, but it is far less a characteristic of Americans than of Germans, and it is most unfortunate that so unjust a presentation of American character should have been presented to a great body of intelligent foreigners.

It is not to be wondered at that, in replying to Dr. Pohlmann, the president, Professor Virchow, said very distinctly that the Washington Congress could expect very little of Germany as long as it was understood that differences still existed regarding its management.

SKEPTICISM IN MEDICINE.

During the past year our columns have contained frequent communications concerning the amount of actual effect we are able to exert by our remedies upon disease. The question has repeatedly been asked, "What can we cure?" Our fathers believed in the positive effects of drugs. They administered them with a lavish hand. We have swung over to an opposite extreme, and, outside of our few specifics, mutually acknowledge our inability to affect many morbid processes. We are skeptical in regard to the effect of our remedies.

Some very striking remarks were recently made upon this topic by Dr. Malcolm Morris, in an address delivered before St. Mary's Hospital. He rightly characterizes the age as one of "tumultuous mental activity." All things are changing. People become accustomed to instability rather than to its opposite, as has heretofore been the case. Young men entering the medical profession are especially affected by the spirit of the times. In its application to our present topic they see remedies brought forward, vaunted as specifics, and speedily forgotten. They are led to disbelieve in the permanency of any drug. "Skepticism," says Dr. Morris, "has infested medicine as much as religion. Where, to-day, is the implicit faith in drugs which was a dogma of the healing art in the past? . . . The extreme skeptic boldly disavows his faith in the potency of any drug whatever. Others, less dogmatic, content themselves with acknowledging the value of a drug or two. The position is alarming where skepticism, wrapped in its own self-confidence, once and for all, repudiates all aids and accessories. Briefly, it states its deliberate opinion that disease is infinitely better left to itself. The natural physiological energy of the body is the prime element in the healing process. This is neither more nor less than modern fatalism—waiting on events. Such a doctrine, if successful, would be fatal to medicine."

Such a condition of affairs is, indeed, unfortunate. It is not, however, greatly to be wondered at. It illustrates, in a general way, the unrest of the age. Furthermore, there are special reasons for its existence. The discovery, ever widening, that many common diseases are self-limited, vitiates the boasted curative agency of remedies. The study of pathology shows us how widely of the mark we have often aimed. We know that topical applications, where possible, can modify disease; but on the various visceral lesions we are able to exert very little direct effect.

It is a matter of common observation that the older a physician grows, the less remedies he generally uses. He does not by any means diminish his therapeutic resources. Rather he enlarges them by the discovery of wider application of old agencies. Is it not possible, nay, more probable, that the skill of many a physician, popularly supposed to be a genius, lies not in a surrender to the prevailing tendency to skepticism regarding remedies, but rather in a wise determination to make the most possible of even the limited resources at his command.

BRIGHT'S DISEASE AND THE URINARY FERMENTS.

It is a fact not generally stated in text-books, but one which is well established by the experiments of Grützner, Sahli, Gehrig, and others, that normal urine always contains pepsin and trypsin. The peptic ferment acts in an acid, the tryptic in an alkaline, medium. Drs. G. Nuja and S. Belfanti have contributed some interesting observations with regard to the relations of these urinary ferments to Bright's disease.

The urine of patients suffering from many different diseases, such as typhoid fever, pneumonia, erysipelas, and even severe gastric affections, such as cancer of the

pylorus, was examined, but in all cases the presence of the ferments was established. On the other hand, in twenty-eight cases of Bright's disease (four acute and twenty-four chronic) the *trypsin* ferment was always absent from the urine. The peptic ferment was, as a rule, present. To the suggestion that this is accounted for by the presence of the albumin in the urine, the authors answer, that in physiological or in febrile albuminuria the trypsin is always present, while in true Bright's disease it is always absent. The trypsin is also absent in interstitial nephritis when the albumin is very small in amount, as well as in parenchymatous forms, in which it exists in large quantity.

The separation of the trypsin, therefore, by the kidneys, depends upon the healthy action of these organs.

In this connection it is worth while noting the fact that Dr. E. Holovtschiner has discovered (*Virchow's Archivs*, Bd. civ., Hft. 1) that the urine contains ptyalin, or the starch ferment, and also a milk-curdling ferment.

News of the Week.

An Expensive Experiment.—In the early days of cocaine investigation its toxic power was tested on a dog, and forty grammes were required to kill the animal. The cost was eight hundred marks, or about one hundred and sixty dollars.

The Medical Advantages of Vienna now be found in the departments of dermatology, laryngology, and venereal diseases, says a correspondent of the *Cleveland Medical Gazette*. The two leading men in the second branch named, Schnitzler and Schrötter, have only four vowels between them, to make up for which there is a regular inebriism of consonants.

Professor Braun, of Vienna, is old and very corpulent, and has passed the zenith of his glory. His gynecological lectures are sometimes interesting, but, as a rule, are not so.—*Cor. Cleveland Medical Gazette.*

Is there a Ring in the Connecticut State Medical Society?—One of the members of the society, Dr. Hubbard, has issued a circular saying that there is a "ring" which controls the Connecticut State Medical Society, but the *N. E. Medical Monthly* vehemently denies it.

Thomsen's Disease.—There has been considerable interest excited in neurological circles over the discovery of a case of Thomsen's disease, it being believed to be the first observed in this country. The patient was exhibited before the New York Neurological Society by Dr. George W. Jacoby, at its last meeting.

Ovariotomy by Young Beginners.—The operation for ovariotomy has twice been performed by the members of the house-staff of Bellevue Hospital, with the permission and under direction of the visiting physician. One patient recovered and one died, the latter being a very unpromising case.

The French Surgical Congress has recently concluded its second annual meeting. The presiding officer was M. Ollier. The subject of the first day's meeting was the after-effects of extirpation of the thyroid. M. Reverdin reported five cases of cachexia strumpsiva among seven cases in which the gland had been totally removed. On the second day M. Vaslin read a paper on tetanus, maintaining that it was a neurosis to be treated by isolation and chloral "to saturation;" while M. Balestreri denied the efficacy of chloral and advocated the use of tartar emetic, giving gr. iij. to gr. v. daily. Most of the speakers believed in the infective and parasitic nature of tetanus.

A Religious Journal as an Obscene Book.—If the representations of the *Weekly Medical Review* are correct, and we have no reason to doubt them, the *St. Louis Evangelist* is a religious journal edited by a very weak-minded or very hypocritical person. The said journal has been recommending and endorsing a quasi-medical book which gives directions for preventing conception, facilitating pleasurable intercourse, and other details of a disgusting character.

A Maternity Home for Respectable Women.—We have received from out-of-town physicians copies of a circular announcing the organization of a "Maternity Home." This "Home" is under the direction of a doctor whose name is not, we believe, in the "Medical Register," but is on the lists of the County Medical Society. His "Home" is for the care of "respectable" unmarried women who are about to become mothers of illegitimate children. The circular announces that such persons can have their cases attended to privately, and, if desired, the child, when born, will be removed, so as to give the mother no further trouble. It is attempted to impart an air of respectability to the "Home" by stating that the "staff" are members of the County Medical Society, and are connected with some of the city colleges and public institutions. A painful feature of the case is that so large a number of the circulars have apparently been sent to Philadelphia. This conveys an imputation upon the moral status of that good city which we feel sure is unjust. The "Maternity Home" is an institution with which respectable medical men cannot associate themselves, and the manner in which it is advertised is to the last degree revolting. There need be no fear but that the County Medical Society will do its duty in connection with the matter.

Dr. Samuel Sexton, at the invitation of the Philadelphia County Medical Society, attended its meeting last Wednesday, and opened the discussion of Dr. Burnett's paper on "Otorrhœa and its Treatment."

Fatal Result from the Use of Peroxide of Hydrogen.—Dr. Laache, of Christiana, reports the case of a man suffering from emphysema, to whom hypodermatic injections of a three per cent. solution of peroxide of hydrogen were given. After the seventh injection the patient showed signs of heart-failure, and died in ten minutes.

Paralytic Ataxia of the Heart is the name given by Professor Sammola to a cardiac neurosis which comes on at the age of forty to sixty, as the result of emotional strain and venereal excesses. It is characterized, first, by severe dyspeptic troubles, then by cardiac symptoms, palpitations, and irregular heart action, marbled extremities, dyspnœa, and slight œdema.

The County Medical Societies of New York *versus* the District Branch Associations.—At the annual meeting of the Fifth District Branch of the New York State Medical Association, the President, Dr. Porteous, compared the working of the District Branches and the County Societies. He said "he had recently seen a statement by one of the censors of the Medical Association of Alabama, that the County Medical Societies of that State have a good deal of important work to do, and they do it. Most of the County Societies in this State had a good deal of work to do, and did *not* do it. In perhaps a majority the meetings were annual or semi-annual, the attendance small, and the principal business the all-important one of electing officers. For years it had been only a form, and so much had this been felt by the more active members of the profession that in some parts of the State three or more counties would form an independent association, in which very good work was done. He said independent, because the State Society would not recognize them. But the District Branch Associations were still better—better organized, and, with a common head, working more harmoniously and efficiently." If all this is true the County Medical Societies of the State had better look after their work a little more closely.

The Memphis City Hospital is a very poorly conducted institution, according to the *Mississippi Valley Medical Monthly*. The mortality rate is high (nearly fourteen per cent.); the wards are not well built, and are not kept in a cleanly condition. The cause is want of money.

The Tri-State Medical Society meets in Memphis on November 10th and 11th.

Controlling Contagious Diseases with Cotton.—By the use of cotton filters and respirators Dr. David Prince, of Jacksonville, Ill., proposes to keep the infectious germs from spreading out of an infected room and from entering the system of persons exposed. Cotton filters arrest the passage of all particulate matter.

Our Expensive City Government.—The average cost of food per capita annually in prisons and asylums is generally from $35.51 to $47.12; that for working-men, $47.67. To support, however, the 14,000 persons in the care of the Commissioners of Charities and Correction of this city it costs $1,500,000, or over $100 per capita, annually.

A New Method of Limiting the Spread of Consumption was proposed at the recent meeting of the American Public Health Association. It consists in popularizing and making uniform the practice of disinfecting the sputa of all phthisical patients. They would be expected to cough upon aseptic rags and expectorate only in disinfected receptacles.

The Use of Nitroglycerine by physicians should be attended with some special care. The drug may be old and inert, or, on the other hand, the alcohol which holds it in solution may evaporate and leave the solution dangerously strong.

The New York Academy of Medicine has had another stroke of good fortune in the gift by Mrs. Woerishoffer of $25,000. This, with previous gifts and legacies, brings the funds of the Academy close up to $200,000, and will enable it soon to begin the erection of a suitable building, as well as to make other needed additions to its equipment.

Carlyle on the Medical Profession.—In a letter written to Dr. Hutchinson Stirling in 1842, and but recently published, Carlyle said of the medical calling: "What profession is there equal in true nobleness to medicine? He that can abolish pain, relieve his fellow-mortal from sickness, he is indisputably usefullest of all men. Him savage and civilized will honor. He is in the right, be in the wrong who may. As a Lord Chancellor, under one's horse-hair wig, there might be misgivings; still more, perhaps, as a Lord Primate, under one's cauliflower; but if I could heal diseases I should say to all men and angels, without fear, 'En! ecce!'" Carlyle also gives some good advice on the subject of writing *versus* working. He counsels his correspondent, Dr. Stirling, then a young man, to "learn the indispensable significance of hard, stern, long-continued labor," and of silence. "Be in no haste to speak yourself," he says. "Why be *porous*—incontinent? Nothing can ferment itself to clearness in a *colander*." Avoid literature, he continues, which, as a trade, is the "frightfullest, fatallest, and too generally despicablest of all trades now followed under the sun."

The late Professor Panum, the distinguished Danish physiologist, died, in his sixty-fourth year, from thrombosis of the coronary artery, consequent fatty degeneration, softening and finally rupture of the ventricular wall. He died literally of a "broken heart."

A Free Hospital for Children, costing $300,000, has recently been erected in the upper part of the city, and placed in charge of homœopathic surgeons (!) and physicians. No doubt we shall be freely charged with maliciousness and envy in saying that the placing of serious cases of illness in care of genuine homœopaths is little less than a crime. This is our very unbiassed opinion, however, which, if the homœopathic physicians in question are, as is the rule, men who use a little homœopathy and a great deal of ordinary medicine, then it is a case of misrepresentation, not to say humbug.

At the Annual Meeting of the American Rhinological Association, held at St. Louis, October 5th, 6th, and 7th, the following officers were elected: J. A. Stuckey, M.D., of Lexington, Ky., President; Carl H. von Klein, M.D., of Dayton, O., First Vice-President; Theodore North, M.D., of Keokuk, Ia., Second Vice-President. The Association adjourned, to meet on the last Tuesday in September, 1887, at Dayton, O.

Successful Brain-surgery.—Mr. Victor Horsley has now operated upon four patients for removal of brain-tumors. In all four cases the patients survived and were improved.

Dr. de Chautemps calculates that M. Pasteur has saved the lives of one hundred and forty-five of his countrymen

Iodized Hydrogen-water.—Dr. J. Mortimer Granville, who is *facile princeps* in the devising of new, ingenious, and sometimes fantastic therapeutical methods, recently recommends, in *The Lancet*, iodized hydrogen-water for use in the uric-acid diathesis. He suggests the use as a drinking-water of distilled water to which a minute quantity of iodine or hydriodic acid is added; a current of hydrogen-gas is then passed through the mixture. The theory is that this water is a better solvent of excrementitious matters.

Nickel-plated Cooking Vessels.—An order has been issued in Lower Austria forbidding manufacturers and tradesmen to sell nickel-plated vessels for cooking. It is stated that vinegar and other substances dissolve nickel; and that this, in doses of the seventh of a grain, produces vomiting, and is generally more poisonous than copper.

In the Diagnosis of Cancer of the Stomach the presence of enlarged supraclavicular lymphatic glands is a factor of value, according to M. Troisier. These glands may also be enlarged in cancer of the lung, pleura, or œsophagus.

An Attempt to Secure Reform in the Matter of Medical-expert Testimony was made at the recent annual meeting of the Belgian Medical Federation. M. Poirier, of Ghent, moved "That it is desirable that instruction in forensic medicine in the universities should not be theoretical, but practical, and that a higher degree of importance should be attached to this branch of the art of healing in examinations; also, that a special and thorough examination, comprising *viva voce*, written, and practical tests, should be instituted, which would confer the title of 'medical jurist;' that the courts of law should, as far as possible, be compelled to have recourse to practitioners possessing this qualification, and that a superior council should be formed for the purpose of verifying the various reports addressed to the courts and judging of the capacity of the 'medical jurists.'"

A Second Case of Fatal Poisoning by Iodide of Potassium has recently been reported by Dr. Wolf, of Goritz—the patient, a man who was suffering from subacute kidney disease and cardiac hypertrophy. The dose taken was only about thirty grains in thirty-six hours, and the effect is considered to be the result of an idiosyncrasy.

Memorial Notice of Dr. W. H. Dudley from the Council and College Faculty of the Long Island College Hospital.—The sudden and unlooked-for death of Dr. William H. Dudley, President of the Collegiate Department of the Long Island College Hospital, has taken from it its earliest and life-long friend. Associated with its inception and intimate with its various struggles, he lived to see it take rank with the foremost medical colleges of the land. It falls to few men to project a great educational institution, watch its sure and steady development, and in the ripeness of years to look with just pride upon its assured influence in the community. Yet this was Dr. Dudley's labor and his reward. Committed to a principle in medical education and convinced of the feasibility of its practical application, he had a comprehensive grasp of the means to be used, and devoted himself assiduously to the result. Intimately acquainted with the working of the various departments of the institution, he became the constructor of the general scheme, during all his life he was constantly observant of its work. From the choice of associates in the conduct of the College Hospital and Dispensary to the last details of the routine work, in each he was watchful, earnest, and untiring. A common sympathy with the institution was the open door to his enthusiasm and regard. And he lived to the fulfilment of his hopes and the appreciation that his labors were rewarded by success. Measured by the spirit and the work of kindred colleges, he lived to see the Long Island College Hospital the peer of any. He lived to see its cardinal principle adopted as the correct idea in medical education. He died as few pass away, in the fulness of years, with his life-work complete. His associates in the Council and the College Faculty unite in this testimony of regard for his faithfulness to principle, his purity of motives, and his heroism in endurance, and offer this tribute of admiration over his well-spent and honorable life.

J. W. Hunt, M.D.,
A. Hutchins, M.D., } *Of Council.*

J. S. Wight, M.D.,
J. A. McCorkle, M.D., } *Of Faculty.*

Reviews and Notices.

Transactions of the Medical Society of the State of New York for the Year 1886. Published by the Society.

This annual does not materially differ from its predecessors in general make-up. Its typographical appearance, accuracy, and fulness of detail leave little to be desired.

Annual Report of the Adjutant General of the State of New York for the Year 1886.

The only article of professional interest in this volume is the report of the Surgeon-General, Dr. Joseph W. Bryant. This deals especially with the general hygienic condition of the State Camp at Peekskill, and contains many valuable suggestions. Some of the evils mentioned need immediate attention, or the health of the troops occupying the camp next year will be exposed to considerable risk.

Criminal Report of Health Commissioner of St. Louis, 1885–86. John D. Stevenson.

A most complete publication, which would serve as an excellent model for our own local officials.

How We Treat Wounds To-day. By Robert T. Morris, M.D. Pp. 165. G. P. Putnam's Sons.

This is the second edition of Dr. Morris' manual, which has been very freely criticized. Its subject-matter contains nothing especially new, but is full and accurate. The author's description of the antiseptic details of an operation is most commendable. His epigrammatic style is at times unpleasant, but yet enables him to make his statements clear and forcible. A surgeon away from the centres of professional activity can, by the perusal of these pages, easily place himself abreast of the times as regards knowledge about the antiseptic treatment of wounds.

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. Illustrated by chromolithographs and fine wood-engravings. Edited by Albert H. Buck, M.D. Vol. III., FAC to HYS. New York: William Wood & Co. 1886.

The third volume of this great work embraces all the subjects arranged under the letters F, G, and H. Some of the larger articles are those on Face, Fever, Fœtus, Fractures, Gonorrhœa, Gout, Hand, Health Resorts, Heart, Hernia, Histological Technique, Hospitals, and Hygiene. In addition to these there are between three hundred and fifty and four hundred other articles on every conceivable topic connected with medicine or surgery. To mention only a few of the out-of-the-way subjects, information upon which is accessible to the possessor of this encyclopædia, there is a table giving the exact rendering, in degrees Fahrenheit, of every tenth of a degree Centigrade from $-45°$ to $+52°$, thus enabling the reader of foreign works to make the change at once into the Fahrenheit scale without the necessity of going through an arithmetical calculation. Another article treats, at all-sufficient length, of the legal rules concerning the collection of fees, and another upon the duties of army and navy surgeons in time of war. In the article on Histological Technique the reader can learn all that is necessary to enable him to prepare, mount, and stain microscopical sections of healthy and diseased tissues, and in the one on Habitations many valuable suggestions are made concerning the precautions necessary for rendering the dwelling a real protection, and not a death-trap, for those living in it. There are also articles on all the more important health resorts and mineral springs in the world. It is impossible, in a brief notice, to convey any adequate idea to the reader of the vast amount of information contained in this veritable mine of medical knowledge, and we can only say that it is a work which no physician can afford to do without. The contributors, ninety-one in number, are all from this country and Canada, and by their labors they are building up a monument of which Americans may well be proud.

A Treatise on the Principles and Practice of Medicine. Designed for the use of Practitioners and Students of Medicine. By Austin Flint, M.D., LL.D., late Professor of the Principles and Practice of Medicine and Clinical Medicine, in the Bellevue Hospital Medical College, New York. Sixth edition, revised and largely re-written by the author, assisted by William H. Welch, M.D., Professor of Pathology in Johns Hopkins University, and Austin Flint, M.D., LL.D., Professor of Physiology in the Bellevue Hospital Medical College, New York. 8vo, pp. 1,160. Philadelphia: Lea Brothers & Co. 1886.

There is a feeling of sadness experienced by the reviewer when he realizes the fact that the gifted author of this work has laid down his pen forever. It is the last touch of the vanished hand, the last thought from the brain that is still. Aside from its intrinsic merits as a leading work on the practice of medicine—an exponent of the present state of medical learning of the present century—it will have a special value to the student and practitioner as the last work of a careful observer and a conscientious teacher. The individuality of the author is here in all its force, perspicuity, and honesty. He dealt with facts, and interpreted them in the light of the science of the day. Wedded to no theory, he was ever ready to modify his views in accordance with the advances made in scientific research. There was nothing but truth for him, and he always aimed conscientiously and impartially to be on the right side. It is unnecessary to give a detailed account of the manner in which the task was accomplished. The work, as a whole, made its reputation as a trustworthy medical guide with its first edition. Large as was its field, nothing of importance was omitted. The author was essentially a clinician. His natural powers of observation and study directed him more particularly to the bedside of the patient. His pathological instincts were so subservient to this tendency that, in order to keep abreast of the advances in this department, he felt it his duty to summon to his aid one of the highest authorities in that department. As it now stands the treatise is rounded out into its properly comprehensive proportions, and will be reverently placed upon the library shelf as the last effort of a great medical writer. This edition is made especially valuable on account of several new and important articles, viz., on infectious tumors, syphilitic diseases of the lungs, cerebral syphilis, general considerations relating to inflammatory and structural diseases of the spinal cord, spastic cerebral paralysis of children, hereditary ataxia, myxœdema, multiple neuritis, general pathology of fever, and milk sickness. The volume is judiciously edited by the son of the author, Professor Austin Flint, who prefaces the work with an admirably written account of his beloved father's labors.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume Eighth. Pp. 460. P. Blakiston, Son & Co. 1886.

This publication is in general appearance and contents a most creditable volume.

Massage as a Mode of Treatment. By William Murrell, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminister Hospital, Examiner in Materia Medica in the University of Edinburgh, and to the Royal College of Physicians of London. Philadelphia: P. Blakiston, Son & Co. 1886.

This little book contains considerable information concerning the classes of diseases in which massage may prove of service and the benefits which may be expected to result from its employment. It is not a text-book on massage, but rather a pleasantly written essay, from the perusal of which one may learn what this system of therapeutics is and what it can do.

An Unusual Case of Poisoning.—The papers have recently related a fatal case of poisoning from an overdose of podophyllum. A physician in Maine ordered, in a prescription, "Podophyllum, gr. ss." The last two letters were mistaken by the druggist for figures, and read "88." He thereupon dispensed the latter quantity, which was taken at one dose (as was presumably ordered for the correct quantity), death occurring soon after. The clinical history of the case is not given; but the toxic symptoms were probably those of an acute irritant poison. However much the physician may be blamed for his illegible writing, it is hardly conceivable how any druggist could have given such a quantity of a powerful drug without at least verbal instructions to the customer as to its potency.

Simulated Hyaline Casts.—Dr. S. E. Armstrong, of Passaic, N. J., writes: "The simulated hyaline casts of Dr. F. Tilden Brown are unlike the true cast in the following particulars, viz.: They are longer, more flimsy, hence do not rotate on their long axes as readily as true casts do when the cover-glass is manipulated; are apt to be joined to each other by narrow bands of the same material of which they are composed, and *their ends*, when discovered, *do not have the rounded contour peculiar to genuine hyaline casts*. Dr. Brown would have us expect to find casts in the urine only when the chemical analysis reveals the presence of albumen; . . . 'but we may find casts without albumen, and albumen without casts' (Delafield, Pepper's Practice, p. 76)."

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, October 28, 1886.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

DR. J. E. WINTERS read a paper [see p. 505] on

MATERNAL NURSING AND WET-NURSING.

The discussion was opened by DR. S. BARUCH, who was not willing to go so far as the author of the paper, on the question of the effect produced upon the uterus by nursing. Of course, whatever produces uterine contraction aids involution, and it is true that the application of the child to the breast produces contraction of the uterus or intensifies it. But he was not aware that this effect is produced after the first few days immediately after labor. Involution goes on with remarkable rapidity, the average period for its accomplishment being four or five weeks, and, after that, maternal nursing cannot afford any special advantage, so far as affecting the uterus is concerned. For the prevention of uterine disease he regarded maternal nursing as far inferior to the proper antiseptic management of labor, with abstinence from interference with the vaginal canal by either the finger or syringe after the confinement is completed. He was not opposed to maternal nursing, because it was the rational and physiological method of feeding children. At the same time it must be remembered that there are women whose physiological function, in this particular, cannot be relied upon. He thought that maternal nursing had but little bearing upon the development of uterine disease. He regarded wet-nursing as an evil, and never advised it except as a last resort. His experience enabled him to say that food for infants can now be obtained which so nearly approximates mother's milk that, in nearly all cases, wet-nursing can be avoided.

DR. E. L. PARTRIDGE believed that the period of uterine involution should be placed at three months, rather than the shorter time mentioned by Dr. Baruch. If that be correct, the cause for many acute disorders, which terminate in chronic affections of the pelvic organs, may be found in subinvolution. Anything, therefore, which favors involution guards against the development of uterine disease. He, therefore, was strongly in favor of maternal nursing, unless impossible, for at least three or four months after labor.

Abstinence from night nursing is an important point, and where artificial feeding is to be begun, it should be introduced at the time when the child requires something besides the mother's milk. Of course, this requires the assistance of a competent nurse, so that the mother may have seven, or eight, or nine hours of undisturbed sleep.

With regard to the wet-nurse, he believed all that Dr. Winters had said concerning her, and yet he believed that she has an important place, not against the mother who is able to nurse her child, but against the mother who, by inheritance, is incapable of nursing, or who, after two, three, or four months, gives evidence that she has not a good supply of milk, and then he preferred a wet-nurse to artificial food. He thought that a week's attention to the selection would enable one to obtain a wet-nurse far more desirable than those which Dr. Winters had described, and he would not say no more wet-nursing, because of the comparatively few bad wet-nurses to which reference had been made by the author of the paper.

DR. E. H. GRANDIN was fully in accord with the writer of the paper with regard to the influence of proper lactation in preventing certain diseases of the pelvic organs. He was satisfied that one of the most favorable oxytocics, after labor, is the application of the child to the breast, and he believed that this influence extends even to three months.

He would also say a word in favor of the wet-nurse. He could conceive of circumstances under which he would be unwilling to dispense with the wet-nurse, and believed that irregular and improper artificial feeding had quite as much to do with infant mortality as did wet-nursing. Of course, for obvious reasons, it was more desirable to give the child to a wet-nurse in the spring than in the autumn.

DR. J. LEWIS SMITH was not opposed to the employment of wet-nurses, because he believed that there was another side of the question to be considered. In his own practice he always advised their employment for children under six months of age, when it becomes impossible for the mother to continue to suckle. He believes that, when mothers are not able to suckle, *proper* wet-nursing will reduce the rate of infant mortality.

What he had to say, therefore, related entirely to the disastrous results of wet-nursing. These were due to a considerable extent to the scarcity of good wet-nurses, and this scarcity was influenced largely by the fact that very many mothers who are abundantly able to nurse their children did not, for a great variety of reasons, do so. Medical men should, therefore, urge and insist, as strongly as possible, that the mothers who were able to do so should nurse their children, and thus enable very many who really need them to obtain good wet-nurses.

In some instances the employment of wet-nurses increases the aggregate of infant mortality in this city, and chiefly with respect to the infants of the wet nurses themselves. Wet-nursing also may result disastrously to the infant because of the unfitness, both morally and physically, of the wet-nurse, and also because of the liability that the wet-nurse will administer to the child opium, alcoholics, etc.

DR. A. CAILLE sympathized with Dr. Winters in his opposition to wet-nurses, but also thought that many such papers would not abolish one of the evils described, because the wet-nurse would get something else to do and her child would fare no better than it does now. All attempts to make food which can be used as a substitute for mother's milk have, so far, been failures. He believed that most physicians would decide in favor of wet-nurses, and especially in the early part of the warm season. In some cases an effort should be made to give artificial food.

DR. WINTERS, in closing the discussion, said that no woman should be allowed to nurse her child in the night, nor should she be allowed to sleep in the same room. With regard to the child of the wet-nurse faring about the same, whether its mother followed the occupation of wet-nursing or not, he thought that these women were tempted by the offer of large wages, which they could not obtain elsewhere. At some future time he hoped to have an opportunity to read a paper on wet-nursing *versus* artificial feeding, but it would be with precisely the same views in mind as he had advanced in the paper for the evening.

The Section then adjourned, to meet on the *fourth Wednesday* in November, the fourth Thursday being Thanksgiving Day.

THE LENGTH OF A STEP.—Dr. Gilles de la Tourette has recently published a monograph upon normal locomotion and the variations in the gait caused by diseases of the nervous system. He found, from a comparison of a large number of cases, that the average length of a pace is, for men 25 inches, for women 20 inches. The step with the right foot is somewhat longer than that with the left. The feet are separated laterally in walking about 4½ inches in men, and about 5 inches in women. The ataxic gait is characterized by an actual shortening of the pace coinciding with an apparent lengthening, and by a considerable increase in the lateral separation of the feet.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HEALTH OF THE SEASON—TESTIMONIALS—SIR A. CLARK—DR. REDWOOD—THE LIVERPOOL HOSPITAL FOR WOMEN—THE CLINICAL SOCIETY—MALFORMATION OF THE HEART—THE TONSILS—PULSATING TUMOR OF HEAD—THE OBSTETRICAL SOCIETY—THE COMING ELECTION.

LONDON, October 1, 1886.

SEPTEMBER was with us unusually fine and summer seemed, therefore, prolonged. So little rain fell that gloomy prognostications told us we should suffer for it later on, and some even declared such weather unhealthy. The rainfall for three months past has been only a little over half the average, 2.5 inches, instead of 4.9. Some fears have therefore been expressed as to the supply of water in the coming spring. These, however, may be relinquished, for so far October has not maintained its repute for dryness. We have had very heavy and frequent rains, I should think enough to make up for the previous deficiency, and as a dweller in a city I should rejoice to have the crisp, dry, healthy weather of our old Octobers prolonged into November, as drizzling September was postponed to October.

Sir Andrew Clark has finished his twenty years' service at the London Hospital, and therefore passes to the retired list with the title of consulting physician to the charity he has so long and so well served. His admirers are taking the opportunity of getting up a testimonial to him. It will be remembered that on the retirement of his surgical colleague, Mr. Jonathan Hutchinson, a testimonial to him was also raised. It is to be hoped that we are not about to allow such movements to crystallize into regular precedents. It would be an awful infliction if the profession were to be expected to subscribe to a fund for every senior physician or surgeon of all our numerous hospitals. If the governors of such charities choose to recognize the services rendered by professional men, by all means let them, but really the other doctors who are working gratuitously ought not to join in such a movement. In Sir A. Clark's case there are, perhaps, exceptional circumstances, but it is well known that he is a wealthy man, and, therefore, costliness would be to him no attraction in a testimonial. I therefore hope no one will subscribe a large sum—I mean no doctor—let the public give as freely as they please. As a medical testimonial I should have thought an address from his colleagues would have been appropriate.

Dr. Redwood, whose eminent services to pharmacy are well known on your side of the water, is to have a testimonial. The fund for this will shortly close. I hear it has been successful.

The discussion at Liverpool respecting the surgical proceedings in the Hospital for Women seems to be by no means approaching a conclusion. Sir Spencer Wells has been induced to intervene, a letter having been sent to him from the secretary to elicit his opinion, which he has given with a brevity and distinctness which is unmistakable, and he has enclosed the secretary's letter and his reply to Dr. Grimsdale as consulting physician to the hospital, with his permission to use the correspondence in such way as he pleases. Dr. Grimsdale accordingly sends it to the *Lancet* and this journal publishes it to-day. Much comment is being excited and it is to be hoped some good will come out of the controversy.

The Clinical Society held its first meeting on the 8th inst., Mr. Bryant in the chair, when Dr. Charlwood Turner read an account of a case of congenital malformation of the heart, and remarked on the causation of bruits preceding the cardiac sounds. The patient was a little boy of six who had been under observation for four years. There was a systolic bruit over the pulmonary valve, and this was followed by a well-defined "prediastolic" bruit running up to an accentuated second sound and accompanied by a slight thrill. The bruit was conducted down the sternum. Dr. Turner thought that the conditions existing in this case and the sounds produced confirmed Dr. Barclay's view of the causation of presystolic bruits, and gave a sufficient explanation, and indeed the true interpretation, of the clinical facts. Dr. Carrington and Dr. Coupland made some remarks, but did not seem to consider the precise mode of causation of much consequence.

Mr. Gould brought forward a case bearing upon the association of disease of the tonsils with other organs, which gave rise to some conversation on this subject. Mr. Treves related a case of pulsating tumor of the head with Raynaud's disease, and exhibited the patient to the meeting. There seemed to be two pulsating tumors, and they appeared to be of a different nature. One was in the middle line of the occipital region, the other was over the left mastoid and appeared to be a cirsoid aneurism, while the former was thought to be of a venous character and in communication with the superior longitudinal sinus. The patient was a lad of seventeen who, for a year or more, had suffered from headaches, vomiting, and vertigo. Both carotids were enlarged, as well as the temporo-facial and internal jugular veins. There was protrusion of the eyeballs and a difference in the size of the palpebral fissures, giving a very strange look to the lad, and when he tried to look toward either side the globes were agitated by rapid movements—horizontal nystagmus. There were other interesting symptoms complicating the case.

The Obstetrical Society has also begun its winter work, having opened on the 6th inst., when some interesting specimens were exhibited and cases related.

As the time of election draws near the candidates for a seat in the General Medical Council are endeavoring to stir up an interest in the subject. Some of them are general practitioners and want to persuade their brethren that they alone can represent their views. It is hardly clear to ordinary observers that diligence and success in family or club practice is the only qualification for a council of medical education. One would certainly suppose that experience as a teacher would be quite as useful, though it is true there are plenty of teachers on the board. So far, the only question which produces excitement is the conduct of the so-called Birmingham Committee, which is generally denounced as a caucus or a clique, though those who took part in it get angry at such expressions. I was at Brighton when this caucus was proposed, but the British Medical Association refused to take any part in nominating candidates. Thereupon a few of the councillors of the association met at their hotel and determined that they would nominate. They adjourned to Birmingham, where thirty-two gentlemen met and took measures to propose, in the name of themselves and correspondents, three councillors of the association who had kindly mentioned each other at Brighton, and since then these three councillors have had all the influence of the *British Medical Journal* at their disposal, and a shameless attempt is being made to manipulate the branches notwithstanding the refusal of the association in general meeting assembled to countenance such proceedings.

BRAINS OR HAIR.

To the Editor of The Medical Record.

SIR: Two remarkable editorials have appeared this month in THE RECORD, entitled, "The Progress and Prevalence of Baldness in America" and "The Long-beard Habit." The former argument is based on Mr. Eaton's observation as published in the *Popular Science Monthly*, while the latter appears to be purely editorial in basis and development. The paper of Mr. Eaton treated the

bald-heads with great respect, showing that Mr. Eaton may have a wholesome fear of bears; for he contradicts the paragrapher's usual statement that the bald-headed man is generally found at the variety theatre on the front seat, gazing at the ballet-girls, and goes on to say that religious meetings are graced by bald-heads in direct proportion to the refinement of the religion; and, in fact, draws the general conclusion that culture and brain-development are associated with baldness, because bald-heads are more prevalent East than West, and are found in the more cultivated public meetings, whether the meetings are in the interest of religion, art, or science. In fact, the central idea of the editorial begins to show up in this article, for his conclusion is that "baldness is in direct proportion to the amount of education and cultivation which a community receives." But this article does not declare so distinctly that there is a relation of cause and sequence between loss of hair and brain-development, in the sense that loss of hair may result in giving more bodily energy which may be used in brain-development; or, in other words, that there is good reason for the opinion that some people are "hair-brained."

So far as these conclusions and observations are concerned there is no question that baldness is increasing, and that it is increasing among the more highly civilized and more cultured races and individuals; but an observation of this kind, taking note of only two factors of biology—hair-growth and brain-development—is apt to be misleading. Such a problem, stated in such a manner, might delude innocent people into the belief that loss of hair contributes to mental growth and development.

The obverse side of this proposition will read that intellectual effort, by absorbing vital energy, draws part of this energy from the hair-glands and causes baldness; hence the more highly cultured men in medicine are bald. There is a hint here for our professional sisters, except Dr. Mary Walker; and perhaps the old universities will graduate more women physicians with honor if the women will wear short hair, to give themselves an equal intellectual chance with the men.

In the second editorial the argument is that "beards must go," as they are unsanitary, are not worn by the more highly cultured physicians, or eminent men in the profession (or eminent medical women). Beards, especially if they don't happen to split at the ends and grow long, are "characteristic of an undeveloped civilization." (Then why do American Indians, native Bushmen, negroes, Esquimaux, Kanakos, Mexicans, cow-boys, gorillas, monkeys, Chinese, and Sandwich Islanders, have short beards or none at all?) "Hercules was bearded, but Apollo was smooth-faced." (Perhaps the people who invented Hercules had a delusion that vital energy was a hairy affair, and they shaved Apollo, the better to show his pretty face.)

But now comes the *grand dénouement:* "Hardly a doctor of the first eminence in the world's history ever wore a long beard, and he who possesses one may as well concede at once that he will never rise above mediocrity."

Following this proposition to its logical conclusion on the data given to support the proposition, the conclusion must be that the beardless men and the women are to be the coming doctors, while the "captain with his whiskers" will retire to the kitchen or nursery, and find there the duties which he is intellectually fitted to perform.

The editorial gives the data for this conclusion as follows: First, that the vital energies in hair-growth absorb energy that might go to mental development; and second, that certain eminent men in the profession became eminent because they "*patronized the barber*" and therefore wore short beards; as, "Linacre, William Harvey, John Hunter, Benjamin Rush, Dupuytren, Nélaton, Andral, Laennec, Cuvier, Bichat, and Ricord, and turned the iphysiological energies that might have been lost in making hair into the making of brain" (verily it was a question of making hair or brain with these gentlemen, and not fashion).

I suppose, but I do not want to be personal, that this editorial was written by a gentleman who was in a hurry; otherwise how could an Eastern gentleman, high up in the profession, who, therefore, is bald-headed and smooth-faced, except perhaps a few straggling hairs for a mustache, ever write two propositions, either of which destroys the other instead of proving anything. These eminent Englishmen, Frenchmen, and Americans wore short beards because they patronized the barber, and thus diverted vital energies to making brains instead of hair. Now, if it is true that vital energy can be so diverted or correlated, it was not true in these instances; for patronizing the barber does not prevent the beard from growing, and thus cannot change the vital current from hair-wards to brain-wards. These eminent men probably gained their brain-development because they were industrious men, and they shaved because they wanted to, or because such was the fashion. The proposition that loss of hair results in brain-development and intellectual eminence reminds me of a story.

A professor of midwifery gave a lecture on sterility, and, among other signs and symptoms, he stated that he had observed that the hair on the pubes of sterile women was straight, while on the pubes of child-bearing women the hair was curly. A smart student wanted to know if curling the pubic hair would cure sterility. I really think this student's proposition was as sound as the editor's theory of how to cure "professional mediocrity," and I also think, if there is anything in it, that the States which now control medical practice should at once pass an act compelling all doctors to shave, in the interest of a "higher medical education," and appoint a State Board of Barbers as auxiliary to the State Boards of Health. As shaving the beard cannot lessen hair-growing energy, those doctors who rise to eminence through their patronage of the barber should be tested. They are frauds. A State board should therefore be established to not only examine a man who wants to practise physic, but this board should also test a man by finding out if his beard would grow to a great length or thickness provided he did not shave. This is the only way to test this question and "rid the profession of incompetents."

Ole Bull could render beautiful music with only one string to his violin. Bull was a master in the art. Similarly, some (short-haired) men can solve a problem with only one or two factors given. Cuvier and Agassiz could take one bone of an individual of an extinct and unknown species and make a drawing of the whole skeleton. But our common musicians, were they to attempt the one-string business, would only fiddle on one string, while like disasters wait upon certain other workers in different fields. There is no greater subject than the relations of mind and body; and therefore no subject which a man should attempt to teach with more caution. And now, to better understand this question of the relation of hair to brains, let us introduce a new factor in the problem, known as natural selection.

With this factor in hand no man is justified in studying any human problem from the basis of any single individual species or race, but ethnological questions must be studied in all relations to all races, in the light of human history, and also in the light of zoölogy. Doing this, we will find, first, that the question of the habit of life and the climate are the first factors to know in the hair question. The animals of warm climates have less fur and hair than those of cold—irrespective of mental development. As animals develop mentally they live more in caves and hollows, in trees and burrows, and get along with less hair, but more intellectual eminence. Coming up, or down, along the line of animal development, we reach the monkeys. These animals have short hair all over, but are not good for fur. They wear their hair short, and most species have no beards, though I think, without looking up the matter, that the chimpanzee, a very intelligent variety, has quite a flowing beard. The chimpanzee has never attained any very great eminence as a monkey.

He is never seen riding a hand-organ, or passing a hat for pennies, but occupies a very dignified position in the "Zoo" gardens. The little common monkey, with a tail, certainly attains a certain kind of eminence. He has no long beard, his hair is short, his "smellers" are few and far between—like the modern intellectual mustache—he can gibber perpetually, climb a greased pole to eminence, and hang all day by his tail. The chimpanzee has no tail, but quite a beard. He looks more human; and it was doubtless the chimpanzee which gave the suggestion for the mightiest idea of the nineteenth century to the "only greatest" intellectual giant of this century, whose name was Charles Darwin—whose head was bald, but who didn't patronize the barber and wore a heavy beard.

Coming down, or up, to the early human progenitor, we find that the cave-man had hair all over his body, short whiskers, and not very long hair on his head. But he spent many centuries toasting his shins by the fire, making graven images of his hairy-coated sweethearts on pieces of deer-horn, and learning to sew. He clothed himself with the fur of animals, except his face, and natural selection, therefore, took the hair off his skin; and as he couldn't make plug hats, the hair on his head and face grew long as he approached civilization.

As we can do no better in a short space, let us look at an epoch or two of human progress. We have all read more or less of Chinese history and the European history of the dark ages. The Chinese, for centuries, have shaved their faces, and all of their heads except a little spot for a pig-tail; yet there is no particular eminence in the medical profession of China. The Europeans of the dark ages were closely shaven. They shaved their faces, and also a good share of their heads, and the custom is yet preserved as a heritage among some religious sects. Europe was brought out of the ignorance of the dark ages by long-whiskered Islamites, who brought school-books, tore down churches, established school-houses, and natural science, and swore—not by the cheek of a shaven monk, but by "the beard of the prophet."

The civilization of Europe hinged on the conduct of these long-bearded and unshaven men, and if not for them we would all of us to-day, perhaps, be shaven monks or, worse, shaven believers, without the science and civilization of this nineteenth century, and without the factor of natural selection as an aid to the solution of problems of life, and mind, and hair.

Looking at the present epoch of civilization, we will find that the majority of men have beards if they don't shave or patronize the barber. A large number of men will have long beards if the hairs don't split. The men who wear plug hats, or who get the depilatory germ in their heads, will grow bald. The Western men, who wear hats of more ventilating texture, have heavier hair. The beard of most men grows heavy, because the face is exposed. Women have less baldness, because three or four straws, with a stuffed bird, are not much "protection" to the head, and women don't have whiskers, because—well, who would want a woman, even a woman doctor, with whiskers? We will all agree with that old gentleman who wrote the Epistle to the Ephesians, and which somehow miscarried so that he never received an answer, that the glory of woman is in her hair, though we may not believe that other story about Samson any more than we believe that mental strength depends upon no hair.

Professional long beards or short ones depend upon the taste of individual professionals, or upon fashion. It is within the memory of many of us, graybeards, when the fashion was imperative to shave, and a mustache was an abomination that could not be tolerated in polite society; in fact, the hoodlums on the street would follow and hoot after a man who had the gall to wear a mustache. If it can be made to appear that patronizing the barber is necessary in order to appear eminent, from the delusion that short hair, shaven, makes brain, then the doctors will all shave, or be shaven, of course. It is quite likely, however, that the only relation between hair and intellectual development and professional eminence rests upon the fact that the golden moments spent by the young doctor sitting in a barber-shop waiting for his "next," and whiling away his time looking at the bawdy literature which abounds in barber-shops, will use so much of his time and so corrupt his taste that he can never be eminent.

ROMAINE J. CURTISS, M.D.

JOLIET, ILL., October ... 1886.

[We are much obliged to Dr. Curtiss for his interesting letter. Many of our illustrations were intended to be figurative rather than literal, but their ingenious use in the arguments of our correspondent gives a somewhat novel complexion to the discussion.—ED.]

AIR WITHOUT MICROBES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In a recent issue of THE MEDICAL RECORD, October 9, 1886, I read an article by Dr. Baldwin, headed "Is there Air without Germs?" upon which I beg the privilege of offering a few brief comments. In order to more clearly convey my idea, I will preface my remarks with a rude classification of micro-organisms. For our present purpose we conveniently distinguish between fungi cryptococci and schizomycetes. The fungi and cryptococci rarely produce disease as compared with the schizomycetes. Under the head of schizomycetes we recognize microbes which are continually identifying themselves with particular pathological conditions. They are the micrococci or round form, the bacteria or oval-shaped, and the bacilli or rod-like. The micrococci are also specially designated according to the relation they assume one to another—when in pairs, diplococci; in chains, streptococci; in bunches, staphylococci; in masses, zoogloea. Now it is absolutely proven that we cannot have suppuration without the staphylococcus pyogenus. But we may have the staphylococci present and not have suppuration. In other words, they must be in sufficient numbers under conditions favoring the development and growth of their spores before suppuration can occur. To substantiate this, I will refer to Dr. Knapp's remarks before the Twenty-second Annual Meeting of the American Ophthalmological Society (*American Journal of Ophthalmology*, vol. iii., p. 254). He said: "It must be remembered that in the majority of operations a certain quantity of infecting material is required to produce any effect. Where there is a free escape of liquid from a wound, the material is washed off; but where there is a sucking process, the danger is much greater." Dr. J. A. Andrews, of New York, concludes that mere contact of the microbe is not *always* sufficient to produce suppuration, especially in the case of the cornea, where the material is liable to be washed off. But where the material containing the staphylococcus pyogenus has been introduced into the wound and kept there for a short time he had never seen a failure to produce suppuration. Now, Dr. Baldwin argues that, because he has had twenty-three cataract operations without any suppuration, the "pyogenic germ" was necessarily absent, and therefore it was not necessary to take precautions against it. He thereupon laughs at the idea of there being any such germs existing in his region, and says that it is necessary to take antiseptic precautions only in hospitals.

By referring to Dr. Billings' malarial map one would be naturally led to suppose that "germs" existed in Alabama in a high state of development and in great luxury. But, of course, there may not be any "pyogenic" microbes. This is a very dangerous position to take, for who can tell when they are present and when not? Shall we wait until the enemy is upon us in full force before we attempt to defend ourselves? Would it

not be wiser to follow the teachings of our most progressive surgeons and be continually on the alert? The doctor is probably following his prejudice, which is all right, but he should not expect others to repeat it. He refers to Tait (as does everybody else who has anything to offer against antiseptics), with his one hundred and thirty-nine laparotomies without a death. It is just as difficult for a great number of the profession to swallow, unmasticated, all Mr. Tait says as it is for Dr. Baldwin to swallow "each new-hatched theory of the German laboratory." To use the abandoned spray as an argument against antiseptics in surgery simply shows how weak the opposition is. Antisepsis in surgery has produced results in wound treatment undreamed of a few years ago; has made accessible to the surgeon regions which heretofore were considered clearly beyond his domain. Antiseptics have practically rendered extinct those diseases depending upon suppuration, viz., pyæmia, hospital gangrene, etc. Surgeons may differ as to the relative merits of different antiseptics, but they agree as to the underlying principles. I have lately visited a large number of hospitals in both the East and West, and I can assure you the men who are piling up statistics of new and great operations are the workers in antiseptic surgery.

W. Edwin Ground, M.D.

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MRS. CHARLES F. WOERISHOFFER'S GIFT TO THE NEW YORK ACADEMY OF MEDICINE.

The following is the correspondence relating to the recent munificent gift to the New York Academy of Medicine:

Dr. A. Jacobi.

Dear Sir: Please find enclosed a check for the Academy of Medicine, which I send you in memory of my husband, the late C. F. Woerishoffer. In selecting the Academy of Medicine as one of the institutions to which I intend to distribute a certain sum, in accordance with the wishes of my husband, I am led by the high appreciation Mr. Woerishoffer always entertained for the medical profession.

Yours very sincerely,

Anna Woerishoffer.

Dr. Everett Herrick, *Chairman Board of Trustees, New York Academy of Medicine.*

Sir: In presenting a munificent donation to the New York Academy of Medicine, Mrs. Anna Woerishoffer was guided, firstly, by the great respect her late husband, Mr. Charles F. Woerishoffer, always felt and expressed for medical science and the medical profession; and, secondly, by her conviction that it is better to aid and sustain such institutions of either science or charity as have already proved their faculty and right to exist by duration, results, and accumulated property, than to create new institutions.

After mature deliberation she came to the conclusion that the New York Academy of Medicine has, by its publications in the journals of the country, and in numerous volumes of transactions and bulletins, and by its regular stated and section meetings, largely contributed to the progress of medical science, and deserves eminently the name of a scientific body.

That, after having existed forty years, collected an ever-increasing library, and accumulated considerable property, the New York Academy of Medicine holds out the promise of perpetuity.

That, by excluding politics and ethical strifes from its constitution and gatherings, it deserves the name of a purely and exclusively scientific body, and thereby the confidence of the public; and that it must necessarily become, and be, the centre of the scientific interests and labors of the medical profession of New York.

Mrs. Woerishoffer was also struck with the fact that the present building of the New York Academy is too small for its present and future purposes; that not only its sections require more accommodations, but that every medical and scientific society of the city ought to find ample room within its walls, and look upon the academy as its proper centre; and, finally, that the increasing library is in urgent need of a fire-proof building.

From these points of view Mrs. Woerishoffer desires to contribute to the means required for enabling the New York Academy of Medicine to accomplish its great ends and reach its high aims, which she takes to be both truly scientific and truly humane.

I have the honor, Mr. Chairman, of enclosing Mrs. Woerishoffer's letter and her check for $25,000.

Very respectfully yours,

A. Jacobi, M.D., *President.*

Mrs. Anna Woerishoffer.

Dear Madam: The Trustees of the New York Academy of Medicine gratefully acknowledge the receipt of your check, through Dr. Jacobi, for $25,000, sent in memory of your husband, the late Mr. C. F. Woerishoffer, and in accordance with his wishes. In accepting this gift the Trustees desire to thank you as the almoner of your husband's estate, and hope so to use it that no one bearing his name shall have cause to regret "the high appreciation which Mr. Woerishoffer always entertained for the medical profession."

Yours very truly,

Everett Herrick, M.D., *President.*

Geo. A. Peters, M.D., *Secretary.*

[illegible]

Mrs. Anna Woerishoffer, New York, N. Y.

Dear Madam: At a meeting of the Academy, held Thursday evening, October 21, 1886, the following resolutions, moved by Fordyce Barker, M.D., and seconded by C. R. Agnew, M.D., were unanimously adopted:

Resolved, That the New York Academy of Medicine accept with the warmest thanks and gratitude the noble gift of $25,000 from Mrs. Anna Woerishoffer as an expression of the appreciation by her late husband, Mr. Charles F. Woerishoffer, and herself, of the importance of the medical profession to the health and welfare of the public, as well as to individuals, and the necessity for the development of its highest culture.

Resolved, That the names of Mr. and Mrs. Charles F. Woerishoffer be inscribed in the Academy for permanent record as benefactors.

Resolved, That a copy of these resolutions, duly engrossed, and signed by the President, Recording Secretary, and Treasurer, be transmitted to Mrs. Woerishoffer.

A. Jacobi, M.D., *President.*
A. M. Jacobus, M.D., *Secretary.*
F. A. Castle, M.D., *Treasurer.*

A Bullous Eruption caused by Salicylic Acid.—Dr. Rosenberg reports in the *Deutsche Medicinische Wochenschrift* a case of rheumatism treated successfully, as regards the articular pains, with salicylic acid. But the patient complained of a severe burning of the skin, and the body became covered with purplish spots. The medicine was discontinued for a time, but on another trial, a month later, the same sensation was complained of, and in addition to the discoloration of the skin there appeared a number of large blebs filled with serum, situated on the back and extremities, and also upon the conjunctiva and mucous membrane of the tongue and lower lip. A third trial resulted in a precisely similar eruption. Examination of the fluid in the blebs failed to reveal the presence of salicylic acid.

New Instruments.

A NEW NASAL ILLUMINATOR.

By J. A. THOMPSON, M.D.,

CINCINNATI, O.

THE idea of illuminating the nasal cavities for medical examinations from the naso-paryngeal space is not a new one. But a cheap, simple, and effective device for this purpose is not generally known to the profession. The necessity for some better means of examining the nasal fossæ than we now possess is too evident to need discussion. By no method now in vogue can more than half of the nasal cavity be seen. Even so good an observer as Morell Mackenzie, in his statistics showing the place of origin of nasal polypi, gives only their apparent, not their real, site. Examinations of the posterior nares and the walls of the naso-pharynx are attended by so many difficulties that many competent observers say they are unsatisfactory in a majority of cases.

To overcome these difficulties, to avoid the necessity for groping in the dark in many cases of disease of the upper air-passages, I had made, nearly a year ago, the instrument a brief description of which is appended. It has been such a help to me in difficult cases in my own practice that I desire to make it more generally known.

A small incandescent lamp (see cut) is mounted on a metal tube curved on a short radius to an arc of 90°. This delicate lamp is protected from injury, by the spasmodic contraction of the throat muscles, by a metal shield. The inner side of this shield is polished and serves as a reflector. It is movable, and can be turned so as to throw the light on either Eustachian orifice, through the nose, or on to the posterior wall of the pharynx, and can be removed for cleansing or polishing when soiled. The tube and lamp are provided with a hollow wooden handle for ease of manipulation, and to afford means of connecting the lamp with a battery. An insulated wire in the tube, connected with a metal plate in the handle, forms part of the electric circuit. The circuit is completed by the lamp, the tube on which it is mounted, a switch, and a second metal plate inside of the hollow wooden handle. This arrangement makes it possible to use a smaller tube than could otherwise be employed. By putting a switch in the circuit the light is completely under the control of the operator. The distance from the bottom of the tube to the top of the lamp is less than three-fourths of an inch, so it can be readily guided into the naso-pharyngeal space. It is usually well borne. Care must be taken, however, not to touch the parts with the lamp itself, as it becomes quite warm if the examination be prolonged.

The film of air between the lamp and metal shield prevents the latter from becoming heated, and contact with it has no more effect on the throat than that of any other smooth instrument. Should the patient's throat prove too sensitive to permit of examination without it, an application of cocaine will render it tolerant.

With the lamp in position in the naso-pharyngeal space, when the anterior nares are dilated by any good speculum the whole of the nasal cavity is seen to be brilliantly illuminated and can be examined in detail by varying the position of the lamp. Unless there is marked deviation of the septum, or hypertrophy of the Schneiderian membrane, the lateral and posterior walls of the naso-pharynx can be clearly seen through the inferior meatus by turning the reflector.

This light will also be found serviceable in a way not thought of when it was first made. In ordinary post-rhinoscopic examinations the light is reflected, diffused, and again reflected. In each of these processes some rays of light are lost, and the image is rendered indistinct for want of sufficient illumination. The small lamp I have described offers no obstacle to the use of the rhinoscopic mirror, and the image afforded is as much clearer as the illumination is better.

Three cells of any ordinary galvanic battery will furnish current enough to light the lamp. For office use a storage battery is a great convenience.

The advantages of this method of illumination in cases of tumors of, or foreign bodies in, the nose or naso-pharynx, or for determining the condition of the mucous membrane in any of the diseases to which these cavities are subject, are too apparent to need mention in a brief descriptive article.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 24 to October 30, 1886.

BILLINGS, J. S., Major and Surgeon. Granted leave of absence for eight days. S. O. 246, A. G. O. October 22, 1886.

LAUDERDALE, JOHN V., Captain and Assistant Surgeon. Leave of absence extended one month. S. O. 249, A. G. O. October 26, 1886.

CORSON, JOSEPH K., Captain and Assistant Surgeon. Granted leave of absence for one month, to take effect when his services can be spared. S. O. 246, A. G. O. October 22, 1886.

MOSELEY, E. B., Captain and Assistant Surgeon. Relieved from duty in Department of the Columbia, and ordered to report in person at Headquarters, Division of the Pacific, for assignment to duty. S. O. 87, Division of the Pacific, October 16, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending October 30, 1886.

DIEHL, OLIVER, Passed Assistant Surgeon, U. S. N. Granted three months' leave from October 26th.

THE ANALYSIS OF A SO-CALLED NERVE-FOOD.—Dr. Francis Wyatt, of this city, having analyzed for the *American Analyst* the "Moxie Nerve-Food," found that it contained nothing but a little essential oil and the infusion of some ordinary bitters. It is, he says, practically an inert mixture.

THE LATE DR. THOMAS A. MCBRIDE.—At a meeting of the Medical Board of the Presbyterian Hospital, held October 16, 1886, the following resolution was adopted:

Resolved, That in the death of Dr. Thomas A. McBride the Medical Board of the Presbyterian Hospital has lost a member whose high professional attainments, devotion to duty, and winning personal qualifications, have won for him the highest esteem of his associates. Though still far from having reached the meridian of life, he was deservedly in the enjoyment of the full noon-day of professional reputation. While we mourn deeply the loss of our friend and associate, we realize that the good work which he has done remains as a monument to his conspicuous ability and as a stimulus to his survivors to a like devotion to the highest aims of their calling.

WILLIAM H. FLINT, M.D.,
Secretary of the Medical Board.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 30, 1886:

	Cases.	Deaths.
Typhus fever		
Typhoid fever		
Scarlet fever		
Cerebro-spinal meningitis		
Measles		
Diphtheria		
Small-pox		
Yellow fever		

Death from Bromide of Potassium.—The symptoms of chronic bromism are well known, and cases of this condition are not rare, but the only death reported from this cause was, we believe, that related by Hameau in 1868. The patient was an epileptic, twenty-two years of age, who took about four and a half pounds avoirdupois of potassium bromide in the course of ten months. A second case has been reported by Eigner in the *Wiener Medizinische Presse*. The patient was a girl, nineteen years of age, who became epileptic at the age of six in consequence of a fright caused by an attempt at rape. She had taken bromide of potassium, without medical advice, for about a year, beginning with a small dose, but increasing it rapidly until, for some weeks, she had been taking two teaspoonfuls of the salt a day. The epileptic attacks ceased, but the patient began to grow weak and irritable, was unable to sleep, had vertigo, difficulty of vision, and slowness of speech, and lost her memory. There were salivation, foul breath, and an eruption of acne on the face and over the entire body. The author calculated that the girl had taken over three pounds of the drug in the course of a year. She was admitted to hospital, but no improvement followed; she became delirious, and finally died. Just before death signs of a commencing pneumonia at the base of the right lung were discovered, but while this perhaps hastened the fatal termination, death was inevitable and was evidently attributable to bromism. The only lesions found at the autopsy, in addition to the pneumonia, were a slight bronchitis, and hyperæmia of the brain and meninges.

Iodol in Gynecological Practice.—Dr. Ménière has used iodol with excellent results as a local application for ulcerations of the neck of the uterus, and even in a few cases of vulvitis in strumous girls. He employs a mixture of iodol half a drachm, glycerine one ounce, and alcohol two ounces.

The Iodoform Rash.—Mr. Frederick Treves reports, in *The Practitioner* for October, 1886, a peculiar exanthem which he observed in a case in which iodoform had been freely used for three weeks. At the end of this time the entire forearm, upon which was the wound, became evenly swollen, œdematous, and a trifle red. On the following day a crop of vesicles was found on the forearm, the eruption having appeared in the night. The vesicles, about thirty in number, were small, and varied in width from one to three lines. They were limited to the forearm, and were not more numerous in the vicinity of the wound. The iodoform was now discontinued, but the vesicles went on to suppuration, discharged a little, and then soon healed up. Three days later a remarkable exanthem appeared, covering the left arm and shoulder, the greater part of the face, nearly the whole of the front of the chest, and some part of both sides of the neck. The right upper limb, the legs, the abdomen, and the back were quite free. The eruption appeared in the form of patches. Each patch consisted of a number of closely packed papules. These papules were all of less size than a pin's head, and were set upon a pink erythematous base. The little papules could be felt as well as seen, and they were paler than the surrounding skin. The erythematous patches varied in size from a sixpenny to a half-crown piece. They were irregularly round, and ran the one into the other. The margin of each patch was clearly defined. The child presented no constitutional symptoms. She appeared to be in perfect health, and her appetite was excellent. In about two days the eruption had disappeared, and was represented only by a faint yellowish tinge of the skin. From the time of the appearance of the vesicles to the end of the exanthem there had been a regular elevation of temperature of 99° in the morning and 100° in the evening. During the day preceding the appearance of the exanthem the patient had complained of intense headache and giddiness, and of not feeling well, but all those symptoms disappeared as soon as the eruption became visible. Zeissl, Neisser, and Goodell have reported cases of a similar nature.

Ikteros Typhou is the name given by the local physicians to a disease which has been very prevalent in the Grecian city of Nauplia, the capital of the province of Argolis. It attacks chiefly those in easy circumstances, and usually terminates fatally in from one to three or four days. The symptoms of the disease are not reported, but it is said that the dead bodies are first of a bright-yellow color, which changes to black as decomposition rapidly sets in. The etiology of the disease is uncertain. Some of the physicians attribute it to the leaky condition of the city sewers and consequent pollution of the soil, others to the presence of neighboring marshes. It is hoped that a commission may be sent to Nauplia by the government to make a scientific study of the disease.—*Medical Record*.

Bejuco.—M. Sacc, of Cochambo, in a note addressed to the Academy of Sciences of Paris, describes a plant, called by the natives bejuco, which enjoys a reputation in equatorial countries as an efficient antidote to the bites of venomous snakes.

A Monument to Robin.—The friends of Charles Robin have opened a subscription list, in order to obtain the funds necessary for the erection of a monument to his memory. Quite a sum has already been collected, the subscriptions running from five francs up to five hundred francs.

The Mortality of Enteric, Typhus, and Scarlet Fevers.—Dr. Henry Handford presents, in *The Practitioner* for October, 1886, the results of a study of a large number of statistics, taken from the records of hospital and private practice, bearing upon the mortality and incidence of enteric fever, as influenced by age, compared with typhus and scarlet fevers. The following are his conclusions: Susceptibility to enteric fever decreases with age from the earliest years onward, though the decrease is slight between fifteen and twenty-five, whereas the risk of a fatal termination steadily increases with age. With regard to typhus, susceptibility is slight below five years of age, is at its maximum between ten and fifteen, and from this age onward steadily diminishes, though the risk of a fatal termination rapidly increases. In scarlet fever both susceptibility and mortality are greatest under five, and diminish with age. The mortality rises slightly after twenty-five, but the susceptibility does not.

The Best and Cheapest Culture Medium.—Irish moss, with one per cent. of cane sugar and two per cent. of beef peptone, is one of the best and cheapest culture media for micro-organisms, according to Dr. Alexander Edington, of Edinburgh. The mixture ought to do very well for invalids also.

Raw Mutton can be safely Eaten, according to M. Chatin, of Paris, since it never contains parasites, at least in dangerous amount. It is a safer raw food, therefore, than beef or pork.

Gonorrhœa of the Rectum is a frequent affection in Syria, from the fact that sodomy is about as general as prostitution.—*Cor. of Maryland Medical Journal.*

Laparotomy for Purulent Peritonitis.—A case is reported by Dr. Studenski in the *Chirurgicheski Vestnik*, of a child, aged twelve, who was suffering from purulent peritonitis, arising in the course of typhoid fever. Aspiration was tried without any permanent relief. The abdomen was then opened by an incision in the linea alba, below the umbilicus, and exit was given to about six pints of pus. The peritoneal cavity was then washed out twice daily with a four per cent. solution of boracic acid in glycerine and water. At the end of six days the inflammation was limited to the neighborhood of the spleen, and the child eventually made a good recovery.

The Statistics of Suicide in Mexico.—According to some recently published statistics the number of reported suicides in Mexico, from 1860 to 1884, was 487. The greatest number occurred in the spring and the fewest in the winter. Only 64 of the total number were women; the youngest suicide was aged nine, the oldest eighty. The army furnished the greatest number, and prostitutes the least. Of the thirteen different classes into which the suicides were divided the medical profession came tenth on the list in point of frequency. Of the various causes mental aberration was the most prolific, alcoholism furnishing only 4 cases. Love impelled 65 to self-destruction, and 5 preferred death to the sufferings from incurable disease. Fire-arms were selected as the means of suicide in 288 cases. Of the nationalities the Mexicans furnished the largest contingent, then came the French, and after them the English residents. It is to be noted, however, that of the foreign residents during the period embraced by the statistics the French were by far the most numerous.

Peculiar Muscular Power.—Under the name of "l'homme protée," a man in Paris has been attracting considerable attention by reason of the peculiar control which he has over his muscles. He is able to move separately not only special groups, but also individual muscles, in such a way as to produce the most grotesque contortions. He assumes at one time the appearance of a man suffering from the most marked tetanic convulsions; at another, the muscles of one limb are flaccid and seemingly paralyzed. It is said, also, that by contracting individual muscles very forcibly he is even able to almost entirely shut off the circulation in certain segments of the limbs.

Hydrofluoric Acid in Phthisis.—Seiler treats pulmonary tuberculosis with daily inhalations of hydrofluoric acid. He passes air through a mixture of one part of hydrofluoric acid to three parts of water, and then drives this air, charged with the vapor of the acid, into a small room in which the patient sits. He claims to have obtained good results from this practice. The cough and dyspnœa are quieted, the night-sweats cease, the expectoration is lessened in quantity, refreshing sleep returns, the appetite is improved, and the patients gain in weight. These good effects become evident after from four to fifteen sittings.

Hydrophobic Inoculations in Naples.—Professor Cantani has established a Pasteur institute in Naples, where preventive inoculations against rabies are practised. A number of persons have already been received and treated, and as yet no deaths have been reported.

The Cholera Committee of Venice.—An association exists in Italy the object of which is to afford relief to individuals and communities in time of a cholera invasion. When it was announced last May that the cholera existed in Venice the members of the association met and appointed a committee whose duty it should be to care for the sick, and to endeavor, as far as possible, to prevent a spread of the disease. This committee visited all the sick poor, provided them with food and clean clothing, procured medical help and gave them medicine, watched with them when necessary, and attended personally to the cleansing and disinfection of their dwellings. Diet-kitchens were established, and a house was obtained where garments and bed-clothing were prepared. The appeals for pecuniary assistance were responded to very liberally, and the committee was never hampered for want of funds, even having a surplus of over two thousand lire when their labors were over. Too much praise cannot be given to this most charitable association for the truly noble work performed by its self-sacrificing members. To them it was undoubtedly in great measure due that the plague found comparatively so few victims.

Hygienic Precautions during the Erection of a Building.—A new chamber of commerce is about to be erected in Paris on the site of the old *halle aux blés*. As the latter was built in 1769, and the soil upon which it stands has not since been disturbed, some apprehension is felt as to the effect upon the health of the workmen of digging over the ground. Drs. Dujardin-Beaumetz and P. Richard have therefore presented a report to the Conseil d'Hygiène Publique upon the hygienic measures necessary to be observed during the demolition of the old building and the erection of the new one. They advise that the earth be freely sprinkled with antiseptic and disinfectant solutions, such as the salts of copper, iron, and zinc. Before the old walls are pulled down they should be thoroughly wet, so as to prevent, as far as possible, the rise of dust. The earth removed for the new foundations and the débris of the old building should be taken at once outside of the city. All the old privy vaults and subterranean passages should be cleaned out, dried, and disinfected with sulphurous acid. The building should be surrounded by a police cordon to prevent the approach of any persons not directly concerned in the work. Diet-kitchens should be provided in the immediate neighborhood, whence the workmen may obtain, at small cost, soup, wine, and hot coffee. The physicians living in the arrondissement are to be instructed to report at once to the proper authorities any case of typhoid or malarial fever occurring among the laborers. Finally, a commission is to be appointed to see that these measures are properly carried out, and to establish new regulations as emergency may arise.

Hysterical Sleep.—Greatly prolonged sleep is one of the rarer phenomena of hysteria and pertains to the category of hystero-epilepsy, in which sleep predominates over the convulsive symptoms. Charcot recently had a case in which sleep continued for fifty-four days, and was followed by two days of restlessness accompanied by hallucinations. There was no difficulty in feeding the patient, as reflex movements of deglutition occurred whenever anything was placed in the mouth. The urine and fæces were passed involuntarily. The patient awoke spontaneously and had no recollection of her long slumber.

The Society of German Naturalists and Physicians.—On the occasion of the recent annual meeting of this association the *Deutsche Medicinische Central-Zeitung* recalled the fact that the first meeting was held in 1828, under the presidency of Alexander von Humboldt, and among those present were Gauss, Metscherlich, Berzelius, and Dieffenbach. The number of members was then 458, and now it is about four thousand.

A Sanitarian's Argument against Free-Trade.—Dr. Weymott Tidy, of England, shows that while the population of England and Wales is steadily increasing, the agricultural products, owing to foreign competition, are diminishing, until England now only raises one-half its own food. Dr. Tidy claims it to be an unhealthy condition when a nation cannot maintain itself.

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Original Articles.

THE PRESENT STATUS OF BACTERIAL PATHOLOGY, AND ITS RELATION TO THERAPEUTICS.[1]

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BOSTON.

To those who have made the progress of medicine a study during the past years, the observation of the changes which have occurred in the many departments of this most comprehensive science must have afforded material for much reflection, and no less for astonishment. In some avenues of medical research the entire conception of the facts on which our knowledge was supposed to rest has been reformed and extensively changed. New and distinct branches of special practice have been established; different modes of treatment have been introduced; and as the reason of these various changes, and the most important of all of them, is the fact that the great foundation of medical science—pathology—has recently assumed a degree of importance and practical interest never before attached to it. These changes commenced with the introduction of the more careful methods accompanying the perfection of the microscope, and its introduction and application to the study of the organic, or elementary, features associated with the various diseased processes.

Following this epoch in the recent history of medicine was a marked variation in the conception of the nature of the diseased conditions of the human system, and, with the sharpened acumen of genuine enthusiasm, hundreds of zealous laborers began their investigations in the enlightened realms of medicine. This era of the history of our profession was the period most calculated to bring out the highest and best which the knowledge and the experience of the past, and the newly discovered methods of study belonging to the present were able jointly to produce. It was the accumulation of these fortuitous conditions and the existence of these favorable surroundings which has given to us a host of those who have become illustrious in the recent annals of our science. With the results of the united labors of such an army of leaders have been associated a gradual variation in the methods of study, and in the views which obtain of the nature and character of the processes which are observed in the human body in that condition of the economy which is produced by the disturbance of its normal functions in the way of disease.

The general tendency of medical thought has been toward the discovery of some tangible *Wesen* of disease, something in the shape of a *materies morbi*, though in a sense somewhat different from that entertained by the earliest disciples of pathology, and consisting in a more precise study of the features of individual diseases, and the careful observation of their relations one toward another, which has made possible a more thorough analysis of the phenomena attending their course; and this has afforded the means for the acquirement of a greater degree of information and more extended knowledge than we formerly possessed, as to their origin, their nature, and their result upon the tissues and structures of the body.

The researches, carried on during many years by devoted workers in the paths of science, has had its reward in a long list of valuable discoveries, which have added much to the existing fund of knowledge, and have materially aided our labors for the relief of human suffering and the healing of disease.

Among the most important, as well as the most recent, advances in medical science must be classed the establishment, upon a firm and unshaken foundation, of the specific and infectious nature of a large class of diseases which were formerly supposed to occupy an entirely different position in their relation to the patient affected and to his surroundings. The group of maladies now considered was formerly believed, without exception, to depend upon some indefinable constitutional taint, or some predisposition of unknown character, or upon dyscrasia, or upon some other equally indefinite and unsatisfactory foundation. In all, or nearly all, of this large collection of morbid processes there has been found to exist a coincident development of a low form of organic life, of bacterial nature, which, it is claimed, is always present, in some definite and recognizable form, in each of the various diseases of this group.

The views here alluded to were first looked upon with some degree of doubt by the majority of practitioners; but the prolonged and careful observation of many competent men, of all countries and of undoubted integrity, has secured, even in the brief period which has elapsed since the new pathology was announced, a large and steadily increasing number of adherents, until there are now comparatively few physicians who hesitate to accept the bacterial origin of many of the severer forms of constitutional disease.

The value of the bacterial element in the production of the diseases above mentioned has been so thoroughly recognized that already, in most of the larger schools of medical instruction, the study of this department of medical science is encouraged by the establishment of courses in bacteriology, which are considered of great importance, ranking with those of many of the special branches embraced in the study of medicine. More than one renowned teacher has increased his former fame by the discovery of new and unknown organisms, belonging to the group of disease-producing germs, until the array of the recognized forms of bacteria has attained formidable if not terrifying proportions.

The conscientious medical practitioner is now expected to subject every secretion of the human frame to microscopic and chemical analysis; he must make cultures in doubtful cases, and propagate the successive products, and is taught to base his opinions, in diagnosis at least, largely on the results of the investigations so made.

In the present state of our science, and in view of the great importance which the new views of the pathological value of the germ-forms have attained, it is time that we ask ourselves the questions, which should be uppermost in the mind of every upright practitioner of the healing art, What has the discovery of the bacterial forms added to our knowledge of the treatment of disease? What has it done to increase our power of combating the processes which destroy life in these maladies? What has it done to enrich our means of preserving the health of those not affected, and to restore those already attacked with bacterial disorders?

[1] Read at the Annual Meeting of the Massachusetts Medical Society, June, 1886.

It is perhaps too early to perceive the entire bearing of this great question in all its relations upon the life and practice of the physician, as exemplified in his every-day rounds of ceaseless and wearing activity. The course of medical progress has ever been uneven, one theory or belief ever outstripping its neighbor, so that medicine is perhaps the most uneven and ill-balanced of all the sciences taught or studied by man. Each epoch of its history has presented the curious spectacle of an unequal preponderance of one or the other department of its great complexity of details, leaving a degree of nakedness in other directions which is both incongruous and unfortunate.

Thus, in our own day, the progress of the medical sciences has been unsymmetrical and irregular. The advances of histological research, both in the study of the normal as well as in that of pathological conditions, have been so rapid that other and no less important departments have been left far behind for the time being.

Thus, while we have been made acquainted with the sources and the nature of diseases to a degree never before approached, we have as yet realized no corresponding progress in the all-important department of therapeutics, nor, indeed, in the better rational treatment of the new conditions with which we have become familiar.

We know, indeed, much which was only a short time ago unknown; we have made certain majestic strides in the detection and classification of pathological conditions; and this is all to be valued at its true worth, and is an indication of the progress which should characterize our science; but, unfortunately, we do not yet know how to benefit our patients, except indirectly, by the utilization of the newly acquired information. Undoubtedly we are in a position to secure better results in the treatment of disease than formerly, but the improvement in this respect is as yet in no way commensurate with the augmented demands of medical science. We must with humiliation confess that the possibilities of our art have not been so enlarged as the demands of the position occupied by the medical profession to-day require. All will admit that thus far the advances which have followed as the result of the recent studies of germ-diseases have been principally in the direction of the better application of surgical measures, and the avoidance or the prevention of the accidents attending this great department of the healing art. Thus far the tendency has been toward the exercise of more uniform and thorough cleanliness in the practice of surgery. This has taken a definite form under the general outline of the antiseptic system of operation and treatment, and is only of benefit in that it establishes innocent surroundings, and aids the early healing of surgical lesions by mechanically or chemically preventing the access of the germs of septic processes.

The benefit of bacterial pathology has thus far, therefore, accrued to surgery rather than to medicine. The entire treatment of the so-called "germ-diseases" partakes thus far of the nature of antidotal rather than of curative character; it is preventive rather than therapeutic. The practical therapeutics of the group of bacterial diseases has not yet been developed.

The great defect in the present condition of medicine is the absence of an adequate form of general treatment for the conditions universally recognized as existing in the group of maladies known as "germ-diseases." Attempts have been made to supply the means of such treatment, but thus far they have been entirely unsatisfactory. We have tried to carry our medicines directly to the seat of the organism, the presence of which is recognized as the only sure indication of the disease; but we have no means at present of bringing the remedy into that relation with the germs which is necessary for its exterminating action. All the measures thus far advocated as curative in bacillary diseases are efficacious only by means of some action which requires the positive contact of the remedy with t e organisms. This action is essentially of a mechanical or a chemical nature, and as such cannot take place without material contact of the agent employed with the body to be affected.

This is the one indispensable condition, and from the nature of the case the means which may be employed are much restricted. Many desirable agents are inapplicable to this purpose on account of their action on the human economy, by which its integrity might be injuriously affected. As yet we have no knowledge of a mode of treatment appropriate to the demands of the clinical conditions. We do not yet know an efficient germicide which it is safe to employ in the internal treatment of these diseases; that is, we have thus far no agent for the extermination of the disease-germs which is not also dangerous to the human system. *The ideal antiseptic* or *germicide is not yet in our possession.* We have not yet acquired the *best* which we have reason to expect in the way of medicinal treatment pertaining to this class of affections. The recent discoveries in therapeutical chemistry lead us to hope that a more suitable mode of combating the septic processes of the body will be discovered than we have yet become acquainted with.

The possibility of the cultivation of septic germs under conditions which insure the growth of the organism to a development similar to that which takes place in the body, gives to the experimental student the means of subjecting the germs to the action of various agents for their destruction, without being obliged to run the serious risk of injuring the human organism by the introduction of such agents into the animal economy. We have in this way been furnished with a number of efficient agents for the destruction of germ-life; but thus far no means has been discovered by which the tissues of the human body may be freed from the presence of these organisms, without, at the same time, being subjected to some dangerous action from the remedy employed. We may kill all forms of organic germ-life by means of sulphurous acid gas; but the human system would be also injured by the same means. We may subject the germs to the action of chlorine, with the certainty that they will inevitably be killed; but no animal organism can possibly endure the test. We may employ the solution of carbolic acid, or that of the mercuric bichloride, for the external treatment of wounds; but we always run a certain amount of danger, from the facility with which these powerful agents act as poisons to the system. We may combat some of the effects of certain bacterial forms by means of large doses of quinine; but we do not know how it acts, nor how to estimate its usefulness in septic diseases. We may employ the salicylates of the alkaline metals to diminish the virulence of some of the symptoms accompanying certain of the infective or other dangerous diseases, especially those which are supposed to be due to the formation of some pathological ferment in the animal system; but we often inaugurate a new train of symptoms scarcely less dangerous than those we seek to obviate, and are obliged to withhold the remedy.

In short, we possess absolutely no knowledge of any mode of treatment which corresponds with the demands of the advanced pathology of the present day, and we have but a scanty and unsatisfactory power of controlling the manifestations of disease, as revealed by our new light; so that the actual condition of medical science is not yet practically benefited by the great discoveries of the later years. We have as yet no adequate and safe means to obviate the effects of a known and recognizable cause; nor have the advances of pathological science thus far been of great advantage to the sick, except in indirect ways. We have, indeed, learned that the temperature of the surrounding media has a decided influence on the vitality of the various forms of germ-life, and we can experimentally control their activity in this way. The effects of certain atmospheric constituents has seemed to possess the power of diminishing the vitality of germinal forms, and to effect their extermination. The improvement of the general condition which is often realized in

high altitudes and in a rarefied atmosphere is doubtless effective in the destruction of low forms of bacterial life. The more wholesome ideas of personal hygiene, of the necessity of pure air in our houses, of the need of larger individual air-space in our hospitals, of the propriety of a more thorough isolation or seclusion of the sick, so as to diminish the chance of contamination of those yet healthy; the greater care in the treatment of known infectious diseases, such as scarlet fever, diphtheria, typhoid, and other disorders of the same class, cannot but be of the most salutary character. This is, however, all secondary in importance to the active and systematic treatment of an acute disorder.

The advantages thus far obtained must be classed as hygienic rather than medicinal. This knowledge, incomplete and defective as it is, is of inestimable value, as it has enabled us to perceive the direction in which our energies must be exerted to still further benefit the race in the diminution of infectious diseases. We can now better understand why the curative properties of a health-resort may deteriorate with the lapse of time and the populousness of visitors, if we conceive that the ground, water, and perhaps the atmosphere, may gradually become impregnated with the germs of pulmonary or other serious diseases. We can understand how that class of diseases called hereditary may be *communicated* from one generation to another; and how household and local epidemics may be originated and propagated. This is sufficient occasion for gratification; but it is not sufficient for the realization of the full benefit to be ultimately derived from bacterial pathology, and here, unfortunately, our knowledge reaches its present bounds.

If we take the germ of tubercle, as the most important member of the present known forms of bacilli, we find that the existing state of our knowledge is about as follows: We have in the bacillus tuberculosis a definite form of bacillary growth, which is found associated with the rational and physical signs of tuberculosis, and is believed to constitute the essential or specific element of this particular disease. In short, it is not too much to say that, according to the views of the most advanced pathologists of the day, the existence of the bacillus of tuberculosis alone constitutes tubercle, in distinction from other pathological growths or degenerations. This theory, I think I may say, is now fully accepted by all intelligent men, and I assent in full to its conditions. Before the discovery of this organism the subject of tubercular diseases had been a maze of speculation and uncertainty. In the light of the bacillary pathology this, and in connection with it many obscure points in the clinical history of allied diseases, are either explained or at least greatly simplified.

The radical fact, however, still exists, that all the researches in the bacillary origin of diseases have not yet led to any form of treatment for their relief which is in any way consonant with the importance of the case, or, in any adequate measure, meets its requirements. The existence of bacilli is still only a luxury in diagnosis, not an indication in the choice of treatment. The known existence of the bacillus tuberculosis has not, then, added any material benefit to the methods of treatment in that disease to what was known previous to its demonstration. There has, doubtless, great good come from the extensive researches to which the discovery of the various germs occurring in or accompanying the bacillary diseases have given rise; but thus far we have not attained the greatest and most valuable result—the indications for a better mode of treatment. The great value of bacillary examination, and the fatal import of their detection, have suffered a material and wholesome diminution from the repeated experience that patients with unquestioned bacillary development in their bodies have quite recovered from all symptoms of the bacillary disease, and have acquired good health again.

The greatest claim which has been advanced for the bacillus of tubercle therefore falls at once to the ground; for the chief importance which at first attached to the presence of this organism was as an aid to diagnosis, and a positive indication in prognosis in this affection. The bacillus has been proved to not only diminish, but to disappear entirely in cases in which it was undoubtedly present. The discovery of the bacillus was unquestionably an advantage for purposes of diagnosis, but the value to be derived from the detection of this organism was greatly overestimated.

The treatment which has thus far been advocated consists only in the extermination of these low forms of life, by means of the destroying action of some agent capable of annihilating them. The human organism is so delicate that many, and indeed most, of these means cannot be safely employed. The measures adopted to drive out the unwelcome guest would surely kill the unwilling host. We do not yet know how to bring our remedies into all the parts of the body in which it is desirable that they should operate in order to expel the organisms of disease. Thus we are left in nearly the same position as before the discovery of the bacillus, as to the cause and substance of the disease.

This is not, however, altogether true in regard to prophylaxis, and especially in relation to that element of treatment which may be generally denominated "hygiene." We have become acquainted with the character of a new organism, we have learned somewhat its habits, its mode of growth, its conditions of propagation, and we have ascertained some of the conditions under which these organisms will not thrive, or under which their development is hindered or quite prevented. Thus we know that a certain elevation of the temperature is essential to the development of certain disease-germs, and we at once conclude that if the temperature can be kept below the danger-point, the development of that particular germ may be prevented. We can thus account for the benefit accruing from removal to a favorable location, and this also in part explains how a particular place may become a sanitarium for persons afflicted with certain classes of disease. The amount of certain gaseous constituents of the atmosphere is thought to have a determining influence on the development and growth of certain forms of germ-life, and this may retard their spread in an organism in which they have already gained a foothold. They may be supposed to live a long time under unfavorable conditions, and thus we see the patients who are benefited by a temporary stay in a health-resort, on returning to their homes, immediately fall victims to renewed attacks of the old enemy. We may in this way also understand how a health-resort may deteriorate after a time, when the soil and air become impregnated with the constantly increasing amounts of the diseased material brought to it by large numbers of invalids, until the entire surroundings may become charged with the virus of disease, and the locality is no longer a health-resort. This much we may claim to have gained from the study of germ-pathology, and the value of this study none will deny; but our misfortune is, that this is *all* we know at present about the treatment of the tubercle bacillus or tuberculosis, in the present signification of the word; and all this we were accustomed to practically employ before the existence of the bacillus had been proved. We sent our patients to the same health-resorts before the demonstration of the bacillus that we now recommend, and we employed the same general treatment which we now prescribe, and we attained practically the same, or at least similar results. True, some enthusiastic practitioners have launched upon the profession a variety of methods for the exterminative treatment of all bacillary diseases, and we have the announcement of intra-pulmonary antiseptic injections, of various inhalations, and of a host of other attempts to hunt out the wily bacillus in its lair in the pulmonary parenchyma, or in other remote tissues of the body. We have methods recommended, and sometimes warranted, to permeate the residual air, and thus turn the interior of the lung into a reservoir of antiseptic vapors, but the proof

of the actual accomplishment of these objects is yet to be demonstrated. What is true of tuberculosis also holds good in regard to other bacterial disorders.

The most imperative need of the day in bacterial pathology is the discovery of some means whereby the germs which are proved to exist in certain diseases may be acted upon in the tissues of the body by some agent which may cause them to disappear, and at the same time the remedy should not injuriously affect the parts locally or the system at large. When we have the power to thus influence the development of germ-life, and can reach these organisms in the organs and structures of the animal body, we may hope to properly utilize the knowledge we now possess of the influence exerted upon the animal economy by the various forms of bacterial life.

It is, however, to synthetical chemistry that we must look for the fulfilment of this earnest hope. The resources of our present remedial measures are now known with a fair degree of accuracy, and it is not probable that we shall acquire the desired relief from any means at present in our possession.

The requirements of bacterial therapeutics are such that none of the known remedial means would serve the double purpose of destroying the bacteria and leaving the human organism uninjured. The character of the agents thus far known to possess the properties of a germicide are those of a chemical incompatibility, or of a corrosive or otherwise local and individual character. With all our knowledge, we yet know of no way to cause the disappearance of bacillary forms except by the actual and injurious contact of the remedy employed. This method of treatment is necessarily restricted to close range, and cannot be employed as treatment for the internal conditions arising from, or associated with, the development of bacillary diseases. It is not, however, necessary to give up the hope that the startling discoveries of the last years may not yet be crowned by the greatest of them all—the discovery of some means of safely combating the various bacillary organisms in the hidden and inaccessible recesses of the body. We need not yet take the gloomy view at present held by an eminent practitioner who recently stated that the discoveries of the bacillary forms constitute an interesting but profitless epoch in medical science, to which he gave no heed, except to regret it, inasmuch as it only serves to show our inability to consider medicine a satisfactory science, either in the way of successful study or logical research. He further stated that he should take no heed of the new pathology until he were furnished with some remedy which would exterminate the bacilli without at the same time killing the patient.

The diagnosis in questionable cases will doubtless sometimes depend on the presence or absence of the special bacillus. The praxis has already adopted this method of fortifying diagnosis. This in itself is a great benefit to the science of medicine ; but it is to be hoped that other and more important benefits will accrue from the discovery of some means of eliminating the germs of disease, by which the severity of the malady may be mitigated. Judging from the results of experiments thus far made, there is not a favorable prospect of immediate success in the search for means to directly influence the development of pathogenic organisms in the living body of the patient.

All the greater importance is therefore to be laid on the prophylatic treatment of this class of diseases. This should consist, in part at least, in the careful destruction of the bacilli by the strenuous disinfection of all objects which have been in contact with the patient, or have been in any way soiled by the secretions or excretions from the disease. Measures should be also taken to protect healthy individuals from any contact with the emanations from the sick. Any measure of protection which does not insure the destruction of the bacilli is useless, as it fails to accomplish the only radical and necessary object of prophylaxis. The sick should not be permitted to mingle with those who are well, but should be secluded as far as practicable in the case.

To the *prevention* of bacterial disorders, therefore, rather than to their cure, should our present efforts be directed. We do not know how to affect either the progress of the disease or to cause its subsidence. We do know, however, in some degree, how to mitigate its severity, and we have learned that under favorable conditions we may sometimes hope to see the patient recover from all traces of the bacillary affection.

Let us trust that the efforts of the great number of arduous laborers in the domain of experimental pathology may yet be crowned by the discovery of the means of controlling germ development in the human body, and thus complete and finish one of the grandest labors in medical science which the world has ever looked upon.

When we possess the means of preventing bacterial growth and dissemination, we have the power to stem the spread of epidemic diseases which now so often fill nations and continents with terror. Cholera, tuberculosis, small-pox, diphtheria, and a host of other maladies will then be susceptible of rational and restrictive treatment, and the sum of human woes materially diminished. Surely nothing could be more attractive to the mind than the hope of achieving this priceless boon for humanity. From the triumphs of the past we may augur the future. We are able to confer the blessed gift of anæsthesia upon the agonies of operation or injury, and may we not hope that the earth is yet to be blessed with the means of controlling epidemics? The traditions of our science are full of examples which should give us renewed faith in its resources. We are now face to face with an unsolved problem of the greatest importance. Let us each endeavor to do what in us lies to aid in its solution.

THE TREATMENT OF CONSUMPTION BY INTRA-PULMONARY INJECTIONS—REPORT OF A CASE OF RECOVERY.[1]

By JOHN BLAKE WHITE, M.D.,

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Local applications are naturally regarded efficacious in all forms of structural diseases whenever they can be practised.

In respect to the lungs, the experiments which have been made of late years not only demonstrate conclusively the practicability of local medication in diseased conditions of these organs, but also that decided benefit oftentimes results from such treatment. I need not comment upon the unsatisfactory effects of the methods of treatment at our disposal in the past, for the relief of patients suffering from phthisis, for, alas ! the mortality reports speak more eloquently than words, affording too frequent and far too numerous examples of the destructive march of this justly dreaded destroyer of human life, as well as the impotency of our noble art to arrest its progress.

In November, 1885, I instituted a judicious trial of intra-pulmonary injections in some cases of advanced consumption while on duty as visiting physician to the Charity Hospital, where a large number of such cases were congregated. After a careful observation of the results of these injections I reported my experiments in The Medical Record, May 22, 1886. Among the cases at the time was a private patient of my friend Dr. Ira B. Read, who has kept the case under observation since the treatment was commenced to the present time, and who, I have no doubt, will corroborate what I shall say concerning the benefit which has followed the treatment. So far as the method is concerned, I can assure

[1] Read before the Yorkville Medical Society, September 30, 1886.

you that my confidence in it increases with my experience, and the results compel me to accord to it an established position among the legitimate means at our command of battling against this formidable foe.

The cough, expectoration, and local soreness about the cavity were remarkably controlled by the intra-pulmonary injections. The debilitating night-sweats were always checked, while the patients undeniably improved in flesh and strength during the continuance of the treatment. When much dyspnœa was experienced the injections exercised a soothing influence upon the respiratory centres, while the appetite invariably received a material stimulus.

The physical condition of the cavity is changed; the walls become dry; the secretion is greatly lessened. In place of the loud, gurgling crepitation there is heard the large crepitation, which in turn is replaced by finer crepitation, until, after several administrations of the carbolized iodine by intra-pulmonary injection, all moist râles disappear, and a pronounced "click" is detected. I regard the presence of the "click" a favorable indication, for it is only present when the necrotic process has been arrested, and denotes a marked tendency to inspissation of the cavity.

In the case herewith reported this "click" was very noticeable after the fifth intra-pulmonary injection, and a dry, cavernous sound in both expiration and inspiration was present later.

The injections have been usually administered once each week, and I have found that the lung manifested a greater degree of tolerance when the intervals were not prolonged and the operation was regularly performed. Some patients cough considerably after the first pulmonary injections, who manifest no irritation whatever after subsequent operations. The respiration usually becomes more easy and regular, while all the most troublesome symptoms are soon relieved.

I have been frequently asked what I expected to accomplish by this method of treatment, and my reply has been, *both local and general improvement.*

I look for such a modification of the condition of the cavity itself as will tend to arrest the formation of pus and encourage its cicatrization and contraction.

Some eminent authorities object that cavities do not contract, but my experience in this particular satisfies me that such does take place. The resistance which the needle encounters on entering the lung, after several injections have been practised, cannot be solely due to the development of fibro-cellular tissue as a result of the treatment, but is, in part at least, occasioned by condensed tissue, the result of cicatrization with contraction. The auscultatory and percussion sounds also denote when contraction has taken place. The resonance on percussion is less diffused over contracted cavities, and is easily demonstrated.

A prominent physician interested in this method of treatment of phthisis did not see how the pus in the cavity was disposed of, though he thought it might prevent the further formation of pus. Fortunately, nature provides the means of ridding the cavity of exuded pus by cough and expectoration, both of which cease when there is no longer cause for either.

When carbolized iodine is used for intra-cavernous injections, I expect, by the well-known influence of iodine, to disinfect the cavity and exert within it a remedial, alterative, and resolvent effect.

Taken internally, it is said to excite the appetite and give tone to the digestion; but as it irritates the stomach it cannot ordinarily be taken in this way. Introduced into the system by intra-pulmonary injections, its good effects are all realized, and without the least risk of disturbing the digestive functions. Iodine sometimes exercises a remarkable emmenagogue effect, hence its great value in phthisis is not infrequently realized by restoring the uterine functions in young female consumptives, who always suffer from amenorrhœa. The sooner intra-pulmonary injections can be administered in such cases after apicial softening has positively taken place, the greater will be the probability of a return of menstruation, and an improvement of the lung condition proportionately increased.

The method which I have adopted of administering the lung injections is the following: If the patient is much debilitated, a stimulant is administered at least fifteen minutes before the operation. He is then directed to assume the recumbent position, with the head and shoulders slightly raised, and resting upon a hard bolster or pillow. This position is preferred to the sitting posture, as a better resistance is afforded posteriorly, and the patient cannot avoid the thrust of the needle as easily as the sitting posture would permit. Such an attempt on the part of the patient would be difficult to resist, and its execution might cause the operator to introduce the needle in a different place from that intended, if it did not materially embarrass its skilful and painless entrance into the diseased portion of the lung.

The syringe and needle should both be carefully cleansed with a solution of carbolic acid, and the pulmonary fluid warmed to at least one hundred degrees Fahrenheit.

After determining by careful auscultation and percussion the depth to which the needle should be inserted to reach the cavity, the little rubber guard, which is a useful adjustment to the needles made by Tiemann & Co., is set for the purpose of indicating and regulating the depth of penetration required. The patient is then directed to turn the head and face to the side opposite the one to be operated on, and to take two or three deep inspirations slowly; at the second or third inspiration, when the lung is well inflated, the needle, with syringe attached, is pushed through the intercostal space selected, with a quick, firm pressure, at right angles with the chest-wall, until the depth of penetration in accordance with the fixed rubber guide is attained. The fluid in the syringe is then slowly injected, and the needle quickly withdrawn. A small piece of adhesive plaster is placed usually over the external puncture, though it is not abolutely necessary. A knowledge of the relation of the first rib to the clavicle, and its direction, is necessary to avoid striking it with the needle. The first or second intercostal space, anteriorly, is generally selected, in accordance with the size and location of the cavity, and the point of penetration of the needle is usually in the nipple line or to its outer border.

If the needle is inserted within the nipple line, or too near the border of the sternum, there is danger of wounding some branch of the intercostal or internal mammary vessels and nerves. This precaution is more necessary on the right side than on the left, by reason of slight difference of distribution of these several vessels and nerves. Furthermore, in order to avoid the danger of shock, paroxysmal coughing, or hemorrhage, the fluid should be slowly injected.

On no account should the needle be inserted between the clavicle and first rib, as there would be danger of wounding the subclavian vessels, and on the left side the thoracic duct in addition.

Although I have always observed the strictest care when operating on the right side, it has been sometimes impossible to avoid troublesome paroxysmal cough, dyspnœa, and fibrinous expectoration. In one case cyanosis, with unilateral spasm, succeeded the operation on the right side, and, though apparently serious for a short time, nevertheless gradually abated without further trouble after several inhalations of a few drops of chloroform. I have not observed such phenomena when the injection has been confined to the left pulmonary apex, and I believe the chances of such occurrences would be lessened by inserting the needle a little outside the nipple line when operating on the right side. Should severe paroxysms of cough follow the operation at any time, and tend to be prolonged, I would advise the administration of a few

drops of chloroform by inhalation, which will generally suffice to arrest the paroxysm.

I have used and found beneficial the inhalation of steam, medicated with a drachm or two of laudanum. Such treatment, however, is rarely required. It has only been necessary to resort to some such measure with two patients, both of whom manifested serious laryngeal complications, the presence of which alone seemed to excite and aggravate coughing. Every care should be exercised to avoid the superficial veins, and approximate as much as possible the lower border of the intercostal space, as the artery, you will remember, courses along the lower inner border of the rib.

For twelve or twenty-four hours after each pulmonary injection the patient should be kept in bed, free from all excitement, as any undue exertion of either a mental or physical character would tend to increase the force of the circulation and possibly precipitate hemorrhage.

I know that the operation has been performed and the patient permitted to walk home, but I feel obliged to advise against such practice.

An understanding as to what takes place at the point of puncture in the lung substance is clearly explained by the experiments of Eugene Frankel (*Deutsche Medicin. Wochenschrift*, 1882, No. 4, p. 51) upon rabbits, and to which my attention was kindly called by my friend Dr. Edward Frankel, of this city. Solutions were employed of tartrate of alumina, two to five per cent.; carbolic acid, one to five per cent.; boracic acid, four per cent.; iodoform, five per cent. The above solutions were made with the finely triturated substances in olive oil, and parenchymatous injections of one gramme per dose, once to six times daily, administered.

He states that no especial reaction was manifested on the part of the animals; in a few of the cases there was slight cough during the injections.

The autopsies revealed a circumscribed croupous bronchitis. At later periods the pathological changes due to the trauma in the lungs consisted of slight hemorrhages into the pulmonary parenchyma, but confined to the point of puncture and its immediate neighborhood, which undergo the customary changes, with pigmentary deposit, and finally disappear entirely. There were also disseminated deposits, varying in size from a hemp-seed to a cherry-pit, situated sometimes on the surface, at others in the deeper layers of the parenchyma.

These deposits are at first of a blackish- or brownish-red color, and at a later period assume a reddish-gray or pale grayish-yellow color. When iodoform had been injected the deposits were of a sulphurous yellow hue.

On microscopic examination they presented a massive desquamation of alveolar epithelium. These deposits, he further says, disappear either by absorption or cicatrices of about a millimetre in thickness, in which loose connective tissue replaces the pulmonary parenchyma at the end of six weeks after the injection. Such important changes occurring, the advisability of keeping the patient quiet after each intra-pulmonary injection, for at least a few hours, will be apparent to you all.

Frankel remarked as a result of his experiments that he believed the human pulmonary substance would prove receptive of antiseptic injections, the technical difficulties of the operation being slight.

He thinks the injections might be practised with benefit in catarrhs of the apex or apex infiltrations, and in certain cases of putrid bronchitis or pulmonary gangrene.

My practice is to commence with ten or fifteen minims of the carbolized iodine solution, and increase the amount five minims each week until forty minims are reached, which are then injected weekly or fortnightly, as the exigencies of the case require, until local indications for continuance of the treatment are no longer present.

While the patient is under this treatment we should not lose sight of the necessity for such general remedies as are known to promote digestion and assimilation, as well as tend to help store up fat. Disagreeable dosing, as well as too much dosing, should be studiously avoided.

An example of the value of intra-pulmonary injections is afforded by the following case of long-standing consumption: The patient presented, without exaggeration, a hopeless condition of the left lung when intra-pulmonary treatment was commenced. I have no doubt that without the benefit afforded by this method of treatment she would have rapidly declined. Dr. Read, whose patient she was, and Dr. Morrill, who visited the patient with us on several occasions, will undoubtedly corroborate what I have said.

A better idea can be obtained of the patient's condition, and the result of the treatment, if I give you a detailed history of the case, with the notes which I took concerning the patient's progress while under treatment.

Mrs. K——, patient of Dr. Ira B. Read, aged forty-five, married. The mother of several children, most of whom are living. Gives no family history of phthisis. On March 11, 1879, she swallowed a fragment of bone, which lodged, she thinks, in the œsophagus. Many attempts were made to dislodge the bone, without avail, when the services of a physician were sought. He attempted to push it down with a spoon, but after unsuccessful trials to remove it, finally abandoned further efforts to do so. A short time after this she began to experience severe pain in the throat, on the left side, and slight cough supervened.

Another physician was consulted, who, after three months' treatment, gave up the case as hopeless, but advised her to take cod-liver oil, which she did.

In the meantime she experienced great general debility, was troubled with night-sweats, persistent cough, and began to expectorate blood. About July, 1880, she consulted a third physician, under whose advisement she improved, until the following winter, when she was again troubled with night-sweats and hæmoptysis.

These symptoms after a while ameliorated, but again returned during 1882. In April of this year, after a severe paroxysm of coughing, she dislodged and expectorated the piece of bone. I will herewith exhibit the fragment, and you will see that from its size and shape it probably never lodged below the glottis. It is too large a fragment to have passed beyond the rima glottidis.

After this she continued to be alternately better and worse until the spring of 1884. At this time her physician discontinued his visits, and informed her husband that she could not possibly survive but a short time. She then called in Dr. Read, under whose care she remained up to the present time. Dr. Read advised her to test the value of intra-pulmonary injections as the only remaining chance of saving her life. This she consented to do, and resulted in my visiting the patient, with Drs. Read and Morrill, May 1, 1886.

For the past five years she had been coughing incessantly, and the expectoration increasing. At the time of our first visit she complained of severe pain in the throat and upper portion of left lung, for relief of which she had become accustomed to take large doses of morphine. Her expectoration amounted to sixteen ounces in twenty-four hours, and was of a dirty green color and fetid odor. She was having regular profuse night-sweats, which were partly controlled by atropine. Emaciation was manifest, and her finger-nails presented the characteristic clubbed appearance so generally observed in consumptive patients. A large cavity was easily made out in the upper part of left lung, where auscultation revealed loud gurgling crepitation. Infra-clavicular flattening was very marked over left apex. The syringe and needle having been, as usual, rendered aseptic, I injected twenty minims of carbolized iodine, previously warmed to 100° F., into the upper part of the cavity, through the second left intercostal space, on a line with the nipple. The operation was followed by no cough or expectoration, and the

patient complained of no pain or irritation whatever. The respirations were as regular and steady as was possible under the circumstances, and the pulse evidenced slight excitement for a short time only.

May 5th.—The following was received from Dr. Read: "Our patient is doing well. She has coughed but very little, and raised but little. She did not sweat any for two nights. She feels very hopeful and does not dread our visit next Saturday. I sincerely trust she may be permanently benefited." I quote Dr. Read's letter that the very satisfactory character of the report may not be attributed to my enthusiasm and confidence in the treatment. I ask you to note the marked and immediate improvement so short a time after the very first injection.

May 8th.—Visited patient with Drs. Read and Morrill. Her general condition appeared much improved. She seemed cheerful and hopeful. Her tongue was naturally clean and moist. Voice clear and stronger. Temperature, sublingual, 99.5°; pulse, 90; respiration, 20.

Patient declared that since the last in ection she has taken out-door exercise with ease and felt benefit therefrom. Feels much more inclination to exercise than she did. The expectoration has been decidedly lessened, and the sputa is far more viscid in character.

Upon auscultation the loud, moist crepitation was found less pronounced, the cavity presented indications of cicatrization, and superiorly the walls were dry and hardened. At the dependent portion of the cavity the gurgling râles were materially lessened, clearly demonstrating that expectoration had removed most of the purulent exudation, while the injections had arrested the suppurative process. Respiration was easy and regular in the portions of the lung surrounding the excavation. Thirty minims of carbolized iodine were again injected into the cavity, a little to the left of the previous point of insertion, and was not followed by any cough or other evidence of irritation whatever. No soreness or pain of any sort was complained of, and there was no expectoration or cough up to the time of our departure. The first and second injections were exceedingly satisfactory in the perfect freedom from any evidence of local irritation.

May 13th, A.M.—I received a note from Dr. Read as follows: "Our patient is doing well beyond expectation. Better appetite and spirits. I think she feels very hopeful." 4.30 P.M., Dr. Morrill and I met Dr. Read, according to appointment, and we found the patient in a very cheerful mood. She stated that she has had no night-sweat since May 8th. Has been exercising out-doors every day that the weather permitted, and without feeling fatigued in consequence. She says she feels stronger. Coughs very little, and expectoration does not exceed two ounces in twenty-four hours, while it is more consistent in character. Her appetite has greatly improved. Has had a fancy for meat, which she ate with relish, though prior to the intra-pulmonary injections she decidedly disliked animal food.

On auscultation the gurgling crepitation had ceased. Moist râles were heard at left apex, but less distinctly and less diffused. The patient's general condition presented undoubted evidences of improvement. Her skin felt less relaxed and manifested more natural firmness and temperature. Her respirations were regular and performed without pain.

The third injection of thirty minims of carbolized iodine was administered in the first intercostal space, on a line with the left nipple. A slight oozing of blood occurred externally when the needle was withdrawn, but was immediately checked by digital pressure. This was doubtless from some superficial vessel. The injection was followed by no cough, pain, nor evidence of irritation whatever.

Tuesday, May 18th.—Dr. Read wrote me that he had seen Mrs. K—— in the morning, and stated that steady improvement continued. "Very little cough or expectoration since last injection. Scarcely any râles detected. None of a coarse nature. Appetite fair. Walked four blocks and back yesterday. She feels much better, and I am encouraged." This report was penned the fourth day after the third injection, and the seventeenth day of treatment.

Friday, May 21st, P.M.—Visited patient with Drs. Read and Morrill, and found her out walking. She said she seldom coughed. We were struck with her strength and energy. Instead of the pale, emaciated features she once presented, her complexion was of a more healthy hue, and expression cheerful. Her expectoration is reduced to one ounce in twenty-four hours. No gurgling crepitation heard on auscultation, but in the place of it a dry, cavernous sound. Has had no return of night-sweats since May 8th, and sleeps well. Appetite continues good. Still takes regular out-door exercise without fatigue. Has not felt the least ill effect from the intra-pulmonary injections, but, on the contrary, declares that she is sensible of acquired strength since the very first injection was administered.

The patient having been fortified with a stimulant, as usual, and the pulmonary fluid warmed, thirty minims were injected through the first intercostal space, a little outside the nipple line. No cough followed, and no pain nor soreness was felt. Up to the time of our departure the patient had neither coughed nor expectorated since the injection was administered.

May 28th.—I met Dr. Read according to appointment. We found the patient out walking. She still manifested decided evidences of improved health. She assured us that she very seldom coughed; that her appetite continued good; that she felt better; had had no night-sweats, and very little expectoration. The sputa is less purulent and more mucoid in appearance. Over the site of the cavity a sharp "click" was heard on auscultation; not, however, with every act of inspiration.

The patient has so materially improved, and the physical condition of the cavity so much altered for the better, a continuance of weekly injections is not deemed necessary after this.

Injected thirty minims of the carbolized iodine through second intercostal space, and resulted in no cough or other evidence of irritation whatever. This constituted the fifth injection.

Both Dr. Read and I were impressed with the amount of chest expansion with each inspiration on the affected side. The respiratory murmur was somewhat restored over left apex, and tubular breathing established directly over the site of the cavity. This, together with the percussion notes obtained, I regarded as evidences of cicatrization and contraction of the cavity.

A very important result of the intra-pulmonary injections was the absence of fetor about the sputa, which condition was especially observed on the occasion of my first visit.

On June 2d Dr. Read wrote that he saw Mrs. K——, Sunday, May 30th, and also June 2d, on which two occasions she appeared in good health and spirits. She had very little cough, and only expectorated about two drachms of thick, viscid mucus.

June 11th, Dr. Read wrote: "Mrs. K—— is very much better; scarcely any cough or expectoration; there is a slight increase of mucous râles, and I think it would be best to administer another pulmonary injection. The patient has been to my office once, and down town on the elevated road once."

June 14, 1886.—Visited Mrs. K——with Drs. Read and Morrill. To describe the patient's condition would be but a repetition of what has already been said on the subject. Her progress toward health has been surprisingly rapid and sure. Although it is sixteen days since last injection, she has little cough and very little expectoration. Upon auscultation the respiration over the affected lung-space indicated remarkable improvement. Some more râles were observed than at last examination, but were less loud and diffused than formerly. There ap-

peared to be good expansion on the affected side, and she said she felt no soreness in the upper part of the lung. The pain in the throat and at apex of left lung, which used to be exceedingly severe, and for relief of which she took large doses of morphine regularly, has not returned since the intra-pulmonary injections were commenced, and she has altogether given up taking morphine.

The sixth intra-pulmonary injection was administered, of thirty minims of the carbolized iodine, and was not followed by pain, cough, or irritation of any sort. The patient assured us that she felt conscious of improvement and had little doubt of her ultimate recovery. She said, moreover, that she would submit to the treatment as long as it was deemed necessary for her to do so.

June 24th.—I administered the seventh intra-pulmonary injection of thirty-five minims of carbolized iodine. Drs. Read, J. L. Morrill, and W. T. Alexander were present. The patient's general improvement has continued. She now coughs very seldom, without expectoration. Some mucous râles were heard on auscultation over posterior aspect of left lung. Superiorly, respiratory murmur remarkably clear and almost wholly restored. The tubular breathing over apex, anteriorly, much modified. Percussion note muffled somewhat, but of good quality. No cough or other disturbance followed this injection.

July 10th.—Visited Mrs. K—— with Drs. Read and Morrill. On auscultation heard no râles whatever over affected lung, either anteriorly or posteriorly. A dry murmur was heard over region of former excavation upon expiration and inspiration, and an occasional "click" discerned. The lung capacity and chest expansion appeared admirable. The patient informed us that she had weighed herself two weeks after the treatment was begun, and in the succeeding six weeks had gained four pounds. Her appetite still continues excellent, and she feels inclined to exercise daily. I administered the eighth intra-pulmonary injection of thirty-five minims of carbolized iodine without exciting any cough or other noticeable reaction.

The physical condition of the patient's lung having assumed so nearly its healthy normal state, the injections are deemed no longer necessary, unless there should arise some future requirement for their administration. The patient bade us adieu with warm expressions of gratitude for what had been accomplished. At the request of Dr. Read, while absent from town, I visited Mrs. K——.

August 18th.—I examined her chest very critically, and on auscultation failed to detect any râles whatever. Respiratory murmur remarkably clear over former diseased lung, and with the exception of a barely perceptible prolonged expiration, and slight, coarse murmur, there were no other abnormal sounds heard. There was, of course, a modified percussion sound, but the amount of dulness was so slight as to surprise me. The cavity had undoubtedly entirely cicatrized and contracted, so that the tubular breathing which was present in July had entirely given way to a somewhat exaggerated expression of the normal respiratory murmur. The patient expressed her belief in the permanency of her recovery, and assured me that she had been for some time entirely free from cough, expectoration, or night-sweats.

Dr. Read wrote me, under date of September 14th, that his patient continued well, "with absolutely no return of cough or expectoration."

The last intra-pulmonary injection was administered July 10th, since which time she has been entirely free from cough, expectoration, or night-sweats, and I am therefore, I think, justified in believing her recovery likely to prove permanent.

The history of the case from the very first injection has been characterized by the patient's steady and gradual improvement. Furthermore, we cannot fail to be impressed with the wonderful power exercised by the intra-pulmonary injections in arresting pulmonary disintegration, which in this case was rapidly extending.

These, gentlemen, are the clinical facts as regards intra-pulmonary injections, and I now leave you to judge whether such results are not sufficient to warrant the confidence which I entertain for this method of treating phthisis pulmonalis.

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CEREBRAL ANÆMIA—ITS CLINICAL MANIFESTATIONS, PATHOLOGY, AND TREATMENT.

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Historical.—Although some of the older writers were more or less familiar with the symptoms induced by sudden hemorrhage, it was not until the advent of the writings of Marshall Hall[1] that the idiopathic form of the affection was accurately described. Besides this he showed conclusively that many of the symptoms, at that time commonly ascribed to hyperæmic conditions, were in reality due to anæmia of the brain, being identical in every essential respect with the phenomena observed after severe hemorrhage. A similar explanation of *apoplexia exinanitione* was given by Abercrombie about the same time.

Sir Astley Cooper's[2] observations concerning the effects of ligature of the carotids undoubtedly served to give more scientific shape to the current pathological opinions of the day; but it was not till the experimental researches of Kussmaul and Tenner, and numerous others, had been published that the pathogenesis of the affection can be said to have been substantially advanced.

Experimental data.—When pressure is applied to the carotids of an otherwise healthy individual the following phenomena are observed: The face becomes pale, the eyelids droop, respiration and the heart-beat are gradually retarded, and eventually, if pressure be sufficiently long-continued, a well-marked soporific tendency is apparent.[3] If the degree of pressure be very severe and sudden complete unconsciousness and syncope are induced. During the continuance of the local depletion sensibility is diminished, the tactile sense is impaired, and an examination with the dynamometer shows that the muscular power of the hands is sensibly diminished. At the same time the subject complains of weakness in the knees, and attempts at walking are accompanied by staggering and vertigo. Schiff has shown, and Stone had occasion to confirm this observation, that when the compression is so great as to cause almost entire occlusion of the arteries, severe convulsions may be induced.

When the circulation in both vertebral and carotid arteries is interrupted, the pupils dilate, the eyeballs roll upward, the masseter muscles are violently contracted, and the respiration becomes slow and finally ceases altogether. At the same time the entire muscular system is thrown into a state of violent convulsions, and death ensues. It is an interesting and significant fact, however, that if artificial respiration be maintained, an animal may be kept alive for a considerable length of time, though as far as motion and sensation are concerned life is extinct. Moreover, when the ligatures about the vertebrals are removed, respiration is again restored.

All the phenomena are enhanced when moderate compression of the arteries is combined with galvanization of sympathetic and pneumogastric nerves, as I was the first

1 Lectures on the Nervous System and its Diseases. London, 1836. Also, Observations on Apoplexy. London, 1836.

2 Account of the first successful operation performed on the common carotid artery for the cure of aneurism. Guy's Hospital Reports, vol. i., 1836.

3 Vide the experiments of Dr. Alexander Fleming, British and Foreign Medico-Chirurgical Review, January, 1864, and January, 1869. Corning, J. Leonard: Sleep, the New York Medical Record, July, 1882. Also, Prolonged Instrumental Compression of the Carotids as a Therapeutic Agent, Medical Record, February 18, 1882; and Physiological Brain Rest, a paper read before the New York Neurological Society, June 6, 1882, and published in the Philadelphia News, June 17, 1882.

to point out and practically utilize in the treatment of functional cerebral affections.[1]

As some writers have imagined that the pressure exercised upon the jugular vein and pneumogastric nerve, which is an almost unavoidable concomitant of severe compression of the carotids, may have had something to do with the evolution of the phenomena above referred to, I determined to set the matter at rest, if possible, by resorting to other methods of depletion than arterial pressure.

Accordingly, I had constructed by the Messrs. Rheinders & Co., of this city, an apparatus on the principle advocated by Junod, which encircles both the lower extremities, and is secured by an air-tight india-rubber belt about the loins. By means of an appropriately constructed air-pump, it is possible to cause a partial vacuum in this apparatus. When the pressure is thus diminished around the extremities, the vessels of the latter become engorged with blood, and the brain, in company with the viscera of the thorax and abdomen, is greatly depleted. Under these circumstances I have been able to reproduce all the symptoms obtainable by compression of the carotids,[2] thus eliminating all sources of error and confirming the results obtained by myself and previous observers.

Finally, I cannot refrain from referring to the important experimental researches of Jorschovsky[3] with reference to effects exercised by loss of blood upon the irritability of the cortex. This observer found that when an animal is deprived of about one-seventh of the entire quantity of blood, no pronounced change in the irritability of the cortex takes place. When, however, the quantity eliminated amounts to about one-fifth of the whole amount, the irritability is much augmented. But, on the other hand, when from three fifths to two-thirds of the entire amount are withdrawn from the circulation, diminution and ultimate abolition of cortical irritability are observed.

Pathology.—Where cerebral anæmia exists, the vessels of the pia are partially or entirely empty, and the meninges have a pale transparent appearance. The cerebral tissues also present unmistakable evidence of malnutrition. Upon section the small drops of blood, which under normal circumstances are met with in abundance, are scanty or entirely absent. At the same time a copious exudation of serum takes place from the pia and ventricles, proving conclusively—if we accept current physiological opinions concerning the functions of the perivascular lymph—that the vessels have been in a condition of more or less contraction during life.

It is clear that where cerebral tumors, thrombosis, or embolism is present, the anæmia will be more or less circumscribed in character, whereas in conditions of general inanition all the organs within the cranium are liable to be affected.

If the experiments of Jorschovsky be accepted, it is easy to understand why some cases of cerebral anæmia exhibit phenomena of irritation, others again those of depression, and yet others somnolence and even coma.

Causation.—Cerebral anæmia may be local in character or may affect the entire brain, as well as the superior portion of the cord.

The causes which give rise to cerebral anæmia are those which tend to diminish the entire amount of blood in the organism, and those which are expressed in disorders of the vaso-motor mechanism.

To the first category belong hemorrhage and chlorosis. When an individual has lost a large quantity of blood, either from traumatic, pulmonary, or uterine hemorrhage, the sudden abstraction of so large a portion of the vital fluid causes a lowering of arterial tension. At no portion of the entire economy are the effects of this reduced tension more evident than in the organs enclosed within the cranium. The vertigo, confusion of mind, and somnolence so often witnessed after parturition and severe epistaxis are, in fact, the direct result of cerebral anæmia.

When, on the other hand, the reduction of the amount of blood within the economy is more gradual, as in certain chronic wasting diseases, the cerebral disturbances, though well marked, are less rapidly developed, and are usually less intense in character.

The vaso-motor disturbances which express themselves in anæmia of the intra-cranial organs are often, though not invariably, associated with more or less exhaustion of the higher centres. They are also found in conjunction with a warm and moist condition of the extremities, and with a generally debilitated state of the organism at large.

Symptoms.—It is evident that the character of the symptoms will depend greatly upon the cause which gives rise to the anæmia. Where the latter is developed rapidly, as the result of sudden hemorrhage or mental shock, facial pallor, ptosis, vertigo, tinnitus, mydriasis, and syncope are almost instantly produced (acute cerebral anæmia). In a large number of cases, however, the phenomena of the affection are gradually developed, owing to the insidious nature of the processes which lie at the root of the disease. Without entering further upon a discussion of the latter, it will be well to give at once a general description of the symptoms observed in gradually developed (chronic) anæmia of the higher cerebral centres.

When the amount of blood circulating within the brain is progressively diminished, the first symptom usually observed is an unusual degree of mental irritability, accompanied by marked physical and mental inertia. At the same time there is more or less depression and drowsiness, especially during the early morning hours; while toward evening there is a temporary revival of physical, and especially mental, activity. All efforts at systematic mental effort are, however, of short duration, and attempts at even moderate physical exercise are followed by vertigo, inordinate fatigue, and depression. The sleep function also exhibits marked derangements. Sometimes the subject is restless and more or less irritable during the early hours of the night, and is unable to obtain sleep till long after midnight. At others he is tormented by disagreeable dreams, or even severe nightmare, and awakes in an irritable and torpid condition, which totally unfits him for the routine duties of the day. As the anæmia becomes more pronounced, the cerebral symptoms increase in severity. Attempts to rise from the recumbent posture are followed by vertigo and even syncope, the dizziness being especially marked when the stomach is empty and the intestines but partially distended. Hence all attempts at exertion before breakfast are usually followed by nausea and fainting. Headaches, described as "heavy," "dull," "profound," and "vague" in character are of frequent occurrence. The location of these pains is sometimes difficult of determination, but in many cases they are decidedly circumscribed in character, being confined to the occipital, vertical, or parietal regions. They are usually much relieved, or even temporarily entirely abolished, by resort to the recumbent posture, or by the administration of alcohol, or the inhalation of the nitrate of amyl. The application of Esmarch's bandages to the lower extremities usually affords immediate relief.

Not a few practitioners are in the habit of regarding all headaches as indications of irritation or congestion, and, as a result of these crude pathological conceptions, an indiscriminate resort is had to dry cups, leeches, and even bleeding. It can readily be imagined that where well-marked anæmia of the higher centres is present, such expedients can only serve to materially aggravate the morbid accidents already existing, and under certain

[1] Electrization of the Sympathetic and Pneumogastric Nerves. [illegible]

[2] Practical Compression of the Carotids. By J. Leonard Corning, M.D. [illegible] Medical Journal and Record, [illegible]

[3] Über den Einfluss der Blutentziehungen auf die Erregbarkeit des Grosshirns. Vorläufige Mittheilung von Herrn Dr. Jorschovsky aus Petersburg. [illegible]

circumstances they may even prove decidedly dangerous. As a rule, both pupils are more or less dilated, but in some cases only the pupil of one side is affected.[1]

Most patients who have suffered for a considerable length of time from cerebral anæmia evince unusual susceptibility to sensory impressions, particularly to those of light and sound. The light from even a moderately bright lamp is often intolerable, and the ordinary noises of the street are sufficient to provoke intense irritability and headache.

When general anæmia has been induced by severe hemorrhage or starvation, delirium sometimes occurs, accompanied by hallucinations, illusions, and delusions. In the majority of cases the excitement passes off in the course of a few days, or even hours; but, occasionally, in severe inanition, the symptoms persist for weeks, and the condition becomes one of permanent mental impairment. Marshall Hall[2] has described in a graphic manner the cerebral anæmia occurring in young children. The beginning of the affection is characterized by irritability and insomnia; the pulse is frequent and the surface of the extremities is warm to the touch. Subsequently the latter become cold; the face loses its color and assumes an ashy appearance; the eyelids droop, and the pupils become dilated and insensible to light. Sometimes the respiration is devoid of rhythm and accompanied by sighing and rattling, occasioned by the collection of mucus in the trachea. There is also present a tendency on the part of the child to sleep at all hours of the day. In the milder forms of the affection this somnolence gradually passes off, while in severe cases it is extremely liable to pass into coma and death, unless energetic treatment be at once adopted.

An examination of the fontanelle reveals manifest depression of the latter as a result of the diminished intracranial pressure. This symptom is important, since it serves to distinguish the disease from hydrocephalus.

Diagnosis and prognosis.—In the cerebral anæmia arising from general inanition little difficulty will be experienced in forming a diagnosis, and the same may be said of that following uterine, traumatic, or other forms of hemorrhage. Less easy of determination is the anæmia consecutive to vaso-motor disturbances. The chief difficulty in such cases arises from the liability of confounding the affection with cerebral hyperæmia. There are, however, substantial points of difference between the two disorders, which a careful analysis of symptoms will usually serve to reveal.

In cerebral hyperæmia there is usually restlessness and irritability during the day, and confusion of ideas and sleeplessness at night; while in anæmia, on the contrary, there is drowsiness during the day and sleeplessness at night—which is not, however, characterized to a marked degree by confusion of ideas, except, as we have seen, where the anæmia is so severe as to cause unusual cortical irritation. Where the latter condition is present it is true that hallucinations, and even delirium, may be present, but the facial pallor is so great that little difficulty will be encountered in forming a correct diagnosis. Moreover, observations conducted with the surface thermometer, or with the differential calorimeter, show a decided decrease of temperature over the hemispheres and vertex. On the other hand, marked hyperæmia of the hemispheres is accompanied by quite as striking an increase in temperature, and the ears, face, and conjunctivæ are much injected. Palpitations and throbbing of the carotids are characteristic of intracranial hyperæmia, whereas in cerebral anæmia the carotid pulse is soft, and palpitations are rather the exception than the rule. If moderate compression be applied to the carotids of a patient suffering from cerebral anæmia, dizziness and syncope are immediately produced; but where hyperæmia is present no such symptoms are observed at once, unless the pressure be exceptionally severe. The pupil is also usually more or less affected, being contracted in hyperæmia and dilated in anæmia of the higher centres.

Though special attention should always be directed to the cerebral symptoms, careful heed should also be paid to the general history and all concomitant symptoms. A rigid application of the method of exclusion will also be found to yield important information in many cases.

Differential Summary.

Cerebral Hyperæmia.	*Cerebral Anæmia.*
Restlessness and irritability during the day; confusion of ideas and sleeplessness at night.	Drowsiness during the day; sleeplessness not characterized to the same extent by confusion of ideas.
Increased temperature over hemispheres and vertex.	Decreased temperature over hemispheres and vertex.
Facial flushing.	Facial pallor.
Diffuse headache.	Circumscribed headache.
Energy of cardiac action increased; palpitations.	Energy of cardiac action decreased.
Throbbing of the carotids; moderate pressure upon these arteries does *not* produce syncope.	Feeble and frequent pulsation of the carotids; moderate pressure *produces* dizziness and syncope.
Choked disk.	Pale retina.
Contracted pupils.	Dilated, sluggish pupils (frequently uneven).

The prognosis in the majority of cases is favorable, provided there be no disease of the heart, or other profound organic affection, nor chronic inefficiency of the digestive apparatus.

Where the affection is due to derangements of the vaso-motor apparatus, appropriate treatment, when persistently employed, is almost always efficacious.

Treatment.—The method of treatment to be followed will depend, in the first instance, upon the cause which lies at the root of each case, and which is usually ascertainable by careful attention to the clinical history, and by close observation and analysis of the symptoms. If the patient is in a critical condition from severe hemorrhage, he should be placed in a horizontal position with the head depressed and the extremities elevated. It is well also to envelop the extremities, especially the legs, in Esmarch's bandages, in order to force the blood which they contain toward the carotids, thus materially increasing the available supply to the brain. This is a far more efficacious procedure than merely exercising pressure upon the crural and brachial arteries, as it is obvious that, although the blood may thus be prevented from passing through the arteries to the extremities, a considerable quantity must nevertheless remain in a passive condition within the veins of the latter.

The hypodermatic exhibition of brandy is also an excellent expedient, especially where the patient is entirely unconscious. Ether has also been exhibited subcutaneously in considerable doses with good results. If the loss of blood has been exceedingly great, and coma is imminent, transfusion should be tried as a last resort. The body should also be kept warm by covering it with hot blankets, and placing bottles containing warm water along the extremities, thorax, and abdomen. It is a great advantage in such cases to be able to place the subject upon an india-rubber mattress filled with hot water, which can be renewed from time to time by means of appropriate stop-cocks.

The cerebral anæmia which arises from general inanition should be treated with alcohol and hyper-nutrition. Change of climate is also beneficial in many cases. Patients of this class should be enjoined to drink a pint-bottle of pale ale, stout, or malt-hop tonic at meals, and the diet should be of the most nutritious character, consisting chiefly of rare meats, unbolted cereals, and milk; or beef-tea, strong vegetable soups, and chicken broth where the digestion is weak. Iron and quinine may also be given if the stomach is in a sufficiently good condition; and the same may be said of arsenic and strychnia.

When the anæmia is alone traceable to vaso-motor

causes, compressed air-baths, alcohol, and Chapman's spinal ice-bag should be prescribed. If possible the subject should remain during a portion of the year at the seaside, where the atmospheric pressure is great; but even moderately high altitudes are to be studiously avoided.

General faradization of the entire body may be employed with profit; and the application of the galvanic current to the spine is often beneficial. I usually employ an ascending current; but I am by no means certain that special preference is to be given to this mode of application.

Sea-baths, taken during the months of July and August, are most useful in this form of anæmia; the subject should, however, remain but a short time (from four to six minutes) in the water, and should keep moving about. After the conclusion of the bath the limbs and body should be rubbed vigorously with a towel or hair mittens.

Those who suffer from the vaso-motor variety of cerebral anæmia are often subject to attacks of fainting, which are prone to occur before breakfast, or, indeed, at any time when the stomach is empty. Such persons should invariably take a cup of hot coffee and a piece of dry bread, or a biscuit, previous to rising in the morning. By adopting this practice it is possible to stop these sudden attacks of syncope; though it can readily be imagined that the permanent eradication of the vaso-motor difficulty is a matter of more or less persistent treatment, according to the rules already enunciated.

To treat these sudden attacks of syncope with indifference is, however, a grave mistake, since not only is there more or less danger of injury from falling, but the general health of the subject is much jeopardized by their continual occurrence.

Alcohol, as we have already had occasion to remark, is the remedy *par excellence* in intra-cranial anæmia; it should be given in frequent doses (preferably in the form of brandy or whiskey), but never in sufficient quantities to cause violent facial flushing; where the stomach is at all intolerant it may be given hypodermatically or per rectum.

In many cases of cerebral anæmia dependent upon general, or even vaso-motor, causes, I have found it an excellent expedient to put the patient to bed for from twelve to fifteen hours a day. While at rest, electricity (general faradization) and massage may be employed, as recommended by Weir Mitchell, and the diet should be carefully regulated so as to include only the most nutritious ingredients. I generally give chicken broth, rare beefsteaks, mutton chops, strong vegetable soups, and milk, when properly digested. The small portion of the day during which the patient is about should be devoted to moderate exercise, such as walking, driving, or rowing. Horseback riding is, unfortunately, not well endured by some of these patients, though in the less extreme cases it sometimes proves a most valuable adjunct in treatment.

—West Forty-seventh Street.

WANTS TO STUDY MEDICINE.—Dr. J. B. Kell, of Delphos, O., writes: "Dr. S——, of our city, received the following letter, from a Reverend of Putnam Co., O., who desires to 'sudy medson.' I give it in full.

"'H——, Putnam Co. O.

"'DR. S——.

"'DEAR SIR: aS I think of StuDing medson, and am Aqanted With you By rep and aS you bore the name of A Criston I thout you Would be a good man to Sudy under and ASK you if thare Would Be Eney Chance to Have you fore councle I will fernish my oan books and Bord Ples ancer By retorn male and I will come up Yours in christ.

"'REV. R—— P——.'"

Clinical Department.

THE REUNION OF SEVERED DIGITS.—LITERATURE OF THE SUBJECT.

REFERRING to a case of Dr. Souther, reported in the *Boston Medical and Surgical Journal*, and quoted in THE MEDICAL RECORD of October 23d, Dr. J. J. Morrissey, of Hartford, Conn., reports the following: "A young man had the misfortune to have his thumb amputated by a hay-cutter, as cleanly as if it were done by the keenest knife. Fully recognizing the importance of the thumb, as the man was a printer, I approximated the parts as closely as possible, yet with little hope of obtaining a good result. I afterward adjusted a splint, and the healing process took place almost immediately. In the course of a month he was able to return to his work, and now, some eight months later, he has the perfect use of his thumb. I confess that I did not hope for such a gratifying result, and it was only as a sort of experiment that I first joined the dissevered parts."

Dr. T. J. Hutton, of Fergus Falls, Minn., writes that the practice of replacing severed digits is not at all uncommon, and refers to the following literature of the subject: "Four cases of digital reunion, reported by me, may be found in the *Medical and Surgical Reporter* of August 23, 1873. One of these occurred in the practice of Dr. Frew, in 1869, the particulars of which—further than the result—I did not learn. The second occurred in the practice of Dr. E. E. Smith, in 1872; a clerk, helping to unload a huge dry-goods box filled with goods, and bound with a projecting hoop-iron band, let it fall to the ground from the dray, severing a finger at the middle of the second phalanx. The third victim was a young man who, while chopping ice on a picnic ground, July 4, 1871, chopped off an index-finger with a hatchet. The fourth case I treated in 1872; a sailor, while discharging his cargo, had his hand forcibly sandwiched between two sharp-edged bars of iron, severing a finger about midway in the second phalanx. In the *St. Louis Weekly Medical Review*, for September 18, 1886, appears a short article on 'Reunion of Cut-off Fingers,' from which I quote the following: In *Vratch*, for 1881 and 1884, as also in *Tchernigov Zemsky Shornik*, 1884, we find such cases recorded. THE MEDICAL RECORD gives an interesting case reported by Dr. Perkins, in 1885. Dr. S. D. Ivanoff records two cases in the *Russkaia Meditzina*. Both cases occurred in healthy sailors, one of whom had accidentally cut away, by a stroke of an axe, the second phalanx of the forefinger of the right hand. The second phalanx of the thumb of the left hand was cut off in the other case. In one, treatment was instituted two hours after the accident, and in the other three hours after the accident. In both there was union by first intention and limited mobility, with a return of sensibility."

HINTS FOR ANOTHER THEORY OF URÆMIA AND URÆMIC CONVULSIONS.

DR. J. C. PETERS, of this city, writes: "In C. M. Ralfe's 'Chemistry,' page 118, we read: 'Urea is isomeric with ammonium cyanate [*i.e.*, it is the same in composition but differs in properties]. It is probable, moreover, that cyanogen compounds precede the formation of urea, and act with great molecular energy till they pass into the more stable but effete form of urea, when they are cast out of the body. Ammonium cyanate is the type of living, urea of effete, nitrogen. Urea represents the ultimate product of the metabolism of the nitrogenous constituents of the food and tissues.' If urea is not formed, cyanate of ammonia accumulates in the blood and tissues.

"We know very little about the action of cyanate of ammonia, but we do know a great deal about that

of cyanate of potash, which it must closely resemble. The action of cyanide of potassium is identical with that of hydrocyanic acid, for which it may be substituted. Internally it has been fatal in doses of from three to five grains. The symptoms are insensibility, severe muscular spasms or convulsions, clammy skin, glistening eyes, stertorous breathing, fixed jaws, foaming at the mouth, and death in convulsions, or by asthenia. In uræmia there is a drowsy condition, more or less intense, with frequent recurrence of convulsions of an epileptic character.

"Some consider uræmia due to the poisonous action of retained urea, but large quantities of urea have been injected into the veins of animals without inducing uræmia, and it has often been given as a safe diuretic, in doses of ten grains, three times a day, in the dropsy following scarlet fever.

"Again, uræmic convulsions occur in some cases without there being evidence of any marked diminution in the excretion of urea, as in puerperal convulsions.

"Others suppose that the urea is decomposed into ammonium carbonate, and that the blood is poisoned with simple ammonia. But this has been disproven. Pure carbonate of ammonia will not produce these effects, but cyanide of ammonia very probably will.

"Urea was shown by Nohler fifty years ago to be identical with the hydrated cyanate of ammonia, and he then furnished the first proof that a complex organic product could be artificially formed. In 1868 Williams made urea from cyanate of lead. Cyanide of potash was fused at a low heat with red lead, and finally urea was formed. Bašaroff made urea from carbonate of ammonia. Again, urea is often made from ammonia cyanate by simply evaporating a solution to dryness over a water-bath. Heated to 120° C. urea melts and at a somewhat higher temperature; ammonia, and cyanate and carbonate of ammonia are formed, and cyanuric acid is left in the retort.

"The point made is that it is the cyanogen and not the ammonia which is the active poisonous agent in uræmia. Unfortunately there is no direct antidote to prussic acid, although the Messrs. Smith have recommended an alkaline ferruginous solution which operates by converting the poison into insoluble prussiate of iron. The patient is directed to swallow first a solution of carbonate of potash, twenty grains in an ounce of water, and immediately afterward a mixed chalybeate solution of ten grains of sulphate of iron and one ounce of tinct. ferri perchlor. in one ounce of water. M. Preyer proposes the subcutaneous injection of a small quantity of atropia as an efficient antidote."

TREATMENT OF TUMORS BY NASCENT PHENIC ACID.

Dr. F. G. Blynn, of Manchester, N. H., reports the following cases:

"Case I.—A. S——, widow, aged sixty-five, affected with glandular enlargements in her neck. The submaxillary glands were the seat of the disease, and were in size as large and hard as a good-sized green apple. My treatment was subcutaneous injection of Déclat's hypodermatic solution of pure nascent phenic acid. I gave twenty injections, alternately in the tumors themselves and in the abdomen. After the first ten injections had been administered the tumors began to soften, and had diminished in size about one-eighth of their bulk. At the twentieth injection the reduction in size was one-quarter. At that time the lady was called home to the South on account of the sickness of a relative, and since that time I have heard nothing of her.

"Case II.—About the first of May, 1885, I was called in haste to see a married lady, aged twenty-six, supposed to be suffering with diphtheria. On examination I found high fever, eyes injected and of a yellowish hue, pains at the base of the brain, considerable inflammation in and about the ovaries, with intense sharp pains darting down the thighs, tonsillitis of a mild character, with a superficial ulcer on the left tonsil. The usual remedies were administered, and hot flaxseed poultices applied to abdomen and back, which afforded relief. At a subsequent visit I acquired a history of the case, which was as follows: Six years previously she had an attack of peritonitis shortly after the birth of her first child. After recovery from this attack she experienced at the menstrual periods a series of epileptiform spasms, recurring periodically, and generally accompanied with much the same symptoms as those detailed above, except that she had no tonsillitis. She had submitted to all kinds of medical treatment, but without material benefit. About two years since she had observed a tumor the size of a hen's egg in the right ovarian region, which showed itself occasionally, but could be felt most of the time when she was sitting in her chair. Some physicians had diagnosed a fibroid of the broad ligament; others a right ovarian tumor. One medical attendant diagnosed an abscess, which he was anxious to open, but she would not consent to it. I gave the lady one subcutaneous injection daily of eighty minims of Déclat's hypodermatic solution of pure nascent phenic acid, and, up to date, have given sixteen in all, with the following result: Total disappearance of spasms, a gradual diminution in the size of the right ovary, and the patient informs me that she begins to feel as she did when she was a young girl. Last summer she kept her bed for five months, and now she does some housework, sews, and takes a short walk each day.

"The above are two of many cases which I have treated by the antiseptic or Déclat's method, and which in my hands has produced brilliant results. The essential for success is a pure acid. Who would dare administer forty grains of the phenic acid generally found in drug stores? And yet Déclat's acid has been and can be given in heroic doses without fear. In Bellevue Hospital and in the practice of Dr. J. R. Wood, forty grains have been given in divided doses during the twenty-four hours, with the most beneficial results."

COCAINE AS A PERMANENT ANALGESIC.

Dr. Charles Schram, of this city, reports the following case: W. R——, a German, aged thirty-eight, of large and massive frame, had usually enjoyed excellent health. His occupation entailed much exertion, such as running up and downstairs, stooping, carrying heavy loads, etc. On the afternoon of October 13th, while stooping over, he felt a crick in the small of his back, the pain being sharp, shooting and momentary. He continued at work, however, and went to bed feeling tolerably well. On awaking the next morning, he suffered from severe pains, sharp and lancinating in character, extending across the small of the back and the lower part of the abdomen, and increased by the slightest exertion. There was no fever. A menthol liniment, mustard poultices, dry cups, massage, "ironing," electricity and dry cups, free diaphoresis and quinine pushed to its constitutional effects were tried without avail. On the evening of the third day Dr. Schram detected three or four points of marked tenderness in the lumbar and upper sacral regions. Into each of these, after warning the patient of the constitutional effects which might follow, he injected ♏x of a freshly prepared solution (strength not stated) of hydrochlorate of cocaine. The effect was marked, and within five minutes after the third injection, the patient, who just before had groaned with pain on attempting to stir, much to his own surprise, sat up in bed, then got out of it and walked several times up and down the room. He was entirely free from pain, but said he still felt weak in the back. About one-half hour later he complained of dizziness, nausea, and obscured vision. The pupils were much enlarged but reacted readily to light. The pulse remained unchanged. The first dizziness and nausea passed away in the course of an hour, and the dimness of vision was gone the follow-

ing morning. At this time the pain had again returned, but only to a slight degree, in the upper sacral region. Here the injection was repeated with the same happy effect. Constitutional symptoms again appeared, but were less marked. The dimness of vision disappeared in about four hours. The patient sat up all the afternoon and, with the exception of "feeling weak in the back," and loss of appetite, he was quite comfortable. On the following day he felt well enough to resume his work. There has been no recurrence of the pain since. Some anæsthesia in the lumbar and sacral regions remained for three or four days. The writer continues: "In employing cocaine in this case, my intention had been to afford temporary relief, in preference to resorting to morphine. That a permanent cure would result, I had not expected. The experience above detailed has led me to think that the subcutaneous use of cocaine may prove useful in those obstinate cases of facial, sciatic, and other neuralgias which resist all other modes of treatment, and where it may obviate the necessity of resorting to surgical measures."

THE TREATMENT OF SYPHILITIC CONDYLOMATA.

Dr. A. G. Parsons, of Durham, N. C., writes that he has tried the following ointment in many cases of syphilitic growths on the scrotum, and around the anus, and has never met with a failure:

R. Morph. sulph'.	gr. ij.
Pulv. camphor	gr. xx.
Bismuthi subnitrat.,	
Hydrarg. chlor. mitis	āā ʒ jss.
Cosmolin	ʒ j.

Sig. Wash with soap and water, and then rub the ointment in thoroughly twice a day. In a few days, Dr. Parsons says, the warts will be found to have entirely disappeared.

A CASE OF MYXŒDEMA.

Dr. W. H. Bryant, of Savannah, Mo., writes: "Mrs. N——, forty-six years of age, of remarkably healthy parents, and a perfect type of both physical and mental health, was delivered of her third child twelve years ago. Saw her ten days after and found her with all the characteristic symptoms of septicæmia, from which she recovered and was dismissed well in about three weeks. Two years after she was again confined, with her fourth child. Five days after symptoms of septicæmia were manifested, but as she was at once put under proper treatment, all signs and symptoms of her former serious attack soon disappeared, and in a few days she was again dismissed well. I give this brief puerperal history, as it was a probable factor in the etiology of a subsequent disease. Two years after her fourth and last confinement, I was requested to see her on account of failing health. She presented the appearance of one suffering from Bright's disease; the face and the eyelids were œdematous and had that peculiar pale, waxen color so characteristic of chronic nephritis. Her feet and ankles were also swollen, but did not pit on pressure. I felt sure that she was suffering from some one of the forms of Bright's disease, and obtaining a sample of her urine, I was surprised to find it did not contain a trace of albumen; but remembering that in the cirrhotic variety we may or may not have albumen, I still thought of nothing else but Bright's disease; for at that time I knew of no affection having so close a resemblance, and consequently gave her treatment in accord with the diagnosis. Not long since I had the opportunity of reading Sir William Gull's description of this disease under the name of 'Cretinism in the Adult.' Some time after the appearance of Dr. Gull's article, Dr. Ord, in a paper read before the London Medical Society, called attention to the same condition in connection with thyrodectomy, stating that all who had undergone that operation became myxœdemic. Charcot, of France, and Kocher, of Berne, have each called attention to it, stating that it is almost always confined to adult females. But males, according to Dr. Andrew Clark, are not exempt from it.

"After looking up the scanty literature upon this seemingly rare disease, I became sceptical in regard to my diagnosis in Mrs. N——'s case—in fact, believed it to be a case of myxœdema, for the reason that many of the prominent symptoms of Bright's disease were absent. Accordingly, I visited her a short time since, and found her in the following condition: The face presented the same pale, puffy, waxen appearance as when the patient was first examined six years ago. The hands, arms, feet, and legs were enlarged to almost double their natural size, the swelling of the hands being especially marked. The abdomen was as large as at the eighth month of gestation. The patient thinks, talks, and performs all motions very slowly and carefully, and in conversation she is provokingly tedious. She never leaves her house for a walk on account of the slow and awkward manner of her gait, and the constant fear which she has of falling. She can neither button nor unbutton her shoes, and it requires a long time for her to dress herself, and very often it is necessary to have assistance in completing her toilet. The skin over the entire body and limbs is dry and scaly; the lips and tongue are flat and thick, and with the sallow complexion, vacant stare, etc., she presents the appearance of an imbecile. During the day there is a sero-mucous discharge from the nose, which compels her to keep a handkerchief always at hand, and at night saliva flows from the mouth in quantity sufficient to saturate the pillow. On top of both shoulders there is a large deposit of fat or mucine, and on the dorsal surface of all her fingers, between the first and second joints, is the same thickening of skin from this mucine deposit. On the palmar surface of the left little finger, between the first and second joints, there is an enlargement about the size of a cherry. This swelling of the hands with the thickening of the skin, which gives the 'spade-like' appearance, is hard and unyielding.

"She eats with great care and deliberation on account of not being able to swallow well, and does not attempt to take any but small bits of solid food. A year ago a tooth was extracted—upper bicuspid—which caused an ecchymosis spreading over the entire cheek and side of the neck, and lasting six weeks. Her mental capacity is weak, and she is keenly aware of this fact, as she said to me while visiting her, 'she thought sometimes she would soon go to the asylum.'

"The first two years of her disease, she states, she was always so sleepy that she could not sit down in quietude for a few minutes without falling asleep, and it was with difficulty that she could be aroused. At this time I prescribed active diuretics, cathartics, and diaphoretics, under the impression that uræmic coma or convulsions were impending. There has never been any enlargement of the thyroid gland, and at present it seems to be of normal size, though a thorough and satisfactory examination could not be made on account of the thickening of the skin and tissues of the neck. In the majority of the cases so far reported, the thyroid has been either extirpated or atrophied, and this connection between disease or absence of the thyroid and myxœdema will, no doubt, sooner or later lead to an understanding of the function of this gland. As there are some features of myxœdema common to it and Bright's disease, from which affection it has to be differentiated, I will notice those I have been able to gather from this single case. The œdema of the face, hands, and feet is hard, elastic, and resilient like rubber, and does not pit on pressure. This is in such marked contrast with the soft, putty-like swelling observed in Bright's disease, that it, and the ab-

sence of albumen, severe cephalalgia, and other symptoms referable to the nervous system, will be sufficient to prevent an error in diagnosis. In regard to the treatment of myxœdema, nothing definite has as yet been suggested. Jaborandi, or its active principle, pilocarpine, has been recommended on account of the dry skin. I believe that arsenic has also been used.

"This is about the extent of therapeutics, so far as I have been able to gather from reported cases. I have put my patient on the use of bitter wine of iron and Fowler's solution, ʒ j. of former to ♏ v. of the latter. Of course the use of arsenic is but theoretical, though its well-known virtue in diseases of the skin would suggest its use in myxœdema. I will continue its use for a sufficient length of time to test its virtues. In the present state of our knowledge as to the pathology of myxœdema all remedies must of necessity be directed to the relief of the symptoms."

SPONTANEOUS ORIGIN OF SCARLET FEVER.

Dr. M. R. Perry, of Russellville, Ky., writes: "I noticed in one of the late numbers of The Medical Record a note in regard to the possibility of the spontaneous origin of scarlet fever. About October 1st I was called to see a child, ten years of age, who presented the following symptoms: Temperature, 103½°; sore throat, inflamed tonsils and pharynx. The child, the day before, had complained of chilliness frequently, and that night vomited freely. On the second or third day a general efflorescence became visible, and also the red tongue, with the peculiar strawberry appearance, was noted. There was a troublesome cough for a day or two, but it, with all the symptoms, gradually abated, and in ten days the child was out of bed. There was desquamation of the hands and feet; but vaseline was used freely over the body, and this may have prevented its showing much on the trunk and extremities. Was the case one of scarlet fever? and if so, where did the contagion originate? There was not, up to this time, a case of scarlatina in the entire town, but following this there were several cases with similar symptoms, but not so marked. I would like an opinion as to the nature of the case."

CIRCUMCISION UNDER COCAINE.

Dr. B. F. Kingsley, of San Antonio, Tex., writes that, having seen the report of a case of this sort by Dr. E. R. Palmer, he is led to relate one of his own. He performed the operation on November 29, 1885, and makes the claim to priority in the use of cocaine in circumcision. The patient, Mr. G——, applied to him for the relief of insomnia, frequent nocturnal emissions, and a variety of obscure nervous symptoms. He had a very redundant and contracted prepuce, partially adherent to the glans, and circumcision was advised and consented to. The operation was performed by the author, assisted by Dr. Berry, on the date above mentioned. A common rubber band, half an inch wide, was applied around the penis close to the scrotum, and three drops of a four-per-cent. solution of cocaine were injected into the foreskin at each of three equidistant points along the line of proposed incision. In a few moments the prepuce was grasped in the shank of a double tenaculum, and divided by the scissors. The mucous membrane was then slit up and the parts united with a continuous suture of iron-dyed silk, and the wound dressed with vaseline and absorbent cotton. There was no pain, and no hemorrhage to speak of. There was but little subsequent swelling, and union occurred by first intention. The sutures were removed at the end of thirty-six hours, and the patient returned to his duties on the seventh day greatly improved in health and spirits.

Progress of Medical Science.

An Autopsy Extraordinary.—The following report of an autopsy is by a physician, who is said to be doing a lucrative practice in Delta, O. It goes to show that success in gaining the confidence of the community is not necessarily conditioned on such an appreciation of anatomy, physiology, and pathology as the modern school holds to be correct. "E. C. C——, opened on September 25, 1885, for post-mortem examination. We find that sickness first started in the kidney No. 18, and from there to the hip bone, No. 15, from there to the spine No. 1, from that to the blood, cancer or abscess, blue cancer, etc. From large artery in the 6th rib affected and to the muscles of the hip, where started the ulcer on the left side, and thense to the urine, from thense to large intestine which was affected fifteen yards, and from their to a milky deposit in the bladder, and thense back again to the kidneys, from thense to the hair veins, from thense to the back, and thense to the stomach, and thense to the bladder, and thense to a fever through all the system, No. 18, the liver's weight was 4 lbs., which was badly affected and mortified; from thense to the largest nerve which is connected with the brain which affected them. Weight of the kidney one half pound. The doctor's statement before opening the corpse was consumption of the liver and kidney."—*The Medical Age.*

Hysteria in a New Light.—According to *The Lancet*, September 4, 1886, the views of Mr. de Berdt Hovell on the subject of hysteria are to be carefully received as those of a shrewd practitioner of long practice and large experience. He strongly protests against the whole hypothesis of hysteria. He thinks the theory that localizes the disease in the uterus is the mere survival of medical demonology, which located ill-humor in the spleen, blue-devils in the liver, and the soul in the pineal gland. He claims for hysterical patients more fairness of treatment and more discrimination. He attributes many of the cases to shocks, physical or moral, leading to deficient or depressed nerve-power, with all that this implies in the way of pain, irritability, inability for locomotion, etc. Mr. Hovell admits that the cases are difficult to cure; but he maintains that if we are to deal with them effectually we must "set aside all consideration of the organs of reproduction, which most probably are not concerned, and transfer our attention to the moral nature." Mr. Hovell gives several cases in which there was a distinct history of shock or exhaustive work, to explain the break-down in the nervous system. We live in days when the nervous system is getting its full share of attention from pathologists and physicians, and when even gynecologists are finding out that the uterus, and even its appendages, which are now blamed by some for everything, are not such culprits as has been supposed. Mr. Hovell will admit that the cases of so-called hysteria do occur chiefly, though by no means exclusively, in women. In their organization there is *something* specially favoring the occurrence of this state or disease. It may not be in the special organs of the female so much as in the special organization of the nervous system. Mr. Hovell deserves credit for insisting on this point, and he may well be satisfied to know that the drift of opinion among physicians is toward the acceptance of his views. Women are more finely strung than men. They are more liable to pain or pains of all sorts from mere functional causes. Such a constitution is perplexing to the physician, but it has to be considered, and not treated as a sort of crime, as has too often been the case.

Rupture during Labor of Varix of Labium.—Dr. Atkinson relates the following case (*The British Medical Journal*): Mrs. F——, aged thirty-nine, was in her eighth confinement. On examination a breech was made out, and

in a short time it came well down in the pelvis. When near the outlet the right labium began to swell. Delivery was easily effected, and while the child was being separated the patient was seized with another strong pain. On examination a second bag of membranes could be felt. The tumor, however, steadily increased to an alarming size, and another pain coming on, it suddenly burst on its side, deluging the bed. A napkin, folded so as to make a firm pad, was held to the parts, so as to effectually stop the bleeding. Forceps were applied, and the second child suddenly expelled, the injured part being freely compressed at the same time. On examination it was found that the inner side of the labium was so torn that four fingers could be passed into the opening, which led to a cavity sufficiently large to admit the whole hand. Iodoform was applied, together with plugs and pressure. About the fifth day a piece of vein, about three-fourths of an inch long, which lay across the wound, sloughed off, a little bleeding taking place. On questioning the patient about the veins, it was ascertained that she had observed a lump there for some time. She also noticed that it became larger toward night, but did not think it worth while mentioning. Iodoform dressings and sublimate injections (1 in 3,000), twice daily for a week, secured a good recovery.

Turpentine in Painful Affections of the Digestive Organs of Children.—Dr. Bedford Brown, in the *Journal of the American Medical Association* (September 25, 1886), advocates the use of turpentine in the management of the more painful and grave affections of the alimentary canal of infants and young children. According to his personal experience, the oil of turpentine fills a place which no other remedies, such as opiates, astringents, alkalies, mercury, or bismuth can fill. He believes the therapeutic action of turpentine to be of a multiform character. It is eminently soothing to the irritated and inflamed mucous membrane, and seems to "promptly arrest the rapid exfoliation of epithelium." It is antifermentative, deodorant, and antiseptic. He further holds the oil to act as a stimulant to the salivary, stomachic, pancreatic, and intestinal secretions. The author lauds the beneficial action of turpentine, especially in gastralgia, intestinal catarrh, enteritis, and a number of unclassified painful affections of a functional kind. He prescribes the drug according to the following formula:

℞. Mucilag. acac..... f ℥ iss.
Sodæ bicarb..... x. grs.
Chloroformi..... x. gtt.
Ol. terebinth..... ʒ ss.
M. Sig.—A teaspoonful every two or three hours to an infant of six months.

Recovery after Fracture of the Spine.—At a recent meeting of the Cambridge Medical Society (*The Lancet*, September 4, 1886) Mr. Wherry related a case of recovery from fracture of the lumbar vertebræ, with paralysis of legs; and one of recovery after fracture of the cervical vertebræ, with paralysis of arms; death occurring twelve years after. Case 1.—Charles C——, aged sixty, on October 29, 1873, fell 57 feet from a scaffold, and at 28 feet a plank checked his fall, and lower down he alighted on an office ridge-roof. He was nineteen weeks in Addenbrooke's Hospital. A catheter was used for two years; he recovered power in his bladder by degrees, and from his invalid chair began to walk with crutches, and could go a hundred yards pretty well. He had enjoyed fair health during the past thirteen years; now his legs are swollen and ulcerated. His hands are suffering, probably from the crutch palsy. The urine is retained ordinarily, but any beer or tea beyond a most moderate quantity is followed by incontinence. Case 2.—Peter H——, nearly twelve years ago, in 1874, was standing on the top of a load of tares, and hauling a rope which he thought was fastened down below, when he fell backward on to the ground. He was in the hospital about a year, and had paralysis of the bladder for seven or eight days only; there was no paralysis of the lower limbs; there were large sloughs on the scapulæ. In carrying him to bed crepitus was felt. His breathing was entirely diaphragmatic. When he had been in bed about a year he began to gain flesh and strength, and sat up in a chair, and later walked about carrying his head erect and his neck stiff. Later he could walk vigorously, but his arms remained paralyzed and fixed in the bent position, some slight power of extension was regained in the fingers of the left hand especially, and the upper limb could be moved as a whole a few inches away from the body. There was very little thoracic movement, as indicated by a tape around the chest. After nearly twelve years of excellent health he died thin and anæmic, and with a large spleen. Mr. Wherry here exhibited specimens which showed the bodies of the fifth, sixth, and seventh cervical vertebræ to be firmly anchylosed. No remains of intervertebral substance between the fifth and sixth, and very little between the sixth and seventh vertebræ. The coalesced bodies of the fifth and sixth and the bodies above bend forward so as to make an angle with the bodies of the seventh cervical and upper dorsal. The cervical spine has a marked curve, with its concavity forward. The canal shows a corresponding bend; the angle and the narrowest part of the canal are between the lamina of the fifth and posterior upper edge of the sixth body, an illustration of the usual mode of crushing the cord. The laminæ of the fifth, sixth, and seventh are firmly joined. The articular processes are also firmly united by bone. There is a separation between the articulations of the fourth and fifth, and also, but less, between the third and fourth. The transverse processes of the fifth, sixth, and seventh are closer than natural, but not touching; the vertebral artery canal is patens. The intervertebral canal for the sixth spinal nerve is small and irregular in shape, and this cord must have been nipped at its exit from the vertebral canal. The dry specimen showed a general atrophy of the parts damaged, especially the bodies of the vertebræ; and a singular absence of callus. Mr. Wherry thought that the brachial cords were pressed upon or damaged at the intervertebral foramina, the spinal cord itself being very little injured. The *main en griffe* was explained by the extensors of the fingers regaining some power, but the interossei muscles remaining quite paralyzed.

A New Method of Removal of the Entire Tongue.—Dr. F. A. Purcell describes in *The Lancet* (September 18, 1886) a new operation for the removal of the entire tongue and floor of the mouth. It is applicable to the removal of one-half of the organ if necessary. The author calls his method the "supra-hyo-glosso epiglottidean" one, and describes it as follows: "The patient having been anæsthetized, first make an incision in the neck, about a quarter of an inch long, in the middle line from the hyoid bone forward, only skin deep; then pass a whipcord ligature through the raphé of the tongue, an inch behind its tip, to hold the organ by; gag the mouth open; introduce the left index-finger well to the bottom of the glosso-epiglottidean pouch, back of root of tongue. It may be necessary at this stage, so as to make room to get well round the base of the tongue, to snip with scissors the palato-glossi muscles, viz., the anterior pillars of the fauces, as also the stylo-glossi muscles of both sides; these may require pressure-forceps to be employed, as generally some small vessels may bleed; these can be taken off when wanted out of the way. Now take, say, Wood's hernia curved needle on handle, being stout, long, and well curved, threaded with medium-sized whipcord; or the needle, in place of the thread, may carry the platinum wire if the surgeon intends using the galvanic écraseur. Hold the needle in the right hand horizontally, its concavity turned upward and toward the neck, enter its point at the submental incision immediately above the hyoid bone, pass it through the raphé of the mylo-hyoid, the genio-hyoid, and the

lower fibres of the genio-hyo-glossi muscles, and direct it to the right side, forming the sweep of a half-circle; now feel for the point of the needle with the left finger as the needle is pushed through so as to enter the bottom of the side of the right glosso-epiglottidean pouch above the great cornu, hook up the loop of thread, or it may be the platinum wire, with the left finger, pull it well through and out of the mouth, and withdraw the needle; do the same on the opposite side, for which it will be necessary to change the position of the hands, holding the needle in the left and placing the right index-finger in the left side; a loop will in this way be lodged in the pouch at either side; thread each loop with the platinum wire, making a hook of wire by bending its end on itself; draw on both sides, so that the ends of the wire are brought out at the supra-hyoid incision, make even and detach the loops; the centre of the wire now forms a loop, and rests on the base of the tongue. Before proceeding further, remove the pressure-forceps from off the cut anterior pillars of the fauces; take the same curved needle (Wood's), unarmed this time, and enter it again at the supra-hyoid incision in a vertical manner, its concavity directed toward you; feel for the point of the needle with the left finger as it is pushed through the centre of the root of the tongue and in front of the epiglottis; guard the point by means of a piece of cork, here the needle remains to act as a guide for the wire to travel behind; lodge the wire behind the guide and draw it taut, complete its connections, and work the écraseur—the tongue is severed through its root in a well-defined vertical plane; withdraw the guide-needle. Secondly, free with scissors the anterior and lateral attachments of the tongue and floor of the mouth, release the organ and withdraw it through the lips. No hemorrhage, as a rule, occurs; but if the battery or the écraseur should be worked too quickly and bleeding does take place, a sponge on a stick, pressed into the furrow and following the wire, will be found sufficient to restrain it; the linguals are included and cut through by the wire, and if they should so happen to spurt, they can be secured by pressure-forceps on the stump and tied. The ordinary simple écraseur, either single wire or twisted whipcord, may be substituted in place of the galvanic. The entire tongue may be removed as described, or the one-half, if so desired, by scoring the dorsum of the tongue with a blunt-pointed scalpel exactly in the middle line, and dividing the tip freely down and through the middle line of the frænum; then take both threads (one having been previously passed through each tip), one in each hand, and, using the forefingers much in the same way that one would for tightening a ligature on a deep vessel, split the tongue in two halves, and free the diseased half with scissors."

The Physiological Action of Menthol.—Dr. Goldscheider, at a recent meeting of the Physiological Society of Berlin, discussed the action of menthol on the sensory nerves. It was well known that it produced on the skin a sensation of cold, which was commonly ascribed to evaporation. On the other hand the same sensation, when produced in the mouth by solutions containing menthol or peppermint, was explained by a supposed astringent effect. Dr. Goldscheider had come to the conclusion that neither of these explanations was correct. He made his experiments with a solution of menthol in lanolin, which he rubbed into circumscribed regions of the skin. After the rubbing the thermometer showed, in all such places, an increase of temperature to the extent of several degrees, notwithstanding the marked sense of cold produced. The hypothesis of evaporation was excluded by the fact that the feeling of cold was no less marked when the part rubbed was covered with a watch-glass, and could, therefore, be produced only by direct stimulation of the nerves of sensation of cold. Again, if of two corresponding places on the forehead, where these nerves are most abundant, one were rubbed with the menthol ointment and the other not, bodies which previously had caused no particular sensation would be felt as cold on the former spot but not on the latter. Dr. Goldscheider, observing that while some regions, as the forehead, were especially sensitive to cold, others, as the elbow and the volar side of the wrist, were so to heat, found that the inunction of these with menthol produced a sensation of warmth, though less striking than that of cold in the former regions; and he called attention to the recent communication of Prof. Herzen on the precisely analogous results of pressure on the nerve-trunks in these regions respectively. He therefore concluded that the sensations, in some places of cold, and in other places of heat, produced by menthol, were purely subjective and consequent on the direct stimulation of the special nerves of temperature, those usually cognizant of cold being far more sensitive to its influence than were those adapted to receive impressions of higher temperature.—*British Medical Journal.*

The Transmission of Measles from Place to Place by Healthy Persons.—The possibilities of carrying the contagious principle of measles from place to place by the medium of the bodies of healthy persons was recently discussed by the Medical Society of Berlin, and one gentleman, Joël, of Lausanne, presented certain facts which lead to the belief that such a possibility does exist, and that the medium is often furnished by physicians themselves. One case which was cited was that of a boy who was brought from Geneva to Lausanne while he was passing through the incubation stage of measles. The butcher and the postman who served the institution to which the boy was brought conveyed the disease to their children, who were attacked with it in a short space of time, and, what is quite remarkable, the children in almost every house to which the postman delivered letters were attacked. A little girl was brought to a hospital, and in a few days had undoubted symptoms of measles. Her father had paid her several visits before the measles appeared, and it was ascertained that two of his children were suffering at his home with the disease. Eight other children in the hospital were quickly seized with it. It is thought that physicians cannot always avoid carrying the contagium with them, even when extraordinary care is taken. Prophylactic means on the part of the physician should be as thorough as possible, however, by disinfection, change of garments, and all other available procedures.—*The Archives of Pediatrics.*

The Treatment of Orchitis and Epididymitis.—In the treatment of orchitis and epididymitis, the result of acute gonorrhœa, Mr. Frederick W. Lowndes claims excellent results from a plan introduced by Mr. Furneaux Jordan in 1869. It consists in painting the affected testicle with a strong solution of nitrate of silver (two drachms to the ounce), at the same time enforcing strict rest in bed, and supporting the inflamed organ upon a small pillow so as to prevent it hanging down. Mr. Lowndes has invariably employed the same treatment, and in eleven years has treated two hundred and sixty-nine cases. He has always found it highly successful. The acute pain, often amounting to agony, is soon subdued, and in the majority of cases the organ returns to its normal size in the course of a few days. Sometimes a second painting is necessary, but this then suffices. The same plan of treatment has also been used by him successfully in private practice. When the patient cannot be induced to take absolute rest in bed, and when the patients are compelled to follow their usual occupations, the recovery must obviously be slower, as it is not possible by suspensory bandages or by means of handkerchiefs, however skilfully applied, to insure such perfect rest as when the patient is lying in bed. While the rest is an important item in the treatment, it is not by itself sufficient to effect a cure. The immediate effects of the nitrate of silver in allaying the pain are most marked, though for obvious reasons the nitrate must act more powerfully while the organ is in a state of quiescence than when it is constantly active.

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WHENCE COMES THE POISONS OF DIPHTHERIA?

WE referred recently to a case of scarlet fever of seemingly spontaneous origin, or in which, at least, it was impossible to trace its contagion, the disease occurring in a small Italian town completely isolated from the world. Another instance of a somewhat similar nature, though more easy of explanation, is mentioned by Dr. George M. Kober, U.S.A., in a report upon the climatology and health of Surprise and Goose Lake Valleys, presented to the California State Board of Health in 1886. Two young men, who had had measles in Goose Lake Valley, returned after their convalescence to their home in Warner Valley, Ore., and remained at work for nearly a month, when they were brought back again with scarlet fever. There had been scarlatina at Goose Lake Valley, but none in Warner, which place is distant fifty miles from any settlement. In this case the virus was probably conveyed in the clothing or in some other articles carried by the men from Goose Lake to their home.

In the same report Dr. Kober recounts the medical history of a family residing in Surprise Valley. The household was that of a well-to-do farmer who had erected, a few years before, a dwelling on a gravelly spot, formerly used as a corral and the site for a cow-shed, little suspecting that the excrementitious matter had for years permeated and polluted the soil. In the fall of 1879 two cases of typhoid fever occurred in this family, affecting the father and his brother. In September, 1883, three of the children were seized with diphtheria, and subsequently the entire family suffered. One of the children died from laryngeal complication. The inhabitants of this house were intelligent and cleanly, and there was no room to assume contagion, either mediate or immediate, unless possibly the disease prevailed among the fowl. In view of all the circumstances, the author thinks that the occurrence of typhoid fever and diphtheria could reasonably be connected with a local cause, viz., the water-supply. It is very probable, he argues, that the animal refuse matter permeated the gravelly soil to a considerable depth, and with the recession of the subsoil water, under the influence of the warmth of July and August, became converted into a poisonous material which finally percolated into the well.

The theorists of the Pettenkofer school would have little difficulty in accepting this explanation and finding in the case a strong argument in support of their views as to the mode of origin of the so-called filth diseases. But it is the current belief at the present day that diseases like diphtheria cannot arise *de novo* from soil pollution, but that there must be present particulate germs capable of propagating them. Dr. Kober does not dispute this theory, but simply argues that disease-germs must have had an origin some time and somewhere, and so implies that the germs can arise *de novo*, which is, of course, the same thing as saying that the disease itself can originate without the agency of contagion.

In an account of an epidemic of diphtheria occurring in Pitt River Valley, contained in the report above referred to, the writer, Dr. Patterson, states as his belief that the poison emanated from a large tract of swamp land in the neighborhood. The following facts are given in support of this opinion: 1. Not a single case appeared to the windward of the swamp. (In this country the wind blows almost constantly from the south and west.) 2. Almost every child and many of the adults, living in the valley to the leeward of the swamp, were stricken with the disease. 3. The virulence of the diphtheria was in direct ratio to the proximity to the swamp and the exposure to the emanations therefrom, modified, of course, by individual characteristics of the patient and by his other surroundings.

A suggestive case is related by this writer. The family of the proprietor of a hotel at Alturas, hoping to escape the disease, abandoned the family rooms on the ground floor, and occupied instead the parlor and adjoining room on the second floor. His family escaped attack until June, when a great freshet occurred, causing Pitt River to overflow its banks and inundate the town site, filling all the cellars, wells, and privy vaults. His family had meantime returned to the family quarters directly over a cellar, now filled with water and decaying vegetables, which latter had been stored there while fresh for hotel use, but were now carelessly allowed to remain. Both of his children died of diphtheria, and all the adult members of his family were attacked by it, while none of the persons inhabiting other portions of the house was affected. The disease at that time was confined to those who lived immediately over the cellar mentioned, notwithstanding the very unfavorable sanitary conditions which then prevailed throughout the town.

From his experience in this epidemic Dr. Patterson comes to the conclusion that one course, at least, of diphtheria is an emanation from decomposing vegetable matter, though he does not doubt that there are other sources from which the poison may arise. Dr. Kober, as we have seen, believes that pollution of the soil by decomposing animal matter is also a fruitful source of the disease or of its microbe. It remains for those who do not admit the possibility of any other mode of propagation of diphtheria than by contagion to explain the occurrences above cited and to demonstrate wherein the authors have erred in their conclusions.

DEFECTIVE VISION AND HEADACHES.

MUCH has been said of late about the reflex neuroses from defective vision and weakness of eye-muscles. The commoner troubles appear to be headaches of various

kinds, nervousness, neurasthenia, epilepsy, etc. At a meeting of the Chicago Medical Society Dr. F. W. F. Coleman said that, in an examination of the eyes of pupils in Boston, in eighty-nine cases of defective vision fifty-nine were traceable to over-study. Out of this number twenty-five to fifty per cent. of the cases of headache which occurred were relieved by supplying suitable glasses. Another class of cases in which headache occurs is when there is weakness of the recti-muscles. By supplying proper prismatic glasses this weakness may be overcome, and the headache disappears.

To offset this Dr. F. C. Hotz said that he had been surprised to see how few cases of defective vision came to him complaining of headache. He has not found it a prominent symptom. In looking over his record of cases he finds a great many cases of astigmatism, hypermetropia, and ametropia, in which the symptoms complained of are difficulty of vision, but not headache. Children often complain of not being able to see the figures on the blackboard, and consult the oculist for that trouble directly. But if a large number of cases of the eyes of children are examined, it will be found that in youth a normal eye is often far-sighted, and yet such persons are able to do the work required.

A view somewhat similar to this was presented by Dr. Roosa in a paper read before the Academy of Medicine last year.

As there is positive evidence that in a certain per cent. of cases, probably quite a small one, eye-troubles do cause neurotic symptoms, the present line of inquiry should be directed to discovering the conditions in which such reflex disturbances are produced.

POST-PARTUM TROUBLES IN AMERICAN WOMEN.

In a letter to the *American Practitioner and News* Dr. T. S. Galbraith reports an interview with Dr. Fancourt Barnes in which he asked why it was that there was so much difference between American and European surgeons with regard to the frequency of laceration of the cervix, and the need of an operation therefor.

Dr. Barnes said that from a large experience with all classes of patients, he was of the opinion that injuries following parturition were far more frequent in American than English or other European women. "He would account for this difference on the grounds of the defective physique of American women. This he thought was mainly due to the faulty educational methods prevailing in this country. During the period of rapid development our girls were kept too much in-doors, being confined to school too closely, and not allowed to indulge in the out-door sports that have a tendency to give tone and elasticity to the body. In these respects he thought the English girls had the advantage, as public sentiment allowed them to indulge in out-door amusements and athletic sports in common with their brothers. Hence they were able to attain superior physical development, and arriving at womanhood were capable of passing through the ordeal of maternity with comparative safety."

All this is very interesting but it fails to explain the matter entirely, because we have been told that American gynecologists probably operate proportionately quite as often upon foreign-born women as upon natives. Our maternity hospitals also show quite as small mortality rates as those of Europe.

We fear Dr. Barnes has not quite struck the root of the matter.

ONE OF OUR NATIONAL PERILS.

Statistics show that our foreign-born population furnishes the great proportion of our criminal and diseased population. This is particularly striking as regards insanity.

Dr. Foster Pratt estimates that the foreign-born, in 1850, were one-tenth of the population and furnished one-seventh of the insane; in 1860, were one-eighth of the population and furnished one-fourth of the insane; in 1870, and also in 1880, were one-seventh of the population and furnished nearly one-third of the insane. In other words, the foreign-born, from 1850 to 1860, had increased nearly one hundred per cent., their insane one hundred and eighty-one per cent.; from 1860 to 1870, the foreign increase was thirty per cent., their insane nearly one hundred per cent.; from 1870 to 1880, the foreign increase was less than twenty per cent., their insane one hundred and fifty per cent. The proportion of insane to the sane among natives in 1880 was 1 to 662, among foreign-born 1 to 250.

This country is being loaded down with the defective classes of Europe. None observe this fact or can appreciate it more keenly than medical men, and it is their clear duty to call attention to the matter and arouse the proper sentiments regarding it.

News of the Week.

Annual Meeting of the N. Y. Academy of Medicine.—On November 18th the anniversary discourse will be delivered before the N. Y. Academy of Medicine, by Dr. Wm. H. Draper. That meeting is public according to chap. i., sec. 3 of the By-laws. Special invitations will be sent to any gentleman or lady, whose address will be handed to the resident librarian of the Academy, for that purpose.

A Doctor's Suicide.—Dr. Ralph L. Stone, one of the house physicians at the King's County Hospital, at Flatbush, committed suicide on Friday, of last week, by shooting himself in the forehead. No motive for the crime could be assigned, other than over-study.

Dr. Stone was twenty-two years of age, a native of Pennsylvania, and was graduated from the University of Pennsylvania a year ago.

Death from a Button in the Trachea.—While playing in one of the city parks a small boy suddenly dropped down, and in a few minutes was dead. Post-mortem discovered a large bone collar-button tightly wedged in the trachea.

The Total Number of Army Invalids in this country is now 265,854. This is presumed to represent the invalid remnant of the million and a quarter of soldiers who came home from the war over twenty-five years ago. War is a very unhealthful occupation to have made a chronic invalid of one out of perhaps every four survivors.

Dr. Julius F. Miner died at his home in Buffalo, N. Y., last week, aged sixty-three years. He was well known as a surgeon and editor. He was born in Peru, Mass., in 1823, graduated at the Albany Medical School in 1847, and settled in Buffalo in 1855. He was for several years Professor of Surgery in the Buffalo Medical College, and editor of the Buffalo *Medical and Surgical Journal*.

Tait in Texas.—A local journal points with pride to the fact that Tait's operation has been done probably fifty times in Texas. At this rate the mothers of Texas will need soon a champion again.

Another Fast.—Europe is beginning to imitate America. We have had two fasters, one doing forty days and the other, if we remember rightly, forty-five. Now Señor Succi of Italy has fasted for thirty days, and Paris has just raised up a rival in the person of M. Stefano Merlatti who is to fast fifty days "under the supervision of physicians." If he succeeds, America will still be at least even in the famine line, while retaining a proud pre-eminence in the direction of high jumps and whirlpool swimming.

Conferring the Degrees of LL.D. by Harvard.—At the jubilee celebration of Harvard University, this week, the degree of LL.D. was conferred upon three physicians, viz.:

"Joseph Leidy, anatomist, biologist, a leader and exemplar among American naturalists, Professor of Anatomy in the University of Pennsylvania."

"Silas Weir Mitchell, physician, physiologist, author."

"John Shaw Billings, Surgeon in the United States Army, student and teacher of public medicine, medical bibliographer."

Women Candidates for Membership of the Philadelphia County Medical Society received their annual rejection at a stated meeting recently. There is getting to be something really Spartan and heroic in the tenacity with which this Society defends itself against the practices and opinions of the day. The Philadelphia County Medical Society will go down in history as an illustrious exponent of conservatism. But the Goddess of Liberty is enlightening the world, and everything yields finally to it—and to the nagging of women less divine but quite as persistent.

A Monument to a Medical Hero.—Subscriptions are being received by *El Monitor Medico* de Lima, for the purpose of raising a monumental mausoleum to the memory of Dr. D. A. Carrion, whose life was given to keep his countrymen free of that terrible plague, the "verruga." Dr. Jose Mariano Macedo has published an interesting account of this awful scourge, whose ravages and character may be likened to small-pox, and some time ago we gave our readers an account of Dr. Carrion's work. The subscription-list is headed by a contribution of sixty soles from the editors of *El Monitor Médico*, and among the names already published is that of the Secretary for War of Peru, Surgeon-General D. Juan M. Echeniqul.

The Guild of St. Luke in the United States of America.—"There will be a meeting of the Guild of St. Luke, the Evangelist and Physician, at Calvary Chapel, Fourth Avenue and Twenty-first Street, New York City, at 12 M., Friday, November 19, 1886. At 2 P. M. a public service will be held in the chapel, to which physicians and medical students of the regular medical profession who are communicants of the Protestant Episcopal Church, and priests and deacons of the same, are cordially invited to be present. Addresses are expected concerning the objects and working of the Guild, by Bishop Quintard, of Tennessee, and others. (Signed) W. Thornton Parker, M. D., Provost, Newport, R. I." The object of the Guild is to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy. Physicians and medical students of the regular medical profession who are communicants of the American Church Catholic, and bishops, priests, and deacons of the Church, are cordially invited to become members. The entrance fee is $1.00, and the annual subscription fifty cents.

Dr. Koch's Museum of Hygiene in Berlin has been opened.

Medical Schools of Ohio.—We are glad to learn that the medical schools are improving their facilities. A better and more uniform standard of education obtains, both among teachers and taught, than formerly existed. A larger proportion of students have academic or scientific degrees, or have had experience as teachers. The Western Reserve Medical College, in Cleveland, is erecting an elegant college building, with all modern improvements. The Cincinnati schools are thoroughly aggressive and progressive, having a decided advantage in the large number of sick poor that enter the City and Good Samaritan Hospitals for treatment. The Columbus Medical College, the diplomas from which the State Board of Health of West Virginia now recognize, has been justly restored to a position on a par with all reputable regular institutions. The new Mount Carmel Hospital adds to its strength and usefulness. Every State in the Union acknowledges the good standing of the school.

Cholera in Vienna.—Asiatic cholera has been slowly making its way northward in Europe, and at last it appears in Vienna. Months ago it began its march at Brindisi. Passing up the western shore of the Adriatic, it tarried for a time in Venice and passed eastward to Trieste and Fiume. From the head of the Adriatic it crossed to Buda-Pesth, on the Danube, and it now prevails there and in neighboring villages.

Death of Dr. Wm. H. B. Post.—Dr. Wm. H. B. Post, a son of the late Dr. Alfred C. Post, died last week after a lingering illness.

A Doctor Blackmailed.—The case of Dr. William H. Graham, charged with criminal assault, which was tried last week at Toronto, Canada, excited intense interest. The prisoner was in the enjoyment of a respectable practice in that city last summer, when Mary Bull, a domestic, made the charge against him. Miss Bull's story was to the effect that she went to Graham's office to be treated for rheumatism, when he assaulted her. The defence proved that it was a case of blackmail, and the jury returned a verdict of not guilty.

THE DEATH OF DR. LAUER.—Dr. Eugene Lauer died of diphtheria at his home, 308 East Fifteenth Street, this city, October 31, 1886, aged forty years. He was a native of Hessen-Darmstadt, Germany, received his early education at Giesen, and was graduated in medicine from the University of Marburg in 1868. He served as assistant surgeon during the Franco-German War, and came to the United States in 1873, settling in New York City as a general practitioner. Dr. Lauer was a close student, an acute observer, and worked devotedly in his profession to the close of his life. For the past twelve years he was an active member of the German Dispensary, class of internal diseases, and although enjoying a large and lucrative practice he was as prompt and punctual in his dealings with dispensary patients as he was known to be with his private *clientèle*, and was universally held in high esteem for his skill and devotion to his patients. In the death of Dr. Lauer the community suffers the loss of a practical and intelligent medical adviser. His colleagues, especially his dispensary associates, deeply deplore the premature death of one whose integrity of character, high professional attainments, and modest manners, won the respect and esteem of all.

"THE HOSPITAL" is the title of a new journal published in London, and announced as "an institution, family, and parochial journal of hospitals, asylums, and all agencies for the care of the sick, criticism, and news." Its first numbers contain some very creepy stories and poems, and a column of "humorous" things that make one fairly weep, as at the sight of decayed old age. Besides these, there are articles pertaining to nursing, the management of hospitals, etc.

THE LATE DOCTOR JAMES G. WAKLEY, editor of *The Lancet*, gave five thousand dollars on two occasions to the hospitals. It is, we believe, a very exceptional thing for medical men to contribute large sums to the hospitals, and Dr. Wakley's example is the more noteworthy on this account.

SURGICAL OPERATIONS AND BELLEVUE HOSPITAL.—We have no doubt that the surgical staff of Bellevue Hospital will be surprised to learn from the *Cincinnati Medical Journal* that letters of questionable taste are emanating from that institution and are being published in the daily papers of the West. "Some time since," says this *Journal*, "the people of this section were regaled with the details of a laparotomy done for gunshot wound of the intestines. Later the extraordinary dexterity of some laryngologist, as displayed in the removal of a laryngeal neoplasm, was extolled in such terms as to lead to the inference that there were no laryngologists except in New York, and none there but such as were connected with Bellevue Hospital. And now we have a string of stuff about a splenectomy." We are told that the descriptions are given with so much technicality as to lead to the belief that there must have been some medical reporter at work.

THERE IS TO BE A CONVENTION OF QUACKS.—All doctors who practise without diplomas are invited to a convention at Des Moines, Io., on November 16th.—*Sanitary News.*

MALE AND FEMALE MORTALITY IN THE UNITED STATES.—In the first ten years of life male mortality is the greater. From ten to forty it is less than that among females, from forty to eighty-five it is greater again; and after eighty-five it becomes less. In England, the only period of life when the female mortality is greater is between ten and thirty-five. England is apparently a relatively healthier country for women than the United States.

TORONTO has three medical colleges—two male and one female—as the local journal puts it.

IT has been announced, we believe correctly, that there will be a reorganization of the Jefferson Medical College. The office of Dean will be abolished, and those of President and Secretary be established—Professor J. M. DaCosta, to be President, and Professor J. M. Holland, to be Secretary of the Medical Faculty. Professor Roberts Bartholow, the present Dean, will resign. —*Medical and Surgical Reporter.*

THE INTERNATIONAL SANITARY CONGRESS will open in Vienna in September, 1887. Crown Prince Rudolph and Prime Minister Von Taaffe are to be its presidents.

FEEDING INFANTS.—Dr. R. P. B. Taafe, president of the Section of Public Medicine of the British Medical Association, says in his address, that the infant on the bottle should be fed only once in three hours during the day and twice at night. The proportions of cow's milk and water up to the third month should be as one to two; from two to four months, milk and water in equal parts; from four to seven months, milk two-thirds, water one-third. A dessertspoonful of milk and sugar is to be added to each bottle. Dr. N. S. Davis, in the *Journal of the American Medical Association*, editorially criticises these directions, and says that the food thus given would be insufficient for the infant's growth. Dr. Davis's views as to the insufficiency of this diet are of interest, since the prevailing opinion is that babies suffer more from stuffing than from starvation. Bottle-fed babies, one, two, and three months old taking food every three hours will consume probably more than Dr. Davis's estimate of thirty-two ounces of milk in twenty-four hours. Assuming, however, that this amount of diluted cow's milk (which contains thirteen and a half per cent. of solids), is taken, the daily amount of solids would be about 46 grammes. If now the child took milk from the breast, during its first months of life it would get only from 500 to 752 c.ctm., or from a pint to a pint and a half of milk daily. This milk contains only about 10.5 per cent. of solids, and the child would thus get from 50 to 75 grammes of solids. Dr. Davis's figures are correct, therefore, for the first two months in life, assuming that the child takes only the thirty-two ounces daily. After the second month, however, the mixture of equal parts of cow's milk and water, with the addition of sugar of milk ought to furnish sufficient nourishment to the child, viz.: over 80 grammes daily. Children in the middle of the first year take about 1,200 to 1,300 c.ctm. of milk daily, according to Vierordt.

A NEW ANÆSTHETIC used by dentists, the Raoul-pictel disinfectant fluid, has the formula CSO_4. It has a very offensive sulphurous odor, according to Dr. J. E. Clark in the *Medical and Dental Journal.*

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 4, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE KRACKOWIZER PRIZE.

THE PRESIDENT announced that the subject for this prize was "New Observations on Osteomyelitis." The contributions must be handed in on or before January 1, 1889.

THE MOVEMENTS OF THE HEART AND THE INTESTINE ILLUSTRATED BY PHOTOGRAPHY.

DR. WILLIAM GILMAN THOMPSON read a paper on this subject, it being an additional contribution to the articles published in THE MEDICAL RECORD, March 14 and September 4, 1886, and elsewhere.

He first showed the photographic apparatus by which he was enabled to take six views per second of the heart or other object in motion. The photographs illustrated the normal pulsating heart taken in full systole and diastole, and the various intervals between. These he compared with the modifications in the movements of the heart produced by various stimuli—thermic, mechanical, and chemical. The pictures showed very accurately the effects of drugs upon the heart. The animal experimented upon was anæsthetized, a collar of white celluloid was slipped behind the heart for the purpose of obtaining a bright background, and the experiments were then begun. Some of the animals experimented upon were kittens, rabbits, rats, pigeons, dogs, lizards, and calves.

The shape of the hearts varied very considerably, but generally the longitudinal diameter exceeded the transverse one-fourth when in diastole. The movements and alterations in the form of the heart were determined principally by the thick-walled left ventricle. The most important of his later observations were :

First, that the base of the heart descended very little, if at all, in systole in most animals.

Second, it was a question among physiologists whether the long diameter of the heart shortens in passing from diastole to systole. The photographs showed much variation in this matter, but in most animals there was slight shortening. In the pigeon there was slight elongation. The transverse diameter was shortened usually twice as much as the longitudinal in full systole, and it was uniform from the base to the apex, unless interfered with by drugs. The anterior-posterior diameter was uniformly elongated by about one-eighth.

Third, the apex was uniformly tilted forward, upward, and to the right. The rotatory movement of the heart from left to right on its long axis occurred in excised hearts as it did in hearts *in situ*.

Fourth, the right ventricle lay so much higher, and was so much thinner than the left, that it had much less influence on the shape and movement of the heart, especially at the apex.

Fifth, it was a question in physiology whether the apex-beat was due to the thrust of the apex against the chest-wall or whether to pressure of the hardened anterior wall. The photographs showed that in some cases the apex-beat was due to impulse of the apex itself against the chest-wall, in others that it was due, to a greater or less degree, to the impact of the anterior wall of the heart. We could not be certain which took place in man.

The apex, as well as the whole contour of the heart, was greatly modified by drugs. Drugs whose action was to increase the systole tended to make the apex sharper, while drugs whose action was to lengthen diastole tended to make the apex blunt and round ; and if in this condition an antagonistic drug be applied, the apex as well as the whole contour of the heart usually remained much more rounded.

The surface of the heart in all the changes in size from full systole to full diastole was smooth, but it became more or less irregular by various stimuli.

The right ventricle showed greater vitality than the left, as it attempted to contract when the left had ceased to do so. The auricles contracted but very little in systole.

The photographs showed that the auricular systole overlapped the ventricular in point of time.

The extent of the movement of the heart, as a whole, bore no definite relation to its size ; it depended upon the suddenness or force of the systole, or amount of work of the heart.

He thought the coronary arteries received blood during diastole, and perhaps also during systole.

The photographs showed that the contraction of the circular fibres of the heart was uniform and symmetrical. The papillary muscles were shown to have independent contractile power.

Of the stimulants which he had applied to the heart, the strongest was heat. Of the chemicals, Glonoin seemed to be the most active. Chloral produced marked diastole.

Dr. Thompson also exhibited photographs of the intestines, which showed that there was peristaltic action both toward the pylorus and toward the anus, also contraction on irritation, producing stricture to a greater or less extent, also pendulum movement of the intestines. All these motions were frequently observed to take place simultaneously.

The paper was discussed by Dr. A. H. Smith, and by the President, who expressed satisfaction at such accurate and valuable investigations made in this country.

DR. W. GILL WYLIE then read the following paper :

SIX CASES OF LAPAROTOMY—INTESTINAL OBSTRUCTION, PERITYPHLITIS, AND TUBERCULAR PERITONITIS, WITH REMARKS.

Out of sixty-seven laparotomies operated upon since June, 1885, I have selected six cases that are not gynecological to report. Gynecologists have lately done their part in advancing abdominal surgery, and their large experience in seeing and examining the peritoneal cavity of living women gives them some advantages over the general surgeon in dealing with any kind of abdominal tumors. On the other hand, the gynecologist who is not a good and well-trained surgeon would be wise in keeping his hands out of the peritoneal cavity. I would much rather risk a good surgeon in an ovariotomy than a gynecologist without surgical training.

LAPAROTOMY FOR COMPLETE INTESTINAL OBSTRUCTION.

Mrs. O——, fifty years of age, married ; has had three children and one miscarriage ; last pregnant twenty years ago ; menses ceased four years ago. She was always a delicate woman. Eleven years ago a fibroid tumor was discovered, and examination with a sound caused a violent attack of peritonitis. She was many weeks in bed, and more or less bedridden for a year. Since then she has had great trouble in getting her bowels moved and has not been strong. She had not felt as well as usual for several months past. Previous to October 6th she had more or less abdominal distention with colicky pains. On that day she took an unusually long walk, and during the night a violent colic with vomiting came on. Half a grain of morphine was given hypodermatically and half a grain by mouth before she was comfortable. The vomiting continued, but no movement could be forced by simple laxatives and enemas. The pain was such that half a grain of morphine was given every six hours. Ox-gall enemas failed to cause a movement.

October 9th, Dr. Fessenden N. Otis asked me to see the patient with him and Dr. Ward, the family physician.

After getting an outline of the above history I saw the patient. She was quiet. Pulse 85 and temperature 99°. She seemed very listless. Abdomen distended, but not very tense; the outline of distended intestines could be plainly felt and seen through the thin abdominal walls. The material vomited was dark and shreddy in appearance, but was not stercoraceous. My diagnosis was intestinal obstruction. Dr. Otis agreed. Purgative pills were ordered to be given and turpentine and ox-gall enemas used, and every effort made to secure a movement, without injuring the patient, for twenty hours. If no movement or gas was secured, laparotomy was advised.

October 10th.—Patient's condition about the same, but the listless condition was more marked. The pupils were not contracted, but she was drowsy and heavy. As had been the case for four days, the slightest thing given by the mouth caused vomiting. The abdomen was less distended, but not even gas had been passed per rectum.

The patient was etherized by Dr. N. D. Jones, and, assisted by Dr. R. H. Wylie and Dr. M. Crandall, I proceeded to operate, in the presence of Drs. Otis, Ward, and others. I made a small incision in the median line and introduced my index-finger. I broke up several peritoneal cysts, from which escaped ten or twelve ounces of reddish serous fluid. The pelvis was filled by a large uterine fibroid, and the intestines were adherent to the upper border. One of the peritoneal cysts pressed directly on the descending colon, but I was not satisfied that it was sufficient to account for the intestinal obstruction. While making further examination on the right side, near the ileum, I discovered a mass of intestines rematted together, and at first thought it a malignant growth. The incision was extended seven or eight inches. Chocolate-colored intestines bulged up through the incision. Most of the intestines were then turned out of the abdomen and covered with towels wrung out in hot water. The cause of the obstruction was easily brought into view. A loop of the ileum some distance above the cæcum had been drawn down and firmly bound to the side, deep in the pelvis, by a band or cord of lymph as thick as a lead-pencil. Above this point there was great distention from complete occlusion of the lumen of the gut. For a space of an inch and a half around the adhesion the intestine was black from congestion and extravasation. I put the band on the stretch, caught it with pressure-forceps, tied the end attached to the pelvis, and cut between ligature and forceps. The loop of intestine at once sprang up in place and it was evident that the lumen was free. A careful examination showed no slough, but the intestine at the point of adhesion was so black that for a time we were in doubt. There were numerous other bands, but none constricted the intestines. At one or two points the intestines were flattened by adhesions on the surface of the fibroid. These were loosened. The fibroid involved the uterus and both broad ligaments, and would have been difficult to remove. As it was evidently undergoing atrophy it was not disturbed. The intestines were with considerable difficulty replaced in the abdomen without any puncturing for the escape of gas. The wound was closed in the usual way and an antiseptic dressing applied. After the operation an enema was given and some dark fluid came away. Ten hours later the patient had a copious liquid stool. There was some reaction, but the highest temperature was 101°. The vomiting ceased and she had very little pain. She has made an uninterrupted recovery, and now has less trouble with her bowels than at any time for ten years. It is probable that there had been more or less obstruction since the first attack of peritonitis, and that the attack of October 6th was due to complete occlusion of the lumen at a point where there had been for years more or less obstruction. The absence of severe or alarming subjective symptoms was partly due to the fact that the patient's condition was not aggravated by too much medication, but the contrast between a normal pulse and temperature, etc., and the critical local condition found when the abdomen was opened was indeed very marked.

Remarks.—This case goes far to confirm my belief that some of the cases heretofore called peritonitis without fever have been in reality cases of intestinal obstruction. I am satisfied that intestinal obstruction occurs after laparotomy for the removal of tumors, etc., more frequently than is recognized. Most of these nature overcomes, and the patients recover; but many cases with vomiting and abdominal distention have died from intestinal obstruction that have been treated for peritonitis. Until very recently, laparotomists followed the orthodox practice of keeping the bowels quiet after laparotomy, and gave opium as in peritonitis, and left the bowels constipated for five or six days at least, no matter how much tympanites and vomiting there might be. I am not yet ready to go as far as one laparotomist, and say that a brisk purgative will stop peritonitis or sepsis; but, from experience, I am certain that it is safe to give turpentine or ox-gall enemas for tympanites after twenty-four or forty-eight hours have elapsed after laparotomy, and that an early movement of the bowels will, when indicated, relieve abdominal distention, stop vomiting, and often lower a rising temperature. It is plain that intestinal obstruction would be more likely to occur, or, at least, become more complete and difficult to relieve, if time is given for the adhesion to strengthen and contract. I have now adopted the plan of moving the bowels any time after twenty-four hours, whenever indicated by tympanites, vomiting, or rise of temperature, and on the third or fourth day in all cases after laparotomy.

INTESTINAL OBSTRUCTION BY LYMPH-BANDS.

L. S——, aged twenty-five, widow, admitted to my ward in Bellevue, May 21, 1885. Menstruates regularly, but with some pain. Had one miscarriage six months ago; since then she has had dragging pains in back and in both iliac fossæ. She has more or less swelling on left side of abdomen, and for many weeks past has been obstinately constipated and became very much swollen. She has had some fever and tenderness. Her appetite is poor and she is very weak. The uterus is more or less fixed by adhesions, but the distention of abdomen prevents a satisfactory examination. She was kept in bed and every effort made to regulate bowels.

June 28th.—There being no improvement, abdominal incision was decided upon. The usual median incision was made. Extensive adhesions were found involving intestines and omentum. A mass of indurated tissue partly filled the left iliac fossa. It was smooth and involved the broad ligament. There was nothing to indicate where the tubes and ovaries were. Some inguinal and mesenteric glands were distinctly enlarged, and a diagnosis of syphilis or malignant disease was made. In searching for the cause of the intestinal obstruction some very firm bands of lymph were found constricting the colon just above the sigmoid flexure. These were broken up and the abdominal wound closed. Patient had slight rise of temperature, but her bowels moved without difficulty and the abdominal distention disappeared, and August 3d she was discharged well, having gained flesh and color, and appeared perfectly healthy.

OPERATION FOR PERITYPHLITIS.

W. B——, twenty-two years of age, negro, admitted to Bellevue August 23, 1885. In the absence of Dr. E. D. Hudson, Jr., the attending physician, I was asked to see the case August 24th. Two weeks previously he had had some pain in right iliac fossa; it was colicky in character and it steadily grew worse. Since then bowels have been irregular and constipated, and for the past week abdomen has steadily grown larger. Three days ago he had a severe chill, followed by great local pain and high fever. Since then he has had several slight chills, and now has a temperature of

103°. At times has profuse sweating. The abdominal wall near the crest of the ilium, for a space of several inches, is indurated (not boggy), and there is some dullness on percussion, but is not very well marked. From the subjective symptoms and the indurated feel I diagnosed suppurative perityphlitis, and proposed operation. Dr. Janeway and Dr. L. A. Stimpson saw the case with me, but both thought an operation was not indicated. Later in the day the late Dr. McBride saw the case and agreed with me as to advisability of operation. Selecting the point of greatest induration and dulness, a little below the crest of the ilium, I made an incision through the skin and muscles about three inches long. The muscles were not at all œdematous, but were grayish in color. I was careful to open the abdomen at the point where adhesions of the peritoneum to the abdominal wall were indicated. As I reached the peritoneum it was forced up through the wound by the great intra-abdominal tension, and when it was punctured stinking pus and gas escaped in a strong jet, and about ten ounces of pus was evacuated. The opening was carefully enlarged and the cavity examined with the index-finger. The intestines were firmly matted together about the cæcum, but no foreign body was found. The cavity was washed out with bichloride solution, 1 to 5,000, a double drainage-tube introduced and the wound closed around it. The cavity was occasionally washed out for a few days and as it closed the double tube was gradually shortened. Recovery was complete in three weeks.

EXPLORATORY INCISION—TUBERCULAR PERITONITIS.

Mary C——, thirty years of age, married; five children, one miscarriage. Menstruation normal before marriage but painful afterward. Has not menstruated since last pregnancy, two years ago. During last lactation had epistaxis monthly. For last year has had attacks of pain in the abdomen, and four months ago noticed a small tumor in left inguinal region, which has increased up to now. She has become emaciated in last three months. There is a large mass which extends above the umbilicus; no tympanitic sound can be obtained anteriorly, and it is undoubtedly largely fluid. After preparatory treatment the patient, who had improved, was operated upon April 12, 1886. As soon as the peritoneum was opened about two quarts of a yellowish but nearly clear fluid escaped. After breaking up many adhesions a semi-solid mass presented, dotted here and there with numerous grayish-white nodules a sixteenth of an inch in diameter. The tumor or mass was aspirated with a fine hypodermatic needle several times, but no fluid was obtained. After loosening up some more adhesions in order to find out, if possible, the nature of the mass, it was finally decided that it was tubercular in nature, involving the intestines, etc. Two drainage-tubes were put in and the cavity closed. The patient recovered and was discharged May 1st, very much improved in her general condition. Several of the nodules were removed, but the pathologist came to no definite conclusion as to their nature. After leaving the hospital the patient enjoyed better health for about a month, but her abdomen increased in size, and eventually a sinus was established in the scar of the wound, which discharged a yellowish flaky fluid. Her temperature during this time ranged between 102° and 104°. Finally there was ulceration into the intestines, and the patient died about the middle of July, 1886.

TUBERCULAR PERITONITIS.

Kate McG——, fifty-four years of age; had five children. Menses stopped about three years ago, but for several years before that she had suffered much from menorrhagia. Parental history negative. For about two months she has had no appetite and has been drowsy, and five weeks ago she noticed a swelling in the hypogastrium. After one week there was some pain. There is a diffuse enlargement of the abdomen which gives a fluid wave on palpation. The distention very great and walls look as though they might slough; no tympanitic sound is obtained by percussion anteriorly. Abdominal section.

May 26, 1886.—On opening the peritoneum there was a gush of clear, greenish, but viscid, fluid. On introducing the finger the uterus could easily be felt and mapped out, showing that the fluid came from the peritoneal cavity. There were numerous adhesions between the intestines, omentum, and parietal peritoneum; numerous small nodules indicate tubercular disease. The cavity was washed out with mercuric bichloride (1 to 10,000) and a drain inserted. Temperature remained subnormal for twelve hours, but the patient slowly recovered.

June 22d.—General condition better. There is a slight serous oozing from a small sinus in wound, but patient is discharged at own request in an improved condition.

EXPLORATORY INCISION.

Ann L——, Irish, aged seventy-four, widow, admitted October 22d. About three months ago abdomen began to enlarge on the left side, and one month later on the right. This has been accompanied by general abdominal pains. During last few days it has increased very rapidly. Abdomen is so distended with fluid that palpation gives no results. Patient is slightly jaundiced, but no history of stomachic trouble can be obtained.

October 23d median incision was made. When peritoneum was reached, trocar was carefully introduced into abdomen, and about three gallons of serous fluid, slightly bile-stained, were drawn off. After this nodular masses in liver and omentum could be felt and diagnosis of cancer was made. Patient recovered well from operation. Abdomen began rapidly to enlarge again.

October 26th she was discharged at her own request, improved.

In Germany permanent drainage in tubercular peritonitis has been lately recommended and practised. These two cases were certainly improved by opening and draining as long as there was any fluid to escape. The irregular feel of the mass—parts being firm, others elastic and yielding—are somewhat characteristic. The almost complete fixation of the intestines by adherent and thickened mesentery accounts for the absence of tympanites anteriorly. Since we have learned the great importance of perfect cleanliness and the proper use of antiseptics, exploratory laparotomy is less dangerous than tapping in doubtful cases of abdominal tumors. The trocar probably has been of some service, but in the light of to-day, so far as abdominal tumors are concerned, many useful lives would be saved if there were no such thing as a trocar.

To-day a physician from Central New York brought to me a woman enormously distended with an ovarian tumor, and said she had been tapped six times, and she is now so bad he had refused to tap her again. He spoke of two other cases at home; from one of these a doctor had drawn seven hundred and fifty pounds of fluid in about twenty tappings.

He also said: "You cured one tumor case from our county last year, and if this one gets well, we will have you come up and operate on one that is too sick to be moved." The case he referred to had been tapped ten times, and was so feeble that it was only by the greatest care and good luck that she recovered.

Last week I was called to Cooperstown, N. Y., to see a case of puerperal convulsions. While there I was asked to see a lady suffering from a large tumor. A New York doctor had, several months ago, pronounced it a cystic tumor of the liver that could not be removed, etc. Dr. Crane, of Richfield Springs, was called, and had diagnosed ovarian tumor, but thought her too weak to operate upon. She had been tapped four times. I telegraphed for one of my assistants and instruments, and removed a suppurating ovarian tumor of eighty pounds. The patient had a very feeble pulse—120 to 140—and some septic fever, but she is still alive, now on the sixth day after the operation.

As long as these unfortunate women are tapped, they will not seek those prepared to operate upon them and give them the only chance for permanent relief, except by death. Laparotomists in this country can never get as good results as operators in Europe until doctors stop this miserable, mistaken, and murderous practice of tapping abdominal tumors. If they would refuse to give temporary relief by tapping, it would be an easy task to persuade the patient to consent to an operation, which, if done early by an expert, would save at least nineteen out of twenty. I am fully aware that the patients themselves or their relations are often intractable, and that until very recently the death-rate after laparotomy in this country has been very great.

THE ANNIVERSARY ADDRESS, NOVEMBER 18, 1886.

THE PRESIDENT announced that the anniversary address would be delivered at the next meeting by Dr. William H. Draper. He also spoke of the necessity for a new building, and said a sum of two hundred and fifty thousand or three hundred thousand dollars would be necessary to commence it. In addition to the gifts to the Academy recently announced, there would soon be a donation of seventy thousand dollars. The importance of establishing a building fund was apparent, and when he put Dr. Agnew's motion to establish a building fund, it was unanimously carried.

The Academy then adjourned.

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE EQUINE ORIGIN OF TETANUS—THE ANALOGY OF TETANUS WITH CHOLERA—THE FUTILITY OF SPECIFIC TREATMENT—THE HINDOO METHOD—THE DISEASE INFECTIOUS IN THE HORSE AND IN MAN—HORSE-MEN VERY LIABLE TO THE DISEASE—THE INDICATIONS AND CONTRA-INDICATIONS OF LITHOTRITY—DR. POZZI DECORATED.

Paris, October 25, 1886.

THE Congrès François de Chirurgie held its First Annual Meeting on Monday, the 18th inst., under the presidency of Professor Ollier, the well-known surgeon of Lyons. It took place in the large amphitheatre of the Paris School of Medicine, and was well attended. The papers that were read on that occasion were of varying interest, but it is impossible, within the limits of an ordinary letter, to do more than refer to some of them. The novel theory of the equine origin in the etiology of tetanus in the human subject, lately propounded elsewhere by Professor Verneuil, was developed by Drs. Thiriar, of Brussels; Doyen, of Rheims; Larger, of Paris, and by Professor Verneuil himself. Dr. Blanc, of Bombay, is not only in favor of this new theory of the etiology of tetanus, but, he finds in it, curiously enough, an analogy with Asiatic cholera in its origin and pathogeny. The author founds his theory on sixty cases of tetanus observed by him at Bombay, where the disease is said to be very prevalent. He pushes the analogy between the two affections still further, by comparing their symptomatology and the seasons of the year in which they occur, at which time they reign simultaneously.

With regard to the prevalence of these two affections, the author divides the year, at Bombay, into three seasons: The cold season, from October 15th to March 15th; the hot season, from March 15th to June 15th; the rain season, from June 15th to October 15th. Tetanus reigns principally at the height of the hot season, in the month of May. It appears with equal frequency during the hot seasons which interrupt the tropical rains, and it is also at these divers periods that the cholera is developed. At Bombay, according to the same author, three distinct forms of tetanus are observed: Acute or hyper-acute tetanus, which lasts three days on an average and carries off the patient with a temperature raised as high as 108° to 110° F.; subacute tetanus, which proves fatal between the tenth and twelfth days, by respiratory spasm ordinarily. The temperature in these cases is irregular in character and does not augment progressively. It may remain low. Chronic tetanus lasts from thirty to sixty days, and remains apyretic. Acute tetanus is always fatal, the subacute often; chronic tetanus ordinarily cures. As regards treatment, Dr. Blanc stated that he had tried all kinds of drugs without finding a single specific. Some of those in ordinary use in such cases, such, for instance, as the bromide of potassium, particularly when the latter is given in large doses, are dangerous, whilst others are inefficaceous. All he does is to isolate the patient for quietude and to give him a little chloral to calm him. The rest of the treatment consists more in diet than in medication.

The Hindoo doctors pay great attention to the bowels, and treat their tetanic patients with purgatives, and, it is said, with success. He is quite in accord with Professor Verneuil as to the equine origin of tetanus, and observed that at Bombay the disease is as frequent among horses as among men, and that the propagation of the malady is effected as much through the organism intact as through an external wound. The pathogenic origin of tetanus, as of cholera, resides in the water. Both the diseases are produced in the hot season, when, the wells being dry, infiltration takes place from the neighboring soil, the water of which contains the microbes or germs of these affections, and those who drink of this water drink tetanus. In fine, concludes the author of this remarkable paper, in closely studying the symptoms of tetanus and cholera, one would find more than one striking analogy between them, and he puts the question, Whether the muscular cramps of tetanic patients are not identical with those of patients suffering from cholera? I may here recall Professor Verneuil's theory, who reiterated the opinion expressed by him in a recent issue of the *Gazette Hebdomadaire de Médecine et de Chirurgie*, that tetanus was certainly infectious in the horse and also in man, and that the disease is transmissible from the horse to man. He adduces the following reasons in support of his opinion: 1. It is a common thing to hear of men living in contact with horses suffering from tetanus and dying of the disease. 2. Tetanus in man results oftenest from injuries caused by horses. 3. Horse-dealers, grooms, and stable-men are more often than others the subjects of this malady. 4. Wounds in contact with a soil contaminated by the dejections of horses are more often followed by tetanus than others.

Dr. Reliquet read a paper at the same meeting on the indications and contra-indications of lithotrity, which may be summed up as follows: As regards the stone, its hardness and size are considered contra-indications. With regard to the urinary passages, certain pathological conditions, such as induration of the urethra, oppose the introduction of the catheter. Concerning the bladder, the state of this organ is very important to consider in regard to the contra-indications—the form in cul-de-sac of the bottom of the bladder, the immobilization of the stone between folds of the mucous membrane or against the parietes of the organ. The flattening of the stone must also be taken into account, some of them being of the form of a cake and are most difficult to grasp. The author then formulates the general conclusion thus: When the stone is not movable lithotrity must not be thought of.

The last meeting of the present session was held on Sunday last and, as usual, was wound up by a banquet in the evening. There are several other papers worthy of notice abstracts of which I shall send you in my next.

As a graceful compliment to the French Surgical Con-

gress Dr. Pozzi, the General Secretary and originator of the Society, has been created Chevalier of the Legion of Honor.

OUR LONDON LETTER.

(From our special Correspondent.)

THE LONDON SCHOOLS—THE LATE MR. SAMPSON GAMGEE—EXPULSION OF A MEMBER FROM THE COLLEGE OF SURGEONS—MEETING OF MEMBERS—HARVEIAN ORATION—OPENING OF THE MEDICAL SOCIETY OF LONDON—PRESIDENT'S ADDRESS—SOCIETY OF OFFICERS OF HEALTH—DR. ALFRED HILL'S ADDRESS.—THE LIGATURE OF ARTERIES—EXTRA-UTERINE GESTATION—THREE HUNDRED CASES OF OVARIOTOMY—MODERN MIDWIFERY FADS—THE COUNCIL ELECTION.

LONDON, October [illegible], 1886.

THE new entries, so far as ascertained, are below the average, and many of the teachers seem lugubrious about it. At the London Hospital there is an actual falling off, although a magnificent new college has been built, and provided with all the modern improvements for study. Guy's is little better off, and University College has fewer entries than St. Thomas's or St. Bartholomew's. The last leads the way with a total of 138 students, of which 125 have entered for the full course. While London teachers lament, Scotch I suppose will be rejoicing, and the little school of Newcastle-on-Tyne is continually increasing its students on account of its being connected with the University of Durham. Unless our London professors make a stronger effort to enable their students to obtain the title of "Doctor," this migration will still go on.

The recent death of Mr. Sampson Gamgee is greatly to be deplored, for he is much missed at the present crisis, as he was one of the ablest and most zealous medical reformers. He was also an accomplished linguist, and a trusted contributor to the *Lancet*. He entered with great zeal into various philanthropic enterprises, and was the originator of the "Hospital Saturday Movement." His fame as a surgeon will be known well to your readers.

The College of Surgeons has removed the name of a member named Alabone from its list, on account of the disgraceful advertisements which he issued. The college has seldom exercised this power, although the council has often had its attention directed to advertisements still more discreditable. Generally speaking, the council troubles nothing about its members after it has extracted the fees for admission. Perhaps they are about to assert that the action of the members reflects credit or discredit upon the college. Such a conclusion will give increased impetus to the demand of the members for representation. In respect to this last demand a meeting of fellows and members is to be held next month, when the question of the position of members, their rights and privileges, will be discussed.

Last Monday the Harveian oration at the College of Physicians was delivered by Dr. Pavy. This oration is delivered annually in accordance with the condition on which Harvey conveyed the gift of his estate to the college. The orator is required to commemorate all benefactors of the college and to exhort others to imitate them, with further exhortation "to search and study out the secrets of nature by way of experiment." Dr. Pavy, accordingly, commenced by noting a recent addition of income, raising the Croonian endowment from £10 to £200, and stated the manner in which the college has determined to expend this money. We are to have more Croonian lectures, and such sums as the college thinks fit are to be applied to the promotion of scientific investigation. The orator then stated that the late Dr. Gavin Milroy had bequeathed £2,000 for the purpose of founding a lecture on State Medicine and Public Hygiene, and he has left behind him an elaborate code of suggestions for the council of the college in the administration of his trust. Dr. Pavy then addressed himself to the exhortation to experiment. He began by placing before his hearers a view of Harvey's own method of work, and followed this up by an account of recent experimental researches. We were carried through clouds of microbes and the diseases they are believed to produce, on to Pasteur's last great experiment with regard to rabies. Here, of course, there is more uncertainty at present, for the microbe of rabies has not been isolated, still less cultivated, and Pasteur's views are by no means generally accepted. Other great experimenters have not confirmed them, and the professional mind seems to be waiting the result of the huge experiment which is being carried on. Dr. Pavy told us he had witnessed Pasteur's work in Paris, and though he did not venture to deny that our judgment is for the present very properly suspended, he said that the results tell decidedly in favor of Pasteur's view.

On Monday evening the Medical Society of London commenced its meetings with an interesting and eloquent address by the president, Mr. Bindwell Carter. He has always something fresh and striking to say, and he delivered himself of a contrast between the other professions and medicine in a charming and agreeable manner. The contentions of lawyers, he said, might conduce to acuteness of perception, but not to the discovery of truth. Theologians of various creeds disputed about the meaning of words, producing, as Dugald Stewart said, "a lively curiosity to know what is said, without a corresponding desire to know what is true." Politicians urged their followers to place confidence in public men in whom they had themselves long lost their confidence. The time cannot be distant when the medical profession will be acknowledged to have shown the right path of mental training, for Mr. Carter held that the study of medical science is calculated to ennoble the moral as well as the intellectual being of man.

Dr. Alfred Hill presided over the first meeting of the Society of Officers of Health, and devoted his address to a consideration of the various methods of disposing of sewage and house refuse. He believes that all intercepting or conservancy methods are false in principle, and on a large scale hurtful in practice; that the water carriage system is to be preferred to every other for convenience, health, and economy; and that where it is impracticable, the system providing the most complete absorption and deodorization should be preferred.

[illegible], October [illegible], 1886.

AT the last meeting of the Clinical Society a discussion took place as to the ligature of arteries and the material to be employed for ligatures. No unanimity of opinion prevailed, but it seemed clear, from the experiments of Messrs. Ballance and Edwards, that the internal coats of the artery need not be divided. Mr. Thomas Smith thought that they were not divided when kangaroo tendon was used. In ligaturing an artery he applies two ligatures and divides the artery between, following in this the practice of Celsus, Galen, Paulus, Ægineta, and Ambrose Paré. The clove hitch, he said, could make a very firm knot.

At the meeting of the Royal Medical and Chirurgical Society, on Tuesday last (October 26th), a unique case of extra-uterine gestation was described by Dr. Gervis, Obstetric Physician to St. Thomas' Hospital. Before admission the patient had suffered from severe pain in the abdomen, and there had been offensive discharges from the vagina. There had been no uterine hemorrhage. On examination an ill-defined swelling was found in the hypogastric region. The lower segment of the uterus appeared to be expanded and fixed. Offensive discharge, consisting of muscular tissue, etc., was going on from the vagina, and the shaft of a fœtal tibia was subsequently passed. On examination *per vaginam* the

decomposing body of a small fœtus was found transversely wedged in the uterine cavity. It could not be extracted. The patient died, and on post-mortem examination it was found that there had been an extra-uterine gestation occupying Douglas' pouch. The sac was found to communicate both with the small intestine and the uterus. The discharge of portions of the fœtus through the uterus had caused a doubt to be thrown upon the diagnosis first made, as it was unique for the sac to burst into the uterus.

Mr. Knowsley Thornton then read a paper on "Ovariotomy," in which he detailed the histories of three hundred cases. Some discussion followed the reading of the paper.

Sir Spencer Wells, alluding to the fact that among Mr. Thornton's cases there were only nine in which the Fallopian tubes were diseased, said this confirmed his own opinion that tubal disease was rare. Mr. Alban Doran referred to the tapping of cysts in the broad ligament, and said he thought it was not justifiable. Dr. Playfair said the spray was not a necessary adjunct to antiseptic ovariotomy, but its use involved the complete and minute carrying out of antiseptic precautions, and in this consisted its value. Dr. Gervis, alluding to the plan of washing out the peritoneum with water, said that it originated with the Americans, who even anticipated the Germans. Mr. Thornton briefly replied. The use of the ice-cap and of cold sponging he considered to be of great value for keeping the temperature within bounds, but antiseptics had greatly lessened the need of them. Drainage-tubes were valuable, but he had never found the reopening of a wound, with the insertion of a drainage-tube, to be successful. He did not believe in tapping simple cysts. The spray was useful, and washing the wound out with water was very valuable. In cases of pyo-salpinx the hot water broke up the little particles of matter lodged in various corners and crevices, and the resulting atoms were easily absorbed or dispersed.

The third stage of labor cannot be said nowadays to lack attention, for some disciples of obstetrics would fain have us believe it merits even more care and notice than the preceding stages. Of late years British obstetricians, at any rate, have taught clearly the importance of paying due attention to this stage. Some of the younger teachers of obstetrics in London are now urging the importance of making a minute and careful examination of the after-birth in all cases of labor. This is to include not only an examination of the placenta to ascertain its entirety, freedom from disease, size, and weight, but also the exact position of the spot at which the cord is attached, the position being exactly ascertained by measurements when the attachment of the cord is eccentric.

The greatest thickness of the placenta is to be ascertained, and a record taken of the position of the site at which the thickness is greatest. The length of the cord, absence or presence of knots, and normality of its surface are to be ascertained. The membranes are to be examined as to entirety, site at which rupture occurred, nature of rupture, smoothness, and freedom from disease. I understand that at one lying-in hospital in London (the General Lying-in Hospital, York Road, Lambeth) all these particulars are religiously obtained in every case of labor, and a record taken. To ordinary practitioners such minutiæ must appear needless and absurd, and they are not likely to adopt the views of the new school. I presume the visiting physicians to the hospital in question (Drs. Champneys and John Williams) cannot be overburdened with private practice, or they would be able to rise above such trivialities.

Canvassing is still actively going on by the numerous candidates for the three seats in the Medical Council. A curious feature of the election is that some fresh candidates are coming forward at almost the last moment. A very discreditable feature is the unfair use which has been made of the machinery of the British Medical Association to advance the interests of certain candidates. Although the Brighton meeting refused to allow the council to constitute itself a caucus for the selection of candidates the council has passed an official resolution favoring the candidature of two of their own number, and this resolution is prominently advertised in their journal. After what passed at Brighton no *official* action, at any rate, should have been taken.

THE LONG-BEARD HABIT.

To the Editor of The Medical Record.

Sir: It appears to me that your correspondent, Dr. R. J. Curtiss, lacks the sense of humor and of proportion. In his argument for beards he seems to lay most stress upon the question of diverting physiological energies, and says nothing about the serious aspect of the long beard, viz., its power of carrying contagion. I fully agree with your editorial upon this point. Long beards are dangerous as infection-carriers. I am sure that I know of several cases in which infective fevers have been carried by their means, and I think that every physician in large general practice must know of similar cases. I trust you will renew your attack on the long beards until they are shortened or cut off. Yours,

ANITAS.

THE TREATMENT OF VARICOCELE.

To the Editor of The Medical Record.

Sir: I have read with much interest the article by Dr. R. F. Weir on "The Treatment of Varicocele," read before the New York Academy of Medicine, and published in your journal of March 20, 1886. During the past ten years I have made a special study of the disease and its treatment, and have practised nearly all the operations suggested or named by the author of paper referred to, and my experience and observation prompt me to say most emphatically that, in my opinion, there is but one operation or treatment we can rely on for the radical cure of varicocele, and that is, *excision of the scrotum*, so as to secure reliable support for the testicles and their appendages.

A case that has been under my observation since 1872 will, I think, bear me out in my assertion. The gentleman—at that time a medical student, and now a practitioner in this city—was first operated upon by the Gagnele's method. Silver-wire ligatures were passed subcutaneously around the varicosed veins about one inch apart, and secured by twisting on metal buttons. They were allowed to remain in position six days. Ten days after their removal the varicocele was found to be worse than before the operation. Eighteen months later the young man again submitted to the same operation, this time having the veins divided with a tenotomy knife at a point midway between the subcutaneous ligatures. This operation seemed to have benefited the patient somewhat; still, in 1876 he found it necessary to again be operated upon. Under the advice of the late Dr. Paul Eve, of Nashville, Tenn., the young man was operated upon by the radical or excision method, about two and a half inches of scrotum being removed by Dr. Eve. The result was entire relief, which has continued up to the present time. The young physician practises his profession regularly, and experiences no inconvenience from his former varicocele at all. A careful examination reveals a slight enlargement of the veins, but the parts are so thoroughly supported by the contracted scrotum that no suspensory bandage or other support is necessary.

Since this case came under my observation I have

positively refused at all times to attempt to cure varicocele by any other method, and my success has been uniform. Until a short time ago I considered the operation, of course, a dangerous one, the hemorrhage being at times alarming. To overcome this difficulty I devised a clamp, which is shown (half-size) in the accompanying cut.

All the scrotal clamps heretofore invented have only served as *guides* to the surgeon, and their removal after cutting is always followed by profuse hemorrhage. With my clamp the operation is completed before its removal, and there is absolutely no hemorrhage. Another objection to other clamps has been the "roughened" or "serrated" inside surface, to prevent slipping, which produces more or less laceration or contusion of the parts. To prevent slipping, on the inside of blades of my clamp are longitudinal grooves which receive a fold of scrotum, thus preventing any slipping whatever, and no bruising of the parts is to be encountered. I find that the cut edges, when the neighboring tissues are not bruised, always heal by first intention. Ordinarily I employ a woven-silk ligature, and apply simple carbolic dressings; but recently I have had splendid success by the antiseptic method. When the latter is employed I use the juniperized animal ligature, wash parts with 1,000 bichloride mercury solution, dress wound with iodoform cotton and gauze, held in place by figure-of-eight bandage. This dressing I allow to remain in position eight days. On its removal the wound is found to have healed by first intention, and with little or no suppuration.

In offering my clamp to the profession I feel confident that its use will soon place excision of the scrotum as a radical cure for varicocele in the category of minor surgery.

Very respectfully,

FERDINAND KING, M.D.

P.S.—I also use my clamp in performing circumcision, and find it indispensable. I always use a thread long enough for two interrupted stitches, to be cut in the middle before tying, after removal of the clamp.

F. K.

ATLANTA, GA.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 31 to November 6, 1886.

CLEMENTS, B. A., Major and Surgeon. Died November 1, 1886, at Fort Leavenworth, Kan.

MIDDLETON, J. V. D., Major and Surgeon. Ordered from Department of the Missouri to David's Island, New York Harbor. S. O. 252, A. G. O., October 29, 1886.

WOODHULL, A. A., Major and Surgeon. Ordered from David's Island, New York Harbor, to Department of the Missouri. S. O. 252, A. G. O., October 29, 1886.

WILLIAMS, J. W., Major and Surgeon. Ordered from Department of Colorado to Department of the East. S. O. 252, A. G. O., October 29, 1886.

CORSON, J. K., Captain and Assistant Surgeon. Ordered from Jefferson Barracks, Mo., to Department of Colorado upon expiration of present leave of absence. S. O. 252, A. G. O., October 29, 1886.

TURRILL, H. S., Captain and Assistant Surgeon. Ordered from Department of the Platte to Department of Colorado. S. O. 252, A. G. O., October 29, 1886.

MUNDAY, BENJAMIN, First Lieutenant and Assistant Surgeon. Ordered from Department of Colorado to Jefferson Barracks, Mo. S. O. 252, A. G. O., October 29, 1886.

OWEN, WILLIAM O., JR., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Schuyler, New York Harbor, and ordered for duty as Post Surgeon, Plattsburg Barracks, N. Y. S. O. 170, Division of the Atlantic, October 29, 1886.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Ordered from Fort McIntosh, Tex., to Post of San Antonio, Tex. S. O. 152, Department of Texas, October 27, 1886.

HARRIS, H. S. T., First Lieutenant and Assistant Surgeon. Ordered from Post of San Antonio, Tex., to Fort Clark, Tex. S. O. 152, Department of Texas, October 27, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 6, 1886.

NEILSON, J. L., Surgeon. Ordered to the Receiving Ship New Hampshire.

DRENNAN, M. C., Surgeon. Detached from the Receiving Ship New Hampshire and granted one year's leave.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 6, 1886:

	Cases.	Deaths.
Typhus fever	[illegible]	0
Typhoid fever	20	2
Scarlet fever	15	1
Cerebro-spinal meningit	3	2
Measles	122	1
Diphtheria	1	[illegible]
Small-pox	1	0
Yellow fever	0	0

THE UBIQUITOUS BACILLUS.—The occurrence of pathogenic micro-organisms in the synovial fluid of inflamed joints, due to diseases of different kinds—as, for example, pneumonia, diphtheria, erysipelas, and glanders—having been amply demonstrated by Schüller, and no information existing in medical literature as to the examination of the synovia of patients suffering from infectious diseases without concomitant articular inflammation, Dr. Smirnoff, of Kazan, wished to discover whether in all cases of infectious disease pathogenic schizomycetes migrate into the joints, or whether this occurs only sometimes (*The Lancet*). He therefore made a series of observations on the bodies of patients who had died of various diseases, but had had no articular inflammation. As a rule the knee-joint was chosen for examination, though in cases of great emaciation from phthisis, where the fluid in the knee was too small in quantity for the purpose, the shoulder-joint was selected instead. It was first carefully inspected to ascertain that there were no signs of inflammation, as redness or swelling. The surface was then washed, together with the knife and the glass slides required, with a solution of sublimate. A lateral incision was then made, and some of the viscid synovia transferred to the slides and dried. They were then passed several times through a gas flame, and afterward the preparations were stained with fuchsin, gentian-violet, methyl-violet, etc., and examined microscopically, the observations being in all cases verified by Professor Lubimoff. In five out of nine cases of uncomplicated

croupous pneumonia, micro-organisms like Friedländer's diplococci with capsules were found. In two cases of pneumonia, complicated with purulent meningitis, staphylococci were distinctly recognized. Koch's bacilli were found in three out of eight cases of phthisis. In three cases of recurrent fever (*febris recurrens*), in two of miliary tuberculosis, and in two of Siberian plague, no micro-organisms could be detected. Cocci were seen in one case of erysipelas, one of malignant pustule, and in one of frostbitten toes, with septicæmia. Three more cases gave negative results, viz., one of burn, one of purulent meningitis, otitis, and caries of the petrous portion of the temporal bone, and one of pericarditis, peritonitis, pleurisy, caseous pneumonia, and perimetritis. The most frequently seen micro-organisms were spherical and ovoid cocci, small bacilli being found much less often, and spirillia and curved bacilli being never seen at all, apparently finding themselves unable to penetrate the joint.

The Great Question of the Day.—The late Dr. Samuel D. Gross used the following words in an address delivered at the dedication of the McDowell monument: "Young men of America, listen to the voice of one who has grown old in his profession and who will probably never address you again, as he utters a parting word of advice. The great question of the day is not this operation or that, not ovariotomy or lithotomy, or hip-joint amputation, which have reflected so much glory upon American medicine—but preventive medicine, the hygiene of our persons, our dwellings, our streets—in a word, our surroundings, whatever or wherever they may be, whether in city, town, hamlet, or country; and the establishment of efficient town and State boards of health, through whose agency we shall be more able to prevent the origin and fatal effects of what are known as the zymotic or preventible diseases, which carry so much woe and sorrow into our families, and often sweep like hurricanes over the earth, destroying millions of human lives in an incredibly short time. The day has arrived when the people must be aroused to a deeper and more earnest sense of the people's welfare, and suitable measures adopted for the protection, as well as for the better development of their physical, moral, and intellectual powers. This is the great problem of the day; the question which you, as representatives of the rising generation of physicians, should urge, in season and out of season, upon the attention of your fellow-citizens, the question which above and beyond all others should engage your most serious thoughts and elicit your most earnest co-operation. When this great object shall be attained, when man shall be able to prevent disease, and to reach with little or no suffering his threescore years and ten, so graphically described by the Psalmist, then, and not till then, will the world be a paradise."

Inter-State Notification in Infectious and Contagious Diseases.—In addition to the resolutions presented by the National Conference of State Boards of Health, and adopted by the American Public Health Association, the following from the Advisory Council of the Association were also adopted:

Whereas, It is necessary for the protection and preservation of the public health that prompt information should be published of the existence of cholera, yellow fever, and small-pox;

Resolved, That the American Public Health Association believes it to be the duty of each State and provincial board of health, within whose jurisdiction one of these diseases shall appear, to give, immediately, notice of the existence of the same to neighboring State and provincial boards of health, and to the boards of towns and cities in neighboring States and provinces which have no central board. In such States and provinces this duty of notification lies upon the local boards.

Resolved, That it is the sense of this Association that whenever rumors of the existence of pestilential disease in a State or province prevail, and upon application to the health authorities of said State or province information respecting the truth of the rumor is refused, the health officials of another State or province are justified in entering the before-mentioned State or province for the purpose of investigating and establishing the truth or falsity of such rumor. In conducting the investigation every reasonable effort should be made to co-operate with the health authorities of the locality.

Resolved, That a case which so nearly resembles one of the specified diseases as to raise a reasonable suspicion of its character, or a case in which concealment is attempted, ought to be reported as a suspected case, in the same manner as if the diagnosis were certain.

Irving A. Watson,
Secretary American Public Health Association.

Pills against Phthisis.—Potain recommends a pill containing creosote, ♏ ½; iodoform, gr. $\frac{1}{10}$; ext. opii, gr. ½; balsam of tolu and turpentine, each, ♏ ½. Of these from four to ten may be given daily.

To thoroughly Disinfect the Intestinal Passages by internal medicine, give gr. iv. of naphthaline in powder form, with a little sugar, every hour. Coto bark is said to be a disinfectant also, as well as astringent.

Tuberculous Sputa, under conditions ordinarily favorable to decomposition, preserves virulence for from three to eight days, according to Dr. Thoma Pierre.

Intermittent Hæmaturia is very common in South Africa, and is caused by the parasite *Bilharzia hæmatobia*.

Bakers and Bad Teeth.—Dr. Hesse, of Leipsic, says that bakers suffer especially from dental caries. This is due, he thinks, to flour-dust, which gets into the teeth and produces an acid fermentation.

To Stop Hiccough in an infant Dr. J. M. W. Kitchen, of this city, advises spraying the posterior wall of the pharynx by means of an atomizer, using only pure water.

The Extirpation of the Uterus for Cancer.—Professor Carl Braun, of Vienna, believes that the total extirpation of the womb for cancerous disease is useless. For extirpation of the neck he prefers the galvano-cautery.

Bjiiiiiii.—With this striking aggregation of consonants and vowels Dr. E. Manière indicates the noise of tinnitus auritus.

Mr. Walter M. Gibson, formerly president of the board of health of the Sandwich Islands, has been recently raised to the dignity of minister of foreign affairs and premier of the kingdom by His Majesty King Kalakaua.

The Dangers of Iron.—Dr. J. Strahan utters a caution against the long-continued use of iron, maintaining that there is a danger of intestinal concretions being formed in such cases.

The University of Dorpat.—Upon the first of September of the present year, there were 1,734 students in the University of Dorpat, Russia, of which number 748 were medical students. Most of these were from the Baltic provinces of Russia, a few from Poland, and only 25 from foreign countries. The university is under evangelical control, and the language spoken is German, though all students are obliged to pass an examination to show their proficiency in Russian before admittance.

A Journalistic Change.—In this country, medical journals, in the natural course of growth, develop from the monthly into the weekly. If this is to be regarded as a sign of prosperity, we must conclude that journalism in Russia is not a success; for the *Zemskaya Meditsina* ("Provincial Medicine") announces that it will in the future appear as a monthly instead of a weekly, as heretofore.

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Original Articles.

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.[1]

BY CLEMENT CLEVELAND, A.M., M.D.,

NEW YORK.

AT the risk of being tedious I have ventured to offer to the Society a few considerations upon this much discussed subject.

I shall be as brief as possible upon theoretical points, and confine myself almost entirely to practical conclusions.

In reading much that has been written upon the treatment of typhoid I have been struck by the unanimity with which the large bulk of writers advocate the use of quinine, some regarding it as a specific in large doses, and others declaring that it has no positive effect either in shortening or even in modifying the disease, yet most of them considering it an important factor in the treatment.

Liebermeister says: "My own experience, at least after treating more than fifteen hundred cases with quinine in doses that would have formerly been considered as dangerous to life, gives no results that would indicate any specific influence of the drug over typhoid fever, nor any power to cut the fever short at any stage."

Farther on he says: "Quinine has often been recommended as a specific in this disease, but has soon been found ineffective and again been dropped. . . . I myself have used it as an antipyretic since 1858, but I never dared to use as large doses as are necessary for a powerful antipyretic effect until after the communications of Vogt. Since then I have hardly treated a severe case of the fever without quinine." He is in the habit of giving from twenty-two to forty-five grains at one dose and then not repeating it for twenty-four or forty-eight hours.

Niemeyer says, after speaking of the hydro-therapeutic means for reducing temperature: "For moderating the fever in exanthematic, as well as in abdominal typhus, next to the abstraction of heat the administration of quinine deserves most confidence."

Da Costa has abandoned the use of quinine as a specific, though he uses the drug in most of his cases of typhoid.

Loomis does not believe in the efficacy of large doses of quinine in arresting the development of typhoid, but uses it in thirty or forty-grain doses as an antipyretic.

Flint says: "Of drugs which have an antipyretic effect quinine holds the first rank. It should be given in full doses, twenty to forty grains, before the evening exacerbation. Trials should be made of this drug, inasmuch as, if tolerated by the stomach, it is only objectionable on the score of annoyance from cinchonism."

Reynolds says: "In the absence of cerebral or gastric disturbance quinia is a most valuable remedy for subduing the evening exacerbations."

The above quotations will serve to exemplify the position taken by the majority of writers of the present day who use quinine in typhoid but deny its specific action. Others, like Stille, maintain that the drug is unnecessary, useless, and often dangerous. I have read quite a number of papers, most of them well written, upon the effect of quinine in typhoid, by men in different parts of the world, many of whom speak with the most positive conviction of the results they have obtained. I have talked with many physicians upon the subject, the most of whom, I found, use quinine in typhoid—some, to be sure, as a matter of routine, but most with an intelligent reason for so doing. I found, too, that many of them believed they had aborted cases with the drug. Say what we may the profession, as a whole, has an abiding faith in this medicine in this disease.

It is a noticeable fact that most of those who do not believe in the abortive effect have drawn their experiences largely from hospital practice, while those who advocate its use as a specific are, in the main, writers who base their belief upon the results of private practice alone. It is well known that, in most hospital cases, the patients have not entered till the disease is well advanced, rarely before the end of the first week, and often not till later, and before entering have been under no systematic treatment. It is different in private practice, where the physician usually sees his patient early, and, though it is hardly possible to make a positive diagnosis before the fifth or sixth day, yet he has his suspicions aroused and is able to begin active measures before the typhoid process has made much headway. It is just here that those who believe in the specific action make their strong point, that, to obtain the positive curative effect, it should be given early and in doses sufficiently large to keep the temperature below the danger point. It cannot, of course, be claimed that the statistics of cases reported as aborted are reliable, for they never can be, unless an easy practical way of detecting the typhoid bacillus can be discovered which will enable us to diagnosticate the disease early in its course. What I would urge is this, that, though not susceptible of proof, the conviction that quinine has this abortive power remains firmly fixed in the minds of many, and, moreover, that it is hardly reasonable to suppose that the large number of men who are known to hold this view could be entirely wrong and that there is no basis whatever for their claim.

But may there not be a scientific basis for this belief? The parasitic theory of typhoid is generally admitted; the typhoid bacillus has been found in the blood and the urine of typhoid patients.

Binz says: "In healthy persons and most febrile patients it (quinine) is not decomposed in passing through the blood, but is entirely excreted by the kidneys and bowels. It is only in typhoid that a deficit of twenty-four per cent. has as yet been obtained." About seventy per cent. is excreted by the kidneys alone in from three to twenty four hours. Quinine has the power of destroying low organic and vegetable life. As it has such a destructive effect upon germ-life outside of the human body, it is probable it has the same effect when taken into the system, especially as so large a percentage of it is passed unchanged in the secretions, and must therefore retain its germicide power in passing through the blood.

As quinine is a specific in intermittent fever, and is so by virtue of its power to overcome the vegetable poison that produces it, and we know that it has this power over the organic as well as the vegetable germ, it therefore should have the same effect in some degree in typhoid. And this position is strengthened by the following quotation from Binz, who says: "Those infective poisons which are capable of self-multiplication, after a more or

[1] Read at a meeting of the Practitioners' Society of New York, November 1, 1886.

less regular period of incubation, are either rendered by quinine incapable of further development, as in malaria, or have their energy paralyzed, as happens to some extent in typhoid." Now it amounts to the same thing whether these germs are destroyed outright, rendered incapable of further development, or have their energy paralyzed, if this paralysis of energy can be kept up long enough for nature to eliminate them, as she makes a brave struggle to do, and suceeeds in doing in those cases that recover.

My own position is this: I believe in the power of quinine to abort some cases of typhoid, to shorten the duration of others, and to ameliorate the symptoms of most. I have seen the effect too often to have any lingering doubt about it. I believe, too, that the time is coming when this will be universally acknowledged. This will be when the detection of the typhoid bacillus enables us to attack the cause of trouble early in its progress.

To be successful the drug must be used boldly. In giving large doses we are of course in danger of overstepping the therapeutic effect and obtaining the toxic. But we are in the same danger with opium. We know perfectly the signs and symptoms of the toxic effect of that drug. We ought to know as well those of quinine. Like opium, quinine is capable of producing death, but enormous doses are necessary. As with opium, we should know by the symptoms how far to push it. Experience has taught that one hundred and eighty grains, given in one dose, *may* produce death. Five ounces, two thousand four hundred and sixty grains, taken in a period of ten days, *has* caused death. That would allow an average of four hundred and sixty grains for the twenty-four hours. But there is no one who, in his wildest dreams, would think of giving one hundred and eighty grains at a dose or a daily dosage of four hundred and sixty.

In regard to the tolerance of the drug, I believe there are very few people who cannot take it in the early days of the fever. In the first ten days, before the mucous membrane has undergone changes due to the typhoid process and the functions of liver and kidneys have been disturbed thereby, there are comparatively few who do not bear the drug well.

It is important to begin with quinine early and not to wait to be absolutely sure of diagnosis. My own plan is to begin with a large test-dose, of five to ten grains, given every fifteen minutes for two hours, as the nature of the case presents itself to my mind. This dose is given in the latter part of the afternoon. The temperature is taken every two hours. If by morning there has been a decided lowering of the temperature I feel encouraged to believe that it is a case manageable by quinine, and particularly so if it is accompanied by profuse sweating.

As quinine is eliminated so rapidly and in such large quantities, I believe it better to give it continuously, in order to keep the system constantly under its influence. Following out this theory, instead of giving it once a day in a large dose, I then give five or ten grains every two or three hours. If by seventy-two hours no decided effect is produced upon the temperature I discontinue the use of quinine entirely, or give it merely in tonic doses. If by seventy-two hours it has not reduced the temperature, I believe it never will.

I have not found it necessary, in the cases where I have used quinine, to give more than eighty grains in the twenty-four hours, and rarely more than sixty, while forty grains is all that has been required in some. It is important to bear in mind that giving a large amount, sixty grains for instance, distributed in five-grain doses throughout the course of twenty-four hours, is not the same as giving that amount at one dose. By the time the last five grains are given, fully three-fourths of the whole have passed out of the body in the secretions.

In all cases I use sponging, not for the antipyretic effect, but for the sake of keeping the skin clean and active.

In a case during the past year, in a young lady of eighteen, I gave five grains of quinine every two hours, now and then stopping it for a shorter or a longer period to note the effect upon the temperature. As long as the quinine was given every two hours the temperature would remain nearly normal, but just as soon as I *let up* on the *quinine*, up would run the temperature. On the tenth day, being a little uneasy from the apparent effect upon the heart, the patient having taken an average of sixty grains a day for nine days, I stopped the quinine. In the *afternoon* the temperature went above one hundred and three degrees, and also on the next day. For these two days I used antipyrin to reduce the temperature. On the twelfth day I returned to quinine in the same doses, not being satisfied with the antipyrin and because I had more faith in the quinine. The temperature went down at once, and did not run up again after the fifteenth day, when I began to lengthen the intervals between the doses an hour or more each day. The disease was then practically at an end, but I continued to use the quinine for two weeks longer in small doses. This case serves to illustrate the experience I have had with a number of others.

Again, I had been treating for ten days a case of typhoid with aromatic sulphuric acid and other remedies, *pro re nata*, where nearly every symptom of the disease was present, when, as matters were going from bad to worse, I decided to give quinine, and gave five-grain doses every two hours with the happiest results. The whole condition changed for the better within twenty-four hours. Every symptom was ameliorated. The diarrhœa, which was constant and characteristic, began to decrease at once. The patient looked better and felt better. Within a week she was convalescent. This case is not unique in my experience. I mention these two cases because they were severe and unquestionably typhoid; and the latter I speak of particularly, to emphasize the point that quinine will sometimes shorten the duration of typhoid, even after the tenth day.

I can recall a number of cases in families where tpphoid existed and subjected to the same influences, where, but for the timely administration of quinine, I believe positive typhoid symptoms would have developed. I believe it is in this stage, the stage of so-called incubation, when the typhoid germs are said to be in an inactive state, that the drug will yet be found to accomplish its greatest work in the way of prophylaxis.

One other point I have observed is, that typhoid patients in whom quinine acts well not only recover more rapidly, but are more likely to recover permanently, or have less of the disagreeable after-effects of the disease. Statistics, if they show anything, show that the expectant plan of treatment gives a much higher death-rate than where quinine forms an important element in the treatment.

In this short paper I have attempted to express what seems to be, from all I am able to learn, the feeling of many in the profession regarding the use of quinine in typhoid fever, and to give some of the apparent reasons why, it appears to me, it holds and must continue to hold, an important place in the therapeutics of that disease.

A Substitute for Circumcision.—Mr. Herbert Snow, writing in *The Lancet*, suggests that circumcision may often be avoided by the introduction of a pair of dressing forceps under the prepuce and stretching the skin by separating the blades. This can be accomplished without pain by means of an application of cocaine. After the tissues have been thoroughly stretched, the foreskin should be drawn back every morning for a few days.

A CASE OF EPITHELIOMA OF THE AURICLE.

By THOMAS R. POOLEY, M.D.,

THE very rare occurrence of epithelioma of the auricle alone makes the report of an additional case warrantable. But in addition to this reason for reporting it is the fact that the growth has not reappeared, although it is now nearly two years since its removal. I shall not take the trouble to compile the number of cases hitherto published, for anyone at all familiar with ear diseases can bear out the above assertion as to the rarity of epithelioma in this location. As the early history of the development of such growths is always interesting and suggestive I asked the patient, who is a very intelligent man, to write me an account of it up to the time I saw him, which I here give: "I first noticed the sore on my ear five years ago, at which time I supposed it was a frost-bite. In its primary condition thin scales would appear, breaking off quite readily, leaving the surface smooth; and, with the exception of an occasional itching, the annoyance was slight. At the expiration of a year the sore was painful in cold weather, which confirmed my first idea that it originated from a frost-bite. During the second year the scales grew thicker and broke off at longer intervals, leaving the surface smooth, but with slight pain remaining. About the third year the scales were sore to the touch, but with a few applications of vaseline the somewhat heavy scale or small lump would break off, giving relief for a short time, when the whole operation would have to be renewed. About the beginning of the fourth year the warty tumor, as it seemed, would, after a few applications of a strong acid which my physician prescribed, become itchy at times, and the scales first whiten and then gradually assume a hard, bony and yellow appearance, very painful to the touch, not otherwise, and difficult to break off without the assistance of vaseline.

"The beginning of the fifth (last) year impressed me as in the previous ones that, regardless of attempts to check or cure the sore, it was gradually getting worse. I noticed that, even when the scab came off, the pain and soreness remained, and very soon thereafter the surface would assume a puffy appearance.

"During last summer I suffered with pain with slight intermissions, a sharp and penetrating pain at times, followed by long periods of heavy pain. I fully realized that the acid was powerless to effect a cure and that I must seek relief through some other agency.

"Toward the close of the summer (1884) the scab became more bony-like, very difficult and painful to remove, and the inflammation intense. Soon as my physician returned from the country I called on him for further advice. He recommended an operation as soon as possible, and the first one occurred at my house, October 25, 1884. Two incisions were made; the under surface of the largest and main scab presented an appearance similar to a piece of honey-comb, the cells in close connection and filled with clear, yellow matter. The piece was preserved by the surgeon for microscopic examination and I was afterward informed that such an examination had been made, and from its appearance the sore or trouble pronounced *non-malignant*.

"The healing of the wound progressed, as I supposed, fairly well, but two cone-like pieces of flesh, white, hard, and painful appearing, I had them cut off on November 20th. Subsequent to this operation the conditions were more unfavorable; the scab grew rapidly and assumed its old aggravating look, but, strange to say, was painless for a time. When the pain returned it was not in the ear at all, but in the large gland of the neck nearest the ear. I acquainted my physician of this new symptom, and I said that another surgeon must be given the case to attend to thereafter."

My relation with the case now began. The patient was brought to me on December 15, 1884 and the same day I made the operation—which I shall describe after giving the appearance and extent of the growth as it then appeared. The patient, T. L. H——, aged forty-two years, was a pale, thin man, and his face gave the impression of long-continued anxiety and suffering. He gave the following family history: His mother died in 1867 of cancer of the breast in her sixty-seventh year. Five years ago a brother, aged forty-six had an epithelial cancer of the nose removed which has not since returned.

Status præsens.—Situated upon the antihelix there is a surface which is covered by an incrusted, scaly scab, which was readily removed, when the underlying surface showed throughout a superficial loss of substance and in its centre a rather deep ragged-edged ulcer. The growth proper measured ½ by ⅔ of an inch. The outer margin, toward the helix, showed a small nodular eminence about the size of a small pea. Moreover, there were a few small nodules below the well-defined border of the growth, toward the lobule. There was considerable enlargement of the submaxillary glands. Before proceeding with the operation the whole area of the growth was included between the blades of a Knapp's entropion forceps, and after the clamp was tightened an injection of a few drops of a four per cent. solution of cocaine was made in the upper margin of the growth with a hypodermic syringe. In five minutes thereafter the operation was proceeded with.

The entire growth was included in an elliptical incision, care being taken to keep well within the healthy skin; this was dissected cleanly off down to the cartilage. The piece thus removed showed on its posterior surface a discolored superficially ulcerated spot, and the cartilage was found to be somewhat softened. Accordingly, all of this suspicious-looking part was scraped off with a sharp spoon, which in some places went through to the underlying integument. The wound was then partly drawn together with sutures covered by absorbent cotton and a firm compressive bandage applied. The operation lasted from ten to fifteen minutes, was almost bloodless, and declared by the patient to be painless until the sutures were introduced. After its completion the patient was allowed to return to his home in the country, about an hour's distance from New York. The subsequent course of the case can be told in but a few words. Immediately following the operation there was some little reaction, with considerable swelling of the ear, which, however, rapidly subsided. The wound healed kindly, but rather slowly, and was from time to time stimulated by the occasional application of nitrate of silver and kept dressed with an ointment of the red oxide of mercury. Early in February, when I presented the patient to the New York Ophthalmological Society, the wound had completely cicatrized, but there was still some vascularity about the scar, and several of the members expressed the opinion that the growth might soon return. Such, however, has not been the case. I have seen the patient repeatedly, and there is not the slightest evidence of any return. The scar is smooth and painless. It will be two years the fifteenth of next December since the operation, and from present appearances we may hope the extirpation of the growth will prove a radical cure. The growth was examined by Dr. Thomas E. Satterthwaite, December 18, and proved to be an epithelial cancer, and contained the characteristic epithelial nests. He adds a recurrence may therefore be expected, although in this locality epithelial cancers are not of the most malignant type. The situation of the growth was such that it was very accessible, and therefore favored its thorough removal, and in this I was very cautious, extending my incisions well into the healthy skin and carefully scraping out all the softened and diseased cartilage. The use of the entropion forceps, which here found a new application, was of great service in rendering the field of operation bloodless. It was noticed, too, and mentioned by me in speaking of the case to the New York Ophthalmological Society, that the anæsthetic effects of the cocaine were apparently much enhanced by the constriction on

the part exerted by the use of the clamp. I mention this now as of interest from the application and extension of this very method to the more complete production of anæsthesia which has been introduced by Dr. Leonard Corning, of this city, without, however, desiring to claim any priority, for Dr. Corning is justly entitled to any and all the credit which this application of cocaine may attain in surgical practice.

RECENT MEDICAL CASES IN THE COURTS.

By HENRY A. RILEY, Esq.,

NEW YORK.

Life insurance is an important branch of medico-legal study, and the cases on the subject are increasing in number and importance. The most important case, however, which has ever come before an American court is that of Colonel Walton Dwight, of Binghamton, N. Y., who died in 1883. The case attracted great attention at the time, and interest is now renewed by a recent decision of the Court of Appeals reversing the former judgment and ordering a new trial. The case was extraordinary in many of its features, and a full statement cannot now be given of all the circumstances. Colonel Dwight was a large, healthy man, about forty-one years of age, and in 1883 he obtained insurance on his life to the amount of about two hundred and fifty thousand dollars. Every life insurance company in the United States was applied to for insurance, and the application was in almost every case accepted. The Equitable Life Assurance Society issued a policy for $25,000, but the others were for smaller sums. Colonel Dwight at the time of taking the policies was a bankrupt, and had no means of paying the premiums, amounting to about ten thousand dollars a year. It appeared, in fact, later on, that he had borrowed money to pay the first quarter's premiums and was absolutely without means to pay the succeeding premiums. It would seem that Colonel Dwight anticipated trouble in collecting from the insurance companies, for he made his will as if for the purpose of making the people of Binghamton friendly to him. He made bequests to most of the public institutions of Binghamton, and also to all the principal lawyers of the town. Colonel Dwight died on the night before the second premium in the policies became due, after a short, and not apparently dangerous, illness. There was instantly great excitement among the insurance companies, and a large number of them refused to pay the policies, alleging suicide. The Equitable Company paid its policy of $50,000, but the others defended suits brought on their policies. The inquest was to the effect that the deceased died from natural causes. The civil courts decided in the same way, in the case of the contesting companies, and a verdict was rendered against them. This decision has now been reversed and a new trial ordered. It is considered doubtful, however, if another trial is ever had, because the witnesses are scattered and the cost of the trial is very large. There were several theories about the death, and that of the relatives was, of course, that it was from natural causes. This was substantiated by the coroner and on the civil trial, but now a new trial has been ordered and the question is again at issue. There are some difficulties about the theory of suicide adopted by the insurance companies.

Several persons were with Colonel Dwight until very shortly before his death, when no apprehensions were felt as to a sudden departure. One person was sitting at the entrance of the room, but just outside, at the moment of death, and reached the bedside just as he died. This occurred about 11 o'clock (P. M.). He testifie sthat there was nothing unusual transpiring in the sick-room to his knowledge. The undertaker says that a few hours after death there was no crease or indentation in the neck, which appearing afterward at the autopsy was relied on to substantiate the theory of death by strangulation. The undertaker testified further that he bent the neck of the deceased in the ice-box, and that this caused the indented appearance.

Large quantities of morphine had been given to the patient by the physicians in order to quiet him, and he was said to be little affected by ordinary doses. The theory of the relatives was that this morphine caused the heart to cease its action, and death resulted. The autopsy was claimed, however, to show that the heart was in a healthy and normal condition. The medical testimony as to the causes of death was not very clear, and the experts differed so widely in their opinions that it was difficult to form a clear idea of the merits of the case. The fact that a bankrupt took out insurance to the amount of $250,000, and died shortly before the second quarter's premium became due is certainly a curious circumstance; but the testimony as to strangulation seems to be deficient in the opportunity furnished for bringing about such a result, and the medical testimony is conflicting. Some of the experts who favored the theory of suicide were of the very best reputation, and one of the many hypothetical questions introduced will be of interest as stating the medical testimony: "Suppose that a man, after an obscure alleged illness of about five weeks' duration, is, on a given day, able to be up and transact business with his lawyer, and have his beard trimmed; is left by his doctor at 10 P. M. on the same day in such a condition as not to give any cause for alarm, and that at 11 P. M. he is talking pleasantly to his attendant and eating a cracker, and in less than half an hour is dead, and that at the autopsy, made fifty-eight hours after death, the following conditions are revealed: A heavy indentation extending upward and backward from os hyoides to right around back of neck, and on left side below the thyroid cartilage, running upward and backward at an angle of about forty-five degrees. Post-mortem discloration of posterior portion of the body; several small ecchymoses of skin of back and shoulders; anterior part of right arm, small ecchymoses; thorax, lungs, and heart in natural positions, except that the lungs are unduly inflated. About four ounces of serum in bottom of left pleural cavity. Left lung, one pound and three-quarters; bronchi, congested and coated with mucus; upper lobe congested and œdematous; lower lobe still more congested and œdematous. Right lung, two pounds; bronchi, congested and coated with mucus; upper lobe, at the apex several small fibrous nodules; rest of upper lobe congested and œdematous; lower lobe congested and œdematous. Heart healthy; weight fifty ounces; right ventricle contains a little fluid blood, not over half an ounce; left auricle contains a little clotted blood. Stomach, at the fundus, mucous membrane softened and partly destroyed by post-mortem changes; pyloric end of stomach, mucous membrane studded with small white spots, denoting chronic gastritis. Liver, congested more than usual, normal color and consistence. Kidneys uniformly congested, and otherwise healthy. Epiglottis, larynx, and trachea congested and coated with mucus. Inner surface of the dura mater, on the left side, chronic hemorrhagic pachymeningitis, with a small extravasation of blood on the left side over the posterior portion of the parietal and anterior portion of occipital lobes. Pia mater of convexity normal, except discoloration over occipital lobes from blood. Brain neither congested nor anæmic, otherwise healthy. And, further, that at an inquest held five months after the first autopsy the indentation on the neck was still distinctly visible; could or could not death have been produced by natural causes?" The answer to this question, by five well-known experts, was that death could not have occurred from natural causes. Notwithstanding this strong testimony on the part of the experts for the defence, judgment was rendered for the plaintiff, and this decision is the one which has just been reversed by the Court of Appeals.

The daily papers give a curious instance of crime re-

sulting from nervous weakness. The case is that of Frederick Berkhardt, a boy of weak intellect living in Newark, N. J. He was charged in the police courts with an assault upon his father. The mother of the boy testified that Frederick was inordinately fond of tea and coffee, and that his nervous system was shattered. A physician said that the boy was suffering from a disease caused by excessive use of coffee. The assault occurred at the table when the boy attempted to take away his father's coffee, saying he must have coffee or die. The boy was found guilty, but sentence was suspended.

A new industry has been opened up to those people who live by their wits by the passage of a law by the New York Legislature at its last session. This law provides that no person shall purchase, or have in possession, or expose for sale any song or wild bird other than a game bird, or any part thereof after the same has been killed. The punishment for a violation of this law is imprisonment in the county jail or penitentiary for not less than five and not more than thirty days, or a fine of not less than ten or more than fifty dollars, or both, at the discretion of the court. One-half of the recovery shall go to the plaintiff, but as the informer is not likely to care for half of the imprisonment allowed by the statute, it is probable that a fine will always be imposed.

A fine field for the unemployed is here offered. The windows of the milliners are full of birds, "or a part thereof," exposed for sale on hats and bonnets, and the majority of the ladies who throng the streets of New York "have in possession" similar birds or "parts thereof." It does not seem difficult, therefore, for a smart man to secure a handsome income simply by taking memoranda of what he sees on a Broadway stroll, and then bringing suits for the penalty imposed by the statute. It is noticeable, however, that since attention has been called to the remarkable destruction of our best song and wild birds for the purpose of head decoration, that the use of this style of ornamentation has fallen off.

The Philadelphia County Medical Society has for a considerable time past been diligently at work ridding that city of illegal practitioners, and with the aid of the District Attorney has accomplished a great deal in depriving the quacks of their business. Some time since one of the journals of Philadelphia gave this statement about one of the fraternity: "Recently we heard of a man in this city who was suffering from hernia. He read the advertisement of one of these frauds, who promised a cure. He called upon him and was assured that he could be absolutely cured in four months; in fact, he was given a written guarantee of cure, prepared on a printed blank, thus evidencing the habit of this wonderful leech to give guarantees. He was to pay eight dollars a month. To make a long story short, he visited his would-be executioner for three months and paid him twenty-four dollars. About this time his hernia became strangulated, and he sought the services of a regular physician just in time to save his life. Upon recovery he called and demanded the return of his money as the guaranteed cure had not been accomplished.

The reply was characteristic: "Not one cent will you get from me; all I want is your money; the world is full of just such fools as you." The prosecutions seem to have been so numerous and so successful that one of the medical journals recently advised the profession to be very careful about future prosecutions, lest the cry of persecution should go up and the irregulars should become martyrs and prosper pecuniarily at the expense of a public which likes to be cheated.

A Pittsburg court has recently had before it the case of a colored physician, who, in addition to his strictly medical practice, claimed to exercise the power of reviving waning affections between man and wife. The method of treatment was to have the husband place a piece of his wife's clothing in a bottle and bury it, and then the wife would obey his slightest wish. In the case before the court, the wife acknowledged the power of the buried bottle, and said that she was obliged to crawl along the floor of her house against her will. It was not stated whether the husband stood over her with a club and assisted in the crawling operation. She further stated that when the bewitched bottle was brought to her and broken, her instant recovery followed.

REPORT AND REMARKS ON A SERIES OF TWO HUNDRED CATARACT EXTRACTIONS.

By C. A. BUCKLIN, A.M., M.D.,

The first hundred of this series were cases which came under my personal observation while following the teachings of Hutchinson, Bowman, Cooper, Bader, and Liebreich, of London; Mooren, of Düsseldorf; Rothmund, of Munich; and Arlt, Stellwag, Jaeger, and Mauthner, of Vienna. The second hundred I operated upon myself. I think the accidents which occurred in the first hundred cases were quite as instructive to me as my own subsequent experience in operating.

It is not my object to criticise any one or any method, the whole end aimed at being to demonstrate how accidents happen in cataract extractions, and how to avoid such accidents.

Hutchinson, Bowman, and Cooper were not innovators in 1877, neither did they use antiseptic precautions, although using instruments which were absolutely clean. Their patients were all profoundly etherized. The section was never the extreme cut of Graefe; these operators having been taught by experience that a section so near the ciliary body exposes the patient to much greater danger from cystitic troubles without giving a corresponding degree of protection from corneal sloughs.

These gentlemen operated much earlier than their continental colleagues; the cataract frequently had a clear cortical layer; the capsulotomy was ⊥-shaped, and the iridectomy was usually rather small. I never saw but one accident at the time of the operation, and my observations embraced fifty cataract extractions. In one case, operated upon by Cooper, the lens turned a complete somersault before presenting in the wound, which accident I believe always to be the result of slight luxation of the lens with the cystotome. This operation was followed by acute iritis and closure of the pupil, good vision being, however, subsequently obtained by iridotomy. In other cases the corners of the iris were frequently caught in the wound, owing to the narrowness of the iridectomy. This fact, taken in connection with the free laceration of the anterior capsule of an unripe cataract, caused iritic processes to be an almost constant complication following the operation; the iritis was, however, mild, and did not in any instance prevent practical vision from being obtained.

I do not think Liebreich's method received the amount of attention that any new operation of apparent practical utility should receive. Neither do I think that his methods would have received the support of many unbiassed operators had they received proper consideration and a fair trial. Some of the results I saw from his operations were truly beautiful; but one, however, resulted in a complete slough of the cornea, and in another the iris became extensively attached to the corneal wound, and a slow grade of irido-choroiditis destroyed the eye.

Liebreich has had very many flattering successes, but, on the other hand, he never could tell when he would have the most discouraging failure, from no other cause than the peculiarity of his operation. His case of corneal sloughing, above mentioned, fell later into Bader's hands, and he did what I never saw intentionally done before. Although the patient was seventy years of age, he made repeated discissions of the lens in the remaining eye, and after several months caused it to absorb sufficiently to give the man practical vision, a slight portion

of the nucleus remaining, however, in the centre of the pupil.

The above experiment thoroughly demonstrated to me that it was practical to operate upon cataracts long before they were ripe.

The result of my experience I will give later, in detailing my own operations. Modern ophthalmologists dismiss in a very short manner the inquiries of our antiquated colleagues regarding the success of couching the lens, by declaring that the depressed lens is a foreign body in the eye, which will sooner or later be fatal to vision. They reply by stating that they have seen good and permanent results from couching, which statement I doubted for a long time.

In a conversation with the late Dr. Frank Hamilton, he said, when the results of couching at the time of the operation were satisfactory to him, they were usually, after a time, unsatisfactory to the patient; however, when he sometimes completely failed in displacing the cataract from the pupil, the results at a later period became permanently satisfactory to the patient. In the first instance he displaced the lens into the chamber of the vitreous, where it became a foreign body; in the second, his couching needle crushed through the lens, making an extensive discission. The lens, as in Bader's case, was gradually absorbed by the aqueous coming extensively in contact with its substance; in this way he certainly did obtain satisfactory and permanent visual improvement. Dr. Agnew, of this city, believes that the methods of Liebreich, owing to the prejudice of the profession against the man, never have received a fair trial, and he is giving them a trial.

An operation which commands the respect of an authority so bright and honest as Agnew must still be regarded with hopeful consideration. I think the fact that he has not discarded the operation is the most charitable thing I can say about it.

While London surgeons had few accidents during their cataract extractions, owing to their patients being profoundly under ether, the iritic complications were more numerous and severer than those observed after the operations by Horner, Mooren, or Arlt.

The difference in the severity and number of complications could not be traced to any other causes than the stage of development of the cataract at the time of operation and the extreme delicacy with which they operated.

The accidents during the operations were more numerous among the Germans, owing to the fact that they operated without ether, or without profound etherization. Every *accident* I ever saw among the German operators could be charged to one of these causes, the latter being much worse than the former.

Cocaine is excellent for all operations except enucleation, iridectomy, and cataract; I am fully convinced of its dangers in the two latter operations.

Many surgeons, however, have to lose an eye of one of their best patients before they can be convinced of the dangers of trusting it.

The German operators learned from experience that the débris left behind from attempting to remove a lens which had a clear cortical layer caused severe iritic reactions. They insisted in removing the iris sufficiently to prevent its corners from becoming entangled in the wound. They tore more frequently than cut the anterior capsule. I think an operator in 1877, who would have had the temerity to remove a lens from the eye, through which fingers could still be counted at four feet, would have found poor support from his colleagues had he been prosecuted for damages. Arlt, of Vienna, would wait for years till the layers of transparent cortex had become opaque. This was at that time the only way of avoiding the injurious effects from débris being left in the eye, thus causing iritic and irido-cystitic complications, and it cannot be denied that this was very sound practice.

The general introduction of peripheral capsulotomy, for all cases of cataract extractions, by Dr. Knapp, certainly obviates, to a large extent, the objections to having a small amount of cortex remaining.

The experience of Bader demonstrated to me the amount of lens material which would be absorbed in the eye of an elderly individual. Opening the capsule in such a way as to make a perfect pocket of the empty capsule, and thus allowing the débris from the lens to remain in a closed sac, suggested to me the possibility of operating early.

I have been continually experimenting, and now find no trouble in removing cataracts through which fingers can still be counted distinctly at four feet, and I am able to obtain a perfectly clear pupil without iritic complications.

Dr. Noyes, in his most excellent text-book on diseases of the eye, p. 263, states what has always been impressed upon me by most of the authorities, namely: "It may be premised that qualitative perception of light, that is, ability to see objects or to count fingers—not his own but of another—precludes the idea of operating." I know Dr. Noyes well enough to be sure that he states only what his experience has taught him.

My experience is, that out of one hundred cataract extractions ninety-six could count my fingers at from two to four feet. Two persons having cataract, who could not count fingers at any distance, lost their eyes from complications following cataract extraction. These failures were caused by accidents resulting from a hypermature condition of the cataract. I have carefully sought for the reason why experience thus far has brought me to a different conclusion than that arrived at by Dr. Noyes, whose experience certainly has been extensive. Under "Cystotomy," p. 246, I think I find an explanation of how our experience differs. He passes a cystotome below the lower pupillary margin, making a clean vertical cut in the anterior capsule. Now, I have made a horizontal peripheral cystotomy, corresponding, as nearly as practicable, to the upper margin of the lens; occasionally, owing to an extra large lens, or a failure on my part to make the opening in the capsule large enough, the capsule has torn in such a direction as to make an opening which was vertical, and extended below the pupillary margin. In every such case iritis followed, and what should be the movable margin of the iris became fastened to the capsule at the point of this vertical rupture.

I certainly should expect mild iritis in all cases where the opening in the capsule is covered by the free margin of the iris, and additional iritis in proportion to the amount of clear cortex existing at the time of the operation. I believe that every thoughtful ophthalmologist will agree that it is impossible, in an eye which has been opened, to make an opening in any portion of the lens capsule, which is covered by the iris, without having adhesions from between it and the lacerated capsule.

The capsulotomy done by Dr. Noyes is ingenious, easily done, and much less likely to be complicated by accidents in hands which are not thoroughly experienced and under perfect control than the peripheral capsulotomy. Dr. Knapp's cystotome, providing it can be maintained in perfect condition, so that there is no point which will not cut clean, is a very excellent instrument. It is, however, so delicate, that the difficulties in keeping it in condition are very great. The chances are that three out of five of the most experienced operators who have not used it before, or are not warned of the tendency one has to overreach, will plunge the point of the instrument through the suspensory ligament, which accident will be followed by vitreous presenting in the wound.

A sickle-shaped cystotome, with a point flat enough to be easily seen in the eye, is more easily kept in order, and is a much safer instrument in most hands than the Knapp cystotome.

The hundred cases which I have operated upon have taught me one lesson. With an empty stomach, profound etherization, absolute cleanliness, an iridectomy sufficiently broad to prevent any possibility of the corners of the iris becoming fast in the wound, and a clean peripheral cut in the capsule, the operation will not be complicated by any accident which is within the control of an operator. The eye will close in four days, without sufficient reaction for the patient to know from his sensations that the cataract has been removed; extensive hemorrhage into the vitreous at the time of the operation, or soon after, from the rupture of a diseased blood-vessel, is an unavoidable accident.

From the two hundred cases of cataract extraction I have seen, not an eye was lost by infection, and but one cornea sloughed, which accident was the result of a Liebreich section. If this number of cases had been treated antiseptically and the same favorable results obtained, it would have been considered as very positive evidence in favor of the antiseptic method of treatment. I believe that antiseptic precautions should be taken advantage of in our attempts to avoid infection, and intend to make use of them in the future, although I must acknowledge that my past experience would seem to show that the only *bug poison* necessary is absolute cleanliness. Ninety-four of my cases are of no interest to operators, except as to the condition of the eye previous to operation, for without incident worthy of mention I obtained a clear pupil for the passage of light to the retina. Ninety-two of these cases could see a lighted candle at twenty to forty feet in a dark room, and could still count my fingers at from two to four feet. Two of them could not count fingers, neither could they locate the light of a candle at a greater distance than ten feet; these two cases, however, gained sufficient acuteness of distant vision to read the daily papers. The six cases which were complicated are reported in detail, as being the only kind which are instructive.

Case I.—Could not locate a candle at a greater distance than ten feet. Gave an indefinite history of traumatic cataract. I operated without accident. In four days the eye had closed, and he could not tell from any sensations he experienced that his eye had been operated upon. The vision gained only enabled him to tell light from dark objects, and to find his way through the doors of the house. An examination with the ophthalmoscope now showed the track of a piece of nail which had passed entirely through the eye; delicate cyclitic membranes were seen in all directions, although there was no detachment of the retina. Sympathetic disease had already blinded the fellow-eye. This case had a better field of vision, and a better light-perception than the two cases above mentioned. Still, the discrepancy in the amount of vision gained teaches a very practical lesson.

Case II.—Operated upon by a noted and thoroughly competent colleague, with severe iritic complications following. I afterward learned that at the time of the operation sympathetic irritation appeared in the fellow-eye. At the time I saw it all symptoms had disappeared, and I was requested to operate on the other eye. The field of vision was good; the operation was performed. It was slightly complicated by his behaving very badly under ether; the iris was wounded in making the section. The operation was, however, completed without loss of vitreous, and I obtained later a clear pupil. The reaction in this case was much milder after the operation than most of the cases seen on the continent in which the final results were favorable. When the pupil cleared up, however, there were delicate cyclitic membranes deep in the vtireous which were the results of previous sympathetic inflammation. The vision gained after some months was practical, and was better in the second eye than in the first, a circumstance which was, however, purely accidental. If another operator should operate on the remaining eye of Case No. I., he will be obliged to record one case where the visual results were not satisfactory. Should his competitor happen to miss two or more such complicated cases, he could present to the world more charming statistics without being a more expert operator.

Case III.—Old lady, eighty years of age, weight ninety pounds, very feeble. No perception of light in left eye. Operated upon right eye; cataract was hyper-mature. During the extraction of the lens it made a complete revolution, the lower margin presenting at the wound; iritis followed, with closure of the pupil. Good vision was obtained four months later by iridotomy, patient being able to read finest print.

Case IV.—The operation was without accident or complication; never saw an operation go more smoothly. Opened the eye once after removing speculum, and everything appeared satisfactory. Just before applying the bandage I carefully opened the eye to assure myself that the wound was clear of iris. To my surprise I found the wound so bulging that the lid could not with ease be made to slip over the flap. This case I regarded as one of severe hemorrhage into the vitreous from the rupture of a diseased retinal vessel. A few days later I saw a similar case, through the kindness of Dr. David Webster. I gave it as my opinion that the prognosis was unfavorable in both cases. A slow grade of irido-choroiditis destroyed the eye in both cases. The operation in both instances was without accident, and could not have been done with greater delicacy.

Case V.—An old lady of eighty-five years of age had hyper-mature cataracts. She could not count fingers, but had a good field of vision. I removed the lens without accident; the lens was filled with calcareous débris. She could see for some time after the operation, but there was a constant deep injection of the blood-vessels about the ciliary region. The eye looked like one having a foreign body lodged in the ciliary body. As months went on the vision was lost by a low grade of irido-cyclitis. I believe that this eye was lost by calcareous deposits taking place in the ciliary region, or calcareous débris dropping from the lens during its extraction.

Case VI.—Gentleman, seventy years of age. I operated upon his left eye without accident. Six months later operation was performed on his right eye. He took ether badly. After the iridectomy vitreous presented in the wound; the speculum was removed, and profound etherization was obtained. Without using a speculum a careful cystotomy was made, and the lens was delivered without further loss of vitreous. Moderate iritis followed, but at the end of six months he had $\frac{5}{10}$ of normal vision in both eyes. I do not approve of the introduction of a large flat spoon into the eye until all other methods of removing the lens fail. I have never used it myself, but have frequently seen the spoon introduced where I was positive that, had the etherization been carried to the state of profound muscular relaxation, the lens could have been delivered without it. This expedient is said to be a successful means in complicated cases of removing the lens; but those who have introduced spoons into the eye know well that they feel very uneasy about the prospects of that eye. Unfortunately, in every case (six in number) where I have personally witnessed the introduction of a spoon the eye has eventually been lost.

Taking into consideration the possibilities of one operator meeting cases of a complicated nature, of another operator refusing complicated cases, I do not see how the figures regarding the success of one, two, or more hundred cataract extractions show truly the superiority of any operation or operator. I would rather draw a conclusion from the nature of the failures, accidents, and complications which follow an operator's work, than from the tabular results of his successes. Thus one operator may lack expertness, having loss of vitreous with half of his extractions, entanglement of the iris in the corners of the wound in the other half, and make an irregular tear in the capsule in all of this operations, thus giving quite severe inflammatory reactions. Still, he may have the luck

not to meet a case with diseased retinal vessels which will rupture spontaneously when the eye is opened, or a case of hyper-mature cataract which has a lens capsule filled with calcareous deposits, or a case of hemorrhagic diathesis which will bleed without end upon the slightest provocation. If it had been my fortune not to have met with these cases, I could have reported one hundred operations without a single failure. If it had been my misfortune to meet ten such complicated cases as those I have described, I would have had ten failures. The judgment against any one having so many failures would be unfavorable, although it might be unjust.

My results I sum up as follows: *Ninety-six could read the daily papers; two*, from disease existing behind the cataract, could not read, although the wound healed promptly without inflammatory reaction; *two* were complete failures, from causes above detailed, and for which the unbiassed scientist can in no way hold operator or operation responsible.

I have not selected my cases, but have thus far operated upon all cases presenting, irrespective of complications known to exist previous to the operation. The two cases where the light of a candle in a dark room could not be seen at a greater distance than ten feet, were very uncertain in locating the position of the light, and had been advised against an operation by very competent authority, owing to the probable complicated nature of the cataract. While I acknowledge the perfect soundness of the advice, I cannot help calling attention to the instructiveness of the result, namely, vision sufficiently practical to read the daily papers. The prospective question in ophthalmology will be, How shall we treat such cases of cataract where the disease is sufficiently advanced to prevent the individuals from following their usual vocation? The prospects are not inviting where an attempt is made, after a preliminary iridectomy, to bring sufficient traumatism to bear upon the lens by applying the force through the cornea. Is it better to attempt to remove the cataractous lens at any stage, or to resort to some artificial means to ripen it?

If the lens is to be ripened artificially, shall it be done by doing an iridectomy, and then introducing a delicate, polished instrument into the eye, stroking the anterior surface of the lens directly with its smooth surface? or shall we dilate the pupil, and introduce into the eye a curved needle, the surface of its curve being a polished surface with which the lens may be carefully stroked? or shall we carefully make a small discission of the lens for the purpose of ripening it? My experience thus far enables me to say that they may still count fingers up to six feet before one is warranted in exposing his patients to the accidents which may follow any attempt to artificially ripen a cataract. It is better, when they cannot count fingers at a greater distance than six feet, to remove the lens and deal with any subsequent pupillary opacity as occasion requires, after all inflammatory reaction has subsided.

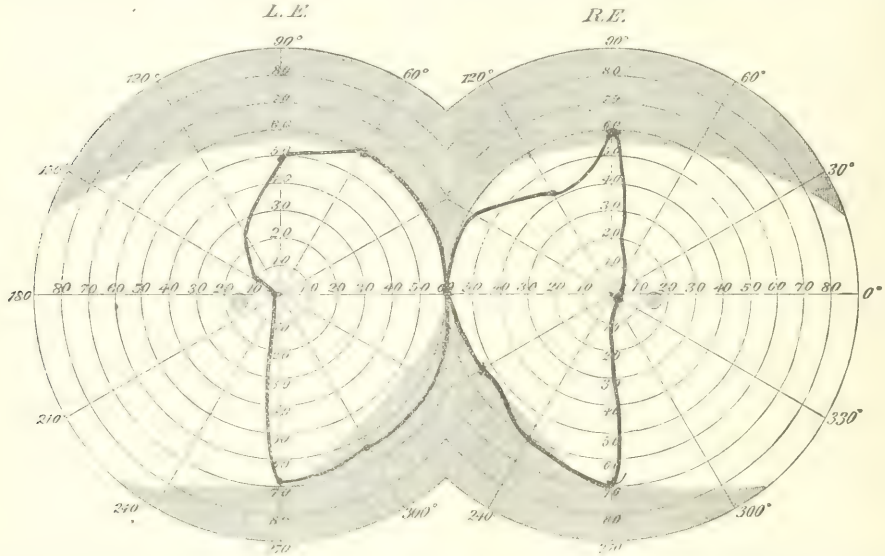
We must look to the experience of the future to decide which of the above methods is preferable.

A CASE OF BITEMPORAL HEMIANOPSIA.[1]

By EDWARD WAITZFELDER, M.D.,

VISITING PHYSICIAN TO THE NERVOUS DISEASES, BLACKWELL'S ISLAND HOSPITAL; ATTENDING PHYSICIAN TO THE EASTERN DISPENSARY.

MR. PRESIDENT: Cases of hemianopsia of the classic type—that is, temporal in one eye and nasal in the other, have become so frequent during the past few years as no longer to excite comment. It is now thoroughly established, I think, that they owe their origin to a lesion, usually destructive in character, situated in the optic, tract, posterior to the optic chiasm, and most usually in the occipital lobe, at its extreme posterior mesial surface; in fact, either involving or in close proximity to the cuneus.



But cases where only one side of the field is destroyed, or the same side of both fields, are sufficiently rare to warrant me in presenting the following case, as it is one in which a positive localization can be made, and in which all the symptoms can be accounted for by the lesion, and where the growth of the lesion is made manifest by the increase of the existent symptoms, and by the development of new ones.

Julius S——, aged eighteen and a half years, native lithographic artist. Paternal history, negative; maternal history, negative, except that one aunt suffers from migraine. Patient states that he was very nervous when a child, but never had convulsions. During early childhood had scarlet fever, but with no complications. At eight years of age had purpura hemorrhagica, which lasted three weeks. Further history negative until fifteen

[1] Read before the New York Neurological Society, November 2, 1886. Case presented.

years old, when he began masturbating excessively, and continued it for one year. At about the same time began to have attacks of migraine, which at first used to come on almost daily, but now occur irregularly about once a week or ten days. Excepting these attacks he was in good general health until early in last April, when he noticed, while at work, that he had a "blur" over his right eye. For this he consulted Dr. Callan, at the New York Eye and Ear Infirmary, who made the following note of his condition at that time: "He had right temporal hemianopsia (almost the whole of the temporal sight being wanting); it grew worse; then the left eye became affected, and temporal vision on the left side was lost." In a note to me, September 16th, Dr. Callan says: "He has now bitemporal hemianopsia. There has been a low grade of neuro-retinitis on the right side for the past two months. His vision now (September 16th) is: R. V., fingers at 15 feet; L. V., $\frac{20}{20}$. The ophthalmoscope shows optic atrophy of right nerve, with some tendency toward that condition in the left nerve."

When I first saw the patient, September 16th (five months after the beginning of his complaint), he presented as follows:

Examination of the heart, lungs, and kidneys, negative. Temperature and pain sense, normal and equal on both sides of face. At one examination I thought the right angle of the mouth was slightly lower than the left, but this, the patient states, is congenital, and is also the case with his mother. General condition, good. Reflexes (superficial and deep), normal. Taste, smell, hearing, color, perception, normal, and equal on both sides. Vision, as above. Hemianopsia complete, except that it "dodges" the fixation point. His chief complaint was of the pain of his hemicrania (which most frequently affected the left side of his head). For the relief of this I recommended the instillation of atropia, to paralyze his accommodation, which I thought was faulty, and the cause of his attacks of migraine. Since that treatment was begun he has had but one slight attack, and that was of short duration.

October 25, 1886.—R. V. $= \frac{20}{200}$; L. V. $= \frac{20}{20}$. Ophthalmoscopic examination: R. E., disk atrophic; vessels of retina small, especially, on nasal side; complete ring of pigment about the disk. L. E., disk atrophic; vessels small, lower and inner vessel, tortuous. Atrophy of retina and disk in both. Color-sense normal.

There is no history of tuberclosis; and while the patient denies syphilis, hereditary or acquired, he has been subjected to a very thorough course of anti syphilitic treatment, sufficiently long continued to exclude a syphilitic lesion as the cause of his hemianopsia.

Although the presentation of a case of cerebral disease without the specimen offers large opportunity for speculation as to the location and character of the lesion producing it, I think we are warranted in drawing the following conclusions from this case: That the symptoms are due to a tumor, which, on account of its rapid growth, is probably sarcomatous in character; that the tumor lies anterior to the chiasm, and that it exerts pressure upon the fasciculi cruciati of both nerves.

The growth of the tumor is comparatively rapid, as it has crossed the mesial line within five months. As yet the fasciculi laterales are unaffected; but I think, as the tumor grows in size, the pressure will be sufficient to interfere with the proper function of that portion of the optic nerve, and complete amaurosis will result.

It has, as yet, involved none of the other basal nerves. The optic atrophy is also due to the pressure of the tumor being most marked in that nerve which has been subjected to pressure longest, viz., the right. The situation of the lesion precludes surgical interference; the prognosis is bad, and if the lesion continues to increase in size as it has the termination of the case is not far off.

Mayor Grace has appointed Mrs. Mary Nash Agnew and Miss Grace Dodge Commissioners of Education.

Clinical Department.

A CASE OF QUININE RASH.

Dr. M. A. Veeder, of Lyons, N. Y., writes that he has recently observed a case of quinine rash in which the condition of the skin closely resembled that existing in scarlatina. The patient, without consulting a physician, had for a day or two been taking quinine in small doses for some slight disorder, supposed to be malarial; but, becoming alarmed at the appearance of the rash and imagining that the disease might be scarlet fever, medical advice was sought. The slight malaise and feverishness, together with the cutaneous conditions, formed a group of symptoms sufficiently obscure; but fortunately, for the credit of the profession, the source of the difficulty was at once suspected, and the taking of quinine forbidden. The rash disappeared with great promptness, but returned again repeatedly when, as an experiment, quinine was again administered in small doses.

MALARIAL AFFECTION SIMULATING BASEDOW'S DISEASE.

Andrew H. Smith, M.D., New York, reports the following interesting case: "D. H. S——, a lad eleven years of age, found, while preparing for bed one evening in March last, that the collar of his night-shirt seemed unusually tight. On looking into the mirror he perceived that his neck was considerably swollen. This was brought to the attention of his mother, who came with the lad to see me on the following morning. The swelling had nearly disappeared during the night, but I could still detect a slight fulness of the thyroid gland. At 8 o'clock that evening the throat was found to be swollen again, and I was called. The circumference of the neck, over the most prominent part of the swelling, was then three-fourths of an inch greater than when I saw the case in the morning. The swelling occupied the isthmus as well as the lobes of the thyroid gland. On placing the stethoscope over the tumor a loud bruit was heard with each cardiac systole. The pulse was 110, and there was marked palpitation. There was no exophthalmus. Temperature, 101. The spleen was considerably enlarged. The following morning the neck had decreased again in size, the measurement being the same as on the morning before. The temperature was normal, and the pulse 98. Quinine was administered in full doses during the day. In the evening the swelling again increased, but to a less extent than the day before. After this there was a rapid subsidence of all the abnormal phenomena. A week or ten days elapsed, however, before the fulness in the neck had entirely disappeared.

"The case was seen by Drs. Jacobi and Webster, neither of whom had met with a similiar instance in his observation or reading. It was certainly something entirely new to me, and but for the periodicity, which was so strongly marked, the malarial nature of the affection might have escaped notice.

"This case adds another illustration of the protean forms which malarial poisoning may assume. In a former paper (The Medical Record, May 30, 1885) I have given a number of examples, including one in which valvular disease of the heart was very closely simulated. This case, however, has a value other than as a clinical curiosity, as it lends strong support to the theory which ascribes the phenomena of Basedow's disease to disturbance of function of the sympathetic.

"As the general phenomena of a malarial paroxysm are produced through the sympathetic system, it is a fair inference that the malarial poison in producing the phenomena of Basedow's disease acts through the same medium. The theory that other disturbing causes act through the sympathetic in producing the usual more

permanent form of Basedow's disease thus receives additional support.

"Futhermore, this case may fairly suggest inquiry as to what rôle chronic malarial-poisoning may play in the causation of the ordinary form of this affection."

Progress of Medical Science.

On the Influence of Antipyrin on the Elimination of Nitrogenous Matters.—The steadily increasing utilization of antipyrin as a prompt, convenient, and innocuous antipyretic has naturally stimulated researches as to the physiological aspects of the drug. Among these the influence which this drug exercises on the tissue-changes invites, of course, our special interest. Umbach's experimental studies, executed in the laboratory at Berne (*The Therapeutic Gazette*), are well adapted to enlighten us in regard to the subject in question. Umbach made the observations pertaining to the elimination of nitrogen and uric acid on his own person, in order to obtain very reliable results. By rigorous dietetic measures the observer succeeded in establishing a certain normal figure for the elimination of nitrogenous matters, with but slight daily variations (3j. *pro die* at the utmost). Uric acid was determined by precipitation with muriatic acid, and the total value of the eliminated nitrogenous matters was obtained by Kieldahl's process, as modified by Petri. After ten so-called normal days Umbach took on two consecutive days 3j. of antipyrin each, and noted soon a general excitation, insomnia, and a peculiar burning sensation of the skin. The minimum of the bodily temperature was 97 ° F. and the frequency of the pulse decreased about fourteen beats per minute. It was ascertained that antipyrin, while not altering the elimination of uric acid, caused a reduction of thirty grains (corresponding to one drachm of urea) in the figures representing the total of the eliminated nitrogenous matters. A second series of observations instituted on his own body furnishing quite analogous results, Umbach felt safe in announcing the following axiom: "Antipyrin, like quinine and other antipyretics, materially lessens the elimination of nitrogenous matters, and can therefore be said to cause a decrease in the tissue-changes of the respiratory and alimentary systems." While antipyrin was thus shown to reduce the tissue-changes, it was proven by similar experiments that the sulphates (sulphide of calcium) cause an increase in the total of eliminated nitrogenous matters, with a simultaneous decrease of uric acid. Umbach explains this influence of alkaline salts—as in the case of carbonates—as resulting from the increased alkalescence of the juices, and the thus heightened oxidation processes in the body. An investigation of the influence of antipyrin in fever patients, instituted by Wiczkowski, led to very similar results. This observer also noted a considerable diminution of the chlorides in the urine in the apyrexia produced by antipyrin, even if a sufficient amount of chloride of sodium be ingested.

The Existence of Lobar Pneumonia in Very Young Children.—The question is raised by Dr. Carron de la Carrière, whether broncho-pneumonia, which is so common in the early periods of life, has not drawn away attention from lobar pneumonia, as well from the pathological anatomy stand-point as from the clinical. To show the changed views regarding this disease, a few years ago the generally received opinion was that pneumonia in early life was usually of the lobar form; now, with many authors, every inflammation of the pulmonary parenchyma which occurs in a child under two years of age is considered, *a priori*, as broncho-pneumonic. Some well-known French writers are still of the opinion, however, that lobar pneumonia in early childhood does exist, and among them may be mentioned J. Simon, Descroizilles, Rilliet and Barthez, and Picot. The author, in his inaugural thesis, has related several cases of croupous lobar pneumonia which came under his observation, the children being all under the age of two years. Cases of this character usually continue for seven days. Neither the mode by which the disease begins nor the physical examination of the chest can serve to differentiate broncho-pneumonia, at this early period, from pneumonia, but the thermometric curve affords a certain means for making a diagnosis. Jurgensen has shown, by the analysis of a large number of cases, that in two-thirds of all cases the fever declines between the fifth and seventh days, and that in seven times out of eight it is by crisis and not by lysis. Therefore the author concludes that every acute pulmonary affection which comes on suddenly, lasts seven days, and then suddenly ends, is a simple pneumonia.—*The Archives of Pediatrics.*

Cocainomania.—The undue use of cocaine, and the symptoms referable thereto, are at present claiming quite a share of professional attention. Erlenmeyer, in the *Deutsche Medizinal Zeitung*, has studied these symptoms in a number of individuals who have used cocaine to excess, by subcutaneous injection or otherwise. The characteristic symptoms denote vaso-motor paralysis, the pulse is accelerated, the sweats profuse, and dyspnœa and syncope ensue. Failure of general nutrition is very notable, the eyes become sunken, and the skin of cadaveric hue. At a more advanced stage psychic troubles supervene, sometimes requiring personal restraint. Most of the persons so affected had previously been addicted to the abuse of morphia, and cocaine had been resorted to as a minor evil. It would therefore be unjust to lay too large a share of the troubles noted at the door of cocaine; still, enough evidence is at hand to prove that it may be productive of evil consequences, and should only be used as a powerful medicament with circumspection.

The Danger of Syncope in Hot Baths.—It is surprising that deaths by syncope during the use of hot baths are not more common than the coroner's court returns show them to be (*The Lancet*). The peril of faintness by the mere determination of blood to the surface of the body, thus quickly depriving the heart of its usual normal supply and stimulus, is very great. In cases of muscular weakness of the heart, this danger must be imminent whenever the "hot" or even the "warm" bath is used. Apart from this obvious risk, however, there is always the possibility that in weakly or too impressionable states of the nervous system, the peripheral stimulation produced by the application of heat to the whole of the cutaneous extremities of the afferent nerves may so act on the centres as to arrest the evolution of energy by an inhibitory influence. It is doubtful if we lay stress enough on this condition when prescribing the use of such external agents as act on large areas of surface, and strongly impress the nerves there commencing. We know how burns of even moderate severity may kill by the impression they produce on the centres of vitality from the periphery. There is much to learn in regard to the nature and extent of the central effects which may be thus caused. Whether for good or evil, the application of heat or cold to the cutaneous surface is a potent measure, and one that ought not to be recklessly resorted to, more especially in cases of great susceptibility, involving such excitability of the nervous centres as often coexists with fairly good health in a weakly body.

On Extirpation of the Kidney.—At the Berlin Medical Society a paper was read by Professor Ernst von Bergmann, containing *five new cases*, and six others which the author had mentioned in a previous paper, but which have not as yet been published, making eleven in all. The unfavorable prognosis of operations for malignant tumors of the kidney may yet be improved, in the opinion of the author, by advances in the diagnosis and technical execu-

tion of the operation. Malignant tumors greatly vary in their course, some growing rapidly, others very slowly. Some present early metastases, others none at all. In children a very gradual growth is the rule, leading to intermittent hæmaturia, marasm, and weakening diarrhœa; but other cases in which no renal symptoms occur are observed as well. The periods of occurrence of malignant disease, before the fifth and after the fiftieth year, also tend to render the diagnosis easier. The movability of the tumor does not, however, appear constant enough to prove valuable in diagnosis, nor is any constancy to be found in the adhesions of the tumor to surrounding organs. As to technique, the author advocates lumbar incision for the removal of malignant neoplasms, and illustrates the dangers of anterior peritoneal section by two unsuccessful cases. If the tumor is too large to be readily removed an oblique lumbar section is to be made, without incising the peritoneum. In this way he successfully operated in one case for malignant disease of the kidney. Well-developed abscess of the kidney is to be treated solely with the knife. The diagnosis can be made from the presence of a lumbar tumor and one containing pus. The author was able to limit the diagnosis to one kidney in five cases. Two cases of extirpation of the kidney for pyelo nephritis are given, one of which ended fatally. A tumor was present, and evening elevations of temperature were observed in both cases. The urine was comparatively clear, owing to the admixture of healthy urine secreted from the healthy kidney. Both patients were females and attributed their troubles to pregnancy. In one of these cases a stone in the renal pelvis caused the suppuration. In two further cases the cause of suppuration could not be ascertained. These both terminated favorably, as did also another (fifth) case, in which a kidney was extirpated for perinephritic abscess of large proportions. These kidneys did not bleed when their substance was injured, an observation which materially facilitates similar operative procedures. In certain cases, where the pus is concentrated in one point, simple nephrotomy may be preferable to nephrectomy. The former should be preferred if the diagnosis is uncertain, and if it is uncertain whether the other kidney is diseased. One case, in which the author removed the kidney for suppurative processes, ended fatally, and the post-mortem showed that the other kidney was similarly affected. In no case did any infection of the wound occur from the incision into the suppurating mass.—*Annals of Surgery.*

The Infectious Capacity of Chronic Gonorrhœa.—Neisser, the discoverer of the gonococci, addressed the meeting of German physicians at Strasburg on the subject of the infectiousness of chronic gonorrhœa (*The Therapeutic Gazette*, September 15, 1886). He believes that the question whether chronic gonorrhœa is infectious or not cannot be answered summarily, but can solely be decided from case to case by repeated examinations of the gonorrhœal secretion for gonococci. Examining one hundred and forty-three cases of chronic gonorrhœa for gonococci, he found the proportion of cases giving a positive result to be almost equal to that giving a negative result. Neisser recommends, as the most effective treatment, nitrate of silver in a proportion of 1 to 3,000 to 2,000, or a five per cent. solution of salicylate of sodium, the remedy being best injected with a soft, thin catheter, having at its point several openings. In a case presenting, even on repeated examinations, no gonococci at all, treatment is better wholly avoided. The internal administration of the balsam of copaiba appears to be a useful measure. This recalls a statement of two French observers, Sinety and Hennegue, which is in opposition to Neisser's claim. In their experience injections of nitrate of silver were unable to kill the gonococci found in the urethritis of females. The same negative results they obtained also with permanganate of potassium, ozone-water, and even with corrosive sublimate.

Dermoid Cyst of Testis.—At a recent meeting of the London Pathological Society, Mr. D'Arcy Power showed a specimen of a rare form of congenital tumor, a dermoid cyst of the testis. The cyst occurred in a healthy child, four years of age, and had been observed for three years. As the tumor then began to grow rapidly, castration was performed. The cyst was situated on the right side, as was the case in the majority of the few cases which were on record. Within the cyst were numerous smaller cysts, containing gelatinous tissue. The walls contained fat, and, in a few places, calcified cartilage; certain of the smaller cysts contained hairs. The dermoid tumor occupied the whole of the body of the testis, and was enclosed in the smooth and somewhat thickened tunica vaginalis; the epididymis was present.

Poisoning by an Aniline Pencil.—Dr. Arthur Pearce reports the following case (*The British Medical Journal*, October 23, 1886). H. C——, twenty-three years of age, a discharged soldier, sent for him at 3 P.M. on October 5, 1886. He was then in a state of partial collapse, sweating and almost pulseless. He had vomited, and suffered severely from diarrhœa, not in any way characteristic. He had been subject to dysentery abroad, and had been drinking on October 2d. Dr. Pearce gave him a stimulant stomachic, with two grains of gray powder and five of compound ipecacuanha powder, every four hours, with other directions. On seeing him the next morning it was found that he had revived, and had been sick after every powder, vomiting some blue liquid, unfortunately thrown away. He now showed an indelible aniline pencil, which he had used on October 3d, to push out a fang of a tooth, left after partial extraction on October 1st. On the same day he was seized with vomiting and purging, and just before the doctor saw him he was said to have had an epileptiform fit. He recovered from all symptoms in a few days, only some weakness remaining.

The Cause of Circular Gastric Ulcer.—Dr. Silbermann, of Breslau, has lately made some experiments on dogs for the purpose of showing that the kind of anæmia characterized by deficiency of hæmoglobin in the red corpuscles of the blood is peculiarly favorable to the production and maintenance of circular ulcers of the stomach. Hæmoglobinæmia was produced by injection of various substances, and then either chromate of lead was introduced into a small gastric artery, or a ligature was applied to it, or the internal surface of the stomach was abraded by means of an œsophageal sound carrying a guarded point. All these animals were found to have contracted gastric ulcers, and it appeared to make no difference whether the hæmoglobinæmia was produced before or after the stomach was injured. With the microscope it was found that a number of the red corpuscles were of a very pale color, and that the blood was less alkaline than normal, which is explained by the experiments of Preyer, A. Schmidt, and Rollet, who have shown that hæmoglobin is a weak acid. Dr. Silbermann considers that in the anæmia of hæmoglobinæmia all the conditions are present which are required by various theories for the production of gastric ulcer—namely, arterial anæmia (Klebs), venous hyperæmia of the gastric mucosa (Key), venous stasis in the hepatic vessels (Gunsberg), circumscribed hemorrhages (Virchow), and, lastly, diminished alkalinity of the blood (Leube).—*The Lancet*, October 23, 1886.

A New View on the Causation of Bright's Disease.—At a recent meeting of the Académie de Médecine, Prof. Semmola, of Naples, brought forward, in an exhaustive paper, his peculiar views on the causation of Bright's disease. According to this inquirer the nephritis which accompanies the malady is not primitive, but consecutive. Albuminuria is produced independently of alteration in the structure of the kidneys, and even, in his opinion, the real cause of the changes witnessed in those

bodies is due to the constant passing of the albumen through their canaliculæ. Sufficient proof of this assertion might be found in experimenting on the lower animals. If the white of an egg were injected subcutaneously albuminuria was determined, and subsequently nephritis. On the other hand, the skin seems to undergo changes which are striking, and sufficient to account for the presence of the affection. The sweat-glands are atrophied, and the conjunctive tissue of the derma is very proliferous. He deduced from this that the skin was the first organ to be affected in Bright's disease, and not the kidney, and all the attention should be turned toward that structure.

Rupture of the Uterus.—At the Obstetrical Society, of London (*The Lancet*, October 16, 1886), Dr. J. G. Swayne gave a description of four cases of ruptured uterus occurring in his practice—two complete and two incomplete. The first occurred about the middle of utero-gestation, and was not clearly traceable to any accident. The uterus appeared to have given way during the effort to expel a putrid five months' fœtus. The woman died undelivered, and a laceration was found in the anterior wall of the uterus, through which the child had passed, so that it lay between the uterus and the bladder in a pouch formed by the peritoneum, reflected from one to the other. In the second case, labor had been induced at eight months, and the rupture had apparently arisen from a transverse presentation and the spontaneous expulsion of the fœtus, in a doubled state. In neither of these cases was the peritoneum torn. The third case was one of complete laceration, and the accident took place during the course of an ordinary labor at full term in a woman with slight pelvic deformity. She was delivered by craniotomy, but died on the fifth day after delivery. The fourth case was one of complete rupture, and occurred in a multipara during an ordinary labor. The child which had partly escaped into the abdomen, was delivered by turning. Laparotomy was performed, the abdomen was thoroughly cleansed, and the wound in the uterus united by several sutures. Death took place within an hour afterward. Dr. Richard Cox then gave the details of the following case: A multipara, aged thirty-eight, was taken in labor at 8 A.M. on May 2d, and was attended by a midwife. Until 3 P.M. everything had appeared normal. The patient then suddenly screamed out, and became faint and sick. The expulsive pains ceased, but an agonizing pain in the abdomen was complained of. Dr. Cox was sent for, and, being from home, arrived about 6.30 P.M. The patient was then moribund. After administering some stimulant, Dr. Cox passed his hand into the uterus, which was empty, and finding a rent of five inches in the anterior wall, he was able to seize a leg and bring the child back from the abdomen, together with the placenta, and to deliver them pretty quickly. There was some difficulty with the head, which was arrested at the brim by a slight contraction. The patient died shortly afterward. She had had natural confinements previously.

Pulsating Tumor of the Head, with Raynaud's Disease.—At a recent meeting of the London Clinical Society (*The Lancet*, October 16, 1886) Mr. F. Treves read notes of a case of pulsating tumor of the head, with Raynaud's disease. The patient, a lad aged seventeen, complained of severe frontal headache, vomiting, and vertigo. These symptoms had existed for twelve months. Both carotids were considerably enlarged, as were also the temporo facial and internal jugular veins. Over the arteries a loud and harsh bruit was to be heard, and a thrill felt. There was no arterio-venous communication. Certain vessels of the scalp were dilated. The right side of the face was a little larger than the left, the right facial muscles also acted with greater vigor. The right side of the tongue was larger than the left. The right eye was more prominent than the left, and the right palpebral fissrue was the larger. There were nystagmus and occasional diplopia. The left external rectus was weak. The patient was liable to "hot sweats." Over the left mastoid region was a cirsoid aneurism of peculiar character. It was the seat of an intense bruit. The skull beneath the tumor was marked by a number of irregular channels. There was a second pulsating tumor over the occiput. It was venous, and communicated through a fissure on the skull with the superior longitudinal sinus. It was the seat of a certain pulsation, but presented neither thrill nor bruit. The tumor was readily reduced. The sphygmographic tracings of the two swellings revealed remarkable differences. In the venous tumor the respiratory curve was evident. The pulsation in this tumor was derived from the brain. The skull presented certain irregular gaps and fissures, which appeared to have been caused by veins in a state of congenital dilatation.

What Constitutes Malignancy?—In *The Lancet*, of October 23, 1886, Dr. Herbert Snow, of London, concludes his articles on the above subject. Referring to the bacterial hypothesis to account for the phenomena of malignancy, he says: "I have already alluded to the fact that there is a fashion in medical opinion, and just now bacteria are extremely in fashion. Besides, it would be extremely convenient if we could call in the aid of a bacillus or micrococcus to account for the strange phenomena of proliferating protoplasm which we find in cancer. Yet, apart from the fact that no one has yet succeeded in discovering such (although no doubt carefully looked for in innumerable instances), there seems to me a very marked distinction between cancer on the one hand, and on the other all the diseases hitherto referred to bacterial agency. In the latter there has always been either evidence, or else great suspicion of *contagion*, which evidence has of late years become much stronger. To leprosy I need hardly allude. To tuberculosis the suspicion of contagiousness has long attached, although by lapse of time the contagion is weak among Europeans; and it is not till the malady finds fresh and virgin soil, as among the savage tribes, that we are able to recognize the phenomenon in its full vigor. By malignant disease, on the contrary, no suspicion of contagiousness has ever been incurred, unless it may be in a few extremely rare instances, which could hardly fail to occur as a mere matter of coincidence. This fact, to my mind, renders it highly improbable that we shall ever be able to refer the latter to any bacterial excitant." He then briefly sums up as follows: "The phenomena of malignancy result from conditions which irritate normal protoplasm, causeit to proliferate abnormally, and to assume a quasi-independent parasitic vitality. These conditions may be mechanical; in a much larger proportion of cases they are neurotic. That is the furthest point we have yet reached; nor do I see how our knowledge of cancer can make much advance until we know far more than at present about the ultimate properties of protoplasm, and the manner in which this is influenced by states of the nervous system."

Non-gravid Hydrorrhœa.—Dr. James Oliver, writing on the above subject to the *British Medical Journal*, says: Some time ago I drew the attention of the profession to an anomalous uterine function manifested by the discharge, more or less frequently, and in varying quantity, of a slightly opalescent watery fluid from the cavity of the uterus; to this I applied the term non-gravid hydrorrhœa. The secretion or excretion, whichever it may be considered, is truly comparable with that from the renal organ. That the uterus should, by some freak, perform a function wholly foreign to us is quite intelligible. In many of the lower organisms, where structural differentiation is ill-defined, vicarious function is readily fulfilled. The animal may, for example, be turned inside out, with impunity, and the vital state of the organism thereafter be maintained unimpaired The endoderm, as yet but feebly specialized and set apart for assimilation, now dis-

charges the function hitherto performed by the ectoderm, that of elimination, while the ectoderm, on the other hand, readily fulfils the function of the endoderm, that of assimilation. The reproductive and urinary organs, it is to be remembered, are, by a process of gradual evolution, developed from the middle of the three germinal layers —from the temporary organs named Wolffian bodies. These bodies, when fully formed, occupy nearly the whole of the abdominal cavity, and constitute a pair of symmetrical organs, closely related in structure to the permanent kidneys. It is not, therefore, astonishing that an organ developed in common with the kidneys, from the same primordial structure, should occasionally reveal the manifestation of a function so closely related to that normally displayed by the renal organs.

Treatment of Typhoid Conditions by Benzoic and Salicylic Acids.—At a recent meeting of the Société Médicale des Hôpitaux, M. Albert Robin proposed a new method of treating typhoid conditions in which the organism is always overcharged with the incompletely oxidized residues of nutrition. These residues were eliminated with difficulty, owing to the fact that they are but slightly soluble in the fluids of the human body. There were certain pharmaceutical substances which combined with the nitrogenous residues of the human organism, and rendered them more soluble, and this facilitated their elimination. The principal agents which acted in this way were benzoic and salicylic acids, which, after combining with nitrogenous substances, such as glycocol, passed into the urine as salicyluric and hippuric acids. M. Robin, in his first experiment, studied the physiological action of benzoic acid on combustible substances. He administered benzoic acid to persons in good health, whom he had previously dieted for a few days. Under the influence of this treatment, the solid constituents of urine slightly decreased, and there was also a smaller proportion of urea, consequently its relative proportion to solid matter was lower. These results could not be attributed to a moderating action of benzoic acid on combustion, but to the action of the acid in carrying away into the urine part of the combustible substances. On another occasion, M. Robin administered benzoic acid to five patients with typhoid fever, in whose urine he noticed an increase in the weight of urea and solid matter. Salicylic acid and salts gave the same results, as also did substances such as toluene, xylene, toluic acid, ethyl, and propylbenzine, which, in passing through the system, become transformed into benzoic acid.—*The British Medical Journal*, October 23, 1886.

Induction of Premature Labor in Severe Albuminuria.—A correspondent of the *Lancet*, reports the following case: Mrs. S——, primipara, aged twenty-six, came under my care on November 5th of last year. The case, on examination, proved to be one of pregnancy, complicated with albuminuria. The confinement was expected about the middle of January, of the present year, thus making her period of pregnancy somewhat less than seven months. The lower extremities were extremely anasarcous, the hands and face slightly so. The quantity of urine passed was much less than natural, was of high specific gravity, and highly albuminous, containing a large quantity of casts—hyaline and blood casts. The treatment consisted of diaphoretics, the hot-air bath, free purgation, and free leeching of the loins. Notwithstanding this, the urine gradually diminished, and became more albuminous, until, on the 27th instant, the quantity passed in the previous twenty-four hours only reached between three and four ounces. Now came intense headache, impaired vision, vomiting, and a condition highly suggestive of uræmia. Under these circumstances, with no labor imminent, I considered the best treatment would be to induce premature labor. This I did in the usual manner, with a gum-elastic catheter, and with the best results, as my patient was delivered within twenty-four hours, from the introduction of the catheter, of a living female child, apparently about seven months' gestation. The after-progress was all that could be desired; the urine was passed in large quantities, and within one week was quite free from albumen.

A Collection of Pine Leaves in the Bronchi Causing Repeated Hemorrhage.—Dr. Axel Key has recorded the case of a man, thirty-six years of age, who had suffered for seventeen years from violent hemorrhage from the lungs. He died in the Serafim Hospital, December 1, 1885, after a short residence there. At the post-mortem examination the body was found to be robust, and not emaciated. In both of the larger bronchi there were a number of circumscribed blood coagula. The right lung was unaltered; in the left there was a slight enlargement of a smaller bronchus, with induration of the walls and immediately surrounding lung tissue. In the cavity of the dilatation there was a quantity of coagulum. Outside the cavity there were six pine leaves partly massed together, but with the points free; the leaves were of a brownish-gray, faintly changing into green, stiff, and with sharp points. The marks of the points appeared on the mucous membrane, and were several millimetres long. The lung was in other respects healthy. The leaves were, in the opinion of Dr. Key, the cause of death, owing probably to the fact that latterly they had embedded themselves more deeply in the lung, or that their position had changed to a new and more dangerous place.—*The Lancet.*

Spurious Venereal Diseases.—Dr. Jordan Lloyd holds views on the nature of the so-called venereal diseases which are at variance with those generally received by the profession. He has just published a series of observations (*The Birmingham Medical Review*, October, 1886) which would tend to show that neither gonorrhœa nor chancroid have a specific virus of their own. Both are contagious; but, he maintains, both may, and do, arise from the inoculation of the products of other inflammations. Syphilis is the only one of the group of venereal diseases which in every case originates, directly or indirectly, from a similar pre-existing primary or secondary lesion. The author, speaking of spurious gonorrhœa and spurious soft chancre, says: "Whether we can distinguish between the true and the false, clinically, is a matter not yet decided, although personally I do not think we can in every instance. Some authors, however, contend that the cases which originate as it were *de novo* are more severe and less amenable to treatment than those which come from true gonorrhœa and chancroid; on the other hand, authorities may be found who hold contrary opinions. My own practice would incline me to agree with the latter. Whether there are or are not reliable clinical distinctions between the true and the false is a matter of little therapeutical interest, inasmuch as the same lines of treatment will serve us in both disorders. The chief object to be gained by the recognition of the true and of the false is a social rather than a professional one, inasmuch as we are often called upon to give judgment on the *nature of the origin* of urethral discharges and penile sores, and, under such circumstances, whenever there is room for the slightest doubt, I say unhesitatingly, in the present state of our knowledge, the infecter is entitled to the benefit of it. I would remove spurious gonorrhœas and chancroids from out the group of venereal diseases altogether, although most of them result from venery, because the term venereal, as at present used, suggests something loathsome and nasty; something which essentially appertains to the prostitute and her visitors." Dr. Lloyd further thinks that individual predisposition is a potent factor in the etiology of venereal diseases, both as regards liability to, and immunity from, those conditions which he has called spurious, as well as true gonorrhœa and chancroid, and he thinks he might take in syphilis

itself. In speaking of predisposition, he does not refer to any of the local predisponents, such as long prepuce, small meatus, liability to herpes and eczema, stricture, etc. Independently of all these there can be no doubt that some individuals contract—and even develop—venereal disease much more readily than do others. There can be no doubt that all physicians, from the nature of their calling, must, during the course of each year, be exposed to infection of one kind and another many hundreds of times. He is not aware that physicians take any particular precautions in the way of protecting themselves from these influences. Immunity does not, in every case, depend upon their having already suffered from attacks of the various infectious diseases. How is it, then, that they so rarely become affected? It is because they have not the predisposition, whatever that word may mean; because their bodies do not present a suitable nidus for the growth and development of the germs of disease. Again, in a class of cases more closely allied, clinically and pathologically, to those under discussion, how often do we see among hospital officers men who are frequently developing crops of hospital furuncles on their hands and arms, others with constantly recurring sore-throat, others with inflamed wounds and lymphatics from *post-mortem* abrasions, while at the same time and under precisely the same conditions there will be men who, year after year, remain free from all such troubles. Susceptibility of one class of individuals to certain poisonous influences, or insusceptibility of the other, must be the explanation. There is nothing more strange in it than in that of many of the well-known "idiosyncrasies;" for example, the poisonous effects of eggs and tobacco on certain persons. In speaking of a class of persons, called (by him) "suppuraters," he says, "these people, apparently of robust health and iron constitutions, frequently have boils; when their lympathic glands inflame, and they often do, the process more often terminates in suppuration than resolution; trivial wounds in such people do not dry up at once, they heal by granulation. I believe these suppuraters contract venereal diseases where ordinary mortals escape them."

Heart Disease and Over-exertion.—Seitz, Corvisart, Hope, Kreysig, Allbutt, Peacock, and many others, have all maintained that heart disease is frequently due to over-exertion. But ever since Bouillaud showed the close connection between heart disease and acute rheumatism the over-exertion theory has been pushed rather far to the background. The object of a recent communication by Leyden (*Zeitschrift für Klinische Medizin*) is to restore it to its merited position. The author gives a short *résumé* of writings on the subject, pointing out the frequency of cardiac ailments among the harder-worked classes. He refers particularly to Peacock, Myers, Da Costa, and others who favor the over-exertion theory. Of course there are objectors. Shrötter, in "Ziemssen's Handbook," remarks that if such a thing does occur without disease of the heart-muscle, it must occur very frequently, and yet the greater part of the human race lives by strong muscular exertion. Spillman maintains that "the heart wearies not. It is formed to beat. That is its *rôle*, its life. It beats sixty, seventy, and eighty years without wearying." According to such views the word "over-exertion" applied to the heart is not physiological. Leyden answers, in substance, that the question is purely a practical one, and proposes to examine it by the light of his own experience. In this examination care must be taken not to take the pathological condition of the heart as a starting-point, but the cause or causes of such a state. Heart diseases due to over-exertion he arranges in three groups: 1. Sclerosis of aorta, aneurism of aorta, arterio-sclerosis. 2. Insufficiency and rupture of aortic valves. 3. Cases of over-exertion of the heart, resulting in injury to the heart itself. As regards (1), over-exertion as a cause is not so very prominent. Still, after eliminating other causes, such as heredity, abuse of alcohol, etc., a number of cases remain that are most probably due to over-exertion. As regards (2), the works of Allbutt, Myers, and Da Costa are conclusive. Particularly interesting are those cases in which a sudden rupture of the aortic valves has immediately followed an over-exertion. He mentioned two cases coming under his own observation, eight given by Peacock, and others by Rosenberg, Todd, Hyde, Salter, Foster, and Pepper. But it is on the third group that Leyden lays most stress, and he devotes the bulk of his paper to an account of ten cases of dilatation produced by over-exertion. One of these must serve as a type. A healthy man in the prime of life, on lifting some heavy weight, is suddenly seized with a feeling of pain and oppression in the epigastrium. This soon passes away, for the time being, but returns with every renewal of exertion, so that the patient seeks relief in the hospital. The heart is found increased in its long diameter, with weak apex beat (dilatation of left ventricle) and great irregularity in its action (*delirium cordis*). After rest and digitalis the dilatation of the left ventrical almost disappears, but the irregularity of the contractions continues. The patient is dismissed with injunctions to avoid over-exertion. He disregards the advice, and, after working two months, the old symptoms return and in addition the extremities begin to swell. With the former treatment the dropsy and other symptoms disappear. Attempts at work, however, are followed by palpitation and a sense of constriction of the chest. The symptoms gradually get worse, the lungs, liver, etc., are affected in the usual manner, and the patient dies with well-marked symptoms of heart disease and its complications. At the autopsy the heart is found more than double its normal size, the increase being mainly in the long diameter, and in the left ventricle. Both aorta and pulmonary artery are found comparatively narrow, but the valves of the heart are sound. The left ventricle is much dilated, especially toward the apex, which bulges out into spherical dilatation. Under the microscope there is visible considerable fatty degeneration, confined to the inner layers. The whole point lies in this: Was the heart healthy to commence with? Fatty, and in some cases fibrous, degeneration would lead one to suspect myocarditis, but both the autopsy and the course of the disease gave no decisive sign of any inflammatory process. One might suggest, with Dusch, progressive atrophy of the heart-muscle, but the microscope shows not a trace of this. Over-distention of the hollow muscle of the heart seems the simplest, the most natural, and therefore the truest explanation of the phenomenon. This view explains, without much difficulty, how the ventricle loses its normal shape, bulges at the apex, and, as the disease advances, is unable fully to empty itself. It also explains how, in some less severe cases, under proper treatment, the overstrained heart recovers to some extent its natural shape and tonicity. Still, plausible though the theory be, it is difficult to prove it. Experiments on frogs' hearts (Pitres) show that, if overtaxed or overdistended, they give evident signs of weariness, but the human heart differs too much from the frog's for the analogy to have much force. The human bladder is a better example of a hollow muscle behaving in a similar manner when overdistended. As regards the manner in which the distention is produced, we know that the rush of blood during violent exertion has been powerful enough to rupture the aortic valves, and it is not difficult to suppose that in similar circumstances the left ventricle finds itself unable to cope with the blood-pressure, and gets overdistended. Of course, a heart weakened by other causes will be all the more liable to give way under exertion.

Dyed Hosiery and its Relation to Skin Irritation.—In a paper on the above topic, by Mr. John R. Ashwell, who is thoroughly familiar with hosiery dyeing as carried on at Nottingham and Leicester, the principal points for this work, we find the following (*The Polyclinic*): The term "dyed hosiery" is limited to those

articles which are dyed after their manufacture, not in the yarn. The main bulk of this consists of either wool or cotton, or mixtures of wool and cotton, known either as "merino" or "shoddy," according to quality. With but few exceptions, cotton hosiery is subjected to a mordanting process, which consists in impregnating, first with tannin, and afterward an excess of some metallic salt, by which means an insoluble tannate is formed. The article is then subjected to a severe friction and rinsing, which removes soluble and loosely adherent particles. Mineral pigments, manganic oxide, lead chromate, Prussian blue, or copper arsenite, are not used. Ferric hydrate is about the only precipitated mineral substance employed. All colors which are easily dislodged by soap are avoided. The tannates precipitated on the goods are highly insoluble, because they have to be subjected to friction and frequent rinsing. The tin and iron tannates, separate or mixed, form the mordants for almost all colors; the two tannates being used on bright colors. This has been done for a long while. Tin tannate is decomposed by alkaline preparations, but no tin passes into solution. Iron tannate is very largely used for the production of blacks with logwood, and has been so used for many years; and when we remember the quantities of iron taken into the system in food, it is difficult to see how the insoluble salts can act as irritants. The coal-tar colors may be divided, for the purposes of this question, into two classes, according as arsenic is or is not employed in the process of making the color. Under the first head may be included magenta, grenadine, aniline brown, and maroon. Popularly, it is supposed that arsenic exists in the hosiery dyed with magenta, but, so far as cotton hosiery is concerned, this is not true, while with woollen hosiery it is so little used that it may be ignored. In 1872, Dr. Springmühl found in fourteen analyses of magenta, arsenic from 6.5 per cent. to 0.25 per cent., but of late years the latter figure has not been reached, and the quantity is generally under 0.09 per cent. Cotton hose, mordanted with tin tannate, rinsed, dried, soaped, and redried, does not show on analysis any indication of arsenic. Of the blues, violets, and greens which are in use, some are met with as double salts of the color base and zinc. Experiments show that the zinc does not remain on the cotton. The German Government, after a searching investigation, permitted the use of all the aniline dyes, except picric acid, for dyeing and coloring even articles of food. Manufacturers of aniline dyes agree that they do not know of any skin-irritating properties of the anilines from workmen whose hands and faces are continually covered with them. In these cases anilines in a soluble form are presented to the body, but in hosiery the colors are in as insoluble a form as the dyer can make them.

Artificial Cocaine.—Merck, of Darmstadt, has succeeded in preparing an artificial cocaine which possesses all the properties of the natural product. Benzoic ecgonine is treated with methyl iodide and a certain quantity of methyl alcohol at 100° C. Benzoic methyl-ecgonine is thus obtained, and this substance is cocaine.—*Phila. Med. Times.*

A Simple Method of Plugging the Posterior Nares.—Dr. R. Bruce Wilson, of this city, writes that he has been led to discard the ordinary instruments used for plugging the posterior nares, and uses instead a small sized gum bougie, No. three to six. About one-third of its length is cut off, and a loop of strong thread is passed through the cut end transversely. To this loop is tied a piece of string, and the bougie is then passed through the nostril. When the end becomes visible in the throat it is seized with forceps and drawn out of the mouth. The plug is now attached to the thread and drawn back into position. If the weather be cold the bougie may be warmed a little at first, but the natural temperature of the parts renders it soft and pliable in a few seconds.

Ulcers of the [illegible] —Dr. W. H. Haynes, of this city, writes that he has observed ulcers of the leg following the continued use of bromide of potassium, similar to the case reported by Dr. Amidon at a meeting of the Pathological Society. He has succeeded in curing the ulcers and preventing their return by administering small doses of Fowler's solution at the same time with the bromide. In addition to the use of arsenic internally, oxide of zinc ointment was employed as a local application.

Delirium Tremens from Tea.—Dr. Slater has reported in *The Lancet* the case of a young girl who suffered twice from well-marked symptoms of delirium tremens. She did not drink alcoholic beverages, but had been in the habit, for a number of years, of chewing tea-leaves, which she said acted as a stimulant and enabled her to perform her work better. At the first attack a large mass of tea leaves was passed from the bowels after the administration of cathartics.

Prolonged Gestation.—Dr. Steele Bailey (*Archives of Gynecology*) reports a case of gestation extending over ten months, followed by the birth of a fœtus thirty-three inches in length and weighing seventeen pounds. Labor was naturally very tedious, and the child died during delivery. Dr. S. K. Jackson reports a case in which gestation extended from July, 1884, to September, 1885, ending in the birth of a child weighing eight pounds. Dr. Rossie has related the history of a case of gestation induced by a single intercourse, extending over 317 days. The child, which was delivered by the aid of forceps, was a male, measured a little over twenty-one inches in length, and weighed rather more than twelve pounds. It died six hours after birth.

Entomology in Medical Jurisprudence.—At a recent meeting of the Paris Academy of Medicine M. Brouardel made known some curious and interesting facts concerning the dead body of a girl twenty-two years old, which was discovered in a cellar under a heap of straw. The body had lain there about a year, and was in a perfect state of mummification; putrefaction had never set in. One of the limbs was shown at the meeting: it was thoroughly desiccated, the tissues were hardened, and, when struck, sonorous. MM. Brouardel and Audouard attributed this mummification to the dryness of the soil on which the dead body had been placed; but the more important factors were five different species of acarina, which deposited the débris of the envelopes of their eggs and carapace among the dust that covered the dried tissues of the body. M. Mégnin has proved that by studying the generations of acarina which have been at work on a dead body, the date of death can be ascertained. This entomologist, by examining the débris of acarina in a child's corpse, ascertained that death occurred two years previously; a judicial inquiry confirmed this statement. M. Brouardel described the order of succession of different species of acarina which worked on the dead body of the young girl; also the work of destruction accomplished by each separate species. One species absorbs the fluids, another consumes the fatty acids; when a species has finished its work it dies on the dead body, or is devoured by a succeeding species, which in its turn sets to work. Each generation in summer-time lives from six weeks to two months. In the recent Villemomble murder, M. Mégnin established with precision the exact date of the burial of the human remains discovered in the garden. Among the remains a particular kind of ant was observed, which is never found in soil recently disturbed; also the débris of acarina known as *æsophagus echinococcus*, which also furnished a chronological indication; portion of a bulb of a lily furnished further proof. Two years must have elapsed in order that the bulb should undergo the alterations it presented.—*London Medical Record.*

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PARALYTIC ATAXIA OF THE HEART.

FOR the third time in the last ten years Professor Semmola has called to the attention of the profession a peculiar disorder of the heart, of purely nervous origin, which he calls "paralytic ataxia of the heart, of bulbar origin." In a recent communication to the Paris Académie des Sciences he brings, as he believes, new evidence of the existence of this disease.

Paralytic ataxia of the heart is a disease which usually affects men between the ages of forty-five and sixty. It is caused, as a rule, by powerful emotions and venereal excesses. The disease begins with gastric disturbances—an obstinate dyspepsia, followed by gastric catarrh. Then the cardiac symptoms appear, and consist at first simply of systolic weakness and increase of the heart-beat. This constitutes the prodromal stage of the malady, and it may last for one, two, or three years. The patient while in this stage may recover; but if the causes continue, the disease progresses and new symptoms appear. These consist of attacks of palpitation, irregular heart-beat, and respiratory troubles. The patient during an attack develops a marbled discoloration of the hands, forearms, and legs, especially at the finger-joints and about the knees. This symptom is characteristic and differential, and it is due, says Semmola, not to any mechanical disturbance of the circulation, but to a vaso-motor paralysis, and it shows that the vaso-motor centre as well as the cardiac centre in the medulla is affected. The heart shows no enlargement and no evidence of a valvular lesion. The patient suffers from shortness of breath on slight exertion, and auscultation of the lungs reveals crepitant râles at the base. These Semmola believes are also due to vaso motor paralysis, and not to mechanical obstruction. Against this view, however, it may be said that it is doubtful whether the pulmonary blood-vessels are influenced by vaso-constrictor nerves.

The patient also suffers from attacks of suffocation, which arouse him from sleep and force him to sit up in bed, when the symptoms soon disappear. After a time œdema of the feet begins to develop, and this marks the terminal period of the malady. At this time a slight cardiac bruit is heard; but Semmola believes that this does not indicate a valvular lesion, since it disappears with the improvement of other symptoms.

It is stated that post-mortem examination of these cases shows a distinct degeneration of the cardiac ganglia, and also of those parts of the medulla in connection with the vagus nuclei. The disease is a progressive degeneration, therefore, of the cardiac nervous apparatus.

Our readers will see that the paralytic ataxia of Semmola may easily be confounded with simply irritable heart, or angina pectoris, or with a fatty heart. We regret that we have been unable to find Semmola's reports of illustrative cases or records of autopsies. A good many of these are required to give to the disease the distinct clinical and anatomical entity which is claimed for it.

EMETICS AND BLISTERS.

IN an instructive article, entitled "Notes on Some Forgotten or Much-neglected Remedies," by Dr. Caleb Green (*Philadelphia Medical Times*), a plea is made for the more extensive use of bleeding, of tartarized antimony and other emetics, and of blisters. It is quite the fashion nowadays to make a plea for old-fashioned remedies, and perhaps some physicians take a little pride in recommending what is "Early English" or "Louis Quatorze" in therapeutics, but we are quite of the opinion that what the common practice and presumably the common-sense of the medical profession indorsed for a long period of time must have some value, and it is not wise to let the effective measures of the past be forgotten.

Dr. Green believes in treating croupous pneumonia, when sthenic, by the jugulating plan—*i.e.*, by bleeding, and the subsequent use of tartarized antimony or veratrum viride. For tartarized antimony he puts in a special plea. As a cardiac sedative, he ranks veratrum higher, but he adds: "It seems not to be very generally known that tartar emetic is one of our most efficient agents in promoting parturition. When the pulse is tense, the os rigid, the skin dry and hot, the advance of the head slow, I have seen, by the use of small doses of antimony, the most prompt and happy change for the better."

Dr. Green then alludes to the very general abandonment of emetics at the present time, except as simple evacuants of the stomach or air-passages. "Emetics," he says, "for the purpose of evacuating the bile-ducts and stimulating a torpid liver to a more healthy performance of its functions, and at the same time exerting an 'alterative' effect on the glands of the stomach and intestines, are not as often resorted to as formerly. They often relieve in a most evident manner that condition which, for want of a better name (and we scarcely need a better one), we call *biliousness*. But the physician who will, even 'semi-occasionally,' resort to emetics, with all proper precautions, is in danger of being branded a 'fogy.' Yet, with the proper restrictions and precautions, we know that they are powerful for good."

Turning to the subject of blisters, he says that here again the modern physician is too timid in his practice, and often resorts to mustard and poultices when a blister would be better. The blister "is a powerful adjuvant to other antiphlogistic measures, even when resorted to early, in many cases of pneumonic inflammation, and, as I intimated before, where pleuritis is an early and marked complication."

In pleurisy he is particularly positive that early blis-

tering is one of the most potent measures for lessening the inflammation. The blister will even prolong the lives of phthisical patients, by reducing the complicating pleuritic troubles.

SOLANINE AS A SUBSTITUTE FOR MORPHINE

THE many disadvantages of opium and its alkaloids are too well known to require mention, and while they are not sufficient to counterbalance the good effects of these drugs, they are of enough importance to make an equally efficacious and more innocuous substitute a desideratum. According to Dr. Geneuil (*Bulletin Général de Thérapeutique*, September 30, 1886), we have such a substitute in solanine, which is not a newly discovered remedy, but rather one which has fallen, the author thinks, into unmerited disuse.

Solanine was discovered by Defosses in 1821, in the berries of the nightshade (*Solanum nigrum*), and has since been found by others in the stems, leaves, and berries of the bitter sweet (*S. dulcamara*), and other varieties of solanaceæ. It is now prepared from potatoes, by boiling the young shoots in water slightly acidulated with sulphuric acid, and adding ammonia to the warm decoction. It can also be obtained from the parings of very young or very old potatoes. The alkaloid crystallizes in fine silky needles, insoluble in water, and but slightly soluble in ether, oils, and cold alcohol, but dissolving more readily in hot alcohol. It has an acrid taste, and imparts a burning sensation when placed in contact with the mucous membrane of the mouth.

This substance was first employed in medicine by Julius Clarus, of Leipzig, who published a memoir on the subject in 1859. The remedy, however, was never used by others to any extent, possibly because given in insufficient doses. Clarus gave it in doses of from one-tenth to three-fourths of a grain, whereas Geneuil states that it has no appreciable effect unless given in doses of from one to five grains per diem. It may be administered in pill, or the hydrochlorate, which is very soluble in distilled water, may be employed subcutaneously in single doses of about one-half grain, repeated three or four times a day.

The author has tried solanine in a number of cases of neuralgia, rheumatism, obstinate vomiting, spasmodic nervous affections, asthma, and bronchitis, and from the results obtained is led to believe that the remedy will prove to be of the greatest value in the treatment of these and similar affections. The following are the conclusions of his paper: 1. Solanine is a poison to the terminal motor plates. It narcotizes the medulla and spinal cord, causing a paralysis of the terminal, sensory, and motor nerves. By reason of this action solanine is to be classed among the best of the analgesics. 2. The drug may be prescribed in large doses without danger, and presents none of the inconveniences of morphine or atropine. There is no danger of a cumulative action. 3. Solanine does not cause congestion of the brain, even in the aged, and, probably, a like freedom from this danger exists in the case of children. 4. In all cases where it is necessary to calm excitement, relieve pain, or overcome spasm, solanine promises excellent results. It may be given with advantage in the place of morphine for the relief of any of these conditions.

If the author's exalted opinion of this remedy is borne out by further experience, it will indeed prove to be one of the most valuable of recent additions to the materia medica. But medicine is an uncertain science, and others may not meet with such wonderful success as Dr. Geneuil himself has had.

THE ANTISEPTIC TREATMENT OF PNEUMONIA

THE widely accepted view that acute lobar pneumonia is an infectious disease has stimulated some physicians to try and treat it antiseptically. Professor Lepine, of Lyons, France, seems to have carried out this method most extensively, and he has recently reported his experience (*Gazette des Hôpitaux*, No. 115, 1886). For a year he has treated his cases of pneumonia by pulmonary injections of an antiseptic liquid. He states that he has not lost a case, that in many instances the attack seemed shortened and the severity of the disease lessened. His method is as follows: He takes a long hypodermic needle and plunges it between the ribs over the centre of the hepatized lung, and carries it for about an inch into the diseased tissue. He then attaches a syringe and injects about twenty cubic centimetres (℥ v.) of his disinfectant solution. He then withdraws the needle a little and thrusts it into a neighboring part and makes another injection. This process he repeats three or four times, until the hepatized lung has been saturated with two or at most three ounces of the antiseptic fluid. The operation causes a little cough, and sometimes a temporary bloody expectoration. The only marked inconvenience is the pain caused by the puncture. The solutions used have been the benzoate of sodium, which Lepine now discards; the iodide of potassium in concentrated solution, and bichloride of mercury in solution not stronger than 1 to 40,000.

Professor Lepine claims to have established an interesting fact in this connection, viz., that a mixture of antiseptic solutions is stronger than any of the agents singly. Thus, a mixture is made of bichloride of mercury, 1 to 100,000; salicylic acid, 1 to 1,000; carbolic acid, 1 to 1,000; benzoic acid, 1 to 500; chloride of lime, 1 to 5,000; bromine, 1 to 10,000; hydrobromate of quinine, 1 to 2,000; chloroform, 1 to 2,000. This, when mixed with equal parts of bouillon containing *bacillus subtilis*, arrests the growth of that organism, while no one of the constituents used alone will do it. Lepine finds that this solution injected into the lungs of dogs does not cause any irritation, and he proposes, therefore, to use it on man.

THE VERTIGO OF THE KAJAK

M. HASTRUP, a physician of North Greenland, has observed a curious affection that attacks the Esquimaux. Its name in the Esquimau vernacular is the equivalent of our term "boat-fright;" but Danish physicians call it "Svimmelhed i Kajak," or vertigo of the kajak (*Hospitals Tidende*, August 18, 1886, *Rev. internat. des Sc. méd.*, September, 1886).

The disorder is described as follows: An Esquimau, while sailing in his kajak upon a perfectly calm, smooth

sea, is suddenly seized with a feeling that his boat is tipping to one side. He jumps to the other side to preserve the equilibrium, but this only makes matters worse, and he abandons himself to anxious and even frenzied attempts to keep the boat from tipping. He can no longer fish, and his trouble does not cease until he gets in sight of shore or of another boat. These attacks are not accompanied or preceded by any malaise or nausea. There does not appear to be true vertiginous sensations, but there is rather a hallucination of the sense of equilibration. The disorder attacks the Esquimaux when they are apparently in full health, and it is not accompanied with headaches, tinnitus, palpitations, convulsions, or paralyses. It may last a lifetime, or go away as it comes, quite suddenly. It is a great misfortune to the patient, since he can no longer fish, and is practically an unproductive member of society. The disease has been attributed to the excessive use of coffee and tobacco, but Mr. Hastrup has observed it in men who used neither of these substances.

BONE-GRAFTING.

At a recent meeting of the Société des Sciences Médicales of Lyons (*Lyon Médical*, September 26, 1886), Professor Poncet related a very interesting case of bone-grafting which he had had under his observation for about three months, the successful termination of which opens another field for the operation of the modern therapeutical method of the transplantation of tissues.

The observation was briefly as follows: A boy, eleven years old, suffered from extensive necrosis of the lower epiphysis and the diaphysis of the tibia, for which an operation had been performed, all the necrotic portion having being removed. The periosteum remained more or less altered in the upper part, but below it was entirely destroyed. Two weeks later, while the wound was granulating nicely, it happened that an active and perfectly healthy infant died in the hospital immediately after birth. About two hours after the infant's death M. Poncet removed some seven or eight little pieces of bone, about three-fourths of an inch long, from the humerus and tibia, near the epiphysis, and placed them in the midst of the granulations on the boy's leg. A week later, it was found that half of the grafts had taken, those which failed being the larger pieces, and at the end of three weeks four were firmly adherent. At the second attempt, it being impossible to obtain any human bone, a young and rapidly growing kid was taken, and twelve grafts were sliced from its tibia and placed as before in the granulating tissues. Eight or nine of these last remained adherent and were not absorbed. At the time this case was reported, the wound in the boy's leg was nearly entirely healed, and he had a firm, solid tibia.

In making these grafts the author said that it was necessary to take very small bits, not more than one-third of an inch in length, and about two lines in thickness, as his experience showed that larger pieces acted simply as foreign bodies. The grafts are placed deeply within the granulations, a little incision being made in the granulations for their reception.

This observation is unique and interesting, as it is the first one of successful grafting of bone in an osteogenetic region. In the hitherto published cases the osseous grafts disappeared after a time through absorption, but in this instance they persisted and became the centres of a new bone formation. It would seem as though osseous grafts were destined to render important service in cases of extensive solution of continuity in bony tissue, and that by their means many a limb can in the future be saved which would otherwise be weak and useless, owing to imperfect regeneration of the bony framework.

THE SO-CALLED COCAINE HABIT.

Apprehensions which some have entertained lest there may develop a new and pernicious "habit," will be somewhat allayed by the discussion on the cocaine habit, so-called, which was held at the Neurological Society recently. For over a year the daily papers have been giving currency at times to shocking stories regarding victims of the cocaine habit, and a few reports of a similar kind have circulated among the profession. In Germany, especially, the subject has been studied by Erlenmeyer, and his contribution was supplemented by one of Dr. Borneman, and by that of Dr. Smidt, the latter having been read at the German Congress of Physicians and Naturalists. Altogether, therefore, the question of a cocaine habit has received very considerable ventilation. So far as any conclusions can now be drawn, they are to the effect that the cocaine habit is extremely rare, if it ever exists. The use of cocaine and morphine together, however, has been observed often, and a morbid habit which has been termed "morphine-cocainism" has been developed. This habit is much more serious, physically and mentally, than the morphine habit alone. The addition of the cocaine seems especially to produce hallucinations and other alarming psychical troubles. German and American writers agree upon the baneful effects of this cocaine-morphine combination. The use of cocaine in helping patients to rid themselves of the opium habit is one, therefore, that should be employed with great caution.

So far as pure cocainism exists, it seems to affect, mainly physicians and druggists. To them there will be added soon recruits from the army of habitual drug takers, who are always possessed with the desire to try every remedy that agreeably affects the nervous system.

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.

Our readers will be interested in the paper on the above subject which appears in our present issue, and in the very full discussion of it before the Practitioners' Society. Dr. Cleveland presents, with much clearness and force, the views of those who believe in the efficacy of quinine in this disease. On the other hand, it will appear from a perusal of the discussion, that the bulk of medical opinion is just now decidedly against its routine use, and in favor of the expectant plan. It is this view which the Medical Record has been inclined to favor. The matter, however, cannot be said to be definitely settled, and the further discussion of it will no doubt be prolific of much good.

LEFT-HANDEDNESS.

A POPULAR English novelist has written an essay in which he maintains that man is working great injury to himself by the persistent habit which he has of dextral preference, and urges a return to the ambidexterity of the primitive races. In Franklin's well-known "Petition of the Left Hand" the same idea is also expressed. But despite the arguments and pleas of these and other writers, ninety-one per cent. of civilized beings continue to use their right arms and hands in preference to their left, and in all probability this proportion will increase rather than diminish in succeeding ages.

Dr. Louis Jobert has published an interesting work on the cause and frequency of left-handedness, in which he has collected a number of curious facts concerning this abnormal preference. No purely left-handed race of men has ever been discovered, yet among certain peoples the proportion of those who use the left hand in preference to the right is very large. Among the inhabitants of Pendjab, for example, nearly seventy per cent. use the left hand by preference. The Hottentots and the Bushmen of South Africa are said also to be, for the greater part, left-handed.

Dextral preference would seem to be a mark of racial, though, of course, not always of individual, superiority. "Man," says Moilin, "is the most asymmetrical of animals as he is the most perfect." The new-born child uses one hand as well as the other, but as his faculties become developed he begins to show a preference for one or the other hand, and usually for the right. One of the curious results of the study of crime, which is pursued so industriously by the Italian physicians, is the discovery that left-handedness is very common among criminals. Dr. Marro found that from fourteen to over twenty-two per cent. of convicted criminals were left-handed, while the highest ratio among people of all classes is only about nine to one hundred. Among the insane also dextral preference is found to be much less marked.

It would thus appear that, while ambi-dexterity is theoretically an advantage, it is not to be expected that the human race will ever acquire it, since the tendency in evolution is to differentiation of the two hands, just as it was formerly to differentiation of the upper from the lower extremities. Right-handedness is the price which we have to pay for a higher civilization and greater mental acquirements; while left-handedness would seem to be a step backward and a tendency to a reversal toward primitive man.

FORTY THOUSAND NEW DOCTORS IN TEN YEARS.—In the last nine years 103,598 persons have matriculated as medical students, and one-third of these, or 33,684, have become doctors of medicine. At this rate the total number of doctors for the decade will be nearly forty thousand. For making these, the medical colleges must have received over twelve millions of dollars.

THE CHOLERA.—Over a thousand cases of cholera have occurred at Pesth since the present outbreak began. The English Government has prohibited the importation of rags from Austria-Hungary until April 1, 1887.

News of the Week.

THE MEDICAL EDUCATION OF WOMEN IN EDINBURGH.—The reopening of the Extra-mural Medical School at Edinburgh this fall, was marked by the re-admission of women to medical education in Edinburgh, after an interval of more than twelve years. The first year's course comprises, as usual, anatomy and practical anatomy, chemistry and practical chemistry. The ladies' class consists at present of six students.

A GENEROUS DONATION FOR THE PROMOTION OF MEDICAL SCIENCE.—Edinburgh University has recently received a large donation from Dr. Gunning, of Rio Janeiro, to be used for the establishment of funds for prizes. The sum is large enough to establish eleven triennial prizes of $250 each. The prizes have received names which commemorate previous Professors of the University. They are the Munroe Prize for Anatomy; the Bell Prize in Physiology; the Edward Forbes Prize in Zoölogy; the Hatton Balfour Prize for Botany; the Joseph Black Prize for Chemistry; the Christison Prize for Materia Medica; the Lister Prize for Surgery; the Gregory Prize in Practical Physic; the John Thomson Prize in Pathology; the Simpson Prize in Obstetrics; the Alison Prize for Medical Jurisprudence and Public Health.

THE VALUE OF THERAPEUTICAL RECOMMENDATIONS.—A correspondent writes that, as a matter of curiosity, during the past twelve months, he has tried twelve different therapeutical recommendations which he had culled from current medical literature, other than THE MEDICAL RECORD. (We fear that this was added out of compliment.) Of the twelve, in only one case did he get any satisfactory results (paraldehyde for insomnia). Our correspondent is of the opinion that ninety-two per cent. of therapeutical contributions are quite valueless.

DR. FRANCIS M. WELD, of this city, will spend the winter at Thomasville, Ga., where he will practise his profession.

A SENSIBLE VIEW OF THE TEMPERANCE QUESTION.—Dr. Huntington, rector of Grace Church, preached the temperance sermon in the Church of the Holy Trinity, Fifth Avenue and 125th Street. He said: "The Bible nowhere makes total abstinence necessary to righteousness, and it ill becomes advocates of total abstinence to maintain that anyone cannot be really good unless he is a total abstainer. Temperance does not mean total abstinence, but moderation. Yet it is true that, under the social conditions of this country, the cause of temperance can best be served by the adoption of habits of total abstinence. The remedy of the widespread evils of drunkenness can best be secured by the quiet method of personal example and influence, rather than by noisy and demonstrative parade. I am not one of those who expect that legislation is going to effect a remedy of the evil. We must look to the personal example of abstinence set by men for the benefit of their weaker brethren, to gradually reduce the pitiable evils of intemperance." Well said, Dr. Huntington! Science, morality, civilization, and religion are on your side.

Alleged Fatal Poisoning from Local Application of Cocaine.—Dr. W. H. Long (*American Lancet*, November) reports the case of a man thirty-three years of age, suffering from tumor of the larynx, who died from the results of the application of a two per cent. solution of cocaine.

A Medical Journal Clique.—A correspondent calls our attention to an editorial in the *St. Louis Medical and Surgical Journal*, in which the following statement appears: "During the meeting of the American Medical Society in this city last May, a mutual admiration club was organized by the editors and representatives of certain medical journals published in various parts of the country, with the very laudable object of keeping each other well before the reading public. The motto of this club was 'You scratch my back and I'll scratch yours,' and the members pledged themselves to copy as much as possible from each other." We know nothing about the alleged formation of such a ring.

A New Antiseptic is being used in the wards of Jefferson College Hospital, writes a correspondent of the *Atlanta Medical and Surgical Journal*. This is trichlorphenol, which is of Russian introduction, and has been favorably mentioned by one of the most prominent therapeutists. Trichlorphenol is extemporaneously prepared by mixing one part of a four per cent. solution of carbolic acid with five parts of a saturated solution of chlorinated lime; the filtering is said to be twenty-five times more powerful than carbolic acid. It is certainly a good combination, and doubtless will prove useful. It has been chiefly employed, freely applied locally, in epidemic erysipelas.

Refrigerant and Rheumatic Diseases.—In the course of a paper on Rheumatism, says *The Lancet*, read at the recent Berlin Congress of Naturalists and Physicians, Professor Senator, who adduced evidence to prove that rheumatism is a specific disease, made some remarks upon the popular acceptation of exposure to cold being a cause of disease (*Deutsch. Med. Woch.*, No. 41). He said that undoubtedly many painful affections of the locomotor system, many neuralgiæ and paralyses—*e.g.*, facial—arise from sudden exposure to cold, especially if the surface be heated and bathed in sweat. But the term "cold" should only be applied to cases where the history of such exposure was quite clear, and the diseases produced thereby should be termed "refrigerant" rather than "rheumatic." The use of the words "rheumatism" and "rheumatic" should then be reserved for such cases of disease as are not due to mere cold, but to a special kind of miasmatic infection, like that which excites acute rheumatism—the prototype of rheumatic disease—and are amenable to specific treatment.

A New Fluid for Preserving Museum specimens, so as to keep their color, size, form, and consistency for several weeks, has been devised by Professor Grawitz. It consists of 150 grammes of sodium chloride, 20 grammes of saltpetre to 1 litre of water; to this is added three per cent. of boracic acid.

Medical Organization at the Antipodes.—It is proposed to hold a meeting of the various scientific societies in Australia and New Zealand in 1888 (the hundredth anniversary of the foundation of the colonies), upon the lines of the British Association meetings, and to form an Australian Association for the Advancement of Science, with similar aims and objects.

Water and Fever Patients.—Dr. Glax, as the result of observations made by him, concludes that the imbibition of water, especially cold water, by fever patients, causes the temperature to rise. The water taken abundantly is not excreted in proportionate amount, but accumulates. With defervescence the water passes off rapidly. Herr Glax will not convince physicians that the old dry method of treating fevers should be adopted again.

A Curious Wager.—The following is extracted from the *Indian Medical Journal* for July: "Two Mahometans in Hyderabad City made a curious wager the other day, which resulted in the death of one of them. The deceased accepted a challenge that he would stand facing the sun from 8 A.M. to 6 P.M. A certain day was appointed, when a large gathering assembled to witness the *tamasha*, as they styled it. The deceased took his stand, gazing at the sun from the agreed time up to 3 P.M., when suddenly he dropped, foaming from the mouth. Medical aid was soon summoned, but before assistance arrived life was extinct."

The Dengue is again at work on the Texans, and we judge, from the very graphic and scholarly leader upon its symptomatology, that the editor of the *Texas Courier-Record* had had the disease himself. The dengue, when in Texas, we are told,

> "Aequo pulsat pede pecuarium tabernas
> Regumque turres."

And it seems that since dengue persists in thus knocking at *regumque turres*, the medical editors do not escape. The *Courier-Record* treats the disease with calomel, aloes, and extract of hyoscyamus.

A German Anatomical Society has been founded, with Professor Kölliker as President, and Professor Bardeleben as Secretary.

A Russian Remedy for Hydrophobia.—Dr. Makaveyeff reported to the Society of Russian Physicians seven cases of wounds inflicted by mad wolves or dogs, in which he employed the powdered leaves of *xanthium epinosum* (a species of cocklebur) in ten-grain doses three times a day, combined with Russian baths given every other day (*Russkaya Meditsina*, May 4, 1886). None of the patients suffered from hydrophobia, and they were followed up for from two to ten years after having been bitten. The companions of some of those who were bitten died of rabies, without treatment, within a few weeks. The wounds were not cauterized, and the only prophylactic measures taken were those mentioned, the treatment being continued for six weeks.

Belladonna in Eczema.—In a case of infantile eczema, Professor Bartholow, besides directions given as to diet, placed the child (two years of age) upon tinct. belladonnæ, gtt. v., ter die, or sufficient to cause dryness of the mouth. The object in view is to affect the cutaneous circulation, and thus bring about a cure.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, November 8, 1886.

DR. GEORGE F. SHRADY, PRESIDENT, IN THE CHAIR.

DR. BAYLEY ROBINSON presented a

CASE OF PHTHISIS PULMONALIS, WITH LARGE CAVITY AT RIGHT APEX, TREATED WITH INTRA-PULMONARY INJECTION OF DILUTE CHURCHILL'S TINCTURE OF IODINE, COMPOUND CREASOTE INHALATIONS, ETC.

Charles O——, admitted September 29, 1886, twenty-six, single, Swede, wood-carver. Invalid in this hospital from December 18, 1885, to January 18, 1886, for phthisis pulmonalis and has improved. After leaving hospital felt well until June, when the cough became severe and expectoration increased. Two months ago he had two hæmoptyses, one in the evening the other the next morning; the quantity of blood lost was quite large. Since this time he has been growing worse, has been losing appetite, flesh, and strength.

On admission physical examination showed large antrum on right anteriorly; posteriorly signs of antrum in supra-spinous fossa not as well marked as anteriorly.

Left, anteriorly and posteriorly, signs of consolidation and old pleuritis.

September 29th.—℞. Tr. iodi ætherealis, ʒij.; crosoti, ʒj.; acid. carbolic., ʒj.; alcoholis, ℥j. M. S. Gtt. x. in respirator, t.i.d.

September 30th.—Antrum injected with ♏ xv. of a solution of Churchill's tr. iodi, j; aquæ, iv.

September 31st.—Cough improved since injection.

October 9th.—Second injection of ♏ xv. as above, cough having increased again.

October 10th.—Marked improvement in cough.

October 17th.—Third injection of ♏ x.; cough improved.

October 21st.—Fourth injection of ♏ xv.

October 22d.—Cough improved.

October 26th.—℞. Tr. physostigmatis ♏ xv., t.i.d. (for night-sweats).

October 31st.—℞. Ferri et quin. cit., gr. v., t.i.d.

November 2d.—Fifth injection, ♏ x.

℞. Whiskey, ʒj.; glycerini, ʒij.; creasoti, gtt. vi. M. S. ʒij.; q.3h.

November 3d.—Some improvement in cough since last injection.

It has also been noticed that the expectoration has been diminished since injections have been used.

November 6, 1886.—Patient was presented before the Practitioners' Society last evening. In their presence sixth injection of dilute iodine was made in the second right intercostal space. Immediately after the injection there was a moderate hæmoptysis, possibly in part explained by the heat of the room and the emotional excitement of patient, although the injection itself was undoubtedly the immediate efficient cause of it.

Subsequent to these injections the patient always suffers from slightly increased chest-pains and more frequent cough during one to several hours.

DR. SAMUEL SEXTON'S OPERATION FOR THE RADICAL CURE OF OTORRHŒA.

DR. SEXTON presented to the Society one of the first cases on whom the operation had been performed. She came to him seven years ago stating that the left ear had discharged constantly for thirteen years, having commenced when she was seven years of age. A large polypus protruding from the meatus was removed with a snare, when it was found that the small portion of the membrana vibrans remaining was composed of cicatricial tissue, and that the attic of the tympanum and mastoid antrum were suppurating and contained much granulating tissue. The polypus had protruded through a perforation in the posterior portion of the membrana flaccida. Polypoid masses re-formed and presented at this opening almost as fast as they could be removed, and occasionally, from closure of the outlets, matter accumulated in the attic and gave rise to much pain. The patient had frequent neuralgic pains and headache, and was often very dizzy. The granulation-tissue bled freely when probed, and the ear ran more about the menstrual period. The remains of the drum-head uniting with inner wall of the tympanum formed a cul-de-sac underneath the attic, which always contained more or less muco-purulent matter and inspissated pus collected in the antrum.

Almost uninterrupted treatment during the past seven years only resulted in keeping the drum and antrum free of granulations and purulent matter, but so soon as treatment was suspended for a short time, or on the occurrence of a head-catarrh, the parts were liable to become inflamed, secretions re-accumulated, with earache, vertigo, and headache. In April last the patient, under ether, was operated on. A knife, manufactured by Mr. Ford for the purpose, was made to transfix the membrana flaccida close to the tympanic ring just behind the handle of the malleus, and by sweeping it backward along the margin of the auditory plate the membrane was everywhere detached posteriorly. The blade was then passed through the membrane in front of the malleus handle and carried forward, detaching the remaining portion. The point of the instrument now being directed up into the attic, the ligamentous and other attachments of the malleus and incus were severed; the chorda tympani was then divided on either side. The malleus was now removed with stout aural-dressing forceps.

The bleeding on bringing the malleus away necessitated repeated use of Canton wool to the parts, after which the incus could be seen slightly projecting behind the auditory plate; it was then brought down from its place upon the scute of the attic with the scraper, and was removed with forceps. The malleo-incoidal joint not remaining, this attachment did not require disarticulation. The patient was examined by members of the Society, and stated that the cure was complete and that she heard better than before the operation.

In commenting on the case Dr. Sexton stated that he had found considerable difficulty in seizing, for removal, the incus, which prolonged the operation; but that since employing his aural foreign-body forceps for that purpose, it only required ten or twelve minutes for its performance. Whenever possible the ear should be prepared for the operation by treatment directed to the removal of granulation-tissue and the drying up of secretions. After displacement of the ossicles, carious or granulation-tissue, redundant mucous membrane, etc., in the attic or antrum, should be removed with the attic scraper or cutting curette. The slight pain sometimes following the operation can usually be controlled by one or more applications of a four per cent. solution of cocaine instilled into the tympanum. A rapid and complete cure may confidently be expected from this operation, in from one to three weeks the parts being found healed. It has been found by persons who have hitherto removed portions of the drum-head for any purpose that it was impossible to prevent a greater or less reproduction; but where the membrane has been detached entire, and the malleus and incus excised at the same time, as in the operation described, we had never had any reproduction take place.

DR. CLEMENT CLEVELAND then read a paper (see page 562) entitled

THE PLACE OF QUININE IN THE TREATMENT OF TYPHOID FEVER.

The paper being open for discussion, DR. A. BRAYTON BALL said that he did not see how the argument regarding the destructive effect of quinine on the germs of fever

could be made to apply to typhoid fever. If it is based on the ground that it destroys germs of all kinds, then it ought to destroy those of small-pox, measles, and other infectious diseases caused by a bacillus. But theories regarding the point were, after all, of no value. His experience with quinine was unsatisfactory. He had given it up long ago in the treatment of typhoid fever. As an antipyretic we have better drugs, and he only used quinine as a bitter tonic in period of convalescence.

As regards aborting typhoid fever he did not see how that could be proved. In every epidemic of typhoid there is a large number of cases that abort themselves, so to speak. It is a matter of every-day hospital experience to find cases brought in with more or less of the symptoms of typhoid fever and run a course anywhere from five to ten or fifteen days. The pathology of these cases is obscure; they are not typical cases of typhoid and perhaps had better be called simple continued fever. But the fact that they occur in epidemics of typhoid fever, and in families where there is typhoid, makes it pretty clear that they are only mild cases of that disease that abort themselves. It is a very difficult thing to make a diagnosis of typhoid fever until the patient has been sick for a number of days.

Dr. E. D. Hudson said that until four years ago he was a firm believer in the use of quinine in typhoid fever. He made the effort with it to secure an antipyretic effect and he also employed it to influence the general course of the disease.

Lately his experience had led him to believe that quinine is not an essential part of the treatment. He, however, still employed it early in the disease for its antipyretic effect, and also after the third week for the purpose of securing a more rapid convalescence. But during the second and third weeks, when the nature of the fever is established, the drug is not of any material value, and in some instances it is positively injurious. In the early stage of the disease, before a positive diagnosis is possible, quinine should be given, because there may be a malarial element present.

Dr. Hudson approved of giving quinine in large doses at the outset of the disease, and associating it with a cholagogue cathartic. He had never seen cases treated heroically with quinine, that appeared to be shortened in their course, though he thought that quinine might shorten the convalescence. With reference to

RELAPSES,

he had seen patients who had been treated thoroughly with quinine, but in whom a relapse occurred. This was another argument against quinine having any specific effect. He had been astonished to see in patients in the hospitals, with all their unfavorable surroundings, pretty uniformly good results as compared with patients in private practice, who had everything possible done for their comfort and cure.

On the whole, he thought that except for the occasional use of antipyretics it was well not to use drugs too much in typhoid fever. He had seen some very remarkable illustrations of the advantage of keeping to a strictly milk diet.

Dr. Beverley Robinson agreed substantially with what Dr. Ball and Dr. Hudson had said, viz.: That quinine did not have any special influence over the course of the disease. A case was cited of typhoid fever, then under the speaker's care, in which he was sure that death was to occur, and not from any special complication or high fever, but because the fever seemed to have attacked the heart and enfeebled it. No drugs seemed to have any effect in such cases as this. The patient had never had any marked rise of temperature, so that it was not the febrile heart that produced the cardiac weakness.

The speaker was opposed personally to the use of any drug unless the temperature was very high. If the temperature was 104° it was simply part of the disease, and unless the patient were adynamic he would not treat the symptom. If he had typhoid fever himself he would not allow anyone to give him a drachm of quinine daily any more than he would allow it when he was well. When quinine caused a lowering of temperature, it did it only by depressing the circulation. He thought that the expectant plan was the only rational method of treating typhoid fever. He did not think that statistics regarding its treatment were of any value whatever. At some places and times the fever ran a very adynamic course, in other places not at all so.

Dr. Robinson believed that the

MUSCULAR LESIONS

in typhoid fever occurred without any reference to the high temperature. He had some doubts about the value of digitalis, when the heart was affected, in these cases. You might use diffusible stimulants, but in giving digitalis one might whet up a good fibre but make the poorer fibres still more weak. In conclusion, the speaker reiterated his belief that the only rational way to treat typhoid fever was by the expectant plan—no specific treatment, no antipyretic treatment.

Dr. F. P. Kinnicutt also believed in the expectant plan of treating typhoid fever, and he thought that this plan gave the best results.

In reference to the statement that the mortality from typhoid was less under the quinine treatment, it seemed to him that it would require a very large number of statistics to prove this. He had not seen the statistics in reference to this point.

Dr. Kinnicutt had been accustomed to use quinine in large doses a number of years ago, but he had never felt quite safe in using it, and he had given it up of late. Experiments had shown that it undoubtedly had a depressant effect on the heart in large doses. He usually gave quinine in the early stages of the fever, but even when he had given it in large doses he had never seen any abortant effect.

Dr. Henry F. Walker was accustomed also to give quinine in considerable doses until the diagnosis was made. When he was sure that it was typhoid fever, with no malarial complication, he ceased to use it. He thought that there was sometimes a malarial element all through the course of the typhoid. He cited also an interesting case of a patient who had typhoid, which ran its usual course, not showing any malarial complication until the period of convalescence set in, when the patient developed intermittent fever of a distinct type.

Dr. C. L. Dana said that he had also abandoned the routine use of quinine in typhoid fever, and followed the expectant plan. It was a matter of some interest to note the change of practice in the hospitals regarding this point. At Bellevue ten years ago quinine was in most wards regularly given in all cases of typhoid. Now its use was abandoned as a rule; antipyretics of various kinds were given occasionally, but the treatment was mainly symptomatic and expectant. If there had been any manifest advantage in the quinine treatment it would doubtless not have been so completely dropped. The speaker thought that even in cases where there is a manifest malarial element, quinine did not produce much effect on the course of the disease.

Dr. Geo. L. Peabody did not think that quinine was a desirable thing to use in typhoid fever. He did not think that it had any tonic influence in small doses, any more than would be obtained by any simple bitter. Its effect in large doses he did not think was good. He had never seen it do any harm to the heart, although he thought that it might do so, and even to a strong heart, if the doses were heroic. He had never seen it abort the fever, although several years ago he had given it for that purpose. It was very difficult to prove that cases of typhoid fever had been aborted, but he thought that he had succeeded in some cases last summer by the use of naphthaline. Five grains of this every two hours disin-

fects the intestinal canal. In two cases in which it was given the characteristic symptoms of the disease were well marked, including the eruption and enlarged spleen. In these the fever seemed to decline rapidly under the naphthaline; in two other cases it had no obvious effect. Most of his cases came under observation too late for the application of the treatment. Dr. Peabody was rather of the opinion that the drift of modern writers was against the use of quinine.

Dr. J. B. Hunter said that he was under the impression that the use of quinine in typhoid was very generally abandoned. He had had a very considerable experience with it during the war. On one occasion it had been found advisable not to give quinine to the typhoid patients on account of the difficulty of getting it. The patients seemed to do just as well without it.

Dr. A. A. Smith said that some three or four years ago he placed himself on record as believing, not only that quinine was not of much service in typhoid fever, but that it did harm, particularly in its effect as a cardiac depressant. He did not think that quinine in antipyretic doses was a safe thing to give after the second week. He followed the same plan as the others of giving it in the first week.

Dr. Hudson referred to a case then under treatment in which antipyrin had been used with unfavorable effect. Quinine being substituted, the patient did much better.

Dr. Cleveland said that he was himself conservative in the matter of giving quinine. He thought that it produced its best effects in the early stage of the disease, and he hesitated to give it in large doses throughout the whole course. He was sure, however, that he had seen favorable effects follow its administration, and he believed that in some cases he had seen it abort the disease. Others had reported a similar experience. He believed that it acted more as a germicide than as an antipyretic, although he did not claim that it destroyed the parasite, but that it probably had an influence in inhibiting its activity. It might have this effect on the parasite of typhoid without affecting that of measles or small-pox; and it was this view that he would present in answer to the criticism that if it acted as a germicide to one disease it ought to do the same to that of all other infectious fevers.

Dr. Robert F. Weir exhibited to the Society an

ANTISEPTIC POCKET-CASE.

It was a nickel-plated metal box, of about the size of an ordinary pocket-case. The instruments had metal handles and everything in the interior was of metal, so that the whole could be placed in a dish of carbolized water.

The Question of Contagion in Leprosy.—There is a wide difference of opinion among authorities concerning the contagiousness of leprosy, as there seems to be on many other subjects. The Royal College of Physicians requested an expression of opinion from many physicians familiar with the disease, in all parts of the world, and received a large number of replies. Of these authorities, thirteen asserted positively that the affection was contagious, while thirty-four maintained with almost equal positiveness that leprosy was not transmissible by contagion. In several cases affirmative and negative opinions were given by different physicians residing in the same locality. Nearly all, however, were at one in the belief that the disease was hereditary, though many asserted that it arose spontaneously with nearly equal frequency. As regards the relation of syphilis and leprosy opinions were likewise divided. Twelve asserted their belief in a relationship between the two diseases, while twenty-one could trace no connection between them. These statistics, with many others bearing on the same subject, are contained in a summary of reports furnished by foreign governments to the Hawaiian health authorities.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, November 2, 1886.

The President, Dr. C. L. Dana, in the Chair.

Dr. Edward Waitzfelder presented (see p. 568)

A CASE OF HEMIPLEGIC HEMICHOREA.

Remarks were made on the case by Drs. Pooley, Webster, Starr, Leszinsky, and Bullard.

THOMSEN'S DISEASE.

Dr. George W. Jacoby presented a young man suffering from Thomsen's disease. The patient was a young man from the interior of this State, who had suffered from a peculiar stiffness of the muscles since childhood. If he closed his hands tightly, or drew up his arm or legs, the muscles remained spasmodically contracted for a few moments, and only by a violent exercise of the will could they be slowly relaxed. On striking the body of a muscle deep welts appeared, and remained present for half a minute. The patient was of very muscular build. He suffered no pain. No other member of the family had the disease, so far as known. A full report is to appear later.

REMARKS ON COCAINE AND THE SO-CALLED COCAINE HABIT.

Dr. W. A. Hammond made some remarks upon his personal experiments with some of the preparations of cocaine. He had used only the fluid extract, various wines, and hydrochlorate of cocaine. The fluid extract had been discarded by him since two or three years, mainly because it had been badly borne by the stomach; it excited nausea and was disagreeable to the taste. He then began the use of the wines; but finding that they differed so much in their effects, he gave them up until he suggested to a firm in this city to try to make a wine of coca free from tannin and extractive matters, and they had, he believed, entirely succeeded in doing so. There were two grains of the hydrochlorate of cocaine to the pint of wine. With this preparation he had had an extensive experience, not only upon others, but upon himself. He had used it in spinal irritation with excellent results—results which could not be attributed alone to the wine, but in part to the cocaine. He had used it also as a general tonic and for fatigue. For some time past he had been in the habit of taking a wineglassful at the close of his day's duties, and with benefit. It certainly had a decidedly restorative effect, without being followed by a feeling of depression.

He had also used it in some cases of dyspepsia with a very irritable state of the stomach. He supposed its action was by lessening the sensibility of the stomach, as it lessened sensibility when applied to other parts. It was remarkable to what an extent the irritability of the stomach was overcome by doses of two or three teaspoonfuls of the wine of coca, repeated at intervals of fifteen or twenty minutes until half a dozen doses had been taken. If the first doses were vomited the succeeding ones would be retained longer, until finally they were retained altogether. Cases of irritability of the stomach, due apparently to spinal irritation, had been relieved within a few hours by this treatment. Generally, when he wished in any case to produce a powerful therapeutical effect, he employed the salt.

Dr. Hammond here spoke briefly of the physiological effects of coca, and said that the first writer who had described its effects upon the native Indians of South America gave an exaggerated account of its baneful influence, and his ideas had been copied over and over again without the authority being given, until our minds had become thoroughly indoctrinated by them. There had recently been some very striking stories in the newspapers regarding the injurious effects of the drug upon persons who had become addicted to its use. In order

to determine whether there was any truth in these statements, Dr. Hammond made some experiments upon himself. He first injected hypodermatically one grain of the hydrochlorate of cocaine, which caused an exhilaration of spirits and a happier state of mind than he had enjoyed during that day. He was unable to sleep that night until four or five o'clock in the morning, and when he got up he had a severe headache. He also had a large evacuation of urine. The effect of the drug was to produce an exhilaration such as would be produced by two or three glasses of champagne. The next night he injected two grains, which produced the same pleasant feeling, and in addition he felt an inordinate desire to write. He wrote eight or ten pages of foolscap, and thought it was the best that he had ever written; but the next morning he found that it was the most extreme nonsense. Each sentence was complete in itself, but no two sentences had any relation to each other. The next night he injected three grains, and although he again felt the disposition to write, he did not indulge it, but he talked a great deal and made speeches. He knew what he was about, and was able to restrain himself, but it was pleasant to speak. He went to sleep late and again awoke with a severe headache.

It was a peculiar fact in his case that at the point of injection there always developed redness, swelling, stopping short only of an abscess. He now had several hard spots on his arm, and waited four or five days, when he injected six grains of hydrochlorate of cocaine, three grains at two different places. He then felt decidedly "upset." Yet he did not lose consciousness, nor his relation to things. He gave instructions to the servants correctly. But he did not feel a strong disposition to write or to talk. He was unable to sleep at all that night. The injections were always followed by a large evacuation of urine, by increased action of the heart, and by headache the next day, but without debility. Three nights later he injected eight grains, with about the same effects. The next night he injected eighteen grains, making six different punctures, all inside of twenty minutes. He became intensely exhilarated, and was unable some hours afterward to recall what he did. He was in his office, but in some way got to bed, and the next day he found things in more or less disorder in his office. His headache remained for two days, and there was great action of the heart—palpitation; he could hear it beating on raising the arm to the head. But he experienced none of the horrible effects which were said to attend the use of the drug in large or continued doses; no disposition to murder or commit acts of violence. He acquired no habit; he was able to quit its use at once. And,

REGARDING THE COCAINE HABIT,

he would say that he had given the drug in doses of from one to five grains, for three months, to a lady suffering from exophthalmic goitre, and she was then able to discontinue its use without any difficulty. From a theoretical standpoint, perhaps, cocaine should not be administered in this disease. But it proved beneficial in this case, for the heart's action, which had been increased, diminished, became steadier, and the patient felt much better. He also gave it for some months to a lady addicted to the opium habit, carrying the dose up to five grains injected once a day. It overcame the opium habit, and the patient failed to acquire the so-called cocaine habit. In this and other patients to whom he had administered cocaine, it produced, as in his own case, extraordinary action of the heart, increased temperature and blood-pressure, perspiration, and indisposition to sleep.

He had used a ten per cent. solution of cocaine, soaked in lint and applied to the vulva, for the relief of masturbation. But it had failed in one case, that of a girl four or five years of age. It had been ineffectual in boys, applied to the glans penis.

In three cases of melancholia in women, who refused to speak, injections of cocaine had overcome the prolonged silence, and produced benefit in some cases.

Dr. Hammond regarded the cocaine habit as similar to the tea or coffee habit, and unlike the opium habit. He did not believe there was a single instance of well-pronounced cocaine habit; the patient being unable to stop it at any time, if he chose to do so. If a person were to continue its use for a long time, he should be inclined to look for trouble with the heart rather than with other organs.

Dr. J. B. Mattison, of Brooklyn, could not agree with Dr. Hammond that there was not a cocaine habit. Within a few months Dr. Mattison had had seven cases of the cocaine habit under his care—five in physicians and two in druggists. He certainly believed there was such a thing as cocaine addiction. He regarded the drug as most dangerous and destructive of the tissues. In certain cases its action was more unfavorable even than morphine. The cases reported in the newspapers, he thought, were founded on facts. In one instance he wrote to a physician, asking whether the report was true that a certain doctor had been arrested in the street under the influence of cocaine. The physician replied that it was true; that the doctor was a victim to cocaine. He could cite other similar cases. The effects of cocaine, as far as he had observed, were similar to those described by Dr. Hammond; but besides the action upon the heart, the great volubility, and the unrest, he had noticed hallucinations and delusions, but no homicidal or suicidal tendency. In some cases there was marked emaciation. He thought the effects of the continued use of cocaine were more decided than those of the continued use of morphine. The patients whom he had treated had acquired the cocaine habit gradually, making comparatively small injections several times a day. Dr. Hammond seemed to think that no dose was toxic; but Dr. Mattison regarded Dr. Hammond's case as exceptional, and he would not advise any physician to repeat the experiment.

Dr. J. Leonard Corning thought there was a morbid fear of cocaine spreading throughout the community, and he thought the remarks of Dr. Hammond were timely, as they would tend to allay the prejudice against a most useful remedy.

Dr. L. C. Gray remarked that between Dr. Hammond, on one side, and Dr. Mattison, on the other, there was considerable distance, and he did not know how the question could be solved, except by further experience. Dr. Hammond's statement that no cases had been reported by medical men was a mistake. Cases had been reported in Europe, but they were not numerous.

Dr. M. R. Richard referred to a case of melancholia successfully treated by him with infusion of coca leaves.

The President read a communication from Dr. C. H. Hughes, of St. Louis, in which he said, that most of the cases of cocaine habit seen by him have been mixed cases of opium, cocaine, and alcohol or ether inebriety, combined or alternating; though he knew of cases where cocaine was the chief, if not the exclusive, reliance. But these patients are not trustworthy in their statements. He had not seen a physician addicted to cocaine who stuck to cocaine exclusively. The *finale* has generally been cocaine and opium and whiskey and ether, and all the other neurotic stimulants. Opium was a much more agreeable stimulant, and most patients evidently try to get back to the fatal bliss of opium. He had never relied on cocaine alone in breaking up the opium habit. He had never used cocaine to intoxication, and never regularly. His rule with cocaine cases was to get them back to plain opium, and then break them off that, if advisable.

Dr. Hughes referred to the fact that in some cases cocaine produced poisonous effects.

The President referred to thirteen cases of cocaine habit reported by Erlenmeyer, and to a case reported by

Bornemann. The subject, he said, had recently been discussed at the meeting of the German Congress of Physicians and Naturalists, when Dr. Smidt reported some cases of cocaine-morphine habit, the general opinion was that pure cocaine addiction was rare, but that the cocaine-morphine habit was not so, and was a very destructive and pernicious habit.

Dr. Hammond, in closing the discussion, said he did not deny the existence of a cocaine habit; he only claimed that it was unlike the opium habit, for the patient could break it off at will. He was aware that patients addicted to the use of opium sometimes added cocaine, greatly to their detriment. As to cocaine being a poison, twenty, and even thirty-two grains, had been taken without serious results. He differed from Dr. Mattison, who thought it was more injurious employed hypodermatically; but the patient came under its influence more slowly when it was taken into the stomach.

The President reported from Dr. Herman M. Biggs a case of subacute spinal paralysis, and exhibited specimens of the cord and sciatic nerve. The case was one characterized by gradual paralysis of the lower, and then of the upper, extremities, moderate atrophy, later a slight anæsthesia of the lower extremities—no pain, loss of tendon reflexes, and no bladder troubles. The course was progressive. Death took place in five months. *Autopsy:* The patient was a male, aged fifty-three, not syphilitic. The interest in the case lay in the rarity of the affection and especially of cases in which post-mortem observations had been made. Clinically it resembled mostly the subacute spinal paralysis of Duchenne, although that disease is very rarely fatal. It still more strongly resembled a chronic form of Landry's acute ascending paralysis, and gave support to Ross's classification of, 1, Landry's paralysis; 2, the subacute paralysis of Duchenne; 3, periependymal myelitis; and, 4, progressive muscular atrophy, as inflammatory processes attacking the central gray matter of the cord and distinguished by the greater or less acuteness of the process. The case was interesting also as showing that these paralyses are not always, at least, due to neuritis.

Dr. Dana showed sections of the lumbar and upper dorsal cord, which he thought showed evidences of a low grade of central myelitis. The anterior roots and the sciatic nerve were apparently normal.

The Birth of the Albany Medical College.—In an address entitled "Glimpses of Early Medicine in Albany," published in the *Albany Medical Annals*, Dr. F. C. Curtis refers as follows to the mode of origin of this institution: "The century was only in its twenty-first year when the Albany Medical College legitimately began its existence, in the course of lectures on anatomy, with demonstrations, by one of the fathers of American surgery, Dr. Alden March. There were then twelve or thirteen colleges organized in this country, and half of these are now extinct. In the faculties of two of them, Fairfield and Castleton, Dr. March, and also Drs. James H. Armsby and James McNaughton, of Albany, were leading members. This course of lectures, often encountering serious opposition, was carried on, with the assistance of Dr. Armsby, until, after years of effort, by public lectures and the co-operation of the best citizens, the college was fully organized with an able corps of instructors, a good museum, since grown to be one of the most complete in the country, and a library, now especially rich in rare old books of the early time."

The Influence of Climate and Soil upon Medicinal Plants.—Professor Vogel says that plants do not always contain their characteristic alkaloids when grown under other than natural conditions. Hemlock does not yield coniine in Scotland, and cinchona plants are nearly free from quinine when grown in hothouses. Tannin is found in the greatest quantity in trees which have had a full supply of direct sunlight.

Correspondence.

OUR PARIS LETTER.

THE SIMPLE AND THE ANTISEPTIC TREATMENT OF HYDROCELE—THE TREATMENT FOR EPIGASTRIC HERNIA—OCULAR GRAFTING CONDEMNED—UTERINE FIBROMATA HEALED BY THE CONTINUOUS CURRENT—PASTEUR WITH HIS HYDROPHOBIA AGAIN.

Paris, November 5, 1886.

In continuation of my last I send you a few short notes from papers read at the French Congress of Surgery. Dr. Tédenat, of Montpellier, in his paper on the treatment of hydrocele, remarked that there is a tendency to substitute the aseptic incision of the scrotum for the time-honored iodic injection for the cure of this disease. After comparing the relative value of these two methods the author comes to the conclusion that both the methods have their advantages and disadvantages, and that they should be employed according to the indications in each particular case. For instance, in simple hydrocele he would employ injections of pure iodine and in small quantities, which he would allow to remain in the tunica vaginalis. When the latter membrane is inflamed, covered with false membranes, and when the development of a hemorrhagic pachy-vaginalitis takes place, the aseptic incision must be resorted to.

In a paper on the cure of epigastric hernia, Dr. Terrier, of Paris, remarked that in general no other remedy is employed for the cure of these herniæ than patience and apparatus, and some surgeons have gone so far as to desist from operative measures as long as these herniæ were not strangulated. Dr. Terrier, however, considers that surgical intervention is perfectly justifiable whenever the patient was a victim of digestive troubles and inconveniences caused by epigastric hernia. The operation, according to the author, presents nothing particular. It is that for the radical cure of the ordinary simple hernia elsewhere: Incision of the skin, opening of the sac, reduction of the part herniated, resection of the sac, scraping and suture of the ring, suture of the skin. Dr. Terrier states that he had resorted to the operation in several cases, and, with one exception, with complete success. In the unsuccessful case there remained a deep fistula, which, however, was a slight inconvenience compared with that caused by the size of the hernia.

Dr. Rohmer, of Nancy, considers that ocular grafting is forever condemned, and he makes this assertion on the following clinical grounds: 1. Transplantation of the eye is contraindicated owing to the possibility of sympathetic ophthalmia. 2. The experimental facts which show that the atrophy of the globe of the eye is an inevitable consequence of its transplantation and its reimplantation, even if sphacelus had been averted and if the ocular grafting had entirely succeeded. The author therefore concludes: 1. That ocular grafting cannot, in present circumstances, prove a successful operation, and that to attempt it is a simple delusion which results in certain failure. 2. Should even the grafting of the entire eye be possible, as it has been pretended, clinical observation, showing that sympathetic ophthalmia is always threatening, would destroy the delusion of a success which would be but of short duration.

Dr. Apostoli proposes to treat uterine fibromata by the application of electricity in the form of a continued current proceeding from one hundred to two hundred and fifty milliampers, which he is enabled to do by rendering the cutaneous pole neutral by potter's clay. The two hundred patients which he treated in this way proved the innocuity of the method which, well applied and continued from three to nine months on an average, produced ninety-five times out of a hundred the following results: Anatomical regression of the fibroma, varying

from one-fifth to one-third, and sometimes even to one-half, but never to total disappearance; durable arrest of hemorrhages, disappearance of the phenomena of compression, and the symptomatic restoration of the patient. The rare cases of failure observed by the author are those of ascitic fibromata. This treatment loses, also, a part of its influence in fibro-cystic tumors and when complications of peripheric inflammation or of the hysterical diathesis in its grave form interfere with the employment of high intensities. Galvano-chemical intra-uterine cauterization is compatible with the later stages of pregnancy.

Liebreich, of Berlin, had announced that lanoline favored cutaneous absorption, but Dr. Aubert, of Lyons, finds that, from his own experience, this substance, far from favoring absorption, on the contrary prevents it almost completely. Consequently, as lanoline does not extend on the skin but strongly adheres to it, as it is not absorbed, it might be made to serve as a vehicle for certain antiseptic substances employed in surgery.

M. Pasteur has submitted to the Academies of Sciences and of Medicine another report on the results of his anti-rabic inoculations. The document is divided into three parts: 1. Results obtained during one year. 2. Explanation of the modifications effected in the treatment. 3. The results or new experiments attempted on animals. In the space of one year to October 31st there have been 2,490 persons treated in Paris. The treatment was at first uniform, and of this number there were 80 English, 9 Germans, 14 Dutch, 165 Italians, 191 Russians, 3 Americans, and 1,726 for France and Algeria. Of these 1,726 persons there were only 10 in whom the treatment has been inefficacious, that which proves the efficacy of the method. Seventeen persons died from hydrophobia among the number of those who did not come to the laboratory to be treated. Those who die in Paris are well known. During the last five years 60 cases of death have been counted in the hospitals of the capital. Since the treatment organized by M. Pasteur, there have died in the hospitals of Paris only two persons, non-inoculated. In cases of children bitten in the face the method is ordinarily insufficient; it is for this reason that M. Pasteur has adopted what he terms his intensive treatment, which he repeats two or three times, in using for the inoculation spinal marrows, beginning with the most fresh and ending with the oldest. The sixteen Russians of whom there has been so much talk in the public press are all quite well. The greater rapidity and the considerably increased energy of the modified treatment, particularly in the cases of bites on the face, have till now completely succeeded.

At the last meeting of the Academy of Medicine the President announced the death of M. Mialhe, the well-known pharmacist, who has been a member of the Academy since 1867.

DENTISTRY NOT A SPECIALTY OF MEDICINE.

To the Editor of The Medical Record.

SIR: The leading article of the MEDICAL RECORD for October 23d, by W. A. Purrington, Esq., upon the statutes relating to the practice of medicine, incites me to correct a somewhat prevalent but erroneous impression, viz., that dentistry is a specialty of medicine.

That there may be no ambiguity, let me state that by the term dentistry I mean to cover every branch and department known under that name, and a dentist in the full sense of the term in the present stage of the art is one who understands and can practise each and every specialty of it.

A dentist may be an oral surgeon, but an oral surgeon is not a dentist. A dentist may be an excellent anatomist, physiologist, chemist, microscopist, artist, or mechanic, but no one of these practised to perfection makes him a dentist.

Oral surgery, as practised by dentists, is only a very small, but not unimportant, specialty of dentistry; it occupies the debatable ground between dental and general surgery, but as an essential department of practical dentistry its importance has been magnified by those practitioners who are more skilled in surgery than they are in dentistry.

Oral surgery, even in its most comprehensive sense, is not dentistry, any more than dentistry in its most comprehensive sense is only oral surgery.

I therefore affirm that dentistry is *not* a specialty of any other science or art, but is a profession in itself, as separate and distinct from all others as any other calling or vocation is distinct from every other.

Dentistry is a profession, because it is a vocation of beneficence. This is so patent that I need not attempt to prove it or enlarge upon it. Millions are on the earth to-day who call us blessed, because of the comfort we have given them and the benefit they have derived from us.

Dentistry is a profession by universal acknowledgment; it has been an organized science for more than a generation, and has been called a "profession" by common consent by the cultured and uncultured as well as by its own practitioners.

Even the highest authorities in medical literature refer to dentistry, not as the "dental specialty of medicine," but as a "profession."

The designation of it as a "profession" is not an assumption like that of the barber, the dancing-master, or the itinerant phrenologist; it is entitled to the distinction because the mastery of it as a science or an art involves a considerable knowledge of many other sciences.

Its resources are not only nearly all the sciences, but in an equal degree nearly all the arts. Hardly an art, from plumbing to sculpture, but has its prototype in some branch of dentistry, and yet it is not a department or specialty of any one of them.

While a large part of its processes are of a mechanical nature, it is not a mechanical trade, inasmuch as a mechanical trade is governed by fixed rules and a routine of labor, in which each workman is a servile imitator of the pattern given him, and can become master of his trade without any knowledge beyond its details.

His brain is not constantly called upon to apply established principles to entirely new conditions and surrounding circumstances—the distinction which I would make between a trade and a profession being, that while the latter may employ the identical methods of the former, the judgment and the inventive faculties of the practitioner must be in active exercise to apply those principles and those methods to constantly varying conditions. The predominating feature and characteristic of dentistry, that which removes it farther than all else combined from medicine, is the mechanical nature of its methods. So much alike are the methods of the gold and silver jeweller to dentistry, that the acquirement of one would be considerable of an education for the other. Yet making gold and silver jewellery is not a profession; it is a trade. Dentistry, while using the same mechanical processes, is obliged to add invention in their application to every case. The *methods* of the painter and the sculptor are the methods of the mechanic. But portrait-, figure-, and landscape-painting and sculpture are branches of fine art, and the vocation is a *profession*, not a trade. That which dignifies the practice of dentistry, bringing it above ordinary mechanics, is the fact that the operations are performed upon living organisms, and that which makes it professional is the knowledge of anatomy, pathology, etc., which discriminates in directing the mechanical treatment. Dentistry is not a specialty of medicine, because its chief and predominating characteristics are utterly unlike anything which is taught in medicine, requiring for their successful performance natural faculties and acquirements that are entirely distinct from the practice of medicine. That which makes dentistry as a science kindred to medicine as a science, is

the fact that it deals with a small but important part of the human economy. But the equally great fact that its methods are entirely distinct, requiring special education and special training, makes it an independent science and in no sense subordinate to the other. The training of a dental student for his professional career is totally unlike that required by a medical student. Medicine involves hospital and bedside practice, but dentistry involves, along with the study of the sciences, training of the fingers, first, second, and all the time.

Dentistry became an independent profession, not through any spirit of rebellion against the medical profession, but from sheer necessity. The fathers of dentistry in this country were graduates of medicine, and hoped to dignify their vocation by grafting it upon medicine and have the theory and practice taught in medical schools. Their application was refused, and the history of dentistry as an independent progressive and scientific organization began, and to-day the wondrous fact is the astonishment and admiration of the scientific world. We have more than a dozen independent institutions of learning which teach everything that a dentist need know, and in separate institutions, and no other, can a dental student obtain that knowledge. Those universities which teach dentistry teach it as a separate department from medicine, and confer a distinct degree. We have an independent literature, which is not indebted to medicine so much as it is to other sciences. Anatomy, physiology, histology, microscopy, chemistry, etc., are not medical studies. They are sciences, upon which medical and other studies are based.

We have an independent journalism larger than the total of medical journalism when our history began. We have independent national, state, and local organizations that are vital, active, and progressive; and what might once have been by dentistry taught and practised as a specialty of medicine cannot now in the very nature of things ever be brought about. If to-day all the medical colleges, together with the entire medical profession, were blotted out, the practice of dentistry would not be injured in the least; nor would humanity suffering from diseases of the teeth be one whit the less cared for. Dentistry has come to stay—not as a specialty, but as an honorable, dignified, learned, scientific, beneficent, and independent profession. Dental colleges have come to stay, and the degree of D.D.S. has come to stay.

The question of our participation in the forthcoming International Medical Congress is being forced upon us. A year or so ago the then secretary stated that there would be no Section of Dental Surgery, because dentistry was not generally recognized as a specialty of medicine. Now, for some reason or other, it seems desirable to the Council of that Congress that we should take part in it, but, as an *independent* profession, we have no business there. As dentists we are out of place. A Section of Oral Surgery is eminently proper, and if there are oral surgeons enough in the world who want a section all to themselves, by all means let them have it, but do not hitch dentistry on to the tail of the medical kite to give it ballast for a higher flight.

At a large convention of dentists held in Rochester on the 26th ult. (October, 1886) the following preamble and resolutions were passed *unanimously*:

Whereas, Dentistry in America is practically an independent profession, and not subordinate to any other; and,

Whereas, All of the great attainments in dental science have been reached through separate literary, educational, and scientific organizations; and,

Whereas, Dentists throughout the world look to their professional confrères in America for the further advancement of dental science; therefore,

Resolved, That in the interest of dentistry as an independent profession, immediate steps be taken looking to the formation of an International Dental Congress, to be held in this country, and to which every reputable dentist in the world shall be entitled to admission and all its privileges.

Resolved, That a committee of one be appointed from each society represented in this convention, who shall form a joint committee, whose duty shall be to co-operate with similar committees from other societies for the purpose of establishing such a congress at as early a date as arrangements can be made which will make such a congress a credit to the dental profession in America.

Resolved, That we recommend the City of New York as the most suitable place in which to hold such a congress.

NORMAN W. KINGSLEY, D.D.S.,
President of the New York State Dental Society.

ADVERTISING A SPECIALTY.

SIR: Your paper, always instructive in its editorial department, contains in its article "The Question of Advertising a Specialty" (p. 495), this clause: "This practice [of announcing one's specialty or specialties on one's card] is not sanctioned by the profession in general, and fortunately is not widely adopted. It opens the way to a great deal of abuse, and may speedily bring the physician to the level of the ordinary advertising charlatan." What is meant by "the profession in general?" Presumably that of the United States. Do not physicians in various parts of the United States advertise their specialties on their signs? And if on their signs, why not on their cards?

In Germany, in university towns as well as in non-university towns, it is no uncommon thing to see signs like this: "Dr. So-and-so, Practical Physician and Specialist for Diseases of the Nose and Throat," etc. Now, as far as my experience goes with men who announce themselves according to the sample just mentioned, not any of them were anything like quacks, but honorable men and able physicians. My experience may be only an isolated one, and thus be of no account. You speak of *abuse* and charlatanism, to which this card announcing *may* lead; but is such talk complimentary to "the profession in general" that does not sanction this mode of advertising? Is the integrity and honesty and the implied humanity of "the profession in general" only a very watery thing and untrustworthy—no good unless backed by fear? Is it liberal to assume that "the profession in general," is something inorganic. Of course, there is nothing so common as human nature, but it cannot be denied that even human nature is something more than purely mechanical. . . .

Very respectfully yours,
ADOLPH RUPP, M.D.

[Our correspondent concludes with an argument that writing as a means of advertisement may also be abused. To his criticisms we must reiterate our opinion that good sense and propriety demand that physicians should not advertise publicly their specialty. In this country the practice is only adopted by quacks, and American medicine has not fallen so low that it needs to follow their methods.—ED.]

THE HEALTH OF MARSEILLES.—During [illegible] 1885 the death-rate of typhoid fever was 17 per 100,000 inhabitants in London and in Berlin, 14 in Vienna, 63 in Paris, and 149 in Marseilles. In the latter city there were 91 deaths per 100,000 from small-pox, and a much larger proportion than this in 1886. The figures for diphtheria in Paris were 80, and for Marseilles 98; for scarlatina, 7 in Paris, and 23 in Marseilles. The latter city is the most unhealthful in France, and it would seem as though the authorities would finally wake up to the fact, and would exert themselves to enforce measures designed to render the city a fit place for human habitation, for which it now seems very poorly adapted.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 7, to November 13, 1886.

WRIGHT, J. P., Major and Surgeon. From Department of Texas to Department of the Missouri, for duty as Attending Surgeon at Leavenworth Military Prison, Fort Leavenworth, Kan. S. O. 257, A. G. O., November 4, 1886.,

FORWARD, W. H., Major and Surgeon. From duty as Attending Surgeon Headquarters Division of the Missouri, and Examiner of Recruits at Chicago, Ill., to Department of Dakota. S. O. 257, A. G. O., November 4, 1886.

HUBBARD, V. B., Major and Surgeon. From Department of Arizona, to duty as Attending Surgeon at Headquarters Division of the Missouri, and as Examiner of Recruits at Chicago, Ill. S. O. 257, A. G. O., November 4, 1886.

LORING, L. Y., Captain and Assistant Surgeon. Sick leave of absence further extended three months on Surgeon's certificate of disability. To be relieved from duty in Department of California, and on the expiration of his present sick leave of absence, will report by letter to the Surgeon-General of the Army. S. O. 262, A. G. O., November 10, 1886.

MOSELEY, E. B., Captain and Assistant Surgeon. Assigned to duty as Attending Surgeon in San Francisco, Cal. S. O. 94, Division of the Pacific, November 1, 1886.

PERLEY, HARRY O., Captain and Assistant Surgeon. Granted leave of absence for four months on Surgeon's certificate of disability. S. O. 257, A. G. O., November 4, 1886.

BARROWS, CHAS. C., First Lieutenant and Assistant Surgeon. Ordered to report to commanding officer St. Francis Barracks, St. Augustine, Fla., for duty at Fort Marion. S. O. 180, Division of the Atlantic, November 10, 1886.

PHILLIPS, JNO. L., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply at Headquarters Division of the Missouri for an extension of one month. S. O. 116, Department of Dakota, November 2, 1886.

EWING, CHAS. B., First Lieutenant and Assistant Surgeon. Ordered from Fort Supply, Ind. Ter., to Fort Leavenworth, Kan., for duty. S. O. 126, Department of the Missouri, November 6, 1886.

IVES, FRANCIS J., First Lieutenant and Assistant Surgeon. Ordered to proceed to, and take station at, Fort D. A. Russell, Wyo. S. O. 145, Department of the Platte, November 4, 1886.

PROMOTION.

O'REILLY, ROBERT M., Captain and Assistant Surgeon. To be Major and Surgeon, November 1, 1886, vice Clements, deceased.

APPOINTMENTS.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon, November 5, 1886.

ANDERSON, CHAS. L. G., First Lieutenant and Assistant Surgeon, November 5, 1886.

SULPHATE OF IRON IN DIARRHŒA.—Mr. Rothwell (*British Medical Journal*) suggests the use of sulphate of iron in the treatment of diarrhœa in children. The author has used this drug with much success in the choleraic diarrhœa of adults, and thinks that it ought to be used for those cases of infantile diarrhœa where there are offensive stools. Should there be vomiting, it would be better to give the iron by injection.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 13, 1886:

	Cases.	Deaths.
Typhus fever	1	0
Typhoid fever	16	8
Scarlet fever	34	4
Cerebro-spinal meningitis	9	9
Measles	288	43
Diphtheria	117	47
Small-pox	0	0
Yellow fever	0	0

THE TREATMENT OF FELON.—Dr. W. H. Halbert is an advocate of the conservative treatment of paronychia. He treats it with salt and turpentine, allowing the mixture to remain on the finger several days, moistening the salt twice a day with the oil of turpentine. In the forming stage of a felon he wraps the finger firmly with surgeon's silk isinglass plaster, and applies the mixture over it, leaving it undisturbed for two or three days.

A SOLID PURGATIVE.—Professor Bartholow tells of an old soldier who always carried about with him a bullet, which he had used as a cathartic, when occasion required, for forty years. It probably acted as an exciter of peristaltic action, by reason of its weight.

AN ASYLUM FOR EPILEPTICS was opened a few months ago in Rueti, Switzerland. It has accommodations for fifty patients, and the beds were rapidly filled after the opening of the hospital. The medical director of the institution is Dr. Koelle. This is the first epileptic hospital established in Switzerland.

THE LEPROSY HOSPITAL IN HONOLULU.—The annual report of the Hawaiian board of health to the legislative assembly, for 1886, contains a glowing tribute to the good work of the Franciscan Sisters of Charity in the branch hospital for lepers. In former years, before the sisters came, several policemen were required to maintain even the semblance of order, and a night watch was required. There was a call of the watch, a change of guard, ringing of bells, and the condition of the yard was like that of a fort rather than that of a refuge for the sick and suffering. At the present time this has all been dispensed with. Neither guards nor watches are required, except that two of the patients act alternately as porters at the gate, and to keep watch that the rule concerning the separation of the sexes is enforced. Two infirm patients are the only guards needed. It is understood by all that the sisters are ready to answer any call at any hour of the night, and consequently they go to rest in confidence that there is kindly help near by, and this assurance has led to the quieter aspect observable inside the Kakaako enclosure. The former noisy clamor of an excitable and distrustful body is all changed to the peace and silence of an establishment reposing in a secure sense of affectionate trust. The hospital is in charge of a community of Franciscan Sisters, formerly residing in Syracuse, in this State.

"THE HYMEN IN MEXICO" is the rather sensational title of a recently-published work. The author states that the complete absence of the hymen in Mexican virgins is very rare. Apart from this, however, the book contains no startling items of information, but treats of the subject chiefly from a medico-legal point of view.

THE DANGER OF NAPHTHALINE IN RENAL DISEASES.—Dr. Charles W. Purdy says that, contrary to the statements of M. de Pezzer, naphthaline is a dangerous drug to use in cystitis, prostatitis, and pyo-nephritis.—*Journal of the American Medical Association.*

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Original Articles.

THE PRINCIPLES AND THE PROGRESS OF MODERN THERAPEUTICS.[1]

BY WILLIAM H. DRAPER, M.D.,

ANNIVERSARIES which only serve to emphasize the signs of slow but inevitable dissolution, or those which simply startle us with the flight of time, and chide us with the loss of opportunities, are certainly melancholy occasions; but anniversaries which mark, with each recurring year, in a body like this Academy, increasing vigor, higher aims, and better achievements, inspire gratitude and hope and lofty purpose in the work of the future. These surely are the sentiments which this occasion inspires. As the Academy becomes venerable in years, it renews its strength at the fountain of youth. As those who have borne the burden and heat of the day rest from their labors, the stimulating force of their example manifests itself in the keener efforts and higher aspirations of their successors.

Death has, to be sure, made sad havoc in our ranks during the past year. Three of our former presidents and four of our active members have vanished from our sight. The venerable James Anderson, one of the founders of the Academy, and one of its steadfast friends, will be long remembered as the impersonation of Æsculapian dignity and the exemplar of professional ethics. The familiar form of the veteran Post, which haunted these halls and the operating theatres of our hospitals, almost to the day of his death, will long remain a tradition in the medical history of this city. Age could not wither his enthusiasm, nor custom stale his interest in his daily work. As we recall the eagerness with which he entered into every discussion, the perfect candor with which he related his clinical experiences, successful or unsuccessful, and the ardor with which he displayed the pathological curios that were always concealed in the folds of his garments, we must ever admire the zeal and the integrity of his long and useful life.

The name of Austin Flint has taken its place upon the roll of fame. Heberden, in the introduction to his commentaries, likens the life of a physician to Plutarch's description of the life of a vestal virgin, which was divided into three portions. In the first of these she learned the duties of her profession, in the second she practised them, and in the third she taught them to others. The period during which Dr. Flint was engaged in what Heberden regarded as the appropriate duty of the final stage of a physician's life was a long, laborious, and most honorable one. With what an elevated purpose he fulfilled its duties! How fitly he illustrated in his career the dignity and influence of his calling! It was our privilege to know and feel the force of his example, as well as to enjoy the ripe fruit of his experience. It should become our sacred duty to emulate his virtues, and to labor as he did, to the hour of his death, in the service of his fellow-men.

From a younger generation, whose paths he served to direct, we have to mourn the loss of several of our most brilliant and promising fellow-laborers. Of these McBride was perhaps the best type of the modern clinical physician. To a genius for investigation he added an enthusiasm which tolerated no restraint and shrank from no sacrifices. He was an alert and accurate observer, accomplished in the application of all instrumental aids to precision in the exploration of disease, and a zealous and sanguine believer in the possibilities of rational therapeutics. His life was too short for the realization of the achievements which it promised, but long enough to furnish an inspiration to many who felt the directing force of his intelligence and the stimulation of his enthusiasm.

It has seemed to me that Flint and McBride illustrated in their careers the changes which the progress of scientific medicine has made in the type of the practical physician. Flint exemplified the influence of the progress of pathology upon practical medicine. He did his work with few tools, but, through his knowledge of lesions and the natural history of disease, he saved the victims of many maladies from the additional miseries of useless medication. Though by no means a sceptic in therapeutics, he was more or less dominated by the idea that pathology is the sole basis of the healing art, and that the *vis medicatrix naturæ* is the best doctor in many diseases.

McBride, on the other hand, represented a later generation, which, while it recognizes the dependence of rational medicine upon pathology, still believes that the art of therapeutics has an independent growth of its own, based upon the experimental study of the effects of remedies, and further, that therapeutics is not without its value as a means of shedding light upon the causes and effects of disease.

It was partly from my reflections upon the essential qualities which distinguished these two late conspicuous members of the Academy as physicians, that I have been moved to choose, as the subject of my address on this occasion, "The Principles and the Progress of Modern Therapeutics."

It is always a profitable exercise to review from time to time the advances that are made in the science of disease, and the corresponding progress in the art of healing, and to note especially how nearly the art is itself approaching the dignity and stability of a science. It must be acknowledged that, if such a review is made at short intervals, we are sure to find that, through the imperfection of the science of disease, the ancient traditions still control in large degree the art of therapeutics, and that much of our medication still has no other justification than the routine sanctified by long usage, and no other basis than speculation as to the relation of cause and effect. At the same time, the discoveries of each succeeding year, in all the branches of knowledge which are tributary to pathology, are modifying therapeutic methods; they are exploding many of our fondest delusions, and slowly but surely giving precision to the art of preventing and curing disease.

It has been truly said that "art, even of the lowest and most inarticulate kind, is always tending toward a scientific form, to the discovery and assertion of itself; and science, if it deserves the name, is never absolutely barren, but goes down into some form of human action, becomes an art; the two run into each other." This is eminently true of the science and art of medicine. The art had its birth long before the science came into being; the science had its origin and still draws its inspiration from the art. The distinction, therefore, between the science and the art of medicine is an arbitrary one. The science is daily becoming more practical and the art more scientific, but it is still a melancholy fact that

[1] Anniversary address delivered before the New York Academy of Medicine, November [illegible], 1886.

the scientific practitioner of the present is often a very poor doctor, and the pure artsman, as Plato calls him, may be a very successful one.

Broussais remarked that "the real physician is the one who cures; the observation which does not teach the art of healing is not that of a physician, it is that of a naturalist." There is a wholesome truth in this observation which it would be well for the faculties of our colleges, as well as for those who consider themselves eminently scientific practitioners, to take to heart, and it is this: That neither anatomy nor physiology nor a knowledge of the causes and effects and natural history of disease, neither the botany nor the chemistry of medicaments, nor even skill in diagnosis, can make the possessor of them a master of the art of healing. They constitute the essential equipment of a physician; they do not make him a physician. They define the objects of his craft, and fix the limits of its possibilities. He would, to be sure, be helpless without them, but he is worse than helpless with them until he has learned how to use them, how to construct out of them the special art which enables him to cure disease.

To a certain extent, the tendency of pure pathology has been to diminish faith and create scepticism in the possibilities of therapeutics. It is a common reproach to the teachers of the theory and practice of medicine, that they spend much time and pains in describing the lesions and the natural history of diseases, and dismiss the principles and means of cure with few and distrustful words. The reason of this is that pathology only furnishes the object to therapeutics—it does not properly embrace or direct it. The pathologist is essentially a naturalist. He investigates the causes and effects of disease, its onset, progress, and terminations. There is nothing, necessarily, in all this that suggests the means of cure. But since pathology has cleared the way, since it has defined and differentiated the many effects of similar causes, and the many causes of similar effects, the progress of the therapeutical art shows that the narrow limits within which a simple knowledge of pathology would confine the possibilities and the means of cure are being constantly enlarged by the independent experimental study of the action of remedial agents.

It is far from my intention, by these remarks, to underestimate the importance of pathology to the practical physician; I desire simply to state the logical relation of pathology to the healing art, and to insist that, though pathology is often essentially practical in its application, the art of therapeutics is itself becoming more and more scientific. If I were asked to name one of the most important contributions which pathology has made to therapeutics, I should say that it is what is known as the expectant treatment of disease; and while I believe that this has been productive of grave errors, and has retarded in many ways the progress of the art of healing, I am willing to admit that it has exposed many fallacies, dispelled many delusions, spared much needless suffering, and saved many lives.

Profoundly as the progress of therapeutics has been influenced by the advances in the science of disease, it is most important to bear in mind that the art of healing owes its greatest achievements to inductive methods no less than those of science. There is nothing, for example, in the pathology of small-pox which could possibly have led to the discovery that the modification of the disease produced by its transmission through the cow would so change the virus as to produce in the human subject a new disease, which would protect against the disease from which it was derived. Marvellous as the fruits of this discovery have already been in controlling the scourge which determined it, the principle which it established has proved to have a wider application and more pregnant consequences than the wildest imagination could have conceived when Jenner propounded it.

The discovery of anæsthesia really had its birth in the brain of a man who was not a physician. Sir Humphry Davy, in his observations on nitrous oxide, affirmed that as this "gas in its extensive operation seems capable of destroying physical pain, it may probably be used with advantage during surgical operations." Nearly fifty years afterward the principle suggested in this discovery of the anæsthetic properties of nitrous oxide found its application in the use of the ethereal derivatives of alcohol to paralyze temporarily the cerebro-spinal functions during surgical operations. But time would fail me were I to attempt to adduce all the examples which might be given to show how the art of healing grows through independent experimental methods of its own, and how pathology really, for the most part, furnishes the objects to therapeutics, and, so to speak, gives the terms of the problems which observation and experiment have to solve.

To apprehend clearly the principles upon which modern progress in therapeutics has been made, it is necessary to observe, first, that the aims of therapeutic effort are daily becoming more clearly defined. Many diseases which were formerly the object of assault by drugs, to which siege was regularly laid by a process of sapping and mining in which the patient often perished, have now been relegated to the realm of surgery. The surgical, in the sense of local, management of many of the tegumentary diseases, of the mucous membranes as well as of the skin, of cystitis, pyelitis, empyema, and even peritonitis, furnishes conspicuous examples of the substitution of local treatment for treatment by drugs. So large, indeed, is the number of diseases now treated by surgical procedures which were formerly subjected to general and more or less useless medication, that the domain of surgery is rapidly encroaching upon what has always been regarded as the special field of medicine. It is a curious commentary on the history of the medical art that what was once considered the *opprobrium medicorum* should have become the most advanced and scientific branch of the art of healing, for truly the stone which the builders refused has become the headstone in the corner. When we reflect that the lessons of antiseptic surgery have furnished the greatest impetus to the investigations of the germ-origin of disease and promise to revolutionize the principles of its prevention and cure, we can hardly overestimate the achievements, or exaggerate the possibilities, of the surgical art.

Another fact which is especially worthy of attention in estimating the changes which are taking place in therapeutics is, that the revelations in the etiology of disease and the more exact methods of diagnosis have exploded many of the old traditions, and only those survive which are substantiated by rational principles or by uniform success. Poly-pharmacy is following its victims to the grave, and the test of a sure aim and intelligent purpose is slowly but surely taking the place of random shots at imaginary foes.

In reviewing the many lines along which the art of therapeutics has advanced with the science of disease, we must be impressed especially with the greater objective precision of treatment in the management, first, of disorders of the nervous system; secondly, of the maladies due to parasitism; and thirdly, of the functional derangements of the processes of nutrition.

The discoveries in neuro-physiology have enabled the practical physician to differentiate the focal, systemic, and peripheral lesions of the nervous system, and to distinguish these from the functional affections. The practical benefits which are daily resulting from this essential preliminary step toward the substitution of exact for skirmishing methods of therapeutics are perhaps nowhere more striking than in the modern treatment of nervous maladies. Numerous examples might be adduced to justify this statement. A few will suffice. The early diagnosis of the meningeal irritation and pressure myelitis from caries of the vertebræ, and the timely application of mechanical treatment, not only prevent deformity but save many victims from the miseries of a helpless paralysis. Less conspicuous perhaps, but still impressive

when we contrast the present with the former consequences of the disease, is the considerable success which now attends the treatment of many cases of acute poliomyelitis. I hardly need refer to the striking results which are obtained in the treatment of the focal diseases of the nervous centres, of syphilitic origin. Much cannot yet be said in regard to the success of surgical effort in the treatment of the focal lesions of the brain, based upon the localization of sensory motor centres, but still enough has been accomplished to justify a reasonable faith in the possibilities of surgical relief in certain cases of cerebral hemorrhage, abscess, and tumor. The exploits of abdominal surgery have exceeded the most sanguine hopes; it is not impossible that the surgery of the cranial cavity will yield triumphs of equal magnitude. It is not to be expected that the systemic affections of the cerebro-spinal centres will ever be cured by the intervention of art, but there is good reason to believe that their progress may be more or less controlled by it. The slow development of such diseases as posterior and lateral sclerosis and progressive muscular atrophy, give abundant time and opportunity for experimental treatment, and it is not by any means unreasonable to predict that art may yet do something to modify or arrest the degenerative processes which constitute the determining cause of these affections.

It is hardly necessary to allude to the success which now attends the treatment of the peripheral lesions of the nervous system, both by surgical and medical procedures. In this division of nervous diseases the diagnosis of the sensory, motor, and trophic disturbances which proceed from the different forms of neuritis possesses the highest interest, and has proved most important in the determination of rational methods of treatment.

The management of the neuroses, which, for lack of more precise knowledge, are called functional, are of reflex origin, or presumably dependent upon variations in vascular supply, has reached a degree of precision and a measure of success which is most encouraging. Those which affect the intellectual and emotional centres, and which are now happily absolved from purely psychological theories of their origin, such as hysteria, hypochondriasis, melancholia, and the acute forms of dementia, have been brought within the range of rational treatment in a way to affect most favorably, in many cases, their prognosis and cure.

The affections of the higher motor centres, such as epilepsy, chorea, and the cardiac and respiratory neuroses, present conspicuous illustrations of the success of modern medicine in controlling, almost always, and in curing, often, these painful and distressing maladies.

It is interesting to note in the modern therapeusis of organic and functional nervous affections how largely it is based upon the direct local action of medicines upon special centres of innervation. The action of the bromides upon the medulla, of atropia and physostigma upon the respiratory centre, of digitalis and kindred drugs upon the cardiac ganglia, of cocaine and the nitrites upon the vaso-motor system, are familiar examples of the direct local influence of drugs upon the different specialized springs of nervous energy. The progress which has been made in cardio-vascular dynamics promises even greater results in the future than it has already attained, and is likely to give a precision to the application of remedial agents which will confer on medicine something of the exact scientific quality which belongs to surgery.

There is another department of neuro-therapeutics to which the limits of this discourse will permit only a brief allusion; I refer to the improved methods of treatment which have been brought about through our daily increasing knowledge of what are called reflex neuroses.

The application of the rational principle of all therapeutics, "Causa sublata, effectus tollitur," is often most successfully illustrated in the cure of many sensory motor derangements by the removal of the remote peripheral irritations which determine them. This recognition of the reflex origin of many morbid conditions has been so fruitful of valuable suggestions to therapeutics that, in our department at least, it is to be feared enthusiasm has carried its votaries beyond the bounds of warrantable induction. I allude to the surgical procedures which have been invented for the relief of the sensory, motor, and even psychic disturbances which the gynecologists affirm proceed from diseases of the sexual apparatus. It must be acknowledged that in the mind of candid observers there is more or less skepticism as to the correctness of the purely gynecological view of the origin of these neuroses, and consequently more or less opposition to the fantastic operations resorted to for their relief. Without calling in question the occasional brilliant results of oöphorectomy, even in cases where no visible disease has been demonstrated in the ablated organs, it is difficult to resist the suspicion that a very serious and unjustifiable mutilation is sometimes practised in cases of simple sexual hypochondriasis.

With this very incomplete sketch of the way in which modern scientific researches in the diseases of the nervous system have affected modern therapeutics, let us briefly consider the revolution which has taken place in the art of healing through the discoveries in the field of parasitism. Scarcely more than a quarter of a century ago our knowledge of parasitic diseases was confined to the morbific effects of the entozoa, the epizoa, and the epiphyta. Within this brief period most of the so-called zymotic diseases, and some which were not regarded as zymotic, have been traced to microzymes. The immediate and inevitable effect of these discoveries was to demonstrate the futility of much of the traditional treatment of zymotic affections, and to direct the attention of art to the possibilities of destroying or antagonizing these subtle and pestilent foes of the human organism. It is not possible for me to consider the present aspect of the germ theory in its relation to the many diseases to which it has been applied. It is sufficient to remark that it is continually invading the domain of pathology in new and unexpected directions. Not only all septic processes, but even inflammation itself; not only eruptive fevers, including syphilis, but even malarial and rheumatic fevers; not only phthisis and pneumonia, but even common colds; not only diphtheria, but ulcerative endocarditis; not only leprosy, but even the malignant infection tumors—all of these general and local affections have been more or less reasonably suspected of hiding the secret of their origin in a specific germ. Admitting that the microbic etiology of many diseases is as yet only a theory, it has surely given a new and definite aim to therapeutics, through which it has achieved in certain directions marvellous results. It has revolutionized the art of surgery by converting what were formerly regarded as most formidable operations into safe and simple procedures. It may be said to have conferred an almost dangerous facility upon certain surgical undertakings, and to have tempted the modern surgeon to enter upon paths which the angelic prudence of his predecessors made them fear to tread.

The problems, however, which the germ theory presents to the physician are more complicated and difficult to solve than those which it offers to the surgeon. Thus far it seems to afford promise of great results only in the direction of prophylaxis. To the sanitarian it is the revelation of a new gospel. It gives a pith to the principle of cleanliness, which commands a respect that has never been secured by its supposed contiguity to godliness. It has so formulated the protective measures against the spreading of infection in hospitals and private houses that it must in this way largely diminish the ravages of disease. But when we come to the object which the germ theory holds out to art, to antagonize the morbid processes which germs set up in the living body, either by destroying the germs or by neutral-

izing their effects, we are met by what seem to be insuperable difficulties.

If we consider the action of the remedies which have long been in common use in the treatment of what are now regarded as germ diseases, we find little to justify the explanation of their action on the theory that they are germ destroyers, and yet there is something suggestive in the effect of quinine in malarial fever, of mercury in syphilis, and of salicin in rheumatism, if this should prove to be a germ disease.

There are two directions in which the study of germ diseases seems likely to affect their preventive treatment. The first is prophylaxis by inoculation with a virus modified by attenuation or by passage through lower animals, and the second is a scientific investigation of the constitutional conditions which favor the growth of the various specific germs. Whatever doubt may exist as to the truth of Pasteur's deductions from his experiments in the inoculation of hydrophobia, there can be little question as to the protective results of inoculation in chicken-cholera and splenic fever. From what has already been accomplished in the saving of animal life in these diseases, and from the beneficent results of vaccination in controlling the ravages of small-pox, it seems quite within the range of possibility that similar effects may follow like efforts toward the prophylaxis of other diseases.

The investigation of the constitutional conditions which establish vulnerability to germ diseases seems to be a wellnigh hopeless problem; but when we reflect upon the daily observation of the variations in intensity in the infection fevers, in syphilis, and in the malignant neoplasms, if these should prove to be of germ origin, we cannot resist the hope that a scientific study of the causes which tend to produce a congenial soil for the development of the parasites which determine these diseases may yet lead to discoveries which will place other means of prophylaxis within our control.

The improvements which have been effected in the therapeutics of the disorders of nutrition through the scientific study of the processes of digestion are less conspicuous, perhaps, though they are really of wider practical beneficence, than those which have resulted from the discoveries in neuro-pathology and parasitism.

When we reflect how large a proportion of human ailments and the daily discomforts of life result directly or indirectly from vices of digestion, it is not surprising that the medical art should have been quick to appropriate the practical suggestions which scientific research has indicated in the physiology of nutrition. There is no good reason, perhaps, to suppose that the digestive organs of man are better adapted to the conversion of a greater variety of foods than those of the lower animals, but it is certain that his natural instincts, as well as his acquired habits, incline him to a larger variety in his diet. As a consequence he is doomed to more complicated disorders of his digestive processes, and from his higher nervous organization he suffers from them in very special and varied directions.

The investigations which have been made as to the nutritious value of all kinds of food-stuffs, of the relations of food to growth and to the evolution of different forms of vital energy, and especially the revelations of artificial digestion, have given an interest and importance to the subject of dietetics in the work of the practical physician which it would be impossible to exaggerate.

The improvement in the dietetic management of acute febrile diseases which has been effected through the introduction of partially digested foods has, without doubt, contributed very largely to their more successful treatment. The necessity imposed upon the physician, of "mending the watch while it is going," renders the question of feeding the sick one of primary importance. And there is perhaps no more useful improvement in practical medicine than the discovery of successful means of maintaining nutrition under the disturbing influence of disease.

In the special disorders of nutrition, such as lithæmia, gout, and diabetes, diet has come to play the essential part in their rational treatment. When we consider the manifold derangements of health which proceed from these disorders, the distressing cutaneous and mucous catarrhs, the joint-lesions, and the nervous disturbances, and reflect that, by attention to the diet alone, these affections may be largely controlled, we realize the magnitude of the obligation which art is under to the scientific investigation of the chemistry of digestion.

In this connection I cannot forbear to say a word in regard to what seems to me one of the most important changes in medical opinion and practice growing out of careful scientific observation of the effects of articles of diet in health and disease. I allude to the present aspect of professional judgment on the alcohol question. I believe I am speaking within bounds when I say that the majority of thoughtful physicians who have studied carefully the effects of what is regarded as the moderate, as well as the immoderate, use of alcoholic beverages are persuaded that as foods, excepting possibly in the febrile state, their value has been largely overestimated, and that in the normal condition of the body they are not only quite unnecessary to the maintenance of healthy nutrition, but are always more or less baneful in their effects. That they add, as Matthew Arnold has said, to the agreeableness of life, that their use is universal, that through their stimulating influence upon the nervous centres they have been potent factors in the progress of civilization, and that they are of inestimable value as stimulants and anæsthetics, are considerations entirely apart from the facts concerning them which are especially interesting, namely, their effects upon nutrition; that these are harmful and deteriorating to such a degree as to constitute the most powerful cause of physical degeneration at the present day, there can, I think, be no question. The drift of professional opinion in this country and in Europe is surely tending toward the restriction of their use as articles of diet, and simply for the reason that they are the determining cause of many functional derangements and structural degenerations.

In this brief and very imperfect sketch of the progress of modern therapeutics I have endeavored to give expression to two primary ideas involved in the principles upon which progress has been made: One is that the art of healing is to-day as empirical an art as it has ever been, but that with the advancing knowledge of disease the empiricism of therapeutics has become more scientific—it seeks more and more to assert itself, to establish its efforts upon a sure basis of reason. The other is that in modern therapeutics the application of remedial measures is made to operate more definitely upon the determining causes of disease. In the three special directions of diseases of the nervous system, of those due to parasitism, and of the disorders of nutrition I think that these two ideas are forcibly and successfully illustrated. The principles are of course not new, but they have hitherto had only limited and imperfect sway in the field of pure medicine. Now that an impulse has been given to them by the discoveries in the physiology of the nervous system and in organic chemistry, and especially by the experimental method of studying the action of remedial agents, they have become the basis of rational therapeutics and the foundation of our hope in its future growth. These principles constitute the basis of the great advances that have been made in the many special departments of medical practice, and whatever objections may be made to specialism in medicine, there can be no question that it has given an impetus to the art of healing, which the science of disease alone never could have afforded.

As I began this discourse with a tribute to the memory of three of our departed presidents, it seems appropriate that I should close it with an acknowledgment of our obligations to our present distinguished president and his predecessor for their effective and untiring efforts in elevating the character and in stimulating the growth and

development of this Academy. While the progress of the science and art of medicine all over the world has contributed to raise the standard of our profession, and to exalt its influence in society and in the state, it is impossible to overestimate what is being accomplished by such institutions as this Academy in crystallizing the energies and securing the co-operation of many minds in a common and exalted purpose.

To effect this we need, above all things, the directing intelligence of a wise and able executive. It has been the good fortune of the Academy during the past seven years to have its work organized and its destinies controlled by guides whose personal influence and professional distinction have infused a spirit of eager devotion to scientific work which must surely be fruitful of beneficent results. It is our part and duty to yield loyal service to the pilot whose hand is now upon the helm.

It is an auspicious sign of the times that the claims of scientific medicine upon the sympathy and confidence of the laity are daily being more distinctly and generously recognized. It is not very long since it would have been as vain in this community to call upon the public for financial aid in support of an institution of medical learning as to secure the means to teach Sanskrit in the common schools. Happily a new era has come, and men and women with wealth to spare, not only lend their ears, but they extend their hands in liberal response to the appeals of those who fitly represent the relations of scientific medicine to the most pressing needs of humanity. The public is beginning to comprehend that these relations have indeed become so manifold and so intimate that it would be difficult to name a single common human interest that is not more or less affected by them. Public education, the public health, the care of the poor, the criminal, and the insane, the regulation of social evils, and the adaptation of legislation to the many problems which confront us in the antagonisms of capital and labor—questions like these and many others involve in some of their aspects an appeal to principles which can only be evolved by the science of disease and the art of healing.

With such enlarged and varied demands upon the medical profession, it is easy to see that societies like this Academy are essential to organize labor in the many departments of the science and art of medicine, so as to encourage more thorough work and stimulate a higher ambition, to animate the younger men with the spirit of explorers, to test by free discussion and critical inquiry the merits of new discoveries and the accuracy of original observations—in a word, to unite earnest seekers after truth in a common effort to advance the standards of sound medical learning.

Albuminuria in Children's Diseases.—Dr. Alexandra Eckert states that she has made fifteen hundred analyses of urine in one hundred and four children, in order to study the changes occurring in this excretion under the influence of various affections attacking the child's organism, and to determine quantitatively the albuminoid losses sustained by the system in febrile albuminuria. The general conclusions reached by the author are given as follows: 1. All affections considerably disturbing nutrition of the child's system, and running their course in association with a high febrile state, give rise to albuminuria in an overwhelming majority of cases. 2. The characteristics of albuminuria are usually dependent upon the intensity of the morbid process, and the duration of the febrile period. 3. As a rule, albumen rapidly disappears after abatement or cessation of fever. 4. Non-febrile affections, as well as those accompanied only by slight fleeting febrile movements, seldom give rise to albuminuria of any considerable degree; and when they cause albuminuria, it occurs only as a phenomenon of very short duration.—*London Medical Record.*

FOLLICULAR AMYGDALITIS.[1]

BY A. JACOBI, M.D.

In Nos. 17 and 18, 1886, of the *Berlin Clinical Weekly*, Professor B. Fraenkel published a paper, read before the Berlin Medical Society, on "Angina Lacunaris and Diphtheritica." In that essay he quoted several times a short paper of mine, which appeared in the *New York Medical Journal*,[2] of September 24, 1884, under the heading "Diphtheria Spread by Adults." Professor Fraenkel expresses himself as follows: "A. Jacobi asserts that diphtheria is spread by adults suffering from angina lacunaris. As this affection is a very frequent one, and as the patients suffering from it do not stay at home, Jacobi assumes that this affection, while not dangerous to the patients themselves, becomes an urgent danger to the community." Professor Fraenkel then adds: "I do not go so far." Still, he does go so far, for he reports the case of a girl aged twelve, who, while herself suffering from "angina lacunaris," infected her whole family with diphtheria. He then says: "Such cases, however, are so rare that I cannot agree with Jacobi in this, that the spreading of diphtheria is attributable to angina lacunaris. Still, there is a possibility that diphtheria may be spread through angina lacunaris, and, therefore, I deem it proper, as a measure of caution, to isolate cases of angina lacunaris."

These quotations have induced me to refer again to the subject of angina lacunaris, amygdalitis follicularis, "tonsillitis follicularis," and to propose the subject for your consideration. My reason for so doing is not the fact that my opinions and statements have been quoted rather incompletely or erroneously, but because it still appears necessary to fix the relation of follicular inflammation of the tonsils to tonsillar and general diphtheria beyond a doubt. I have tried to do so repeatedly, but have not been satisfied with the effect of my previous statements and deductions. What I desire to emphasize at once, however, is that I do not—as I am quoted—assert that diphtheria is spread by adults suffering from follicular amygdalitis. On the contrary, what I did say and do say is this, that what, in an individual case, was called by that name and then gave rise to diphtheria, was diphtheria, and, therefore, produced diphtheria. Nor do I say that every case of follicular affection of the tonsils is diphtheria, and that diphtheria in general is spread by follicular amygdalitis in general, but I claim that the name of follicular or lacunar amygdalitis is but a subterfuge for the lack of a correct or complete diagnosis. There are cases of follicular amygdalitis of a catarrhal, purulent, fibrinous, and diphtheritic character, and its name ought to be dropped from our nomenclature, because of its giving rise to mistakes, unless it be complemented with a descriptive adjective.

Professor Fraenkel makes the statement that he has changed his opinion on the relations between follicular amygdalitis and diphtheria since the year 1881. In that year (*Berlin. klin. W.*, No. 47) he published a paper in which he denied the possibility of the former ever being an infectious disease. His denial was based on the fact that an attack of follicular amygdalitis did not protect the patient, but, on the contrary, created a predisposition to relapses. He forgot that a first attack of acute rheumatism, or of erysipelas creates rather than annihilates a predisposition to relapses, and still both are counted among the infectious maladies. He says he forgot that circumstance. But he has forgotten more. He forgets that I have claimed, and do claim, that a previous attack of diphtheria predisposes to future attacks of the same kind, and, what is more important, that this observation and statement have been found to be correct by many other authors since. In regard to his changed views he refers to Friedreich as the first to count

[1] Read before the Section in Diseases of Children of the Academy of Medicine, November 1886.

[2] See THE MEDICAL RECORD, [illegible]

certain cases of lacunar amygdalitis among the infectious diseases. This great author bases his position on the following observations:[1] Before there are any local symptoms there is *sometimes* a chill. The fever is *often* found to be higher than the local affection appears to justify. Further, the fever is *apt to* exhibit a cyclical curve. *Sometimes* Friedreich noticed a swelling of the spleen, and prostration and debility were *often* too marked for a merely local process.

I have known very long that certain diseases of the throat occurring during the prevalence of an epidemic of diphtheria—though they were not claimed as genuine diphtheria—belong to or are intimately related with this malady, and are, or can be, of an infectious character. Allow me to prove this assertion by quoting a few lines from my first papers on diphtheria which appeared in the American *Medical Times* of August 11 and 18, 1860, under the title "On Diphtheria and Diphtheritic Affections." There I say: "The register of the (German) dispensary shows, for January, 1860, the number of eighteen cases of membranous diphtheritis, and nine cases of affections considered by us to belong to the verge of, and caused by, the epidemic. While the records of our private patients, during the first week of January, gives out of the whole number of seventy-seven, sixteen cases of membranous diphtheria, and thirteen of the second class. This distinction has always been kept up by us. The diagnosis of diphtheria was never considered to be unimpeachable except in such cases as offered well-developed membrane. Among the second class of such diseases as were considered by us to be influenced or brought on by the epidemic genius, we have counted and put down stomatitis, pharyngitis, diphtheritic pharyngitis, cervical adenitis, and diphtheritic fever. Of the 2,577 patients of the children's class, during the last nineteen months, there were 200 cases of diphtheria and 185 of kindred diseases."

Permit me to make one more quotation from the same paper: "There is a form of the diphtheritic process in which very little or no fever is perceived, and little or no glandular swelling will take place. The congestion and swelling of the pharynx are not very marked, and the first remarkable appearance is noticed on the follicles of the nucous membrane of the pharynx. They are visible as whitish-gray spots of a twentieth or a twelfth of an inch in diameter. Not long after, however, membranes are formed, and the whole process will run its course in sometimes three or four days, without any great inconvenience to the patient. But there are cases in which the symptoms will increase in severity, fever will set in, and submaxillary and cervical adenitis take place. Such cases have been set apart by some authors as 'mild membranous angina,' 'herpes of the throat,' or 'herpetic angina.' We do not see anything else in these cases but mild diphtheria, mostly without pronounced general symptoms. We have not found any more reason to distinguish this form, of which, however, we have not seen more than a dozen cases, from diphtheria, than we should think of excluding a case of scarlet fever, without fever and with less than the usual eruption, from the record of cases of scarlatina. Moreover, we have pointed to the fact that such apparently simple cases will sometimes be followed by fever and adenitis; and when we add, further, that some of these mild cases of 'herpetic angina' have been followed by diphtheritic paralysis, we ought to lay aside our fondness for classification and subdivision. The clinical conditions of the diphtheritic process are variable in their appearance but alike in their innermost nature." These, Mr. Chairman, are quotations from a paper which I published twenty-six years ago.

The tonsil is a conglomerate of follicles, that means lymph-glands, of the simplest form. They are connected with, or rather separated from, each other by a network of cellular tissue, in the meshes of which colorless and nucleated lymph-cells and fine circular lymph-vessels are contained. The whole surface of the tonsil, composed (as it has been described) of follicles, is covered with a mucous membrane. Between it and the tonsil there is still a layer of parallel fibres of connective tissue. The mucous membrane has its own muciparous glands, and is covered with several layers of pavement epithelium. These epithelia, however, do not adjoin each other very closely; for, according to the researches of Th. Stoehr, there are interstices between them which permit round cells to escape between them. The surface of mucous membrane is not smooth or unbroken; it has depressions which Luschka called lacunæ, and Virchow, crypts. It is never the entire mass of a tonsil which is affected by a disease. Even malignant maladies start from single localities or tissues. There may be an affection of the superficial mucous membrane or of its epithelial covering, the subjacent connective tissue, or the dense connective tissue situated between the follicles composing the tonsil, or of these follicles themselves with their scanty lymph-ducts, and, finally, the cellular tissue in which the tonsil is imbedded. The character of the disease, whether more or less serious and troublesome, and the changes brought on by it, whether more or less persistent, depend on its nature, location, and extension. The superficial membrane with its lacunæ may be the seat of catarrhal, inflammatory, and diphtheritic processes. There may take place accumulations of mucus, pus, pus and fibrine, and diphtheritic membrane, and mixtures of several of them. In the course of time the mucous membrane itself will undergo changes. Occasionally its muciparous glands exhibit an inflammatory exudation or effusion, and ulceration following the rupture of the vesicles, particularly during a universal attack of follicular stomatitis of infants. Smaller or larger abscesses within the deeper tissue which perforate the surface, destroy part of the tissue and give rise to persistent sinuses, which are found empty or filled with mucus or pus, or pus with fibrine, or cretaceous material, found by E. Gruening to consist mainly of leptothrix and permit of the introduction of a probe to a depth of from one to two centimetres. The superficial indentations and depressions also may become deeper and assume a more irregular shape, sometimes in consequence of superficial processes, and partly of the breaking down of the deeper tissues. Thus we are not always in a position to determine whether we have to deal with a transformed lacuna or with an incomplete fistula resulting from the destruction of tissue. As a rule, the former are covered with epithelium, the latter are without it.

The lymph-vessels of the tonsils have remained very problematic for a long period. J. Harff wrote an inaugural dissertation in 1876, at Bonn, in which he treated of the anatomical and pathological structure of the tissue of the tonsil. In it he described the circular lymph-vessels, which, as mentioned before, surround the follicles and send very fine ring-shaped nets from within outward. Soon after Sappey published his exact observations in his "Anatomie descriptive," 3 ed., II., p. 892, 1876, and in his great "Atlas," 1882. Injections of the lymph-vessels of the lower surface of the soft palate reach the surface of the right and left tonsils in a newly born child, a fœtus, and an infant of from six to seven months. These injections, however, do not succeed in every instance. Whenever they were successful, they went rarely beyond the surrounding cellular tissue; exceptionally only into the follicles themselves. Besides this scanty lymph connection with the velum palati the tonsil has a similar one with the anterior and posterior pillars and the glands adjacent to the common carotid artery. It appears that C. Heitzmann's remark ("Microsc. Morphology," p. 592, 1883), that a large amount of lymph-tissue is stored up in the tonsils, is based on his own observations. These lymph-vessel connections are scanty, as it has been stated. With advancing age they become still more so. They are much less numerous in the adult. It is self-

[1] Volkmann's series of Clinical Lectures, No.

evident, besides, that each hyperplastic proliferation of the connective tissue, which is the direct result of most cases of local amygdalitis, compresses the small array of lymph-vessels and renders them atrophic. By the same process the surface undergoes changes, inasmuch as the normal mucous membrane and its epithelium are replaced by cicatricial tissue. That can be easily ascertained by the inspection of the throats of those who, while not affected possibly by an acute attack, have suffered from amygdalitis before.

Thus, tonsil and tonsil are not identical at all. When we study an acute attack, or a recent affection, we have always to bear in mind the changes which have been, or may have been, produced by previous diseases in the epithelial layers, in the mucous membrane with its muciparous follicles, and the lymph-vessels.

The surface of the tonsil may be affected, as stated before, with a catarrhal, fibrinous, purulent, or infectious inflammation. The first and the fourth varieties are most frequent at the present time. The first exhibits the usual symptoms of catarrh, viz., hyperæmia and hypersecretion. Actual catarrh of the tonsil produced by cold is not unilateral; it is accompanied with universal hyperæmia of the pharynx. Whenever there is an acute attack with *unilateral amygdalitis*, the latter is *the result of either trauma or infection*. The lacunæ of the surface are, as I said, often changed by previous disease. The new attack is particularly vigorous in their deep recesses, particularly when there are already fistulous diverticles. Then the mucous or purulent secretion is deposited in larger and tougher masses, it is viscid and cohesive, and resembles very much the contents of fistulæ originating from previous purulent inflammation of a part of the tonsil. The more the lacuna is fistulous, or the deeper the original fistula, the more local is the course of the whole process, the less the congestion, the more adhering and the dryer is the secretion. But it never forms a structure intimately adhering and cohering with the subjacent tissue. Occasionally a hard morsel of bread removes a part of the secretion, or a sponge, or a piece of absorbent cotton wrapped round a probe are sufficient to detach, or fetch from nooks the drops, or nodules, or membrane-like looking points. It is always easy to introduce a blunt probe into the recess of the lacuna or the fistula. This condition may exhibit an acute character, and last but a short time, or it may persist. In that case fibrin is frequently mixed with the purulent mucus. The drop, or nodule, is rapidly replaced by another one. Through weeks and years the same observation and the same procedure may be repeated. Each new attack *may* run its course with or without fever. Sometimes, but rarely indeed, there is some glandular swelling near the lower jaw. It depends less on the local affection, however, than on some accompanying universal pharyngitis or rhino-pharyngitis. Thus the catarrh of the tonsil, of the lacuna, may run an independent course, no matter whether acute, subacute, or chronic, and not attended with any complication. Still, it is self-evident, that some complication is possible, for a throat which is subject to catarrhal or inflammatory disposition offers less resistance to an existing epidemic of diphtheria. A much more frequent complication, however, is nasal catarrh of a subacute or chronic character. It is so frequent, that it is difficult in many cases to decide which of the two, rhinitis or amygdalitis with pharyngitis, was the original disease.

Another variety of disease, the visible elements of which are nodules, deposits of different consistency, either single or numerous, on either one or on both tonsils, is genuine diphtheria. Its deposit, though of small circumference or thickness, is membrane. While in some cases of catarrhal amygdalitis the deposits—being mucous—may change their very location by a change of position on the part of the patient, or are easily removed by brush or probe, in the diphtheritic form the dots do not change their place, they cannot be displaced without some effort, nor will a probe enter a cavity or fistula through them, or alongside. They are spherical or of irregular shape, whitish or whitish-gray; may be thrown off in from four to five or six days; or they get larger within a day; or a number of them become confluent and merge into a membrane. The space between them, or their neighborhood after confluence has been accomplished, may be pale or congested; fever and glandular swellings in the neighborhood absent or present. The more the morbid process is limited to the tonsils, the more frequently both fever and glandular affection of the neck are absent. But there are cases in which fever precedes the eruption; it may even increase during the presence of the first deposit, and until the completion of the membrane; and recede rapidly in many cases with a favorable result, with or without albuminuria. These severe cases are sometimes accompanied with a moderate amount of glandular tumefaction.

It does not appear difficult to estimate at their full value these cases of punctated diphtheria. But rarely large membranes rise from its basis at once; they are the result of many exudations melting into each other. This process of conglomeration being slow, or incomplete, we have a specimen of what is often called by the general name of follicular amygdalitis. The deposits may form from three different sources: either from the normal interstices of Stoehr, or from interstices formed by previous morbid processes, or directly from the pavement epithelium. It is particularly the persistence of the first which has been called diphtheritic angina, or angina lacunaris diphtheritica. It would be better to drop the name.

Albuminuria is not observed in catarrhal amygdalitis, unless there be a high degree of fever. As a rule, this happens only when there is a complication with intense inflammation, or even suppuration. Nor is albuminuria a frequent occurrence in unquestioned diphtheritic amygdalitis, either punctated or membranous, for the very simple reason that the organism does not participate, or participates but little, unless the amygdalitis is complicated. In uncomplicated amygdalitis, the surrounding cellular tissue being tense, and the lymph-vessel connection between the tonsils and the organism being insufficient, the transmission of the poison, from its original seat to the body, is prohibited. The obstacle is still more powerful when previous inflammations have resulted in hyperplastic proliferation. Thus the absence of albuminuria militates neither for the catarrhal nor the diphtheritic nature of the inflammation. Its presence is of some account only when its rising from other causes may be excluded; for nephritis is more frequent than many of us may suppose.

What about fever? Is its absence or presence of any value in the differential diagnosis of the catarrhal or diphtheritic form of amygdalitis? The simple and uncomplicated catarrh of the tonsil yields but few general symptoms, and but little elevation of temperature. However, general pharyngitis and phlegmonous amygdalitis look different. Thus, when there is much fever there is a complication.

The punctated diphtheritic amygdalitis, no matter whether it remains so or becomes membranous, need not be feverish. This fact is sufficiently explained by what I said of the anatomy of the tonsil. To expect fever only because a disease belongs to the class of infectious maladies is a (rather childlike) pathological postulation. Even grave sepsis is apt to run its full course with but little elevation of temperature, and the much boasted-of curves, which look quite picturesque in the books and are sometimes furnished by nature, shine too often by their absence. There are cases of diphtheria with high or little fever; fever in the beginning; fever in the advanced stage of the disease, because of more or less absorption of the poison either directly into the blood or through the lymph-vessels, and on account of rapid or slow elimination from the system.

Allow me, in connection with this statement, to return

to another one, which does not date from to-day, but which I have often verified and taught, and which will not lose by repetition. Surface diphtheria, without participation on the part of the lymph-vessels, is apt to exhibit no fever, or but little. There is no fever when the affected surface is not connected, or but little so, with the lymph system of the body. Such parts are, besides the tonsil, the vocal cords. Both are covered with pavement epithelium. Both have but little lymph communication with the neighborhood. What I said of uncomplicated diphtheritic amygdalitis is valid for diphtheria of the vocal cords also. A membranous croup without diphtheritic affection of other parts, or complication with a feverish disease, has no fever. Croup symptoms with high fever, but without complication, do not belong to the membranous form. Catarrhal laryngitis begins with fever. Even in cases of an existing punctated amygdalitis, when symptoms of croup make their appearance, the continuance of low temperature stamps the case as membranous; the appearance of high fever renders the catarrhal character more probable. It is not the place here to enumerate cases of which, however, I have seen many corroborative ones in the course of decades. But the subject is one of great importance both for diagnosis and prognosis and treatment. A single case may be mentioned here. On January 1, 1886, I diagnosticated membranous laryngeal stenosis in a boy aged eighteen months, because of the characteristic respiration and the absence of fever, there being no congestion, inflammation, or exudation in the throat. I had to perform tracheotomy a few hours after. Some membrane was expectorated through the tube on the third and fourth days. There was none in the fauces. On the third day, when the wound became slightly diphtheritic, there was an increase of temperature amounting to $\frac{1}{2}$° F. during a few hours. The tube was removed after a fortnight. The child remained well until he was taken with laryngeal stenosis and a high fever, four weeks afterward. He was attended by Dr. P——, who had assisted me in the operation and heard me speak of the differential diagnosis of these conditions. He diagnosticated the laryngitis as non-diphtheritic and proceeded accordingly. The child recovered in the usual way.

Fraenkel thinks he can diagnosticate some cases of diphtheritic and catarrhal amygdalitis by the absence or presence of peri-amygdalic abscesses. The presence of the latter, he claims, excludes diphtheria, because he has, so he says, never seen that combination. That reason is rather negative; his not having seen that complication will not prevent him from meeting it some day, and then he will publish another paper on the subject. I *have* seen the combination of diphtheria and abscess; it is not frequent, but it exists. There is no reason why it should not do so. For diphtheria, perhaps not even those cases excepted in which it enters through Stoehr's interstices, requires a mucous membrane previously affected. No admission to diphtheria through an intact integument. The previous catarrh and inflammation themselves may give rise to abscesses, while they also predispose to diphtheria.

It has been claimed by Fraenkel and others—for instance, by my learned friend, Dr. Holt—that there are so many differences between the course of angina lacunaris and diphtheria that the former is necessarily a special disease. Fraenkel could be right if diphtheria consented to run a typical course, exhibited albuminuria, high fever, paralysis in every instance, and turned out to be fatal in every case. That is, more or less, what has been claimed by some, and the practitioner or author who claims to have seen diphtheria recovering is gently accused of ignorance, or of falsifying his reports on account of ambition or greed. Nothing is more erroneous. Why diphtheria should be observed in the worst form only, when cholera, yellow fever, variola, and scarlatina are permitted to run a mild course oftener than merely occasionally, I cannot understand. If Fraenkel were less particular and less given to schematic differentiation, he would be less troubled about the cases of paralysis of the palate after his cases of alleged follicular amygdalitis. It is true that paralysis is so rare that, "he would fain believe that the case was one of diphtheritic catarrh." There are, however, besides the paralysis of the facial and trigeminus nerves, from intracranial causes, but two ways in which the soft palate can become paralyzed. It may occur in consequence of a general pharyngitis which results in serous effusion into the soft palate, and secondly by diphtheria —as a genuine diphtheritic paralysis. Whenever such a paralysis occurs after a punctated membranous amygdalitis, call it what you please, I call it diphtheria.

Such cases as are described by E. Wagner (in Jahrb. f. Kinderh., xxiii., p. 402), in which diphtheria was developed as late as three days after the commencement of an "angina lacunaris," are by no means rare. Cases in which, without fever, half a dozen or a dozen of punctated exudations merge into a membrane after a day or two are frequent. Most of you have also known of families in which one child died of membranous croup, another had nasal diphtheria and sepsis, another pharyngeal diphtheria, another "follicular," pointed, isolated deposits on a tonsil, or both tonsils, with various degrees of fever and constitutional ailment. Nor are the cases infrequent in which the good-natured and well-meaning practitioner diagnosticated a mere "follicular tonsillitis" an "angina lacunaris," and neither isolated nor disinfected, and the malady afterward, starting from the mild case, desolated the family. Whoever has seen that once must not forget it, and whoever has overlooked it once has enough self-reproach to bear to last a lifetime. Thus this "angina lacunaris" has not such an innocent look about it, "behind which," as Fraenkel says, "affections which are not diphtheritic may hide themselves," and in spite of which he advises to isolate the patient; on the contrary, in those cases in which the deposits are firmly attached, and are neither mucous nor purulent, they are diphtheritic, and are to be feared and treated as such.

In the paper published some years ago, and quoted before, I have shown that this variety of punctated diphtheria is mainly seen in adolescents and adults. This fact finds its explanation in my previous remarks on the gradual changes in the tonsillar tissue produced by repeated or chronic inflammations. For this reason the formation of large membranes, and serious constitutional affection, are not frequent among adults. In accordance with this observation is the other fact which has also been stated by Monti, that local and partial diphtheritic angina occurs mostly in bigger children who are inflicted with chronic pharyngitis and hypertrophic tonsils. Thus we can make the broad statement that pharyngitis produces the disposition to diphtheria and relapses in small children, and chronic pharyngitis of long standing suppresses this tendency in those of more advanced age and creates the disposition to localized punctated exudations. But whether membrane or point, the contagiousness of the disease is the very same. A mild variety begets that which is mild or severe, as the severe form may produce its like, or a mild variety. This mild variety is that from which adults are apt to suffer. It made me proclaim the warning that there is as much diphtheria out-of-doors as in-doors, as much out of bed as in bed. With this variety the adult is in the street, in business, in the school-room, in the railroad car, in the kitchen and nursery. With this variety parents, while complaining of slight throat trouble which is not heeded, kiss their children. It appears there is no escape from this mild, murderous variety. But wherever it is suspected it ought to be looked after; where it is seen it must be isolated and treated, less, perhaps, for the sake of those who are sick, than of those who are in serious danger of being infected.

THAT CHESTNUT AGAIN.—Dr. Smith says that no infant food has been found to adequately serve as a substitute for the breast-milk.

ON THE ABORTIVE TREATMENT OF PHLEGMON, ESPECIALLY OF THE FINGERS, BY RESORCIN INOCULATION.

By LUDWIG WEISS, M.D.,

[illegible]

Local therapy has from time immemorial played a most important rôle in the treatment of surgical diseases of the fingers, as has also internal medication. The alimentary canal in particular was not neglected, and the status biliosus et arthriticus was sought to be combated by purges, antimony, etc. The exposed position of the parts affected, and the extreme painfulness of the disease, were the causes which in times gone by led to those manifold methods of local treatment which tradition has handed down to us. These were mainly palliative, and intended to bring the swelling to a "head." Fried onions, bread masticated with salt and butter, honeyed dough, etc., have had, and still have, their firm adherents in the ranks of female wiseacres; fomentations, drawing plasters, rubefacients, epispastics, and resolvents still have their advocates.

With the deeper involvement of the tissues, however, producing subcutaneous paronychia, acute volar dactylitis, or even phalangeal osteitis, much more energetic measures must be promptly adopted if we would avoid the loss of a phalanx, perhaps even systemic infection or pandactylitis.

Phlegmons of the dorsum of the fingers, as is well known, are more apt to be diffuse, owing to the loose arrangement of the cellular tissue, and lymphangitic complications are comparatively rare here; while in volar dactylitis—by reason of the peculiar dense structure of the fibrous fasciculi of the connective tissue passing vertically down to the periosteum—there is manifested a great tendency to the extension of the inflammatory process down to the bone. The exudation is confined in the meshes of this unyielding fibrous tissue, and compression and necrobiosis result, causing the most agonizing pain. Phlegmonous forms are mostly of traumatic origin, following punctures or lacerations of the nail-fold or of the bed of the nail itself (hangnail). We must regard these very slight original lesions as the portals of entrance for the septic material, the absorption of which gives rise to very serious complications. These cases must be treated, in accordance with modern antiseptic surgery, by early incisions and thorough disinfection.

It will be evident from the foregoing that I am an advocate of the established methods of surgery. However, the large number of phlegmons of the fingers which presented themselves at my class for skin diseases at the German Poliklinik, at the time that I was experimenting with resorcin in other dermatonoses, prompted me to use the drug in these cases, and, as I believe with the most gratifying results.

Following the methods of Andeer,[1] in Munich, I had previously used resorcin *epidermically*, in the form of an ointment in furunculosis and lymphangitis,[2] with varying results. It happened that in those cases in which the necrotic plug was about to separate, the resorcin, applied to the denuded surface, hastened involution. I concluded that if it were possible to introduce resorcin into the centre of infection, not only would the noxa be destroyed locally, but by virtue of the rapid absorption of the drug in the lymphatics, the virus already there deposited might be rapidly destroyed, and, provided the treatment had been resorted to in time, surgical interference become unnecessary.

The opportunity for carrying out my experiments soon presented itself, and, as it happened, my very first patients were physicians, who, in the performance of their daily duties, had acquired some form of finger-phlegmons. The following records of cases will illustrate the method of treatment advocated:

Case I.—Dr. W——, an apparently healthy man, presented himself, March 18, 1886, for an intense phlegmonous inflammation of the nail-fold of his left thumb, due to a slight laceration and probable septic infection of the scarcely visible wound. This process extended to the pulp, and in twenty-four hours the ungual phalanx was swollen, reddened, tense, and painful, and the throbbing was very annoying. Resorcin inoculation was proposed, with the proviso that in case there was no amelioration in twenty-four hours a deep incision to relieve the tension be made. The inoculation was performed in the following manner: A number of shallow, parallel incisions, about one-fourth inch long, were made into and around the lesion, through the integument. Cocaine was used in twenty per cent. solution. The slight operation was scarcely felt by the patient. A ten per cent. resorcin-lanoline salve was now applied, in a very thick layer, to the scarifications. The entire finger was then enveloped in a strip of lint, which in turn was thoroughly saturated with the salve; over this a layer of gutta-percha tissue, absorbent cotton, and a moist gauze bandage were applied in the order mentioned. The hand was then suspended in a sling and the finger dressed twice daily.

After twenty-four hours there was complete cessation of the pain, rendering a night's rest possible. The painful dragging along the flexor tendons had ceased entirely, as had also the annoying throbbing. The points of inoculation showed the peculiar effects of the resorcin: a whitish discoloration; the surrounding epidermis thrown into white rugæ, similar in appearance to the tips of the finger of a washerwoman. Twelve hours later the affected phalanx could be thoroughly examined, as if for fluctuation, without causing any pain whatever. The treatment was continued for three days, after the lapse of which the epidermis became discolored brownish-green, the points of scarification appearing leathery, and also brownish; and the nail showed a more yellowish-brown discoloration—all these changes being due to the deoxidizing power of the resorcin. The inflammation having subsided, boric ointment and a glove-finger for protection constituted the dressing.

Case II.—Dr. L——, a man in good health, punctured the tip of his left index-finger, close to the free border of the nail, with a surgical needle, while sewing up a lacerated perineum, on May 16, 1886. This slight injury, though somewhat painful, was overlooked. On the 17th considerable pain in the pulp; the next day pain became almost unbearable. Pulp tensely swollen, reddened, throbbing, with a dragging sensation in the flexor tendons; on the volar aspect of the radio-carpal articulation a bright red strip of lymphangitis, extending up to the elbow, was noticeable. Cubital and the axillary glands were swollen and painful. In this case I attempted treatment without inoculation, in order to satisfy myself as to whether the epidermic use alone of the drug might not be productive of equally good results. So the ointment was applied in a thick layer up to the axilla, and occlusive dressing as above described made use of. On the following day the symptoms were unabated; temperature, 101.5°. Owing to the intensity of the symptoms inoculation with the ten per cent. resorcin-lanoline ointment was at once resorted to; the scarifications in this case were made on the entire breadth of the tip, parallel to the long axis of the finger. Inunction of the rest of the finger, and of the entire flexor aspect of the forearm and arm up to the axilla, with the same ointment; the usual dressing was applied and the arm was suspended. The same night quiet sleep was possible; the next day the fever was absent, and pain was almost abolished; the lymphangitic redness was gradually fading. The following day the pains in the cubital and axillary glands were greatly diminished and were sensitive only to the touch. With this stage reached, the process was practically ar-

[1] Das Resorcin in seiner Anwendung bei Hautkrankheiten, Monatshefte für prakt. Dermatologie, Bd. [illegible] No. 5, 1884, p. 117.

[2] Ibid., Bd. iii., No. 7, 1884, and Nos. 1, 2, 3.

rested. The same treatment was kept up for three more days, after which the characteristic discoloration of the epidermis and desquamation followed. Protective measures as in the first case.

CASE III.—Dr. R—— injured the tip of his left index-finger with a vulsellum hook while curetting the uterus post abortum. The fetid and decomposed portions of the placenta gave rise to primary infection of the wound. Twelve hours after this slight injury there was intense pain at the point of lesion, and the cubital glands were swollen and very painful; temperature, 101° F.; malaise rigors. The doctor, a firm believer in heroic procedures, subjected himself at once to the operation of excision and thorough *évidement*. Shortly after this, perhaps five days, the patient noticed on the anterior aspect of the lower part of the leg of the affected side a red metastatic spot, which soon increased to the size of a dollar, became swollen, painful, and hot to the touch, causing an erysipelatous swelling of the entire dorsum of the foot. The temperature was 101°, and the patient had a sallow look. There was a dragging sensation along the tibialis tendons, and the inguinal glands of the same side were swollen and painful. Resorcin inoculation, by means of the twenty per cent. ointment, was performed locally, and the flexor aspect of the leg and dorsum of the foot were anointed with the same salve. Typical dressing up to the knee. After twelve hours, fading of the erysipelatous redness was noticed, and pain and fever were absent. After twenty-four hours the inguinal glands were painless, and the patient could leave his bed; recovery ensued in three days.

The doctor expressed his confidence in the treatment, attributing his immunity from inguinal lymphadenitis entirely to the speedy absorption of the resorcin.

CASE IV. was that of a servant-girl in whom resorcin inoculation was impracticable, because the patient had been treated by a druggist until tendovaginitis and caries of the phalanx had set in.

CASE V. was that of another servant-girl in the same family. While cleansing silverware with a patent polish, she must have forced some of its poisonous ingredients into an abrasion of the nail-fold of the right middle finger; forewarned by the bad results of delayed treatment in the case of her fellow-servant, she applied to me in time. I found an extremely sensitive and swollen finger-pulp; there was a throbbing and dragging pain along the tendons, and the axillary glands were swollen and painful. Resorcin inoculation with the ten per cent. ointment and regular dressing brought about an almost immediate amelioration; after three days there was complete cessation of all the symptoms, without suppuration.

CASE VI.—A young lady endeavoring to remove a corn from the little toe made too deep an incision. Infection of the wound occurred; within twelve hours the incised toe was intensely inflamed, and the dorsum pedis, up to the ankle, was swollen and erysipelatous; pain in the inguinal glands was complained of. Temperature, 102°. Resorcin inoculation with a fifteen per cent. ointment was performed, and a dressing applied to above the ankle. Amelioration of all the symptoms took place within twelve hours, and in three days the patient could walk. As will be observed from the histories of these cases—to which numerous others could be added—the prompt arrest of the inflammation and infection was undoubtedly to be attributed to the action of the resorcin. Besides its antiseptic, caustic, and hæmostatic properties (Andeer), resorcin also has an antipyretic action (Brieger and Lichtheim); the latter, however, according to the investigations of Cattani, in Milan,[1] is exceedingly slight, and of not much importance. Its local action is very rapid, especially in genuine diphtheritic processes; the exudation under its influence soon becomes modified, and, undergoing fatty degeneration, is exfoliated. Its main triumphs, however, it obtains in erysipelatous skin affections, in acute, infectious, phlegmonous erysipelas, and in infected wounds. The advantages of resorcin compared to phenol, which in many cases would be indicated, are to be found in its minor degree of diffusibility and the consequent possibility of using it in more concentrated solutions or ointments without causing coagulation of albumen on denuded surfaces, and thus closing the avenues for its absorption; in its rapid absorption by the lymphatics without giving rise to dangerous intoxications, as may be the case with phenol, which is very diffusible; in its beneficial regenerating power on the epithelial structures of the skin, and its constringent effect on the capillaries. The absorption of resorcin manifests itself, according to the quantity absorbed, by a dark brown or olive-green discoloration of the urine.

Its absorption is not to be doubted if this discoloration of the urine is not present, either because the quantity necessary to effect a cure may have been small, or it may not have been used in the degree necessary to produce such discoloration. In either case, however, the marked disappearance of the symptoms for which the remedy was used will admit of no doubt as to its absorption.

Andeer, in 1884, described resorcin as the best means for an abortive treatment in the primary stages of infectious skin diseases and localized recent infections.[1] While he designates it as the most active in the form of an ointment, Cattani uses solutions of two to ten per cent. strength, and in serious cases applies cotton compresses saturated with the same solution. In opposition to Andeer's view, Cattani praises the hypodermatic use of the drug, because, as he claims, cellular inflammation does not arise more frequently from this than from other remedies similarly used.

Although the effect of resorcin in inflammatory skin diseases must be considered very active, I noticed that in wounds of the fingers, primarily or secondarily infected, and originating from minute solutions of continuity of the skin, its epidermic application was not efficacious enough to prevent infection and suppuration. The tardy absorption of the drug in these localities must be attributed to the characteristic dense connective-tissue structure of the finger-pulp, and to the compression to which the inflamed and engorged parts are subjected, making the lymph-capillaries impermeable, in spite of their abundant distribution and very numerous stomata. The callousness of the epidermis of the finger-tip also acts as a barrier to absorption.

In order to overcome these obstacles, and with the purpose of introducing the resorcin within the centre of infection, and there endeavoring to destroy the virus at the point of its entrance, and, finally, to facilitate the more rapid penetration of the resorcin into the lymph-capillaries, I concluded to break the skin, *i.e.*, by making minute solutions of continuity to scarify, and then to inoculate with the drug.

For the inoculation I found the salve form in a ten to thirty per cent. strength of resorcin the most serviceable, and, in order to facilitate its absorption in the non-scarified parts, I availed myself of the more easily absorbable lanolin.

This method, simple though it be, must be carried out strictly and carefully in order to be efficacious. It is of the highest importance to use a very fine, narrow-bladed bistoury, owing to the extreme sensitiveness of the finger-tip. In whatever situation the original lesion may be located the inoculation is performed in the area involved by the point of invasion. The small parallel incisions are longitudinal to the finger-axis, when made on the tip, and at right angles to it when on the nail-fold. In the bottom of each incision a slight bloody point is sometimes seen from an injured capillary, which is of no consequence; a hemorrhage, no matter how slight, is absolutely unnecessary and harmful. Cocainization by the application of absorbent cotton saturated with a ten to

twenty per cent. solution, according to the sensitiveness of the patient, may be performed, though many bear the little operation without any previous local anæsthesia. As a rule, a layer of thickened and callous epidermis will be found around the free border of the nail, into which the slight incisions can be made without inducing any pain worth speaking of. I have found that, no matter how carelessly this little operation might be performed, the inconvenience caused is so slight, compared to the benefits derived therefrom, that it ought never to be dispensed with in a given case. The next step is to abundantly apply the salve to the affected parts. I usually direct my patients to immerse the finger into the salve-pot, so that by directly impregnating the scarifications rapid absorption may result. A strip of lint is then closely wrapped around the affected finger, upon which, in turn, the salve is thickly applied, until it is thoroughly saturated with it. This forms a constant source of supply for the points of scarification, which supply is retained by application of the gutta-percha tissue. A layer of cotton and a moist gauze bandage complete the dressing. Rubbing in of the ointment is painful and unnecessary, since the dressing forces it mechanically into the scarifications.

It is sufficient to renew the impregnation twice daily, though as to this the subjective sensations of the patient are the best guide. The scarifications being sufficiently numerous to absorb the resorcin, an amelioration of the pain and tension is noticeable in from six to twelve hours.

One of the first requisites to the success of the treatment is its timely application. In the stage of erythematous redness, when the dorsal surface of the ungual phalanx or the nail-fold is reddened and glistening, when the patient first experiences pain, the inoculation of resorcin will almost positively abort the inflammation and prevent suppuration. The same favorable result is obtained in volar phalangitis also, provided the case presents itself before the exudation has exerted such a pressure on the dense vertical fasciculi of connective tissue as to cause necrobiosis and suppuration. When severe pain sets in in a circumscribed area of the finger-tip—which may appear turgescent, tense, reddened, and pulsating from the engorgement of its vessels, lymphangitis and lymphadenitis already commencing to show themselves, perhaps the finger being instinctively held in an elevated position—the process is still within the bounds of successful treatment by means of resorcin inoculation.

That the quick subsidence of the threatening symptoms in such a case is distinctly due to the inoculation and subsequent rapid absorption of resorcin, I believe to be beyond doubt. The application of the drug to the intact integument would not act promptly enough to prevent the rapid absorption of the infectious material. The introduction of the resorcin into the rete mucosum, or into the superficial layers of the cutis, as I advise it, must necessarily hasten its absorption and have a destructive effect on the infectious matter, since the drug is forced into the open mouths of the lymph- and blood-capillaries. Nevertheless, the epidermic use of resorcin along the track of the inflamed lymph-canals is of an importance not to be underrated, and should be made use of in every case in which lymphangitis exists.

To resume, resorcin used in the manner described will be accepted as an effective remedy in all furuncular and phlegmonous inflammations; it aborts the inflammation, if used in time, by destroying the germ locally as well as in the lymph-canals leading from the point of infection, at the same time acting as an anæsthetic on the terminal filaments of the sensitive nerves. This is accomplished in the surest way by the method of scarification and continuous impregnation.

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Dr. Richard Maly has been nominated for the position of professor of chemistry in the German University of Prague.

THE PRINCIPLES OF WOUND DRAINAGE AND THE USE OF HARD RUBBER DRAINS.

By John C. Schapps, M.D.,

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The importance of dryness as a condition of wound hygiene has had, during the last few years, an increasing recognition, as manifested by the number of recent dry dressings and implements for drainage. Of the former, perhaps, it may be true that perfection has been approached; but certainly not of the latter, since none of them has altogether supplanted the soft rubber tube, with all its imperfections.

The mechanical principles operating to drain a fresh wound may be considered, in their natural sequence, under the following heads:

I. The action of the tissues.

II. Gravity.

III. The action of the drain.

I. There are occasionally to be removed from a wound, by drainage, before its healing can be accomplished, such solids as particles of bone, and very commonly such semisolids as blood-clots, flocculi of lymph, and detached shreds of tissue. The function of the first or serous discharge from a wounded surface is, as regards these loose fragments, simply that of a vehicle for their removal. Should it not suffice, and, on the other hand, should they fail to secure vital union with the neighboring tissues, their disintegration is accomplished after a time by the formation of pus, and their expulsion is thus rendered more certain. All foreign bodies in a wound, whether derived from the tissues themselves or introduced from without, tend in a varying degree to increase fluxion into it. Certain kinds, whose surfaces are rough and mobile, have also the property of causing coagulation of the fibrin contained in the wound exudations. The clots thus formed, those already existing, and bits of soft tissue when present, retain in themselves fluid which frequently prevents their permanent adhesion to adjacent parts and makes them very liable to become necrosed before they can escape. The importance of promptly removing these substances, or, at least, of depriving them of their liquid, as a preventive of suppuration, is evident.

II. The current bearing the cast-off material is subject to (i.) its own *vis a tergo*, as fluid continues to be discharged from the tissues, to (ii.) the force of gravity, and possibly to (iii.) the capillary attraction caused by approximated surfaces. But the last-named force alone doubtless never retains enough fluid to prevent healing. The necessity of being guided by the law of gravity in determining the location and position of a drain needs no emphasis.

III. Regarded as a foreign body, it is evident that the merits of a drain are inversely as its activity in causing fluxion, coagulation and obstruction of the discharges, and mechanical injury to the tissues by pressure or friction. Drains may be divided, according to the principles upon which they act, into two distinct classes—capillary and tubular. The former obstruct the egress of everything except fluid, and, because of their fibrous surfaces, are probably active in bringing about coagulation and fluxion. They have, however, the compensative merit of an absorbent power, in draining off the liquid which renders prejudicial the presence of soft, moist substances. Such a drain, forming the extension of an absorbent dry dressing, may have large hygroscopic capacity. The dressing should, of course, be not merely a receptacle for discharges, but should have the power of absorbing from the drain, as the latter has of absorbing from the wound; otherwise the drain itself becomes saturated and a source of danger. Capillary drains are less completely dependent upon the force of gravity than are those of tubular shape. An open or tubular drain is simply a tissue retractor to maintain a channel, and has no inherent power to take up to,

retain, or to transmit. Its contents may be impelled by accessions of fluid discharged from the tissues, but the sole principle which is relied upon for its operation is the force of gravity. Aside from its passivity as a foreign body, the value of a capillary drain depends upon its activity in absorbing fluid, that of a tubular drain upon the opportunity it furnishes solids, semisolids, and liquids to pass into and through it. There is a class of drains, including both the open form, as those of decalcified bone, and the capillary, as those of catgut, which from the nature of their material have comparatively little potency in causing fluxion, coagulation, obstruction, or mechanical injury. By the imbibition of liquid a gradually increasing soft, gelatinous layer is formed upon their surface, thus protecting the tissues with which they come in contact, and preventing the formation and deposit of fibrinous clots. The soluble portion of these drains finally becomes transformed into a homogeneous liquid which may either escape or be absorbed. A small amount of basement structure, sufficiently organized to readily take up vital connection with adjacent parts, remains. A soft drain of this kind is less prejudicial to a wound than a clot or similar substance, because the latter cannot be liquefied except by a necrotic process, and, on the other hand, is not so highly organized, and therefore so ready to unite with the parts as is the structural base of an animal drain. The practical objection to these temporary affairs is their uncertainty. They may fail to maintain their existence long enough, or may be too slow in softening.

While it is unnecessary to discuss the advantages and disadvantages of each of the multitude of drains known to surgery, it is worthy of remark that the one probably in most general use—the soft rubber tube—has to a peculiar degree all unfavorable mechanical properties possible, except that of rigidity, which, by the by, is not always a disadvantage. Its surface is rough and its lateral openings are small, and usually angular. Their edges invite the coagulation of fibrin, and increasing deposits frequently obstruct the apertures and may even occlude the lumen of the tube. The presence of such a body, with its load of disintegrating material, is one of the most frequent causes of failure to secure primary union. It is an open question whether, under these circumstances, the admission of germs from without is a necessary factor in the production of suppuration.

With a view to meeting the indications touched upon, I would call the attention of the profession to the possibilities of hard rubber as a material for wound drains, and present as examples the forms shown in the accompanying cuts.

Fig. 1.

That represented in Fig. 1 is flexible. It consists of a thin tube, the convex surface of which is perforated by a single long aperture, rounded at each extremity, and winding spirally about the tube but terminating a short distance from each end of it. The area of this opening, which is narrower than would appear from the cut, is about one-fourth that of the convex surface of the tube, exclusive of those portions where the cylinder is entire. Close to each end of the drain, and near together, are two small holes. The instruments are smooth and polished without, within, and on the edges. They are made eight inches long, and of four diameters, one-fourth, five-sixteenths, three-eighths, and seven-sixteenths of an inch externally, and are known as Nos. 1, 2, 3, and 4 respectively. Each is intended to be divided into two drains, and is easily cut with knife or scissors, but it is better to soften the place where section is to be made. The flame of a match will suffice. The sharp edge made by cutting should be rounded with a fine emery cloth, and can be polished by means of crocus and oil. The makers, Messrs. Tiemann & Co., will furnish this instrument cut to any length and finished, and also that one shown in Fig. 2. By the use of hot water or dry heat one of these drains may be given a permanent curve corresponding to that of the wound, and by twisting it while soft the width of the spiral opening may be modified. The end of the drain where the circumference is unbroken is placed externally in the wound. The spiral opening is not continued to the end of the drain, because the skin is thus liable to drop into it, and obstruct the tube. The two small holes are for the insertion of a hare-lip pin, safety pin, a stitch, or other means of securing the instrument in place. In all tubular drains the best openings are at the ends. A drain should therefore be as short as it can safely be used and in a wound with two openings should not pass through it from one to the other, but two drains should be introduced. This is especially important when one opening is superior and is for the purpose of admitting irrigating fluid intended to reach all parts of the wound, and not merely to pass through the drains. The tube may be filled with catgut, horse-hair, or similar capillary material and the strands extended in all directions. They may be subsequently withdrawn, leaving the tube *in situ*, or may be left and the tube removed.

For this instrument the following merits are claimed: 1. As a foreign body it is comparatively harmless. The fact is well known that hard rubber pessaries cause much less vaginal secretion than those of soft rubber. Smooth, hard bodies, buried in the tissues, frequently become encysted, but soft substances usually give rise to abscess. It presents everywhere a polished surface; its aperture is the largest possible, with the smallest possible extent of edge; this edge is smooth, thin, and uninterrupted by angle, crevice, or sharp turn, with the exceptions of that at the end of the spiral opening and of the two small holes which are external to the wound. For these reasons it is not liable to cause coagulation, and the opportunity for coagula to adhere to and obstruct it is reduced to a minimum. Furthermore, by reason of its flexibility it cannot injure the tissues mechanically, except it be crowded into a situation where, by its mere presence, it interferes with the circulation. Its edges cannot sink into the soft parts, because of the width of the strip between them. 2. As it is unaffected by secretions or by chemical germicides it may be used again and again *ad infinitum*. 3. It cannot collapse. This property may prove valuable when considerable pressure by bandage is necessary to arrest oozing and prevent the formation of pockets. 4. From the thinness of its walls it is light, and has large capacity in proportion to its size. 5. Should granulations grow into it, its removal without injuring them is easily accomplished by a screw motion.

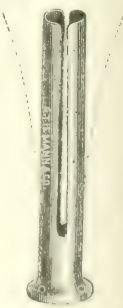

Fig. 2.

The instrument shown in Fig. 2 and which, for distinction, may be called an inflexible drain, consists simply of a thin, hard rubber tube, upon one end of which is a rounded flange, while from the other, two opposite slits extend nearly the whole length of the instrument. Should occasion require, the blades on either side of the slit may be fixed, by the use of hot water, at any degree of divergence. This drain, like the preceding, is everywhere rounded and polished, and its only crevices are at the ends of the longitudinal slits. It is placed in a wound so that its flange is external, and is also provided with two small holes for the purpose of fixing it. The blades are quite yielding in the direction indicated by the dotted lines. It is made in the following sizes: No. 1, diameter, one-fourth inch; length, one and one-half inch; No. 2, diameter, five-sixteenths of an inch; length, two inches; No. 3, diameter, three-eighths of an inch; length, two and one-half inches; No. 4, di-

ameter, seven-sixteenths of an inch; length, three inches.

Probably other forms will be devised in which this material will be found a useful one for wound drains. In hip-joint abscess it has been well borne, and is easy of removal and replacement in the form of a round or flattened tube without lateral openings. Though holes of any size and shape may be made in hard rubber tubing, it should always be borne in mind that any drain should be as free as possible from irregularities of surface.

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Clinical Department.

FOREIGN BODIES IN THE INTESTINES.

Dr. Boardman Reed, of Atlantic City, N. J., writes: "Apropos of several cases of coin-swallowing recently reported in The Medical Record, I have to relate a case in which an irregular disjointed half of a sleeve-stud was swallowed by a four-year-old boy, and passed without injury. One month ago I was called to see a rather puny, delicate boy of four years, who had just swallowed part of a gold sleeve-stud. The corresponding part of the other stud was shown me. It consisted of a button-shaped disk nearly half an inch in diameter, with a small cylindrical stem projecting from it about one quarter of an inch. From this stem, again, there projected three little metallic points which could be pressed in, but were pushed out again by springs when the pressure was removed. It was altogether an ugly-looking instrument to expect to find its way through the human alimentary canal, and I had many misgivings about it. I ordered two teaspoonfuls of castor-oil, followed by plenty of mush and other coarse diet. The button passed safely in about thirty-six hours, without any pain having been complained of."

PERITONITIS FOLLOWING HERNIOTOMY TREATED BY IRRIGATION AND DRAINAGE OF THE ABDOMINAL CAVITY.

Dr. J. E. Summers, Jr., of Omaha, Neb., reports the following case:

Mrs. T——, a robust German, married, aged twenty-seven, entered the Child's Hospital, August 2d, for relief from a rather large femoral hernia on the right side, which she had had for three and one-half years, and which for five days had been irreducible. There were no symptoms of strangulation; only discomfort was complained of. As the woman was anxious to be cured of her infirmity, I operated on the third day after her admission, with the intention of relieving the constriction, and then doing an operation for the radical cure. The sac, on account of its thickened and inflamed condition, was with difficulty recognizable as such. It was opened, and a large piece of omentum, also inflamed, was cut off in the usual way, carbolized silk being used for ligation. No attempt at closing the canal being deemed advisable, the ring was dilated by a blunt instrument passed in along the inner border of the canal, internal to the sac, and upward traction made. (A conical urethral sound is sometimes advantageously used, as this was, in strangulated herniæ, instead of the knife.)

The sac was then cut short, and its circumference (the inner two-thirds) united with catgut to the edge of the femoral ring; the external segment was fixed by passing the needle through the tissues and skin covering it. A drainage-tube was introduced through the ring, the wound irrigated with a warm solution of bichloride of mercury, 1–1,000, and antiseptic dressings applied. Twenty-four hours after the operation a general peritonitis developed. The abdominal cavity was well irrigated twice daily with a warm solution of 1–5,000 bichloride of mercury for three days, when, a diarrhœa setting in, the bichloride solution was replaced by a one per cent. solution of carbolic acid, and the diarrhœa subsided. At times, when irrigating, the drainage-tube, more than ten inches in length, was replaced by a 22 F. nearly straight metal tube, passed well up into the abdominal cavity. Some fluid always remained behind, but it came away in the dressings, drainage being favored by position. At each irrigation pus and fibrin, in quantities sufficient to make a heavy cloud in the vessel, were removed. After irrigation there was always a noticeable fall of temperature and a better general condition of the patient. Dry cold by means of a Leiter's coil, morphine subcutaneously in quantities sufficient to control *all* pain, and a milk diet, constituted the rest of the treatment. The patient's convalescence was interrupted by a sharp attack of cellulitis on the left side, but this was soon brought under control by the use of long-continued hot-water irrigation of the vagina, and morphine subcutaneously. On the fourteenth day the temperature had reached the normal point; it had varied from 102° to 104° F. Shorter and smaller drainage tubes were gradually substituted, a change being made daily for four or five days, when they were withdrawn altogether; the wound contracted slowly, but is now completely healed. Whether the peritonitis was the result of a faulty antisepsis, or directly dependent upon the operative procedure, matters little. The interest in the case centres in the treatment, which in principle is the same as in those cases of suppurative peritonitis which have been treated by abdominal section and drainage.

THE CONSTITUTIONAL EFFECTS OF RHUS TOXICODENDRON.

Dr. Robert Hubbard, of Bridgeport, Conn., referring to the report of a case by Dr. White in a recent issue of The Medical Record, affirms his belief that the poison of rhus may produce constitutional effects. In support of this view he reports the following case: "Many years ago a healthy man, about thirty years of age, consulted me for a vesicular eruption, covering the whole body, without febrile disturbance, but attended with severe burning and itching; otherwise he was in perfect health. He said he consulted me because his regular attendant said he was suffering from scarlatina. The appearance of the eruption suggested ivy-poisoning, and I inquired if he had not been exposed to it; to which he replied confidently that he had not. On cross-questioning him closely I learned that his special work was lettering monuments and that he had, a few days before, been at work in Mountain Grove Cemetery, where the rhus toxicodendron is abundant. I suggested to him that possibly he had thus been incidentally poisoned. He, however, declared he had handled no shrubbery, except that he had pulled up a root of sarsaparilla, which also abounds there, and *ate it*. Doubtless he mistook a small specimen of the rhus, and hence, in my opinion, the result. The eruption differed from that produced by external application only in the size of the vesicles, which were smaller. I notice that many writers consider the eruption an eczema artificially produced, whereas I think the greater thickness of the envelopes of the vesicles and the greater delay in rupturing, distinguish it from vesicular eczema and place it more properly among the varieties of herpes.

Billroth would probably never have been the surgeon he is but for the influence of Langenbeck. The mantle has fallen with a double portion of his spirit. Langenbeck's pupil is not content to let power die with himself, as will be shown by the simple mention of a few of his former assistants and students—Menzel, of Trieste; Czerny, of Heidelberg; Winiwarter, of Luttech; Gussenbauer, of Prague; Mikulicz, of Krakan; Wolfler, now of Graz; and Hacker, of Vienna.—*Ex.*

Progress of Medical Science.

Gangrene of both Legs in a Young Girl, due to Arteritis.—Dr. Briggs, writing in the *British Medical Journal*, reports the following case: G——, aged eighteen, first seen on August 17, 1882, had been suffering such severe pain in both legs and feet as to deprive her of all sleep and to reduce her to a state of collapse in the morning. The pain was evidently in the course of the femoral arteries and their branches; and pressure over them could not be tolerated. Both feet were cold and tallowy-looking, the toes already having a bluish appearance, and giving the impression of commencing gangrene. There was no cardiac disease. She had been out to tea the previous afternoon, and had been taken with the severe pain on returning home. Stimulants, abundance of nourishment, and opium were given, and she rallied. The gangrene, however, spread on the right side to Scarpa's triangle, and to the knee on the left, the pain along the course of the arteries being a most marked and distressing symptom. The toes were shrivelled and dried up; blebs, however, formed higher up the legs. Toward the end, a sharp attack of bronchitis, with a considerable rise of temperature, developed, and death resulted from exhaustion. She was always an extremely anæmic girl, and had been under treatment several times for anæmia. She had never had any serious illness. She died on September 12th. The father drank, and the mother was both nervous and anæmic. In the early part of the attack, while the legs were dark-looking, they were noticed one morning to have assumed a bright-red tint, but were quite cold; the patient declared, however, that she felt something running in them. The diagnosis of arteritis was based on the absence of any other cause and the presence of marked and severe pain along the course of the arteries, with tenderness, most acute on pressure. The bronchitis was looked upon as probably secondary to some embolic plugging.

Perforating Inflammation of the Vermiform Appendix.—A study, based upon 257 cases of perforating appendicitis, has just been made by Dr. Reginald H. Fitz, and appears in the October number of the *American Journal of the Medical Sciences*. From their consideration it is apparent that perforating appendicitis is a disease most frequently occurring among healthy youths and young adults, especially males. Further, that attacks of indigestion and acts of violence, particularly from lifting, jumping, and falling, are exciting causes in one-fifth of the cases. A local cause is to be found in more than three-fifths of all cases in the retention in the appendix of more or less inspissated fæces, or in the presence there of a foreign body. The retention of fæces may be promoted by a constipated habit, but congenital or acquired irregularities in the position and attachments of the appendix frequently act as favoring causes. A fact in support of the last-mentioned statement is to be found in the frequency of successive attacks, one or more, of inflammation of the appendix. The inflammatory process once excited, its course and results show extreme variations; appendicitis may exist without giving rise to any characteristic symptoms, and often without a symptom of any distinct malady. Errors in diagnosis have been numerous, chiefly because the cardinal symptoms of localized pain, general heat, and circumscribed swelling have not been duly appreciated in their defined sequence. As to treatment, the first and last thought should be to keep the bowels quiet, together with absolute rest in bed, liquid diet in small quantities often repeated, and, above all, sufficient opium to neutralize pain. If, after the first twenty four hours from the onset of the severe pain the peritonitis is evidently spreading and the condition of the patient is grave, the question should be entertained of an immediate operation for exposing the appendix and determining its condition with reference to its removal. If any good results are to arise from such treatment it must be applied early. If surgical interference is not instituted within the first twenty-four hours after the onset of the sudden and intense right iliac pain, to keep the bowels quiet must still be the injunction. The formation of the tumor, the circumscribing of the peritonitis, is then to be awaited. It is sure to form, in the large majority of cases, if the patient lives long enough. It is only in a small fraction that it occurs before the third day. In more than two-thirds of the cases the contents will escape externally or internally. Without surgical aid the escape is into the peritoneal cavity in most instances, with a rapidly fatal result. In a smaller number, the escape elsewhere not infrequently produces serious, if not fatal, sequels. Dr. Fitz concludes his elaborate study of the disease and its treatment with the following statements: The vital importance of the early recognition of perforating appendicitis is unmistakable. Its diagnosis, in most cases, is comparatively easy. Its eventual treatment by laparotomy is generally indispensable. Urgent symptoms demand immediate exposure of the perforated appendix, after recovery from the shock, and its treatment according to surgical principles. If delay seems warranted the resulting abscess, as a rule intraperitoneal, should be incised as soon as it becomes evident. This is usually on the third day after the appearance of the first characteristic symptom of the disease.

Gelosine, a New Base.—The Paris correspondent of the *British Medical Journal* says that, at a recent meeting of the Société de Thérapeutique, M. Guérin read a paper on gelosine, a mucilaginous substance extracted from a Japanese alga, which is sold in the form of dry whitish leaves. Gelosine is an excellent base, mixing easily with all pharmaceutical substances, soluble in alcohol and water, and in acidulated or alkaline water; it served as a medium for salts, powders, and different tinctures, and was of great utility in preparing suppositories. Gelosine gradually contracts and expels the water and medical substances it contains, which are thus spread over the surface of wounds or cavities, in which it is placed in any form. Gelosine thus gradually regains its original volume, but can be used more than once for the purposes cited above. Gelosine, therefore, appeared to be preferable to liniments and ointments. M. Guérin showed specimens of cylinders and slabs of gelosine containing camphor, creasote, sulphate of zinc, cocaine, tincture of belladonna, iodoform, corrosive sublimate, carbolic acid, and coal-tar. In order to use gelosine as a medium the quantity required should be immersed in its weight of hot water; the therapeutic agent is then added and incorporated. When the mixture becomes as thick as sirup, it is poured into moulds. These operations were completed in a quarter of an hour, and the expense was slight. Sterilized gelosine might be utilized in bacteriological research.

Tapping the Uterus in Hydramnios.—The *British Medical Journal* publishes the following contribution from its Paris correspondent: "An interesting case is now under the care of M. Tillaux. A woman, aged thirty-seven, apparently of a healthy temperament, was sent to the hospital. The patient believed she was pregnant; it was five months since she had menstruated. She had borne five children; two of these were twins, and had lived only twenty days. Delivery had always been easy, without any complications or sequelæ. Since the last delivery she was excessively susceptible to the influence of cold; when she was chilly the abdomen became swollen and painful. The enormous development it presented was rapidly attained; the diaphragm was pushed upward, and threatened the patient with asphyxia. It was difficult to ascertain whether the swelling was present previous to the disappearance of her period. The patient's answers to questions encouraged the belief that a tumor had existed longer than five or six months.

When M. Tillaux examined the tumor he ascertained that it was full of fluid. A few days after this first examination, on the left side and in front certain symptoms were observed which were opposed to the hypothesis of a unilocular cyst. Dropsy of the amnion was suggested, but not admitted. A few days later the patient was examined, and the signs were favorable to the belief of a unilocular cyst. The surface was equal and the resistance uniform. An operation was necessary, as the patient was almost suffocated and could neither eat nor sleep. She was tapped, and the fluid that escaped was clear, slightly yellow, and free from viscidity, which suggested that it was amniotic. M. Tillaux, while allowing the fluid to escape, kept his hand on the surface of the tumor, and felt it harden and contract like the uterus during parturition. The patient declared that she felt labor-pains at the onset. This enormous tumor, which contained at least twenty litres of fluid, was a uterus dilated at the fifth month of pregnancy by subacute hydramnios. M. Tillaux decided, in the interest of both mother and child, to diminish the quantity of amniotic fluid, but, nevertheless, to leave a sufficient amount in order that the infant should be surrounded by normal conditions. Seven litres were withdrawn; the patient was much relieved. Collodion was painted over the trocar wound. A hypodermatic injection of half a centigramme of morphine, and an injection containing laudanum, stopped the uterine contractions. The patient continued in a satisfactory state. A few weeks subsequently the patient left the hospital, and then felt uncertain about the fœtal movements."

Epithelomatous Tumor of Cæcum.—M. P. Blocq records a case of primary cancer of the cæcum, occurring in a male, aged fifty-one. Malignant disease primarily attacking this part of the intestines is rare, and this case is interesting from the fact that death resulted from perforation of the bowel in the neighborhood of the new-growth, producing fatal collapse, and not, as has happened in recorded cases of a similar nature, from obstruction. The patient had, fifteen months prior to seeking advice, complained of pain of a stabbing character in the right side. Shortly afterward, he could detect by the hand the presence of a small tumor, about the size of a walnut. He became rapidly emaciated, and had a cachectic look. He never evinced any special symptoms indicative of grave disturbance of the gastro-intestinal tract—no vomiting, no constipation, no diarrhœa. The tumor was not apparent to the eye, but was readily felt by palpation; it was painful to the touch, smooth, somewhat hard, and mobile. The patient died after having been under observation four months, or fifteen months after the development of distinct symptoms. At the autopsy a small, pedunculated, sloughing growth was detected close to and invading the ileo-cæcal valve, as also a small perforation in the wall of the gut, which had been the immediate cause of death. The greater part of the neoplasm, owing to putrefactive change, resisted the action of the stains for microscopic examination; those sections, however, which took up the coloring agents revealed the characters of a cylindrical epithelioma. There was no evidence of cancerous disease in any other organ of the body.

Insanity and Crime.—Dr. Richard J. Kinkead discusses at length the relation of crime to insanity, and controverts the views expressed by Lord Bramwell in a late number of *The Nineteenth Century*. The author believes that madmen who have committed criminal offences should be sent to an asylum. If an insane man commits homicide, he should be confined in an asylum for life; the protection of society demands this, not only to guard against a repetition of the act by the lunatic himself, but to prevent simulation of insanity by the sane. Imprisonment for life with lunatics would be to the sane far greater punishment than penal servitude—to many, worse even than death. For less offences he should be confined in an asylum till cured. To punish a man for having a disease, or for the acts which his disease compels him to do, is unjust. To remove a madman to a place where his disease will be properly treated, and where he cannot injure others, is just, politic, and humane. Penal discipline is injurious to the insane; lunatics cannot be kept in prison; not only because it is detrimental to them, but because their presence is subversive of discipline, and a constant danger to the other prisoners and to the officers. Whether a man is mad or not can be decided only by those who have experience of insanity—that is, by experts. The law as it stands, Dr. Kinkead holds, is a wrong law; it tries to define what is indefinable, to create a disease which does not exist; it withdraws from the jury matter of fact, and establishes tests which experience has shown to be utterly fallacious. Lord Bramwell thinks it hard to say why lawyers, generally supposed sharp enough, should go wrong on this particular subject. The answer is simple: their education and training have not fitted them to deal with it. Versed in metaphysical lore and legal subtleties, they have not studied physiology or pathology, nor acquired experience of the insane; just as no amount of book learning alone will enable a physician to deal with sickness, or a surgeon to operate; so no mere mental philosophy or legal training will enable a lawyer to grapple with the paradoxes of insanity. If lawyers were obliged to spend six months in an asylum studying mental diseases, they too would be quite as anxious as doctors are that the law should be changed, and would be just as convinced that it is wrong, as Lord Bramwell is that it is right. Nor would they fall into the error of considering madness not a disease of the body; for whether we look upon mind as the product of the brain, or merely working through it, it is disease, functional or organic, of the organ, which is either its origin or instrument, that constitutes madness.—*The American Journal of the Medical Sciences*, October, 1886.

The New Ointment, Lanoline.—M. Doyon, in the *Annales de Dermatologie*, states that the new substance introduced by Liebreich, called lanoline, is rapidly absorbed by the skin. After being rubbed by lanoline, the skin appears firmer and more turgescent, and, at the same time, the surface is almost dry; while, with vaseline, it preserves a shiny appearance, even after energetic friction. This rapid absorption, which may be shown experimentally, seems to be due to the intimate connection existing between lanoline and the fat of the epithelium. Lanoline has been shown experimentally to have no injurious action upon healthy or unhealthy skin, but acts favorably on morbid phenomena occurring in the deep layers of the skin. Doyon has used ointments prepared with lanoline, instead of vaseline or glycerine, in four hundred cases of persons affected with cutaneous lesions, and has not found injurious effects in any one of them, not even in those cases where there was great irritability of the skin. In the case of a child suffering from impetiginous eczema of the skin of the head and face, the use of lanoline, containing salicylic acid at two per cent., produced cure. In cases of ulcerated impetigo, or of inflamed eczema, immediate benefit has been derived from the use of the following ointment: Salicylic acid, one part; lanoline, twenty-five parts; zinc oxide, starch, āā, twelve parts. In the case of a patient who had suffered for several years from a severe and rare form of pityriasis, three frictions of the following ointment sufficed to destroy the parasite: Salicylic acid, one part; precipitated sulphur, five parts; lanoline, fifty parts. In affections of the skin of the head, carbolic lanoline and sulphur suffice to remove furfuraceous desquamation. Doyon advises the addition of tincture of benzoine, in a rough state of the skin. His clinical experience fully confirms the favorable views which others have expressed of lanoline, as a great improvement upon either lard or vaseline as a basis for ointments and cosmetics.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE IODIDES IN VALVULAR HEART DISEASE.

A PAPER of considerable interest, concerning the therapy of certain forms of heart disease, was read by Dr. Henri Huchard at the meeting of the French Association for the Advancement of Science, held in Nancy, in August last. The paper appears in the *Bulletin Général de Thérapeutique*, for October 15, 1886, and is supplementary to one on the treatment of angina pectoris, published in the same journal for September 30, 1885. In his first article, the author related a number of cases of angina pectoris treated very successfully with the iodides. In some of these cases there were valvular lesions in addition to disease of the coronary arteries, and the writer discovered that the iodide not only relieved the attacks of angina, but modified very favorably the valvular affection.

Of nine observations of this nature, the author reports four of the most conclusive. In the first, the patient, a man fifty years of age, suffered from atheroma of the arteries and chronic aortitis. There was also a double murmur heard over the aortic area. At the end of two years this murmur had entirely disappeared. In the second case, that of a man fifty-nine years old, there was dilatation of the aorta, and a diastolic murmur was audible at the base. After four years of continuous treatment the signs of aortic dilatation, and of valvular disease, had entirely disappeared. In the third case, an aortic regurgitant murmur became inaudible at the end of eighteen months, and in the fourth a diastolic murmur at the base became barely audible, and a systolic murmur at the apex disappeared entirely after treatment extended over two years.

Dr. Huchard affirms that the murmurs present in these cases were true organic murmurs, and in no instance functional. The patients were not anæmic; in every case there was fair compensation, and the heart was not dilated to any appreciable extent; there were no signs of asystolia, and the murmurs were constant, being heard at every examination for months, and disappearing only after years of uninterrupted treatment. It is certain also, he maintains, that the sounds were intracardial and were not caused by pericardial friction.

The medicament employed was the iodide of sodium, which is preferable in these cases to the corresponding potassium salt. The latter, when its employment is long continued, may affect injuriously the cardiac and renal functions, while the former is equally effective, more assimilable and less offensive. The drug is given in doses of from five to fifteen grains three times a day, and the treatment should be continued, when possible, for from one to three years, with occasional interruptions of six or eight days in each month.

It is not claimed that the iodide treatment is efficacious in every form of valvular disease, but only in chronic, so-called sclerotic, inflammation of the endocardium. This is a very insidious affection which may attack the heart primarily, or may be due to an extension of the atheromatous process from the aorta. The process may invade the heart in several ways, attacking (1) the aorta alone, (2) the mitral and aortic valves, (3) the coronary arteries with or without simultaneous disease of the muscular tissue, or (4) the muscle and connective tissue alone of the heart (sclerotic myocarditis with or without granular degeneration). It is this condition that was present in the cases treated by the author.

Dr. Huchard is apparently not writing hastily and without a basis for his assertions of the efficacy of the iodides, for he says he has waited five years in order to speak with certitude of the results obtained. He has satisfied himself of the disappearance of the murmurs and of the permanence of the cure before publishing his observations. Not only did the abnormal sounds become inaudible, but the other objective and subjective symptoms of the atheromatous process were either greatly ameliorated or disappeared entirely.

SOME MODIFICATIONS IN BRAIN SURGERY.

MR. VICTOR HORSLEY'S contribution to the subject of "Brain Surgery," at the last meeting of the British Medical Association, contained a number of practical suggestions, as well as some radical departures from ordinary methods. Surgeons will do well to consult his article in detail. We can present here only the main features of his paper. Mr. Horsley describes the method of operating when portions of the brain-substance are to be incised or excised, but some of his methods can be adopted with advantage in ordinary operations for trephining.

The main points upon which he lays stress can perhaps be summed up as follows:

First. Strict antisepsis, including the use of the spray, is enjoined. The patient's head, on the day before the operation, is shaved, washed with soft soap, and then with ether. The portion to be operated upon is then covered with carbolized lint for twelve hours or more.

Second. A purgative is given on the day before the operation, and an enema on the day of the operation. Chloroform is used as an anæsthetic, as a rule, and just before anæsthetizing the patient he is given one-fourth of a grain of morphine. This allows a less amount of chloroform to be used, and it also contracts the cerebral capillaries and lessens hemorrhage.

Third. The incision in the scalp is not cruciform, but semi-lunar. It is carried directly to the periosteum, and its curve is to be directed so as not to cut large vessels, and so as to allow drainage when the patient lies on his back.

Fourth. A very large trephine is used, one of two inches in diameter. Or, two smaller openings may be made, and the intervening bone removed with a Hey's saw.

The dura mater is cut around four-fifths of the area exposed, and at a distance of one-eighth of an inch from the edge of the bone, so that it can be stitched into its place again. If the dura mater is intact, and can thus be replaced, the pieces of bone removed are placed between aseptic sponges, are cut in small pieces, and replaced at the end of the operation between the dura and the flap.

Fifth. The hemorrhage caused by incisions into the brain itself, can be controlled by plugging with small bits of sponge. The hot iron is not recommended.

Sixth. Wound cavities produced by the removal of brain are not to be drained for more than twenty-four hours. At the end of this time the drainage-tube is removed. The advantage of this plan is that the inflammatory exudation causes a pressure which is beneficial. If this exudation becomes too great, it can be lessened by opening up the tract of the drainage-tube with a probe.

THE EVIDENCE THAT A THOROUGH MEDICAL EDUCATION PAYS.

It would seem quite self-evident that it pays for the medical student to take a long and thorough course of study before starting upon his career. That he does not do so, however, is shown by the fact that only forty-one out of the one hundred and twenty-six medical colleges in the country exact three courses from their students. No doubt many young men would gladly avail themselves of fuller instruction, but the excuse is that their means forbid. For this class we think that sometimes too much charity has been shown, for certainly society does not excuse the inefficient engineer because he was too poor to get a good knowledge of his calling, nor does it pardon the railway company when accidents occur, for not having money enough to equip its road completely. Therefore the young man who is unable to give himself a thorough medical education, and, excusing himself on the ground of poverty, still starts out to learn upon his fellow creature that which he should have learned in a college, undertakes a very serious responsibility.

But, apart from this, it is now becoming a practical question, whether a young medical graduate can any longer earn his living, if he simply takes the old-fashioned two winter's course. The demands upon physicians for wide knowledge and technical skill have become much greater even in the past few years. And the young doctor must have some special claims for recognition if he would make his way.

An instructive illustration of this point is furnished by Dr. John H. Rauch in his last Report on Medical Education and Medical Colleges in the United States and Canada. He says: "During the past nine years I have followed up, with especial interest and care, the careers of 789 out of 1,000 physicians who studied four years and attended three terms before graduating. These are, with few exceptions, the successful and prominent members of the profession in the different communities in which they reside. They are well equipped by general education, by an ample period of professional study, by didactic and clinical instruction, and by hospital practice. They are successful, as a rule, because they have fitted themselves to command success."

That medical educators are beginning to appreciate these facts, is shown by the gradual increase in the length of terms and number of the required courses. The average length of the lecture term has increased from twenty-three and a half weeks in 1882, to nearly twenty-five weeks in 1886–87. The number of colleges requiring attendance on three or more courses of lectures has increased from twenty-two in 1882–83, to forty-one in 1886–87.

THE PREVENTION OF SCARLET FEVER.

Scarlet fever is a disease whose prevalence does not seem to be greatly affected by improvements in drainage, water-supply, or by better modes of living generally. This is shown by English statistics. For the last twenty-five years the annual mortality in all England from this disease has kept above 12,000. In London the mortality, until within the last two years, has been over 2,000. In New York City the mortality in 1871 was 791; in 1875 it was 514; in 1883 it was 744; and in 1885, 559.

It is only by isolation and disinfection, therefore, that this disease can at present be checked; but there is already considerable evidence that such measures are helpful.

Thus, in London, in the last two years, since more efficient means have been adopted for isolation, the mortality rate has fallen to 700 in 1884–5, while for the present year it has been only at the rate of about 400.

At Salford, England, according to Mr. John Gatham, the annual death-rate from scarlet fever used to be about 135 per 100,000 of the population. Since the establishment of a fever-hospital, and the passing of a compulsory notification act, the mortality has been only about 50 per 100,000.

It thus appears that by means of isolation, by the establishment of fever-hospitals with the enactment of a proper compulsory notification law, scarlet fever can be reduced in amount about one-third. And this seems to be the only way at present by which we can seriously affect the prevalence of the disease.

It may be said that in New York we have both these things, and yet no marked effect is produced. To this the answer is that New York, owing to its crowded population, is under peculiarly unfavorable circumstances; and again, it is by no means certain that we may not claim a diminution in the prevalence of the malady; for our population has increased 300,000, while the scarlet-fever mortality has not increased, the annual average being, perhaps, even less than it was a decade ago.

THE NEW SURGEON-GENERAL OF THE ARMY.

Lieutenant-Colonel John Moore, Surgeon and Assistant Medical Purveyor, has been appointed by President Cleveland Surgeon-General of the Army, *vice* Surgeon-General Robert Murray, retired.

General Moore has proved himself an efficient officer in every arm of the service, has an honorable war record, is a trained soldier, a thoroughly competent surgeon, and one who will bring to the duties of his new office a ripe experience, a sound judgment, and an impartial administration. We congratulate him on his promotion, and tender him our best wishes.

News of the Week.

MONUMENT TO DR. BENJAMIN RUSH.—The effort to secure funds for erecting a monument to Dr. Benjamin Rush is being actively carried forward by the committee in charge. The member for New York State is Dr. A. N. Bell. It has been decided that $40,000 can be raised by one-dollar subscriptions, and contributions of this amount are solicited from every doctor in the country. Payments can be made to Dr. Bell or to the Treasurer, Dr. J. M. Toner, of Washington, D. C.

HOSPITAL SUNDAY.—The work of arranging for the annual week of contributing to the hospitals of New York City has begun. It is expected that over $50,000 will be obtained this year. Last year the sum was $46,085.

THE LEGACY OF A MILLION.—Lady Wilson, the widow of Sir Erasmus Wilson, died recently. The Royal College of Surgeons now becomes entitled to the legacy of $1,000,000 left by Sir Erasmus.

DR. DANIEL G. BRINTON, of Philadelphia, has been elected Professor of American Linguistics and Archæology in the University of Pennsylvania. Dr. Brinton has been for several years Professor of Ethnology and Archæology in the Academy of Natural Sciences of Philadelphia. He is the author of numerous works and essays on these branches, and has edited a series of works in the native American languages, under the title "Library of Aboriginal American Literature," six volumes of which have already appeared. We congratulate Dr. Brinton upon the well-deserved honor which he has just received.

DEATH OF DR. JOSEPH G. RICHARDSON.—Dr. Joseph G. Richardson, Professor of Hygiene in the University of Pennsylvania, and a member of the Board of Health, died very suddenly of apoplexy, at his home, November 13th. He was fifty years old at the time of his death.

M. PAUL BERT, the well-known physiologist and politician, died on November 11th.

THE OFFICE THIEF AROUND AGAIN.—Now is the time for overcoats to be hung in the hall, and for the office thief to take them. Look out for the pretended patient who calls at odd hours and wishes to wait for the doctor.

THE NEW JERSEY SANITARY ASSOCIATION held its twelfth annual meeting at Trenton, on November 19th and 20th. This association now numbers three hundred members.

THE LATE WILLIAM H. DUDLEY, M.D.—The late William H. Dudley, M.D., while travelling in Europe, in 1857, conceived the idea of establishing in this country a medical college in conjunction with a hospital, where students might have the advantages of medical and surgical instruction at the bedside of the patient. On his return he communicated his plan to a small number of friends, who, at a meeting held in October, 1857, at the rooms of the German Dispensary, 147 Court Street, Brooklyn, agreed to organize. At a subsequent meeting committees were appointed to effect the organization of such an institution, under the name of the St. John's Hospital, and to obtain a charter from the Legislature. In March, 1858, it was agreed to change the name to that of the Long Island College Hospital, under which a charter was obtained and the institution was incorporated. The hospital work was begun in November, 1857, at the rooms of the German Dispensary. That place soon proved inadequate, and in February, 1858, the present property in Henry Street was purchased. To this place the hospital was removed in the following spring.

No adequate aid being furnished by the public, the work of the hospital only was continued till October 5, 1859, when a meeting of the regents was called to consider plans for organizing a medical college. The council, then consisting of Drs. Dudley, C. L. Mitchell, Th. L. Mason, and John Byrne, submitted a plan which was adopted. But the regents, in view of their pecuniary inability to meet expenses, declined to open the school, when Drs. Dudley, Mitchell, and Mason offered to guarantee the annual expenses of the school to the extent of $3,000, if the regents would open the teaching department. This offer they declined, fearing that the debt of the institution would prevent permanent success. Finally the affairs of the institution came to a crisis, and the property was sold to Dr. Dudley for $28,550, including a mortgage of $20,000, which he assumed.

In this way the doctor's object of saving the institution from destruction was accomplished. Then Drs. Dudley, Mitchell, and Mason, courageous and faithful friends of medical education, offered the Regents to assume all the liabilities of the school for the first term. The offer was accepted, and the opening lecture was delivered on March 29, 1860. When the term closed, these gentlemen offered to assume the liabilities of the school also for the future. The acceptance of this offer made it possible to continue the collegiate department, for the embarrassments of the institution were still so great that the Regents could not afford to aid the medical school. These embarrassments culminated in October, 1861, when the president and secretary of the institution, despairing of success, resigned. If others despaired through these discouraging years, Dr. Dudley was hopeful. Difficulties seemed to inspire him with new courage and determination to make the institution succeed. It was undoubtedly his courage and determination that gave hope to others, who, but for him, would have abandoned the enterprise. His colleagues in the council were also brave and faithful, and bore their shares of the burden. And there were Regents who would not abandon the institution, and who contributed of their own means, and secured the aid of personal friends to make it succeed. At last, on February 16, 1865, after an uncertain existence of many years, a committee appointed to raise money to relieve the institution, reported the receipt of $22,800, including Dr. Dudley's subscription for a large sum. The mortgage of $20,000 and other debts were then paid, and the title of the property retransferred by Dr. Dudley to the corporation of the Long Island College Hospital. In 1866 Dr. Dudley was elected a member of the Board of Regents; he was a Regent from that time till his death. He had the satisfaction of seeing the institution, which he had thus originated, fostered, and sustained, and of which in the long, dark days of its adversity he had never despaired, flourish and grow strong, an honor to the country, his profession, and himself, and with

which his name should ever be gratefully associated During the last years of his life he was the president of the college, in which position the wisdom of his advice and the fruition of his work were more and more manifest. This memorial inadequately represents the difficulties encountered by him and his co-workers, both physicians and laymen. Let it be said that he never faltered in his duty to this institution, to which his time, his money, and his best efforts were always freely given, in an unassuming, but most liberal and persistent, manner. The final success is his best and most enduring monument.

In the death of Dr. Dudley the Regents have lost a very dear friend and associate, whose place it will be most difficult to fill. The Regents feel that they cannot do less than place upon their record this brief memorial of his services and of their personal respect and regard.

By order of the Board of Regents of the Long Island College Hospital. THOS. H. RODMAN, *President.*
W. J. OSBORNE, *Secretary.*

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual and Stated Meeting, November 22, 1886.

THE adjourned annual meeting was called to order by DR. DANIEL LEWIS, President.

DR. JOHN C. PETERS made a supplementary

REPORT FROM THE COMMITTEE ON HYGIENE,

with special reference to *stable manure* and *manure-yards* in this city. The Committee advised "that a petition be sent from the Society to the Health Board and other authorities, recommending the passage of an ordinance abolishing the sidewalk manure-pits entirely within one or two years."

The recommendation of the Committee was adopted.

The recommendation of the Treasurer, that the Comitia Minora be authorized to investigate

THE ARREARS IN DUES

of all honorable members whose present circumstances are such as to embarrass them in paying the tax, and to remit the same, was adopted; as also was the recommendation that the Comitia be instructed to report to the Society for expulsion the names of those who can, but will not pay their dues.

The Society then listened to

THE ADDRESS OF THE RETIRING PRESIDENT,

who referred to the intimate relations existing between the New York Academy of Medicine and the County Medical Society, and yet duties devolved upon the latter such as no other medical organization of this city can ever assume. After referring to the importance of becoming members of the medical body politic as here represented, he gave a brief reference to the membership, and then spoke of the scientific work done during the last two years. Reference was then made to the relation existing between the specialist and the general practitioner, and it was said of the latter that if he failed to use the opportunities offered, he will naturally become the servile lackey of the specialist, a position of little profit and doubtful honor. Special reference was made to the long list of members who had been stricken from the roll by the hand of death, which included the young and the aged, and those with brilliant prospects as well as those who had achieved all the honors of a long and well-spent life. After thanking the Society for the great honor which it had bestowed upon him, Dr. Lewis introduced his successor in office, DR. LAURENCE JOHNSON.

The Society then listened to

THE INAUGURAL ADDRESS

of its new President on taking the chair. After expressing his thanks for the high honor conferred upon him, coupled with the promise to discharge the duties of the office to the best of his ability, he directed attention to what he thought should be the policy that the Society should pursue during the ensuing year.

The Society owed first a duty to the people, next a duty to the science and art of medicine, and lastly a duty to itself, its individual membership.

Duty to the people included dissemination of the knowledge of sanitation and preventive medicine, and other matters of public importance, and the discouraging, in every way possible, the abuse of medical charity. The best way to cure the poor of the abuse of this charity was to charge them only what they could afford to pay. From time immemorial it had been the policy of the profession to consider a fee as an honorarium and acknowledgment of services rendered, but not strictly a compensation. If the subject was placed on this basis in our dealing with the poor of New York, then we could sweep away in an instant our false pride in the matter of accepting small fees, and give due weight even to "the widow's mite." This should apply with special force to our younger specialists.

The duty of the Society to the science and art of medicine reached every individual member, and required of him an endeavor to advance, by personal study and observation, the science, and in his practice to exemplify the art.

Reference was then made to the extreme form of specialism in medicine, which threatened the Society with serious danger, and which relegated papers on diseases of the eye to the audience of ophthalmologists, of the ovary to the gynecologists, of the brain to the neurologist, etc. There was a form of specialism which was legitimate, but it was not of the character of the above.

Lastly, the President referred to the duty which the Society owes to its membership, including the legal obligations.

At the close of the address, the President appointed the

COMMITTEES FOR THE ENSUING YEAR.

Committee on Ethics.—Dr. E. Darwin Hudson, Jr., Chairman; Drs. Charles E. Hacklev, Alexander S. Hunter, E. A. Maxwell, and Edwin F. Ward.

Committee on Hygiene.—Dr. Alexander Hadden, Chairman; Drs. John C. Peters, Cyrus Edson, D. B. St. John Roosa, and John H. Billings.

Committee on Prize Essays.—Dr. Joseph D. Bryant, Chairman; Drs. A. B. Judson and F. A. Castle.

Auditing Committee.—Drs. P. A. Morrow and H. G. Piffard.

The *Committee on Ethics* recommended the discipline, and the *Comitia Minora* recommended, as the kind of discipline,

THE EXPULSION OF DR. JAMES O'REILLY.

The recommendation of the Comitia, after hearing the case, was adopted unanimously.

The *Comitia Minora* recommended the adoption of a resolution providing for the publication of

THE MEDICAL DIGEST-DOPY

for another year, to be edited by the Comitia, and the recommendation was adopted.

DR. JOSEPH D. BRYANT then read a memoir of

GASPAR GRISWOLD, M.D., M.R.C.S.,

in which he paid a worthy tribute to the memory of the deceased.

The reading of Dr. De Garmo's paper on "The Treatment of Hernia by Subcutaneous Injection" was postponed to the next stated meeting.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 18, 1886.

A. JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE ANNIVERSARY DISCOURSE.

THE occasion was the delivery of the Anniversary Discourse. The audience was large and distinguished, including many ladies, and several gentlemen eminent in the liberal professions.

The President, DR. A. JACOBI, spoke as follows:

The New York Academy of Medicine is of about the same age as modern medicine, as anæsthesia in America, and as Virchow's *Archiv*, and his cellular pathology in Germany. During these forty years scientific medicine has progressed all over the globe in steady evolution. This Academy has not only followed this progress, but has contributed to it very largely. Of this assertion its historian would find many and irrefutable proofs. Indeed, very many of the names connected with the Academy would be bright lights in any country's literature; to mention them here, however, would call the blush of pride to many a modest man's cheek, for there is many a Fellow in this hall, at this moment, who is both admired in our country and blessed in foreign parts, for his contributions to the science and art of medicine.

Still, justice requires me to say that the Academy owes its position and efficiency to more than the efforts and genius of its best and most powerful minds alone. The political and the scientific republic thrive on the co-operation of the great capacities and the democratic masses. The biweekly stated meetings, with their papers and discussions, have kept the interest in scientific pursuits awake, more or less, all these decades; the vigorous life of the newly established sections proves the zeal of the many participants; the rapid increase of the library, which is accessible to both the whole profession and the public, speaks as well for the Academy's success as for its generosity; the absence of ethical codes from the requirements of admission, and of ethical wranglings from its gatherings, for its scientific spirit; and the unencumbered possession of this large building, for the Academy's perpetuity and lasting influence. In its name, I am directed to extend to all of you a hearty welcome to this hall. Still, while so doing I cannot abstain from expressing the hope that my successor may, in the near future, have the honor of receiving you in a larger hall, and one more worthy of being the centre of the profession of this metropolitan commonwealth, and the representative of American medicine.

American medicine has always exhibited a peculiar feature, mostly in common with the rest of the Anglo-Saxons on the other side of the Atlantic. It is eminently practical. In this I do not wish to be misunderstood. Science need not have, *ea ipsa*, an exclusively practical aim; its value is not its weight in bread or butter. Mental efforts must not always be directly changeable into coin. The very branches of philosophical and exact sciences which have contributed most to increase the growth of human powers, carry their reward less in money than in their intellectual results.

Indeed, for a long time American medicine has suffered from the very fact that we had no class of men who studied for study's sake, and found their aims reached in the cultivation of pure science. We had no institutions to aid them, no citizens—though they would have fain done so—rich enough and interested enough to endow the institutions, no scientific men independent enough to allow themselves to be absorbed in their intellectual labors. All this is being changed. The number of strictly scientific workers among us is still small, but it is increasing constantly, and the men and women outside of the profession who are interested in, and willing and anxious to aid, the cultivation of medical science begin to make themselves known. The American family who but lately enriched a medical school and thus, let us hope, rendered the prospects for a vast improvement in medical teaching, and an elevated standard of professional merit more promising than ever; the large bequest to this Academy due within a few months, by a lady connected with one of the most illustrious medical families of the city; the munificent donation, a few weeks ago, by another lady who desired to lend an expression of her husband's and her own admiration for medical science and the medical profession—all of them prove the interest the public is beginning to take in medicine and medical progress.

Well it may, for if there be a science, or a complex of sciences, pure and at the same time practical, it is medicine. The medical professions of all countries, and medical science in every land, have but one aim and end—that is, the preservation of the health of the commonwealth and the individual, and the saving of life. The very results of the most abstruse investigations, the very highest intellectual efforts, are always directed to the accomplishment of these practical ends.

If there were no other tie between the public and the profession, there it is. Its existence is proven by the interest you have exhibited and the readiness with which you have kindly yielded to our invitation. As for the profession, it has felt it always; certainly, since the time when its adepts ceased to wear wigs wherewith to cover the occasional emptiness of heads, and discarded the gold-headed canes from which the oracularly sealed lips liked to suck wisdom, the thoughtful and progressive professional man has always understood his connection with, and his responsibility to, the community, and known this also, that the more intimate the public became with the foundations and tendencies of his science—not to be gathered, however, from the cheap publications and advertising sheets which they steal into your houses, or sell to you in the garb of a religious or secular newspaper—the easier and more successful was his own task, viz., to protect or save his individual charge, and to benefit the community at large. In this spirit, dictated by the feeling, more or less conscious, of the existence of interests common to the public and the profession, once, nearly thirty years ago, an Anniversary Discourse was delivered to which the public was invited. What at that time appeared to be merely desirable, has at present become a necessity. The revised constitution of the Academy ordains that the Anniversary Discourse must be delivered in November of each year, and must be public. To me personally, it is a source of intense gratification that the new rule should be inaugurated during my presidency. Thus was granted to me what I hardly had the courage ever to hope, to witness the realization of what often was considered an ideal future. Thus there is one ideal at least that has become a fact.

The participation of the most intellectual class of the lay public in what formerly would have been, and was, the exclusive domain of the profession, proves that the conviction is gaining ground that medicine is both the most humane and the most practical of sciences. Indeed, science and practice are not divergent. Their aims are identical, they serve each other, and both joined serve mankind.

Learning and practical tendency go very well with each other. That is what I shall prove by the discourse of a gentleman who is known to erudite men of all classes as a scholar, to his professional brethren as a learned physician, and to his numerous admirers among the public at large as a consummate practitioner—Dr. William H. Draper.

DR. WILLIAM H. DRAPER then delivered the Anniversary Discourse (see p. 589), selecting for his subject

THE PRINCIPLES AND PROGRESS OF MODERN THERAPEUTICS.

At the close of the paper, which was listened to with marked attention, DR. FORDYCE BARKER moved that the thanks of the Academy be voted to Dr. Draper for his

most excellent discourse. The motion was duly seconded and carried unanimously.

Proposed amendments to the by-laws were then read, after which the Academy adjourned.

SECTION IN PRACTICE.

Stated Meeting, November 16, 1886.

ALFRED L. LOOMIS, M.D., LL.D., CHAIRMAN.

DR. A. JACOBI read a paper (see p. 593) on

FOLLICULAR AMYGDALITIS.

The discussion was opened by DR. C. HEITZMANN, who objected to the use of the word gland when speaking of the tonsils. There was no such thing as a lymph-gland. There was lymph-tissue composed of follicles and interfollicular spaces. He preferred to use the English term, and say lymph-ganglion. Lymph-vessels and lymph-tissue did not mean the same thing at all. Lymph-vessels were not very numerous, but the tonsils were composed largely of lymph-tissue, best seen in fœtuses. He uses the terms lymph-tissue and myxomatous tissue synonymously, a view not generally accepted. He favored the theory of causation by micro-organisms.

DR. T. E. SATTERTHWAITE, being called upon, said that he agreed with Dr. Jacobi that the name "lacunar" amygdalitis was unnecessary, and might with profit be expunged from our nomenclature. He also agreed with him in the fact that this form of tonsillitis was closely allied with tonsillar diphtheria, and gave two instances bearing on the point. In 1875 he received from Dr. W. W. Vermilye a piece of diphtheritic membrane, detached by coughing on the seventh day of the disease. The patient, a girl six years of age, had been attacked with what seemed at first to be a simple follicular tonsillitis. On the sixth day the tonsils, palate, and pharynx were covered with a thick exudation, which peeled from the palate quite easily, leaving a bleeding surface behind. The patient had albuminuria on the twelfth day, but recovered after two weeks' illness. The patches recurred when removed.

In 1876 he also received from Dr. William E. Bullard two pieces of diphtheritic membrane. The patient, a boy six years old, had had enlarged tonsils for some weeks. On the first day of the attack there was a simple pharyngitis; on the next, membranes formed in both tonsils, uvula, and anterior nares. The patient recovered after an illness of thirteen days. The regular symptoms of diphtheria were present.

Dr. Satterthwaite then stated that he presumed the reason for his being asked to speak arose from the fact that he had been known to have made some studies on the pathology and pathological anatomy of diphtheria, which, it was clear from the statements of the speaker, was an allied disease. He thought it well, however, at the outset, to give his own classification of inflammatory tonsillar affections, and he was happy to say that in adopting such a simple classification as he offered he was in harmony with the laryngologists. His divisions were as follows:

1. Simple or superficial tonsillitis, which might be a catarrhal affection of the mucous surface, or enter also into the crypts or lacunæ, which then had received the name *lacunar tonsillitis* or *amygdalitis*.

2. Deep or parenchymatous inflammation of the tonsil was a more grave affection, that might originate from the surface or from the deeper parts. It was synonymous with quinsy. It might terminate in resolution, more often in abscess, rarely in gangrene.

3. Another form might be called gangrenous. The tonsils were then attacked with an inflammation that early showed a tendency to sloughing. It was also called putrid sore throat. He had observed such a condition not very infrequently in severe attacks of syphilis, but it might be due to other causes, and sometimes it seemed to be a variety of the *gangræna oris* that is seen about the lips and gums of children.

4. Membranous tonsillitis. In this case there is an actually organized membrane on the tonsils. It might be due to diphtheria or other causes, just as some other membranous exudations in other mucous surfaces were due to causes apart from diphtheria.

5. Finally, there was an ill-defined group of tonsillar inflammations, that had been described as "rheumatic," "gouty," "mycotic," etc. With the two former he might say he had no personal acquaintance. In the latter instance the one case that he had carefully examined was from the throat of a child that died of scarlatina. The patch was not membranous, *i.e.*, organized, but was made up of a feltwork of fungi that was thought to belong to the penicilium glaucum with bacteria of various kinds, and epithelium and granular débris.

As, however, the paper seemed to bear most upon the clinical distinctions, if any there were, between superficial tonsillitis and tonsillar diphtheria, he would venture to point to the signs that he thought most valuable in effecting a differential diagnosis, and he relied upon the cases that had formed the basis of his report (in conjunction with Dr. E. Curtis) to the New York Board of Health in 1877, in giving the diagnostic signs of diphtheria.

1. Diphtheria was apt to be ushered in by a chill, and followed more or less rapidly by a fever that often was high, in one case reaching to more than 106° F. There were also convulsions, drowsiness, or stupor in a moderate number of the cases, and severe prostration. In follicular amygdalitis the symptoms of invasion, though at first sharp, were less apt to be associated with high fever, and never with a protracted high temperature, unless a complication existed. Although there was prostration it did not continue long.

2. In diphtheria the tonsils were apt to be attacked first, but the disease would usually spread, in severe cases, to the adjacent parts, such as the pillars of the fauces, uvula, and up into the nares. In follicular tonsillitis the patches were confined to the tonsils, though the pharynx might be inflamed, and often was.

3. In diphtheria the attack was much longer in duration, lasting on an average from six days to three weeks. Superficial tonsillitis almost always reaches its height on the third day, and was over in a week.

4. In diphtheria we are apt to find an engorgement of the adjacent lymphatic glands. In superficial tonsillitis this incident is rare; in quinsy it may occur.

5. The membrane of diphtheria, as found upon the tonsils, consists, in my opinion, of a fibrillated network in the interstices of which there is pus, epithelium, bacteria of rod and round forms, granular débris, oil-globules, and sometimes thalli or spores of some fungus. In follicular tonsillitis there is no fibrillated tissue, but the secretion of the mucous membrane forms the matrix.

6. The membrane of diphtheria is apt to adhere closely, and when removed leaves a bleeding surface in most cases, especially where the surface is covered with flattened epithelium. In superficial tonsillitis the membrane is easily brushed off, unless it has become dry, as happens sometimes when the mouth is much open, or when the patches are closely adherent to the follicular discharges. Any form of the ordinary mould fungi will cause the cohesion of such a patch.

7. Diphtheria has been proven in some instances to be propagated by a distinct contagion. In follicular tonsillitis the evidence of contagion is not well established, or rather it has not yet been conclusively shown that it is propagated by a personal contagion as distinguished from a telluric or miasmatic agency; and it is possible that it may be induced by simple cold, a digestive attack, or unusual fatigue.

8. Uræmia, as evidenced by convulsions, drowsiness, coma, and albuminuria, with granular, and blood-casts in the urine, is a pretty well established phenomenon of

diphtheria. In our cases, which were undoubtedly severe, they occurred in about thirty-three per cent. In follicular tonsillitis there is probably no albuminuria, except as produced by the high temperature, and then it is short-lived.

9. In diphtheria membranes may appear at any time from the first to the sixth day in a pronounced case. In simple tonsillitis the membrane is almost uniformly gone on the third or fourth day.

10. Paralysis of some kind is a sequel to diphtheria in a small number of cases. In simple tonsillitis it probably never occurs, although throat paralysis may follow quinsy or any sloughing process, if sufficient tissue be destroyed.

11. The fatality from diphtheria may reach fifty per cent. It exceeded this figure in our cases where the records were complete. All forms of diphtheria were included. Deaths from superficial tonsillitis are so rare that it may be said they practically do not occur.

Dr. J. Lewis Smith believed that there was no relation between the two affections, except that diphtheria might occur as a secondary disease and then it would be a complication of a pre-existing catarrhal inflammation. He preferred to use the term follicular pharyngitis, because the pharyngitis was the prominent feature early in the case. This simple affection begins abruptly, frequently with as high temperature as occurs in diphtheria. Its multiple occurrence in families is an interesting feature, and is probably due to a specific micro-organism, although he was not certain that the disease is contagious. He had treated as many cases as he had of diphtheria and had lost only one patient.

Dr. C. E. Billington continued the discussion, and said that follicular amygdalitis occurred both sporadically and epidemically, and that its causes were "catching cold," epidemic influence, and local, unwholesome conditions. He had seen it, in several epidemics, very prevalent in populous neighborhoods. He recalled one instance in which it affected nearly all of the children in all of the families in a large tenement-house. In its epidemic form it is, he thought, in some degree infectious, because he had so often seen it go through families of children, successive cases occurring at intervals of one, two, or three days, just as occurs with diphtheria or scarlatina. He had seen it manifest especial severity and virulence when complicating the effects of malarial or filth poisoning.

He regarded follicular tonsillitis as a disease, *sui generis*, and not a milder grade of diphtheria. The two diseases are not usually concurrent in the same patient, nor does the one shade off into, nor lead up to the other. The exception to this rule is that when diphtheria is epidemic any catarrhal condition of the faucial mucous membrane is an inviting soil to its germs; but even then it does not usually supervene until the follicular tonsillitis has run its course. As this requires only a very few days, such cases as those mentioned by Dr. Smith and Dr. Satterthwaite are, at such times, not infrequent.

Follicular tonsillitis differs from diphtheria in not causing constitutional poisoning, either septic or specific. It does not cause nephritis (except as any febrile catarrhal affection may occasionally do); it does not cause paralysis, and he had never known of a fatal case.

The differential diagnosis of these diseases was very important, as they were very liable to be confounded.

The onset of follicular tonsillitis is undistinguishable from that of diphtheria in the amount of febrile and nervous disturbance. He had known it to be accompanied with convulsions, vomiting, and much apparent prostration. Its second stage, that of follicular exudation on the inflamed tonsil, may closely resemble diphtheria. Its third stage, which occurs after one, two, or three days, is that of the disappearance of this exudation, exposing in its place the characteristic appearances of erosion or excavation in the surface of the tonsil. These last appearances are pathognomonic, but the diagnosis is usually called for at an earlier stage. In the second stage, or that of exudation, the diagnosis is made easy, in the majority of cases, by the appearance of whitish or yellowish points projecting, or liquid oozing, from one or more of the lacunal orifices; for these appearances are pathognomonic. It is made easy in many other cases by the evidently soft and pultaceous character of the deposit on the tonsil, and by its lying loosely and superficially on its surface, from which it is easily removed with a brush or swab. There is a smaller proportion of cases, but yet quite numerous in the aggregate, in which the diagnosis is much more difficult. In these cases the patches on the tonsils may not only closely resemble in appearance diphtheritic membrane, but are, in fact, quite firm in texture, and quite closely adherent to the mucous membrane. In occasional instances, these are so large as to cover nearly the whole of the tonsil. In company with these there are sometimes seen on the adjacent surfaces of the uvula or the faucial pillars, deposits of the same material, or smearings of white tenacious mucus, that are very deceptive to the eye. To complete the picture, the swollen throat may be filled with thick yellowish or sanious, and sometimes fetid, muco-pus, the *ensemble* being that of quite a grave case of faucial diphtheria.

But, it might be asked, what ground of certainty had he that any such cases were not in reality diphtheritic? He would answer, because we can accurately predict the subsequent course of events, which is that, after two or three days, the diphth*eroid* appearances will have vanished, leaving in their place the typical erosion and excavation in the tonsil; and that there will be none of the sequelæ of diphtheria.

In a paper which he read before the Academy in 1880, and which was published in The Medical Record of March 27th of that year, he mentioned, among other points or methods in this diagnosis, two which he had learned in the school of experience, and which, so far as he knew, had not been previously published. If they had not been, it was merely an illustration of the truism that it was sometimes the simplest and most obvious things that escape notice and mention. As he still believed them to be of practical utility, he briefly recapitulated them.

The first related to the location of membranous patches. The diphtheroid patches of follicular tonsillitis, being formed by exudation from the lacunal openings, are usually limited to that more central portion of the irregular convexity of the tonsil which is the site of the principal and most numerous openings, while true diphtheritic membrane is not, according to his observation, usually thus limited; but when it occurs in a small patch it is apt to occupy a more lateral or marginal position. Hence, patches which are limited to the former region and unaccompanied by membrane in any other location, will usually be found to be follicular, while those, however small and slight in appearance, which are seen on the posterior or the anterior, the upper or the lower marginal portion of the tonsillar surface, should be regarded with grave attention and their nature carefully investigated.

He had seen diphtheritic membrane in its formative stage extending in a slight streak or in spots across the tonsil. In these instances it was easily to be seen that the streak or spots did not emerge from the lacunal openings, and bore no relation to them, which was, in reality, the essential point to be ascertained in the diagnosis.

At this point the rule of the Section which limits each speaker to ten minutes brought Dr. Billington's remarks to a close. The following notes of what he was about to add, had time permitted, have been furnished by him as essential to the completeness of his statement:

[The second point referred to is a method which is especially applicable to those grave cases of follicular tonsillitis which he had sketched as so closely resembling diphtheria. In these cases a syringing of the throat with water will cleanse it of much deceptive material, expos-

ing its whole mucous membrane clearly to view. The diphtheroid covering of the tonsils will be, in part at least, broken up and washed away, showing its friable and superficial character and its relation to the distended lacunal orifices. A prompt and accurate diagnosis is thus made practicable, by a simple and readily available method, in many cases in which it would otherwise be difficult or impossible.

It should be added that there are cases in which the most experienced physician must reserve his diagnosis for a short time.

There can be no doubt that follicular tonsillitis is often mistaken for diphtheria. He had personally known of not a few instances of this error, causing much needless alarm, and made in some cases by intelligent, conscientious, and not inexperienced physicians.

Dr. Lefferts, in a valuable paper read by him before the Academy in 1879, called attention to the striking resemblance between the natural history of follicular tonsillitis and the "catarrhal diphtheria" of Oertel. Dr. Billington had in not a few instances, on reading in journals accounts of the successful employment of this or that therapeutical agent in the treatment of diphtheria, been impressed with the fact that the descriptions of the location, course, and termination of the disease were strikingly suggestive of follicular tonsillitis, and of nothing else. In fact, he believed that all reports of large numbers of cases of diphtheria, in which the disease was mainly limited to the tonsils, should be regarded with suspicion. In a list of forty carefully studied cases, which he described in the paper to which he had referred, eleven only, or twenty-seven and a half per cent., were thus limited, and he believed that proportion to be quite as large as the average.]

Dr. L. Emmett Holt believed that follicular amygdalitis occurred both as a sporadic and an epidemic disease—in both instances being, as a rule, sharply defined from diphtheria. If the connection between the two were close, and physicians all the time discussing cases of real diphtheria as those of simple amygdalitis, we would expect that institutions which furnished many cases of amygdalitis would also give some of undoubted diphtheria. The facts did not support this. Dr. Haig-Brown, medical officer to Charterhouse School, in England, who had five hundred boys under supervision, had met with four hundred and sixteen cases of amygdalitis among them in three years, and only one case of genuine diphtheria.

Dr. G. A. Spalding, of this city, had stated that at the House of Refuge cases of amygdalitis were constantly occurring, yet no clear case of diphtheria had been seen there in years.

Dr. Gibney had made a similar statement with reference to the Hospital for the Ruptured and Crippled, during his service there. In both institutions a large number of older children and adolescents were under observation.

Dr. Holt's personal experience in amygdalitis was based upon three hundred recorded cases, which had been mostly seen in dispensary practice. The symptoms were strikingly uniform. In acute cases the invasion was abrupt, the temperature high, and, unless complicated, the fever seemed to be limited to three days, irrespective of treatment. A temperature of 105° F. was a common occurrence; he had in several cases seen 106°, and had known of one case in which it was 107°. Transient albuminuria, when the temperature was high, was not very rare, but there were no casts or blood-globules in the urine. The group of symptoms presented were suggestive of a general rather than a local disease. It showed no tendency to asthenia; convalescence was rapid.

In pharyngeal or tonsillar diphtheria, on the other hand, the temperature was low, 100° to 101.5° F., the higher range showing extension into the air-passages or into the nares. The albuminuria of diphtheria was not transient, and bore no relation to the temperature; casts and blood, as well as albumen, were generally present. A marked tendency to asthenia was one of the most constant features of diphtheria; convalescence was slow.

The patches of membrane seen in simple amygdalitis could usually be easily removed without bleeding, and lasted only four or five days, and showed no tendency to spread; the membrane of diphtheria, on the other hand, involved deeper tissues, caused bleeding, rarely lasted less than a week, and showed a marked tendency to spread to the adjacent mucous surfaces.

Dr. Haig-Brown had recorded two epidemics in which simple amygdalitis was unquestionably spread by contagion; hence this fact, though always suggestive of diphtheria, was not to be taken alone as proof that we were dealing with this disease.

The occurrence of paralysis was to be regarded as establishing positively the existence of diphtheria. In doubtful cases *all* the symptoms were to be taken into consideration, and there were few in which a positive differential diagnosis could not be made after watching a case for a day or two.

Dr. Holt called attention to the frequency of tonsillitis in patients with a rheumatic diathesis; the occurrence was too common to be regarded as a mere coincidence.

Dr. J. E. Winters thought that if mild sore throats were frequently diphtheria, more of the cases would terminate as diphtheria terminates, yet such a termination was scarcely ever heard of. With reference to Dr. Jacobi's statement that membranous laryngitis never gives rise to elevation of temperature, he regarded it as certainly a mistake, because he had seen cases of laryngeal stenosis with considerable elevation of temperature throughout, and where post-mortem examination had verified the diagnosis. Three weeks ago he performed tracheotomy in a case of diphtheria, with a temperature of +103° F., and the temperature remained elevated until the tube was removed.

Dr. H. D. Chapin thought it probable that there was such a disease as punctate diphtheria which resembled follicular tonsillitis, yet he knew of no way by which a differential diagnosis could be made at the outset, and he thought that it was impossible for most men to make the distinction.

Whether the infection in diphtheria and certain forms of amygdalitis was the same he was unable to say. It had appeared to him that there was a difference in degree of severity in different cases of simple amygdalitis.

Dr. Walter L. Carr related briefly the cases of three trained nurses who were taken ill while attending patients with diphtheria and after tracheotomy for diphtheritic laryngitis.

The first was a nurse, of phthisical tendency, who had had previous attacks of amygdalitis. She had in this instance a rigor, followed by fever and temperature of 102° F., in the mouth. There was exudation on the left tonsil, and the edges of the pillars of the fauces were covered with a thin membrane. This was easily separated, and did not cause bleeding or seem in any way to have a close attachment to the underlying structure. The exudate had all disappeared at the end of four days, but the patient remained weak for some time. The pulse was irregular, and albumin appeared in the urine.

The second case was a nurse who was in the room with the first patient. The onset of the disease was very severe—sharp rigor, fever, with temperature of 104½° in the mouth, profuse sweating, and great prostration. On examination the left tonsil was found to be covered in an irregular, patchy manner with a creamy exudation. There was no difficulty in introducing a probe into the lacunæ, and the exudation was easily removed, showing the tonsil to be congested, but otherwise apparently healthy. In two days the nurse was well and attending to her duties.

In the third nurse the exudation appeared on both tonsils, and was punctate, as if due to a filling of the

lacunæ. There was also a thin membrane streaked over the tonsils and fauces that left a slightly bleeding granular surface on removal. Albumin in the urine and irregular pulse persisted for two weeks. It was a month before the nurse was able to return to her occupation.

A fourth nurse, who had been exposed to the third patient, was said to have had a sore throat, but she was not observed by Dr. Carr. No paralysis followed any case.

The conclusion from the study of these few cases leads us to believe that follicular amygdalitis can be caused by direct infection from diphtheritic poison. Contrariwise, can the contagium of the follicular exudation produce diphtheria? It seems not only possible but probable that, under certain conditions, it can.

Dr. Jacobi said that the copious notes he had taken were for his own benefit, and they were not to be used in closing the discussion. He had gained much information, and was grateful for the attention which his paper had received. There were but few points to which he wished to refer. The first was concerning Dr. Satterthwaite's mortality of fifty per cent. It must be borne in mind, that the specimens of membrane which he received were from the worst cases of diphtheria, in which the pieces were discharged spontaneously from the mouth, and such patients were very apt to die. Dr. Winters had misunderstood him before, and also to-night, as he (Dr. Jacobi) had stated that when membranes are located upon such parts as are clad with pavement epithelium, upon parts which have but little connection by lymph-passages with the general organism, there is no fever. Dr. Winters had tracheotomized and found plenty of membrane. Those were not the cases of which he had spoken, and had referred only to those cases in which the diphtheritic membrane was upon the tonsil; in such cases there is no fever. It was natural that there should be no fever in such cases, and experience had taught him that it was absent. When, therefore, he found a case of laryngeal obstruction without fever, he said, this is a case in which there is membrane upon the vocal cords, and nowhere else. Dr. Winters had proved the same thing; for, in cases in which there is membrane over the trachea and there is a large amount of lymphatic connection with the general organism and the membrane is not lifted off, there is fever.

He feared that he had given a wrong title to his paper. Perhaps, it should have been "Doubtful Follicular Amygdalitis," as he wished to direct attention to the cases close to the boundary line. He meant to speak of the cases in which it was easy to make a mistake in diagnosis, as it was sufficiently easy to make a differential diagnosis between simple follicular amygdalitis and severe diphtheria.

As Dr. Chapin had said, there are a number of cases in which it is impossible to make a diagnosis, and in these doubtful cases he claimed that it was better to regard them as belonging to the more dangerous form of disease, because very frequently they are of the dangerous variety.

Of Dr. Carr's cases, the second would have been diagnosticated as follicular amygdalitis had it been seen apart from diphtheritic cases, and the others were doubtless true diphtheria. In the cases on the border line, those difficult of diagnosis, it was better not to say, this is a case of diphtheria, but to tell the people that it is one in which we shall be obliged to wait until to-morrow before a diagnosis can be made.

The Section then adjourned.

A Novel Method of Making Good House-Servants.—In a discussion on laparotomy, at the meeting of the American Medical Association, it was stated that in Central Asia little girls were castrated just before menstruation, and in this condition they made very useful house-servants.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 27, 1886.

John A. Wyeth, M.D., President, in the Chair.

Dr. T. Mitchell Prudden presented specimens from a case o

OBSTRUCTIVE JAUNDICE, WITH SITUS TRANSVERSUS OF THE ABDOMINAL VISCERA.

For the epitomized clinical history he was indebted to Dr. J. S. Ely, of the first medical service in Bellevue Hospital, as follows:

A middle-aged Irish laborer had a night attack of gastro-enteritis, followed by jaundice, about eighteen months before admission to the hospital. The jaundice persisted, with anorexia, heaviness after eating, occasional dizziness, diarrhœa, and occasional nausea, but no gastric pain and no vomiting. He continued to lose flesh and strength, and came to the hospital for failing strength, loss of appetite, and dizziness. His family and previous history were good.

The liver was found considerably enlarged, extending well over to the left side, somewhat tender and smooth. Slight dulness and râles at the right apex.

Nothing abnormal was observed on palpation of the abdomen. The patient remained in much the same condition for a month after admission.

On September 25th, without apparent cause, he had a chill, followed by a rise of temperature to 103° F. It fell slightly during the night, but went up again to 106° F., and fell again to normal by the next morning.

Two days later there was another sudden rise to 107½° F., and a sudden fall. The temperature continued down until October 12th, then it suddenly rose to 107¾° F., and remained between 103–105° F. until just before death, when it fell for a day, rising suddenly to 105½° F. at death. He gradually failed, and, with numerous crepitant râles, but no evident consolidation, died on October 20th. A few days before death a hypodermatic needle was introduced into the liver at a point one and a half inch below the lower border of the ribs, and a little to the right of the median line. A thin, greenish liquid, containing solid particles, was obtained, which contained very large numbers of bacteria.

A subsequent introduction of the needle, at apparently the same point, was rewarded by only a few drops of blood, which was used for cultures-purpose with entirely negative results.

Autopsy.—Body emaciated; skin yellow. Heart normal. Lungs; emphysema and chronic bronchitis, with interstitial pneumonia and œdema.

The omentum was absent, the cæcum lay in the right hypochondriac region. Along the edge of the liver, which projected slightly beyond the free border of the ribs, nearly equally on both sides, lay the ascending colon, while the transverse colon lay in the position usually occupied by the descending colon. At the brim of the pelvis, on the left side, the descending portion of the colon took a half-turn to the left and upward, forming, with the sigmoid portion of the gut, a loop whose upper portion lay above and to the right of the umbilicus. The sides of this loop were bound closely together. The colon was thus turned partially around to the left on a horizontal axis. The gall-bladder was very much atrophied, with thickened walls; was bound firmly to the lesser curvature of the stomach, and lay to the left of the median line. Its cavity was not larger than a small hickory-nut. The spleen was on the right side, in about the normal relative position. It was large and trilobed, with one of the lobes much elongated. There was below this an accessory spleen, about two inches in diameter, and five smaller accessory spleens. The kidneys were in normal position, and contained a few large patches of connective tissue. The stomach was somewhat enlarged, the cardiac opening was situated on

the right side, and the pylorus well over to the left. The duodenum made a large double curve, and about three inches from the pylorus was a diverticulum directed upward and to the right, about as large as a small hen's egg. The pancreas lay largely on the right side.

The common bile-duct was completely occluded by a gall-stone about half an inch in diameter, while several smaller calculi lay above in the common and hepatic ducts. The hepatic duct was considerably dilated.

The liver was cirrhotic and somewhat enlarged. The left lobe was nearly as large as the right, and from its lower surface projected a conical lobule about two and a half inches long and one and a half inch in diameter at the base. The generative organs were normal.

It is evident from the position of the organs that the bacterial fluid, which it was supposed came from the gall-bladder, was derived from the gut at the part corresponding to the ascending colon, which was in the place ordinarily occupied by the gall-bladder.

As an example of transposition of the viscera this case is interesting, as the abnormality was confined to the *abdominal* organs. It also affords an example of the tendency of the colon to be independent of the other abdominal organs in visceral transpositions, cases having been observed in which, with complete transposition of both thoracic and abdominal viscera, the colon was in its normal situation.

Dr. Roosevelt remarked that the case was interesting to him because it occurred in his own service, and illustrated the difficulty sometimes encountered in making a diagnosis of the cause of obstructive jaundice. There was nothing in the history that pointed toward the presence of gall-stones. Physical examination reached the diagnosis of enlargement of the liver, particularly of the left lobe, which was really the transposed right lobe.

He also referred to another case, in which the heart was in its normal position, yet the area of dulness led him to the suspicion that the liver was transposed; there was no dulness in the region normally occupied by the liver.

Dr. Prudden, in reply to a question asked by the President, said that these cases were of infrequent occurrence, and that transposition of the heart and abdominal viscera were very liable to be associated.

The President said that, according to Hyrtl, persons with complete transposition of viscera were usually left-handed; but especially when the heart is on the right side.

Dr. Prudden referred to a report of eleven cases in which inquiry was made on this point in three cases, and the persons were right-handed.

Dr. J. West Roosevelt presented specimens which illustrated the lesions of

CORROSIVE-SUBLIMATE POISONING, WITH MARKED LESIONS OF THE KIDNEYS AND INTESTINES.

The case was interesting because of the rarity with which bichloride of mercury is used for suicidal purposes, and also on account of the enormous dose taken. The clinical history was interesting because of the nearly complete suppression of urine for several days, yet no uræmic symptoms were developed. It might be urged that the profuse diarrhoea acted vicariously; but at the same time it should be borne in mind that in many cases these nervous phenomena are merely accidental, and that they are not necessarily produced by destruction of the kidneys.

S. B——, nineteen years of age, single, colored, and a domestic, took, on the morning of May 6, 1885, *twenty-five* grains of corrosive sublimate in solution. She vomited in five minutes. There was severe pain at once in the throat and abdomen. Severe purging began in an hour and a half. Shortly after admission, some hours after the poisoning, she passed urine containing twenty per cent. of albumin, and abundant granular casts, epithelial cells, pus, and blood. The patient stated that her feet and hands had swelled occasionally during the past year.

May 8th.—Constant purging, and ℥ jss. of urine has passed since admission; and on May 9th ℥ j. of urine was drawn with the catheter.

May 10th.—Fifteen stools, small in amount and containing blood. Vomiting of yellow fluid free from blood. Great abdominal pain. Urine very scanty, albuminous, granular and epithelial casts; epithelial cells of all shapes—flat, tailed, and polyhedral.

May 12th.—Died in collapse, after continued purging and vomiting and abdominal pain. She was delirious on the night before death, but became rational in the morning. Stools, on day of death, dark slate color and fluid. Her temperature was normal or subnormal, save on day of admission, when it reached 100° F., and on the night before death, when it reached 102.8° F.

Autopsy, one hour and fifty minutes after death.—Body well nourished. Rigor mortis absent. *Brain* not examined. Visceral *peritoneum* injected and dry, and coated with fibrine, especially over the great curvature of the stomach and lower end of the ileum. Mesenteric glands as large as a Lima bean. The *heart*, *lungs*, and *spleen* were normal. The *liver* weighed three pounds three ounces; was soft, slightly mottled, red and yellow, and the cut surface was shiny. *Kidneys:* Perhaps a little enlarged; capsule not adherent; surface smooth; cortex somewhat thickened, yellow, and somewhat granular in appearance; medullary rays appear as paler yellow lines in the yellow cortex. Under the microscope there seemed to be no infiltration of the stroma with cells. The epithelium of the convoluted and some of the straight tubes was in places cloudy, swollen, and granular. In some of the tubes a curious change had taken place. The lumen of the tube was, in some parts of its course, filled with closely packed, round, homogeneous bodies, which showed no sign of structure or nucleus. These bodies stained deeply with eosin. Toward the distal end of the tube they seemed in places to have fused and formed bodies looking like hyaline casts, but so large as to completely fill the tube, which was denuded of its epithelium in these places. That these bodies were altered epithelium was shown by the fact that in many parts of the tubes the epithelium might be seen in which a similar change was in progress. Also cells showing a similar hyaline appearance at the periphery, and others more extensively changed, with nuclei of indistinct outline which stained poorly, were to be seen here and there still attached to the basement membrane. In some places the tube was simply filled with granular detritus. This hyaline appearance might be due to hyaline degeneration or to coagulation necrosis. In some tubes small flat cells could be seen, which seemed to be newly growing. The blood-vessels were normal. The cells of the capsule of Bowman were swollen. *Stomach:* Mucous membrane swollen, reddened, coated with mucus, and showed numerous punctate hemorrhages. *Small intestine:* Mucous membrane of upper part injected and coated with mucus. In the lower two yards of the ileum were quite numerous patches, about one inch square, of gray appearance, covered with a thin false membrane. The *large intestine* throughout showed patches of false membrane, especially on the prominent folds of mucous membrane. The uterine cavity contained blood, and in the left ovary was a large, fresh corpus luteum.

The specimens were interesting, especially with reference to the local lesion, particularly marked in the large one, and consisting of the production of diphtheritic membrane.

Dr. John C. Peters had been deeply interested in the presentation of the specimens, because of recent discussions in the Section on Therapeutics and Orthopedic Surgery in the New York Academy of Medicine. The plan of treatment of Bright's disease, by the administration of corrosive sublimate, was commenced in the New

York Hospital forty-four years ago, by Dr. J. A. Swett, and afterward continued by Dr. Griscom and Dr. Joseph Mather Smith. The number of cases treated was twenty-six, and the majority were very much improved, although the fact remained that albumin did not disappear from the urine. It was given in doses varying from one-sixteenth to one-eighth, even one-fourth of a grain, every four hours, and always with the tincture of cinchona. One noticeable effect was that it produced diuresis, but in Bright's disease only. Orthopedic surgeons had used the drug, for its tonic and restorative effects, in scrofulous diseases of the joints.

In connection with the question of cause of nræmia, Dr. Peters referred to the latest theory, that the cyanide of ammonium is the active agent, a substance isomeric with urea.

Dr. H. J. Schiff presented microscopic sections from an

INTRACANALICULAR FIBROID OF THE BREAST.

Mrs. E.——, twenty-nine years of age, and a housewife, consulted him in June last, with reference to a small tumor in her left breast. Eight years ago, one year after the birth of her child, she noticed there a lump about the size of a bean. About one year ago it began to give her pain; sometimes neuralgic, at others a dull, burning pain, especially during menstruation and after manipulation. The tumor also began to grow rapidly. There was no history of hereditary disease. The patient was otherwise healthy. Menses normal.

The tumor was situated at the upper and outer part of the left breast, and was painful on pressure. On August 31st Dr. Schiff removed it under antiseptic precautions, and when, ten days later, the dressing was removed, union was complete throughout.

The tumor was encapsulated, and after removal of the capsule measured one and a half by one and five-eighths of an inch. At its lower part were two cysts one-eighth of an inch in diameter.

Microscopical examination showed it to be an intracanalicular fibroid.

Dr. Schiff also presented a

HÆMORRHOID

which he removed by Allingham's method, on October 25th, from a patient twenty-three years of age, on whom, ten months before, he had injected the tumor with a *ten* per cent. solution of carbolic acid without benefit, and one month later with a thirty-three per cent. solution with some benefit, but not very great.

The specimen, one of three tumors removed by operation, showed the site of the injections. There was a decided depression in the centre, which was apparently the result of inflammation set up by the carbolic acid. All around this central part the tumor was filled with blood.

Dr. Prudden said that the tumor from the breast was especially interesting, because it was a variety of neoplasm which had not been often recognized in this country. It is very liable to be mistaken for carcinoma, and the mistake is quite natural. These growths are rarely seen in their early stages, and only when the outgrowth has gone on to such an extent as to nearly or completely fill the acini.

Dr. Waldstein remarked that these tumors occasionally became malignant. He had seen three cases, which had been described in Virchow's *Archives* eight or ten years ago. In the beginning there was the same condition that existed in Dr. Schiff's specimen, namely, intracanalicular fibroma, but in parts there was proliferation which went beyond the typical form, and could be called carcinoma.

BRONCHO-PNEUMONIA—UNUSUALLY HIGH TEMPERATURE RANGE—SMALL PULMONARY ABSCESSES.

Dr. L. Emmett Holt presented the kidney and lungs removed from a child, eleven months old, who died of broncho-pneumonia at the New York Infant Asylum. The point of special interest in the clinical history was the unusually high temperature. The child was previously healthy, and the illness lasted sixteen days. For the first five days the temperature, when not reduced by antipyrin, ranged between 104° and 105.5° F. As the pulmonary signs did not seem sufficient at this time to explain the temperature, and as the spleen was so much enlarged that it could be distinctly felt, quinine was substituted for the antipyrin; four grains were given four times a day. This was stopped after two days, as the temperature rose in spite of the drug to 106.5° and then to 107° F. on the eighth day of the disease. This was brought down to 100° F. by two six-grain doses of antipyrin, given at four-hour intervals *per rectum*, as the stomach was irritable and the child not taking nourishment and stimulants very well. During the next four days the temperature record was phenomenal; it remained steadily at or near 106° F., unless reduced artificially. Antipyrin being required in too large doses for the child's condition, baths were employed in the following manner: The child was put into a bath at 100° F., which was gradually cooled down to 90° F., and continued for fifteen to twenty minutes. These were repeated about once in four hours. The temperature was thus reduced from two to three degrees, and the pulse and respiration were uniformly improved. The effect, however, rarely lasted more than three hours. During the last four days before death the temperature range was lower, rising above 105° F. only once, but touching that point nearly every day. By means of the baths it was kept most of the time below 104° F. The fever at no time was marked by remissions. The other symptoms were not especially grave. The cerebrum was not much disturbed; the pulse ranged from 160 to 180, and the respirations from 40 to 60. The urine was passed freely. The treatment was mainly directed to the fever, and sustaining the strength by food and stimulants. They were given unsparingly. The physical signs of consolidation were not apparent until the tenth day. The child died quietly of exhaustion on the sixteenth day of the illness.

Autopsy, made twenty hours after death.—Body well nourished; child large for its age. *Head:* The brain was moderately congested, otherwise healthy; the pia was "milky" in appearance over convexity and at base, and a mere trace of pus was seen; dura healthy; cerebro-spinal fluid measured two ounces; the sinuses contained dark post-mortem clots. *Chest:* No fluid in the pleural cavity. Left lung was consolidated throughout the greater part of the lower lobe, the surface of which was covered with a recent fibrinous exudation; quite a large area of consolidation was found at the right apex. The lungs elsewhere showed more or less disseminated pneumonia. Subpleural ecchymoses existed beneath the pleura covering the right lung, but no fibrine upon its surface. On making section of the lungs several small abscesses were found in the upper part of the left lower lobe and at the right apex. They varied in size from that of a small pea to a marble, and contained thick, creamy, odorless pus. The appearances elsewhere were those of a typical broncho-pneumonia. The bronchial glands were enlarged, but not cheesy. The heart contained a thin, laminated clot in each ventricle, closely adherent; its walls and valves were normal. *Abdomen:* Spleen about twice the usual size, and softer than normal. Liver, normal. A moderate catarrhal enteritis in the upper half of the small intestine; below, Peyer's patches were slightly swollen and pigmented, but otherwise normal; enlargement and pigmentation of the solitary follicles of the large intestine and moderate catarrh, chiefly in the cæcum and the ascending colon. Kidneys twice the normal size, weight, together, five and a quarter ounces. They showed to the naked eye very marked parenchymatous degeneration. Light-colored, soft, non-adherent capsule; in section cortex much thickened, of grayish-white color, markings indistinct. Careful search was made throughout the

body for tubercles, but none were found. The specimen was referred to the Committee on Microscopy.

Dr. J. Lewis Smith remarked that from what he had seen of the effects produced by the two remedies, he should prefer salicylate of sodium to antipyrin in all diseases attended by prostration, such as fevers and pneumonia occurring in infants.

ABSENCE OF RIGHT LUNG—MALFORMATION OF THE HEART.

Dr. J. Lewis Smith presented a specimen removed from the body of a negro child two months old. When first seen, it was eight or ten days old. There was then great difficulty in making a diagnosis. The case was supposed to be one of pleurisy, but that could not be made out satisfactorily, nor could it be made out clearly that it was a case of lung consolidation. During the two months the child had thriven well, but died suddenly.

At the autopsy the thoracic organs were removed, and the following report had been submitted by Dr. L. J. McNamara. The specimen was also referred to the Microscopical Committee of the Society.

The specimen consists of a left lung with its usual division, and the heart and great vessels. Careful examination reveals, just at the aorta, a thin fragment of lung-tissue, but which had never been inflated. The trachea, opened from the posterior, presents the usual bifurcation into right and left bronchi. The left bronchus can be traced into the lung, but the right is lost about one fourth inch from bifurcation. The tissue supposed to be the rudimentary right lung was taken from this place. It does not present any of the appearances of lung-tissue.

Examination of the heart shows a large left ventricle which has three openings: One the aorta; one from the auricle, and one which communicates with a small opening, supposed to be the right ventricle, as the right pulmonary artery enters the heart at this spot. I cannot find any left pulmonary artery. There is but *one* auricle, which, in this specimen, is filled almost entirely with coagulated blood, and has the usual opening into left ventricle. The opening into the rudimentary right ventricle was enlarged, thinking that it might lead into the proper opening of the right ventricle, but instead it opened into the left. In order not to change the relations of the parts, this opening was closed with sutures.

The blood, therefore, coming from the venæ cavæ poured into the *one* auricle; from the auricle it was discharged into the *one* ventricle; from the ventricle it was sent into the aorta, and through the opening in the septum, shown by the paper, it was sent also into the right pulmonary artery.

The Society then adjourned.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 14, to November 20, 1886.

Greenleaf, C. R., Major and Surgeon. Relieved from duty at Columbus Barracks, O., and ordered for duty as Attending Surgeon at Headquarters, Division of the Missouri, and Examiner of Recruits at Chicago, Ill. S. O. 268, A. G. O., November 17, 1886.

Tilton, Henry R., Major and Surgeon. Relieved from the duties of Attending Surgeon at the Headquarters, Division of the Pacific and Department of California. S. O. 96, Division of the Pacific, November 9, 1886.

Waters, W. E., Major and Surgeon. Ordered from Fort Spokana to Vancouver Barracks, Wash. T., for duty at that post. S. O. 197, Department of Colorado, November 8, 1886.

Hubbard, V. B., Major and Surgeon. Directed by Par. 8, S. O. 257, A. G. O., November 4, 1886, amended, to report in person to the commanding officer, Columbus Barracks, O., for duty. Par. 3., S. O. 268, A. G. O., November 17, 1886.

Caldwell, D. G., Major and Surgeon. Granted leave of absence for one month, with permission to apply for twenty days' extension. S. O. 150, Department of the Platte, November 12, 1886.

Smart, Charles, Major and Surgeon. Granted leave of absence for one month. S. O. 265, A. G. O., November 13, 1886.

Macauley, C. N. B., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days. S. O. 118, Department of Dakota, November 8, 1886.

Crosby, W. D., First Lieutenant and Assistant Surgeon. Ordered from Fort McDowell, A. T., to Fort Bowie, A. T. S. O. 110, Department of Arizona, October 29, 1886.

Morris, E. R., First Lieutenant and Assistant Surgeon. Ordered from Fort Bayard, N. M., to Fort Thomas, A. T. S. O. 110, Department of Arizona, October 29, 1886.

APPOINTMENTS.

Moore, John, Lieutenant-Colonel and Assistant Medical Purveyor. To be Surgeon-General of the Army. November 18, 1886.

Ball, Robert R., to be Assistant Surgeon with the rank of First Lieutenant. November 19, 1886.

PROMOTIONS.

Baily, Joseph C., Major and Surgeon. To be Assistant Medical Purveyor with the rank of Lieutenant-Colonel. November 18, 1886.

Heizmann, Charles L., Captain and Assistant Surgeon. To be Surgeon with the rank of Major. November 18, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending November 20, 1886.

Nash, Francis S., Passed Assistant Surgeon. Ordered to special duty Smithsonian Institution. November 26, 1886.

Rhoades, A. C., Medical Inspector. Ordered to special duty attending officers and families in New York City.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 20, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	[illegible]	[illegible]
Scarlet fever	25	3
Cerebro spinal meningitis	1	1
Measles	[illegible]	[illegible]
Diphtheria	113	52
Small-pox	1	0
Yellow fever	0	0

Hæmoglobinuria and Functional Albuminuria are diseases closely related, according to Dr. C. H. Ralfe, and are dependent upon an extraordinary breaking-up of the red blood-cells in the liver. This process is called hæmolysis, and its gradations are represented as follows:

Ordinary hæmolysis.	Urinary pigment, urea.	Normal urine.
Active hæmolysis.	Increase of urinary pigment, increase of urea.	[illegible]
Increased hæmolysis.	Increase of urinary pigment, appearance [illegible] increase of urea, albumen in urine.	Functional albuminuria.
Extraordinary hæmolysis.	Hæmoglobin in urine, increase of urinary and bile pigment, increase of urea, albumen in urine.	Hæmoglobinuria.

—*The Lancet.*

THE MEDICAL PROFESSION AND PROPRIETARY QUACKERY.—In the *Philadelphia Medical Times* (October 16, 1886) Dr. S. S. Wallian offers some practical suggestions on the above subject. According to him, "Incomplete statistics show that the money expended by the people of the United States for secret and proprietary medical preparations aggregates annually more than eighty millions of dollars. When the reasonable statement is added that certainly more than one-half of these exploited remedies are positively detrimental rather than beneficial to their consumers, the subject becomes fairly tragic. Compared with this insidiously growing evil, war and intemperance are made to seem less formidable calamities. Limned in detail, the picture would be ludicrous if it were not in its results so fatal as to be actually appalling. For this unsatisfactory state of things there is no special or easily suggestible remedy. It may be assumed that ignorance is at the bottom of it, but it is inborn and transmitted ignorance. Generations back of us have contributed toward endowing us with a mania for dosing." Again: "There are anti-tobacco societies, anti-liquor parties, even anti-adulteration journals; but there are no anti-nostrum associations. In this connection the profession as a whole must plead guilty of a dereliction of duty. There is no doubt but by proper and persistent effort practitioners have it in their power to initiate a movement which would in time eventuate in wholesome changes in public opinion touching this vitally important subject." Two things still militate against any sweeping or sudden revolution in this direction—ignorance and tradition. But even these he holds are not utterly incurable. "Physicians themselves can accomplish much toward the desired end. Every medical practitioner owes it to his patrons, to his profession, and his conscience, to antagonize three prevailing and mischievous delusions: 1. That it is economy to doctor one's self. 2. That any remedy can be good for every ailment. 3. That irregular and unlettered 'doctors' who catch the public eye, through advertising display, owe their 'unparalleled success' to the possession of chemical or other valuable secrets which are unknown to the regular profession and chemists. The practitioner ought also to inculcate a few wholesome and general precepts: 1. That to regain impaired health does not necessarily imply the use of drugs. 2. That in consulting a physician a maximum of advice and a minimum of medicine is a consummation devoutly to be sought. 3. That the more intelligent people become the less they assume the responsibility of deciding questions of which only a skilful medical man is competent to judge, the less they listen to the catch-penny claims of advertising charlatans, and the less money they pay out for preparations which are not ordered or vouched for by someone in whose sagacity they confide. 4. That those who decline the use of all remedies, except when prescribed by a competent physician, experience uniformly better health, expend less money at the druggist's, and suffer infinitely less from imaginary evils, than any other class. When practitioners everywhere conclude to spend more time and effort in disseminating these and similarly axiomatic truths than in traducing competitors or wrangling over medical politics, there will be less money poured into the coffers of the wily patent-medicine sharks, less quackery both in and out of the profession, and the medical millennium will draw nigh."

THE PROPER WAY TO LIGATURE ARTERIES.—At a meeting of the London Clinical Society recently, Mr. Thomas Smith said that he considered the tying of a large artery in its continuity by a single thread fastened by a reef-knot a defective operation, as the knot dinted in the tunic of the vessel at the part where it lay; when the ligature divided the artery it was the knot that first penetrated the canal of the vessel, and when secondary hemorrhage occurred, it was usually at the situation of the knot. As a remedy for this, he recommended that the ligature should be passed twice round the vessel (an easy procedure with an aneurism-needle, which may carry one end of the ligature forward and bring back the other) as a clove-hitch, and then pulled firmly across the artery. This ligature had no knot; but if it were not considered to be secure enough, the two ends could be tied in a single knot after the tightening of the clove-hitch, and the knot would not then be in contact with the arterial wall. As Dr. Edmunds and Mr. Ballance had shown at the Royal Medical and Chirurgical Society last session, it is not necessary nor desirable to injure the coats of an artery in order to secure a permanent obliteration of its canal.

THE PRESENT STATE OF GYNECOLOGY.—Just now, also, the gynecologists are in what the president, Dr. Reamy, very aptly designated as "the abdominal epoch of gynecological surgery." In this, as in all surgical epochs, there are those who, it has been said, have manifested an unwholesome "enthusiasm" in the use of the knife. Indeed, so incredulous have many become concerning the ultimate benefit to be afforded by some of these operations, that all gynecologists have been divided into two great classes, expressively named the *benign* and the *malignant;* more scientifically, perhaps, the medical and the surgical.—DR. CARPENTER, in *The Epitome.*

BELCHING INFLAMMABLE GAS.—Dr. F. E. Quinby, of Fayetteville, N. Y., writes: "There is a gentleman of this town, who possesses a good reputation for truth and veracity, who narrates a curious tale. He is troubled with a dyspeptic difficulty, one of the symptoms of which is the eructation of gas, that will take place toward evening. Last night, at or about one o'clock, he lighted a lamp, and was just about to blow out the match when some of this gas, was belched. As it issued from the mouth on to the burning match it took fire—'it went puff.' The flame, which is described as being of a bluish color, singed the hair, eyebrows, and mustache; also, as the gentleman gasped, some of the flame was slightly inhaled, burning the hairs of the nose, the lips, and the tongue slightly. There was no coal-fire in the room at the time. I do not know of a parallel case, therefore I write you, hoping that through the columns of your valuable RECORD some of my medical brethren will offer a solution."

MR. JONATHAN HUTCHINSON is thus described by a correspondent of the *North Carolina Medical Journal:* "He seems scarcely more than fifty years old, is tall, rather thin and round-shouldered, has dark hair and dark complexion, an intelligent but homely face, and might pass himself off at the State Fair or anywhere else as a North Carolina farmer, without the slightest fear of suspicion."

BAKERS' TEETH.—Dr. Hesse has found that bakers are peculiarly subject to dental caries, the disease attacking chiefly the anterior surfaces. He explains its frequent occurrence in this class by assuming that the flour which lodges on the teeth becomes converted into sugar, and then undergoes fermentation.

WARTS AND EPSOM SALTS.—It is now fairly established, says a writer in the *Medical Press*, that the common wart, which is so unsightly and often so proliferous on the hands and face, can be easily removed by small doses of sulphate of magnesia taken internally. M. Colrat, of Lyons, has drawn attention to this extraordinary fact. Several children treated with three-grain doses of Epsom salts, morning and evening, were promptly cured. M. Aubert cites the case of a woman whose face was disfigured by these excrescences, and who was cured in a month by a drachm and a half of magnesia taken daily. Another medical man reports a case of very large warts which disappeared in a fortnight from the daily administration of ten grains of the salts.

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Original Articles.

A CONSIDERATION OF SOME UNUSUAL FORMS OF INTRA OCULAR HEMORRHAGE, WITH SPECIAL REFERENCE TO ETIOLOGY AND PROGNOSIS.

By CHARLES STEDMAN BULL, A.M., M.D.,

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THE class of cases to which I desire to call attention has interested me for some years, both because of their rarity and because of their somewhat doubtful causation. I refer to those cases of intra-ocular hemorrhage occurring in persons of middle and advanced life, who have been subjected to severe malarial poisoning. In these cases the blood is extravasated into the vitreous humor or aqueous humor, or both, and the attack is entirely unaccompanied by any other signs of intra-ocular inflammation. The hemorrhages always occur suddenly, and usually into the posterior part of the vitreous humor. The sudden and sometimes extensive loss of sight, together with a direct examination of the media of the eye, in these cases enable us to diagnose an intra-ocular hemorrhage as the cause of the disturbance. Very little has been written in regard to the effects of malarial fevers upon the internal tunics of the eye, though severe lesions of the optic nerve, with amblyopia and amaurosis, are now generally recognized as being occasionally produced by prolonged exposure to miasmatic influences. The occurrence of intra-ocular hemorrhages is merely hinted at, and yet when we consider the not infrequent occurrence of hemorrhages in other parts of the body in persons who have been the victims of protracted pernicious malarial poisoning, it should not surprise us that hemorrhages from the same cause may occur within the eye. Intestinal hemorrhage, epistaxis, bleeding from the gums, hæmaturia, and other signs of a general hemorrhagic tendency have been noted in persons suffering from severe miasmatic poison, especially in tropical countries, and in the southwestern regions of our own country, where the malarial fevers are so often of the congestive type. As a result of venous congestion caused by rapidly occurring temporary obstructions in the capillary circulation, it is known that small, even punctate, hemorrhages sometimes occur in the vitreous entirely independently of pulmonary or cardiac disease. When such hemorrhages are not due to inflammatory changes in the retina or choroid, Wecker and other authorities think that they are probably caused by some disturbance in the circulation, such as venous stasis or increase in the arterial tension, or else by disease of the vascular walls, such as fatty or atheromatous degeneration. Very often several of these causes combine to produce the hemorrhage. Hypertrophy of the left ventricle is now recognized as an important factor in the causation of retinal apoplexy, and presumably, also, in certain cases of hemorrhage into the vitreous. Fatty degeneration is also sometimes indicated by these vitreous hemorrhages. Another possible cause which of late has been brought forward is a gradual dilatation and hypertrophy of the entire vascular system—cardiac and vascular dilatation, without valvular disease or general cyanosis. We also admit that changes in the character of the blood, such as exist in progressive pernicious anæmia, sometimes cause these retinal hemorrhages. It is my belief that diminished intra-ocular tension, or any considerable change in tension, may give rise to vitreous hemorrhages. In such cases pulsation in the retinal arteries is frequently isochronous with the diastole of the radial artery, and this pulsation may be followed far beyond the margin of the optic disk. These pulsations in the retinal arteries occur almost constantly with insufficiency of the aortic valves, and yet may at times be entirely absent. The reason for this is that the change of tension in the arterial system is much greater than in a healthy circulatory system. It was formerly almost universally considered that large extravasations of blood into the vitreous came from ruptured choroidal or ciliary vessels; but some observers have come now to believe that in these cases the blood comes either from the papillary and retinal vessels, which are branches of the central retinal artery, or from the vessels of the sheath of the optic nerve. This is the view advanced by Wecker, and it has many adherents. Wecker states that in very many cases the blood may be traced directly to the papillary margin, or to some one branch of the central retinal artery. These "sheath-apoplexies," as he calls them, may occur successively in the two eyes, and are not infrequently met with in diabetic patients. Where they occur along the course of the larger vessels for some distance, it is sometimes difficult to distinguish them from retinal apoplexies.

It is certainly important to carefully observe the relation of these vitreous hemorrhages with the margin of the optic disk, and as soon after their extravasation as possible, which, of course, can only be done when the hemorrhage is a slight one. Wecker is of the opinion that they occur after a sudden change of temperature, or after some ordinary muscular exertion made by persons when in a state of congestion or fever, and are fifty years of age or over, or who are suffering from cardiac disease. It is probable, also, that similar hemorrhages occurring in young people are produced in the same way; but as the retina is more resistant in them and less liable to tear, the extravasated blood is more apt to pass forward in the retina, or between the latter and the vitreous membrane, and enter the vitreous humor in its anterior segment just behind the lens. Small extravasations of blood in the anterior portion of the vitreous sometimes occur after violent muscular efforts or exposure to malarial disease, but they are very different from these sudden and large extravasations.

A general filamentous or flocculent opacity of the vitreous is a not very infrequent result of one of these hemorrhages. These opacities may or may not be adherent to the retina and choroid, and when the pupil is well dilated they are seen to be suspended in the vitreous. These may exist without any other lesion of the eye, and might possibly be regarded as the consequence of periodic congestion of the blood-vessels with rupture and extravasation of blood into the vitreous.

As before stated, it is Wecker's opinion that most of these hemorrhages come from the vessels of the sheath of the optic nerve, and its method of occurrence he describes as follows: "The blood here at first opens a passage through the natural openings, follows the eccentric course of the hyaloid canal, and thence enters into the 'triangular space,' so called, of Stilling." Wecker considers that what Manz has called "retinitis proliferans" is nothing but the organization of large strata or

layers of blood extravasated in the posterior part of the vitreous. These layers become in time thinner and more translucent, and in contracting cause a deviation of the central vessels toward the point of implantation of these membranes. This view will, however, scarcely meet with general acceptance. He claims to have seen patients who have become suddenly blind from intra-ocular hemorrhage, in whose eyes the vitreous was occupied by several translucent membranes which divided it into regular segments. These, he asserts, are formed at first by extravasations of blood from the margin of the papilla which project into the vitreous, and says that he has in several cases been able to follow the various stages of their development and transformation.

These hemorrhages, assumed to be due to malarial poisoning, occur almost always in one eye, though they may occur in both eyes; but I have never seen a case in which they occurred simultaneously in both eyes. In every instance in my experience they have happened during the febrile or congestive stage. All my patients were forty years of age or over, and had been subject to malarial disease for a varying length of time, contracted in markedly miasmatic regions. In some the tension of the eye was increased; in others it did not seem to have suffered any change. The refraction was in the majority of cases slightly hypermetropic, while in a smaller number it was emmetropic, and in a few cases it was slightly myopic. In the majority of cases the blood seemed to be extravasated generally through the vitreous, but in a few cases the mass of the blood was certainly in the posterior part of the vitreous. The recurrences of the hemorrhages were always, as in the first instance, spontaneous, and sometimes frequent. The process of absorption was always very slow, even when but one hemorrhage occurred; and in some instances, after a brief period, the absorption seemed to be entirely stayed. In those cases in which the blood disappeared sufficiently to admit of a more or less satisfactory view of the fundus, there was never any arterial or venous pulse. In no case was there any valvular disease of the heart; but in some of the cases there was hypertrophy of the left side of the heart, though never to a marked degree. In a few cases there was an atheromatous condition of the arteries, as in the temporal and radial vessels, and in all of them there was a more or less marked irregularity in the strength and quantity of the blood-current. In no case was there complete restoration of central vision. In nearly all the cases there existed peripheral choroidal disease, usually atrophic in character and slight in degree, which could be distinguished with the ophthalmoscope after the hemorrhage had been partially absorbed. In none of the cases was there any tendency to either gout or rheumatism, such as Hutchinson describes in cases of spontaneous vitreous hemorrhage. In his cases there were always iritis, with vitreous opacities as well as hemorrhages, and he thought that the tendency to extravasation of blood was due to unequal circulation. We know from recent investigations that both low tension and high tension are compatible with liability to rupture of the capillaries. A condition of loss of balance is easily induced if the blood-vessels are not well under vaso-motor control, and they readily become empty in one place and overfull in another. In all my cases chronic renal disease was excluded by a careful and frequently repeated examination of the urine. There seems no reasonable doubt that the hemorrhages were due in the main to rupture of the choroidal or ciliary vessels, and possibly of the vessels of the sheath of the optic nerve, during the febrile or congestive stage of malarial attack, when there was a loss of balance in the vascular tension, and when the system had become decidedly enfeebled by previous attacks of a similar nature.

As regards the *prognosis* of these cases, it of course depends largely on the cause, the amount of blood extravasated, and the degree of organization to which the resulting opacities may have attained. If the choroid and ciliary body were in a healthy condition, these hemorrhages might be absorbed more rapidly and completely provided the patient could be removed from his miasmatic surroundings and a proper treatment and diet instituted. But unfortunately in these cases there was more or less atrophy of the uveal tract, and the blood disappeared very slowly. Any obstacle to the proper nutrition of the vitreous would of course stand in the way of the absorption of these hemorrhages, and this, of course, is always the case in large and sudden extravasations of blood. The most that can be hoped for in these cases is that they will eventually become such thin membranes as not only to be semi-transparent, but will also cease, by their contraction, to pull on the retina, and thus cause its possible detachment. These membranous opacities, the remains of organized hemorrhages, may and do last for years.

Case I.—C. H——, aged forty, travelling salesman; first seen March 27, 1874. Three years before, while in Texas, he was dangerously ill with quotidian intermittent fever of the congestive type, and on recovering consciousness, after a second attack, he noticed he could not see with the *right* eye. For six weeks the sight of the eye was so defective as to be useless, and he then began slowly to regain his vision. It was more than a year before he could see to read, and since then there have always been floating particles and thread-like bodies before this eye. He has had several attacks of fever since then, and with each one a more or less marked obscuration of vision in the right eye. During the last week in February, 1874, while under treatment, and walking in the street, he had a slight chill, which was very soon followed by high fever, and while in the febrile stage the sight of the *left* eye began to fail, and in fifteen minutes he was entirely blind. When I saw him the examination revealed: R. E., $\frac{2}{40}$. L. E., perception of light; tension + 1. Several filiform and membraniform opacities in right vitreous, and peripheral choroidal atrophy. In left eye, dull reflex from fundus at periphery, and vitreous full of blood. No cardiac or renal disease. Liver enlarged. Refraction hypermetropic, D. 1.50.

Case II.—F. K.——, aged sixty-eight, farmer; first seen August 10, 1874. When a young man he had intermittent fever of the ordinary tertian type, while living in New Jersey, which obstinately resisted treatment until a sea-voyage of some duration broke it up. Subsequently he settled in Indiana, and during his residence there on a farm became subject to severe chills and fever. Has had a number of attacks of loss of sight in both eyes, but does not remember how long they lasted. Thinks his vision much impaired in *left* eye. One week ago vision in *right* eye began to fail very rapidly, while suffering from the second stage of an attack of fever. Examination showed: R. E., $\frac{1}{200}$; tension + 1; blood in anterior chamber; large hemorrhage in vitreous; peripheral choroidal atrophy. L. E., $\frac{2}{200}$; extensive peripheral choroidal atrophy; two small membranes extending diagonally across vitreous in the axis of vision, apparently attached downward and backward to retina on temporal side; small recent hemorrhage in vitreous, just above and behind the lens on nasal side; tension normal; myopia, D. 1. Hypertrophy of left side of heart. Atheroma of arteries at wrist and temple. No renal disease. This patient was under observation only for a brief period of three months, during which time there was scarcely any improvement of vision and no change in fundus.

Case III.—L. S——, aged forty-five; first seen June 25, 1878. Patient resident for many years in Central America, though of German birth. Repeated attacks of congestive fever, and three attacks of serious loss of sight in *left* eye, with only partial restoration of vision. Eight days before I saw the patient he had rather a violent febrile attack, with sudden and complete loss of sight in the *left* eye, but no pain. This total blindness in *left* eye lasted

three days, and then slow improvement set in. Examination showed: R. E., $\frac{20}{20}$; media clear and fundus healthy except at periphery, where there were [illegible] of local choroidal atrophy. L. E., movements of the hand; tension [illegible]; in vitreous one large clot and several [illegible] smaller clots. Emmetropia R. E. No cardiac or renal disease.

Vision in this case improved very slowly. At the end of ten months it was $\frac{20}{70}$, and at the end of two years $\frac{10}{200}$. The vitreous of the L. E. showed a large floating membrane, which was thicker in some places than in others, and was apparently attached both at the equatorial region and at the optic disk.

Case IV.—S. M. L——, aged forty-six, native of Arkansas; first seen July 17, 1878. Has been subject all her life to congestive chills, but never had any failure of vision till eight months ago, when she suddenly lost the sight of the *left* eye while in one of her attacks. From this she slowly recovered. Four weeks ago, while suffering from an attack of fever, she again lost the sight of *left* eye entirely, and of the *right* eye partially. The *left* eye remained entirely blind for six days, and then vision began slowly to return. An examination showed: R. E., $\frac{20}{200}$; small recent hemorrhage in the vitreous near the retina, and exactly in axis of vision; refraction hypermetropic. L. E, fingers at 6″ eccentrically; large clot in vitreous obscuring entire fundus except at equator. No cardiac or renal lesion. Liver and spleen both enlarged. Choroidal atrophy at periphery. This patient has never had any recurrence of the hemorrhages, and when last seen vision was, in R. E. $\frac{20}{60}$—; L. E., $\frac{20}{200}$, with a somewhat thick membranous band stretching across the centre of the vitreous, which was perforated by several holes, through which the fundus was visible.

Case V.—C. K——, aged forty-three, steward of steamer; first seen February 14, 1879. For the last twelve years has been subject to congestive chills, which he attributes to an attack of yellow fever which he contracted at Vera Cruz. Has never had any trouble with his vision till ten days ago, when, after a violent chill and equally violent fever, he noticed an obscuration of vision of *left* eye which rapidly grew worse, and on the next morning he could not even see light. Vision began to improve on the sixth day. Examination showed: R. E., $\frac{20}{20}$; media and fundus normal; refraction hypermetropic. L. E., movements of hand; vitreous filled with floating blood-clots. No cardiac or renal disease, but spleen much enlarged.

This patient in the course of seven months had four hemorrhages into the vitreous of the L. E. He was then free from attacks of fever for nearly two years, during which vision in L. E. rose to $\frac{20}{40}$. Then came another hemorrhage entirely filling the vitreous, and when last seen, now some years ago, vision had sunk to $\frac{5}{200}$ in L. E.

Case VI.—A. M——, aged forty-five, sailor; first seen December 3, 1879. Has had several severe attacks of congestive intermittent fever while in tropical climates, the last being about eight months ago, while on the west coast of Africa. During this last attack he lost the sight of the *right* eye entirely. The loss of sight was sudden and complete within a few minutes. The eye also became bloodshot, and remained so for some weeks. Two weeks ago, while on shipboard, he had another chill followed by high fever, and again lost the sight of the *right* eye, which had partially recovered from the previous attack. Examination showed: R. E., $\frac{4}{200}$; tension normal; no reflex from the fundus except at the extreme periphery; small hemorrhage in the anterior chamber, and the vitreous full of blood. L. E., $\frac{20}{20}$; media and fundus normal; refraction hypermetropic. No cardiac or renal disease, but the man's appearance and complexion is that of one saturated with miasmatic poisoning.

In this case vision in the R. E. improved to $\frac{20}{100}$ in fourteen months, but since then there has been no improvement.

Case VII.—B. M——, aged fifty, civil engineer; first seen August 9, 1880. Was healthy up to four years ago, when he contracted congestive chills while in Mexico. For more than a year was unable to do any work. Two months ago, during an attack, vision suddenly failed in the *right* eye, and in about an hour he had only perception of light. Examination showed: R. E., $\frac{20}{50}$; tension normal; numerous small floating clots in the vitreous; choroidal atrophy at the periphery. L. E., $\frac{20}{30}$; faint opaque striæ at periphery of lens; peripheral choroidal atrophy; refraction emmetropic. No cardiac disease and no renal disease, but liver and spleen somewhat hypertrophied.

June 17, 1881.—Sudden and extensive hemorrhage into the vitreous of *right* eye four days ago, which now seems limited to the nasal half of fundus. V. = $\frac{10}{200}$ eccentrically. This case is one of the very few I have seen in which there has apparently never been any absorption of the extravasated blood. The patient was under observation at very long intervals for nearly five years, and at the last visit the vision of the R. E. was $\frac{10}{200}$, and the blood in the vitreous did not show any change.

Case VIII.—B. G——, aged forty-three. First seen October 4, 1880. First attack of fever ten years ago, and has never been free from it since. First failure of sight in *left* eye seven months ago, from which she partially recovered. Another attack, accompanied by loss of sight, three months ago, and again a sudden and complete loss of sight eight days ago, from which, however, she has already begun to recover. Examination shows: R. E., $\frac{20}{20}$; media and fundus normal; refraction emmetropic. L. E., $\frac{10}{200}$; blood in the anterior chamber and a large clot in the vitreous. Patient emaciated and very feeble. Heart-sounds faint and circulation very sluggish, but no murmurs and no hypertrophy. Enlarged spleen. No renal disease.

This patient has been seen at long intervals since—the last time in May, 1886. An examination then showed: R. E., $\frac{20}{30}$, with some peripheral choroidal atrophy. L. E., $\frac{10}{200}$; large diaphanous membrane in vitreous; the remains of the old blood-clot, and some floating opacities, still tinged with blood, the remains of more recent hemorrhages. She still suffers from chills and fever.

Case IX.—M. N——, aged forty-three, clerk; first seen October 25, 1880. Subject to intermittent fever for many years, but has never lost his sight entirely, although he has had attacks of partial failure of vision on several occasions. One week ago had a violent attack of fever, and suddenly noticed a large black spot before the *left* eye, which rapidly grew larger and soon obscured the entire sight. Examination showed: R. E., $\frac{20}{30}$; hazy vitreous, with what was apparently a small blood-clot. L. E., $\frac{1}{200}$ eccentrically, and vitreous filled with blood; faint reflex at extreme periphery. No cardiac or renal disease.

This patient was under observation daily for about three weeks, and then at long intervals for nearly two years, since which time he has not been seen. During the two years he had several slight attacks of loss of sight in L. E. At date of last visit examination showed: R. E., $\frac{20}{30}$. L. E., $\frac{10}{200}$, with both fixed and floating opacities in the vitreous, and a general haziness which obscured most of the fundus.

Case X.—H. G——, aged sixty-four, captain of a sailing vessel; first seen in February 25, 1882. Has had several attacks of Chagres fever and one of yellow fever, and in all of them had loss of vision, though never complete. Thinks he has never regained the sight of the *right* eye entirely since the attack of Chagres fever nine years ago. Ten days ago, while at sea and recovering from a chill, there was sudden and complete loss of vision in the right eye. Examination showed: R. E., movements of the hand; fundus absolutely invisible. L. E., $\frac{20}{40}$; Ht. D. 1; considerable atrophy of choroid at periphery; two semi-transparent delicate membranes in the vitreous, the remains probably of former hemorrhages; faint striæ at periphery of lens.

No renal disease, but has hypertrophy of left side of

heart. This patient was under observation for about five months, during which time there was no apparent absorption of the blood in the vitreous of R. E. He was again seen in April, 1884, and then vision in R. E. had risen to $\frac{20}{200}$, with some floating opacities and one large membraniform opacity attached to disk.

Case XI.—J. F——, aged fifty-eight, discharged soldier; first seen February 12, 1883. Contracted fever first while in the army during the Civil War, along the Red River. Subsequently was transferred to the Army of the Potomac, and suffered severely in the swamps of the Chickahominy region. Has never lost the vision of either eye entirely, but has had repeated attacks of partial failure of sight, always during a febrile attack. Has had no distinct attack of fever for several years, though he has had chilly feelings. Three days ago, while complaining of a congested feeling in his head, he suddenly and entirely lost the sight of the *left* eye. Examination showed: R. E., $\frac{20}{40}$+; hypermetropic; choroidal atrophy. L. E., perception of light; vitreous filled with blood; no reflex; tension + 1.

Patient has had muscular rheumatism, but has no organic heart disease. Repeated examinations of the urine show a faint trace of albumen but no casts.

Patient last seen in July, 1885. He had had two attacks of hemorrhage into the vitreous since his first visit to me, in both of which I saw him. Vision at last visit: R. E., $\frac{20}{30}$. L. E., $\frac{15}{200}$; clots and membrane in vitreous.

Case XII.—B. G——, aged forty-four; first seen March 26, 1883. Subject to repeated attacks of intermittent fever of the regular tertian type for many years. First loss of sight two years ago, in *left* eye, during an attack of fever. Second attack about ten months ago in same eye. Third attack two days ago in same eye. Examination showed: R. E., $\frac{20}{20}$; media clear; fundus normal; refraction emmetropic. L. E., $\frac{1}{200}$ eccentrically, eye slightly divergent; fresh hemorrhage into vitreous, and membranous remains of former hemorrhages. Patient thinks that the divergence of L. E. came on after the second attack of loss of sight ten months ago. This patient is in fairly good condition, in spite of the long continuance of the malarial poison in his system. No cardiac or renal disease. Slight tendency to chronic diarrhœa. No choroidal atrophy. This patient was last seen eight months ago, two years after the last hemorrhage, and the absorption had proceeded so slowly that in L. E. V. = $\frac{1}{200}$, and the details of the fundus were still so indistinct that no exact idea of the condition of the choroid and retina could be obtained.

Case XIII.—P. McB——, aged forty, carpenter; first seen April 16, 1883. Contracted intermittent fever of a virulent type three years ago, and with the third attack had loss of sight in the *left* eye, from which he says he entirely recovered. After that he had repeated attacks in the same eye, generally slight, and always during or after a febrile attack. The last attack occurred three weeks ago, and was the most severe he had ever had.

Examination shows: R. E., $\frac{20}{30}$. L. E., $\frac{2}{200}$. Media of R. E. clear, but in the L. E. a large floating clot and numerous thin, almost transparent filaments, the remains probably of former hemorrhages. Refraction hypermetropic. No cardiac or renal disease. No apparent enlargement of liver or spleen. Vigorous treatment, persisted in for about four months, succeeded in curing this case as far as the febrile attacks were concerned, and there was no recurrence of the hemorrhage into the vitreous. This patient was seen during the past summer, but vision in the L. E. had only improved to $\frac{15}{200}$, with no distinct view of the fundus.

Case XIV.—R. S——, aged fifty-six; first seen December 31, 1883. Subject to "congestive chills" for some years, contracted in southwestern Missouri. Has had repeated attacks of partial and transient loss of sight, lasting for a few weeks. Sudden failure of vision in right eye two days ago. Has rather marked yellow complexion, and is very thin.

Examination shows; R. E., $\frac{20}{200}$: faint reflex from fundus; large clot in vitreous. L. E., $\frac{20}{40}$; choroidal atrophy at periphery; small membranous opacities in vitreous. Faint striæ at periphery of both lenses. Refraction, myopic. No cardiac or renal disease. Spleen enlarged. General nutrition depraved. This patient did not recover from the attacks of intermittent fever till the spring of 1885. Between December, 31, 1883, and March 20, 1885, there occurred two hemorrhages into the vitreous. The patient was last seen in November, 1885, when the vision of R. E. was $\frac{8}{200}$, and that of the L. E. was unchanged. The absorption of the blood was very slow.

Case XV.—M. E——, aged forty-seven; first seen November 16, 1885. Always in feeble health, neuralgic, and dyspeptic, but had never had any symptoms of malarial poisoning until the preceding August, while in a low, swampy region. She was exposed one evening to a wetting, and that night had a violent chill, followed by high fever. The next afternoon the chill was repeated and during the febrile paroxysm she suddenly lost the sight of the *left* eye, and has only recently begun to regain it. Examination showed: R. E., $\frac{20}{30}$; faint opacities at lens peripherally; ash. of D. 1; axis 90°. L. E., perception of light; faint reflex from equatorial region; vitreous filled with blood. This patient has no cardiac or renal disease, and no demonstrable engorgement of either liver or spleen. The menopause has not yet begun. Radial pulse feeble and irregular; complexion muddy.

This patient was last seen in June, 1886. At that time R. E., $\frac{20}{30}$+. L. E., $\frac{1}{200}$; faint signs of choroidal atrophy at periphery of both eyes; absorption of hemorrhage in L. E. proceeding very slowly; fundus entirely indistinct.

Case XVI.—C. R. F——, aged forty; first seen February 1, 1886. Has had repeated transient loss of sight in one or the other eye, always during a febrile paroxysm, so that, as he said, "he had come to expect it." Subject to severe attacks of intermittent fever, in some of which he was unconscious during a period of about three years. The last attack was one week ago, and was not particularly severe, but was followed by a sudden loss of sight more serious than for a long period.

Examination showed: R. E., $\frac{20}{40}$; small, fixed, and floating opacities in vitreous; choroidal atrophy at periphery. L. E., $\frac{20}{200}$; large clot floating in vitreous; choroidal atrophy. Refraction of R. E. hypermetropic. This patient has no cardiac disease or renal disease demonstrable. Has always been subject to "fever and ague," and the spleen seems slightly enlarged. The blood-current seems feeble, and the general nutrition of the patient much below par. This patient was last seen during the latter part of September, and then vision was unchanged. There did not seem to have been any fresh hemorrhage, and no attempt at absorption had taken place.

Case XVII.—L. C. G——, aged fifty-two; first seen May 17, 1886. Patient has just arrived from Panama. Has had Chagres fever twice; the second time with loss of sight in *right* eye, four years ago, from which he has never entirely recovered. Three weeks ago, while in the interior, had a violent attack of fever, during which he entirely lost sight of *left* eye. Had to be carried on board the vessel sailing for home. During the voyage there was a slight improvement of the vision.

Examination shows: R. E., $\frac{20}{40}$; a small, long, membranous opacity in vitreous, almost diaphanous, and apparently fixed to retina. L. E., fingers eccentrically at two feet; large floating clots in vitreous, and a general haziness, so that no detail of fundus can be seen. Refraction cannot be estimated, probably hypermetropic. Heart and kidneys apparently normal, but the liver, and especially the spleen, are enlarged. This patient is still under observation; vision in R. E. remains the same, but in the L. E. has increased to $\frac{1}{200}$. Very little absorption of the blood-clot in the vitreous.

As regards the *treatment* of these cases there is little

to be hoped for owing to the age of the patients, the atrophic choroiditis, and the consequent retardation and incompleteness of the process of absorption. Wecker was the first to recommend the internal administration of an infusion of jaborandi, and subsequently the hypodermatic injection of the salts of pilocarpine, for chronic vitreous opacities, other than hemorrhagic, so frequently met with in inflammations of the uveal tract; and he subsequently advised their employment in the treatment of the remains of hemorrhages into the vitreous. But hypodermatic injections of pilocarpine should always be employed with great care, and the daily dose should be increased very cautiously for fear of the occurrence of collapse from heart-failure. I cannot recall a single case in which the absorptive process was hastened by the use of this remedy in chronic cases, and I have seen some alarming instances of collapse from its employment. I have seen no benefit arise from the use of diuretics or purgatives, even when continued for a long time in small doses largely diluted. The few partially satisfactory results which I have gained in these cases have apparently been due to the strict attention paid to the dietetic and hygienic management of the patient, such as dry massage with a coarse towel or hair gloves twice or oftener during the day, and the ingestion of food that was easily assimilated; systematic daily exercise in the open air when the weather permitted, and abstinence from all use of the eyes for close work. Whenever there was a recurrence of the hemorrhage, rest in bed for a few days and the application of a pressure-bandage for a few hours daily seemed to be indicated, and perhaps succeeded in checking the extravasation. A pressure-bandage, however, is not borne well by these patients for more than a few hours at a time. Much has been claimed for the continuous current in promoting the absorption of these opacities, but in my experience it has completely failed. Le Fort, Onimus, and Giraud-Teulon have reported some remarkable results; but Onimus also states that an ill-timed employment of the continuous current has been known to increase the opacities of the vitreous. He thinks that the centrifugal current is the only one which possesses the power of clearing up these opacities of the vitreous—that is, where the negative electrode is placed upon the closed lids, and the positive electrode behind the ears or at the nape of the neck; and the current should not be passed for more than two or three minutes, for fear of increasing the turbidity of the vitreous. In not a single one of the cases which have come under my own observation was any improvement noted from this method of treatment, though carefully carried out and in every instance followed by an ophthalmoscopic examination.

Sudden Development of a Talent.—In a recent work on "The Colloquial Faculty for Languages, Cerebral Localization, and the Nature of Genius," Dr. W. H. Walshe relates an instance of a youth, living in the north of England, who, having previously displayed but feeble, if any, taste for art, suddenly, during a winter spent in Algeria, became a painter. "The luminosity of the atmosphere, the clearly far-lit landscape, the sharp outlines, the deep shadows, the brilliant colorations, the Moorish architecture, the picturesque draperies, unwonted attitudes, gesticulations, and groupings, either solemn or comical, of the natives—all combined, in their powerful contrast to his past experience of a humdrum land of gloom, to abruptly stimulate into wakeful life the hitherto dormant brain-cells of the pictorial craft."

A Good Idea for County Medical Societies.—The Cincinnati *Lancet-Clinic* says that the Noble County (Ind.) Medical Society receives $500 a year for all the sick paupers in the county. The member nearest the pauper treats the same. The money is used for building up a society library.

THE TREATMENT OF SUBSTANTIVE EMPHYSEMA.[1]

BY FRANCIS DELAFIELD, M.D.,

On October 21st I read before the Academy of Medicine a paper on Pulmonary Emphysema, and showed, with the lantern, sections of emphysematous lungs. I advanced the view that in substantive emphysema we have a disease which is, both clinically and anatomically, entirely different from the other forms of pulmonary emphysema; that with this form of emphysema, as with chronic Bright's disease, the condition of the vascular system is a matter of great importance; and that substantive emphysema is really a chronic interstitial pneumonia.

Such a view of the nature of the disease is not altogether new, for among the best observers we find many who have recognized that a mere dilatation of the air-spaces could not be the whole of the disease.

Thus Rokitansky[2] describes a form of emphysema characterized by the production of interstitial connective tissue, and says that the symptoms are due partly to this growth of new tissue.

Andral[3] looked upon the condition as one of both hypertrophy and atrophy of the lung-tissue. Louis describes the dyspnœa as due to an hypertrophy of the walls of the air-sacs. Sir William Jenner[4] says that the most frequent anatomical change in the lungs is fibrous degeneration.

Waters[5] says that there can be no doubt that lobar emphysema is a malady resulting from some form of malnutrition of the lung-tissue; that it is of a constitutional nature. He gives altogether the best description of substantive emphysema that exists, especially of its clinical features, and of the cases without cough but with the development of a general cachexia.

But yet it has seemed difficult for anyone to fairly admit that there is a special chronic disease of the lung, belonging to the class of chronic inflammations, and for which substantive or lobar emphysema is the only name which we yet have.

In speaking of the treatment of substantive emphysema, therefore, it will be understood that I exclude the consideration of all other varieties of emphysema, and that it is my object rather to establish a rational basis for treatment than to recommend new remedies.

Before speaking of the treatment, however, we must call to mind what is the natural course of the disease.

We find that in some persons the changes in the lungs are developed slowly and gradually, the disease never amounts to more than an inconvenience, and death is due to other causes.

In other persons there are never any marked pulmonary symptoms, but simply a gradual failure of health and strength, with anæmia.

In still others, dyspnœa, asthmatic attacks, bronchitis, and general venous congestion are developed in varying degrees of severity.

In many of the cases chronic endarteritis and the disposition to increased arterial tension exist as complicating conditions.

The conditions which demand treatment in substantive emphysema I should enumerate as follows:

1. The chronic inflammation of the lungs.
2. The constant dyspnœa.
3. The asthmatic attacks.
4. The bronchitis.
5. The venous congestion.

1. The chronic inflammation of the lungs.—It is evident at the outset that this inflammation, like that of chronic nephritis or of chronic endocarditis, is one which

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it is difficult to stop or control; and that the results of the inflammation, when once effected, are not likely to be changed.

On the other hand, it is to be remembered that, although such lesions exist, it is possible for the general health of the patient to remain good; so that it is well worth our efforts to put such patients under the most favorable conditions. Such conditions seem to be an out-of-door life in a suitable climate, abstinence from alcohol and tobacco, and partial abstinence from sugars and starches.

I have never believed that any drugs have a direct effect upon the structural changes in the lungs when they are once established, although it is very probable that drugs, such as iron and cod-liver oil, by improving the general health, may indirectly delay or modify the progress of the disease of the lung.

From a theoretical point of view, the treatment by compressed air should be that which exerts the most direct effect. For the inspiration of compressed air is said to diminish the quantity of blood in the lungs, and the expiration into rarefied air to increase it; so that by the alternate use of compressed and rarefied air the pulmonary circulation would be made much more active, and such activity might well be followed by a change for the better in the nutrition of the lung-tissues.

Experience, however, has not entirely settled the value of this plan of treatment. While some claim good and permanent results, others have been less successful.

My own attempts in this direction have been with compressed oxygen-gas instead of compressed air. This has seemed to me in some cases to be of real service.

2. *The constant dyspnœa, including the dyspnœa excited by exertion and by indigestion.*—In observing this dyspnœa, one is at once struck by the different ways in which it behaves in different patients. The breathing may be noiseless, or whistling; the movements of the thorax may be exaggerated, or quite natural; the patient may complain bitterly of the need for more air, or he may assert that his breathing does not trouble him at all.

This dyspnœa seems to be due to: (*a*) Anatomical changes in the lung-tissue which impair its functions as the organ of breathing. These changes are a thickening and thinning of the walls of the air-spaces, with more or less dilatation of their cavities; a thickening of the walls of the bronchi, and often a dilatation and congestion of the blood-vessels in the stroma of their mucous membrane. (*b*) Changes in the condition of the walls of the arteries, both in the lungs and in the aortic system—chronic endarteritis, rigidity, and contraction. A good example of this is furnished by those persons who, while suffering from emphysema, chronic endarteritis, and chronic nephritis, yet are in comparative comfort until high arterial tension is developed. Then both pulmonary and renal symptoms make their appearance.

Still further, constant dyspnœa may exist for a long time, and dilatation and hypertrophy of the right ventricle of the heart show that there is an obstruction to the passage of blood through the lungs; and yet, after death we find but little dilatation of the air-spaces, and can make a complete artificial injection of the lungs. This would point to a contraction of the pulmonary vessels which existed during life and disappeared after death.

For the improvement of the anatomical changes in the lungs the methods of treatment already enumerated are indicated. For the condition of the arteries, the drugs which we know by experience diminish increased arterial tension—the iodide of potash, chloral hydrate, belladonna, and opium.

3. *The asthmatic attacks.*—The causes of the attacks of asthma seem to be: (*a*) Spasmodic contraction of the bronchi. This would appear more likely to occur in those cases in which the walls of the bronchi had not been thickened and rendered rigid by chronic inflammation. To relax such a bronchial contraction the proper remedies are: The inhalation of the fumes of stramonium and the nitrate of potash, and of chloroform and ether; the internal use of emetics, of belladonna, the compound spirits of ether, and opium.

(*b*) Venous congestion of the stroma of the mucous membrane of the bronchi. The condition of the wall of the bronchi after death, in many cases of emphysema, suggests very strongly that their calibre can be suddenly and decidedly diminished during life by congestion of the stroma of the mucous membrane; for the walls of the bronchi are thickened and rigid, and the stroma of the mucous membrane is so filled with large vessels as almost to resemble erectile tissue. To relieve such venous congestion we naturally use the drugs which cause a large and rapid production of mucus from the bronchi, such as lobelia and grindelia robusta; the rapid determination of blood to the surface of the body by dry cups, and the drugs which stimulate the heart, such as caffeine, convallaria, and digitalis.

(*c*) A spasmodic contraction of the smaller branches of the pulmonary artery, a condition similar to the contraction of the smaller arteries of the aortic system which is seen in angina pectoris and in uræmic attacks. To overcome such a contraction we use the remedies which diminish arterial tension—amyl nitrite, chloral hydrate, potassium iodide, and opium.

(*d*) Some emphysematous persons only have asthma when they have an attack of acute bronchitis. In such cases the indication evidently is to treat the bronchitis.

(*e*) There are some persons in whom inflammatory changes in the nose seem to have a large share in producing the attacks of asthma. In such persons, of course, the nose should be properly treated.

4. *The chronic bronchitis.*—This is a very important feature in many cases of emphysema. In many patients it is the symptom which demands treatment more than any other. Like the chronic catarrhal inflammations of other mucous membranes, it exhibits a marked tendency to continue and to relapse; and, like them, it is favorably affected by climate and mode of life rather than by drugs.

5. The establishment of general venous congestion and of loss of nutrition and anæmia.

These conditions, fortunately, are not developed in all cases of emphysema. They mark the worst forms of the disease, the form which is regularly fatal. There is failure, dilatation, and hypertrophy of the right ventricle, sometimes of the left ventricle also. The blood accumulates in the veins and leaves the arteries. The patient becomes feeble, emaciated, dropsical, and anæmic. In such cases we may, perhaps, put off the evil day for a time, but not for very long.

The indications seem to be to use cardiac stimulants—caffeine, convallaria, and digitalis; to improve the nutrition with iron, oxygen, and fats; and to cause the patients to live in the most favorable climates.

He Never Advertised.—"Good-morning, gentlemen," said the doctor, as he walked into the newspaper office, "is the city editor in? Ah, yes, I see. Mr. Huntemup, there was an accident on Fremont Avenue this afternoon that I thought you would like to hear of. Mrs. John Peduncle was thrown out of her carriage and sustained a compound fracture of the right clavicle. She was taken home and medical aid summoned. Her injuries were skilfully attended to, and she is now resting easily. You might say that I was called and have charge of the case." "By the way, doctor," said the advertising manager, looking up from his books, "I would like to insert an advertisement for you in the *Banner*. I'll let you have it a year for $30 an inch, payable——" "Sir," interrupted the doctor, with a scowl, "I never advertise. It is contrary to medical ethics. Good-day, gentlemen!"—*The Canadian Practitioner.*

THE VENEREAL DISEASES OF THE RECTUM AND ANUS.

BY CHARLES B. KELSEY, M.D.

THE venereal diseases of the rectum constitute a study which has never yet been mastered by either the syphilographer or the student of diseases of the rectum. Each has contributed a certain amount of information acquired by personal experience, but neither has ever completely covered the whole ground.

The difficulty with the syphilographer in general is that he is not thoroughly familiar with rectal exploration and diagnosis, and with the rectal specialist that he is not an authority on venereal diseases. Many manifestations of syphilis escape the former, because, as a rule, they are out of his field of vision and beyond the reach of his usual examinations; while many are brought to the notice of the latter, not at all because they are venereal but because they cause pain and trouble with the rectum.

For this reason it has seemed to me that a review of the whole subject might be profitable to the general reader, not so much from anything original which it may contain as from a concise statement of what is definitely known and what is still to be learned. The field of observation is one in which every observer's clinical experience is of the highest value, for many of the points which still give rise to debate may easily be settled by a few accurately reported cases. It is in the hope of exciting such observation and clinical report and of pointing out the special points upon which clinical observation is most needed, that the following article is contributed.

The term venereal diseases will be used here in its broadest sense, as including all those affections referable to, or directly caused by, the sexual act, and the number of such is very considerable, for there is scarcely any manifestation of venereal disease capable of affecting the soft tissues which has not at some time been observed in the rectum or anus.

Before considering the various forms in detail, a few words are almost unavoidable as to the modes of their acquirement. Some of them are local, some are the manifestations of a constitutional poison. The local ones may be acquired by accidental contact or by the practice of unnatural sexual vice. However disgusting this last phase of the etiology of venereal disease may be, it cannot be set aside as a matter of ancient history nor utterly disregarded in the practice of medicine of the present day.

For statistics regarding the extent of these unnatural practices we are in great measure dependent upon the French and German writers upon legal medicine. All through French medical literature we find references to sodomy and pæderasty as common crimes, about the existence of which there can be no discussion. Kocher, in his work "De la Criminalité chez les Arabes," begins his chapter on this subject with the concise statement, "Like all the people of the Orient the Arab is a sodomist," and remarks on the special frequency of the habit in those countries where polygamy is allowed, using the apt expression, "moral hermaphrodite," for a man addicted to the practice. He quotes Bertheraud in calling attention to a peculiarity in the dress of the Arabian pæderast. The ample Turkish pantaloons are provided with an opening at the site of the anus, which, together with the stains surrounding it, constitutes valuable legal evidence.

The most important statistics, however, come from France. Martineau[1] says: "The frequency of sodomy is great, as you may judge from the cases seen every day in my service. Since my lectures on this subject in 1881, I say it with regret, deformities of the anus due to this act against nature, have become more and more numerous, proving that these libidinous practices increase from day to day. If I dare express the results of my observations I should say that for many years I had noticed an evident increase in these acts. Saphism, lavage, and sodomy grow in unheard-of proportions." Out of 1,170 observations made during the year 1880 he found 500 cases of vulvar or anal deformities, due to masturbation, saphism, or sodomy.

Tardieu[2] numbers his cases of pæderasty by the hundreds, and classifies them as follows: Passive, 139; active, 32; both active and passive combined, 101; not mentioned, 30. Of these 302 cases 78 were servants, 54 shopkeepers, 16 soldiers, 12 tailors, and 142 others belonged to 60 different trades. As to age, 32 were under 15 years, 88 between 15 and 25, 40 between 25 and 35, 39 between 35 and 45, 35 between 45 and 55, 6 between 55 and 65, 5 between 65 and 70, and 57 not mentioned.

These figures may be open to criticism, as may the statements of Martineau, on the ground that both believe so implicitly in the physical changes supposed to result from the habit that they may have argued backward from certain appearances of the anus to the existence of the vice, and in some cases the inference may not have been correct.

A few words as to the exact uses of terms. Sodomy is a general term for all forms of unnatural intercourse, regardless of the sex of the parties. It is also applied to intercourse between the human race of either sex and the lower animals, and in current literature has too general an application to convey any definite idea of the particular form of vice indulged in. In its more correct and limited application it refers to the act of sexual intercourse *per rectum*, where the passive party is a woman and the active a man.

Pæderasty, properly defined, is rectal intercourse where both parties are males. The Greek παις signifies a youth, and not necessarily a boy; but in modern literature the word is applied only to males, and without regard to age. The terms active and passive, as applied to pæderasts, sufficiently explain themselves.

Buggery, sometimes used synonymously with sodomy, means properly, sexual intercourse with one of the lower animals. It is derived from the French *Bougre*, the name of a religious sect in Eastern Europe—the Bulgarians—but is not held as any imputation against their practices. Of this vice there are many forms, some of them of direct interest in this study, and others not.

Greek-love is another name for pæderasty, the practice having come into Greece from the older civilization of the East.

Besides these practices there is one other—rectal masturbation—which is of direct interest in causing the lesions about to be described.

The existence of these habits is explained by the physiological fact that a certain degree of sexual orgasm may be excited in either sex by the irritation of the rectum and anus. It may be safely assumed that no man would give himself up habitually to be the passive party in this practice unless such were the case. The habit of rectal masturbation (the irritation of the anus and rectum by the introduction of foreign bodies such as bottles, candles, or sticks of wood, can only be accounted for in this way. There are, moreover, some clinical observations which seem to indicate that the capability of producing an orgasm in this way may outlast the natural sexual power. The men addicted to rectal masturbation are generally old and sexually incompetent.

The following case, reported by myself at a recent meeting of the Clinical Society, is one in point.

A man in the middle class of life, the steward of a steamboat, forty-five years of age, fat, round, and flabby, consulted me about an occasional loss of blood and considerable pain during and after defecation. The most careful examination failed to detect any lesion, both anus and rectum seeming perfectly normal. After prolonged

[1] [illegible]

[2] [illegible]

questioning I was about to give up the diagnosis in despair, when the patient, seeing my evident perplexity, suggested that perhaps he ought to tell me one thing. It was this: He had practised masturbation during the early years of his life, but about fifteen years ago he had begun the practice of passive pæderasty, and had continued it steadily ever since. For some time he had noticed that each indulgence was followed by pain and hemorrhage. What he really wanted to know was whether he had received any physical injury or acquired any venereal disease. He was a married man, but without active sexual power.[1]

The voluntary practice of these vices being thus accounted for, there still remain many cases in which their existence is to be explained in other ways. Male children and physically weak male adults have not infrequently been made the passive parties by force and violence. Many women submit to it from love of gain, and others, when married, because forced to do so by the unnatural demands of the husband. The fear of pregnancy, vaginismus, imperforate hymen, or any painful disease of the vagina may account for the practice. But these explanations are by no means sufficient to account for all cases, for Martineau refers to the fact that in certain countries of Europe, Asia, and Africa young girls, from the age of eight upward, give themselves freely to anal intercourse, because the shame of this habit is less than that which would attach to the fact of having lost their virginity, when they came to be married.

There are many points at which this subject comes within the field of the alienist and neurologist, rather than that of the surgeon. It is easier to understand why a man or woman should submit to rectal intercourse, than why a man should practise sodomy upon a woman, often his wife. That the sexual appetite is capable of almost every conceivable perversion, history only too clearly proves.

As to the existence and extent of these practices in this country, but little is known and less has been written. This very ignorance on the part of physicians, and lack of medical literature on the subject, go far to prove that the vice cannot have reached any such proportions here as must be the case in France, to justify Martineau's statement that, although the practice is particularly common among prostitutes, it is no necessary part of their profession, and that he sees much of it among women whose social habits and standing remove them from all suspicion of unnatural practices, and in cases where, unless the physician has made an attentive study of anal deformities, he is liable to misconstrue the origin of the local and general symptoms which depend on the act.

Sodomy here must be sought for among prostitutes, and pæderasty where bodies of men and boys are banded together and separated from the opposite sex for a long time, as on board ship.

The French writers describe in detail the changes, malformations, and diseases of the rectum and anus produced by this practice, and it is on account of these only that this subject has been introduced. It is a well-attested fact that all of the supposed physical signs of the vice may be absent in those who have practised it for years. The case reported by myself is one in point, and Kocher calls especial attention to the fact that among the Arab pæderasts all of these signs are generally absent. Ligg[2] describes a deaf-mute, thirty-five or forty years old, the victim of this habit, whose anus showed no trace of traumatism, and was well closed, being marked only by an absence of the radiating folds. The mucous membrane of the rectum was also normal.

Although there is a perfectly normal type of anus, the changes which may be found in it without indicating disease are numerous. The tonicity of the sphincter differs greatly in different people in health. In some a Sims No. 8 speculum may be introduced without pain, while others can hardly tolerate the index-finger. In some patients the radiating folds of skin are very strongly marked, while in others they are entirely absent; and the depth of the anal depression varies most strikingly in different people.

The changes which unnatural intercourse is supposed to produce are relaxation of the sphincter, disappearance of the radiating folds, and an infundibuliform shape of the anus, together with, in more marked cases, fissures, lacerations, abrasions, ecchymoses, ulceration abscess, hemorrhoids, fistulæ, and incontinence. There is no doubt but that all of them may be produced in this way, but only under extreme conditions. It certainly would lead to error, however, to infer the existence of an unnatural practice from a lax sphincter or an absence of radiating folds in every case, or even in the majority of cases. In studying these changes, and their value in diagnosis, it will be safer to admit that although the prolonged practice of the vice may certainly cause them to appear, they may still all be absent in old cases; and their mere presence will seldom constitute proof of the practice without additional evidence, usually only to be obtained from the confession of the patient.

The physical signs which indicate this vice are of two kinds—those due to physical violence and those due to direct contagion of venereal poison. The former will vary according to the age of the passive party, the tightness of the sphincter, the size of the male organ, the amount of violence used, etc., and also according to the frequency of the act. In a young child, and sometimes in an adult, the injury may amount to actual laceration, and may be attended by profuse hemorrhage in consequence; but it is more apt to show itself in abrasions, bruising of the parts, and ecchymoses. These injuries may be followed by abscess, and hence by resulting fistulæ. A case of ischio-rectal abscess was called to my attention not long since, supposed to be caused in this way, and, at all events, occurring in a confessed pæderast. In less marked cases a single act may be followed by pain in the rectum, increased by defecation, tenderness to the touch, slight erosions, and, perhaps, by a slight sero-sanguinolent or mucous discharge. In cases of long-continued practice, where marked changes have been caused, the physical signs are of a different character. Tardieu illustrates his work with a plate of a patulous anus, in which the sphincter is entirely paralyzed, and Burgeon[3] describes the rectum of an idiot, who for a considerable time had practised the vice, as much dilated and infundibuliform in shape, the mucous membrane being blackish, swollen, and ulcerated in spots, and the submucous and muscular layers hypertrophied to four or five lines in thickness. In such cases there will be incontinence of gas and fæces, fistulæ, and, perhaps, stricture following the ulceration.

With regard to the diagnosis in these cases it will be seen that none of the signs enumerated are absolutely diagnostic, though they may be sufficiently so to excite the strongest suspicion. Pæderasts are said to recognize each other almost invariably, and certain general characteristics are said to be common among them, such as an affectation of femininity, the use of perfumes, wearing of jewelry, a mincing gait, curled locks, exposed neck, etc.; but about the only absolute proof of the habit when it is denied by the criminal is the finding of spermatozoa either on the mucous membrane of the rectum or in the discharge from it.

The injuries caused by the practice of rectal masturbation are often much more severe than those due to sodomy or pæderasty. It is this secret vice which lies at the bottom of all the remarkable cases of foreign bodies found in the rectum, generally of old men who have lost natural power. A bottle in the rectum explains itself, and it is useless to call out the story of diarrhœa, or constipation, with which the sufferer always provides himself.

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[2] [illegible]

[3] [illegible]

One reason for the fatality of these cases is found in the length of time the true condition will be concealed by the patient before his shame allows him to seek medical relief; and another is that in the futile attempts to remove the body made by the patient it is generally pushed farther up, or if friable is broken.

It is not my intention to deal any more fully with this very interesting surgical point at this time. In another place I have collected many of these cases,[1] and have indicated the course of treatment to be followed. Suffice it to say that their treatment requires often the greatest surgical skill, and that fatal results are not infrequent.

Leaving, with this brief outline, the physical changes which may result from these practices, we come to the other vencreal diseases of the rectum and anus which may be caused by them or in other ways.

Proctitis, due to sodomy or pæderasty, may be either simple or gonorrhœal. The former is due to mechanical violence, and its presence without palpable cause, and associated with an eroded condition of the anus, is sufficient to excite a suspicion of the vice. The symptoms are a sensation of heat and weight in the part, a frequent desire to go to stool, more or less pain, often extending to the bladder, sacrum, and loins, and causing vesical tenesmus and a discharge of sero-purulent matter with the passages and between them.

With these local symptoms there may be more or less fever and loss of appetite, and an examination will reveal local rise in temperature and a congested state of the mucous membrane.

True gonorrhœa of the rectum, arising either from direct contagion or by inoculation with pus flowing from the vagina over the anus, is very rare. Rollett[2] reports a case due to direct inoculation from the penis to the rectum in a patient who was in the habit of introducing his finger into the bowel to provoke a passage.

Tardieu has never observed a case, and Gosselin[3] saw only one at Lourcine in three years.

In some experiments made by Bonière,[4] he found it very difficult to inoculate the rectal mucous membrane with gonorrhœal pus placed upon it through a tube, though the anus was easily affected. On the other hand, Requin[5] believes it almost sure to follow passive pæderasty with a person suffering from the disease.

Individual cases will occasionally be seen reported, and most of the standard writers acknowledge its existence.[6] In my own practice I have never had occasion to suspect its existence but once, and then I could not be positive; the patient—a woman—denying any unnatural intercourse, and there being another explanation of the condition equally good.

The diagnosis must rest rather upon the confession of the patient, the existence of the deformities which point to unnatural intercourse, and the severity of the inflammation. In gonorrhœal proctitis all the symptoms will be more severe and acute than in any of the simple varieties. The pain is more severe, the discharge very abundant and greenish in character, escaping with the stools and also by itself; the finger introduced will at once detect the increased heat of the part, and a speculum examination will show intense redness and congestion. The mucous membrane is covered with thick discharge, bleeds readily when touched, and the follicles are enlarged and discharge pus. Although a very severe proctitis may be caused by other causes than gonorrhœa, such, for instance, as the prolonged use of drastic purgatives, the history of the development of the disease will be much more chronic.

The irritating discharge from the anus may cause erosions and fissures, or previously existing fissures may become inoculated with gonorrhœal pus and spread in superficial extent. The inflammation of the mucous membrane of the rectum may be so severe as to end in ulceration and loss of tissue.

The treatment consists in rest in bed, hot sitz baths, anodyne injections of warm starch-water and opium, and perhaps of a solution of nitrate of silver (1 or 2 grs. to ℥j.). The diet should be of milk and fluids, and the bowels should be kept gently acting with salines. By this means a cure may generally be effected in a fortnight or three weeks.

Chancroids at the anus may be caused by direct contagion or by auto-inoculation, and though they may be due to unnatural intercourse their presence is no proof in itself of the vice. They are much more common in females than males, constituting one in nine of all cases of chancroids in the former, and only one in four hundred and forty-five in the latter. To account for this disproportionate relative frequency it is only necessary to remember the possibility of accidental contact of the male organ in coition, and the facility of auto-inoculation due to the proximity of the rectum and vagina.

They may be single or multiple, may be situated at any point of the anal circumference, and may cover a large extent of surface. They often extend upward between the radiating folds of skin, and thus greatly resemble simple fissures; or they may spread backward into the fold between the nates, following in extent the natural course of the discharge; but they do not tend to spread upward into the rectum, or to involve the surface of the gut above the line of the sphincter. When they do so, which is rarely, they are of limited extent and well circumscribed. Their existence in the rectum proper has been denied by good observers, the mucous membrane there being believed to furnish no suitable ground for their inoculation.

These sores at the margin of the anus have the same general characteristics as when located in other parts. The base is soft, and covered with the same grayish pellicle, the edges are sharply punched, and the secretion is profuse. They tend to spontaneous cure with cleanliness, or with judicious cauterization, and are not very painful unless they are within the grasp of the sphincter, when they may cause the usual pain of fissure. Even when they have extended upward in this way they still heal kindly, and almost spontaneously, and no matter how completely they may have involved the anus or the surrounding skin, they seldom, when healed, leave any traces of their former existence.

In certain rare cases they may be accompanied by an undue amount of ulceration, known as phagedæna; and in certain patients with other rectal disease, or in whom the scrofulous or syphilitic taint is marked, they may assume a chronic type, and the healing be delayed for a long time; but even then they may generally be induced to heal with proper care.

From this general description it is evident that only under very exceptional circumstances will a chancroid, even when phagedenic, extend far enough into the rectum, and cause sufficient destruction, and subsequent cicatrization and fibroid deposit, to result in stricture. That it may do so we are almost forced to believe from the testimony of others; but it is none the less a clinical fact that it seldom does do so, as all those having large experience with venereal sores will testify.

Ulceration of the rectum, in my experience and that of others who have devoted special attention to the diseases of the rectum, *begins within the rectum proper*, well above the sphincter, and not at the skin of the anus, except in some rare cases of lupus, tubercular disease, and rodent ulcer. In the old cases of syphilitic stricture of the rectum, in which the anus is surrounded by tags of hypertrophied skin with ulcers between them extending upward into the gut, we have no proof whether the ulcers were present before the stricture or resulted from the stricture. The cases are always too old, the conditions

[1] Kelsey, Diseases of the Rectum and Anus. New York, Wm. Wood & Co.
Poulet, Foreign Bodies in the Rectum. New York, Wm. Wood & Co.
[2] Dict. Enc. des Sci. Méd., article, Rectum.
[3] Arch. Gén. de Méd., 1859.
[4] Revue des Nouvelles sur la Blennorrhagie, Arch. Gén. de Méd., 1859.
[5] Eléments de Path. Méd., t. i, p. 729.
[6] Therap. Presse Méd. Belge, Nov. 28, 1852. Dunmire, Diseases of the Anus and Rectum, Philadelphia, 1883. Bumstead and Taylor, Vidal.

too complicated, and the history too confused and imperfect for a positive opinion on this point. In any case of stricture of the rectum, venereal or not, there is generally ulceration below and above, and most frequently a circle of hypertrophied tags of skin around the anus, the adjacent surfaces of which are eroded and ulcerated. To assert that these ulcers are the original cause of the stricture is to assert what has never been proved, and what it is obviously impossible to prove without very careful and prolonged observation of individual cases.

Gosselin is usually quoted as the authority for the idea that chancroid of the anus is the most frequent cause of ulceration, and of the so-called syphilitic stricture of the rectum. It is rather difficult to tell exactly what Gosselin did mean in his much-quoted contribution to this subject, but there seems very little ground for supposing that he intended to convey this idea. Although Bassereau had made the distinction between chancre and chancroid two years before, Gosselin's "chancre" still meant to him, indiscriminately, the hard chancre, the chancroid, and the mucous patch inoculated by the chancroid. What he asserts is, that these strictures are neither primary, secondary, nor tertiary manifestations of syphilis, as such are generally understood, but something developed in the neighborhood of the primary sore, comparable to hypertrophy of the labia or condylomata following the primary lesion. They are "due to a special modification of the vitality of the tissues contaminated by the virus of the chancre, comparable to the lengthening and hypertrophy of the prepuce with contraction of its orifice which follows a chancre on its under surface, in which the disease is evidently neither an œdema, nor a specific induration, nor a constitutional affection, but a local lesion, due to the presence of the chancres, and consecutive to the inflammation which they have caused."

This opinion can certainly be made to teach the chancroidal nature of the affection only by a considerable exercise of the imagination. Nor can very much be said for the theory itself, except that it seems to be rather a doubtful way of accounting for a condition of doubtful etiology, and one which has never been accepted by the profession.

Dr. Mason's [1] paper is very much stronger than Gosselin's, in that he plainly asserts the causation of stricture to be the phagedenic chancroid. He says he has seen "constriction of the rectum follow, and that very *shortly after* the healing of chancroids has taken place." Van Buren says: "I have also seen chancroids at the anus become phagedenic and extend within the rectum, and have verified, at a later period, the existence of stricture of the rectum from the cicatrization, as there was every reason to believe, of this same ulceration."

Bumstead and Taylor speak in the same way, and Mollière says "Nevertheless, the soft chancre of the rectum does exist, and has even been seen to assume frightful proportions in this deep region." Bridge's [2] case is much relied upon to prove this point, though it is open to grave criticism. The woman had both stricture and ulceration at the time the case was first seen, and there is no positive proof that the ulceration was chancroidal and not syphilitic.

The weight of evidence is thus seen to be decidedly in favor of the possibility of the causation of stricture by phagedenic chancroid, but that any large proportion of venereal strictures are caused in this way certainly cannot be accepted, and this is one of the points upon which further clinical evidence is especially desirable.

The diagnosis of the chancroid in this location will be easy by auto-inoculation, if the probability of its occurrence is only borne in mind, and the treatment has been sufficiently hinted at. Cleanliness, local application of astringents, and attention to the general health are all that is necessary when the sore does not extend beyond the radiating folds.

There are two forms of phagedæna which may complicate a chancroid at the anus—the acute and chronic. The former is rare, and strongly resembles phlegmonous erysipelas following a wound, in that it may involve the tissues to a great extent, cause deep collections of pus and destruction of tissue, and end fatally. The chronic is the one generally seen, and this may go on for a long time, healing in one spot while advancing in another. It is worthy of note that even after months of this process the sore still remains auto-inoculable.

There are other complications of the chancroid which may render the diagnosis difficult. The sore may itself be inoculated with syphilitic virus and assume some of the characters of the hard chancre, especially the induration. In such a case the diagnosis must rest in a great measure upon the combination of symptoms. The sore will present the appearance of the chancre, but the discharge will be more abundant than a chancre generally produces, and the pus will still be auto-inoculable. In addition, the glands in the groins will show the characteristic syphilitic induration.

Mollière has pointed out that the combination of hemorrhoids and anal chancroid may cause certain peculiarities in the course of the latter. The sore may, after a time, lose its auto-inoculability, but still refuse to heal, the surface becomes red and vascular, the discharge sanious, and the sore is changed into a veritable varicose ulcer.

In the treatment of chancroids of the anus many points of difficulty may arise. The sore, from its position within the grasp of the sphincter, may be so painful that nothing can be done to it except by the surgeon himself, and only then by the exercise of the greatest care and gentleness of manipulation; and although this pain may be at once relieved either by incising the ulcer or dilating the anus, both of these procedures involve a great risk to the patient of auto-inoculation. The bowels should, therefore, be kept gently open by the daily administration of a laxative which will cause soft but not watery passages. The ulcer must be touched two or three times daily with a weak solution of nitrate of silver (grs. v. – ℥ j.) on a camel's-hair brush, and subsequently covered with a small pledget of soft lint, gently laid into the fissure and pressed down with a probe. With a light touch this may be done without causing pain.

Should the ulcer have extended upward to the upper edge of the sphincter, there may be such contraction of the muscle that this plan of treatment is impracticable, because all parts of the sore cannot be reached by the brush. In such a case ether or cocaine must be resorted to, a speculum introduced, until every part of the ulcer is exposed, and the surface thoroughly cauterized with fuming nitric acid. The acid must be carried under the edges of the ulcer, and every point must be thoroughly destroyed, for the operation will be positively injurious unless thoroughly done.

Should the ulcer have reached such an extent of rectal surface as to render it doubtful whether by any means of exposure every point of it can be fully seen, it is better not to try cauterization, but to be satisfied with astringent injections frequently repeated. These must also be made either by the surgeon or a thoroughly well-trained and skilful assistant, for no fresh wounds must be made by the point of the syringe, and no pain need be caused by its passage. A small glass point or a small soft-rubber catheter must be gently introduced on the side opposite the ulcer, and about four ounces of water thrown up and passed out to clean the surface of the sore. This should be followed by about three ounces of a solution of nitrate of silver (grs. ij.– ℥ j.) and this application should be repeated at least three times in the twenty-four hours.

Phagedæna in the chronic form must be treated by destructive cauterization, preferably with the Paquelin cautery, and every part of the ulcer must be completely destroyed. Subsequently anodynes may be freely used till

[1] Amer. Jour. Med. Sci., January, 1857.
[2] Arch. of Dermatology, January, 1880.

the eschar separates and a healthy granulating surface remains. In the acute form of phagedena free incision may be necessary in the fossæ and over the buttocks to let out pus and relieve tension, as well as the destructive cauterization of the sore.

True chancre at the anus is not very uncommon, though it often passes unnoticed from the slight annoyance caused by it. In men its presence is very positive proof of pæderasty, there being no chance of accidental inoculation as in women. When, therefore, Pean and Malassez give the proportion of one chancre at the anus to every one hundred and seventy-seven in other parts of the body in men, they also give some idea of the amount of unnatural vice existing in Paris. The same observers give the proportion as one in thirteen in women. Jullien gives a higher relative frequency—twenty-one of anus and perineum and four of the buttocks in eighty-two women. These sores are most likely to be mistaken for simple abrasions, or, when between the radiating folds, for simple fissures. When typical in development they have the hard, raised outline and indurated base, but they are often mere erosions and strongly resemble the mucous patch. There is very little discharge, and what there is is not auto-inoculable. They tend to spontaneous healing, but they may develop into mucous patches. Glandular enlargements in the groins should always be searched for, and in doubtful cases constitutional treatment may be delayed until the appearance of secondary symptoms.

True chancre within the rectum has seldom been observed, though how common it may be as a result of unnatural intercourse will never be known, so little local and constitutional disturbance does it cause. Ricord, Fournier, and Vidal de Cassis each report a single case, and these are about the only ones recorded. In that of the last named the induration is said to have been so great as to cause stricture—a statement which must of necessity throw doubt upon the diagnosis. The difficulties attending the diagnosis of such a sore are manifest. Its mere appearance would scarce be conclusive, and the absence of any other sore which might be followed by general symptoms would need to be fully established, which in woman is a very delicate thing to do.

The secondary manifestations of syphilis around the anal region are some of the syphilodermata, mucous patches, and condylomata.

Mucous patches are very frequent and assume two distinct forms, the ulcerative and the vegetating. The latter begins as a slightly raised red papule, which may, after a time, become a mere erosion or a distinct ulcer. They are generally multiple, and may be seated around the anus, within the radiating folds, looking exactly like simple fissures, or anywhere in the ano-perineal region. They are easily confounded with either chancres, chancroids, or fissures, and the differential diagnosis may be extremely difficult, and only to be made by the history and the results of treatment. The points to be sought for are the raised edges and the grayish pellicle, which are not found in simple fissures.

The surface of a mucous patch sometimes becomes elevated by an upward growth of branching papillæ, with production of connective tissue and dilatation of the blood vessels. When this development has reached a considerable extent, a cauliflower appearance is the result, and what was at first a simple mucous patch may become a large, warty vegetation surrounded by other similar growths which have sprung up around the original lesion and which are due to direct auto-inoculation. These are known as vegetating mucous patches, vegetating condylomata, condylomata lata, syphilitic condylomata, etc., and it is to them, to the exclusion of other warty growths of non-syphilitic origin, and of tags of hypertrophied skin, whether syphilitic or not, that the name of condylomata should be limited.

The vegetating mucous patch is particularly common around the anus, and sometimes grows to a large size, nearly filling the intergluteal cleft. The secretion is in the highest degree infectious, and is also auto-inoculable. The spreading of the growth, where it comes in contact with a moist surface, may be accounted for by direct auto-inoculation, and also by the general syphilitic infection, which, at this stage, is particularly apt to manifest itself in mucous patches at any point in the body which is both moist and irritated. These growths are therefore found most developed in fat people of uncleanly habits in either sex.

The treatment is both general and local. Mercury is given for the syphilitic infection, of which these growths are the proof, and the sores themselves are treated by the application of calomel or iodoform in powder, by astringent washes, and the interposition of pieces of lint between the warts and healthy parts, to avoid further local contamination. Should the growths not yield rapidly to this treatment, they may be freely destroyed by acid.

One point of great interest in connection with these syphilitic condylomata is that they very closely resemble (so closely that to distinguish between them by gross appearances may be impossible) another variety of warty growth, which is often seen in the same place, but has nothing to do with syphilis, and may be entirely independent of any venereal disease whatever. Formerly all of these vegetations were considered proof positive of syphilis, and indeed of sodomy or pæderasty. Mollière relates how, at the time of Dionysius, there was a special hospital at Rome for the treatment of these growths; and Dionysius himself tells how the surgeons spared neither the iron nor the fire, and were not moved to pity by the cries of the patients, inasmuch as this disease was the result of unnatural intercourse between man and man.

The same false idea has not yet passed entirely away, but the independence of these growths upon syphilis is beyond question, except to the extent that any syphilitic sore in this neighborhood may, by the irritation of its discharge, cause their development. They owe their growth, in the first place, as pointed out by Diday,[1] to a special predisposition to the formation of warts on various parts of the body in the individual, and this predisposition is assisted by the presence of any irritation of the part. Thus the discharge from a gonorrhœa, or a leucorrhœa, or any disease of the rectum or genitals, may cause them to grow, and they may appear in persons apparently perfectly healthy and cleanly. Pregnancy has an undoubted influence upon their production, and in such cases they may disappear spontaneously after delivery.

These non-syphilitic warts may appear at any age from infancy to adult life, though they generally belong to the latter period. They may vary in size from a single enlarged papilla at the verge of the anus to a mass weighing a pound or more. When they grow from one side of the gluteal cleft, and are large enough to press with their moist surface upon the corresponding opposite point, a second patch may be developed at the point of contact. Their development may be slow or rapid, and when of large size the patient is constantly troubled by the presence of the mass, by the sanious and foul-smelling discharge, and by the fresh erosions and superficial ulcers in the adjacent parts. Great pain in defecation may be caused by a small wart located just at the verge of the anus, and such a little tumor may give rise to all the characteristic symptoms of a painful fissure, including a slight discharge and an occasional drop or two of blood. They are not very infrequent on the line of junction of the mucous and cutaneous surfaces, just within the verge of the anus, and they may arise entirely from the mucous membrane above the sphincter, though they are generally confined to the first inch of the canal, and, in such cases, give rise to a much more aggravated train of symptoms, and sometimes to much difficulty of diagnosis. Within the canal they are smaller and harder than on the cutaneous surface, and they cause a serous discharge, which

[1] Exposition succincte et jugement pratique des nouvelles théories sur la syphilis. Paris, 1860.

may be so profuse as to escape from the anus between the acts of defecation and cause much suffering from pruritus and tenesmus.

On examination in such a case the mucous membrane will be found dry and glistening as a rule, though there is sometimes more or less extensive proctitis; and the little, tender, warty excrescence which is the cause of all the symptoms and of so much suffering may escape notice. The only treatment for this condition is the ablation of the tumors, with the mucous membrane to which they are attached. They may return several times after removal.

As has been said, these warts are most often mistaken for syphilitic condylomata, and the diagnosis may only be possible by the history and the absence of any other signs of syphilis. Under the microscope the structure is not the same, the non-syphilitic wart being an hypertrophy of the rete Malpighii, and the other an hypertrophy and branching of the papillæ.

The most satisfactory way of curing these vegetations is by paring them off with knife or scissors. They may be ligatured or destroyed by acid, but the former plan will cause the least trouble. They may also be made to dry up by applications of alum or tannin in powder, or by frequent washing with Labarraque's solution.

There is still another form of new growth around the anus which is generally called condyloma, though improperly, and for no particular reason. In fact, the word condyloma has been applied to so many totally different varieties of growth here that the word has come to have no definite signification. It would be much better could it be limited to the syphilitic mucous patch. The growths now referred to are composed of skin and connective tissue, they are attached by a broad base to the verge of the anus, are pinkish in color, soft, fleshy, and irregular in shape, flattened against each other where two come in contact, and often excoriated on the anal surface, and, therefore, giving out a slight secretion. These generally arise from one of the radiating folds of the anus, and consist of an hypertrophy of the whole thickness of the skin. Their size varies from a pea to that of the end of the thumb, and they may be single or multiple. They are the result of a localized chronic inflammation of the skin of the anus, arising from any source of irritation. They are seen typically developed in cases of stricture and ulceration of the rectum, and are due to the irritation of the discharge flowing over the anus. Such a cutaneous hypertrophy may not only be excoriated but ulcerated, and it may even suppurate, but it is generally more annoying than painful, the discharge from its surfaces keeping up a continuous irritation of the adjacent skin.

Paget has said that without considering these growths as absolutely and always syphilitic, they are so rare without it that he had never seen a case.[1] I confess that this statement from such an authority has always been utterly incomprehensible to me. That they are often seen in connection with syphilitic stricture of the rectum is undoubtedly true, and it is also true that in these cases they will sometimes atrophy under the use of iodide of potassium. But they are also found associated with non-syphilitic strictures, and, indeed, with any ulcerative disease of the gut which causes an irritating discharge.

These tumors occasionally reach a large size. Barnes[2] has reported one the size of an orange which protruded from the anus during labor. It proved to be a dense growth attached to the margin of the anus, the rest of the anal circumference being surrounded by piles more or less indurated. At one point the tumor was greenish, as if about to sphacelate. Goodhart reported it as composed for the most part of loose, fibro-cellular tissue, covered by tough and altered mucous membrane; the deep parts were, however, cavernous in structure. He was of opinion that it originated in a chronic overgrowth of connective tissue round a pili.

Do mucous patches ever occur within the rectal pouch? From analogy with the fauces alone it would probably be safe to answer in the affirmative; but this is one of the points on which clinical evidence is especially to be desired. Mollière[3] is the only observer with whom I am acquainted who has reported such a case. He describes a white, pearly, rounded plaque, in a subject evidently syphilitic, about one centimetre in diameter and five centimetres above the anus.

It is known that any ulcerative lesion, often of a very trifling nature originally, may, in the rectum, under the influence of the irritation of the fæces, assume considerable proportions; and it has been assumed rather than proved that a mucous patch in the rectal pouch may in this way become the cause of destructive ulceration, subsequent cicatrization, and hence of stricture, so-called syphilitic. There is no clinical proof of this, as far as my reading goes, nor are we forced to accept any such theory, however probable and plausible it may be, to account for the strictures and ulcerations of the rectum which arise during the secondary stage of syphilis.

At this point we have to leave this question, with the others, for future accurate clinical observation, only observing that, as Mollière points out, at no other part of the body are mucous patches followed by retractile cicatrices.

Of the existence of syphilitic ulceration of the rectal pouch, occurring in the late secondary or early tertiary stage of the disease, there can be no more doubt than of the existence of the same condition in the fauces and trachea, where it is more easily discoverable, and hence has been more often described. The ulcer is due to the deposit of syphilitic tubercle in the mucous membrane, which rapidly comes to the surface, disintegrates, and leaves a small, well-marked loss of substance, with clearly cut edges and yellowish purulent base. When these ulcers coalesce there is sometimes great destruction of tissue, and large cicatrices follow their healing. Their favorite seat is the lower part of the rectum, and when found in great numbers they will gradually decrease in frequency as the bowel is followed upward.

This form of ulceration has been long recognized and has been thoroughly described, but better studied on the *post-mortem* table than in the consulting-room. Curling[4] describes a case presented by the late Mr. Avery at a meeting of the London Pathological Society,[5] the history of which clearly shows the connection of the lesion with syphilis. "Immediately within the anus, which was surrounded by a circle of vegetations, the ulcer commenced, extending three inches upward, and occupying the whole of the internal surface of the rectum to that extent. The edges were rough and uneven above, and below soft and rounded; the whole surface was smooth, exhibiting the muscular fibre of the intestine quite bare. When she died she had numerous indelible marks of syphilitic eruptions on the limbs and trunk, and was suffering from sore throat."

Paget,[6] also, has given a clear description of the disease, with the points in differential diagnosis between it and tubercular ulceration. He says: "The whole mucous membrane is destroyed except one small patch, which is thickened and opaque. The exposed submucous surface has a lowly tuberculated, undulating, uneven appearance, and is thickened by infiltration. In the early stages the tissue is soft, as if from recent inflammatory effusion or œdema; but as the infiltration organizes it hardens, becomes callous, with fusion of the mucous and submucous coats, and then contracts, and thus brings about the stricture. The affection commonly extends from the anus, as if by continuity with the excrescence (condyloma), to about five inches up the rectum; but it is rarely so marked in the first inch of the rectum as it is higher up."

[1] Med. Times and Gaz., vol. i., 1877.
[2] Brit. Med. Journ., April 12, 1884.
[3] [illegible]
[4] Diseases of the Rectum, p. 111.
[5] Trans. Path. Soc., vol. [illegible], p. 98.
[6] Med. Times and Gaz., 1865, vol. i., p. 279.

"These ulcers were limited to the large intestine, and decrease in size and number from the rectum upward, conditions which, I think, are never observed in the tubercular disease. There is not a trace of tubercle, *i.e.*, of circumscribed, crude, or softening tuberculous deposit, in the submucous or any other tissue of the intestine; none in a Peyer's patch, or at the base or edge of any ulcer. The shape and other characteristics of the ulcers are quite unlike those of intestinal tuberculosis; they are regular, with sharp, even, well-defined edges; with level bases; they are not excavating, nor do they extend through the submucous tissue; their edges are nowhere eroded or undermined, sinuous, thickened, brawny, or infiltrated; the subjacent and intervening structures appear healthy, except at the rectum. These ulcers are not grouped, and where by extension or coalescence they have lost their first shapes, they have acquired one altogether irregular, and have in no instance even tended toward that girdle-like shape, encircling the canal of the intestine, which is so characteristic in the large coalesced tuberculous ulcer. Thus by negative as well as positive characters these ulcers are clearly distinguished from the tuberculous, and, as I have said, there is no no other form of intestinal ulcer to which they bear even a remote resemblance."

The amount of stenosis in these cases varies considerably. In some it is only such as is caused by the thickening of the surrounding structures, in others extensive cicatricial contraction will be found superadded, and with it the results of stricture of the rectum.

This form of ulceration is, to my mind, entirely independent of any venereal lesion at the anus which may extend into the rectal pouch. It is syphilitic, and it belongs to a late stage of syphilis. It is, moreover, syphilitic ulceration of the rectum, and not of the anus, and it begins an inch or more above the external sphincter. While some observers have sought to establish that syphilitic stricture of the rectum was not syphilitic but chancroidal, and that it was due to an extension of an ulcer from the verge of the anus, the existence of this form of disease has not been denied, and it is to it that a certain number of syphilitic strictures are, I believe, to be attributed. This, of course, is in direct opposition to the views of Gosselin and Mason; but those views have never been to any extent accepted, even by syphilographers, while those who have studied the disease from the stand-point of the rectum are unanimous in rejecting them. Cases similar to the following are not very rare in the practice of those who devote much attention to the rectum.

Male, aged thirty-one, single; has been under anti-syphilitic treatment at the Hot Springs for some time back, and was sent from there to me. Gives full syphilitic history, and has some brain symptoms, relieved by specific treatment. For past eighteen months has had symptoms of ulceration of the rectum, the usual diarrhœa, with mucous and bloody discharge, etc. Two weeks before coming to me two ulcers were found in the rectum, above the sphincters, and were cauterized, with relief to pain. On examination under ether, and with the anus well dilated, I discovered three separate and well-marked spots of ulceration about two inches within the anus. One was posterior over the tip of the coccyx, the other two were on opposite sides of the median line in front. The ulcers were raised and distinct to the touch from the exudation under and around them; the edges were distinctly marked, though not much indurated, and the bases a bright red, and bleeding easily when touched.

The treatment was entirely local, as the thorough course of mercurials already given evidently had not accomplished anything, though giving much relief to the other signs of syphilis. The ulcers were thoroughly cauterized with nitric acid, and subsequently treated by local applications of bismuth and iodoform, while the patient was confined to bed on absolute milk diet. In one month all rectal symptoms had disappeared. Six months later the patient still continued well in the rectum, but had a decided return of the brain trouble, for which he again visited the Hot Springs.

For the past two years I have had under observation a case which illustrates very perfectly this form of disease in its more advanced stages.

The patient is an intelligent physician, aged thirty-eight. He has a full syphilitic history, and various indisputable scars of the disease. Twelve years ago, while suffering from a tubercular syphilide, he first began to have the usual symptoms of ulceration of the rectum, and for this he had been under treatment for ten years before I saw him. On examination the lower four inches of the rectum, beginning within the anus and extending upward, was found ulcerated in its entire circumference, and in addition there was a free growth of fungoid granulation-tissue covering much of the surface. The wall of the bowel was inelastic and thickened, but there was very little contraction, and no stricture except what came from the partial closure of the calibre of the bowel by the fungous growth. The anus was partly surrounded by fleshy excrescences, and some of these were slightly excoriated on their anal surfaces, but the ulceration proper did not begin till the sphincter had been passed. Anti-syphilitic treatment had never been of the least value for this condition.

At this time I strongly recommended the administration of ether, the thorough scraping of the diseased surface with a sharp spoon, and free application of strong acid to at least a part of the surface; this to be followed by the usual local and general treatment for rectal ulceration. But circumstances rendered this plan unavailable, and the patient disappeared for eighteen months. At the end of that time I again examined him, and found unmistakable stricture at two inches above the sphincter. The stricture presented all the characteristics usual in such cases, was of considerable extent, and admitted only a No. 8 bougie. This for a time was treated by dilatation.

This, to me, is a perfect example of late syphilitic ulceration beginning within the rectal pouch, and going on to the formation of stricture.

It will be noticed that in this case the anus was surrounded by fleshy excrescences, and that these were excoriated on the anal aspect. The presence of such tags is not to my own mind a proof of the syphilitic nature of the disease above, any more than is the excoriation upon and between them the starting-point and origin of the ulceration within the rectum. Both the excrescences and the excoriations are explained by the irritating qualities of the discharge from the ulcerative process above, and will be found equally in tubercular or cancerous disease.

This and one other are the diseased processes which explain the fact that in about fifty per cent. of all strictures, not malignant, there is a full history of constitutional syphilis. Such a fact would not be disregarded in the study of the etiology of any other morbid process, nor should it be in this. If one-half of all non-malignant strictures occur in syphilitic patients, it is only fair to assume that syphilis has some causative influence.

In the differential diagnosis of syphilitic from other forms of ulceration the history is of great importance. The appearance of the sore is scarcely characteristic enough to warrant a positive diagnosis unless all the facts of the case point in one direction, and the failure of anti-syphilitic medication is of no negative value, for the late manifestations of syphilis in the rectum often refuse to respond to either mercury or iodide of potash, though both should always be tried. Traumatism, whether surgical or other, and dysentery may both be easily eliminated, and the only remaining sore at all resembling the syphilitic ulcer is the tubercular one. The diagnosis between these two may be impossible where only one or two spots of ulceration exist in the rectal pouch; but tubercular ulceration is not generally limited to the rectum alone, but rather tends to involve a considerable

portion of the large intestine, being only more marked at the rectum.

The other tertiary manifestations of rectal syphilis are neoplastic in character. Circumscribed gummy deposits of greater or less extent have been quite frequently noted, and are scarcely as rare as would seem to be indicated by the statement of Fournier, that he had never seen a case. Other observers have reported isolated cases, and R. W. Taylor has recently given the notes of four. The deposit may occupy any part of the circumference of the bowel, and in one of Taylor's cases was located in the recto-vaginal septum, and had ulcerated through, causing a fistula. The diagnosis of such a tumor, with its attendant ulceration, offers but few difficulties, and the treatment is both local and constitutional.

Instead of being circumscribed, this gummy deposit may involve the whole circumference of the bowel, and extend from the sphincter as far as the upper limit of the rectal pouch. This is what Fournier has described under the name of ano-rectal syphiloma, and what he believes to be the explanation of most of the cases of syphilitic stricture. For, although he recognizes that stricture may result from late secondary ulceration, in the manner we have described, he believes that stricture from this cause is infrequent as compared with that produced by this diffuse deposit in the rectal wall.

As described by him the disease commences as an infiltration of the rectal wall by this neoplasm. The deposit is entirely submucous, and occurs by preference in the rectal pouch, and always encircles the whole calibre. It may also involve the anus, and may take the form of anal tags and tumors described when speaking of condylomata.

At first it merely causes thickening and stiffening of the gut, so that it loses its dilatability, but there is no contraction and no ulceration until later. As the deposit increases in amount, the mucous membrane over it loses its vitality and becomes ulcerated, and the deposit itself finally degenerates into fibrous tissue, retracts, and causes stricture. This description of the gross appearances and general characteristics of syphilitic stricture will be recognized by all. Fournier was not describing any new affection, but simply, under a new name, "ano-rectal syphiloma," endeavoring to give a complete history of the origin and development of the ordinary syphilitic stricture as seen by every practitioner; and his description in many points corresponds with clinical experience. It must be admitted that in most cases of syphilitic stricture there is more infiltration of the rectal wall; more occlusion of the canal by hard masses of tissue; more extensive disease, in other words, than can easily be accounted for by mere cicatricial contraction; and it seems exceedingly probable that Fournier has more correctly described the true nature of the pathological process than any previous writer.

He does not attempt to describe the initial stage of the deposit. To him it is simply a neoplasm which degenerates and contracts. The whole question evidently turns on clinical observation. Unfortunately I have never seen, in my own experience a syphilitic stricture in the early stage which he describes—an infiltration of the whole calibre of the rectum for a considerable distance longitudinally, but without any change in the mucous membrane covering it—and probably for the reason that he states, that in this stage the disease causes no symptoms. Syphilitic stricture, as generally seen, is just such a combination of ulceration, infiltration, and contraction as he describes anosyphiloma to be in its more advanced stages.

This affection is said by Fournier to be curable in its early stage (before degeneration and contraction have occurred) by specific treatment, but he has never seen but two such cases. Van Buren says that he also has seen the infiltration disappear under anti-syphilitic treatment.

In addition to these tertiary manifestations of syphilis, Mollière describes a stricture of the rectum due to a specific inflammation of the rectal tunics. He says that in these cases the muscular coat is replaced by connective tissue, which by sclerosis causes atrophy of the muscular fibres. The origin of the trouble is in the muscularis, and not in the submucous connective tissue, as with the other forms of stricture.

This is a form of disease which I have never seen.

25 Madison Avenue.

Clinical Department.

PRURITUS ANI FROM THE USE OF COFFEE.

Dr. S. C. Bridgewater, of Dixon Springs, Tenn., reports the following: Mr. J. H. Y——, aged fifty-five years, a rich farmer and stock-raiser, was afflicted with pruritus ani for ten or twelve years, and had tried almost every nostrum that he could hear of, but without success; had applied to quite a number of physicians, and only a few succeeded in giving some temporary relief. Some time in April or May last he applied to me for treatment, and I advised him to quit the use of coffee. In a few weeks the symptom disappeared, and has not troubled him in the least since—no other treatment was necessary. He has now been using coffee again for breakfast for two months. Another gentleman, P. W. H——, a druggist, was describing his symptoms to J. H. Y——, who told him of his relief by abstaining from coffee. P. W. H—— also quit coffee, and was likewise cured, or got well. I read of one similar case, about a year or more ago, in The Medical Record, hence my advice.

NON-GRAVID HYDRORRHŒA.

Dr. H. J. Garrigues, of this city, writes: In the issue of November 20th of The Medical Record I notice with interest some remarks referable to hydrorrhœa in non-pregnant women. Unless Dr. James Oliver has proved, by chemical and microscopical examination, that the fluid secreted in his cases was urine, I think he is mistaken in claiming a parallelism between it and the latter fluid. It is not correct when he says the reproductive and urinary organs are developed from the Wolffian bodies. This applies only to the kidneys, ovaries, and parovaria, whereas the uterus, the organ interested in hydrorrhœa, is formed by a development of the Mullerian ducts.'

The disease seems to be very rare. In most textbooks on Gynecology it is not even mentioned. Barnes refers briefly to it ("Diseases of Women," London, 1873, p. 83) in speaking of watery discharges in general. Courty is the only author I know who gives particulars. He had seen two cases ("Maladies de l'Utérus," p. 592, Paris, 1866). The following notes of a case that came under my observation about two years ago may therefore be worth recording."

Mrs. M——, aged twenty-nine, American, mother of two children, respectively seven and three years old, consulted me, in August, 1884, exclusively with regard to diagnosis. She was under the treatment of an able gynecologist, but went to various others on account of the rarity of her disease. She stated that in March, 1883, she had a first attack of watery discharge from the womb, lasting three days. It returned in April, and continued without interruption for six months, then it stopped for three months. After that it appeared only immediately after the menstruation, which came on every three weeks, and it lasted for three days. During the last two months she had not menstruated, but, instead thereof, she had had the watery discharge three or four days each time. The discharge was so copious that she used forty diapers a day; that she soaked sheets with it, passed it in a bed-pan, and "filled bottles with it." The appetite was good, defecation and micturition were

normal, but she was exceedingly nervous and complained of nausea. I found the uterus slightly tender, and somewhat enlarged. The sound entered three inches and a half, but at previous examinations, by two others, it had entered five inches. The vaginal portion was of a purple color. A drop of fluid presenting at the os contained large, flat, epithelial cells from the vagina, columnar, non-vibratile cells from the uterus, red blood-corpuscles and pus-corpuscles, and some young indifferent cells with a single large nucleus. The ovaries and tubes could not be felt from the vagina.

A high authority had called it dropsy of the Fallopian tube; another said there had been a cystic tumor, which had burst and continued to discharge.

My diagnosis was uterine hydrorrhœa, caused by endometritis, and my reasons were the following: There was no sign of any affection of the tubes, and there had never been any tumor. The elements found in the fluid were of purely uterine character; the discharge was intimately connected with the menstrual flow, and had of late replaced it. There were signs of an inflammation, or, at least, congestion of the womb.

I have later been told by the physician who sent her to me that she had been cured by treating the womb, which goes far to corroborate the diagnosis made.

Progress of Medical Science.

The Diagnosis of Ascites.—Dr. Tripier, of Lyons, published an article on the means of diagnosing ascites by the vagina. He was led to try this method accidentally. He was attending a young woman for tuberculous pleurisy, and had occasion to examine the uterus. The situation of the os was normal, but when the fingers touched it it seemed to fly from it, by reason of an abnormal mobility. It could be turned in every sense with the greatest facility. A certain amount of liquid was supposed to be present in the cavity of the pelvis, and thus caused the phenomenon. The patient died, and the autopsy confirmed the suspicion entertained during life. Several times subsequently he had recourse to this method, and found it of great utility. He was able to diagnose the presence of liquid at the very commencement of peritonitis or of cirrhosis, and in heart disease at an early date.—*The Medical Press and Circular*, October 20, 1886.

A New Emmenagogue—Oxalic Acid.—Formerly, in making a choice among the agents furnished by the materia medica of an emmenagogue, it was considered that the absence of the menses was due to a congestion or inflammation of the uterus; so that rue, savin, etc., were tried, as they were considered to possess some sort of dynamic action that would calm the congestion of the organ; or else it was supposed that the blood by some means had become altered and had been prevented from taking its habitual course; so drugs like saffron were tried, without much better results. Later it was discovered that the menstrual hemorrhage is nothing more than the consequence of ovulation, and there was a revulsion in therapeutical ideas, as the physiological basis had been entirely false. Suppression of the menstrual flux can be caused by the opposite causes of insufficiency and plethora, action of cold, climate, habit, food, etc., but oxalic acid would seem, from the numerous clinical cases given by Dr. F. Poulet, to act in almost all of the various sorts of amenorrhœa. It was reported that this agent acts equally well in almost all cases of catamenial difficulty where there may exist a febrile reaction with consecutive inflammation of other organs, and also when there is a hemorrhage, or where there is a suppression caused by a cold, which last is so common. Apiol is one of the few sure remedies left to us in amenorrhœa, but it can be used to advantage only when the suppression depends on some nervous cause; but oxalic acid, by the multitude of its applications, suits all cases. Attention is called also by this author to the fact that there exists an antagonism between the action of cinchona and its salts and oxalic acid. He declares that just as much as oxalic acid favors and provokes the menstrual flow, so does quinine prevent it. So that the last should be a good remedy for metrorrhagia; and, indeed, Dr. Poulet and those with him consider quinine much superior to ergot in such cases; there is therefore great danger in giving cinchona preparations to women without considering the menstrual period. Oxalic acid has always been considered a very dangerous poison; but it seems to be one of our physiological proximate principles, since in the normal state it is found in the intestinal juice in considerable quantity, and it is now being studied in animals by Professors Armand Gauthier and Mathias Duval. It probably plays an important rôle in intestinal digestion. The following formula [illegible]:

℞. [illegible].
Aquæ ferventis, 100 parts.
Syr. aurantii corticis amaræ, 30 parts.
M. Sig. [illegible].

In one case the whole of the above was given before the effect was produced; in other cases the menses came on before one third had been taken.—*Philadelphia Medical Times.*

Improved Suprapubic Lithotomy.—Dr. Thomas Annandale believes that the suprapubic operation for stone in the bladder, which has previously been advocated for children, is also applicable to adults and constitutes an improvement upon the other methods of operating. The steps of the operation as advised by him in the *British Medical Journal*, October 9, 1886, are as follows: 1. The gradual and thorough dilatation of the bladder by the injection of some antiseptic fluid. 2. The introduction of a lithotrite, and the seizing and fixing of the stone in its blades. 3. The depression of the handle of the lithotrite, so as to press the stone against the abdominal wall immediately above the pubes, in the middle line. 4. Cutting down through the abdominal wall, in the middle line, upon the pubes, and immediately above it, in the usual way, until the bladder is reached. 5. Depressing the handle of the lithotrite still more, so as to stretch the wall of the bladder over the stone, and make it prominent at the wound. 6. Incising the stretched bladder-wall upon the stone to a sufficient extent in a direction downward, and then protruding, through the opening, the stone and blades of the lithotrite. 7. Gently opening the blades of the lithotrite and removing the stone, and in withdrawing the lithotrite, catching one end of an india rubber catheter in its blades, and bringing it out through the urethral orifice, the other end of the catheter being left in the bladder. 8. Stitching the wound in the abdominal wall, and introducing a drainage-tube at its lower end. If the wound in the bladder-wall be small, he thinks it is better not to stitch it, but if it be large, two or more catgut sutures should be inserted. The dilatation of the rectum is not, in his opinion, required, and if employed only complicates the operation.

Back-door Graduates in Germany.—America, it seems, is not alone in the enjoyment of bogus medical colleges. The *Medicinal Zeitung* says it has come into possession of a circular issued by a *doctor juris*, Claisé by name, in which diplomas are offered at fair prices. Would-be doctors of philosophy, law, medicine, chemistry, etc., need not bother themselves with study, but can obtain the desired degree by the payment of 500 marks. For some of these degrees theses are required, but those will be furnished without further charge by the accommodating directors of the diploma bureau.

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ANOTHER ASPECT OF THE "TRAINED NURSE" QUESTION.

THE "trained nurse" question has become a settled factor in our sociological problems. The discussion concerning its merits and demerits has at last reached the daily papers, which, in their correspondence columns, have allowed both friend and foe full say. The trained nurse may be regarded as a new agency for the relief of human suffering, or as merely the extension of an old one. In any event, she has evidently come to stay, and, on the whole, the most satisfactory solution of the matter of hospital nursing is found in the establishment of a well-regulated training-school. It now devolves upon us to extend this new agency for good, and we may congratulate our Boston friends that they have taken the initiative in this good work.

During the past year the practice has been introduced in that city of supplementing the services of the visiting dispensary physicians by the stated attendance of trained nurses at the homes visited. No one with any experience among the poorer classes can have failed to realize how far short of its object skilful medication often fails because it is not followed by intelligent ministration in the home. This new plan of visiting has been of vast benefit to both parties. The necessity of working in an economical manner has been impressed on the nurses. They have been taught that in private work many of the conveniences and appointments of a hospital must necessarily be wanting. They have learned to work without them, and so have become self-reliant. The nurse is brought face to face with many emergencies. She is taught that adaptation to surroundings is a requisite in her calling. Her duties include instructing the poor as to how to give medicine, make a bed, prepare food, ventilate a room, and to perform many other sick-room requisites. She is enabled to make her rounds among the homes of the lowly, and, by spending a short time at each place, to accomplish a vast amount of good.

We do not know of the existence in this city of any association which has this end primarily in view. While every system has its own merits and demerits, we think that no one can seriously question the advisability of this expansion of the work of trained nurses. It should be done through the agencies already existing, rather than by the creation of new ones. Arrangements might be made whereby all recent graduates of training-schools should be employed for a term by some of the dispensaries for this new service. The latter would be a most valuable adjunct to their former experience—very much as a physician desires dispensary work after the completion of his term as a hospital resident. It will cause some expense, it is true, but how much would the efficiency of dispensaries be augmented! If the money of the public, solicited for these institutions, could be employed in this way—and not in erecting new institutions for which there is no need—an advance would be made in the work of helping the poor sick.

THE VALUE OF COMBINING DRUGS.

IT has long been known that by combining drugs certain results may be produced which will not follow if any one of the ingredients be given singly. To Dr. Fordyce Barker belongs the credit of having shown this fact very clearly some years ago.

Quite recently Professor Goll has called attention to some interesting practical points in the same direction. (*Therapeutic Gazette*, September, 1886.) Thus opium, given with irritating or emetic substances, lessens the irritating property. When given with tartar emetic, for example, it prevents the painful retching and cramps, without preventing emesis. When given with mercury the rapid elimination of the latter drug is prevented, it is more abundantly absorbed, and its constitutional effect more quickly obtained.

The utility of opium used in conjunction with morphia is often observed, relieving as it does the subsequent nausea and vomiting. Given with iodide of potassium it will often prevent the disagreeable nasal catarrh caused by the iodide. The combination of belladonna or hyoscyamus with cathartic drugs, in order to prevent the griping, is a well established therapeutical practice. Belladonna, by eventually paralyzing the intestinal muscular fibres, is useful in colic.

Another use for belladonna is its administration as a cardiac stimulant. The following statement of Luchsinger deserves to be widely known: "If the heart is brought to a stand-still, whether by chloroform or potassium salts, by gallic or oxalic acid salts, by apomorphine, quinine, zinc, or poisonous mushrooms, atropine will always succeed in the commencement of the paralysis in restoring the action of the heart." Again, the combination of morphine and atropine in the proportion of twenty to one will accentuate the action of cocaine; combined with chloral, belladonna reduces the paralyzing action of the former on the heart, while, according to Bert, Morat, Aubert, Doster, and Laborde, preliminary injections of atropine will greatly remove the danger of arrest of the heart in chloroform narcosis. Finally, the combination of belladonna with quinine or salicylic acid has deserved the greatest reputation in the treatment of neuralgia.

Still another use of the combination, says the *Gazette*, of drugs is called attention to by Dr. Goll, where the production of solubility plays the most important rôle. Mercury, as is well known, is with difficulty absorbed, and is corrosive in many solutions. The combination of mercury with albumen forms one of the most absorbable compounds. Such a solution is easily prepared by warming a solution of one of the heloid salts of mercury in the presence of a soluble albuminate.

COUNTRY DOCTORS AND HARD THINKING.

We have received a letter from Dr. Colburn Clement, bearing upon the above subject, which is so just and pertinent that we are glad to present it to our readers here. Dr. Clement was evidently a little stirred up by the remark of Dr. Whitford in a dietetic journal to the effect that "country doctors do so little thinking, as a rule." Dr. Clement says: "As one of the class he terms 'little thinkers,' we want to say a word for the provincial practitioner. Doctors who reside in localities remote from large cities and medical centres are necessarily thinkers. Their very independence promotes thought. They have to meet all forms and varieties of disease single-handed. They cannot call in at short notice the specialist, so relied upon in cities, for emergencies. They must decide and act alone. Those disposed to give the credit due the 'country doctors' must therefore, of necessity, admit them to be both thoughtful and not lacking in commonsense. Some people are always 'thinking,' and that settles it. But of what account is thought, unless productive of evident results. Inasmuch as our land is full of 'country doctors,' who achieve brilliant professional results as well as an honorable position among their neighbors, it becomes to us a most satisfactory proof that 'country doctors' think a great deal. Many of the most distinguished members of the profession started, and passed a large portion of their lives, as 'country doctors.'

"We trust Dr. Whitford is not too enthusiastic over his own cogitations.

> Pride, of all others the most dangerous fault,
> Proceeds [illegible]

So says Roscommon."

HOW TO PREVENT A COLD.

Under this title Dr. Brown-Séquard makes a contribution to the Société de Biologie which will be read with interest. Everybody catches cold more or less often, and nobody wishes to do so; hence Brown-Séquard's "method" ought to be popular. Under the name of "a cold" are included a number of acute catarrhal inflammations affecting the nasal, pharyngeal, laryngeal, tracheal, or bronchial mucous membrane. In this country we even apply the term to acute affections of the middle ear, the eye, the stomach, intestines, or bladder. The cause of these so-called "colds" is the influence of cold, damp air upon sensitive portions of the body, producing thereby a disturbance of the vascular equilibrium. The result is a congestion which settles down, perhaps with the help of microbes as the late Dr. Austin Flint believed, into an inflammation.

The most sensitive parts of the skin, according to Dr. Brown-Séquard the catarrhal-genetic areas, are the neck and the feet. In order to prevent "colds," therefore, one has only to harden these areas and destroy their sensitiveness. This is done by daily blowing a stream of cool air, by means of an elastic bag, upon the neck, and by immersing the feet in cool water. The air is at first only slightly cool, but is each day made colder, until the neck can stand an arctic blast with impunity. The feet are immersed in water which is, at first, at a temperature of about 90° F., and this is gradually reduced to 38° F.

Dr. Brown-Séquard's method is only a more rigid and elaborate form of a very well-known practice, viz., that of daily bathing in cool water. It will, no doubt, be useful if the person is not aged or weak. Such methods, however, seem after a time to lose their efficacy.

SURGICAL SENSATIONS.

The editors of certain Western dailies have evidently sent word to their New York and Philadelphia correspondents that they want "surgical sensations" for their readers. It has, in fact, become one of the canons of modern journalism that surgical operations make good news-matter for the people. The result is that we are constantly receiving from Cincinnati, Chicago, St. Louis, and other Western cities, marked newspapers containing lurid descriptions of "remarkable operations" for all kinds of every-day surgical conditions. In some cases the surgeon's name is mentioned, in other cases not; but in all cases the operations are marvellous and successful.

In the cases where descriptions are given without names we do not see that criticism is of any use, or is particularly called for. If the daily papers want surgical news they will have it, despite codes, by-laws, or resolutions. The most that can be done is to place the stamp of condemnation upon such medical men as will allow their names to become bandied about the country in connection with extravagant, and often ridiculous, descriptions of medical or surgical cases.

News of the Week.

The [illegible] of Malaria found at last, says the *Philadelphia Medical Times*. At the conversational meeting of the Pathological Society of Philadelphia, November 3, Dr. Osler communicated the result of a study of the blood in over fifty cases of ague, and he, too, finds the bodies described by Laveran to be constant features. At the Washington meeting of the Association of American Physicians, if we remember rightly, Dr. Osler expressed himself rather doubtfully as to the nature of the bodies he had seen, but further study has evidently convinced him of their parasitic character. He described the bodies as occurring both inside the red corpuscles and free in the plasma. The intra-cellular form appears as either a hyaline or a darkly pigmented body, filling one-third or one-half of the corpuscle, and undergoes slow amœboid changes. The hæmoglobin of the corpuscle is gradually destroyed by the organism, and the stroma becomes pale and finally colorless. There seems to be no doubt whatever about the amœboid character of these movements, which are readily followed with a high-power objective. The forms occurring outside the corpuscle are still more remarkable. These are (1) small, circular, pigmented bodies; (2) curious, crescent-shaped organisms; and (3) an extraordinary flagellate body resembling an infusorian. The pigmented crescents have been noted by all observers, and are much more readily seen than the amœboid bodies. They do not occur so frequently, and apparently only in the later stages of the disease. The flagellate form, also pigmented, is still less common, and

was seen by the lecturer in only six cases. The movement of the flagella is very active, so that it brushes away the red corpuscles in its vicinity. The confirmation given by Dr. Osler, to the observations made by Laveran, Marchiafava, Celli, Golgi, Sternberg, and Councilman, seem to settle the fact that we have found at last a micro-organism peculiar to malaria. This organism belongs probably to the flagellate infusoria. It is observed not only in the febrile paroxysm but in the intervals, and its presence is likely to be helpful in diagnosis; if we cannot yet say that it is the cause of the disease.

Work of St. Luke's Guild.—The object of the Guild is "to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy." The Guild was organized in September of this year, when a charter was received from the parent society in England. The officers of the American Guild are: Dr. W. Thornton Parker, provost, Newport, R. I.; the Rev. George J. Magill, warden, Trinity Church, Newport; Dr. George H. Cleveland, vice-provost, Pentwater, Mich.; the Rev. G. G. Nicholls, treasurer, Jamestown, R. I.; the Rev. W. F. Morrison, chaplain, U. S. Navy. In the two months since the Guild was started members have joined from all parts of the country, including some prominent army surgeons, and corresponding secretaries have been appointed. It has been decided to raise a fund for the maintenance of a medical missionary under the direction of Bishop Boone, of China.

Dr. Pohlmann and American Medicine.—We have received a letter from Dr. Pohlmann, of Buffalo, regarding his speech made at the meeting of the German Congress of Physicians and Naturalists, in which he states that he did not speak as a representative of the American medical profession, but of the American Association for the Advancement of Science. We apologize to Dr. Pohlmann for the mistake, which was due to the report made of his remarks in a German journal, and not to any wish on our part to do our correspondent injustice. Dr. Pohlmann says that Dr. Virchow did not make the answer which we asserted was made. To this we beg to say that Dr. Virchow did, at one time in the session, intimate that which we asserted he did. The proof of this will be found in the records of the meeting. We regret that the remarks of Dr. C. Pohlmann should have evidently been misunderstood by some of the reporters among his audience, as well as by ourselves.

Castration.—The use of this word to indicate the removal of the ovaries has been adopted by European journals, and has accidentally even crept into the columns of The Record. It is, however, manifestly against all English usage, and has no etymological or lexicographical support. The word is derived from the Latin *castrare*, to castrate or remove the testicles.

The Amphitheatre is the title of a new monthly medical journal published in this city, and devoted to the interests of the junior members of the medical body and of the medical colleges of America.

The Micro-organisms of Varicella.—Dr. P. Guttmann has found and cultivated three micro-organisms in the eruption of varicella. These were staphylococcus aureus, staphylococcus viridis flavescens, and a third to which a name is not given; none of them were proved to be pathogenetic.

Splenectomy for Floating Hypertrophied Spleen was successfully performed on the 21st ult, by Dr. J. R. Nilsen, at the New York Post-Graduate Medical Hospital. The patient is doing very well. The case will be reported in full later on. This is, we believe, the first case of splenectomy for this disease ever performed in this country.

Cholera in South America.—The cholera appears to have chosen South America for its season's work. It exists in epidemic form in several cities of Buenos Ayres, and its presence is reported at Rio Janeiro and in Paraguay.

The Royal College of Physicians of London have received two thousand pounds under the will of the late Gavin Milroy, one of the earliest workers in sanitary science. Dr. Milroy left the above-mentioned sum for the endowment of a lectureship on public health and sanitation.

A New Medical Society has been organized in Birmingham, Ala., which is to be known as the Alabama Surgical and Gynecological Association.

An Asylum for Inebriates has been established at Milan, Italy. Such an institution is a novelty, apparently, to the Italians and French. *L'Union Médicale* calls it a "rather fanciful" thing.

Dr. William A. Henna died on November 27th, at his residence in this city. He had practised medicine only two years, and was a graduate of the College of Physicians and Surgeons.

A Large Fee.—The Boston papers report with comment the fact that a leading physician had been paid a fee of $10,000 for a single surgical operation.

Pleuro-pneumonia and the Cattle Growers.—The appeal of the International Range Association to President Cleveland, with regard to contagious bovine diseases, is fully warranted by the imminence of the danger to the cattle interests of the West. Pleuro-pneumonia has at last got west of the Alleghanies, and appeared in several places in epidemic form. The disease is certain to continue its course westward, unless prompt and radical measures are taken to check it. There is but one thing to do, viz., to quarantine and exterminate the infected herds.

Coffee-houses.—A project for establishing coffee-houses on a large scale throughout the city is again being agitated by a number of philanthropic gentlemen. In the large cities of England, there are already 233 such houses in successful operation. There is no doubt of the value of these institutions in promoting health, temperance, and social improvement. A practical objection to their very wide usefulness, however, is that most Americans cannot drink coffee in the evening, and they will not drink tea.

PASTEUR'S SYSTEM IN RUSSIA.—Since the establishment, four months ago, of the Odessa Bacteriological Station, three hundred and twenty-two patients from all parts of the empire have been treated for hydrophobia, by Dr. Gamalea, on the Pasteur system. Of these, seven died subsequent to their dismissal from the institute.

THE DEATH OF DR. E. P. LEPROHON, of Portland, Me., is announced. The deceased was born in 1825, and was a graduate of Harvard and of the Paris Medical School.

THE DEATH IS ANNOUNCED OF HEIT Grohe, Professor of Pathology in the college at Greifswald.

NEW YORK SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The annual meeting of the New York Society for the Relief of Widows and Orphans of Medical Men, was held on November 24th. The following officers were elected for the ensuing year: President, Dr. Gouverneur M. Smith; Vice-Presidents, Dr. Thomas F. Cock, Dr. Everett Herrick, Dr. Henry Tuck; Treasurer, John H. Hinton; Board of Managers (to serve three years), Dr. S. T. Hubbard, Dr. J. H. Anderson, Dr. W. N. Blakeman, Dr. William Detwold, Dr. F. A. Castle, Dr. F. H. Markoe, and Dr. Joseph Wiener.

SALICYLATED WINE.—Over five thousand gallons of wine, containing four and a half grains of salicylic acid to the pint, were recently seized by our City Board of Health.

REGULATING MEDICAL PRACTICE IN TENNESSEE.—Dr. F. L. Sim, editor of the *Mississippi Valley Medical Monthly*, and Chairman of the Committee on State Legislation, has issued a circular to the profession of Tennessee, urging co-operation in securing the passage of a medical registration law. It seems that such a law could readily be obtained of the Legislature, if it were not for the opposition exerted in the profession itself. We trust that Dr. Sim, and those working with him, will be successful this year. The sentiment of thoughtful men is now decidedly in favor of such medical legislation as is being asked for that State.

THE FRENCH CONGRESS OF SURGEONS, which recently finished its second annual session, was an unexpectedly successful affair, and its work has excited much enthusiasm. M. Verneuil was elected President for the ensuing years. The Congress adjourned to meet in 1888, probably in the spring. The number of papers read was very large, but many were of a commonplace character. On the whole, America can do quite as well.

CARRYING HOME "MATERIAL" FOR DISSECTION.—The practice by students of taking home from the dissecting-room anatomical fragments for purposes of more private and secluded study received a slight check in Paris recently. A student who had brought home part of a hand and shoulder, was cited before a judge and condemned to pay the not very heavy fine of five francs.

THE INTERNATIONAL MEDICAL CONGRESS.—According to recent news from Chicago, no one longer doubts the success of the International Congress. The most eminent physicians of Europe have promised to go to Washington in 1887, and many have promised original communications.—*Progrès Médical.*

THE AMERICAN DENTIST IN ENGLAND.—The London correspondent of *The Times* writes: "The American dentist has become almost as fixed an institution in England as the French hairdresser or the German waiter. There are probably two score in London alone, commanding a patronage which would open the eyes of their professional brethren at home. I think dentistry is probably the only thing in which Englishmen would unanimously concede American supremacy."

DARTMOUTH MEDICAL COLLEGE held its annual commencement on November 23d, and graduated a class of nineteen.

PHILADELPHIA has another homœopathic journal, *The Homœopathic Recorder*.

THE SPRINGFIELD, ILL., CITY HOSPITAL is to receive $25,000 from the will of the late Mrs. C. W. Chapin, provided a like sum is subscribed and the city contributes the present hospital property.

THE FAITH-CURE NOT FOR CHILDREN.—An enterprising and well-endowed "faith-cure" congregation in this city, recently established a "faithist" orphanage for children not over twelve years of age. The Society for the Prevention of Cruelty to Children has taken the matter up, and shown that the institution was not legally organized; also, that children should have proper medical attendance when sick. It appears that something like the practices of the "peculiar people" of London were anticipated.

THE QUESTION OF "CASTRATION" AT THE BERLIN CONGRESS.—A very thorough discussion of the subject of operation for pyo- and hydro-salpinx was held at the last meeting of the German Congress of Physicians and Naturalists. Among the speakers were Schramm, Veit, Freund, Hegar, Martin, Fraenkel, Schroeder, and others. The *Medical Press* says of the discussion: "It may be said that the operation never has been looked upon with favor in Germany, not because German surgeons have any sentimental repugnance to it, but because after intelligent trial it has not satisfied the requirements in the cases in which it has been employed. That it has not been grossly and ignorantly abused is evident from the paper and remarks of Martin. If there is one man in Germany who has carried the operation to excess it is Martin, of Berlin. He is everywhere regarded as a bold and eager operator, and his fellow-citizens are not slack in their condemnation of his surgical revellings. Most men have a weakness, and Martin's is amputation of the cervix uteri, and not "castration." As regards this operation, however, his countrymen express the opinion that he carries operative measures to too great lengths, and on comparing his work with that done by other men with large clinics there appears to be some color for the charge. Thus Gusserow's list of "castrations" for pyosalpinx amounts to 14 cases, while Martin's, for pyo- and hydro-salpinx combined reaches 62 cases out of a total of 287 treated; a very great difference truly, but one that becomes dwarfed into insignificance in comparison with the work of an English operator with his total of close upon eighty total castrations in a single year! Nearly all the speakers sounded a note of warning against operating when the case did not require it, and against ex-

pecting the brilliant results some of our operators have led us to expect. And this warning was enforced by two facts, both of which have been absolutely denied by some (not all) English operators. One is, that the virulence of the poison is in many cases only short-lived, and that after the virulence has ceased a condition of quiescence supervenes, in which operation is out of place, because unnecessary; and the second is that recovery not infrequently takes place so completely that conception subsequently follows. In four of Martin's cases conception took place after bilateral disease. It is a little curious that of all the speakers the one who had been foremost in operating pleaded the most strongly for patient, persevering local treatment." Professor Schroeder referred to the tubes and ovaries shown at the Congress by Dr. Hofmeier, and removed from a case in which an operation was apparently strongly indicated, yet the specimens looked almost normal.

Tea as a Cause of Sterility.—Dr. James Davies states, in the *Therapeutic Gazette*, that the Druidic college of the twelfth century considered tannin the most potent of all the products of nature in producing sterility, and that tea-drinking, as practised by the public, undoubtedly acts in the same direction.

The Diuretic Action of the Mercury Salts is, believes Mr. F. S. Locke, due to its stimulating the liver and increasing the amount of urea thrown into the blood by that organ.

Ozone in the Treatment of Diphtheria and Phthisis.—At a meeting of the Clinical Society of the Post-Graduate School recently, a portable ozone generator and inhaler was shown by Dr. Seneca Powell, who reported some remarkably successful results from its use in diphtheria and phthisis. The action of the gas is at first slightly stimulant and then hypnotic.

Possible Danger from Pepsin.—It is suggested by Dr. Wood (*Therapeutic Gazette*) that in ulcerated conditions of the bowels or stomach pepsin may enter the blood and cause septicæmia. Dr. E. Chenery reports a case which he thinks confirms this view.

Pasteur's Last Report of his Work.—Pasteur's last report of his work of inoculation for rabies was made to the Académie de Médecine on November 2d. He announced that he had inoculated 2,490 persons, of which 1,750 cases were from France and Algeria. In this latter number there had been 10 deaths, or 1 in 170. The average number of deaths from rabies in Paris annually is 12, but in the last year only 3, of which 1 had been inoculated, but not by the "intensive" method. Pasteur now finds it necessary, in cases in which the face has been seriously bitten, to inoculate more rapidly and with more powerful virus. Dr. Fitsch's failures with the inoculations in Vienna was attributed to his not adopting this more intense and rapid method.

The Journal of Comparative Medicine and Surgery is now published by A. L. Hummel, of Philadelphia. Dr. Conklin has associated with him as editor Dr. R. S. Huidekoper, of Philadelphia. The *Journal* occupies a position at once unique and useful, and we are glad to observe evidences of its prosperity.

Obituary.

JOHN P. GRAY, M.D., LL.D.,

UTICA, N. Y.

Dr. John P. Gray, Superintendent of the State Lunatic Asylum, at Utica, died in uræmic coma, Monday, November 29th, at the asylum in that city.

Since Dr. Gray was shot through the upper jaw, March 16, 1882, by the crank, Henry Remshaw, he has never fully recovered. The wound seriously affected his nasal breathing, left a neuralgia which was almost constant, and gave a terrible shock to the nervous system. Dr. Gray bore up under it manfully, but it weakened him seriously, and rendered the burdens of his position more trying and exhaustive. His intimate friends have been much alarmed about his condition, and the management of the asylum thoughtfully gave him leave of absence last winter, and he spent some time in Thomasville, Ga., and afterward at Carlsbad and elsewhere in Europe. The attempt to return again to his work, and the cares incident to it, proved too much for him, and week by week the disease took closer hold upon him, while his strength failed and sure signs came that the end was near. About three weeks ago the doctor caught a severe cold, from which dated his rapid decline.

Dr. Gray was born in Halfmoon, Centre County, Penn., August 6, 1825, and was educated in the common school, at Bellefonte Academy, and at Dickinson College, and in medicine at the University of Pennsylvania. Receiving the degree of A.M. from Dickinson College in 1846, and of M.D. from the University of Pennsylvania in 1848, he was in the latter year appointed one of the resident physicians of the Pennsylvania Hospital. He was invited to the New York State Lunatic Asylum, in Utica, in 1851, to become third assistant physician. So marked were his qualities and so valuable his services that his promotion was very rapid; for he was appointed second assistant physician in 1852, and first assistant and acting superintendent in 1853, when only twenty-eight years of age. In that year, also, he was appointed medical superintendent of the Michigan State Lunatic Asylum, and designed the plans for the asylum at Kalamazoo. The managers of the institution in Utica had learned his merits and his efficiency, and in 1854 he gave up his position in Michigan and chose the scene of his life-work, beginning his notable career as medical superintendent of the Utica Asylum. His labors as editor-in chief of the *American Journal of Insanity* began in the same year.

Dr. Gray was married, September 6, 1854, to Miss Mary B. Wetmore, daughter of Edmund A. Wetmore, of Utica, who survives him. To them were born six children, three of whom died in childhood. The Albany Medical College, in 1876, appointed him its professor of psychological medicine, and there, as well as at Bellevue Hospital Medical College, he continued his lectures until 1882. He was in great demand as an expert and gave testimony in the case of the conspirators connected with the murder of Lincoln, in the will cases of Vanderbilt and Fillmore, and the murder trials of Bigot, Buckhout, Frank H. Walworth, and Romaine H. Dillon; also in the case of Guiteau for the assassination of President Garfield. In that trial Dr. Gray directed the policy of the Government in the prosecution, and suggested the course of the examination.

Dr. Gray received several commissions from President Lincoln to report on the cases of criminals alleged to be insane, and was called to examine Payne, one of the fellow-conspirators with Wilkes Booth for the murder of the martyr President.

Personally Dr. Gray was a lovable Christian gentleman, and one who endeared himself to everyone with whom he came in contact.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Stated Meeting, November 24, 1886.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

THE MILK-SUPPLY OF NEW YORK.

DR. CYRUS EDSON read a paper relating to the milk-supply of New York City, which, from a sanitary point of view, he said, was second in importance only to the water-supply. With regard to the causation of sickness he spoke of adulterated milk, contaminated milk, and milk from diseased animals. By adulteration he meant the addition of water or other substances, or the removal of the cream. The admixture of calves' brains, rape-seed, and some other materials, formerly said to be common, had never been seen in the milk in this city. The addition of water or the removal of the cream constituted the fraud in ninety-nine cases out of a hundred. To conceal this fraud there might be added sugar and salt to increase the specific gravity and render the milk apparently richer. The use of chalk and lime for this purpose was very rare. To prevent souring, there was sometimes added bicarbonate of soda, carbonate of soda, borax, nitrate of soda, or salicylic acid. In the writer's opinion the addition of preservatives to milk was exceedingly reprehensible. Borax and salicylic acid were irritants to the kidneys.

Having spoken of the adulterants, Dr. Edson considered the tests of milk. The best test was a complete chemical analysis; but this required time and involved expense, hence it was at present not generally practical. An easy and fairly reliable way to determine the addition of water or the removal of the cream was the lactometer. The lactoscope was valuable in determining the amount of fat in the milk, and he had employed it with advantage in estimating the relative richness of human milk. An examination by the microscope was also important.

Concerning contaminated milk, it was well known that milk would absorb disease-germs, and this source of disease had been plainly shown by European observers. Besides the absorption of disease-germs, milk was liable to become contaminated through the impure water with which it was sometimes diluted. The evil influence of swill food, and an excess of the lime salts upon the cow's milk was pointed out. Milk-cows should be fed on wholesome food and given plenty of pure water. Milk from animals having tubercular disease could transmit that disease to the one using it, and there was evidence going to prove that other diseases were sometimes transmitted from the cow, through her milk, to the user of the milk.

The State should have an ample corps of veterinary inspectors, in addition to the ordinary force of milk inspectors, and they should have the power, under proper restrictions, to summarily destroy all animals suffering from infectious diseases. Through a sense of economy the city had limited the number of milk inspectors to two, whereas there should be ten. The State ought to educate the youth in hygiene, and distribute tracts throughout the country relating to the care of cows, and the evil influences of impure milk.

THE FEEDING OF INFANTS DEPRIVED OF BREAST-MILK.

DR. J. LEWIS SMITH read a paper on the above subject, in which he said that no food was so suitable for infants, under the age of twelve months, as the mother's milk. But unfortunately there were instances in which the nutrition of the infant had to be provided for in other ways. Although the employment of wet-nurses of the right kind was to be recommended, it was much safer to intrust the infant to hand-feeding than to give it a wet-nurse who was mentally and bodily unreliable.

Too great honor could not be rendered the illustrious Baron Liebig, who, without reward, devoted so much time to the preparation of a food for infants. While there was a great variety of infant-foods in the market at the present day, they were prepared essentially after Liebig's formula, who inaugurated an era when he sought, by artificially digested food, to relieve the feeble digestive function of infants. While it could not be denied that, following in the footsteps of Liebig, some manufacturers had brought out very good foods, those which were comparatively easily assimilated and nutritious, yet they were usually too expensive for the poor. It was the duty of the physician to recommend a diet for the infant which the poor as well as the rich could employ. The milk of the goat or ass bore a closer resemblance to human milk than any other food. The foods in the shops either contained animal milk or else a large proportion of milk was required to be mixed with them in the nursery. The important problem arose, how to prepare cow's milk so that it would not be rendered indigestible by fermentation in large masses in the stomach? A gentleman was given permission to try koumyss—which was free from this objection—in the Foundling Asylum, but not a single infant did well under its use. The amount of caseine in cow's milk fluctuated greatly, according to the amount of exercise which the cow had, and other conditions, so that the milk taken from the general dairy-can was probably more reliable than milk from a single cow, because it was likely to contain a better average. He had evidence to prove that the greatest deception was sometimes practised in pretending to sell for infants one cow's milk.

The milk designed for infant feeding should be as fresh as possible, and preserved on ice. Unfortunately in New York the milk delivered in the morning was made up of two milkings of the previous day, and it was difficult to prevent some fermentative change in the summer in milk twenty-four hours old. The milk as soon as received should be scalded, as this arrested fermentation and destroyed microbes.

Much ignorance existed among the people, and among some physicians, regarding the amount of dilution with water which should be employed when infants were fed on cow's milk. The water should be previously boiled, in order to destroy any deleterious substances which it might contain, and then be allowed to cool. The following was a safe schedule for the dilution of average cow's milk for infants: to the third week, three parts water; from the third to the sixth week, two parts water; from the sixth to the fourteenth week, one-half water; from the fourteenth week to four and a half months, one-third water; from four and a half months to the sixth month, one-fourth water.

Even the best of cow's milk had a slight acid reaction when fresh. To neutralize the acidity or render it alkaline, he added two or three teaspoonfuls of lime-water at each feeding, and a little salt, perhaps, aided digestion. To prevent coagulation in masses, some gruel or farinaceous substance had been added with success, their action being to keep separate the caseous particles. It had been said that starch was very sparingly digested by an infant under the age of three months. Dr. Smith recommended that five or ten pounds of selected wheat flour be packed in a bag of firm texture, the bag firmly tied with a strong cord, and kept covered with boiling water four to seven days, which would cause a part of the starch to be converted into dextrine, and probably all the starch would undergo some change, rendering it more easily digested. It was not necessary that the water be kept constantly boiling. The external covering of flour should then be removed, and the internal portion employed when needed, grating it off. Two heaping teaspoonfuls was sufficient for a pint of water, in which it

should be boiled for a few minutes, if the infant were under three months of age; add of this a sufficient quantity to the milk instead of diluting with water, and the infant would be better nourished. Four teaspoonfuls to the pint might be employed after the sixth month. Another mode was to make a gruel of barley or other flour, and when cooled to a blood-heat add to it a small quantity of diastase of malt. If the gruel were composed of four teaspoonfuls of barley-flour boiled for ten minutes in a pint of water, there might be added to it, when at blood-heat, a half to a third of a teaspoonful of liquid extract of malt.

Some physicians had used condensed milk with satisfaction, while others had reported that infants fed exclusively upon it did not do so well. Explicit directions should be given with regard to the dilution of condensed milk; it was often diluted to the extent of starving the infant. If condensed milk were diluted four times its quantity with water, and then prepared as directed before with the farinaceous admixture, it could be employed with good results.

Infants should not be fed oftener than once in two and a half hours, if under three months of age, nor oftener than once in three hours above this age. Like adults, some infants required more food than others, but to infants under six weeks only about one and a half ounce should be given at each feeding; at the third month, about two and a half ounces; at the tenth month, a quantity equal to five ounces, or less, of mother's milk.

Food given by the bottle seemed to be better digested than when given by the spoon, as it allowed the secretions of the mouth to become mixed with it.

Meat usually proved laxative, but sometimes two or three teaspoonfuls of beef-juice, two or three times a day after the third or fifth month, seemed to be of benefit.

Dr. Smith believed that a large majority of the prepared foods sold in the shops at from five to ten times their value could profitably be replaced by boiling flour in the manner he had indicated, and it had seemed to him that in infantile diarrhœas the glucose, supposed to be the valuable element in the Liebig foods, produced a laxative effect, and the boiled flour was in this regard the preferable food.

Dr. H. C. Havew, of Boston, present by invitation, said his remarks were based upon experience in an institution where there were about forty infants. For purposes of exact information he had weighed the infants every day, kept record of the exact amount and kind of food given, etc. He thought that if anything positive could be stated regarding artificial feeding it was that the infants should receive the milk before fermentative changes begin. Experience had shown that it was not so much a question as to the composition of the milk, of the food of the cow, or even of the healthfulness of the cow, but rather of the freshness of the milk. For instance, in a certain institution the infant mortality was brought from ninety down to thirty-three and a half per cent. simply by giving the inmates *fresh* cow's milk. He had not been able to raise a single infant on any artificial food, but children taken to the country and given fresh cow's milk did almost as well as if they were given breast-milk. He had seen children steadily losing weight day after day on certain foods, and on sending them to the country where they could get cow's milk not more than four hours old, they commenced at once to gain in weight and improve in condition. People failed as yet to recognize that children had any right to live; they acknowledge it in words, but failed to do so in practice. If as many adults died from the effects of milk undergoing fermentative changes as did infants, one could not find a drop of such milk in a range of a hundred miles. When it came to the question of the right of the mother to deprive the child of the breast, it was not to be decided alone on the ground as to whether during the first year the child appeared to develop and show activity; it was necessary to look farther, and consider whether that child would be as strong and as much of a human being at the age of forty years.

Prof. Leeds, of Stevens Institute, thought that bicarbonate of soba was the least objectionable of the contaminants mentioned by Dr. Edson. Examination of New York City milk showed that much of it was rife with pathogenic organisms, which rendered its use dangerous. The health officers should have more assistance, and their authority should be extended to the supervision of the cows in their stalls and pastures; simply supervising the sale of milk after it reached the market would never insure its healthfulness. He had found great variation in the composition of human milk, even at short intervals, from the same mother. The dangers attending the employment of wet nurses rendered it preferable, he thought, to employ cow's milk, which could be obtained of nearly uniform composition.

Dr. B. F. Dawson could take exception to nothing which Dr. Smith had said, but he would have laid greater stress upon the importance of not giving infants too much food, and especially not to feed them too often, as was commonly done. "Children die of starvation although fed to repletion." The stomach of an infant without food for some hours would retain that which the stomach of a pampered child would reject. Infants could be easily raised on cow's milk if fed properly.

Dr. A. Jacobi said that while woman's milk varied considerably in the proportion of its ingredients, it was still practically the same in its physiological characters. It ought not to be forgotten that digestion is a vital, not a chemical process, and that the infant's digestive organs, as well as those of the adult, permit a great deal of latitude in the food which they receive. While the mother's milk was, as a rule, the proper nourishment for the child, still we had all found that the nutrition afforded by a good wet-nurse was satisfactory.

WET-NURSING *versus* ARTIFICIAL FEEDING.

Dr. Joseph E. Winters had stated in a former paper that the food *par excellence* for an infant was its mother's milk. He did not wish to have anything which he might say this evening understood as a restriction on what he said previously with reference to the importance of the mother nursing her own child; but, when it came to a question of artificial feeding *versus* wet-nursing, we were considering an alternative for the child. He was not discussing the question of artificial feeding for the infants of the masses, those in institutions, but those of the well-to-do and wealthy only.

In deciding between a wet-nurse and artificial feeding for a babe there was a second child, the wet-nurse's, that demanded our conscientious consideration. Deprived of its mother's breast, this child would almost surely die of neglect and starvation. One life is as good as another; *we* certainly have no right to discriminate. When the physician recommended a wet-nurse, he assumed the responsibility of deciding that one child should die that possibly another might live. Dr. Winters was obliged to take statistics from foreign countries, as there were none in this, showing the comparative mortality between wet-nursing and artificial feeding. According to the statistics quoted, the mortality from artificial feeding was less, and he thought the difference in favor of this method was greater than the figures showed. Dr. Winters did not hesitate to say that cow's milk, properly modified, was safer milk for the infant than that of the average wet-nurse. In private practice he had never had a bottle-fed child die during infancy, nor had he ever been compelled to abandon the bottle for a wet-nurse; but he had often been compelled to abandon the wet-nurse for the bottle. Artificial feeding, properly directed and carried out, was perfectly successful; but it depended upon the mother to superintend the feeding of the child in order to obtain success. The woman who was unwilling to supervise the feeding of her own child committed the greatest sin in her life when

she got married. The child should never be left to anyone but the mother, who alone took special interest in its existence. Dr. Winters gave a number of instances of families in this city in which opportunity had been afforded for comparing the results of artificial feeding, feeding by the wet-nurse, and feeding by the mother's milk. The excellent results of hand-feeding were striking, and superior to feeding by a wet-nurse. There were poor women in this city who had nursed their children, and raised them successfully, until somebody told them about the wet-nurse agency. They put their next babe in the nursery and went as wet-nurses for twenty five or thirty dollars a month. Their own babe died in the nursery for want of a mother's care, whatever may have happened to that of the rich who hired them. But these women, whether married or unmarried, having had one experience, would bear other children, and repeat it; and they were encouraged in it at the nursery, for these institutions also received a fee.

Further remarks were made by Dr. E. C. Harwood, who had had a favorable experience in raising infants on Boardman's condensed milk; by Dr. Dawson, who could add his evidence to that of Dr. Winters, that the rich child's wet-nurse was hired at the expense of the life of the wet-nurse's child; and by Dr. Malcolm McLane.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEETING AT THE COLLEGE OF SURGEONS—THE WILSON BEQUEST OF A MILLION DOLLARS—THE ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL—DEATH OF PROFESSOR DAVIDSON—MASSAGE—MR. LAWSON TAIT AGAIN—THE PENDING ELECTION AND THE ACTION OF THE BRITISH MEDICAL ASSOCIATION—THE SOCIETY OF APOTHECARIES—UNIVERSITY OF LONDON EXAMINATIONS—A RARE CASE OF EPILEPSY—EXTIRPATION OF THE LARYNX.

London, November 5, 1886.

THE event of the past week has been the meeting (at the college) of Fellows and Members of the Royal College of Surgeons. The attendance was numerous, and the result was pretty much what might have been anticipated when we consider the agitation which has been going on for years. On the present occasion the Members had secured as their champion no less a person than Mr. Timothy Holmes, who moved the first resolution. This embodied very drastic measures of reform. It proposed to give Members of the College a voice in its management and to allow them to sit in the Council. This resolution was opposed by Mr. Erichsen, who might be regarded on this occasion as the representative of the Council, by whom he was a few years ago elected to the presidency of the College. Mr. Holmes' resolution was, however, carried by a large majority. A motion was then proposed and carried, requesting the Council to empower certain members of its body to meet and confer with representatives of the Members and Fellows. Two other motions were also carried, relating to the Society of Apothecaries, and to the proposed changes in the manner of obtaining the fellowship, respectively. If the meeting held on Thursday should lead to no more results than did the similar one of last year, it will not be because the reforms desired by the Fellows and Members were not clearly stated in unmistakable language on this occasion. It will be because the Council are determined to resist reform, and will leave no stone unturned to maintain their present position. The Council have no reason to complain of the manner in which, at the recent meeting, the case of the reformers was presented to them. Mr. Holmes and Mr. Rivington were most able, calm, and judicious advocates. The former has been on the Council, and the latter is still an examiner. Yet both of them vigorously assailed the policy pursued by the Council, and they were ably seconded by numerous other speakers. Mr. Rivington, however, I am sorry to say, much to the regret of his many friends and admirers, made much too long a speech, and greatly tried the patience of his audience. This is not my opinion only, but that of every one with whom I have conversed on the subject, and I have had plenty of opportunity of doing this. I have chatted not only with reformers, but with members of the Council of the College, and the latter generally admit that the first half of his speech was most powerful, but that he spoiled the effect by prolonging it. Let us hope that the councillors will duly consider the first half.

The decease of Lady Erasmus Wilson places at the disposal of the Royal College of Surgeons the munificent legacy left by her late husband, Sir Erasmus Wilson, F.R.S. It is supposed the property will amount to £200,000 sterling. It will be remembered that Sir Erasmus was during his lifetime a generous benefactor of the College and of many charitable institutions.

To-morrow is the last day on which candidates can be nominated for the direct representation of the profession in the General Medical Council, and the election will occupy, I believe, the following three weeks. A good deal of apathy has been displayed in the matter hitherto, but interest is now being awakened as to the result. Very unfavorable comments are being made on the conduct of the "Birmingham caucus." An attempt has been made to produce a belief among members of the British Medical Association that the nominees of the caucus were really candidates of the Association. This is a complete misrepresentation. The members, in two general meetings, not only refused to nominate, but refused to refer the question to their Council. In spite of this that Council has officially passed a resolution in favor of Sir B. Foster and Mr. Wheelhouse, their president and late president. This is an open defiance of the rights of members, and an assumption of authority to speak in their name after being refused permission to do so. It also seems a betrayal of the confidence reposed in them, and calls for decided action on the part of members to insist on their rights and to punish the offenders. Many other misrepresentations have also been made. Mr. Wheelhouse advertises that he has been a general practitioner for thirty-seven years, but those who know him declare that he would have considered it a gross insult to call him so only a few months ago. He got elected into the Council of the Royal College of Surgeons some years ago, on the plea of being a hospital surgeon, and it is difficult to reconcile the two positions. But these British medical leaders seem to think any statement good enough to hoodwink the profession. Since Mr. Ernest Hart declined the nomination, they have adopted, as a third candidate, Dr. Glover, subeditor of *The Lancet*. He declined, with some dignity, to amalgamate with them, but they are still using his name as if he had not stood aloof from them; in fact, as the proverb has it, "hanging on to the coat-tails" of a better man.

Only three representatives are to be elected, but there are no less than fourteen candidates; I fancy some of them may not go to the poll.

The late Professor Dyce Davidson was well enough known in London to make his sudden decease a topic of conversation here. He held the chair of Materia Medica in the University of Aberdeen, and while lecturing, on the 22d ultimo, was seized with apoplexy and died within an hour. He was only about forty-five years of age.

A somewhat undignified discussion has taken place lately in *The Lancet* concerning "Massage." It arose from a review of a little book on the subject lately published by Dr. Murrell, the reviewer indorsing his opinion that it required two years to learn the art of massage. Against this Dr. Sturges protested, and declared that a few lessons were quite sufficient. Other correspondents

mixed in the *mêlée*, and some pretty things were said *pro* and *con*. Two years certainly seem a long curriculum for a masseur. On the other hand, a few lessons will scarcely convert a butler or footman into a skilful manipulator. Injury rather than benefit is likely to accrue from rough treatment by clumsy rubbers, and it would be well, perhaps, if massage were only applied by skilled nurses under the supervision of medical men.

An animated discussion took place at the Medical Society of London, last week, on the question of "The General Principles involved in Removal of the Uterine Appendages." Mr. Lawson Tait read a paper on the subject, which was in his usual vigorous style. He attacked Sir Spencer Wells, who, he said, seemed to regard the reproductive act as a twelfth commandment. He went on to say that much of Sir Spencer Wells' language, in the latter's contribution to the *International Journal of the Medical Sciences*, reminded him (Mr. Tait) of the conduct of a certain Scotch laird who, when in a temper, went out into the street and "swore at large." Mr. Tait himself is not so mealy-mouthed that he need complain of others, and he might bethink himself with advantage of the way in which he behaved to Dr. More Madden at the Brighton Meeting of the British Medical Association. An animated discussion followed the reading of Mr. Tait's paper on Monday last, in which the President, Dr. Croom, Mr. K. Thornton, Mr. Doran, Dr. Bantock, Dr. Heywood Smith, and Dr. Imlach took part. The general tone of the discussion was in favor of Mr. Tait's known views. Mr. Doran expressed a hope that in the future means may be found of catheterizing the tubes, and washing out the tubes and ovaries, so as to avoid the necessity for removing them.

LONDON, November 28, 1886.

THE chief topic of conversation in professional circles continues to be the pending election of direct representatives to the General Medical Council, and more especially the action taken by some prominent officials of the British Medical Association. I have already alluded to the unfair way in which the influence of officers of the Association has been exerted in behalf of two of the candidates. Nominally, the Birmingham caucus have been at work for three candidates, viz., Wheelhouse, Foster, and Glover. The latter gentleman has, however, received but a faint-hearted support from them. A circular sent out in the name of Dr. Waters, on the very day the election began, throws Dr. Glover overboard altogether. There can be no doubt that the selection of Dr. Glover as the third candidate (after Mr. Hart had declined) was designed to gag the *Lancet*, and the manœuvre succeeded. At any rate the latter journal, which had previously fiercely attacked the Birmingham caucus, did so no longer, but maintained a discreet silence. It is no secret that Dr. Glover is not very comfortable with his allies, and in fact refused to amalgamate his committee with theirs, but he cannot be expected to fight against them when they are professing to support him. It goes without saying that the *British Medical Journal* is supporting its two officials (members of the "Journal Committee") through thick and thin. Its pages have been deluged with letters in their support, but some of the communications against them have been suppressed, and in the pages of a contemporary I learn that they even denied admission to the *advertisement* of one candidate. From another source I learn that this dodge had previously been tried on another candidate, who, however, got his advertisement inserted by a threat of legal proceedings if it were excluded. The press may be tampered with, but it is impossible to stop private conversation, and many discreditable stories are floating about. Of some I have good evidence. Thus I have seen letters from officers of the Branches complaining of the pressure put upon them, and speaking of Wheelhouse and Foster as the two "Association candidates," although it has been admitted in the editorial columns of the *British Medical Journal* that they are not—as, indeed, they cannot be after the decision of the Annual Meeting at Brighton. In one Branch the resolution passed by the council of the Association *in favor of two of themselves* was sent out (*under cover of the postage paid out of the Branch funds*) along with a summons to a meeting of the Branch. The same resolution has been reprinted and sent out by one of the secretaries of the Metropolitan Counties Branch (one of the Council, and therefore one who helped to pass the resolution) along with his private card. Can official influence be more misused? Every conceivable attempt is made to throw the ægis of the Association over the two nominees of a small clique—one of these two being actually an Irishman, a Home-Ruler, and a foreign graduate.

Another burning question is that of the Apothecaries' Society. The action of the two colleges in sending a joint refusal to admit the Society into their combination is exciting the most unfavorable comments. Those who are personally indifferent view the step with profound distrust. Many are at a fever-heat of indignation. Most general practitioners (I might almost omit the word "general") are members of the College of Surgeons (M.R.C.S.) and licentiates of the Society of Apothecaries (L.S.A.). The question is therefore one of wide interest. The College of Surgeons has excited more dissatisfaction by this step than it can possibly assuage by its tardy promise to take a vote of the Fellows on the question of the admission of the Members to a voice in its government. Our medical qualifications bid fair to become still more confused. How much simpler it would be to take a leaf from our transatlantic brethren and have only one qualification, viz.: M.D. As it has been often said, "If a medical man is not a 'doctor,' what is he?"

Another subject of minor interest, but one debated in academical circles, is the Draconian severity just exhibited by the examiners of the University of London in the recent examinations for the degree in medicine. Out of seventy-nine candidates, forty-three have been rejected, some of these being sent back for the second, and some even for the third time. Severe as is the examination, such a record is unprecedented. All the candidates have previously passed three stiff examinations, at which all the incompetent ones have been relentlessly weeded out. Nor is it the custom to go up for the final test without the most careful preparation. Yet in recent years twenty to thirty per cent. have been plucked, and this year fifty-four per cent. Turning to some old calendars I find that in three consecutive years (1863–65 inclusive) only one candidate a year was rejected. In 1870 every candidate passed. The standard must have been raised considerably since then for the rejections to rise from four to fifty-four per cent. It cannot be pretended that medical education is inferior now to what it was twenty years ago. On the contrary, much more teaching is now given in our medical schools, better text-books are to be had, and, lastly, most London University candidates now voluntarily prolong their curriculum a year or two beyond the minimum period of four years. Rumor has it that the scanty pass-list this year is due to the action of the examiners in obstetrics, who, stimulated by the condemnatory report of the visitor of the Medical Council (Professor Leishman), have even surpassed their severity of last year. They have chosen a bad opportunity for bringing the University into disrepute.

Turning from medical politics to medical science, Dr. Hughlings Jackson related a case of interest at the last meeting of the Medical Society of London. It was that of a boy of seven in whom any unexpected touch on the head set up an epileptic fit. He had had a convulsion when three days old, and an ordinary epileptic fit when two and a half years old. At the latter age he began to fall down, but these falls were really fits. He never fell unless the face or head were touched, but the fit would not occur if he knew he was going to be touched. Some-

times he would have as many as fifty falls in a day. The left arm and leg were smaller than the right, and he limped with the left leg. Dr. Jackson said this showed a local lesion somewhere. There were, he said, three forms of epilepsy—(1) epilepsy proper; (2) epileptiform seizures; (3) epilepsy due to nervous discharges in the pons Varolii or medulla oblongata.

Last week's meeting of the Clinical Society was almost entirely occupied in the discussion of the subject of excision of the larynx. Most of the speakers argued that this operation should be rarely performed. In closing the discussion Mr. Butlin said that if a surgeon were consulted by a patient suffering from laryngeal epithelioma, and there was nothing for it but excision of the larynx, he would be bound to tell the patient (1) that it was a dangerous operation, with a mortality of from forty to forty-five per cent; (2) that recurrence would probably soon take place; (3) that he would not even get much relief from distressing symptoms, for his difficulty in swallowing and breathing would be as great after as before the operation.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE LIFE, WORK, AND DEATH OF M. PAUL BERT—OVER-PRESSURE IN SCHOOLS—PASTEUR'S REPORTS.

PARIS, November [illegible].

You will have heard of the death of M. Paul Bert, which took place at Tonquin on the 13th inst., from dysentery, after only a few days' illness. He was sent out to Tonquin as President-General, in April last, and he may be said to have died in the prime of life, as he was only fifty-three years of age. He was born October 19, 1833, at Auxerre, in the Department of the Yonne, where he received his primary education. Afterward he came to Paris with the intention of entering the Polytechnic, which is a school for engineers, but he suddenly changed his project and attended the School of Laws, and after having obtained the diploma of that institution he was about to enter the Magistrature when he decided that it was not his vocation, expressing himself thus: "I criticise the laws instead of teaching and explaining them." He then made the acquaintance of Gratiolet, Prosector at the Museum of Natural History, who admitted him into his laboratory, where, after having acquired a good knowledge of anatomy, he, in 1863, took his degree of Doctor of Medicine, and in 1866 that of Doctor of Sciences. Soon after this he was appointed Professor of Zoology at the Faculty of Sciences of Bordeaux. Afterward he returned to Paris, acted for some time for Flourens at the Museum of Natural History, and subsequently for Claude Bernard at the Sorbonne, between whom and Paul Bert there arose a strong friendship, although, politically, they were greatly opposed to each other.

For some time past men of science have regretted that the Revolution of the 4th of September diverted Paul Bert from a scientific to a political career, and the way in which he distinguished himself in both branches is well known to the world, and yet it cannot be said that he was accomplished in either. Since he entered political life he made a show of continuing his scientific researches, and though they were remarkable in their way, yet his real value as a savant will always remain contested, for his researches and scientific experiments have never been marked by originality. Even his ideas of the influence of the changes of barometric pressure on the phenomena of life, and also on the influence of compressed air on fermentation, were borrowed from engineers who have succeeded, by means of apparatus containing compressed air, to execute a considerable amount of work under water. Observing that the workmen employed in an air compressed under a pressure of several atmospheres were subject to special accidents, M. Paul Bert began to study these phenomena by submitting dogs to different degrees of compression and of decompression. These interesting researches induced him to wish to apply to human medicine the results that he observed in animals, which results were submitted to the Academy of Sciences, where they met with much opposition. Yet, notwithstanding this, his influence was such that the aerotherapic treatment of disease, which was till then employed more or less empirically, now became a recognized method in therapeutics. This method soon got into vogue, and apparatus for compressed air were established at great expense in several hospitals in Paris, but they had to be abandoned, as they did not meet the expectations of the hospital physicians and surgeons. And so it was with his new mode of administration of chloroform, which, however, was not adopted by the surgeons, who preferred the old method after having experimentally proved that that of Paul Bert was not unattended with many drawbacks.

In fine, of all his works there remain a number of items which may serve as materials for future researches, but not one of them contains any conceptions which would perpetuate the name of a savant by their originality or great importance as regards scientific progress. At the commencement of his medical career he published a voluminous thesis on animal grafting, in which he had accumulated a number of experiments, more or less confused and eccentric, to demonstrate facts which had been known centuries before. On taking his degree of Doctor of Natural Sciences the subject of his thesis was: "The Vitality of Animal Tissues." It was after this that he was appointed Professor of the Faculty of Sciences at Bordeaux, where he showed his predilection for practical physiology, and notwithstanding the number of animals that he had sacrificed, it cannot be said that he had made any great discovery. He was appointed Professor of General Physiology at the Sorbonne in 1869, but he was so absorbed with politics that he was seldom or never to be found at his post, and his courses of lectures were mostly confided to his assistant. In November, 1881, when Gambetta was Prime Minister, Paul Bert was appointed Minister of Public Instruction, and what both these revolutionists did during their short ministry of eight months is still fresh in the memory of your readers. In the educational department M. Paul Bert caused a complete revolution, and his antipathy to religious instruction was such that he prohibited the use of the Church Catechism in schools, substituting one of his own composition. His political influence was so great that even the portals of the Academy of Sciences were opened to him, and it may be said that if he had not become a politician he might have been a greater savant.

Over-pressure in schools is justly occupying the attention of philanthropists in the civilized world on both sides of the Atlantic, and the Société Française d'Hygiène, ever ready to promote the interests of the public health, has offered prizes for the best thesis on the following subject: "On Sedentariness in Schools (Primary and Secondary), and on Intellectual Pressure in Superior and Special Instruction." The first part is to contain facts and observations to establish the position. The second will indicate the inconveniences and modifications to be applied in regard to the hygiene of youth. The memoirs should not exceed the limits of a pamphlet in 18mo, of from thirty-two to thirty-six pages. The prizes offered are: (1) a gold medal of the value of five hundred francs; (2) two silver medals, each of the value of one hundred and fifty francs. The memoirs (written in French, English, German, Spanish, Italian) should be forwarded in the usual academical form to the General Secretary of the Society, 30 Rue du Dragon, before April 1, 1887.

With reference to M. Pasteur's report on his antirabic inoculations, which was received without discussion at the Academy of Sciences, it did not pass without being criticised at the Academy of Medicine, where M. G. Colin, the well-known veterinarian, questioned the value of M

Pasteur's statistics. He found terrific the figure 2,400 individuals as having been treated at the laboratory for rabies, and among these 2,400 there were 1,700 French. This statistic, says M. Colin, is not admissible. Formed by incompetent persons, the elements were not duly verified, and in many cases were not capable of being so. It has frequently happened that a dog after being teased and excited has bitten, and would naturally be pronounced mad. The autopsy is rarely practised, and if it be so, it will only give a presumption. It is sufficient, for the dog to be pronounced mad, that a little redness is found in the throat and a few straws in the stomach, conditions that are observed in other cases, and consequently of little value as a diagnostic sign of rabies. The only certain diagnosis is, according to M. Colin, the death of the dog with paralysis a few days after the appearance of the first symptoms of rabies. Therefore must be deducted from M. Pasteur's statistics, of the animals reported to be mad, a considerable number that are not really so. A second objection is that all persons bitten do not necessarily contract rabies. To these defalcations must be added the number of subjects that had been cauterized. In examining the number of individuals that died annually before the employment of Pasteur's treatment, which was thirty, M. Colin finds that in admitting the correctness of the report there were eighteen or twenty that were saved by inoculation.

IS DENTISTRY A SPECIALTY OF MEDICINE?

"BARBARA, CELARENT, DARII, FERIOQUE PRIORIS."

To the Editor of The Medical Record.

SIR: Inextinguishable laughter must have shaken the sides of the less reverential disciples of the Academy when the mad wag of Sinope threw the plucked cock among them and roared, "Behold Plato's man!" And perhaps it was this sardonic criticism of his definition of man as a featherless biped that caused the master to say—if he said it—"Show me one who can define, and I will show you a god."

We cannot say too often that knowledge is precise in proportion to the accuracy of the definitions upon which it rests. A precise knowledge of what the term "judicial opinion" means, for instance, would have prevented the periodical *Science* from making a grave misstatement of fact in its issue of November 19th, which contained a disparaging editorial note, apropos of a recent prosecution by the Medical Society of the County of New York, which surely would not have appeared if the writer had been careful in testing the accuracy of his facts and definitions. And it is just because of the difficulty of clearly defining terms, and accurately laying down premises, that the law is so uncertain; almost as uncertain as other inexact sciences.

A stray sentence in a recent article of mine on medical legislation has enticed into the perilous mazes of definition the president of the New York State Dental Society, Norman W. Kingsley, D.D.S., who maintains that a doctor of dental surgery, if that be the connotation of the mystic letters following his name, is so called because he is neither a doctor of medicine nor a surgeon, neither a plumber nor a sculptor, but is a dentist—that is to say, a betwixt-and-between, and compound of all these simples.

It is only because every discussion may be of use that tends to clearly define, in a legal sense, what constitutes the practice of medicine, and not from any joy of conflict, or sympathy with the late pestilent Mr. Michael Brady's wife, who argued because it made conversation, that I venture to consider whether the president's "therefore," in the first line of paragraph five, in his letter to THE RECORD of November 20th, is a *sequitur*, and whether there is wrapped up in it a syllogism reducible to any of the forms rendered dear to logical minds by the simple quatrain beginning:

> "Barbara, Celarent, Darii, Ferioque prioris,
> Cesare Camestres Festino Baroko, secundæ."

I must strenuously repudiate any purpose of belittling dentistry as a calling; in fact, by holding it to be, in so far as it is a profession, a branch of medicine, I extol it. And if Plato failed to define a man, it cannot be considered a reflection on President Kingsley to point out that he has failed to define a dentist, who is, as I presume will be admitted, a species of man, and not a distinct creation.

Before we arrive at this pregnant "therefore," a word that indicates the bringing to bed of a logical argument, which, after proper gestation, is about to be delivered of a conclusion, the premises must be examined, and a diagnosis made, lest the swelling word prove turgid from other causes, and the wise women smile at us, recalling the verse of Omar:

> "We came like water, and like wind we go."

The premises of the president are to be found in the first four paragraphs of his letter, and, briefly stated, appear to be as follows:

First, dentistry covers every department known under that name, and he alone is truly a dentist who can practise every specialty of it.

Second, a dentist may be an oral surgeon, or several other things, *e.g.*, an anatomist, a physiologist, a mechanic, "but no one of these practised to perfection makes him a dentist."[1]

Third, oral surgery is a specialty of dentistry.

Fourth, oral surgery is not dentistry.

Such is intended to be, and I think is, a fair statement of the contents of the four premise-containing paragraphs; and, after reading them and the locally sequent, "I *therefore* affirm that dentistry is not a specialty of any other science or art, but is a profession in itself," one is fully justified in saying "Great Scot!"[2]

Suppose one of the worthy class of citizens who, with some justice, call themselves tonsorial artists, but whose entitlement of their art as a profession the President declares to be an assumption, the class, to wit, of the barbers, from the efficient loins of whose mystery sprang the surgeons—suppose, I say, that the Chief Master of their guild should argue thus:

First, barberism[3] covers every department known under that name, and he alone is a barber in very truth who is able not only to depilate, shear, and adorn, but also by removing scurf, dandruff, and all morbific conditions of the scalp; to pilate, if we may so say, the human head,[4] which is greater than the teeth, as containing them.

Second, a barber may be a mechanic, *e.g.*, a maker of switches, Thompson waves, and other hirsute deceptions of the lovelier sex; he may be a dermatologist, a clever chemical compounder of hairine, bandoline, and other articles terminating in "ine;" a proprietor of baths; above all, a brilliant conversationalist, but none of these callings, not even the last, though practised in perfection, makes him a barber, *teres atque rotundus*.

Third, shaving is a specialty of barberism.

Fourth, barberism is not shaving.

Ergo, I affirm that barberism is not a specialty of any other science or art, but is a profession in itself.

Would the President call this argument?

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[1] [illegible] among the [illegible] has [illegible] right in [illegible] that a perfect [illegible] one who [illegible] the dentist [illegible] a practitioner in a limited field of medicine.

[2] [illegible] as the vulgar might suppose. Reference is made to John Scotus Erigena; and the shade of that greatest of schoolmen and dialectors is invoked, most reverentially, to illumine an age that, by neglect of his favorite studies, has come to consider asseveration as the same thing with demonstration.

[3] Alas that the language supplies no worthier name!

[4] A [illegible] Parisian [illegible] the modern barber's function and restoring his lost surgical powers. Returning from having her tonsils cut, she said, in reply to a question as to her whereabouts, "I have just been having a tonsorial operation performed."

But "Dentistry," says the President, "and Euthanasia too," might add the Chief Master, "is a profession, because it is a vocation of beneficence." Well, and what is plumbing, by similar reasoning?

But, to be more serious: let it be admitted that between the President and myself there is no ground on which to differ unless we are to argue for conversation's sake. Zeal for the cause and haste of composition have led him into a chain of statements that will not bear analysis as argument, but constitutes none the less about as good an array of words as can be mustered to defend so weak a thesis as his, viz., that the part is distinct from and as great as the whole. His excellent sense wipes away the sophistry of his sympathies and admits absolutely my contention; for he says: "That which dignifies the practice of dentistry, bringing it above ordinary mechanics, is the fact that the operations are performed upon living organisms, *and that which makes it professional* is the *knowledge of anatomy, pathology, etc., which discriminates in directing the mechanical treatment.*" There is the whole matter in a nutshell. Just so far as dentistry is not a purely mechanical handicraft, it is a branch of medicine. So long as the surgeon was only a blacksmith with a searing iron, so long as the barber-surgeon mechanically applied a bandage, a cup, or a leech, and nothing more, they were tradesmen, that is to say, "mechanics or artificers whose livelihood depends upon the labor of their hands," and not professional men, that is to say, men deriving their livelihood from the application of abstract knowledge and reasoning thereon to the concrete affairs of life.

The fact that its operations are performed on living organisms does not, *per se*, dignify the dentist's calling over that of the chiropodist, manicure, masseur, or barber, any more than the fact that its operations are performed on inorganic matter belittles the profession of a civil engineer. Nor does the fact that the extraction, filling, and imitation of teeth are carried on chiefly as mechanical operations affect the truth of my statement, excepted to by President Kingsley, that "when the dentists, ceasing to be mechanics, undertake the treatment of diseases of the mouth, they become practitioners of medicine and surgery."

President Kingsley, I assume, would not accept the reasoning of that Caucasian variety of the "Kickapoo Indian," who tried to convince the court recently that a registered dentist had a right to prescribe for a patient's liver, or other diseased organ, if he considered the teeth affected by it. And on my part I admit that the dentist's calling is so largely mechanical in its processes that, just as was that of the surgeon in times past, it has been denied by some to form part of the medical profession. Thus, Webster defines a dentist as "one who makes it his business to clean, extract, and repair natural teeth, and to insert artificial ones." This would make the dentist an artisan. Dunglison, however, in his "Dictionary,"[1] recognized by his definition the calling of dentistry as entirely professional, for he defined a dentist as "one who devotes himself to the study of the diseases of the teeth and their treatment." Neither definition is accurate. The courts also have tried to throw some light on the question of how a dentist should be rated. I will cite three cases only. In Lee *vs.* Griffin (1 E. B. and S., 272) it appeared that a lady, after having ordered two sets of teeth, for the better making of which a model of her mouth had been made, died before she tried them in, but not until after a day had been appointed for her to inspect them. The executors, not considering the teeth as valuable assets, declined to pay for them. The dentist sued them for £21, and his counsel urged that what the deceased contracted for was the dentist's skill and that the materials on which it was exerted were but incidents to the employment—the case being analogous to that of an artist employed to make a picture. But the court said: "The subject matter of the contract was the supply of goods. The case bears a strong resemblance to that of a tailor supplying a coat, the measurement of the mouth and the fitting of the teeth being analogous to the measurement and fitting of the garment." So the plaintiff lost his case in spite of his teeth.

In Michigan the taxation of a dentist's instruments as mechanics' tools was upheld, and the court said that "a dentist, in one sense, is a professional man, in another sense his calling is mainly mechanical, and the tools which he employs are used in mechanical operations."[2] In Mississippi a contrary view was taken, the court saying: "A dentist cannot be properly denominated a mechanic. It is true that the practice of his art requires the use of instruments, . . . but it also involves a knowledge of the physiology of the teeth, which cannot be acquired but by a proper course of study, and this is taught by learned treatises on the subject, and as a *distinct though limited part of the medical art.* . . . If such persons should be included in the denomination of mechanics, because their pursuit required the use of mechanical instruments, . . . the same reason would include general surgeons under the same denomination. . . ."[3]

The function of dentistry being as yet chiefly mechanical, and carried on in well-defined limits, in all the bills recently brought forward by the Medical Society of the State dentists have been expressly exempted from purview; and it will be the questions arising in civil cases, chiefly those for damages resulting from bad work and advice, and not criminal actions, that will eventually settle in what degree the dentist is to be regarded as a professional man. Such a question might arise thus: A, a pretty girl, sues B, a dentist, for damages resulting from an operation whereby her beauty and, incidentally, her lover have been lost. This is an actual, not an imaginary case, and on its threshold the question arises how far did B act as a practitioner in a limited field of medicine, and how far, as a mechanic, is he exempt from liability for ignorance of results that medical education would have taught him might flow from his manual operation.

I am, Sir, your obedient servant,

W. A. PUCKINGTON.

[1] Last edition.

POST-PARTUM TROUBLES IN AMERICAN WOMEN—TOO MUCH GYNECOLOGY ONE CAUSE.

To the Editor of The Medical Record.

SIR: I have read with great interest your recent editorial in THE MEDICAL RECORD concerning post-partum troubles in American women. I cannot agree with Dr. Barnes in his estimate of the causes of injuries following parturition in American women, particularly his assertion that American women are defective in physique. It is very true that we have many women of defective physique in this country, but these it can be proven are mostly of foreign birth. I have been quite an extensive traveller in Europe, but have failed to find the women of any nation more beautiful or better formed than those of the native Americans in the United States. Indeed, our American girls, and especially those of the last generation and those born since the close of the last war, are, in fact, generally superior to those of any other nation, with only a possible exception in the English. Our girls certainly suffer from too much indoor life, but I think this is being very rapidly corrected, and out-of-door games and occupations are becoming more and more popular.

The greatest danger our girls and young women have nowadays to encounter is the amateur gynecologist. As soon as a physician possesses a brass-mounted table and a speculum and a pair of forceps, he is recognized at once as making a *specialty* of gynecology, and the number of congestions, ulcerations, flexions, versions, and

[2] [illegible]

[3] [illegible]

heaven knows what all, that afflicts our young girls from sixteen years upward is simply awful! No, the girls are all right, but the gynecologist is all *examinations*. Give our women a reasonable rest, and spare the dreadful nickel-plated speculum, and our women will be healthier and happier, and there will be less to complain of concerning post-partum troubles in American women. The poor uterus, punched, pricked, soaked with iodine, or blistered with nitrate of silver and all the other applications, not to speak of the legion of pessaries which are introduced, for no good reason, is enough to make any woman weak and liable to post-partum troubles, even if such abuse does not make them sterile.

For young girls of sixteen to be subjected to the examination with a speculum, or for girls of nineteen to be obliged to carry about a pessary big enough for a multipara, is certainly not very desirable, and reflects little credit upon the amateur gynecologists who carry out such meddling theories. Gynecology is useful, and oftentimes indispensable; but every candid physician must admit that we have at present in full operation all the gynecologists we shall need for twenty-five years to come. There are other departments of medicine much worse off, as regards numbers, than gynecology, and the advice of the old physician to the younger when asked if an examination should be made, when he replied, "Don't," is good advice in a large number of gynecological cases to-day. PRACTITIONER.

"A SUBSTITUTE FOR CIRCUMCISION."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: On page 562 of the current volume of THE RECORD appears a paragraph in which the stretching of the prepuce is referred to as a novel way of avoiding circumcision. Several years ago, when serving as adjunct-surgeon at the Long Island College Hospital, I had quite a large number of cases of phimosis, which I treated in the manner described: I first introduce a probe under the foreskin to break up the adhesions which generally exist in these cases. Then introducing a pair of dressing forceps, I allow them to expand, thus stretching the narrow opening, turning them around so as to stretch it in various directions. The forceps are then laid aside and the foreskin drawn back to the fullest extent. This is done several times in succession until it can be done with perfect facility. The mother or nurse is shown how to do it, and is directed to do it every day for a week, or until it is no longer a difficult thing to do. The smegma is to be washed away, and a little vaseline applied to lubricate the surfaces each day after washing. Since I first began to treat the cases in this way I have had very few cases of phimosis that needed to be circumcised. It is necessary to instruct the mother not to allow the secretion to accumulate under the foreskin. If it should do so, irritation will be set up, and violent inflammation result.

I do not presume to settle the question regarding the universal performance of circumcision. My own practice is not to interfere with the organ at all, except to see that the foreskin can be easily and fully retracted. My strong impression is that the number of cases, treated in the way described, which require circumcision is *extremely small*. FRANCIS H. STRAET, M.D.

124 [illegible] Street.

THE LONG-BEARD HABIT

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I notice that you have a correspondent on this subject who has "sense of humor and proportion" sufficient to trade his own name for the title of "Sanitas" and to agree with the editor that long beards are infection-carriers; and makes complaint that he "is sure that he knows of several cases in which infective fevers have been carried by these means." "Sanitas" also bases his opinion that I have "no sense of humor or proportion" upon the fact that, in my comments on the editorials, I omitted the sanitary part of the question, and "seemed to lay most stress upon the question of diverting physiological energies." To begin, I wonder what the "sense of humor and proportion" is, anyhow. I have never heard of it. I have always understood that most men were endowed with five senses, but I always supposed that humor was a certain relation between things which was perceived by certain senses, and had relations of cognition in the mind. Perhaps a sense of humor is the mental power, or mental weakness, exhibited by a man who does not know the difference between cognition and sense.

I omitted to speak of the sanitary relations of long beards for the reason that my letter was long enough when the question of "diverting physiological energies" was settled satisfactorily. But this sanitary relation is a question of no significance in the relation suggested. It may be true that a doctor's beard will transmit infection. It is also true that his clothing will do the same. If "Sanitas" wears his beard short as a preventive measure, he should cut off his coat-tail for the same reason; and, in fact, as "Sanitas" is sure that infection is carried in this way, I think it is the moral duty of that gentleman to have his hair all shaved off and be stripped and sprayed before visiting a patient, if he has been exposed to any contagion. The suggestion will come up in the mind of almost any thinking person who has a well-developed *sanitary sense*, that physicians ought to use proper precautions when they know that infectious organisms may use them for a coach, and thus be transmitted from sick people to well ones. The personal use of germitoxics by physicians is imperative; but it does not follow by any means that because hair or clothing may carry contagion Dr. Graybeard must cut off his whiskers, or Dr. "Sanitas" must cut off his coat-tail, or pose before his patients in the costume of the original marble Apollo.

Door-handles convey contagion, so do church pews, car-seats, drinking cups, cigars, food, drink, and, in fact, anything having the name of property, even money; or anything having substance, weight, and dimension may carry contagion. Does Dr. "Sanitas" advocate the abolishment of door-latches, church-pews, car-seats, food and drink, etc., or does he think that these things can be purified by sanitary measures other than by destroying them? The fact that all these things, even hair, may transmit infection is not denied; but the remedy suggested is not "sense." It is bad enough for "Sanitas" to cut off his beard (if he has any) to carry out his "sense" of sanitary "proportion," without wearing his coat-tail short, or be obliged to forego his pew, cigar, door-latch, food and drink, and money. But I need not continue this subject, and will only say that as "Sanitas" is *sure* that he knows something, he should give the profession the benefit of it. Let "Sanitas" tell us how he demonstrated his "several cases" in which long beards carried infection. No doubt from the *a priori* stand-point such things have been done; but let "Sanitas" tell us how he verified it, and, by all means, let him give the length of the beard, and not forget the factor of whether the culpable doctors wore long- or short-tailed coats.

ROMAINE J. CURTISS, M.D.

THE CULTIVATION OF JALAP IN INDIA.—The Madras Government is about to engage in the cultivation of jalap. It was found that the plant grows very well there, and some years ago a large quantity of tubers were given to private individuals in order to encourage them to grow the remedy. But the demand this year from the Madras Medical Department was for 1,300 lbs., and only 400 lbs. could be obtained. So the government has decided to cultivate jalap itself until such time as private growers are in position to supply the demand.

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Original Articles.

LARYNGEAL DIPHTHERIA—INTUBATION AND PATHOLOGICAL ANATOMY.[1]

REPORT OF ONE HUNDRED AND SIXTY-FIVE CASES.

BY W. P. NORTHRUP, M.D.,

IN 1858, in Paris, a man of prominence in the medical profession, but of somewhat limited favor among his professional brethren, sought to place before the professional world a substitute for a very old and well-approved operation, an operation at that time strongly advocated by a medical magnate. The new resource, but little tried and with meagre results to commend it, was pushed with vigor and lack of tact, till a conflict was brought about, with M. Bouchut on one side and Trousseau and the profession of Paris on the other.

Bouchut, however, established this small fact, which in the irritated discussion hardly came into sight, viz.: that the larynx will tolerate a tube. Theory was against it, practice seemed against it, but the seven cases of Bouchut, in which his thimble had been wedged into the larynx, demonstrated then what has been repeatedly proved since. His cases resulted unfavorably, but in each the laryngeal stenosis had been relieved and the dyspnœa relieved.

If M. Bouchut had been a little more patient, and accumulated more facts, and at length presented them to his brethren with a little more deference, Paris instead of New York might claim this honor of the new and simple and successful device for relieving croup.

A word about Bouchut's laryngeal tube. It was a hollow cylinder, narrower at one end, not unlike a small thimble. This was wedged into the larynx from the end of a hollow sound which was easily separated. An attached thread was brought out from the tube at the angle of the mouth, and fastened so as to add assurance that it would not be swallowed, and at last to remove it. The tube was well borne, but the thread irritated.

Bouchut reported his experiments, made onslaught on tracheotomy, incurred the enmity of its advocates, and the Paris Academy of Medicine accepted the report of its special committee and intubation of the larnyx was declared impracticable. I do not here forget that catheters and long tubes have been thrust into the larynx and temporarily relieved dyspnœa. That antedates Bouchut's work. Since the efforts of Bouchut, for nearly thirty years the records of medical progress make no mention of any similar attempt to hold apart these swollen tissues and let the air go through. It was reserved for a member of this Academy, Dr. Joseph O'Dwyer, quite unaware of the *dictum* of the Paris Academy, and the occasion of it, to demonstrate what Bouchut was so near accomplishing.

The method of intubation is known as "O'Dwyer's Method," and the tubes as "O'Dwyer's Tubes."

It is the purpose of this paper to bring before the Academy the practical workings of this new device for the relief of dyspnœa in diphtheria of the larynx, have its merits candidly discussed, and, if it may be, have it commended to the profession at large with the approval of this dignified body.

Furthermore, the autopsy records of the New York Foundling Asylum have been interrogated to show what they may of the nature of the disease which tracheotomy and intubation are called upon to relieve, and they are here, for the first time, opened to the profession. As autopsies on children dying in private practice are difficult to secure, these records may not be unwelcome.

The records cover five years in time, and represent practically all the cases of death from laryngeal diphtheria in that institution. The number of children under care of the asylum averages 1,800; of which 1,100 are tended by paid nurses, in and about the city, ages extending from birth to seven years.

The autopsy records contain 87 cases of diphtheria of the larynx. Of the 87 cases, 50 were females and 37 were males; average age, two years and seven months. Number of children dying under one year, 13; between one and two years, 9; two and three years, 10; three and four years, 36; four and five years, 11; five and six years, 1; six and seven years, 1; unknown, 6—total, 87.

The greatest mortality was, as we have seen, from three to four years of age, where we find 36 of the 87 cases. The next number falls abruptly to 13, representing those dying under one year.

In clinical experience we learn to dread diphtheria beginning in the larynx. In these records of the dead we find 56 of the 87 began with symptoms indicating that membrane made its appearance in the larynx, either before or simultaneously with that in the pharynx.

In 26 it appeared first in the pharynx; in some it was indeterminate. In 31 cases the average number of days from the beginning of diphtheria to the beginning of croupy symptoms was two and a quarter days; in 54 cases the average time from the beginning of croup till death, from whatever cause, was three and four-fifths days; in 2 cases croup was the first symptom, and the children were dead in twenty hours.

Of the 87 cases, those accompanying or following measles were 22; following scarlet fever, 8; varicella, measles, and scarlet fever in quick succession, 1.

In 54 cases there was pneumonia. Most of the cases, where the lesions were not plainly declared by consolidation and other obvious and unmistakable signs, have been subjected to microscopic examination and the post-mortem diagnosis made on the findings. The test has been parenchymatous inflammatory changes—infiltrated bronchioles; pus in the alveoli and alveolar spaces, fibrin in some; proliferation of epithelium; alveoli wholly filled and distended or partially filled and collapsed, with blood-vessels tortuous and distended and encroaching on the capacity of the alveoli.

The question of collapse, or pneumonia, has been constantly before the mind in examining these lungs, and the above signs of parenchymatous inflammation have, as a rule, almost without exception, proved the presence of pneumonitis. There have been gross appearances of collapse; but what name must be given to the lesion when the alveoli are partly filled with the products of parenchymatous inflammation, the bronchi are infiltrated, perhaps even there is fibrin in the alveoli? It would fail of the truth to call it bronchitis. It would fail as much and more to call it collapse. The lesion is *broncho-pneumonia*. To be sure, by inserting a pipe into a bronchus and blowing into it, you may easily fill out the remaining capacity of the alveolus, even though the bronchi are narrowed by tenacious pus and fibrin-exudate and the finest bronchi are infiltrated and contain pus.

[1] Read before the New York Academy of Medicine, December [illegible], 1886.

In determining the cause of death in such a complication of sepsis, bronchitis, and pneumonitis and nephritis, there is little satisfaction in attributing the cause to any one of them especially.

The figures here given place the average duration of illness, apart from those cases complicating measles and scarlet fever, at four and a quarter days. In that time membrane may extend from the nose to the finest bronchi, the poison may depress the heart, embarrass the kidneys, and light up pneumonia in the lungs. However, the records have been interrogated on this point, and here is the answer: Of the 87 cases 27 are believed to have died from extension of the diphtheria into the bronchi; 29 cases had sufficient pneumonia to be easily the cause of death. The highest temperatures have been classified, with this result: In 19 cases it was 104°; in 15, 105°; in 3, 106°; in 2, 103°; in 1, 107°—104° and 105° have, then, been the usual temperature at its highest.

It is of especial interest in studying the lesions of so-called "membranous croup" to see the distribution of this membrane. In 9 cases the membrane extended from the tip of the nose to the finest bronchi; in 6, from the nose to the bifurcation of the trachea; in 17, from the pharynx to the finest bronchi; in 17, from the larynx to the finest bronchi; in 17, from the pharynx to the main bronchi; in 17, in the larynx and trachea; in 3, in the pharynx and larynx; in 1, in the larynx only.

In 1 case the membrane was well marked from the pharynx to the middle of the trachea. Between this and the bronchi of the fourth division there seemed to be an entire absence of it, and yet in the finest bronchi a distinct membrane could be demonstrated. A tenacious cast could be drawn out by means of the forceps.

As a rule, with this exception, it has been continuous.

As to emphysema: This has also been a subject of particular observation. Interstitial emphysema has been found in 8 cases; pronounced vesicular distention in 9. The interstitial has been mostly about the anterior portion of the upper lobes and about the root. The vesicular, mainly in the anterior portion of the upper lobes.

Interstitial emphysema has been met with quite as often in marasmus babies dying of inanition as elsewhere —save in whooping-cough.

In considering the cause of death we find the extent of membrane and the condition of the lungs of great importance. When we consider that membrane in the pharynx may in many cases have disappeared at the time of autopsy, we see the extent of membrane was very great. In 3 cases it involved the pharynx and larynx; in 1 the larynx only. We then have 83 of the 87 cases showing very extensive invasion, and, in addition, we find 54 had also pneumonia, and 29 had pneumonia enough to be easily regarded as an efficient cause of death.

The above cases are not gathered from any epidemic, but are distributed over several years—56 are primary diphtheria; the remaining 31 have near or remote relation to measles or scarlet fever.

In the spring of 1881 an unhappy tracheotomist, with a record which would never do to publish, and the like of which never is published, might be seen hovering about the dead-house of the Foundling Asylum thrusting into the larynx of every child which came upon the autopsy-table a little bivalve speculum, about an inch long, so adjusted to a handle thrust through it from above as to approximate the lower ends when so adjusted, and spring apart when detached.

An opportunity occasionally offered, and these specula were placed between swollen and paralyzed vocal cords in live children. They were tolerated. To be sure, at first they excited violent cough, but at length the larynx became quiet and allowed them to remain. They furthermore relieved laryngeal dyspnœa. The objection to the bivalve was that after a time the mucous membrane pressed forward between the edges of the separated valves and dyspnœa returned.

At length the bivalve was discarded altogether, and a solid tube, compressed laterally, was used. This, with numerous modifications, is the one now employed.

The head, or collar, has undergone many changes in shape and size to conform to the shape of the larynx and allow the epiglottis to close over it. The sides of the tube, compressed laterally, are now made bulging, thickest midway, diminishing toward either end. The bulging and the weight of the tube, together with its anatomical fit, retain it in place.

As the literature of the day has fully described the instruments, I will speak of them only in a few particulars.

The mouth-gag is placed between the back teeth of the left side, and so made as to need ordinarily no assistance.

It being on the left side allows room for the operator's hand on the right.

The handle of the introducing instrument turns a sharp curve to a right angle at the base of the tube, in order to economize space in the mouth.

The tubes are now made with a large triangular head, or collar, so adjusted that one angle fits between the arytenoid cartilages and thus steadies it on its axis. The anterior portion is bevelled sharply off, to allow the epiglottis to shut more securely over the aperture and protect it in the act of swallowing. Each tube is designed, as a result of the measurement of many tracheas, to extend from the false vocal cords to within three-fourths of an inch of the bifurcation, and guard against its lower orifice being plugged by loosening of large plaques of pseudo-membrane in the trachea.

The tube as now made is not often coughed out. The length and weight and lateral bulging maintain it *in situ*, unless, as seldom happens, a plate of thick membrane blocks it from below, when the force from behind is sufficient to drive it out, often projecting it several feet.

The extractor has recently undergone one important improvement. The two movable levers, which separate in the upper orifice of the tube with enough force to drag it out, may be likened to a duck's bill. Originally the farther one moved to and from the nearer. More recently the nearer has been so connected with the lever of the handle as to move to and from the farther. This maintains the tube in its original axis, and makes the difficult manipulation of removal much less difficult.

So, too, the method of inserting the tube has been so fully described as to need nothing further.

One or two points it is well to emphasize:

First, the position of the child.

It should be seated on the nurse's lap in an upright position, squarely facing the operator. It is the tendency to lean the child back somewhat. Then, again, the chin should not be thrown up by the attendant, who usually holds the head while standing behind the nurse. Its position should be as though it hung from the top of its head.

The child should be completely enveloped in a blanket from its chin down, and the grasp of the nurse should not be encircling the chest with her arms, but should be expended on holding the elbows at the side. This allows the child room to breathe, and the operator room to carry the handle of his instruments.

Having hooked up the epiglottis with the left index-finger, the tendency is to carry the handle grasped in the right hand too far to the right side. The inserting and extracting instruments should be worked along the median line. Extraction is no doubt more difficult than insertion. It is much facilitated, however, if the above suggestions as to the position of the child and the relations of the instruments to the median line are observed.

One point, both in inserting and extracting the tube, should be borne in mind constantly—make the attempts short. It is better to try a half-dozen times by short dashes than prolong one.

Having engaged the end of the tube in the larynx,

but little force is needed to sink it into place. Someone has suggested the same rule of procedure as in passing sounds into the male urethra.

Removal of the tube is somewhat difficult; but one ordinarily expert can often do it at first attempt, after a little experience.

As to inserting—one attempt is usually enough.

In preparing for the practice of intubation one is very much favored if he has the cadaver to study on—inserting, and removing, and dissecting. After a sufficient practice the intubation of the live child is found much easier than the cadaver—the muscular action of the patient materially assisting. In the effort to protect the larynx from invasion the child instinctively raises the larynx, holds it firm, closes the epiglottis tightly, and depresses the tongue. The position of the larynx is favorable, while the rigidity with which the epiglottis is held down gives rise often to the most embarrassing part of the proceedings.

To hook up the epiglottis, some thrust the finger first into the beginning œsophagus and bring it forward till it encounters the edge of the epiglottis. Others strike at once upon its convex surface and pass to its edge. In children under two years it is often difficult to hook it up on account of its bending upon itself. These experiences are troublesome, simply because they prolong the time. Since writing the above Dr. O'Dwyer has suggested a word of caution. The tendency is to underestimate the difficulties of inserting and removing the tube. Every day men come to him with sets of new instruments, telling of their chagrin and disappointment in not being able to insert them. Suddenly a patient has called them to a case of croup. Without any experience, they rush for a set of tubes, and back they go and fail of success. He advises practice on the cadaver, and *plenty of it.*

Such practice is not always possible, I suggest, but it is within the range of possibilities, to explore the pharynx and hook up the epiglottis in well children in every-day practice. This experience with normal anatomy will serve good purpose some day. The first exploration will remind the physician of his first vaginal examination, and his observations will be just about as definite.

Another point suggested by Dr. O'Dwyer: Constantly men are coming to him with the complaint that the tube is coughed out, perhaps immediately, perhaps in half an hour. On inquiry it is learned they have put in too small a tube—a tube appropriate for a one-year-old child into a child four years old. They have neglected to gauge the length of tube, measured by the accompanying standard, with the age of the child in years.

It has been my rule, in selecting a tube, to put in the largest size the age will admit, and in children large of the age, and in boys, to select one a size larger than the standard calls for.

Among the questions sure to be asked is this, viz.: "Is there any danger of the tube slipping down into the trachea?" The answer to this question is, *No, there is none.*

First—there never has been such an accident reported.

Second—if you were to insert the proper size, or even one a size or two too small, into the larynx of a cadaver, then cut the trachea just long enough to grasp the end of the tube *in situ*, drag the tube hard down and you would find the head below the vocal cords, but caught by the cricoid cartilage, for there is the smallest diameter.

Another question: "Does it ulcerate the vocal cords?" The answer again is, No. If you examine the tubes you will see the narrowest lateral diameter is just below the head and adjacent to the cords, and it is not wide enough to press heavily. If you examine at autopsy you will see there is no such ulcer. If you examine your recoveries you will see the voice returns in two to four weeks and is normal.

If I may be allowed, I will foretell to you your experience in intubation of the larynx, after a few cases:

There comes to you a sudden call from your neighbor—imperative. You go at once. The first question you ask as you hurry along the street is, "How long has your patient been sick before he became croupy?" Second, "How old is he?" If the doctor answers he is two up to five years old, has been sick three or four days with diphtheria of the fauces and it is clearing off, you say that looks favorable, and you think how your record will look with another case and another recovery, and you are cheerful. If, on the contrary, you hear him say, "He was all well yesterday, and in the night he coughed croupy and can hardly breathe this morning," even before you ask the age you are doubtful. Such diphtheria begins too near the lungs and spreads too fast. He will live thirty-six hours longer. Having reached your patient you will find all the doctor promised you—dyspnœa, indeed, and such dyspnœa! The child thrusts his symptoms on you, and before you reach his crib you have heard the dry, metallic, sawing respiration, seen him throw himself about the bed, quiet down a bit, exhausted, suddenly spring up again, cough—one of those characteristic coughs—have seen his leaden color and anxious countenance. At each inspiration he throws up his chin to help lift his thorax. At each inspiration the bony walls are dragged up by the strong muscles, but the softer parts have no such force, and yield. You listen to the chest. Behind, over the lower portion of both lungs, you feel the rising of the ribs, hear distant rushing sounds, but hear none of that low, near, vesicular filling which we designate murmur. With all his toil he is not getting air enough. Progressive, unremitting dyspnœa which does not yield to remedies requires, at this stage, mechanical interference. The doctor has told them of the gravity of the case, advised intubation; and when it is explained to them that it does not mean chloroform and cutting, they consent. Some member of the family, or if the child has been sick several days a nurse, holds the child. In one case a refined woman and natural mother held the child without a tremor. The child is swathed, the gag is in, the tube is in, the thread is out, the gag is out, and the relieved and bewildered child is looking about, coughing, quite unable to comprehend the surroundings. It gets its breath, the color shows itself. The cough persists, but in ten minutes the child is in a tranquil "child's sleep." I have been called hurriedly to the bedside at this juncture, with the announcement that the child was not breathing. They used their ears and not their eyes. The color was good, and, after inflating his lungs in coughing, the boy was breathing with such ease that there was no sound at a distance of two feet, and the rise and fall of the chest-walls was almost imperceptible.

It is to be your routine experience, at this point, to witness the unbounded gratitude of the parents and friends. The dyspnœa has been wholly relieved, and yet the house does not smell of ether, there are no bowls of bloody sponges, no bloody towels, no two or four surgeons cleaning knives. If it shall be proved that two and two make four in intubation, as well as in tracheotomy, there may be a double truth in what has been said, that "Nothing has so attracted the attention of the profession since the advent of Esmarch's tourniquet.

You will now leave your patient with an untrained attendant, promising to return three hours later, and advising that no food be given till your arrival. An early, severe coughing paroxysm might dislodge the tube before it has settled into place and made peace with the larynx. A little cracked ice can do no harm, and you so advise them.

A great deal of suffering can be saved if you carefully state to the friends the possibility that the tube may be coughed out in your absence. Direct them to drop the tube into a glass of water and send for you, but not to be frightened, for the dyspnœa is not likely to return within four hours.

On your visit, three hours later, you take a cup of milk,

with perhaps a couple of teaspoonfuls of whiskey in it, set the child gently up in bed, place the cup to the lips, allowing the child to hold it also and regulate the amount. It will greedily take two or three swallows, then cough quite hard, then plunge into it again and again till at last it has finished the cupful. Or it may cough too much, reject all it has taken, and fail to get any into its stomach.

You then try, and very likely you may prefer from the outset, undiluted canned condensed milk. This being semisolid is usually well swallowed. If, however, you prefer fluid food, you may try a teaspoonful at a time or a half-teaspoonful, the child lying on its back or on its side, or sitting up. One of these methods is as a rule successful. Professor Waxham, of Chicago, uses a feeding-bottle and stomachtube when the inability to swallow is too great.

Among the semisolids to be made use of are canned condensed milk, which ranks first, frozen milk, scrambled egg, corn-starch pudding, to suit the age of the patient and the caprice of taste.

In one case only have I found nourishing by the mouth impossible. This was a child of seven years. The child was a boy, rather large of his age. I therefore put in a tube somewhat larger than the years called for, thinking it might prove a better fit and less liable to be coughed out. The tube passed easily through the glottis, and yet the head rode high in the larynx. Swallowing was unsuccessful. No milk entered the stomach. The child tried again and again to no effect, and after coughing severely sunk down exhausted. Nourishment was given per rectum, and one after another of the foods tried. I removed the tube after sixteen hours. He drank clumsily even then, some of the milk coming out through the nose, but he soon ceased to cough while drinking. Dyspnœa returned after several hours and I reinserted the tube—this time a smaller one, hoping the head would sink deeper into the box of the larynx and the epiglottis would be better able to cover the aperture. Air entered quite as well as through the larger, but swallowing of milk was no more successful. The child coughed this tube out twice, and twice it was reinserted, after an interval of several hours. This case recovered promptly and fully. Double convergent strabismus followed, however, to complete the ills of a trying case.

It may be you will rely entirely upon milk and whiskey for nourishment, and withhold any medication of an irritating nature, especially till the child learns the trick of swallowing.

You will be looked to for a prognosis. Tell the friends you cannot tell anything about it for forty-eight hours. If no complication makes its appearance in forty-eight hours the prognosis is favorable. Don't shorten it one hour; especially are the last eight hours treacherous. Many disappointments may come in that time. I have seen a promising case playing peek-a-boo in its crib at forty hours and hopeless at forty-eight.

You may think best to remove the tube at some time because the child swallows badly, or because it secretes an unusual amount of tenacious mucus, or because for any reason you desire to give it a good opportunity to use its larnyx to give more explosive force to the cough. The chances are, as you remove it there will follow a large piece of false membrane, or a quantity of mucus, and you will be pleased at your judgment in advising it. The child will breathe fairly well for three or four hours without it, perhaps, or you may argue from the peculiar coarse vibrations of the swollen and relaxed cords that he is still suffering from stenosis. The examination of the chest is the criterion. If the vesicles are not filling well the tube should re-enter the glottis.

One of the most desperate cases I have seen coughed out the tube at the end of forty hours. His breathing was decidedly croupy in sound, but air entered the lungs freely, and I watched him till morning, not wishing to reinsert it until necessary, and fearing still to leave him under eight hours. From eight to twelve hours it may be necessary to be within easy call of such patients.

I believe you will come to the conclusion that it is time for reinsertion of the tube the moment the air ceases to enter freely the posterior portion of the lower lobes. If air cannot enter, and the accessory muscles of respiration are tugging at the thorax, blood will be held in the abundant capillaries of the lung, and more will be drawn in. If the pulse is not strong you can feel its effect on the radial artery. At the instant of beginning inspiration the pulse will be wanting at the wrist. I have seen it again and again. Such a condition can be nothing but harmful to a lung so liable to pneumonia. You have a lung inactive in its posterior portion, its blood-vessels gorged to their utmost, in a disease which is favorable to pneumonia. In your fortunate cases you will find your patient pretty comfortable through the forty-eight hours, and gradually more and more comfortable till he will be climbing out of bed, and you will be fearful lest his exertions may bring on fatal collapse. At last you will have passed all the dangers except late pneumonia.

When shall the tube be removed—supposing it has been a favorable case and needs no removing in the meantime? If the child is two years old or less you will be inclined to wait five or six days. If older, and the normal larynx has more than proportionate room in less than six days, five days will be enough.

Supposing, again, it has passed to forty hours favorably? Its pulse has been (in a three-years-old child) 120; respiration, 22 to 26; temperature, 101½° to 102½°, rectum. On your next visit you find its respiration a trifle quickened, its face a little flushed, and the temperature by the thermometer has advanced a degree or a degree and a half, its pulse has quickened and once or twice in a minute drops a beat. You may find a single watcher on your late visit. The weary friends have retired confident the child is better. "It needs no doctor to tell us that," they say. That visit lasts till broad daylight. That pulse, that increase in respiration, that temperature, means the membrane has reached the finer bronchi and the case is hopeless. Then follows the picture familiar to everybody—rapid respiration, expiratory dyspnœa, restlessness and dyspnœa fearful to witness, stupor, exhaustion, and death.

Dr. O'Dwyer's cases, so far as published, are 48 in number. Of these, 12 have recovered. It is worthy of mention that 25 of these were foundlings.

Fifteen cases were reported in detail by Dr. Dillon Brown, House Physician of the New York Foundling Asylum, together with autopsy records of all cases which died. Everyone is familiar with the low grade of vitality of institution-reared children, and this fact, taken with the ages, accounts for the few recoveries. Of the 15 cases, 4 recovered. "The tube was inserted in every case of severe laryngeal obstruction that occurred in the Asylum, without regard to its hopeless character." "One-third of the babies were aged sixteen, twenty-three, eleven, twelve, and five months respectively." "Two of the fatal cases had tuberculosis; one, a sickly child, died of uræmic convulsions three days after disappearance of all laryngeal obstruction. The report says: "The head or shoulder of the tube does not rest upon the vocal cords, but just above them, on the ventricular bands. There is never any ulceration of the cords, but slight ulceration may be produced by the head and lower end of the tube when retained for a long time. This can do no harm."

Of 25 foundling cases, 6 recovered; of 23 in private practice, 6 recovered. Counting both together (48), 12 have recovered, or 1 in 4.

Dr. F. E. Waxham, of Chicago, was one of the first to publish cases of intubation, beginning in June, 1885. In March, 1886, he had published 17 cases, 8 of which recovered. He has now several to divide the honors with him, and their collected cases, recently published, give an aggregate of 83 cases, of which 23 have recovered. Since this number, Dr. Waxham has added to the list, in

his own practice, 13 cases, of which 6 have recovered. Dr. Waxham's cases are well observed, well recorded, and well attested by other physicians. These cases, 96 in number, with 29 favorable results, reach 30½ per cent. of recoveries. Of the 83 cases, here are details in age: 10 were under two years of age, and 3 recovered; 17 were two to three years of age, and 5 recovered; 14 were three to four years of age, and 3 recovered; 14 were four to five years of age, and 6 recovered; 9 were five to six years of age, and 4 recovered; 7 were seven to eight years of age, and 1 recovered; 2 were eight years of age, and 1 recovered. We are able to give here the conclusions of a man of ample experience in tracheotomy, followed by equally ample experience in intubation. He estimates the advantages in favor of intubation as follows:

"No opposition is met with on the part of the parents and friends; quite a contrast to the difficulty with which we usually meet in obtaining consent to tracheotomy. It relieves the urgent dyspnœas as promptly and effectually as tracheotomy, and if the child dies there is no regret that the operation has been performed, and no discredit attached to the physician.

"There is less irritation from the laryngeal tube than from the tracheal cannula. As the tube is considerably smaller than the trachea it does not press firmly at any portion, excepting at the chink of the glottis. Expectoration takes place more readily than through the tracheal tube. As the tube terminates in the throat the air that enters the lungs is warm and moist from its course through the upper air-passages, and consequently there is less danger from pneumonia. It is a bloodless operation. It is more quickly performed, and with less danger. There is no open wound to close by slow granulation, and convalescence is more rapid. There is no wound that may be the source of constitutional infection. The patient does not require the unremitting care of a physician as in tracheotomy. It is a more successful method of treating diphtheritic or membranous croup than tracheotomy."

Dr. Hance, Resident Physician of the Nursery and Child's Hospital, reports 5 cases, with 1 recovery. The children's ages are all to be named in months, and 1 was bottle-fed, 1 was recovering from severe pneumonia, and 1, a child of five and a half months, was dying from catarrhal trachitis, and the tube was inserted for euthanasia. The case which recovered was the oldest—twenty-seven months. An accident which occurred in the first case is worthy of mention. The tube had been coughed out, together with a large quantity of mucus. After reinserting it, for some reason the thread was not removed, and was allowed to hang from the mouth. The thread disappeared. The child died after a sudden attack of severe dyspnœa, and on autopsy the tube and thread were found in the stomach. The explanation given is satisfactory—that the child swallowed the thread, and in dyspnœa and coughing expelled the tube, which was dragged by the thread into the œsophagus, and thence to the stomach.

Dr. Jennings, of Detroit, reports 4 cases.

In one case, which he does not count, he made several attempts to introduce the tube and failed, as did an expert laryngologist with him. The dyspnœa was urgent. At each attempt at introduction he was unsuccessful in entering the tube into the larynx, but the manipulation relieved the urgent symptoms and the child recovered.

His first intubation, successfully accomplished, relieved the dyspnœa for a time, but the child had great difficulty in swallowing sufficient nourishment. He removed the tube to allow him to take food. Dyspnœa soon reurned, and he reinserted the tube. In this operation a large piece of tenacious membrane was dislodged from the trachea, became wedged in the tube, causing severe dyspnœa. In her struggles the child loosened the tube and pulled out tube and membrane together. The doctor again inserted the tube, and this time the breathing was perfectly easy. Dyspnœa again returned in a couple of hours, and tracheotomy was performed. The tube remained in position while the tracheal tube was inserted low down. "There was no membrane," says the doctor, "below this point, and she breathed with perfect ease." The doctor fully believes the patient would have recovered had he performed tracheotomy at first.

The tube was inserted on the third day of dyspnœa, the case being desperate at the time. In his record he makes no mention of the behavior of pulse, respiration, nor temperature, condition of the child in general, nor the condition of the lungs. I mention this case at length on account of the accident in reinserting the tube. It is well to remember, however, that this was the doctor's first intubation.

His second case died of pneumonia. The croup and pneumonia followed measles. He believes this patient would have died anyway, and gives the tube the credit of relieving the dyspnœa satisfactorily. In his third case the dyspnœa was wholly relieved, though the child died in thirty-six hours from extension of membrane into the bronchi. The fourth case the doctor believes would have recovered by tracheotomy, though the child was moribund when the tube was inserted, was thoroughly restored and relieved, prospered for four or five days, and died on the seventh day with unmistakable symptoms of pneumonia.

Dr. Jennings prefers the cutting operation, and well he may, for he says: "In my experience fully seventy-five per cent. of these cases recover after tracheotomy." He thinks intubation is to be recommended in children under fifteen or sixteen months, and in hopeless cases. To be sure, his experience was unfortunate. In his first case he failed to get the tube in at all. In the second he came to a case which had been in dyspnœa three days, and at last died of exhaustion. He found the fourth case moribund, and she died on the seventh day with pneumonia. Still he believes Cases I. and IV. would have recovered had tracheotomy been performed.

He regards intubation as a supplement to, and not a substitute of, tracheotomy.

He further thinks the laryngeal tube may be useful as a temporary expedient in gaining time to prepare for tracheotomy, and at last as a convenient guide upon which to cut in performing the operation.

His record stands 4 cases and 4 deaths.

The writer of this paper has published 12 cases of intubation, of which 5 have recovered. Of the 5 which recovered, all had diphtheritic exudate in the pharynx, all had albuminuria, all had, before intubation, these conspicuous symptoms, viz.: croupy cough, croup inspiration and expiration, dyspnœa, recessions, restlessness, absence of vesicular breathing over the lower lobes of the lungs behind. Of those which died, 1 died of sepsis, 1 died of sudden heart failure, 1 died of well-marked pneumonia, 4 died of the extension of membrane into the bronchi.

In speaking of the O'Dwyer tube, it will not be without the scope of this paper to mention a very important use in adults—in stenosis of the larynx for any cause, the most common being syphilis. Dr. O'Dwyer believes its usefulness in the future will be more prized in such cases than in croup. One such case he has published, and the every-day experience and the result encourage him in this belief. Tubes of appropriate size are to be had, and the handle and extractor already in use are sufficient to place them and remove them. In the reported case a laryngeal mirror was used to direct the end of the tube into the stenosed larynx, and when it was engaged a second person gently pressed it into place. In two cases of catarrhal croup the tube has been used with pleasing result. In one case the dyspnœa was severe and threatening. After a sojourn of two days, the tube was removed from the larynx and the child recovered promptly.

Dr. O'Dwyer has found prompt relief from its use, also, in œdema glottidis in a child suffering from nephritis. It

has also been recommended in laryngismus stridulus, though no such case has been published.

Briefly, and in conclusion, the advantages and disadvantages are estimated as follows, in order of importance:

Intubation relieves dyspnœa due to laryngeal stenosis.

There is no objection on the part of the parents and friends.

The operation is comparatively simple, and free from danger and free from shock.

No anæsthetic is needed, and no trained assistants.

No fresh wound is added.

The subsequent care of the case requires no trained attendant.

The inspired air enters the lungs moist and warm.

It does not preclude tracheotomy, and may be found useful as a guide upon which to cut.

Intubation has one conspicuous fault, attested by all. It embarrasses, and sometimes interferes with, the swallowing of fluids. The nourishment of the child is never more important. As a rule, however, the child learns to swallow fairly well, and many times has but slight embarrassment. There is likewise *one danger*, illustrated by one published case. It is the danger of pushing tenacious tracheal pseudo-membrane before the entering tube and blocking the trachea. I know of no death from this cause, but I believe it threatens every reinsertion of the tube after the pseudo-membrane has begun to soften and is easily detached.

The medical profession are called upon to relieve the urgent symptom of laryngeal diphtheria—dyspnœa. For such relief, tracheotomy has been offered. The question now before us is what part of the field intubation is capable of covering, and what advantages, if any, it has over the cutting operation.

First, let us question closely whether it meets the requirements. Does it relieve laryngeal obstruction? Waxham, with 96 collected cases, says it does. O'Dwyer, with 48 cases, says yes. Hance, with 5 cases, says yes. Jennings, with 4 cases, admits that it does. Northrup, with 12 cases, says yes. One hundred and sixty-five cases, carefully reported and well attested, say it relieves laryngeal dyspnœa promptly and effectually. Now, does it leave the patient without any of the advantages offered by tracheotomy?

For the answer to this question we must look to results. Twenty-eight and one-half per cent. have thus far recovered, and in estimating the usefulness of the operation it must be remembered it is new, and while its advocates have been making these records they have at the same time been accumulating experience which will tell in future reports. Some of the accidents here mentioned are grotesque, and can never occur again. I do not mention tracheotomy records, because they are so variously estimated. Do you believe that if every case were collected the percentage of recoveries after tracheotomy would reach twenty-eight and one-half? If the number of cases is insufficient, we have not long to wait, for enterprising Chicago sends us the report of 96 cases. Intubation is in use in Kentucky, Indiana, and Virginia. Ohio and Alabama are inquiring.

THE QUACK AND THE FOOL.—The story is told of a man in Philadelphia, suffering from hernia, who consulted a quack, and was given a written guarantee that he would be cured in four months. He agreed to pay the quack eight dollars a month. After three months' attention the hernia became strangulated, and but for the service of a regular physician the aforesaid patient would have died. Upon recovery he called upon the quack, and demanded his money. The quack replied: "Not one cent will you get from me; all I want is your money. The world is full of just such fools as you." The man departed in sorrow. He recognized the justice of the sentence.

THE CONTAGIOUSNESS OF SCARLET FEVER.[1]

BY ARTHUR V. MEIGS, M.D.,

PHYSICIAN TO THE PENNSYLVANIA AND TO THE CHILDREN'S HOSPITALS.

MY object this evening is to endeavor to persuade you to accept my views in regard to the degree of contagiousness of scarlet fever. It is a disease so terrible in its effects, both in its power to strike down with the greatest suddenness children apparently the most healthy and in the disastrous consequences it so often entails, that it has come to be looked upon, both by the public and physicians, as one of the most actively contagious of our common endemic diseases. The effect of this view, which is almost universally held, is to cause the public to be unreasonably afraid of the complaint, and often the poor sufferer, and certainly those who are obliged to take care of him, are made uncomfortable if they are not actually subjected to privation, by the fact that everyone is afraid to come in contact with those who are obliged to be near the sick-chamber. That the disease is contagious does not admit of doubt, but I have long since arrived at the conviction that it is by no means so much so as is commonly reported, and very much less so than measles or whooping-cough and some of the other common contagious maladies. It is a matter of the greatest importance that we should, from a study of the clinical features of the disease, learn in what manner and at what period it is most contagious, in order that we may use our utmost endeavors to prevent its spread.

I have no elaborate statistics to quote, showing that the facts are as I have stated; I shall, therefore, give instances merely, drawn from my recollection of my personal experience, which seem to bear out the view I have enunciated. I can remember but few instances where I have attended a family of a number of children in which everyone was attacked if scarlet fever was contracted by one. On the other hand, it has been unusual in my practice for any child in a family that was not protected by having previously had an attack to escape, if measles or whooping-cough was brought into the house. Usually whole families of children will have measles at once, taking the disease from one another in despite of every precaution that may be taken to prevent its spread, while with scarlet fever, as a rule, one child of a family, or two, will have the disease and the others will escape. To give a few instances:

CASE I.—In a family consisting of seven children five had scarlet fever, but they all had it in different years, except once, when there were two cases within a short time of each other, but in no instance was any child sent out of the house to prevent his taking the disease. The two cases that occurred the same year were mild, while of the others one was a malignant attack from which the child recovered, the second was severe, and the third caused the death of the child, a girl of four years of age. Two of the children of this family never have had the disease, although they were in the house when the others were ill. When measles and whooping-cough came into this household all had them at the same time.

CASE II.—A family of five children had, one year, measles; all were attacked within a short time of each other; again, in a year or two, all had whooping-cough, after which one died of tubercular meningitis. A year or two later, the family being now reduced to four, two had scarlet fever, and the other two escaped, although they were both in the room with one of the children attacked for an hour or two after the rash was out upon his body before it was diagnosticated. Eight years later another contracted the disease while far from home, at boarding-school; the last has never had it, although now more than twenty years of age.

CASE III.—A child in a family, consisting of four, was attacked with scarlet fever when one of them was away from home. It was impossible to isolate the sick child

[1] Read before the Philadelphia County Medical Society, November 24, 1886.

as it should have been done, for the mother would not keep the other children away from the door of the chamber which was almost always open. The two children who were at home throughout the time the disease was in the house, never took it, although constantly at the door of the sick room; but the fourth child, who was brought home in the midst of the sickness, although the mother was warned of the danger, was, within a few days, attacked with the disease in a mild form.

Case IV.—In a family of four children, one of which was a nursing infant, the oldest was seized with malignant scarlet fever. Two were sent out of the house, but the infant had to remain with the mother, who, however, was not allowed by her physician to be in the room with the sick child. One of the children sent away was attacked after about two weeks, and brought home and died, but the infant did not have the disease.

Case V.—In a family of five children, two were taken almost simultaneously with measles, having been exposed to the disease. A few days later, a third developed scarlet fever, then the fourth had scarlet fever, and shortly after the fifth developed measles. As the rash of scarlet fever was disappearing from the body of the fourth child, that of measles came on. The third child had measles about ten days after the onset of his attack of scarlet fever, and one of the two originally attacked with measles developed scarlet fever just as he seemed to be convalescing from the measles. The first and fifth children who, as already stated, had measles, did not contract scarlet fever, although they were in the house throughout the various attacks. This occurred in the family of well-to-do people, living in a large house, and every effort was made to isolate the sick so soon as the diagnosis was made, the third story being devoted to cases of measles and the second to scarlet fever. Thus it appears that of the five children all had measles, but only three scarlet fever, the other two escaping it, although, necessarily much exposed to the contagious influence.

Case VI.—In a family consisting of four children, one had scarlet fever and none of the others took the disease, although not sent away from the house.

Case VII.—A girl of sixteen or seventeen, one of a family of three, was seized with scarlet fever while staying in a hotel where they usually spend three or four months in the winter; no one else had the disease, although frequently in the adjoining rooms.

Case VIII.—A boy, one of a family of four or five young children, had a very severe attack of scarlet fever with double otitis media, and afterward acute nephritis, none of the other children took the disease, although not sent away from the house.

Case IX.—A boy of three or four years of age was taken with scarlet fever while the mother was nursing a younger child; although she continued to nurse her baby, and passed constantly from the sick chamber of the child with scarlet fever, without changing her clothes, to the infant, he did not take the disease.

Case X.—Three children, whose father was a coachman, were seized with malignant scarlet fever within a very short time of each other. One died, and the others recovered after being very ill for a long time. I afterward learned that a man who was living in this house at the time was waiter in the family of a gentleman who has the greatest possible fear of the disease, and takes every precaution he can to prevent its being carried to his children. The waiter every evening dressed himself in his evening suit, and went directly from the infected house to wait at his master's dinner-table, but none of the children took the disease.

Upon examining such memoranda as I possess, and turning over in my mind all the cases of scarlet fever I can remember, I find the result confirmatory of what has been said. In the great majority of instances I have had to deal only with isolated cases of scarlet fever, generally but single ones occurring in each family, and exceptionally there being two or three cases; but most rarely have I seen whole families stricken down with the disease, as usually occurs if measles, whooping-cough, or chicken-pox attacks a member of a family, none of whom have previously had the disease.

The above cases I have detailed, not because I have thought them sufficiently numerous to constitute statistical proof of the correctness of my views in regard to the degree of contagiousness of scarlet fever, but as types of what is the usual history of attacks of the disease as they occur in various families. When I have talked with other physicians about their experience, I have been commonly told that they considered the disease as very highly contagious—one of the most contagious; but, when we have come to discuss their individual experiences I have invariably found them to correspond with my own, that usually only one or two cases occur in a family at any one time, and that only in the most exceptional instances are whole families stricken down with the disease.

If, then, the cases I have cited can be accepted as fair representative types of the usual behavior of scarlet fever on the one hand, and of measles and parallel diseases upon the other, it must be acknowledged that it is much less actively contagious than is commonly represented. It has seemed to me that small-pox, measles, whooping-cough, chicken-pox, and rotheln are representatives of one type of the method of propagation of disease, and scarlet fever, diphtheria, and perhaps typhoid fever, of another. With the first-named class it seems sufficient that an unprotected person should go into the room with any one suffering with one of these complaints, to make it extremely likely that he will take the disease. Some near approach to the person having it seems the usual mode of propagation, and the common history of such diseases is that, as a rule, they will attack all, or nearly all, unprotected members of each household into which they go, the disease spreading rapidly from person to person as those liable come in contact with it.

Into the mode of propagation of the second class, however, the question of some endemic influence seems much more largely to enter, and the usual history is that one or perhaps two members of a household are seized with the disease, and only when it is very prevalent in a given locality, its cause being present in an unusual degree of virulence, are whole households stricken down, and in this respect certainly it bears a close resemblance to diphtheria and typhoid fever. It would not, perhaps, be directly within the scope of my present subject, and certainly there is not now time to fully discuss the subject of epidemics of the three diseases classed together, though it would be easy, I think, to show that there is a singular parallelism between the usual life-history of them, both in the way in which ordinarily, but solitary, cases of them occur; and again, in that when they take possession of a locality they attack large numbers of persons living within the infected region, and in that those who remove to another place usually escape the disease; and perhaps more striking than all, how those who have the seeds of the disease already within their bodies when they remove and develop it after their arrival in an uninfected neighborhood, as a rule, do not occasion the outbreak of an epidemic. In this respect more than any other, perhaps, do these diseases exhibit in an unmistakable manner how different they are in their mode of spread from those which are propagated directly from one human body to another without the intervention, as carriers, of any infected food, water, or fomites.

Although my personal experience with scarlet fever has led me to the conviction that it is a much less actively contagious disease than many others, it has not brought me to any satisfactory conclusion with regard to the stage at which it is most contagious, or the method in which it is propagated. At the same time, however, I have observed this radical difference between scarlet fever and measles, and other maladies of the same type—if an unprotected child is brought into close contact, into the same room, for instance, with one having

measles, during the first day or two before the rash is developed, and, as so often happens, for a few hours after it has appeared and before it is diagnosticated, in the great majority of instances the exposure is sufficient and the disease is taken. Quite the converse is true of scarlet fever, however; it commonly happens that the first child to sicken with this disease in any household will be with the other children of the family during several hours, or even over night, after the rash has appeared, if the attack be a mild one and the parents are not easily alarmed, before a physician is called in and the diagnosis made, and yet in the great majority of cases, so far as my experience goes, but seldom do children thus exposed take the disease. Although it may be said in reply to this that the rash of measles does not usually appear until the fourth day and that of scarlet fever within about twenty-four hours after the onset of an attack, yet it seems to me to be clearly demonstrated by clinical observation that scarlet fever is not very contagious during the first day or two of its course, while, on the contrary, in measles it is during the day or two before the appearance of the rash, and when the only symptom is coryza, that the disease is most freely propagated. At the present time, then, there are no data at hand upon which to base an opinion with regard to the precise period at which the contagion of scarlet fever is most active, although, to appeal here again to the results of clinical observation, it does seem to have been demonstrated that the contagion is much more persistent, and remains about a locality or persons much longer than does that of measles.

To depart a little from the precise scope of this paper, and to take up for a moment the question of the management of scarlet fever, it may here be said that in this fact, the but slight contagiousness of the disease during the first day or two after its onset, we have an important indication pointing out that thorough isolation will be much more effectual in preventing its spread than can be hoped for in the case of other more actively contagious maladies. It is, then, in my opinion, a very important matter that whenever a case of scarlet fever occurs in a family, the patient should be placed in a room by himself, and the other unprotected children carefully excluded. This having been done, many of the precautions which are commonly taken to prevent the person who nurses the sick child coming into contact with other members of the household, seem to me unnecessary, as well as often unreasonable or impossible to be carried out, particularly as this person is usually the mother, whose care is often almost as essential to some of the well children as to the patient.

I have mentioned an instance in which a mother went back and forth between a child suffering with scarlet fever and a nursing infant without changing her clothes, and no harm came of it. Not long since I heard of a case in which a physician forbid the mother of a child with scarlet fever to go into the room with her sick child, because she was nursing an infant at the time. During this time she occupied the room next the sick-chamber, and her husband was allowed to go freely back and forth from one room to the other. Such a direction on the part of the physician was clearly both unreasonable and wrong; for in the first place, if the father could go from one child to the other with safety, the additional amount of risk that would have been incurred, because the mother nursed the infant, by allowing her the same right was so infinitely slight that it was not worth taking into consideration; and in the second, as the two children were both equally the children of the mother, it was wrong to deny the sick child the care of the person who in all the world was most interested in her and best able to nurse her successfully; besides that, it was inexpedient because of the agony the mother was subjected to by knowing that one and later two of her children were in the very next room to her, where one of them finally died, suffering for the want of her care.

Certainly the two sick children had as good a right to the care of their mother as the feeble infant to whom, by the direction of her physician, she was forced to give all her attention. Though it cannot be denied that persons not suffering with the disease may carry it to others in their clothes or upon their persons, yet surely the danger must be much exaggerated. It has long seemed to me that the danger of physicians carrying the disease from patient to patient has been much magnified; if it was so great as is commonly represented, the disease would be found everywhere among the families visited by physicians whenever they were in attendance upon cases of scarlet ever, and yet this is not the state of the case. Again, the families of physicians should much more constantly suffer with the disease than any other class of people. My experience leads me to believe that the children of physicians are no more liable to scarlet fever than any others, although this, of course, is a matter of individual opinion, as there is no means at present of proving or disproving the point.

There is another point in regard to the contagion of scarlet fever to which I wish to refer, and it is the question of the advisability, when a child is taken with the disease, of sending the other children out of the house that they may avoid the contagion. In this city, certainly, it is a very common practice for physicians, when called upon to attend a case of scarlet fever among the better class of people, to direct that all the other children be sent away from the infected house. In my opinion this is a good practice, if they can be kept away long enough to render it likely that they will not get the disease upon their return, but a very mistaken policy if they are to be soon brought home again. No child, I think, should ever be sent from a house infected with scarlet fever unless it be arranged that he shall stay away for a period of six weeks at the very least, and I much doubt its advisability if the time is less than three months. Personally, I do not urge the necessity of sending children from an infected house, unless it can be arranged that they shall stay away for as much as three months. It is a matter of common observation that children thus sent away very frequently contract the disease if brought back too soon, more frequently, some observers have thought, than if never sent away, and my opinion upon this point is, as I have already stated, fixed.

I have ventured to call the attention of the Society to this subject, because it is one with the importance of which I have long been deeply impressed, and I have thought the fear of the disease which so commonly exists to be both unreasonable and harmful in its results. My effort, therefore, has been to treat the subject in such a manner as not to arouse needless opposition, but to stir up discussion of and thought upon the matter, by briefly detailing some of my experiences and the conclusions deduced therefrom. I have tried to make my paper reasonably brief and have purposely refrained from quotations, so that I might say, as Sydenham said of his book, it is "neither vast in bulk nor stuffed out with the spoils of former authors."

There is much that might be said in regard to the mode of propagation of scarlet fever upon which I have not even touched—for instance, the question of the rôle played by micro-organisms in connection with the spread of the disease, but I have purposely avoided any mention of such matters, as my desire has been to make my paper purely clinical, and any attempt to discuss such vast and intricate subjects could only lead me away from my theme, without enabling me to say anything which would be worthy of consideration.

The points I have desired to emphasize are: That,

I. Experience shows that scarlet fever is not so actively contagious as some of the other exanthemata, and that it is largely because it is so dangerous a complaint and often so terribly sudden in its effects that it is so considered; and that, therefore,

II. It is proper that we, as physicians, should combat

the unreasoning fear the public have of the disease, and should diffuse more generally an understanding of the real degree of its contagiousness and should lay down rules with regard to what ought to be done to prevent its spread.

III. That it is comparatively slightly contagious during the first day or two after its outbreak, and that, therefore, it is very important to take all reasonable precautions, even if the disease is not very early diagnosticated; in this respect differing radically from measles, whooping-cough, etc.

IV. That the disease is not nearly so much carried from place to place by persons themselves unaffected transporting it upon their persons and in their clothes as is commonly believed.

CLINICAL NOTES ON SYPHILIS.

By B. FARQUHAR CURTIS, M.D.,

NEW YORK.

From January, 1884, to September, 1886, I had under my charge, at the Out-patient Department of Chambers Street Hospital, 145 cases of primary syphilis, 147 cases in the secondary, and 15 cases in the tertiary stage. It will be interesting to study some of the details connected with them.

The cases of chancroid treated during the same period numbered 458, omitting all cases of doubtful diagnosis. This gives a proportion of about three cases of chancroid to one case of true chancre, agreeing with the accepted view that, in the lower ranks of society, the chancroid is the more common disease.

The average period of incubation of the chancre was three weeks—also corresponding to that usually accepted.

Of the 145 cases of chancre, 13 presented more than one ulcer, three being the greatest number, not infrequently resting upon a single indurated base. In a paper read by me before the New York Clinical Society,[1] statistics were given showing that the fact that a venereal ulcer is solitary is of but little value in the differential diagnosis. The prevailing idea that the chancroid is almost always multiple is based on such statistics as those of the Hôpital du Midi[2] giving, in 327 cases of chancroid, multiple lesions in eighty per cent. Debange,[3] in 118 cases, found multiple lesions in fifty-eight per cent. But my own records (including the cases already reported), with a total of 458 cases of chancroid, give a very different proportion, only forty-six per cent. presenting multiple ulcers. Hence, remembering that the chancroid occurred three times as often as the true chancre, we have found, in every 100 cases of venereal ulcers, 2 multiple chancres, 35 multiple chancroids, 23 single chancres, and 40 *single chancroids*. This seems to us the proportion of frequency to be considered in diagnosis in this class of patients—the chances being almost two to one in favor of chancroid, even in solitary ulcers.

The appearance of the ulcer which is the primary lesion of syphilis is, as a rule, characteristic—a dry, pale-red, non-granulating surface, looking as if the skin had been ground away by contact with a grindstone, or its whole surface covered with an adherent, dry, grayish slough. But in some cases the unhealthy granulations, free discharge, and elevated edges of the ulcer make it impossible to distinguish it from a chancroid until the appearance of the typical induration settles the point. This induration is the most valuable of the diagnostic signs of chancre, for in only one case have I failed to find it present at some time. Of this case I give the history, granting at the same time that it is possible, though hardly probable, that the induration may have come and gone during the interval when the patient was not under observation.

October 19, 1885.—John C——, aged nineteen, single, errand-boy, United States, has had gonorrhœa one year ago; never any venereal ulcer before. One week ago, two days after a connection (but having had a connection two months (?) before). he first noticed the present sore—a superficial ulcer, covered by a scab, on the glans penis near the frenum. November 16th, the ulcer has healed under local treatment without induration. March, 1886, he returned with an eruption of papules along the raphé underneath the penis, and with ulcers on the tongue and inside of the cheek, but with no trace of the former sore. He had had but one connection in the interval, one month before, and the eruption on the penis was already present at that time.

The inflammatory induration about a chancroid may for a while present features resembling the induration of chancre, but local treatment and observation for a few days will almost invariably clear up the doubt.

As to the time when induration of the chancre will appear, Ricord[1] teaches that it will be found three weeks after contagion; Taylor[2] says three weeks after the sore is first observed; Otis[3] places it at forty days after contagion; and most of the authorities agree with these last two estimates. But we have observed the induration make its appearance later, even after the original ulcer has healed, as in the following cases:

August 14, 1885.—William W——, twenty-one years of age, single, soapmaker, United States, has had gonorrhœa, but never venereal ulcers. Four weeks ago, two or three weeks after connection, he noticed a sore on his penis. This ulcer is now three-eighths of an inch in diameter, apparently a typical *chancroid*, on the sheath of the penis near its root. He also has an acute gonorrhœa from another connection ten days ago. The ulcer was treated locally, and healed without induration in about one month.

October 9th.—A hard wart has developed on the site of the former sore; patient has had a double inguinal bubo, and the glands are not available for diagnosis.

November 6th.—The "wart" is smaller and harder, and a faint roseola, with ulcers on one tonsil and the tongue, establish the diagnosis "syphilis." Here no induration was present for over eight weeks after the sore was first noticed, and five weeks after the second suspicious connection; but was found (in an unusual form) at the next visit, about four weeks later.

January 15, 1886.—Michael M——, eighteen years of age, single, laborer, United States, has had gonorrhœa, but never venereal ulcers. Three weeks ago, four days after connection (previous connection uncertain), he noticed an ulcer on the under side of the sheath of the penis. It now presents ragged edges, oval shape, and suppurating soft base. Enlarged gland in left groin.

January 22d.—Gland has suppurated; incised. The sore has healed.

March 1st.—Patient seen regularly every week; to-day, for the first time, the scar is indurated, rising above the surrounding surface, feeling as if a patch of soft buckskin had taken the place of the normal skin. No treatment.

April 19th.—Syphilitic general macular and papular eruption. After one week's treatment, patient did not return until August, and by that time the induration had entirely disappeared, and there were no symptoms of syphilis except general adenopathy. In this case the induration appeared nine weeks after the sore, and was of such an unusual character, that the diagnosis was left open until the eruption appeared.

In one case the chancre was painful, and when it had healed, after five weeks of treatment, the indurated cicatrix remained very painful until it had almost disappeared, four weeks later—a very unusual symptom.

[1] N. Y. Med. Jour., [illegible].
[2] [illegible], in Nouv. Dict. de Méd. et de Chir. [illegible].
[3] [illegible], Paris, 1857; [illegible] Venereal Diseases, [illegible]; Paris, 1886.

The primary lesion was always situated upon the penis, excepting one doubtful case, where it may have been in the rectum. An analysis of eighty-nine cases, where the situation is described more exactly, locates it upon the foreskin in sixty per cent., on the glans in thirty per cent., on the sheath and in the meatus, each five per cent.

In only two cases was lymphangitis of the penis observed, but the enlargement of glands in the groin was never missed. The absence of enlarged glands, after a reasonable time, is to me conclusive evidence that syphilitic infection has not occurred; but their presence is a sign of very uncertain value unless the surgeon knows that they were absent before the appearance of the sore, as so many other causes produce glandular enlargement. In only three cases did suppuration of the glands take place—one has been already related, the other two were also cases of undoubted chancre without complications.

The interval between the time of first noticing the sore, and the first observed symptoms of general infection is recorded in forty-one cases. In twenty-nine of these, in which no general treatment had been instituted, this interval averaged nine weeks; in the other twelve, under treatment, the average was twenty-two weeks, an evident postponement due to treatment, although the number of cases is too small to be useful as an argument in favor of early treatment. Diday's[1] cases without treatment give this interval (the second *entr'acte* of the French, the first *entr'acte* being the incubation of the chancre) as twenty-five to twenty-eight days at the shortest, and seventy to one hundred and five days at the longest—but usually thirty-five to fifty days. I have observed the following cases in which the interval was only three to four weeks, if we can depend upon the statements of the patients, and there was no reason to doubt them.

January 15, 1886.—Albert P——, aged twenty-five years, single, brassworker, United States. Denies previous venereal disease. Noticed present ulcer on his penis three weeks ago, after repeated intercourse with one woman during the month preceding. The ulcer has been extending, and is now one inch in diameter, its base thickened but not very hard. Inguinal glands enlarged. A general papulo-pustular eruption, especially marked on the trunk.

November 16, 1885.—Samuel W——, aged twenty-four years, single, stoker, Ireland. Has had gonorrhœa, also a venereal ulcer once before. Present ulcer noticed one month ago, one month after connection. The ulcer is a typical chancre, and there is a general papular eruption, first noticed three days ago.

Patients with the late lesions of syphilis are not apt to visit a venereal clinic, and the number of tertiary cases observed was small, but among them was one case of sufficient interest to bear relating:

August 10, 1885.—William C——, aged twenty-four years, single, barber, England. Had syphilis, primary and secondary, three years ago, was treated, and has had no symptoms since until the present lesion was observed, four days ago. He has had no connection for these three years. Examination shows an indurated ridge with sharply defined edges, extending across the penis parallel to the corona, and just behind it. Patient has been circumcised, and has no foreskin. The induration feels exactly like that of a chancre, is freely movable with the skin over the tissues beneath, and has several minute superficial ulcers on its surface. Under treatment a slow decrease of size occurred, but the patient was soon lost sight of.

We might mention in this connection that in two other patients, who had had syphilis several years before, recently contracted chancroids became indurated, closely resembling chancres. Perhaps these cases will explain some examples of the second infection of syphilis—they certainly show that no case should be accepted as a true second infection unless typical secondary symptoms follow the supposed chancre.

As to treatment, the usual dispensary "mixed treatment" was adopted, and the results were good. Treatment was begun in every case as soon as a *positive* diagnosis could be made, and continued steadily for many months. In this way secondary symptoms can be modified, or even prevented; and it seems irrational to delay treatment until symptoms develop which will publish the fact of the patient's infection, and perhaps cause him to lose his situation and means of livelihood.

35 West Thirty fifth Street.

A SINGULAR CASE OF "MASTOID DISEASE"—SPONTANEOUS PERFORATION IN AN UNUSUAL SITUATION.

By HUNTINGTON RICHARDS, M.D.,

Assistant Aural Surgeon at New York Eye and Ear Infirmary.

The account of the case alluded to in the title shall be given as concisely as is consistent with a due setting forth of the peculiar features which it presented. These features are unquestionably such as to render the case worthy of being put on record. It has points of interest for the physician who is specially interested in otology, and for the general practitioner. Early in August, the patient, Mr. E——, aged twenty-six, caught cold, having a chill, followed on the next day by sore throat, on the evening of the second day by neuralgic pain in the head and toothache, and on the night of the third day by pain in the left ear. Several days later he consulted a physician who prescribed for his cold, but made no examination of the ear. That night the ear began to discharge. On the day following his physician examined the ear by speculum and mirror, found a perforation of the membrana tympani, and prescribed some "ear-drops" and the use of warm water squeezed from a sponge to relieve the pain. Several days later, that is about four days after the first appearance of the discharge, and one week after the setting in of the earache, his physician ordered the ear to be syringed several times a day with warm water.

About a week later (August 19th) the patient was seen by Dr. Albert H. Buck, who found slight prolapse of the upper wall of the external auditory canal, the membrana tympani red and swollen, but not markedly bulging, and having a small perforation. The patient complained of throbbing in the ear, and stated that he had suffered from intermittent otalgia. The treatment of the case was committed to me by Dr. Buck, who advised immediate paracentesis of the drum-membrane and a Wildes incision, with poulticing and frequent use of the Angelo douche, as a means of obviating, if possible, the necessity for drilling the mastoid process. Accordingly, on the afternoon of this same day I visited the patient at his residence, freely incised the drum-membrane, made an incision through skin and periosteum over the mastoid process, and ordered poultices to be applied over the mastoid region, and the frequent use of the Angelo douche. On the following day no change in the appearance of the auditory canal or membrane was noticed. The discharge, consisting of thick pus, was abundant. I substituted a gravitation douche for the bulb attachment of the Angelo douche, added a strong solution of boracic acid to the water used, and directed the canal to be syringed every hour. Two days later (August 22d) the condition of the patient was unchanged. On the 25th he came to the office. He said he had had some pain in the ear on the preceding night, but that the use of the douche had readily relieved it. The auditory canal was less swollen. The discharge was profuse. "Membrana tympani bulging at back, where the discharge comes through a small opening, evidently

under pressure; is pumped out in thick drops, quickly recurring when wiped away." The wound over the mastoid was discharging but little, so I rubbed a "solid stick" of nitrate of silver over its whole surface for the sake of counter-irritation. I also made another free incision in the membrana tympani. Immediately after the incision the patient stated that his ear felt easier; he also heard my watch when held at a distance of one-fourth of an inch from the auricle, whereas previously the watch had only been heard when held in contact with the auricle. The douching was of course continued.

August 28th.—Condition about the same; slight pain occasionally.

August 31st.—The orifice in the membrane was situated just back of, and just above, the tip of the hammer-handle. It was but a small opening, not more than 1.5 mm. in diameter. To increase its calibre I applied a large "bead" of nitrate of silver. About this time I adopted a measure which I had never before used in a similar case. In the absence of pain in the ear, I cautiously inflated, by Politzer's method, at the office, previous to syringing out the canal; and at his home I directed the patient, immediately before using the douche, to inflate by Valsalva's method, telling him to do so only once on the occasion of each douching, to exercise only a moderate degree of expiratory force, and *not* to blow until he should actually hear or feel the exit of the pus through the opening in the drum-membrane. I had ascertained at the office that the Eustachian tube was freely pervious, and that both these methods of inflation sufficed, even with the expenditure of a moderate degree of force, to drive pus through the hole in the drum-membrane. The object of this measure will be obvious to all readers: its utility I question: its advisability I doubt, even when adopted with the utmost caution, as in the present instance. That it acted either helpfully or harmfully in the case I am now describing, I have no positive proof. It never caused the patient any pain in the ear.

September 4th.—The wound over the mastoid was entirely healed, and there was no redness of the integument, and no increase of the tenderness on pressure over this region. The patient had had no pain in the ear since the last visit, and no headache. Nevertheless, the opening in the drum-membrane was still very small, and it was evident that it did not suffice for good drainage of the drum-cavity, still less for its efficient cleansing by the douche. I therefore introduced a paracentesis needle through the opening in the membrane and made a free incision upward and backward from this central hole to its bony margin. The patient called my attention to a slight swelling situated back of the mastoid process, and over its point of junction with the occipital bone. This swollen spot gave him no pain, but was tender on pressure.

September 6th.—On testing it with a probe, I found that the incision in the membrana tympani, made two days before, had healed completely and firmly throughout its extent. The patient's general condition was fairly good, and he had no headache and no pain in or about the ear. The douching at this time, and for about ten days previous, was done every two hours, instead of every hour as at first. The hearing distance for my watch had increased to half an inch. On the whole, the patient appeared to be improving, and nature's aversion to the maintenance of a large opening in the drum seemed to warrant the hope that the case would progress favorably without further surgical interference. The swollen spot behind the mastoid was, however, more tender on pressure, although not painful. Careful palpation of this swelling gave me a suspicion of deep-seated fluctuation, but it was only a suspicion, the sensation being rather like that which would be experienced on palpating over an enlarged and deeply-seated gland. I therefore granted permission for the patient to return to his work.

September 9th.—Condition unchanged, except that the external auditory canal did not seem to be quite so patulous as it did a week before. Ordered the swelling back of mastoid to be painted daily with tincture of iodine.

September 11th.—At last the patient came, complaining of decided pain in the side of his head and about the swelling. The latter had increased in size and in prominence, and palpation of its most bulging portion (which had a diameter of about an inch and a quarter) detected well-marked fluctuation. While making this examination of the swelling by palpation my attention was attracted by the sudden appearance of pus at the orifice of the auditory canal. Gentle pressure, steadily exercised over the area of fluctuation, increased this flow of pus, and, after syringing out and carefully drying the canal, I found on inspection that the pus was forced through the hole in the centre of the drum-membrane. Evidently there existed a very free communication between the superficial abscess behind the mastoid process and the drum cavity. That afternoon I visited the patient at his house, and opened the abscess by a vertical incision about one inch long, drawn directly through the centre of its most prominent and most fluctuating point. The overlying tissues were pretty tough, and the blade of the scalpel, after penetrating them, plunged in to a depth of fully one inch. Free hemorrhage followed this incision, and with the escaping blood was mixed a fairly large amount of pus. A director introduced into the wound to a depth of an inch and a half from the surface, led out nearly pure pus along its groove. The abscess cavity was syringed out with a solution of bichloride of mercury (1 to 1,000), and a portion of the solution was observed to return through the auditory canal. This syringing caused the patient severe pain in the head, but did not make him dizzy. On account of the free hemorrhage I was obliged to stuff the wound and abscess cavity with lint. Poultices were ordered, and the patient was told to go on with the usual douching of the ear.

September 12th.—The patient complained of frontal headache and nausea. When I visited him, at 4 P.M., he had vomited twice, the temperature was 100.2° F., the pulse 92. No pain in or about the ear. There was markedly less discharge through the auditory canal. There was less swelling of the area about the incision. The packing in the abscess-cavity was not disturbed, lest hemorrhage should recur.

September 13th.—Temperature 101° F., pulse 80. There had been no further vomiting, but the frontal headache persisted, and in addition there was also some occipital pain. The edges of the wound had a perfectly healthy look, but no inflammatory reaction had set in, so that the lint pledget still remained firmly adherent to the walls of the cavity. An attempt to loosen it, slowly and carefully made, demonstrated this clearly. The patient reported that the discharge from the auditory canal had entirely ceased, and, on examining by mirror and speculum, I found not a trace of pus clear down to the drum-membrane, while the latter appeared whitish in color and presented no visible perforation. I therefore allowed the patient to discontinue the douching of the ear almost completely, directing that the gravitation douche should be used only twice a day.

Finding that the poulticing had been imperfectly done, I ordered it to be more vigorously kept up, and, on this condition, concluded to risk leaving the lint packing *in situ* one day longer. The next day (September 14th) I found the patient looking better, although he still complained of nausea, and suffered from headache, referred to the supra-orbital and occipital regions. Temperature 100.4° F.; pulse 68. There was a slight discharge of pus from the wound, and the lint pledget was easily extracted. The depth of the wound down to the bone was half an inch. After prolonged probing, an opening into the bone was detected under the extreme upper angle of the wound, and into this opening the probe was introduced to the depth of an additional half-inch, its point

touching what appeared to be the margins of fine bony lamellæ—none of them loose. Into this bone-channel I introduced a small silver cannula, and through it I syringed out the sinus and wound with a weak solution of bichloride of mercury. No return current through the auditory canal, but some of the fluid escaped by the *nostrils*, and was distinctly felt by the patient as it passed through the cavity of the tympanum. Immediately afterward I tested the hearing, and found that my watch, which before had been heard no further than half an inch, could now be heard distinctly when held at a distance from the ear of four and a half inches. A small drainage-tube was inserted in the bony sinus, its outer extremity being stitched to the lips of the wound, and an antiseptic dressing was applied.

On the following day (September 15th) the temperature was 99.8° F.; pulse 66. There was less headache. Moderate discharge from the sinus. Syringed the sinus with the fine cannula used yesterday, and also with a nozzle of such size and shape as closely to fit the drainage-tube. No return current by nostrils, as there had been the day before; but the patient declared that he felt the fluid in his ear. I insufflated by Politzer's method, but neither fluid nor air was driven through the drainage-tube. The insufflation, however, immediately increased the hearing distance of the affected ear from four up to nine inches. The syringing increased the discomfort in the patient's head, and he dates the headache from which he had suffered for the last four days to the syringing done at the time of the operation. Considering the depth and course of the bone sinus, it appeared not impossible that there might be some exposure of the dura mater; at any rate, I concluded to discontinue the syringing at subsequent dressings, or at most to confine myself to a very moderate use of the syringe, and to avoid any approach to forcible injection of the cavity. The exact location of the sinus in the bone, as ascertained by careful measurements, was an inch and a half back of the posterior margin of the meatus auditorius, and on a level with the upper margin of the latter; its direction was at right angles to a plane tangential to the skull at the point indicated. By comparison with the opposite side of the patient's head, this point would appear to correspond pretty closely to the opening of the mastoid foramen leading into the lateral sinus. The bone sinus into which I had introduced my probe and drainage-tube, and through which I had syringed, may have been the mastoid foramen enlarged by pathological breaking down of its walls, or it may have been a gap similarly formed in the masto-occipital suture. However this may have been, it is pretty evident that the cancellous tissue of the patient's mastoid was largely developed, and that it extended unusually far in a posterior direction.

On September 16th, I found the patient quite free from headache, with returning appetite, and a temperature of only 99.1° F. The drainage-tube was removed and a carbolized horse-hair drain substituted. Two days later the hearing distance had increased to fifteen inches, and four days later (September 20th), when the patient came to the office, it had increased to sixteen inches. On September 23d I removed the horse-hair drain and omitted further dressing of the wound; and when I last saw the patient, September 29th, the wound had entirely healed, there was no tenderness on pressure anywhere in its neighborhood; the patient looked and felt better than at any time since the disease in the ear began, and examination of the drum-membrane showed that it was rapidly returning to a normal condition in respect to thickness and texture. The hearing distance, however, was found reduced to six inches. I applied nitrate of silver solution to the naso-pharyngeal space and insufflated the ear by Politzer's method, and advised the patient to do nothing save to continue a course of tonic treatment which had been prescribed, unless he should find, at the expiration of ten days, that his hearing was less acute, or that it had not improved fast enough to suit him; in which contingency he might return for a course of treatment by Politzerization, etc. He has not returned, so I take it for granted that his hearing is better, or at least no worse.[1]

Lengthy as it is, this history is, nevertheless, a condensation of my notes of the case described. A number of points of minor interest are therein recorded, but the chief peculiarities of the case are, I trust, fairly well shown in this published account. These peculiarities are: the tendency to early location of the suppurative process in, and limitation to, the mastoid cells; the formation of a spontaneous opening in the bone, occurring in an adult, and occurring in so insidious a manner, and at a point so remote from the antrum mastoideum; the strong probability that this opening was effected by the breaking down of a thin lamella of bone separating a mastoid cell of considerable size from the mastoid foramen, or from the masto-occipital suture; the strong tendency to healing displayed by the drum-membrane, especially after the establishment of free drainage by the bone sinus; and the rapid recovery of the hearing power.

More active and prompter treatment at the beginning of the attack probably would have saved the patient much pain; perhaps might have cut short the pathological process which subsequently developed to such a serious condition. The establishment of an artificial opening into the mastoid antrum might also have shortened the duration of the attack; but the patient's condition did not warrant the urging of such a step as a necessity. Finally (and that, too, in a markedly insidious manner), the pathological process advanced in such a direction as to effect perforation of the bony wall within which it had been previously confined, and led in this way to cure of the disease. The incision through the overlying soft tissues was most emphatically called for, and merely helped to bring the case to a favorable termination. It is probable, or at least it is possible, that the spontaneous pathological drilling of the bone, or enlargement of one of the chief emissary foramina, supplemented by the incision, saved the life of the patient.

16 East Thirty-eighth Street.

Paralysis after Scarlet Fever.—Among the paralyses consecutive to the acute diseases, those coming on after scarlatina are among the most rare. Dr. Willems, of Gand, relates the case of a young woman, twenty-eight years old, who had a very severe attack of scarlet fever, and toward the end of the eruptive stage began to complain of flying pains in the limbs, accompanied with a certain amount of œdema. Soon after she had a feeling of unusual heaviness in the upper extremities, which was quickly followed by complete paralysis. There were also very severe pains complained of in these members, but thermic and tactile sensibility were unaffected. The complete paralysis of the upper extremities contrasted very strangely with the absolute freedom of voluntary movement remaining in the lower limbs. This condition remained for two days, when power of motion began gradually to return, and at the end of two weeks the cure was complete. During this time there was considerable œdema about the malleoli, but the urine was normal. The localization of this paralysis was very singular, and to explain the local conditions it is necessary to assume that there was a lesion confined to the cervical enlargement of the cord. The nature of the lesion cannot be stated with any degree of certainty. M. Willems was able to find but five recorded cases of scarlatinal paralysis, and these differed very essentially in their clinical features from the case above related.—*Journal de Médecine et de Chirurgie Pratiques*, No. 9, 1886.

[1] Personally, the [illegible] H. D. for my watch in left ear = 2 feet 6 inches, in right ear = 4 feet.

Progress of Medical Science.

Eggs in the Dietary in Bright's Disease.—In order to solve the problem of alimentation in the subjects of Bright's disease, Löwenmeyer placed a number of patients upon a regimen which was as regular as possible, and added to the diet-list from six to nine eggs a day. In four of the patients, of whom three suffered from amyloid kidney and one from nephritis consecutive to cardiac disease, the addition of eggs to the dietary was followed by no increase in the excretion of albumen in the urine. In three others there was a notable increase; but the experimenter excluded two of them, one because the patient was not carefully watched, and the other because menstruation occurred just after the beginning of the experiment. In the third case, one of interstitial nephritis, the author remarks that the increase in albumen might be accounted for by the fact that the patient took the eggs raw, while the others ate them cooked. He concludes, as a result of these experiments, that an alimentation even very rich in albumenoid matters causes no increase in the amount of albumen in the urine.—*Lyon Medical*, No. 38, 1886.

Supra-Clavicular Adenopathy in Cancer of the Stomach.—The presence of swollen cervical glands is sometimes an indication of cancer of the œsophagus, lungs, pleura, or other inter-thoracic organs, but it is not generally recognized that a supra-clavicular adenopathy may be present also in cancer of the stomach. Several German and French writers have recorded instances of this kind, however, and more recently M. Troisier related three cases at a meeting of the Hospitals Medical Society of Paris (*Concours Médical*, October, 16, 1886). In two of the cases an autopsy could not be made, but the clinical history left no room to doubt the correctness of the diagnosis. In the third case, cancer of the large cul-de-sac and pyloric end of the stomach was found, but the œsophagus was not involved in the morbid process. The ganglia in the immediate neighborhood of the stomach were not degenerated, but those in the supra-clavicular region were manifestly cancerous. In each of these cases during life several enlarged and indurated, but not painful, glands were noticed in the supra-clavicular region of the left side, behind and to the outer side of the sterno-cleido-mastoid muscle. Some of the glands were isolated, others confluent; they were not adherent to the skin, but could be rolled like marbles under the finger.

Cardiac Dyspepsia.—In a recent thesis on this subject (*La France Médicale*, October 14, 1886) Dr. P. Muller maintains that there are few affections of the heart which are not accompanied at one time or another by gastralgia, dyspeptic troubles, or even serious lesions of the stomach. In some forms of heart disease, especially in aortic insufficiency, dyspepsia is often the first, and for a long time the only, symptom pointing to the existence of valvular trouble. The gastric troubles of cardiac origin may be classed under three heads: 1. Affections of nervous origin associated most frequently with cardiac neuroses; 2, trouble due to visceral anæmia (gastralgia), occurring more especially in aortic valve lesions; 3, congestive disorders, the type of which is the dyspepsia of mitral disease. In the treatment of cardiac dyspepsia due regard must be had to the probable pathogenesis. In the reflex dyspepsia of neuroses of the heart, washing out the stomach, which is an excellent sedative of the visceral nervous system, might be tried. In the other form recourse must be had to the ordinary eupeptics, but the use of remedies directed to the heart should not be omitted. In the gastric congestion consequent upon mitral disease, the cardiac tonics, such as digitalis, convallaria, and caffeine, will be of service if they can be retained. In aortic disease, on the other hand, opium and nitro-glycerine will do more good. M. Huchard has recommended a dry regimen in dyspepsia symptomatic of certain general diseases in which there is increased vascular pressure, and this might be advantageously insisted upon in certain forms of cardiac dyspepsia.

Salt Baths in Fevers.—Dr. Ravinovitch has made a number of experiments in cases of typhoid fever to determine the relative value of salt- and fresh-water baths, and formulates his conclusions as follows (*Meditsinskoye Obozreniye*, No. 14, 1886: 1. Salt baths reduce the temperature several tenths of a degree Centigrade more than ordinary baths; 2, the difference in the abstraction of heat is greater the first half-hour, gradually becomes less, and is hardly noticeable at the end of three hours; 3, evening baths reduce the temperature in a greater degree than do those given in the morning; 4, salt baths retard the pulse more than ordinary baths, and, 5, they also reduce the number of respirations per minute, rendering the inspiratory efforts deeper and more prolonged; 6, salt baths increase the muscular strength in a greater degree than do fresh-water baths; 7, the patients feel better while in the salt bath and after its termination than they do when a fresh bath is given; 8, the difference between salt and fresh baths, as regards the slowing of the pulse and respiration, is not so great as to indicate any very powerful influence of salt baths on the functional activity of the heart and lungs.

Osteotomy of the Nose.—At the meeting of the French Association for the Advancement of Science, M. Viennois gave a detailed description of an operative procedure adopted by M. Ollier in the removal of naso-pharyngeal polypi or of other tumors of the nasal fossæ. The procedure, which has for its object the obtaining of more space for work, consists in detaching the nose at its root and sides by two incisions following the naso-genial crease, and folding it down over the chin. If necessary, the septum may also be resected. After the removal of the tumor the hemorrhage, if any occur, can be readily controlled by pressure with sponges soaked in Pagliari's fluid (tincture of benzoin, alum, and water). After the flow of blood has definitely ceased, the nose is to be returned and kept in place by sutures. It readily reunites, and the author maintains that there is no danger that loss of vitality will ensue.

The Proper Use of Ergot in Obstetrical Practice.—Dr. F. H. Potter closes an elaborate paper with the following points for consideration: 1. Ergot is a drug which, in any of its preparations, tends to deteriorate rapidly, and should never be used except when prepared from a pure and fresh specimen. 2. It is a stimulant to the tubular and non-striated muscular structures of the body, causing them to contract. 3. It acts especially upon the muscular structure of the uterus, throwing it into a state of tonic spasm. 4. Its action on the uterus is, however, uncertain; sometimes it contracts the entire organ, at others only a small part of it. 5. If the entire organ is contracted, labor may be delayed through the rigidity of the os, and the child destroyed by the interference of the placental circulation. 6. Or the contraction may be so powerful as to force the child at once into the world, causing any or all of the lacerations of the soft parts of the mother. 7. The life of the child may be endangered, also, through absorption of the essential oil of ergot. 8. If given after the birth of the child, and before the expulsion of the placenta and membranes, it may prevent the removal of the latter, and thus be indirectly a cause of puerperal septicæmia. 9. It may act in a similar manner in cases of abortion, actual or threatened, and cause a similar result. 10. The proper use of ergot in obstetrical practice is limited to those cases in which, after the expulsion of the placenta, the uterus refuses to contract, or, having once contracted, shows a tendency to secondary relaxation. Even in these cases, however, reliance should not be placed upon it alone, but its action should be supplemented by the other means used to provoke uterine contraction.—*Buffalo Medical and Surgical Journal*, September, 1886.

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NORTHERN CALIFORNIA AS A HEALTH-RESORT.

IN speaking of California as a health-resort the mind naturally reverts to the southern portions of the State, and we know of no places to the north of San Francisco which have acquired any extended reputation as resorts for invalids with threatened or actual pulmonary troubles. Yet it would seem that some portions of the State bordering on the Oregon boundary are deserving of a more careful study as regards their climatology than they have hitherto received. In a report on the climatology and diseases of Surprise and Goose Lake Valleys, presented to the California State Board of Health by Dr. George M. Kober, U.S.A., we find some data which may be of use in estimating the probable value of these places as health-resorts.

These valleys lie in Modoc County, one on either side of the Warner Mountains, Surprise Valley being the more easterly. This valley is bounded by low mountains on the east and high mountains on the west, while the reverse obtains in Goose Lake Valley. Both valleys contain numerous alkaline thermal springs, which may be found to possess valuable properties in the treatment of rheumatic affections, although as yet no analyses of the waters have been made. The thermometric observations of Surprise Valley extend now over a period of twenty years. The mean temperature for this time, was 50.3° F., the highest temperature observed at any time was 100° F., and the lowest 19° F. below zero. A striking peculiarity of the climate is the extreme range of temperature, particularly noticeable during the summer and fall months. A daily range of 50° is not uncommon, and even a daily range of 62° has been observed in August. During the dry season the amount of precipitation is hardly appreciable, whole months often passing without a shower, and dew being rarely, if ever, observed. The rainy season is fairly well defined during the winter and spring, the amount of precipitation in the form of snow being sometimes excessive. The prevailing direction of the wind is from the south and west, and while it is rarely violent in force yet a gentle breeze is almost always observed. The town of Fort Bidwell, where these observations were taken, is situated in latitude 42° 10′ north, longitude 43° 12′ west. The climate of Goose Lake Valley is similar to this, except that there is usually a greater fall of snow.

An estimate of the prevalent diseases of this region may be formed from a study of the sick report of the garrison of Fort Bidwell. Dr. Kober has prepared a table from the sick reports for the past sixteen years, from which it is seen that catarrhal affections of the alimentary canal and air-passages are the most frequent, and then follow, in order, rheumatism, malarial fevers, tonsillitis, and neuralgia. Of the cases of malarial fever, most, if not all, were imported, the men having acquired the disease at other posts before being sent to Fort Bidwell. The absence of typhoid fever and other zymotic diseases among the troops was noteworthy, as these diseases occurred with some frequency among the civilians living in the neighborhood of the post, whose neglect of all sanitary laws was painfully apparent.

Although catarrhal affections are common in Surprise Valley, as might be expected from the meteorological conditions there present, yet pneumonia and pulmonary phthisis are practically unknown. In sixteen years, at Fort Bidwell, there were but nine cases of pneumonia; and Dr. Forrest, of Alturas, reported that he had neither seen nor heard of eight cases in as many years. Consumption is also one of the rarest of troubles in that region. Only three or four cases are known to have originated there, and in some of those the inception of the disease could be traced to an injury, and the cases were probably not of a tubercular nature. But the climate would appear to be ill-adapted to those in whom pulmonary tuberculosis is already established, for the great and rapid variations of temperature seem to contribute to an acceleration of the morbid process.

As far as can be determined from this interesting report of Dr. Kober, a few points only of which we have briefly touched upon, it would appear that the climate of Northern California offers certain advantages in the prophylaxis of pulmonary phthisis which other warmer and moister climates do not possess. But it should be remembered that a tubercular process already established will probably be rendered only the more active if the patient seeks this region. The country around Surprise Valley, if it ever become a health-resort, will be one for prophylaxis and not for the treatment of pulmonary disease already established.

THE GALVANO-CAUTERY AND CHEMICAL GALVANO-PUNCTURE IN GYNECOLOGY.

FOR several years Dr. G. Apostoli, of Paris, has been engaged in applying electricity to the treatment of various uterine and peri-uterine disorders. He has some very positive views about the value of this agent, and he has also devised some new methods of using it.

In the *Nouvelles Archives d'Obstetrique et de Gynécologie*, for September, Dr. Apostoli announces under the head of "A New Treatment for Chronic Metritis," the "therapeutic consecration" which he has given to his researches regarding the application of the galvanic current to the interior of the uterus in strength sufficient to destroy the mucous membrane. The article in question shows simply that M. Apostoli has worked out the question of the use of galvanism as a caustic, in place of the more ordinary chemical and mechanical application. The writer says that for this purpose an absolute galvanometer is needed, and he uses a special one which can

register 100 to 200 millampères. This amount of electricity is found necessary. A battery of from forty to fifty Leclanché cells is sufficient to furnish the current. The electrode is made of platinum, of the size and shape of a uterine sound, insulated with celluloid. The negative pole is the one applied.

In *L'Union Medical* for October 16th, the same author begins a series of articles on "Chemical Galvano-Puncture in Gynecology." This consists in the application of a galvanic current introduced through a trocar. The trocar is plunged through the skin or mucous surface, into the part which it is desired to affect. The electrode is then passed in through this. The resistance of the skin being thus done away with, remarkable chemical and mechanical effects can, it is claimed, be achieved. The "galvano-puncture chimique" is indicated in "certain uterine fibromas, certain forms of chronic metritis, certain intra-uterine polypi, certain unilocular ovarian cysts, chronic phlegmons of the broad ligament, subacute and chronic posterior perimetritis hæmatocele, and extra-uterine pregnancy."

THE ANATOMY OF THE MALE URETHRA.

Some new observations have recently been made concerning the anatomy of the male urethra, by Dr. O. K. Newell, of the Harvard Medical School. They have especial bearing upon the operation of endoscopy, litholapaxy, and catheterization.

Dr. Newell had, he tells us, been accustomed to use the small endoscopic tube, but the results of his efforts therewith were extremely unsatisfactory. He had made a tube No. 30 in size, and with the assistance of an ordinary laryngeal mirror the surfaces of the urethra, and even bladder, were easily seen. His first examination with the new instrument was made on the cadaver. Any small body *in situ*, such as a tack, piece of sponge, etc., was easily seen and recognized. A No. 30 tube will carry a body of considerable size, and it is easily possible with this calibre to see into the bladder. The first tube used by Dr. Newell had the length of an ordinary catheter. It was cut off at the visceral end obliquely, at an angle of forty-five degrees. The latter was at first closed with thin glass, but later left open, with a guide passed for its introduction. The object of the glass was to enable the tube to be placed against the bladder-wall, and to keep out the urine. Of course, the shorter the instrument the better the view obtained.

"I find," the investigator writes, in the *Boston Medical and Surgical Journal*, "that an instrument, sound, catheter, or evacuating-tube, having a length of five inches or more, can be readily introduced through the urethra into the bladder of any normal subject, the requisite manipulation being but little more difficult than that required in the introduction of an instrument having the traditional measurement. The pendulous portion of the urethra—the part anterior to the triangular ligament—can be readily folded together so that its long axis occupies not more than from one and one-half to two inches. I have found no case where an endoscope six inches in length could not be introduced into the bladder so as to have two inches or more protruding from the visceral orifice."

The average length of the prostatic urethra is about one inch and a quarter; that of the membranous portion about three-quarters of an inch. "An enlarged prostate seldom increases the length of this part to any great degree, the growth being more lateral and affecting more its calibre and direction." "We have, then, in the male subject, a urethra, a portion of which averages two inches in length, and presents beyond this as its continuation a canal, which, from its anatomical structure and that of its surrounding parts, is readily folded together so as to have the same length, the variation in different individuals when the urethra is thus apposed being of no considerable degree." Its surgical length is then practically only four inches, or, in case of enormous hypertrophy, only six.

Dr. Newell uses for his examinations, as we have said, a No. 30 tube.. It is obliquely open at its visceral end. Inspection is possible in all directions by the protrusion of the bladder-wall or mucous membrane into the tube orifice. It is possible to introduce instruments through an endoscope to aid in the removal of foreign bodies. In preliminary examinations it is preferable to use a fenestrated tube, as the mucous membrane with its vascular supply is much better seen in the full bladder. In an empty bladder an open tube may be used, and its inner surface dried with cotton. For exploring the bladder full anæsthesia is necessary; for urethral inspection cocaine may suffice. Dr. Newell suggests that the tube, used as a trocar cannula in abdominal or thoracic puncture, might enable us to examine the interior of these cavities.

In litholapaxy the application of this new principle will enable us to reduce the distance between the orifices of the "combined" tube in present use from fifteen and three-fourths to ten inches.

Straight tubes have the decided advantages that they can be more easily kept clean and free. The rapidity of evacuation is greater in litholapaxy. A short catheter may be used for vesical irrigation, and a more thorough washing be possible.

THE REV. JOHN WESLEY AS A PHYSICIAN.

We have come into possession of a book entitled "Primitive Physic; or, An Early and Natural Method of Curing all Diseases," by John Wesley, M.A., the first edition of which was issued in 1747, the twenty-second in 1788. He takes a theological view of disease, and says that man, when he first came out of the hands of his great Creator, was immortal and incorruptible in body as well as soul: there were no seeds of dissolution or disease in him. With the advent of sin came weakness, pain, sickness, and death. The great antidote to many diseases is contained in the curse: "In the sweat of thy face shalt thou eat bread;" for the power of exercise, both to preserve and restore health, is greater than can be conceived, especially in those who add temperance thereto. Primitive physic, however, Wesley declares, was not divined, nor scientific or philosophical, but was, and always should be, accidental or experimental. "Thus a man who was walking in a grove of pine trees, when many in his native town were afflicted with a new kind of distemper or sores [diphtheritic?] in the inside of the mouth, a drop of the natural gum fell from one of the trees upon the book he

was reading. He took this up and applied it to one of the sore places in his mouth, and finding the pain immediately cease, he applied it to another, which was also presently healed. This remedy he imparted to others and it did not fail to heal any that applied it. Thus numberless remedies have been casually discovered in every age and nation. Hence ancient men, by the aid of experience and common sense, impelled by ordinary humanity, cured both themselves and their neighbors without the intervention of learned doctors. But in the process of time, men of a so-called philosophical turn of mind were not satisfied to cure in this simple and rational way, but began to inquire how medicines wrought such effects, and to examine the human body in all its parts, and gradually inverted the whole order of physic. Men of learning began to set simple experience aside and to build up medicine on theories and hypotheses; to form theories of disease, and to endeavor to cure these notions rather than the disease. As theories increased, simple medicines and ordinary experience were more and more disregarded and disused. In some of these an abundance of new remedies were introduced by reasoning and speculative men, and rules for the application of these were immensely multiplied till physic became an abstruse science quite out of the reach of ordinary men. Physicians began to be held in admiration as extraordinary persons, and even something more than human, like clergymen. And profit attended them as well as honor, so that they had two weighty reasons for keeping the bulk of mankind at a distance and in ignorance. They filled their writings with a host of technical terms utterly unintelligible to plain men; they delivered their rules and reasoned upon them in an abstruse manner. They said that a critical knowledge of anatomy, natural philosophy, chemistry, and what not, was necessary to the art of healing. Those who only knew how to restore the sick to health they branded as Empirics. They compounded their medicines with so many ingredients that the common man could not know which one effected the cure; and used chemicals and exotics which he had neither skill, money, or time to prepare, and also such powerful and hazardous ones that the unlearned man could not use them except by the advice of a physician. Thus the high honor and great profit of physicians were secured and a vast majority of mankind were utterly cut off from helping and curing either themselves or neighbors, or even attempting it."

Wesley continues: "Is it not needful in the highest degree to rescue men from wasting their fortunes, from pining away in sickness and pain through the selfishness and dishonesty of physicians; yea, and many times throwing away their lives after their health, time, and substance." He writes his book because doctors' books are too dear for poor men to buy, and too hard for plain men to understand; they do not contain only safe, cheap, and easy medicines, but many that are dear, farfetched, and consisting of too many ingredients. Their method of compounding and decompounding medicines can never be reconciled to common sense. Experience shows that one medicine will cure most disorders, at least as well as twenty put together. Why, then, do the doctors add the other nineteen? Only to swell the apothecary's bill and to divide the spoil."

Wesley says he has given a short description of many diseases by which it is very easy for every one to know the one he is afflicted with. He has given several or more remedies for each disease, and marked those which are thought infallible with a big I. Those which are well-proven with *Tried*, etc. If all these fail, then call in "a physician who fears God," not before.

Wesley's book is made up largely from the old herbalists, of course, but he relies largely upon Sydenham, Boerhaave, Cheyne, Lind, Tissot, and others of equal merit. He also says, because they are not safe, but extremely dangerous, he has omitted antimony and those four Herculean medicines, opium, bark, steel, and quicksilver. "How many fatal effects," he says, "have these produced even in the hands of no ordinary physicians? They are far too strong for ordinary men to meddle with." But in reading the book through we find all these heroic remedies recommended, and in no stinted quantities. Thus "for *an ague*, ten to twenty drops of laudanum in two drachms of syrup of poppies. *In a fit of apoplexy* put a handful of salt in a pint of water and if possible pour it down the throat of the patient; he will quickly come to himself; if he does not, send for a good physician who fears God; in the meantime let two strong men carry him upright about the room or give a vomit of three grains of tartar emetic and blow white hellebore up his nose.

"*For an asthma*, take *an ounce* of quicksilver every morning and put an ounce of ether in a quart of boiling water and let him inhale it.

"*For bleeding at the nose*, apply tents made of soft linen dipped in cold water strongly impregnated with *tincture of iron*, and introduced within the nostrils and pushed quite through to their posterior apertures. A *cancer* of thirteen years' standing was cured by applying poppy-water, plantain, and rose-water mixed with honey-of-roses; but Mrs. Bates, of Lancashire, was cured of a cancer of the breast, a consumption, a sciatica, and a rheumatism, which she had had for near twenty years, by bathing daily for a month and drinking only cold water. If this fails apply *goose-dung* and celadine; they will both *cleanse* and heal the sore; or, rub the whole breast night and morning with hartshorn and oil.

"*For a cancer of the mouth or throat*, blow in the ashes of scarlet-cloth; it seldom fails.

"*For whooping-cough*, give three to five grains of gum-gamboge; it vomits and purges, and always cures.

"*For chapped hands*, wash them in flour of mustard.

"*For a colic*, take thirty or forty drops of oil of anise on a lump of sugar.

"*For colic in children*, put one grain of tartar emetic in six tablespoonfuls of water. One teaspoonful will puke a child one week old, and a large teaspoonful is sufficient (!) for a child one month old. Repeat this puke every day. This is perhaps the best medicine yet discovered for infants (!!). It speedily cures inward fits, gripes, looseness of the bowels, thrush, and convulsions in children" (!!!). Herod knew nothing about it.

"*For an hysteric colic*, take twenty drops of laudanum in any proper clyster; it gives instant relief.

"*For a nervous headache*, take one ounce of quicksilver daily for a month. For a windy colic, *parched peas* eaten freely have the most happy effect, when all other means have failed.

"*For a consumption*, eat cow-heel soup, and every morning cut up a turf of fresh earth and, lying down, breathe into the hole for a quarter of an hour. I [Wesley] have known a deep consumption cured thus. But Mr. Masters was so far gone in consumption that he could not stand alone. I advised him to lose six ounces of blood every day for a fortnight, if he lived so long, and then every second day, and third day, and fourth day, and fifth day for a fortnight each. In three months he was well. In the last stages suck an healthy woman; this cured my father.

"*For a cough*, chew Peruvian bark; it seldom fails to cure any cough. I earnestly desire any one who has any regard for his health to try this within twenty-four hours after he first perceives a cough.

"*For deafness*, put a little salt in the ear.

"*For diabetes*, infuse half an ounce of cantharides in a pint of elixir vitriol, and take fifteen to thirty drops three times a day.

"*For a dropsy*, eat a crust of bread every morning; or be electrified. Jane Roberts' skin cracked in many places, and she drank small beer and thin milk, and continued drinking and leaking until her dropsy was quite well; a man drank six quarts of cider daily, and got well of a dropsy supposed to be incurable.

"*For a bloodshot eye*, blow in fine white sugar-candy; for dull sight drop in the juice of rotten apples, often. For *films* of the eye blow in *stercus humanum* finely powdered; it is well to call it *zibethum occidentale*. For white specks on the eye put in a little ear-wax every night.

"*For epilepsy*, be electrified; take five or six drops of laudanum every morning; this has cured many; blow powdered ginger up the nose.

"*For falling of the fundament*, apply a cloth covered thick with brick-dust." Both are red.

"*For falling of the womb*, wear a pessary of cork and drink twice a day a teacupful of the decoction of bark, with ten drops of elixir vitriol.

"*For extreme fat*, live on turnips, carrots, and other roots, with some bread and drinking-water.

"*For a fever with delirium*, apply a treacle plaster on the top of the head.

"*For a fistula*, put an ounce of *corrosive sublimate of mercury* in two quarts of pure spring water, and shake it well every hour for six days; put half a spoonful of this in a large vial with two spoonfuls of water; shake them well together and drink it, fasting. It works both by vomit and stool; do not eat or drink anything for two hours after it has done working. Take this every day, and in forty days you will be well and also cured of any cancer, or old sore, or king's evil, broken or unbroken. A very weak person should not use this, but I [Wesley] have known it used safely and successfully." This is about one grain of corrosive sublimate per dose. The dilution and shaking reminds one of Hahnemann, who was an excellent English scholar, and delighted in such books as Wesley's. The curious part is the corrosive sublimate is extremely soluble, and does not require shaking every hour for six days, except to develop some mysterious electrical power called out by shaking.

It is to be hoped that Wesley's theology was not as strong nor as shaky as his physic.

News of the Week.

The Widely-Advertised Mind-Reading of Mr. W. I. Bishop, in Boston, lately, turns out, according to the *Boston Medical and Surgical Journal*, to have been only an illustration of muscle-reading, after all.

The Promotion of Catholic Laity Medical Men.—According to the *Virginia Medical Monthly*, there is a society called the Guild of St. Luke, Evangelist and Physician, whose object is to promote and defend the Catholic faith, especially among the members of the medical profession, by frequent and regular communion, intercessory prayer, personal influence and example, and promotion of works of mercy.

Placarding Houses Containing Cases of Infectious Disease.—The *Weekly Medical Review* says: "The Health Department of St. Louis is fully alive to its duty. During the past month the Health Commissioner has adopted a plan of placarding houses wherein cases of diphtheria, scarlet fever, and other contagious and infectious diseases exist. This is proper, as it warns the public against unnecessary visiting and exposure." On the contrary, experience has shown that such practice is resented by householders as an invasion of personal rights, and leads to concealment of disease.

Gastrostomy for a Knife.—Dr. Berneys, of St. Louis, recently extracted a silver-plated knife by gastrostomy.

The Death of Professor Albert Burckhardt-Merian, Professor of Otology at Bâle, is announced.

The Terra Cotta Coffin is the latest reported luxury. It makes a case of earth to earth.

A Healthful Place for white people is Tennessee, the mortality-rate being only 13.44 per 1,000 annually.

The Centennial Anniversary of the College of Physicians of Philadelphia will be celebrated on January 3d and 4th. The Society's building has recently been enlarged by the addition of a story, for the accommodation of the united museums.

Quacks and the Daily Press.—An interesting illustration of the way in which quacks get a hold upon the press, and even the Associated Press agents, is furnished in the case of a Toronto quack who was recently tried for a criminal assault. Exaggerated and sympathetic accounts of the said quack's position were telegraphed over the country, and the ingenious defendant even succeeded in getting in an announcement of his having a large and respectable practice.

Dr. F. A. Erich, one of the Faculty of the Baltimore College of Physicians and Surgeons, died of apoplexy at his residence, in Baltimore, on December 7th, aged forty-nine years.

The State Board of Health.—Governor Hill has appointed ex-Senator Thomas Newbold, of Poughkeepsie, and Professor Maurice Perkins, of Union College, Schenectady, to be Health Commissioners to fill the vacancies in the State Board of Health caused by the death of the Hon. Erastus Brooks, and the resignation of Dr. Edward M. Moore, of Rochester.

The New York Medical Colleges.—The New York correspondent of the *Philadelphia Medical Times* writes that the new building for the College of Physicians and Surgeons will be completed and in use a year from now. The walls are up, and one can get a good idea of how the building will look when completed. The main entrance faces Fifty-ninth Street and Roosevelt Hospital; joining the two wings, one facing Fifty-ninth Street and the other Sixtieth Street, is the building containing the large lecture-room or amphitheatre. The structure is principally of a light-red brick. Not being wedged in between other houses, there will be a better opportunity for architectural effect than is possessed by some of our medical institutions. It is understood that the medical department of the University of the City of New York will commence erecting the laboratory, for which a donation of one hundred thousand dollars has been received, next spring. Bellevue has new and comfortable seats in its amphitheatre, together with a place under the seat to put one's hat. The arms are high, making it somewhat inconvenient for taking notes during the lecture. It is a noticeable fact that our medical colleges have not a free coat-room; hence the unseemly stacks of wearing apparel in the lecture-room. Our medical colleges start out with even more than their usual number of students. At the College of Physicians and Surgeons about seventy more are enrolled than at this time last year, and at the University about fifty more, while Bellevue has its quota. One of the requirements for graduation at Bellevue is a course in the Carnegie, or some other pathological laboratory, including the study of pathological and histological anatomy and the examination of the urine. At this college Dr. Janeway fills the position made vacant by the death of Dr. Austin Flint. At the University, Surgeon Billings, U.S.A., lectures on hygiene in October; the Chair on Physiology in this college having been left vacant, lectures in that branch will be delivered by Dr. W. C. Thompson and Dr. E. J. Bartlett; Dr. W. M. Carpenter has also been put down for a medical clinic in January; Professor R. A. Witthaus fills the Chair on Chemistry. At the College of Physicians and Surgeons Dr. Geo. L. Peabody fills the place of Professor Edward Curtis on Materia Medica; Professor Tuttle lectures on Gynecology, and the names of Dr. W. T. Bull and Dr. R. A. Hall appear, in connection with those of Professors Markoe, Sands, and Weir, in the department of surgery.

Bequests to Hospitals.—The late John C. Minturn, of this city, bequeathed $5,000 to St. Luke's Hospital; $5,000 to the Northeastern Dispensary; $5,000 to the Home for Incurables, and the same amount to the New York Infirmary for Women and Children.

Suicide of a Medical Student.—A student of Jefferson Medical College, the son of a prominent physician in Western Pennsylvania, shot and killed himself December 4th. The suicide is said to be the result of overstudy.

A Free Hospital for Sick Animals.—The sum of $70,000 has been bequeathed by Mrs. Ryess, of Pennsylvania, for the purpose of establishing in Philadelphia a hospital for sick animals.

Plaster Mull.—The name of plaster mull has been given to a dressing consisting of a very thin sheet of gutta-percha, coated on one side with an adhesive substance containing one or more medicinal compounds, and backed on the other side with mull or undressed muslin. The name of salve mull also has been given to a similar kind of dressing, in which the medicaments are of a more soothing character, consisting of ointments having a basis of suet and lard spread upon mull. The local application of strong salicylic acid "plaster mulls," says the *Therapeutic Gazette*, is strongly recommended by Unna in the treatment of lupus.

Supervision of Medical Students.—Professor Billroth, of Vienna, has joined the number of German professors who have lately spoken of the necessity of stricter supervision of the university students. He writes, with particular reference to students of medicine: "Sad experiences and observations naturally suggest the thought that our young men are not ripe for the degree of freedom prevailing in our universities. It is to be hoped that by tightening the pedagogic reins some improvement may be effected; the protest of the apostles of freedom surely ought not to be heeded. I would not favor a daily roll-call, but if, for instance, every clinical student had to appear four times instead of once at the practical demonstrations, and should mercilessly lose a semester by his absence when called out of turn, perhaps the students would attend the clinical lectures more frequently." In this country, the system of turning out doctors in forty weeks makes things so lively that our students do not need much supervision.

Veterinary Work for Physicians.—We have at previous times commended to our readers some such sentiments as are expressed below by *The Live Stock Journal*: "The provision for treating human ailments is altogether beyond the requirements. Perhaps there is no calling more completely overcrowded. But with vast sums invested in live stock, there are but a meagre number of those who are prepared to diagnose the ailments of domestic animals and treat them intelligently. If one-third of the graduates of medicine now before the public would add the leading veterinary works to their libraries, looking up the anatomy of the horse and cow—this would be a very simple task, because the tissues are the same, and named in the one case as in the other, the muscles being in pairs as in the human subject, and named after them—apply their physiology, the doctrine of digestion, circulation, generation, pathology, and the use and action of remedies, as they have learned these things in what would naturally be called the higher school, they would find a field before them to a great extent unoccupied, certainly not crowded. The graduate in human medicine would have at once a position accorded to him in the new field, while, in the present state of things, the opportunities for preferment, considering the extent of the competition, are meagre indeed." Many country practitioners have already acquired a good deal of veterinary knowledge, but, if we mistake not, it is very often expected that their skill be bestowed *gratis*.

"Practice" is the title of a new monthly medical journal published at Richmond, Va., and edited by Dr. G. F. Winn.

Societies have been organized to meet almost every contingency in human affairs. The London Society "For the Prevention of Hydrophobia and the Reform of the Dog Laws" is one of the latest expressions of philanthropic effort.

A Fund of Fifty Thousand Dollars has been received by Cambridge University to be devoted to maintaining scholarships in pathology.

Australia also has its medical association, being organized as a branch of the British Medical Association. It has a membership of 4,700. It recently held its seventh annual meeting and resolved to petition the Government to make vaccination obligatory throughout the empire by imperial statute; also to restrict the privilege of private practice to medical men who have already served in a hospital; and, lastly, a request was preferred that a law should be made assigning substantial pensions to the widows and orphans of medical men who might meet with their death through attending to their duties during an epidemic. For a young society, it appears to us to want a good deal.

A Poor Field for Gynecologists.—The editor of the *South African Medical Journal* says that the ladies of South Africa are so sensitive and modest that it is very difficult indeed to persuade them to submit to a vaginal examination or local treatment. The editor has even been refused permission to auscultate the chest. He says: "We have been told by several up-country practitioners that they have perforce got into the way of treating all kinds of ailments, manifestly of an uterine character, solely upon subjective symptoms, through dread of the unpopularity that would ensue if they insisted upon physical examination."

"Der Deutsche Medicinische Verein von Philadelphia" is the name of a new society recently organized by the German physicians of Philadelphia.

The Medical and Chirurgical Faculty of Maryland and the Regulation of Medical Practice.—The Faculty in question has passed a resolution submitting to the Attorney-General of the State the question whether the Faculty's charter empowers it to regulate medical practice. This means, according to the *Maryland Medical Journal*, that the State Society will not, as a body, take further steps toward receiving regulation of medical practice. The *Journal* thinks that such action should spring from the profession as a body, and that the faculty should let it alone.

The Story of a New York Christian Scientist.—An enterprising Western widow became interested in the mind-cure. She worked it up a little in Chicago, then came East and went to Boston, where she took a course in Christian Science of a lady professor of that branch. Equipped with her certificates and letters she came to this city and established herself as a Christian scientist and mind-curer. She was a woman of energy, considerable intelligence and education, and much force of will. She gradually got patients to come to her, and, as every "cure" was a sensation, her patients increased in number until she became occupied all day. In a year she was making, perhaps, over $300 a month. Her methods were those of the "mind-curer," not the "faith-curer," between which two classes of therapeutists there are some fine distinctions. The patient and the "scientist" sit down together—perhaps facing each other. The patient remains passive, while the mind-curer, closing her eyes, proceeds to dispel the idea of disease, the morbid *daimon*, from the body of the patient. The séance lasts for, perhaps, half an hour, and is repeated *pro re nata*. The advantages of practising Christian Science are that when a cure is made, it is the talk of a dozen boarding-houses within a week. When cures do not result, the scientist explains that it is not the fault of the system, but that she, the scientist, is not strong enough. We learn that a college for Christian Science is to be incorporated, so that the license and registration law for medical practitioners need not cause any trouble. We trust that no such institution will be organized. Probably more than three-fourths of so-called "cures" relapse in a comparatively short time; and the general results of the mummeries of Christian Science are unqualifiedly bad.

The late Dr. Edward J. Darken.—At a meeting of the Medical Staff of the Demilt Dispensary, New York City, held December 7, 1886, the following resolutions were adopted:

Whereas, It has pleased an all-wise Providence to call suddenly from our midst our late friend and colleague, Dr. Edward J. Darken;

Resolved, That while recognizing that, in a peculiar manner, he was fitted to exchange this life for the next, we are, nevertheless, deeply conscious of the loss to this institution of one whose wisdom, experience, sound judgment, and eminent qualification for the important trust which he held for a period of twenty years, have been of inestimable value to the Dispensary, and have contributed in no small degree to its success.

Resolved, That in his death the State has lost a self-sacrificing patriot, a loyal citizen; the profession of medicine an ardent and accomplished member; this institution a sagacious and faithful executive; the poor, to whom he ministered with loving zeal, a large-hearted, generous helper, a wise adviser, a true friend.

Resolved, That we, both as a staff and individually, desire to bear affectionate testimony to the never-failing gentleness, brightness, and geniality of his disposition, and to the purity, sincerity, and heroism of his character; a heroism proven, indeed, during his distinguished military career, and then publicly acknowledged; but far more conspicuous and eloquent in the perfect patience and the steadfast equanimity with which he endured the unusual burden which, afterward, he was called upon to bear.

Resolved, That to his family we tender our cordial sympathy for the unspeakable loss which they have sustained.

Resolved, That a copy of this memorial be presented to the Trustees, with the request that it be placed upon the records of the institution, and that it be published also in the current journals.

Joseph E. Winters, M.D.,
Wm. M. Leszynsky, M.D.,
D. Bryson Delavan, M.D.,
Committee.

A Liver with Two Gall-Bladders was recently shown before the pathological section of the Academy of Medicine of Ireland.

London Hospitals and the Poor.—London has only 90,000 paupers, according to its census, yet it treats in free hospitals 1,000,000 of patients annually, at a cost of $2,500,000. Its annual hospital deficit is $250,000.

The Post-Graduate Medical Schools are prospering. The secretary of one of the schools told me that they had on their list two ex-presidents of a State medical society and several professors in medical colleges. Their class, he said, is larger by a very considerable number than that of any previous year. Being asked whether they met with any opposition from the colleges which confer the degree of Doctor in Medicine, he replied, "Not in the least;" that they were on the best of terms. As they received only graduates in medicine, the only effect their attendance had upon the medical colleges was to diminish the number of matriculants at those colleges, not diminishing the number of their graduates.—New York Correspondent *Philadelphia Medical Times.*

Reviews and Notices.

The Medical News Visiting List for 1887. Philadelphia: Lea Brothers & Co. 1886.

This very handy physician's companion appears this year in an improved form. The general arrangement of blanks for daily visits, clinical records, obstetric engagements, etc., is the same as in the first edition, but changes have been made in the lists of remedies and the therapeutic tables to bring them fully up to the times. The typographical execution and binding are excellent.

House Plants as Sanitary Agents; or, The Relation of Growing Vegetation to Health and Disease. Comprising also a Consideration of the Subject of Practical Floriculture, and of the Sanitary Influences of Forests and Plantations. By J. M. Anders, M.D., Ph.D., lately Lecturer on Botany in the Wagner Free Institute of Science, Member of the Bureau of Scientific Information Academy of Natural Sciences, Chair of Forestry and the Relation of Plant Life to Health, Assistant Physician to the Episcopal Hospital, etc. Philadelpha: J. B. Lippincott Company. 1887.

This is a book of really unusual interest by reason of the novelty of its subject. The author is a lover of plants and flowers, and he pleads for their more general cultivation in our houses. Not only are they pleasing to the senses of sight and smell, but they are, he contends, of the greatest value as sanitary agents in purifying the close air of apartments during the winter months. The book is not a mere essay in which the cultivation of plants is urged on purely sentimental or even theoretical grounds, but it possesses a real scientific character. Most of the conclusions put forward are the results of a series of personal experiments extending over a number of years, and conducted with sufficient thoroughness to warrant the deductions drawn from them. One of the most interesting chapters is that upon the value of growing plants in the prophylaxis of pulmonary phthisis, and some striking instances are related of florists who were predisposed by heredity to consumption, who remained in good health as long as they continued in that business, but died of phthisis shortly after engaging in other pursuits. There is a chapter also containing many valuable suggestions on the care of plants, and on the various kinds best suited to grow in different parts of the house according to the degree of sunshine or shade present. Dr. Anders has succeeded in the difficult task of producing an enjoyable book, and one that can be read with profit by physician and layman alike.

Outlines of the Pathology and Treatment of Syphilis and Allied Venereal Diseases. By Herman von Zeissl, M.D., late Professor at the Imperial-Royal University of Vienna. Second Edition, revised by Maximilian von Zeissl, M.D., Privat-Docent for Diseases of the Skin and Syphilis at the Imperial-Royal University of Vienna. Authorized Edition. Translated, with Notes, by H. Raphael, M.D., Attending Physician for Diseases of the Genito-Urinary Organs and Syphilis, Bellevue Hospital Out-Patient Department. New York: D. Appleton & Co., 1886.

To those familiar with German medical literature this work of Professor von Zeissl on syphilis needs no introduction. The author is one who has made a life-long study of venereal diseases, and he speaks with the authority of a master. He has also the happy faculty, which is nearly as essential in the writer of a book as is the knowledge of his subject, of expressing himself clearly and concisely in a way that all can understand, and he is fortunate in having had a translator who, while preserving the spirit of the original, has clothed the author's thoughts in good idiomatic English; free from the Germanicisms which so often mar translations of this sort. There are sections treating quite fully of gonorrhœa and chancroid and their complications and sequelæ, but the greater part of the work is naturally devoted to the consideration of syphilis. Special prominence is given to the pathology of the venereal diseases, though the subjects of symptomatology and treatment are by no means slighted. The translator has wisely refrained from adding too frequent notes, but those which he has made are useful and serve to increase the value of the work for American readers.

A Guide to the Examination of the Urine. By Dr. Wickham Legg.

The present is the fifth edition of Dr. Legg's pocket-manual. It is one of the best of the many small works on urine analysis. It is brief, and yet complete enough for accurate work.

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Witthaus, A.M., M.D. New York: William Wood & Co. 1886.

Excepting a criticism of the word "urinalysis," we have nothing but praise for this volume. It is so compact that it can be easily carried in the pocket, and yet it contains all the essentials necessary for laboratory analysis. It opens endwise and every alternate page is left blank, so that copious notes can be taken. It deserves a large sale.

A Manual of Animal Vaccination. By Dr. E. Warlomont, Member of the Royal Academy of Medicine of Belgium. Translated by Arthur J. Harries, M.D., Assistant Physician to St. John's Hospital, etc. Pp. 152. Philadelphia: John Wyeth & Bro. 1886.

This manual discusses *seriatim* the theory of vaccination, methods of obtaining lymph and preserving the same, and the question of vaccino syphilis. It is a fairly complete *résumé* of the whole subject.

Chicago Medical Directory. Edited by Robert Tilley, M.D. Pp. 178. Chicago: W. T. Keener. 1886.

This publication corresponds in scope to our own Medical Register, except that it recognizes the whole list of practising physicians, regardless of schools. It is attractively arranged, and seems very full and complete.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 2, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

DR. J. BLAKE WHITE presented a specimen of

PHTHISICAL LUNG INJECTED WITH CARBOLIZED IODINE.

Intra-pulmonary injections in cases of phthisis had been the subject of three valuable contributions: One by the writer of the article in "Pepper's System of Medicine;" another by Dr. Beverley Robinson, of New York; and the third by Guggenheim, of Paris.

Dr. White had already reported a case of recovery under this plan of treatment, and the results which he had obtained by the method had verified his expectations.

The lung presented was the left from a male patient, forty-six years of age, who died six weeks after the administration of the third injection. He was an inmate of Charity Hospital and was in the third stage of phthisis, well advanced. In this case notable relief of symptoms followed the injections. The lung exhibited several cavities at the lower portion. The cavity at the apex, which had been injected, contained but a small quantity of pus when the lung was removed, and its walls showed a puckered appearance, which contrasted plainly with the fresh, ulcerating surface seen in the other cavities.

In general, the cough had been modified, the expectoration lessened, the night-sweats checked, and the local soreness about the cavity diminished by the injections in the cases in which he had administered them.

DR. W. P. NORTHRUP then read a paper (see p. 645) on

LARYNGEAL DIPHTHERIA—ITS PATHOLOGICAL ANATOMY, AND ITS TREATMENT BY INTUBATION.

The discussion was opened by DR. FRANCIS HUBER, who had intubated eleven times in advanced stenosis. Three cases occurred in his own practice and the remainder were seen in consultation. The symptoms which led him to introduce the tube were aphonia, stridulous expiration and inspiration, marked recession of the chest-walls, but especially cyanosis. He had performed tracheotomy twelve times, and saved but two patients. He had seen thirty-six other tracheotomies, and in not more than one-fourth of the cases did recovery follow the operation.

Dr. Huber then gave a brief outline of each case in which he had intubated. One child died sixteen hours after the insertion of the tube. One child coughed the tube out. The third child recovered. In the fourth case the dyspnœa and troublesome cough were at once relieved, and the child recovered. In the fifth case the child, three years and eight months old, died at the end of three days and a half of double pneumonia, with suppression of urine. The sixth patient died in uræmic convulsions. In the seventh case the removal of the tube was quite difficult and could be accomplished only when the stomach was empty. It was removed on the sixth day.

The eighth case occurred in a boy, three years old, who had mitral disease, with hypertrophy. Intubation gave complete relief, and the tube was removed on the sixth day. Two days later stenosis recurred, and later on slight pneumonia, but the child recovered.

The ninth case was that of a child, nine years old, in whom the tube gave immediate relief, and it was removed at the end of the fifth day, but, soon after, dyspnœa came on, with rise of temperature and suppression of urine, and death occurred twelve hours later from pulmonary œdema. The tenth was a recent case and would soon terminate fatally by pneumonia. The eleventh was one in which the child was practically moribund when intubation was performed, and death occurred four hours later.

Of the eleven cases the patients had recovered in four, which he regarded as a much more favorable showing than could be produced in the same number of cases of tracheotomy. All were advanced cases, and it was only a question of a few hours whether the child had any chance at all of life.

Dr. Huber also exhibited a modification of the O'Dwyer gag devised by Dr. Denhard, and which he thought was a valuable improvement.

DR. A. S. HUNTER said that his experience was limited to two cases, both of which he saw in consultation.

The first was a boy of six and a half years. He had been suffering from progressive laryngeal stenosis for two days and had a pulmonary complication, the physical signs of which were obscured by the stenosis. The temperature was 102⅗° F. The child was cyanotic and well-nigh asphyxiated. It was his first experience on the living subject. He had experimented several times on the cadaver. The tube was readily inserted in the second attempt. He was entirely unprepared for the phenomenon which followed. The child was dropped from the lap of Dr. Sandburn, of Bayonne, N.Y., who had called him, and stood between the doctor's knees. He looked about dazed. There was no cough, and the breathing so quiet that he failed for the moment to appreciate the fact that he *was* breathing, and so with the string pulled out the tube. It required three efforts to replace it; coughing followed for about five minutes, after which he continued to breath without obstruction until he saw him again forty-eight hours later. He was told that for twenty-four hours after its introduction his condition remained unchanged, then the temperature rose, the pulmonary complication increased, and the respiration became more rapid. Forty-eight hours after its introduction he was told that the patient had only taken a few teaspoonfuls of milk, because it made him cough. Dr. Hunter called their attention to the advantage of having him sit up when he took food, also directed that he be allowed to assist in holding the cup, and with but little difficulty, in three intervals of less than five minutes in all, he drank half a cup of milk and with less cough than with a single teaspoonful given previously. He believed it to be a good point to thus secure the attention and co-operation of the child when it is being fed.

Dr. Sandburn and Dr. Hunter now agreed that the patient had but a few hours to live, on account of the pulmonary complication, and as it had not coughed up any membrane, they thought that they might with safety remove the tube. It was done, and the patient continued to breathe with the same ease until it died seven hours later. The tube accomplished perfectly the object for which it was intended and in the most perfect manner, and, but for the pre-existing pulmonary complication, would undoubtedly have saved the child's life.

The second case he saw with Dr. Agan. The child was two years and a half old, and had been ill three days. It was cyanozed, and the temperature was 103° F. It was just recovering from measles, and had a complicating bronchitis. After inserting the tube the patient coughed from five to ten minutes. An hour later it commenced to play with its doll, and twenty hours later, while taking food, it coughed out the tube. Dr. Agan reinserted it one hour later; five hours afterward it died. The tube in this case also relieved the stenosis satisfactorily, and the patient might have recovered had no complication existed.

DR. E. L. PARTRIDGE referred to two points; the first, the fact that the presence of the thread in the fauces did not increase the severity of any of the symptoms; and second, the possibility of pushing softened membrane before the tube and obstructing the trachea, which could occur with tracheotomy as well as intubation.

Dr. Caille mentioned the fact that introduction of the tube could be very greatly facilitated by rehearsal upon the cadaver. He had introduced it once in the living subject, and was able to do it rather easily.

Dr. Huber does not remove the thread at once, but waits until complete subsidence of the cough.

Dr. Northrup was pleased to hear of the facility with which those who had spoken had been able to introduce the tube.

NOMINATIONS FOR OFFICERS.

The following nominations were made for officers: For president, Drs. A. Jacobi, Alfred L. Loomis, and John C. Dalton; for vice-president, Drs. E. D. Hudson, Jr., and W. H. Draper; for trustee, Dr. E. Herrick; for one member of the Committee on Admissions, Drs. Henry E. Crampton, W. E. Bullard, and R. C. M. Page; for one member of the Committee on Library, Drs. D. B. Delavan, T. E. Satterthwaite, F. P. Kinnicutt, and J. E. Janvrin.

NEW BOOKS.

The Committee on Library reported that Dr. C. R Agnew had obtained *eighty* dollars which had been expended in books on ophthalmology and otology and placed upon the shelves of the library.

The Academy then adjourned.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Conversational Meeting, held November 24, 1886.

In the absence of the President, Dr. William M. Welch occupied the chair.

THE CONTAGIOUSNESS OF SCARLET FEVER.

Dr. Arthur V. Meigs read a paper on the above subject (see page 650).

Dr. J. C. Wilson—The propositions submitted by Dr. Meigs have struck me with more than ordinary surprise. I have been in the habit of taking even a more extreme view of the contagiousness of scarlet fever than is commonly held by the profession. I think that any indorsement of the views submitted to-night, which are at variance with those generally held by the profession and by all writers upon this subject, should be made with extreme caution.

There are two or three points to which I deem it necessary to allude. In the first place it is useless for us to attempt to compare diseases, in regard to their degree of contagiousness, in which the mode of contagion is essentially different. No one would think of comparing the contagiousness of syphilis and the contagiousness of influenza. Nor do I think that the contagiousness of scarlet fever can any more properly be compared with that of whooping-cough. The infecting principle of whooping-cough is diffused through the air with great readiness. The disease may be contracted at a distance of several feet. On the other hand, there is every reason to believe from the recorded experience of the profession that the contagium of scarlet fever is very tenacious and is apt to linger, preserving for a long while its vital properties in clothing, furniture, and other articles about the patient. I think, therefore, that conclusions drawn from a comparison of these diseases in this respect are misleading. I have, in more than one instance, had several members of a household under my care suffering with scarlet fever at one time. And it has often happened, notwithstanding the most careful measures of protection, that two or even three members of a family have been affected at the same time.

I may here call attention to a case under my care last winter which bears upon several important points in this connection. In one family there are two children, about twelve or thirteen years of age. Two squares away a little friend was sick with scarlet fever. Six weeks from the beginning of the attack this child was convalescent, and was permitted to go out into Rittenhouse Squaret There one of the two little girls before referred to me. the convalescent child, shook hands with her, kissed her, and sat beside her in the open air for a few minutes. Five days later this child developed severe scarlet fever. Strict quarantine was established, and the second child in this family escaped the disease. Such a case simply proves that the disease is highly contagious, and that it is contagious for a long time, at least up to the period of desquamation. But it also shows us the far more important fact that the contagion is easily controllable, and that, under proper precautions, its spread in a household may be prevented. In a recent paper before the British Medical Association, Mr. Ashby, of England, held that in those cases where the disease was complicated by a purulent discharge from any source, the period of contagiousness is much protracted.

Even if up to the present time the contagiousness of the disease has been over-rated, the fear of it has been useful, and has saved lives which otherwise would have been sacrificed. In the absence of overwhelming proof that the disease is not as contagious as we have hitherto supposed, I think that we should await further knowledge in regard to the suggestions which the author of the paper has made. I am convinced that many unnecessary deaths occur as a result of the carelessness of the people and of the medical profession. So far from subscribing to the conclusions expressed, I take a diametrically opposite view of the subject, and I never fail to impress, in the most positive manner, the necessity of taking every possible precaution to prevent the spread of the disease, both in the household and outside of it.

Dr. William Osler—I must say that in certain features Dr. Meigs' experience tallies closely with my own. I think that there is among the laity in this city an unusual dread of scarlet fever. This no doubt arises in a large part from the unfortunate events that are liable to arise in connection with the disease, and from the natural severity of many of the cases. I agree with the author that in scarlet fever more frequently than in measles and whooping-cough a certain number of the children of a family remain exempt. In fact, I think that in any community there is a larger number of persons who throughout their lives are exempt from scarlet fever than there are of those who escape other contagious diseases. There are probably in this room several who have not had scarlet fever, although repeatedly exposed to it. My experience also agrees with his, that if early isolation is resorted to, the disease can often be kept from spreading to other members. It is well known that the contagious principle of scarlet fever has a more prolonged vitality and clings to clothing and other articles more tenaciously than the infecting principles of other diseases.

It is certainly strange that the disease is not more frequently carried by physicians, but I know of at least one instance of its conveyance by a physician. During my term as physician to the small-pox department of the General Hospital at Montreal, I attended a case of scarlet fever for a colleague, making two visits each day on three consecutive days. The evening visit was made just prior to my evening visit to the small-pox hospital. There was in the hospital at this time a child, eight or nine years of age, convalescent from a mild attack of small-pox. I invariably saw this child in the evening. Some days subsequently to my visits to the scarlet-fever patient this child developed the disease.

I would refer to one practical point in the prevention of the diffusion of the contagium of scarlet fever, and that is the careful inunction of the surface of the body with sweet oil. This is grateful to the patient, and I think diminishes the liability to the spread of the disease.

Dr. R. Bruce Burns—One reason that scarlet fever is less liable to spread than is measles or whooping-cough

is that in the former case the mother frequently isolates the patient even before the physician is sent for, while in the latter affections the same precaution is not always taken. It has been my experience that scarlet fever is a most contagious disease. There seems, however, to be a peculiar immunity in the case of nursing infants to all contagious diseases.

In 1883 an epidemic of scarlet fever occurred in a house. The mattress which had been used was afterward placed in the attic of another house which was freely ventilated. The following year the mattress was used by a child coming from Washington, and in a few days it developed the disease. As far as was known the child had not been exposed to the disease. It is my rule to isolate the sick person as much as possible.

In regard to immunity from the disease, I would say that I think that during the first year of life there is a certain degree of immunity. The greatest tendency to the disease is between the ages of one and fifteen years. After this age the tendency to the contraction of the disease diminishes rapidly.

I have never seen a case of scarlet fever occur in a household of children where the disease did not extend to all the other children under ten years of age, who were not protected by a previous attack, if exposed to contagion or in contact with the sick one. I once saw a family smitten with the disease lose six children in five days. Cases of scarlet fever occurring in adults are exceptional ones, and not the rule. This disease is strictly a disease of childhood.

Dr. James Tyson—The discussion of this subject is surrounded by all the difficulties which accompany the consideration of any subject which has two sides, and each side may be said to furnish exceptions. In considering it we must, as practical physicians, first take hold of those points which are generally conceded. One of these is the fixedness of the poison of scarlet fever—the property by which it retains its activity for an indefinite period. This has long been recognized, and numerous illustrations have been furnished of it to-night. Again, my own experience confirms that of the speaker, that the disease is readily isolated, and that, with proper precautions, it does not spread to other members of a family. I admit that there are exceptions to this, and these may justify the fear of the disease which is so prevalent. We must bear in mind that a single accident resulting from carelessness will more than counterbalance what seem to be unnecessary precautions.

I agree with Dr. Osler that there seems necessary a certain capacity for the taking of scarlet fever, and this is absent in some who, however much exposed, will not take the disease. I myself have never had scarlet fever, although I have frequently been exposed to the very worst forms of the disease.

Dr. Wharton Sinkler—It seems to me that there must be in individuals at times a susceptibility to scarlet fever which there is not at other times. We see persons who have escaped contracting the disease at one time but have been stricken down in a subsequent exposure. I agree with Dr. Meigs that it is unusual to have the disease run through an entire family. In regard to the susceptibility to the disease at one time and not at another, I may state that I know a physician who, at the age of over forty, after fifteen or twenty years of active practice, contracted a well-marked case of scarlet fever from a patient.

Dr. Charles Wirgman—Cases of scarlet fever in the early stage are sometimes brought to the dispensary of the Children's Hospital and the sufferers may sit with other children in the waiting-room, yet I cannot recall any instance in which another child has contracted the disease in this way. In private practice I have had many instances in which only one out of a family of five or six has been affected, but I recall instances in which four or five out of a family of six or seven have been stricken down with measles or whooping-cough.

In inunctions in scarlet fever I have employed butter of cacao, which is a clean and pure fat, cleansing and cooling.

Dr. William Pepper—I agree with Dr. Meigs that scarlet fever has a much lower degree of contagiousness as contrasted with measles, small-pox in the unprotected, and typhus fever. We know, however, that the disease is positively contagious, and that the contagium is extremely tenacious. I have had too many illustrations of the contagiousness of scarlet fever, and of the deadly results that may follow a neglect of the proper precautions, to have the slightest doubt as to the proper practical course to pursue. This is to me a purely theoretical and scientific question of great interest, but still only a theoretical question. I should consider myself as culpable if I were to allow a child who had not had scarlet fever to be exposed directly to the disease as I should if I permitted one unprotected by vaccination to be exposed to variola.

I agree with Dr. Meigs that we oftener find one case of scarlet fever in families of considerable size than we find single cases of measles. This may be due to the short period of prodromes. The early symptoms are so severe that the suspicions of the parents are at once aroused. In the other affections referred to the pre-eruptive stage is longer.

From the experience of some of the physicians who have spoken to-night, it is clear that an almost complete want of receptivity to this disease on the part of some persons exists. The practical rule in dealing with this disease should be the adoption of isolation as absolute as that employed in a case of measles, typhus fever, relapsing fever, or small-pox.

Dr. William S. Stewart—I indorse in general the sentiments expressed in the paper of the evening over a disease which is regarded with so much dread by our community. I think the distinction between the various types of the disease was not clearly defined, there being three forms, varying in their malignancy. I do not consider scarlatina as contagious as measles, but would rate the malignant form with that of diphtheria. In regard to the insusceptibility referred to by some of the speakers, I, too, have so far been exempt, although I experience a slight pharyngitis when attending a malignant case. I never have manifested much susceptibility to eruptive diseases, as I was the last of a family of seven who took the measles, and had but little eruption with the disease. I have frequently been vaccinated, but with no effect. Patients affected with scarlet fever should be promptly secluded from the rest of the family, and as much as possible kept secluded until all the desquamation has passed off and been destroyed. I have frequently found that the mother of a large number of children, who was obliged to be in the sick-room frequently and just as frequently commingling with the healthy ones, did not communicate the disease. I have also witnessed the fact that nursing-children were peculiarly exempt from attacks of scarlet fever when exposed.

Dr. Benjamin Lee—The long experience of the lecturer in the observation of the diseases of infancy and early childhood certainly entitles any opinions that he may advance to the most respectful consideration. The deductions at which a man arrives after years of practice, and which gradually crystallize themselves in his brain, carry great weight, even if they are not supported by the long columns of figures for the absence of which from his paper the lecturer has apologized. My own experience in this class of affections has necessarily been somewhat limited. So far as it goes, however, I think I can safely say that it corroborates every one of the clinical conclusions at which he has arrived. When we attempt, however, to compare the contagiousness of scarlet fever with that of other infectious diseases, three modifying circumstances must be borne in mind. The first, that which has been alluded to by the secretary, that this disease may often pass unnoticed. Probably every one of us

can recall more than one instance like that which he has described, in which we have said to ourselves, after listening to a recital of symptoms which have marked a slight illness—"That child has had a mild attack of scarlet fever which has escaped recognition." In this way persons are protected without knowing it. It is quite possible that the two gentlemen who have this evening described their condition as a want of receptivity, in reality present a condition of protection from an unrecognized attack in early childhood. Secondly, as has been acknowledged by all who have participated in the discussion, early isolation affords a much surer means of prevention of the extension of this than some of the other diseases referred to, because the period of greatest contagion is later. And, in the third place, I believe that the practice of inunction so much in vogue in the treatment of the disease is to a certain extent destructive of the virus present in the skin, and especially must this be the case when, as happens now so generally, some antiseptic is combined with the fatty matter used. As regards the final conclusion of the paper, however, I am compelled to take issue with the author. I am quite willing that we should all leave this hall to-night determined not to be alarmists. The physician should never be an alarmist. But the true way to quiet the fears of the anxious mother is not to discourage precaution, but rather by taking every possible precaution to be able to say to her: "Everything has been done that ought to be done. The probability is that the disease will not extend beyond the sick-room." I consider that it would be very unfortunate if any of us should be led by the reasoning of this paper to relax any of the precautions which he, as a physician, has been in the habit of employing; and if the daily press is to be believed, the present is not the most opportune moment for attempting to diminish the sensitiveness, either of the professional or the public mind, in this city on this subject. I should be extremely glad to learn from Dr. Cleemann, who is, I presume, in possession of the facts of the case, whether the published report was authentic or not. The case to which I had reference was that in which it was stated that a wedding had taken place, the bride being sick in bed with scarlet fever, and all of her six bridesmaids being present in the sick-room.

Dr. William M. Welch—My experience has been something like that of the author of the paper in regard to the spread of scarlet fever; but I prefer to explain this peculiarity in another way. I have always regarded scarlet fever as one of the most contagious of the exanthems, and have accounted for its failure to infect all persons exposed rather by the fact that many are, for some unknown reason, naturally insusceptible to the contagion. To prove that the contagium is exceedingly active I need only refer to the rapidity with which the symptoms of the disease appear after exposure. The ordinary period of incubation is only from four to seven days; but well-authenticated cases are on record in which this period was not longer than three hours. I have myself seen one case in which symptoms of the disease very quickly followed exposure. In the winter of 1871–72, there was in the Municipal Hospital a child suffering with confluent small-pox. The child recovered and was discharged, having been in the hospital for thirty-one days. The mother removed her one morning, and the same evening brought her back with high fever, and the next day a well-marked scarlatinous eruption appeared. In four days the child was a corpse. There was no case of scarlet fever in the hospital at that time, and it is hardly possible that the child received the contagium before she was taken sick with small-pox, and that it remained latent all that time. A more probable explanation is that exposure did not take place until after leaving the hospital, and that the incubation period was, therefore, of only a very few hours' duration. It is generally supposed that the contagium of scarlet fever is less volatile than that of other infectious diseases. I have, however, reason to believe that it is sometimes transmitted some distance through the atmosphere. Some years ago I was treating one or two cases of scarlet fever in a lower ward and a few cases of small-pox in the upper ward of the hospital. After a time the fever broke out among the convalescents in the upper ward. There was no direct communication between the two wards, except through the hot-air pipe. I think the contagium was conveyed in that way, for experiment showed that when the current of warm air was not very strong there was a tendency for the air of the lower ward to be drawn into the pipe.

A reasonable fear of scarlet fever is, I think, desirable; for if the child can be kept from the disease for some years, the chances are that he will either have it in a milder form or escape it altogether. The period of greatest susceptibility to the disease, and of its greatest virulence, is between the ages of two and four years. After that period of life it may be milder; and in adult life the susceptibility is often entirely lost.

It would be wise if in this disease greater caution were exercised in regard to funerals. The body should be washed with a disinfectant, and anointed so as to prevent the epidermic scales from being carried by the atmosphere. It is also of great importance that the clothing and bedding which has been in contact with the patient should be disinfected. Thorough boiling and washing will doubtless destroy the infection; but there are certain articles that cannot be treated in that way, and for the disinfection of such articles dry heat is necessary. I may state that a service of this kind has for some years past been carried on at the Municipal Hospital. Woollen clothing and bedding sent there for disinfection are subjected for some hours to dry heat at a temperature of 212° to 230° F. So far as we know, articles thus treated have never been the means of spreading the disease.

Dr. Arthur V. Meigs—In my paper I plainly stated that the fact of scarlet fever being a contagious disease did not admit of doubt. In any discussion, to be logical, we must first define the terms to be employed. At the present time there is the greatest confusion existing in regard to the meaning of words like contagion and infection. In Dunglison's "Dictionary," for instance, the terms are defined as synonymous. The "Dictionary" of the New Sydenham Society in its definition of these or parallel words makes the descriptions very brief, and gives the words simply their original etymological meaning.

A large number of individual instances have been related, but individual facts standing alone determine nothing; the only way to reach any conclusion is by the study of general results and what happens in most instances. I think the use of syphilis and influenza as illustrations of contagious diseases, as contagion is commonly understood, hardly applicable. These diseases are not typically contagious in the sense in which I have used that term. With reference to the precautions to be adopted, I have already stated what measures I advise. That certain persons are not susceptible to the disease is so well known that it is not necessary further to discuss the question. The susceptibility to scarlet fever doubtless varies at different periods of life and different ages, and that is another point in favor of the view that measles and some other affections are more highly contagious. I think the question of the contagiousness of scarlet fever is not merely a matter of theory and speculation, for we must, when we treat the disease, be able to answer the questions asked with regard to what shall be done to prevent its spread. It seems to me that when there is such a difference of opinion as exists in regard to the degree of contagiousness of scarlet fever, and such unanimity in regard to that of measles, it constitutes proof almost that scarlet fever is less contagious than the latter affection.

Adjourned.

Of the fifty-five signers of the Declaration of Independence, five were physicians.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE SOCIETIES—RUPTURE OF THE UTERUS—HEPATICO-BRONCHIAL FISTULA—DISSEMINATED MYELITIS IN COURSE OF MEASLES—ACUTE TUBERCULAR ULCERATION OF THE FAUCES—DEATH OF DR. FREDERIC FARRE—THE SOCIETY OF APOTHECARIES AND THE TWO ROYAL COLLEGES.

LONDON, November 13, 1886.

THE meetings of the medical societies during this week have proved rather sterile as regards subjects of interest. At the Medical Society of London on Monday evening Dr. Lewers read a paper on rupture of the uterus during gestation. This was rare, he said, as out of three hundred cases of rupture collected by Gräfe in his monograph on the subject only thirty-eight occurred during pregnancy. Deducting those cases in which the diagnosis had not been verified and those where rupture had taken place during premature labor, sixteen cases remained. Two of these were due to violence, and the remaining fourteen were instances of so-called "spontaneous rupture." Dr. Lewers suggested that spontaneous rupture during pregnancy was invariably due to interstitial pregnancy.

Dr. De Havilland Hall then read notes of a case of hepatico-bronchial fistula. Severe pain had occurred in the region of the liver, followed by jaundice. Vomiting of bright-colored bile took place, and bile was also discharged from the lungs while coughing. Recovery eventually ensued.

At the Medical and Chirurgical Society Dr. Barlow presented the notes of a case in which disseminated myelitis occurred during the eruptive stage of measles, and proved fatal on the eleventh day of the measles. The patient was a man twenty-three years of age, and was admitted to the London Fever Hospital on the second day of the rash. Dr. Barlow referred to the rarity of the case, and said it bore some resemblance to a fatal case of disseminated myelitis which Westphal had reported as occurring after small-pox. Dr. Cheadle referred to a case of cerebro-spinal meningitis which had followed measles almost as closely as the myelitis in Dr. Barlow's case. Drs. Abercrombie and Gay read a paper (prepared jointly) on three cases of acute tubercular ulceration of the fauces occurring in the course of acute tuberculosis. They regarded this form of tubercular ulceration of the fauces as only a part of the general tuberculosis, and considered that it differed entirely from the chronic tubercular ulceration of the fauces, which was either primary in the pharynx or spread there from the larynx.

The death is announced, at a ripe old age, of Dr. Frederic John Farre who, although for some little time retired, was well known to London practitioners, except the very youngest, as he was for many years a very prominent figure at the London College of Physicians. He had held most of the offices at that college. He rendered it very great service as treasurer, and was, at the time of his death, one of its vice-presidents. He was consulting physician to St. Bartholomew's Hospital, after having served the full term as physician.

A most important question arises out of the bearing of the new Medical Act upon the conjoint scheme. The two Royal Colleges have hitherto refused to allow the Society of Apothecaries to co-operate with them. They wish, in fact, to abolish the society. The new Medical Act, however, promises to give it fresh life, for it opens to the society a way to become a complete examining board and issue a license to practise in all departments. If the colleges will not give it fair play the society will no doubt do this, and their six-guinea diploma will be as complete a legal title to practise as the more dignified and more costly parchments of its wealthier rivals. When we are all talking about the over-crowded state of the profession, it seems most injudicious to open the door to a second competing qualification which will certainly be inferior, and which will no doubt be given to students, as heretofore, after the minimum period of hospital study. If an inferior grade of practitioners is introduced in this manner to flood the country, the real blame will be with the Royal Colleges, which have only just begun to really care for the general practitioners. Those who have lived long enough to look back for a quarter of a century remember the time when the Society of the Apothecaries was doing more to improve the education and status of the general practitioner than all the other corporations put together. When the College of Surgeons admitted members after one hour's examination in anatomy and surgery, only the society's examination was complete, except for the omission of surgery, in which it had no legal power to examine. The society was the first body to insist on a preliminary examination for medical students. Its fees have always been low—insufficient, in fact, to cover the cost of examination—but the benefit has been derived by the examinees. It can boast that it has never sold a diploma—even to a qualified man—a boast which the College of Physicians, with all its assumption of dignity, cannot make.

IS THERE AIR WITHOUT GERMS?—A REPLY TO DR. BALDWIN.

To the Editor of the Medical Record.

SIR: Since Dr. Baldwin "of course spoke figuratively" in declaring that there was "air without germs," an apology is due for my obtuseness in failing to recognize the metaphor. He now admits that there is a "germ in all air," and this question may be considered settled, unless he has again "spoken figuratively."

The rôle which these germs play is a question too broad for discussion here.

Regarding suppuration there are probably several, possibly many, varieties of bacteria which may produce it. Klemperer describes three.[1] That they are present in the atmosphere is shown by the fact that suppuration is the rule in wounds freely exposed. Is not suppuration a morbid process? The days of "laudable pus" are departed. No pus is to be lauded. Suppuration occurs, and pus is *not* a living tissue. But it *is* an excellent culture fluid, in which putrefaction and other bacteria grow and develop ptomaines, which by their absorption may and do lead to no end of mischief. Because they occasionally fail to operate as causes of wound-disturbance neither argues against their existence nor justifies a wanton exposure to their influence. There are many conditions, known and unknown, which make the causes of disease inoperative. For instance, out of ninety children exposed to scarlatina, forty-three contracted the disease and forty-seven escaped.[2] No one doubts the existence of scarlatinal virus in proximity to scarlet-fever patients just because more than fifty per cent. of those exposed escape. A much smaller percentage of wounds exposed to the air will escape suppuration.

But the climax of absurdity is reached when we are informed that the lamented Gamgee was right when, several years ago, he predicted the death of Listerism in a few years. Listerism dead! Why, at the International Congress at Copenhagen in 1884, there was not enough respectable opposition to Listerism to make a debate. The question was, how best to carry out its details. Its principles were considered established.

To one whose acuteness of perception can see noth-

[1] Annals of Surgery, June, 1886.
[2] Pepper's System of Medicine, vol. i., p. 444.

ing in Listerism but "hissing, bubbling, carbolized steam," there is little wonder that it seems dead. Those who can look beneath and see its underlying principles *know* that it is not dead. The principles which enabled Volkmann at one decisive step to change his results in compound fracture of the leg from a loss of twelve successive cases by pyæmia and septicæmia to one hundred and thirty-three cases without a single death from these causes still live.' It is strictly within the bounds of statistical facts to say that *many thousands* of persons are living to-day who but for Listerism would be dead. It has revolutionized surgery, and placed within the domain of safe operations surgical procedures which hitherto were almost uniformly fatal.

But what about M. Peter and his followers? M. Peter's paper was based entirely upon the able researches of M. Gautier, which had just been read before the Academy; and M. Gautier found it necessary, in the very next meeting of the Academy, to *repudiate M. Peter's construction of his views.* He finds no difficulty in reconciling the germ theory in "specific diseases" with the auto-genesis of ptomaines in arthriticus, anæmia, diabetes, etc. These and numerous other diseases no one assigns to a germ origin, notwithstanding Dr. Baldwin's assertion that "a special bacterium is claimed for *every disease.*"

But, pushing this theory of ptomaines in specific diseases to its logical conclusion, what is its bearing upon the germ theory of their origin? It ascribes these diseases to ptomaines. If germs produced ptomaines (which is absolutely certain), and the ptomaines produce the disease, then the disease is clearly due to germ infection. These ptomaines, as M. Peter says, are "absolutely topic." But the infection which results is not auto-infection, in the proper sense of the term, but microbial infection.

In my judgment Tait's success teaches a very important lesson which should be freely and honestly accepted. It is this: That the dangers from atmospheric infection are small as compared with the dangers of infection from instruments, hands, sponges, etc. No one practises "antisepsis" more rigidly than Lawson Tait does with his sponge and silk.[2] But his practice and results are no "irreparable blow" to the germ theory and disinfection, because his operations are *aseptic* with reference to the most frequent sources of infection, and *antiseptic* largely, because his operation wounds are small in extent and not exposed to the air for a long time; and because, finally, when his operation is completed, he leaves no gaping wound, the peritoneal cavity having been thoroughly cleansed and dried with *carbolized sponges.*

But while the dangers from atmospheric infection are far outweighed by those above referred to, they are no less real. And to expose an open wound-surface to these dangers for any great length of time (which Tait does not do in ovariotomy) is an act which, in the light of recent investigations, cannot be regarded with complacency.

And now a few words regarding "twenty-five successive cataract operations."

First, are cataract operations a proper test of Listerism? *Emphatically, no!* Fifteen years ago, when asked whether he thought much benefit might be derived from this method in ophthalmic surgery, the great founder of Listerism said he did not think so. The operations upon the eyeball are mostly small; the territory is so well protected that after the closure of the lids the conditions resemble pretty closely those of a pure subcutaneous operation; furthermore, the conjunctive sac is constantly bathed in an antiseptic fluid, the tears; there is little occasion to contaminate the wound with hands, dressing materials, or instruments difficult to keep clean; the operations are soon over and, therefore, exposed to injurious influences for a short time only. All this explains why the "results obtained by careful operations without the use of antiseptic agents have not been inferior to the results of those that have imitated the antiseptic methods of general surgery."[1]

Twenty-five successful cases of cataract extraction are undoubtedly creditable; but, in view of the long series published by Knapp and others, and the reasons above set forth by Lister, they cannot be considered a respectable groundwork for a philippic against antiseptic surgery.

Respectfully,

G. W. McCaskey, M.D.

Fort Wayne, Ind., October 30, 1886.

[1] Cheyne's Antiseptic Surgery, p. [illegible]. [2] Diseases of the Ovaries, p. 262.

THE PLACE OF QUININE IN THE THERAPEUTICS OF TYPHOID FEVER.

To the Editor of The Medical Record.

Sir: Allow me to say a few words as to the place of quinine in typhoid fever.

In the Catskill Mountains, where they have the true typhoid fever, my experience was that typhoid fever could not be averted, or its natural course shortened, by large doses of quinine; that other than tonic doses harmed; that any preventive other than plenty of fresh air, bathing, and supporting treatment was hurtful. We could tell typhoid fever by the symptoms, not by finding in the blood and ejections the result of diseased conditions—a typhoid bacillus, as I think they call it.

In Dutchess County, where I have practised for fifteen years, I have never seen a case of true typhoid fever except in persons who have come here from some mountain region, *where there is no malaria*, and who have been taken sick soon after coming here. In those cases quinine in other than tonic doses did harm.

We have here the typhoid conditions as a result of malarious diseases, and those cases treated with large doses of quinine do well. I believe that the cases in New York City that have done well with large doses of quinine were cases complicated with malaria—the typhoid conditions—not true typhoid fever. But you say you found the typhoid bacillus. You can find maggots in a wound that is not properly cared for. Did the maggots cause the wound? Is not your typhoid bacillus the result of ulceration, of the death of certain parts which the fever poison has expended its force on? If there had been no death of parts would there have been any bacillus?

J. R. Wilson, M.D.

Poughkeepsie, November 2, 1886.

[The typhoid bacillus has been found, so far, only in cases of typhoid fever. Its presence is only of diagnostic value. The question whether it causes the fever has not yet been settled.—Ed.]

Agnew's Operation for Pterygium.—Dr. A. G. Sinclair, of Memphis, Tenn., writes to the *Mississippi Valley Medical Monthly:* In your September issue I find an article, by Dr. J. L. Minor, in which the method of operating for pterygium, the distinguishing feature of which consists of the *tearing* of the corneal portion of the growth from its attachments, is described as a *new* operation, and its introduction credited to Dr. Prince, of Illinois. I became familiar with this operation under the instruction of my friend and teacher, Professor C. R. Agnew, of New York, more than a dozen years ago, by whom it was taught and practised then, and has been ever since. In a recent letter from Dr. Prince he says: "To him (Professor Agnew) is due the credit of priority, which I would be glad to grant him." Honor to whom honor is due.

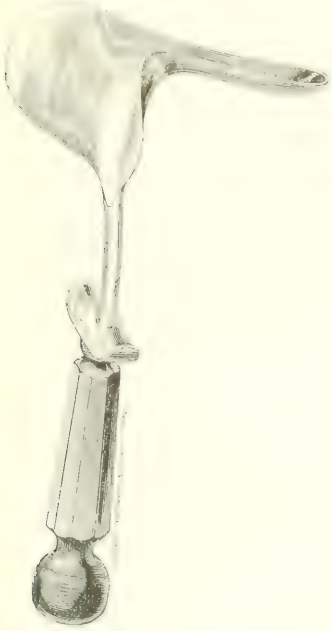
[1] Archives of Ophthalmology, March, 1886.

New Instruments.

A NEW FORM OF VAGINAL SPECULUM.

By HUBBARD W. MITCHELL, M.D.,

In all operations upon the cervix uteri, and the vaginal canal, every surgeon has experienced more or less difficulty in bringing the parts into view perfectly, and retaining them in view during an operation, owing to the defective forms of the different speculums now in use. When the operation requires the patient to be placed in Sims' position, namely, upon the left side, with the knees drawn up, and the chest carried forward, and a Sims speculum used, the perineum can be drawn backward well enough, but the upper labium and the upper border of the vaginal opening are apt to fall downward and impede the operator's view, as well as to embarrass his



manipulations. The elasticity of the parts also causes the lower border of the vaginal opening to partially close upward, and thus to still further obstruct his view. Besides this, the parts are liable to be touched with the instruments, unless great care is exercised to avoid it. Another difficulty is the holding of the speculum by the assistant.

In holding Sims' speculum in proper position so that the cervix or a fistula can be conveniently operated upon, the assistant must hook the free blade around the back part of his wrist, and retain it in this awkward and painful position during the whole time of the operation, which may be a half-hour, or even much longer. Every assistant who has held a speculum in this way knows how difficult it is, and how often he has embarrassed the operator by letting the speculum slip, because his fatigued and half-paralyzed wrist has been unable to hold it firmly while the operation lasted. These difficulties are plain to every surgeon, and the writer, who has had considerable experience in these operations, set about devising some way to overcome them.

The accompanying engraving shows a speculum which I think meets all the requirements of the situation. It is a modification of the principle of Sims' speculum. It has one blade, as the cut shows, which is *short* and *wide*, with two broad and spreading wings or flanges of such a shape, and bent at such a curve, as to keep the vagina opening completely expanded when the instrument is in position. The upper wing is much larger and broader than the lower, to prevent the gravitation of the parts downward. The lower wing is broad and flat, and so curved on its edge as to be entirely out of the way of the operator. A large nicely shaped handle, easy to grasp, replaces the other blade of Sims' speculum. This handle (the cut shows the shape perfectly) is fitted with a transverse metallic bar, curved in such a way as to allow the first two fingers of the assistant to be hooked over it. By the aid of this device the instrument can be held firmly in position during the most tedious operations without fatigue to the assistant, and to the great comfort of the operator. Mr. W. F. Ford has kindly made this instrument for me, and is ready to furnish it in larger sizes if wanted.

This new speculum has worked admirably in my hands, and I offer it to the profession, hoping they will find it equally convenient.

[illegible]

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 28 to December 4, 1886.

IRWIN, B. J. D., Lieutenant-Colonel and Assistant Medical Purveyor. Relieved from temporary duty in New York City, and of the charge of the Medical Purveying Depot in that city, and ordered to San Francisco, Cal., to take charge of the Medical Purveying Depôt in that city. S. O. 270, A. G. O., November 19, 1886.

TOWN, F. L., Major and Surgeon. Ordered from Fort Clark, Tex., to Post of San Antonio, Tex., to relieve Surgeon J. P. Wright. S. O. 159, Department of Texas, November 15, 1886.

GIBSON, JOSEPH R., Major and Surgeon. Ordered for duty as Post Surgeon, Fort Lyon, Col. S. O. 134, Department of the Missouri, November 20, 1886.

MOSELEY, EDW. B., Captain and Assistant Surgeon. Directed to take charge of the Medical Purveying Depot, San Francisco, Cal., until the arrival of a proper bonded officer. S. O. 99, Division of the Pacific, November 19, 1886.

POWELL, J. L., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Fort Supply, Ind. Ter. S. O. 134, Department of the Missouri, November 20, 1886.

EGAN, PETER R., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Clark, Tex. S. O. 162, Department of Texas, November 22, 1886.

WALKER, FREEMAN V., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort McIntosh, Tex. S. O. 159, Department of Texas, November 15, 1886.

CLENDENIN, PAUL, First Lieutenant and Assistant Surgeon. Recently appointed. Ordered to report to Commanding General, Department of Texas, for assignment to duty. S. O. 271, A. G. O., November 20, 1886.

JOHNSON, HENRY, Captain and Medical Storekeeper. Will, in addition to his present duties, assume charge of the Medical Purveying Depot in New York City, as Acting Assistant Medical Purveyor. S. O. 270, A. G. O., November 19, 1886.

CALDWELL, DANIEL G., Major and Surgeon. Granted twenty days' extension of his leave of absence. S. O. 278, A. G. O., December 1, 1886.

BROWN, P. R., Captain and Assistant Surgeon. Leave of absence for seven days, granted by Post Orders, is extended twenty-three days. S. O. 124, Department of Arizona, November 24, 1886.

MOSELEY, E. B., Captain and Assistant Surgeon. Relieved from duty as Attending Surgeon in San Francisco, Cal. S. O. 99, Division of the Pacific, November 19, 1886.

TESSON, LOUIS S., Captain and Assistant Surgeon. Granted leave of absence for four months, to date from November 13, 1886. S. O. 278, A. G. O., December 1, 1886.

WAKEMAN, WILLIAM J., First Lieutenant and Assistant Surgeon. Leave of absence extended three months. S. O. 274, A. G. O., November 26, 1886.

MCCAW, W. D., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared. S. O. 274, A. G. O., November 26, 1886.

CLENDENNIN, PAUL, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Davis, Tex. S. O. 166, Department of Texas, November 29, 1886.

ANDERSON, C. L. G., First Lieutenant and Assistant Surgeon. Recently appointed. Ordered for assignment in Department of Arizona. S. O. 277, A. G. O., November 30, 1886.

BALL, ROBERT R., First Lieutenant and Assistant Surgeon. Recently appointed. Ordered for duty in Department of the Missouri. S. O. 278, A. G. O., December 1, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 4, 1886.

LAW, HOMER L., Surgeon. Ordered before the Retiring Board, December 2, 1886.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Ordered before the Retiring Board, December 6, 1886.

FARWELL, W. G., Surgeon. Detached from the Kearsarge, proceed home and wait orders.

GATEWOOD, J. D., Passed Assistant Surgeon. Detached from the Kearsarge, proceed home and wait orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 4, 1886:

	Cases.	Deaths.
Typhus fever	1	1
Typhoid fever	31	12
Scarlet fever	23	4
Cerebro-spinal meningitis	2	2
Measles	139	14
Diphtheria	110	51
Small-pox	0	0
Yellow fever	0	0

A WOODEN-LEGGED COW.—Some eighteen months ago Mr. John Sharry, V.S., of Norton Malton, England, successfully amputated one of the hind legs for injury of a valuable and well-bred shorthorn cow, the object being to retain the cow for breeding purposes, while a wooden leg was affixed to the stump. Many will be pleased to hear that the object has been fully achieved; the cow is now a mother, and has a fine bull-calf running by her side.

HOW THE LATE PAUL BERT TESTED THE VALUE OF VACCINATION.—It is told of the late M. Paul Bert, as an instance of his scientific enthusiasm and fearlessness, that, at one time, when he was impressed with the prevalence of small-pox from which those vaccinated in youth, and not revaccinated, had suffered largely, he decided to test for himself the value of revaccination; and he did so in a manner which might possibly have cost him his life had his doubts been justified. He was vaccinated, and afterward had himself inoculated at Havre with virus from a man who was dying of small-pox. He escaped the disease.

THE DURATION OF INFECTIOUSNESS in the acute infectious fever is placed by Dr. Frederick Pearse (*British Medical Journal*) as follows: Measles, from the second day, for exactly three weeks; small-pox, from the first day, under one month, probably three weeks; scarlet fever, at about the fourth day, for six or seven weeks; mumps, under three weeks; diphtheria, under three weeks.

QUEEN VICTORIA was the first member of the present royal family of England to receive the benefit of Jenner's discovery. She was vaccinated at the tender age of three months, and no doubt she made matters lively for a few nights.

TYPHOID FEVER IN LOUISVILLE.—The city of Louisville had 1,200 cases of typhoid fever during the past year. Most of the cases were in families using open wells.

A POWERFUL DRUG.—A solution of strophanthin, one part to 10,000,000 of water, brought in contact with a frog's heart, will stop it in twenty minutes.

VOLUNTARY INHIBITION OF THE HEART'S ACTION.—Dr. Lydston, of Chicago, writes to the *American Practitioner and News* that he has the power of voluntarily inhibiting his heart's action, and he has demonstrated it to professional friends.

CORROSIVE SUBLIMATE POISONING.—The obstetrical department is divided into three clinics, with three thousand confinements in each clinic yearly. Four cases of sublimate poisonings occurred last winter. The autopsies showed ulceration throughout the alimentary track, with charred, black appearance of the mucous membrane throughout the colon and rectum. The solution used in these cases was 1 to 4,000 bichloride of mercury.—*Medical Age.*

WHEN IS A MAN DRUNK?—Dr. T. E. Wright sheds the electric light of science upon the question, "When is a man drunk?" From the days of the Apostles it has been observed that man is drunk oftenest after dark; but on Sundays and holidays it is somewhat earlier. Such would be our modest contribution to Dr. Wright's problem.

PARAPHIMOSIS FROM THE TRAPEZE ACT.—M. Francon related, before the Society of the Medical Sciences of Lyons, a case of paraphimosis which was interesting because of its peculiar mode of production. A young man, seventeen years of age, was exercising on the trapeze, and suddenly felt a severe pain in the penis, and in looking for the cause found that the prepuce was pushed behind the glans and could not be replaced. He was hanging from the bar by his hands, and, the conversation of his companions being somewhat loud, he had an erection, the organ resting against the abdomen. He then attempted to swing himself over the bar, and in this way the accident was produced. It was necessary to etherize the patient before reduction could be effected.

DISLOCATION OF THE JAW FROM VOMITING.—Dr. Curtis reports, in the *Medical Press*, the case of a young woman whom he was called to treat for double dislocation of the jaw produced by the act of vomiting.

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Original Articles.

FEEDING AFTER SURGICAL OPERATIONS.[1]

BY JAMES B. HUNTER, M.D.,

THE experience which I have endeavored to reduce to practical form, on the subject of nourishing patients after surgical operations, has been derived chiefly, of late years, from what I have done and seen done in abdominal surgery and in the various gynecological operations. I believe, however, that the subject is one of interest, not only to the general surgeon, but also to the general practitioner. The surgeon should not consider his responsibilities at an end with the performance of a given operation, but should extend his care and supervision to all the details of the after-treatment, the first and chief of which is the proper nourishment of the patient until convalescence is established.

After all capital operations, especially those involving wounds of the peritoneum, the question of nourishment is one of vital importance; and by nourishment may here be understood the use of both stimulants and food. The administration of stimulants in case of shock or collapse, hypodermically or otherwise, need not be considered in this connection.

Let us suppose, for example, that the operation of ovariotomy has been performed, and that the patient has rallied from the anæsthetic. The question arises, When shall food and stimulants be given, of what shall they consist, and how and when shall they be administered, in what quantity, and with what frequency?

My own opinion is that nothing whatever should be given for the first twenty-four hours, except, perhaps, a very little water, unless the patient is very weak, in which case a little brandy may be added. If there is a tendency to vomiting it is better to give the stomach and the alimentary canal *absolute rest*, and even a teaspoonful of water or a morsel of ice, especially the latter, will sometimes be sufficient to excite peristalsis and disturb that rest. If the retching is persistent, and something must be given to combat it, very hot water in small quantities often answers well. After twenty-four hours, if vomiting continues a little black coffee, strong tea, iced champagne, or koumyss may be cautiously tried. If they are rejected it is best to wait two or even three days. Occasionly a patient's fancy may be indulged as to what will, as the phrase is, "settle the stomach." I have known lager beer to be retained when everything else had been tried in vain. When the stomach will retain food, it is well to begin with koumyss, in half-ounce doses, repeated every two hours. If the patient is thirsty, an equal quantity of water may be given in the intervals. In place of koumyss there may be given peptonized milk, milk and lime-water in equal parts, or milk and Vichy, or clear beef-tea, or water in which the white of an egg has been mixed, or barley-water. Whatever is given should not exceed in bulk half a fluidounce. When the stomach is very irritable only one or two fluidrachms should be given at first. Where none of these things agree, brandy, or whiskey, or champagne sometimes answers well. As the stomach bears it, whatever is found to agree best in the way of food is administered at longer intervals and in larger quantity. It is impossible to lay down one rule for all patients. Those who are stout and robust bear abstinence from food much better than those who are weak or anæmic, but even the latter suffer much less than is often supposed from two or three days of fasting.

It will be found, as a rule, that after prolonged anæsthesia the stomach is proportionately longer in recovering its tone. The object aimed at during the first ten days is to sustain the patient's strength with food which will leave the smallest residue in the alimentary canal, which will not cause flatulence, and which will be as far as possible agreeable to the patient. Koumyss or peptonized milk will answer these indications in a larger number of cases than any other form of food. The German operators, Hegar among others, depend chiefly upon small quantities of water and sour wine for the first three days. Where patients have a marked aversion to milk or any of its preparations, clear, freshly made beef-tea may be substituted for it. The administration of stimulants is generally necessary only until food can be digested, and when that point is reached they may safely be discontinued, unless the patient is very feeble.

In private practice, or where the patient is not entirely under the control of trained and obedient nurses, it is very difficult indeed to secure absolute rest for the alimentary canal. As a rule, overfeeding and overstimulation are much more to be dreaded than the reverse.

The method of nourishment described is subject to variation according to the amount of pain, the quantity of morphia administered, and any rise in temperature. After four or five days have passed without any bad symptoms, and the bowels have moved, food may be increased in quantity, great care being exercised until the end of the second week. During the second week stale bread may be given with the milk or other nourishment, but no other solid food. Vegetables and fruit are to be especially avoided, and even soup or broth having vegetables cooked in it.

Rectal alimentation should be resorted to early if the patient is very weak or the stomach very intractable. Stimulants may be given in this way early, using strong beef-tea as a vehicle. Half an ounce of brandy, two ounces of beef-tea, and ten grains of quinine, given every three or four hours, often proves of great value in extreme debility. Where the stomach continues to reject food, systematic rectal alimentation should be resorted to after the second day. I have not much faith in milk in this form of nourishment, but prefer some preparation of beef. Strong beef-tea, peptonized, beef peptonoids, and the preparations of blood, all have their value. In critical cases, where nourishment by the rectum is the chief dependence, I have found nothing so satisfactory as a mixture of the pulp made by scraping raw beef with half of its bulk of pancreatic emulsion (Savory & Moore's). This mixture is allowed to stand in water considerably below the boiling-point until it liquifies, and assumes a homogeneous chocolate-like appearance. It should be prepared freshly each time, and two fluidounces of it administered not oftener than every four or five hours. It should be carried carefully, by means of a small flexible tube, well above the internal sphincter, and injected very slowly, with a hard-rubber syringe, gentle pressure being maintained for some time after the syringe is withdrawn to prevent its rejection. If quinine or opium is indicated, it may be given in the emulsified beef, but it is better not to add to it alcohol in any form.

[1] Read before the Practitioners' Society December [illegible]

This method of nourishment, carefully carried out, may be made to sustain and increase the patient's strength, if necessary, for two weeks or longer, the stomach having, in the meantime, absolute rest. The thirst which is often complained of when the stomach is empty may be allayed by throwing into the rectum four or five ounces of tepid water as often as may be required.

The points which I have endeavored to emphasize are these :

I. That personal attention should be given, with precise directions, to the nourishment of patients after all surgical operations, and that too much should not be intrusted to nurses who can have no means of knowing the varying requirements of individual cases.

II. That vomiting is to be avoided by every means in our power, even if it require absolute rest for the stomach for several days.

III. That even appropriate food, where it can be borne, should be given only in very small quantities, and at regular intervals.

IV. That systematic nourishment by the rectum should be resorted to promptly if other means fail or are insufficient.

V. That less food and more water should be given if the patient suffers from fever.

VI. That the dangers caused by vomiting, by flatulence, or by food difficult of digestion, are much more to be dreaded than those due to abstinence from food.

VII. That stimulants are of great value where needed to meet special indications, but may be generally discontinued as soon as food can be digested.

ON THE INFREQUENCY OF SECONDARY SYPHILITIC CONTAGION.[1]

By GEORGE ARTHUR, M.D.,

[illegible]

THAT the belief in the danger of syphilitic contagion from the consecutive lesions of that disease, by the mere contact of a healthy or, at most, slightly abraded mucous surface with such lesions, or with the secretions therefrom, is quite generally accepted, will not, I think, be disputed. Dr. Keyes, of New York, expresses this belief, as positively, perhaps, as any of the prominent writers on venereal diseases, in the following passage, taken from his work on that subject :

"The contagious properties of secretions from mucous patches, and secondary ulcerated surfaces upon mucous membranes, have become of late years so obvious, clinically, that it is questionable whether this lesion does not divide the honors of propagating syphilis equally with chancre, or possibly even surpass its rival. Fournier has called attention to this fact, and Baumler has emphasized it. Mucous patches and mucous tubercles, ulcers of the mucous surfaces—all of these lesions secrete freely, and are in a position frequently to be brought in contact with surfaces capable of absorption. The long duration of these lesions makes them especially dangerous; they last for months at a time, and relapse frequently, while the syphilitic chancre, for the most part, occurs upon a patient but once in a lifetime, and is of comparatively short duration.

"Abrasions may be inoculated during sexual contact as well from a mucous patch as from a chancre."[2]

Fournier speaks of mediate contagion as a fact too well established to make more than an allusion to it necessary, and relates several cases in his own and others' experience.[3] These and other classic cases can be found repeated again and again by subsequent authors in treating of the same subject.

The same views are held by most of the well-known syphilographers, and, I believe, by the great majority of practitioners—not, I venture to maintain, from their own experience, but from their reading and teaching, and from the influence that any generally accepted belief has upon those who have not had the opportunity to make their own investigations. I have, in addition to the inquiries, the replies to which are contained in this paper, asked a considerable number of civil practitioners, who had previously declared their faith in the ready contagiability of the secondary lesions, for the results of their own experience, and have reason to believe, from their uniformly negative answers, that it does not differ from that of military surgeons, which it is the object of this paper to present.

I do not think it is claiming too much to say that the information obtained on this matter from the medical officers of the army and navy is unusually valuable and trustworthy, particularly since it bears upon the causation of the diseases observed. A full statement of the origin of the cases that come into their hands is one of the most important parts of the records kept by them; and since these records may at any time be subjected to the scrutiny of boards of survey, retiring boards, or, finally, of the pension office, and the element of causation of the disease of the patient or claimant is the most important factor in controlling their ultimate decision, the surgeon, in anticipation of such examination of his records, is very careful to sift all the evidence that is obtainable as soon as the cases come to his attention. This important duty, on the proper performance of which so much may depend, it is enjoined upon all medical officers to carry out faithfully by the regulations and instructions of both services; upon their record-evidence is based the only legal decision in cases of retirement, or pension, or the refusal of pension. The necessity that medical officers are under of giving satisfactory reasons for whatever conclusions they may arrive at—it is not sufficient to simply state their opinions in regard to the origin of a case—is another incentive to careful investigation before recording their decisions.

As syphilis is a disease that may in any instance result in the permanent disability of the individual affected, any unusual feature in its origin or the seat of the lesion first observed is sure to lead to a searching examination of all the evidence bearing on its acquisition.

In performing this duty the military surgeon possesses the advantage of having his patients under more perfect observation and control than is usually enjoyed by civilian practitioners, and can, moreover, obtain more trustworthy evidence as to their habits, history, the probable source of the disease, and the nature of the alleged infecting lesion, particularly when it exists in a member of a crew or garrison.

All these and other sources of information within the reach of military surgeons are, for the most part, practically closed to civilian practitioners, who are usually obliged to accept the patient's story, or form their own theories as to the probable origin of the cases coming under their notice, without evidence.

Both soldiers and sailors are pretty well aware of the general skepticism of their surgeons about extraordinary methods of syphilitic infection, and, appreciating the intimate knowledge that these officers have of their habits, rarely attempt to assign any cause but the true one for their misfortunes. In civil life, however, there exist, in all classes of patients, the strongest motives for concealing a disgraceful truth, even from the physician who is treating them, and the laity are well enough informed, as a rule, to know that the story of a perfectly innocent and accidental contact with a syphilitic individual, or matter from a mucous patch on the rim of a glass, spoon, urinal, or other utensil, has at least a chance of being believed if firmly persisted in. Enlisted men are not entirely exempt from this kind of bashfulness, it is true, but as concealment of any disease in a crowded ship or bar-

[1] Read before the New York Medical Society.

[2] A. L. Keyes, A.M., M.D. : The Venereal Diseases, including Strictures of the Male Urethra, p. 54. Wm. Wood & Co., New York, 1880.

[3] Alfred Fournier : Leçons Cliniques sur le Syphilis, p. 39 et seq. Paris, Delahaye et Lecrosnier, 1881.

rack is impossible, they soon acquire a cynical indifference to the moral, or immoral, aspect of their irregularities that rarely obtains in civil life.

I do not affirm, by any means, that the conclusions of military surgeons in this matter are not open to the many causes of error that envelop the origin of these atypical cases of infection, but I believe that of all classes of practitioners they are, by habit and training, better *detectives* and the least liable to be led into error, either by carelessness in forming their conclusions, by the wilful or innocent misstatements of the patients, lack of experience, or failure to keep the cases under observation long enough to determine their true nature. Among the letters that I have received from the medical officers of both services during this investigation, several speak of cases in which the proof of secondary contagion seemed satisfactory, but that after some time had elapsed facts came to their knowledge that proved the fallacy of their original decisions as to their origin. I mention this merely to show how easy it is for even the most conscientious observers to be led astray, unless they have unusually good opportunities for verifying their conclusions by continued observation of each case.

If syphilization from the consecutive lesion were common in any walk of life, we would naturally expect it to be exceptionally frequent in the army and navy. In these services large numbers of unmarried, or practically unmarried, men are massed together for long periods, and from necessity must come into frequent and close contact with each other, and, in spite of all possible care, must use many things in common, without proper cleansing, that could easily be the vehicles of the syphilitic virus, if it were so active and readily absorbed as the majority of our writers would lead us to believe. Anyone who has seen an entire ship's crew, syphilitics and all, on a hot day in the tropics, crowding around the scuttle-butt, drinking freely and frequently out of the same tin-cup, and failing to find the theoretically-to-be-expected crop of labial chancres following in due time, would, I think, have his faith in the assertions of many syphilographers shaken.

The men thus exposed are not exempt from oral abrasions. The food of enlisted men is often hard and coarse, and defective and broken teeth, in the absence of competent dentists, is quite the rule with them. Sailors, moreover, are in the habit, while working aloft, of using their mouths as a third hand, and cannot be fastidious as to what they put into them.

Some idea of the prevalence of syphilis in our army and navy can be obtained from the following figures, taken from the reports of the surgeon-generals of both services; but the reader should bear in mind that only those cases appear on the official reports, from which the figures are taken, that are so disabled by the disease as to be incapable of performing duty. Anyone who is familiar with syphilis, clinically, will be able to estimate what proportion of cases, under constant supervision and treatment, ever arrive at that condition. From my own experience I should judge the proportion to be, at the very outside, not more than one-third.

The army reports, as far as published, show for the last ten years an average of 46.07 cases of syphilis, including both the primary and consecutive forms, per 1,000 of strength.

In the navy the average during the last twelve years per 1,000 of strength is, of primary syphilis, 23, of consecutive, 18 cases—total, 41.

This represents, in my estimate of the proportion of cases appearing on the official returns to the actual number existing during a year, for both services, including both primary and constitutional consecutive syphilis, 130.59 cases per 1,000 of strength, or 1 in 7.66 individuals.

Not being willing to trust my own experience alone in forming a conclusion so opposed to the general opinion, some information as to the experience of other observers under the same or nearly the same conditions was desirable, and accordingly the following letter was sent to all the medical officers of both services that were accessible, so worded as to give no indication of my own views in the matter, but to get as complete and unbiassed a statement of their own experience as possible:

[illegible]

WASHINGTON, D. C., October, 1886.

[illegible]

tion if you would furnish me with all the important evidence that you can remember bearing on the origin of the cases, and specify whether the disease was probably acquired in or outside of the post or ship on which it was observed.

I particularly desire information upon those cases that have occurred in your own practice within the service, and upon those only.

this method, the status of the consecutive lesions as vehicles of the contagion among soldiers and sailors, and I will be greatly indebted to you if you will fill the accompanying form and return it to me at your earliest convenience.

[illegible]

ingly.)

2d. Nature of the infecting lesions.

3d. Nature of the communicated lesions.

4th. Where acquired.

5th. Whether or not consecutive symptoms were observed.

6th. Over how many years do your observations extend?

Very respectfully, etc.

Of the replies received to this letter, the following is a summary and analysis:

Total number of years over which the observations extend, 3,327; average for each surgeon, 18.59.

To the first question, 138 surgeons answer "None," without qualification; 29 answer that they cannot give any satisfactory information on the point in question, or cannot recall a case; and 12 report cases. Average number of men under observation for the last ten years, 33,760. The number of cases reported is 41.

To the second question the answers are: Oral mucous patches, 38. Of these the supposed infecting lesion was seen in 30 cases, and suspected in 8; unknown in 2; not stated in 1.

To the third question: Chancre in 37 cases; large indurated ulcer in 1; "consecutive syphilis" in 1; not stated in 2.

Method of introduction of the virus: By kissing in 4 cases. In 3 of these the disease was acquired from prostitutes, and the alleged "kissing" occurred in houses of ill-fame. In the fourth the circumstances under which the kissing took place are not stated. In none of the above were the infecting lesions seen by the surgeons reporting the cases.

By direct inoculation in 29 cases. Of these, 26 were communicated by tattooing. These cases are reported by Captain and Assistant Surgeon T. E. Wilcox, who observed the infecting lesions—mucous patches in the mouth of the man who did the tattooing, who moistened the needles by placing them in his mouth repeatedly during the operation. Dr. Wilcox thinks that these cases have not been reported before. In 1, by vaccination. This case occurred in Libby Prison during the war. The infecting sore was not seen; secondary symptoms were observed. By biting in 2. In 1 of these cases it is stated that a wound was made in the lip of the patient, where the chancre afterward appeared. In the other it is merely described as a bite on the chin.

During a vaginal examination in 1 case the resulting chancre was situated on the finger of the surgeon making the examination. The nature of the infecting lesion was not ascertained. One case was communicated by a married man, who had a mucous patch on his tongue, to his wife, on whose lip a chancre appeared. The circumstances of the infection are not definitely known. One case was seen in a female camp-follower, the lesion appearing on her lip, the infecting lesion supposed to be mucous patches in the mouth of a soldier. In 1 case none of the circumstances of the origin of the case are

stated. It was acquired in Tien Tsin, China, where the men have unusually free access to prostitutes.

From mediate contact with syphilitics 4 cases are reported. One was acquired in camp from a mouth-piece of a cornet, the infecting lesions, which were seen by Surgeon Charles R. Greenleaf, of the army, who reports the case, were the ordinary mucous patches in the mouth of the infector. The man who was infected developed a chancre on the lip, followed by secondary symptoms. One occurred in a hospital and 1 on board ship, from using a pipe "supposed" to have been used by a syphilitic in one of the cases; in the other the evidence that the owner of the pipe was suffering from oral patches is satisfactory. Labial chancres, followed by consecutive symptoms, appeared in both these cases. One occurred in a naval hospital under the following circumstances: A man in the same ward with several syphilitic patients, some of whom had consecutive lesions of the mouth, developed a chancre of the lip. Passed Assistant Surgeon Fitts, of the navy, who reports this case, found, on investigation, that all the men were in the habit of drinking from the same water-faucet by applying their lips to the orifice, and thinks that the contagion was transferred in this way. Secondary symptoms were not seen, as the case passed from under observation before they were due, but the labial chancre was characteristic.

Of these 41 cases, 29, including the 2 cases of biting, were acquired by direct inoculation into the blood, and can be dismissed at once as not being cases of secondary *contagion*, which are the only ones with which this investigation is concerned, the possibility of the *inoculation* of the consecutive syphilitic virus being too well established by observation and experiment to be questioned.

In each of the 3 cases acquired by kissing prostitutes, and in the fourth, in which the character of the woman communicating the disease is not mentioned, there are at least four probable sources of error. Either the lips of the patient may have come into contact mediately, *e.g.*, by means of the finger, or immediately, with the secretion of a primary lesion on the genitals, an open wound may have existed in his mouth, or the supposed consecutive lesion in the mouth of the woman, which was not seen by the surgeons reporting the cases in any instance, may have been a chancre.

In the case in which the disease was acquired during a vaginal examination the nature of the infecting lesion was not ascertained, and there is consequently no evidence that it was not a chancre.

In the case communicated by a married man to his wife the data are too meagre to justify any conclusion.

In the case of the female camp-follower there are so many possibilities other than secondary contagion that it cannot be considered as proving anything. This is true also of the labial chancre acquired in Tien Tsin, China.

The 4 cases of mediate infection are all that now remain to be considered. In these the conditions for observation were as good as can ever be expected to obtain in such cases, and are the only ones in which the evidence of secondary contagion approaches reasonable certainty. Even in these absolute certainty is out of the question, for in any one of them an open wound may have existed, providing a path for direct inoculation, or the contagion may have come from a primary lesion, since they all occurred in men who lived in close contact with others, among whom syphilis exists perennially in all its forms, and contact with matter from such lesions was by no means impossible.

When we consider the lubricity and mendacity of men, even of those whose education and refinement would, *a priori*, be considered effectual bars to such indulgences, or even inclinations, as some recent developments in England indicate the existence of in the highest social classes, and the strong disinclination that even the most shameless have to confessing to unnatural debauchery, it does not seem unreasonable to view the cases in which women were involved, and which were attributed to kissing, with great suspicion, and to decline forming any general theory on such foundations.

I do not undertake to deny that secondary syphilitic contagion is possible, but the results of the large experience which is presented in this paper seem to me to indicate that such contagion is extremely rare, that the danger of it has been enormously overrated, and that the conditions under which it occurs, if it does occur, need much more careful observation and study before we can arrive at any final conclusion with regard to them.

In view of the outcome of this investigation, as far as it has gone, I am very strongly inclined to believe that even in the few cases of mediate infection reported the lues venerea or specific bacillus, if the contagion is a bacillus, granting that it came from a consecutive lesion, must have been introduced *directly* into the blood-vessels, and presented *directly* to the white corpuscles, as in the cases of inoculation by tattooing, and that it will not be taken up by the lymphatics; in other words, that consecutive syphilis is, like rabies, inoculable, and not contagious.

In the 3,327 years of observation, under the most favorable circumstances for the propagation of the disease by secondary contagion, the supposed conditions for such contagion must have occurred innumerable thousands of times without a missing factor, yet the result shows only 4 cases in which the primary lesion, or matter from it, can, with anything like reasonable certainty, be excluded. Even in these 4 it is by no means beyond the bounds of probability that matter from a primary sore might have caused the mischief, or that they were cases of inoculation.

If we admit all the supposed cases that are, by the most liberal interpretation, due to secondary contagion, in the list presented, 3 of which were not observed among soldiers or sailors, and have only been included because of the unexpected meagreness of the results of the inquiry, we have in all only 11 cases as the result of these many years of careful observation.

I have little doubt that a fuller number of answers to the letter of inquiry given above would have given a result even more striking than can be shown from those received, since it is reasonable to suppose that the observers who had cases to report would feel more interest in the investigation than those who had none. Several of the gentlemen who did reply expressed great regret that they had no such cases as I was looking for to report, and I suppose that others not having cases did not think it worth while to reply, in spite of the precaution taken in the wording of the circular to secure negative as well as positive experience.

Rather unexpectedly several excellent observers, whose experience has extended over twenty years and upward, expressed quite a pronounced skepticism as to the possibility of the secondary contagion of syphilis. On beginning the investigation I did not suppose there were so many heretics extant.

It is true that all the evidence presented in this paper is of a negative character, and that the results, if one can speak of results that are so purely negative, are arrived at by a process of exclusion. If the reader thinks the exclusion to be too indiscriminate, the data are presented in full, and he can draw his own conclusions. It should be remembered, however, that all the evidence on the other side of the question is quite as negative, depending entirely upon the exclusion of the primary lesion in all the cases reported so far.

It would be interesting to know more certainly than we now do on exactly what or how much ground the prevalent belief in frequent secondary contagion is based. As far as I can find out from the literature of the subject, its only foundation is a very limited number of cases (many of them old, and which, under the searching analysis of the present day, would not be accepted at all), and all of them open to serious sources of error, and besides

these, only the unsupported assertions of various syphilographers and strenuous advocates of the "Contagious Diseases Act." If this paper succeeds in exciting a new interest in the matter, and draws forth from some of those who believe in the prevalence of syphilis acquired from the consecutive lesions by contact alone, even a few cases from their own experience, about which there can be no reasonable doubt, it will have served a purpose at least; but unless we can get more reliable data than we at present possess, upon which to base the theory, I do not think it is entitled to acceptance.

Before concluding I wish to thank the medical officers of the army and navy for the prompt and courteous attention my request received from so many of them.

Since the summary was made, five more replies have been received, all negative, which cover a period of 75 years, bringing the total number of years of observation up to 3,402.

ON THE REMOVAL OF DEEPLY SITUATED TUMORS IN THE REGION OF THE BACK.

BY H. W. BOONE, M.D.,

SURGEON [illegible]

The medical missionary in China who has charge of a hospital soon discovers that his own reputation and the fame and success of the institution under his care will depend in a very great measure upon his success as a surgical operator.

No one class of cases has given me more cause for serious consideration, none has been followed by better results, than the operations undertaken for the removal of deep-seated tumors in the neck. The very first thing which became clear to me was, that the mere external appearance of a growth gave no indication whether it would be easy to remove or no. The largest tumor of the neck I have ever seen—larger than the patient's head—was removed without the slightest difficulty, by simply peeling it out of its bed, as one would peel an orange from its skin; not a single vessel was tied, or twisted, and the loss of blood was insignificant. An apparently small tumor, showing but little on the surface, may send prolongations among the deeper structures of the neck which may tax the skill and patience of the operator to the utmost before its removal is successfully accomplished. Sometimes, after careful and repeated examination, from within the mouth, by placing the head in various positions, causing the patient to swallow, pressure on the carotid, and the use of every means to come to a correct opinion, one finds that little of a definite nature has been learned. The important questions as to the limits of the growth, its point of origin, and whether or no it is deeply connected with important structures in the neck, may, one and all, be involved in as much mystery as before the examination was held. Even in these cases one is quite justified in making free exploratory incisions and attempting to remove the new-growth. The patient should always understand that, if at any period of the operation it is found impossible to excise the tumor, the operation can be abandoned, the wound closed, and allowed to heal up without any fear of after trouble. The most thorough cleanliness of the hospital ward, and of everything constituting the patient's environment, with the careful and persistent use of aseptic surgery, can alone justify the above method of treatment. My operating-room is a detached building having no connection with any part of the hospital.

The following cases have occurred in my practice:

Case I.—July 2, 1883, A. W. M——, aged thirty-six, laborer. Swelling appeared four years ago, under the right side of lower jaw, grew slowly till three months ago, when he received a blow upon it. It then grew faster. Complains of pain and difficulty in swallowing, for which he seeks relief. The tumor extends from midway between symphysis of the lower jaws to one-half inch behind the ramus, downward for two and one-fourth inches, very slightly movable at its upper boundary, and sends a prolongation down under edge of sterno-mastoid. Lower part of tumor is more freely movable than upper, is not adherent to the skin, can be felt from within the mouth, and has a firm, springy feel.

July 5th.—After every antiseptic precaution, chloroform was given by Dr. S. K. Fory, the spray turned on, and, assisted by Dr. R. A. Jamieson, I made a free incision from the angle of the jaw to a little below the lower margin of the growth. A ⊢ -incision, parallel to and below the jaw, extended beyond the anterior margin of the tumor. The surface was cleared as far as possible; the facial artery and vein were freed and held aside; the tumor was put on the stretch with a blunt-pointed director or with my finger-nails the posterior margin was followed for a short distance beneath the edge of the sterno-mastoid; some points could not be torn across, and they had to be freed with a pair of blunt-pointed scissors, curved on the flat, turned toward the tumor. The tumor was followed up, and found to dip down toward the carotid sheath. It was then attacked from the front and gradually freed, a few vessels were picked up, tied in two places, and cut between, and the tumor was lifted out from its bed. A pretty free oozing of blood was controlled by pressure. Two drainage-tubes were inserted, the edges of the wound secured by interrupted sutures of carbolized silk, small pads of Lister gauze put on each side of the wound to bring its sides into apposition, larger compresses filled up the space under the jaw, and over all a Lister dressing and gauze bandages. Morphia, one-third grain. Patient very restless, tried to remove the bandages; had to keep him under full doses of morphia. The third night his temperature was 101°; dressing changed under spray. There had been a slight oozing of blood.

Seventh day.—Temperature 98 $\frac{1}{10}$°, one drainage-tube removed, other shortened and replaced; serum.

Twelfth day.—Removed stitches and drainage-tube.

Eighteenth day.—Patient removed dressing in night, as neck itched. Cleaned and dressed with carbolized oil and lint. Is a restless man, moving his head incessantly.

Thirtieth day.—After some sero-purulent discharge the wound has entirely healed, and patient was discharged, cured. The tumor appeared to be an enchondroma of the submaxillary glands, it was encapsuled, and the only trouble in removing it was the care required to avoid injury to vessels and nerves in its neighborhood.

Case II.—February 25, 1884, H. S——, female, aged forty-seven, married. Firm, hard, elastic tumor below lobe of right ear, extends downward for nearly three inches. Very vague history. No pain, skin free, tumor very slightly movable.

February 28th.—Dr. Chin Wo, head assistant, gave chloroform under spray, and, assisted by Dr. Jamieson, I made a vertical incision down posterior line of tumor, extending above and below growth. After freeing superficial attachments found and opened the capsule. With the knife, or a pair of blunt-pointed scissors, freed the tumor by following the line of the capsule. There was no great difficulty in removing the tumor. The case was dressed precisely like the preceding one. During the first week the temperature went up to 100.4°. Drainage-tube was removed on eighth day. A few days after, the patient loosened the dressing to feel if the wound was healed. Dressed with carbolized oil. Lower part of wound healed by granulation, and patient discharged, cured, thirty-four days after the operation. This was a glandular tumor of the parotid region.

Case III.—June 7, 1884. He has a tumor size of a hen's egg in left submaxillary region, extending to median line. With one finger on skin and one in the mouth fluctuation can be felt. The swelling is smooth

and soft, not adherent to the skin; can be moved slightly, up and down only; no pain.

June 8th.—Dr. Chin Wo gave chloroform under spray, and, assisted by Dr. Jamieson, I made a vertical incision over the centre of the tumor, freed it from its superficial coverings, and then proceeded slowly and carefully to detach it from its bed. A few vessels were tied, then cut across; some adhesions slowly torn or teased through, and the tumor was removed without any great difficulty. Lister dressings were applied. The temperature never rose to 100°. Drainage-tube was removed on the fifth day; serum. The next day the patient insisted on going home, as he felt quite well. The tumor was a sebaceous cyst.

Case IV.—June 10, 1884, married lady, aged twenty-two. Noticed a swelling under right ear two years ago. Last year consulted a Chinese doctor who had graduated in England. He advised leaving it alone. Has tried many native physicians; one of them punctured the tumor with a grooved needle and let out some creamy fluid. The tumor extends from mastoid process to beyond angle of jaw, under the sterno-mastoid, and for three inches downward; is smooth, soft, elastic; cannot be clearly felt from within the mouth. Skin free, except where the puncture was made. The limits of the tumor cannot be defined; it goes very deep and is hardly at all movable. The husband presses for an operation, and announces his intention to seek other advice if I decline to operate. I informed the patient and her husband that I would operate and remove the tumor, if possible; that the operation would be attended with danger, and might fail of accomplishing the object for which it was undertaken.

June 14th.—Patient was admitted to a private room, the bowels were attended to, and she had a bath and new clothing.

June 15th.—Beef-tea and bread at 7.30 A.M.; egg and brandy at 9 A.M.; 10 A.M., neck and face scrubbed with soap and water, then with lint dipped in turpentine; no spray, instruments and hands soaked in turpentine. Chloroform given by Dr. Chin Wo, and, assisted by Dr. R. A. Jamieson, I made a very free incision, extending the whole length of the tumor, near its posterior border, from the lower end of the mastoid process along the border of the sterno-mastoid. After a while it was found necessary to make a ⊢-incision forward over the growth. The tumor was kept on the stretch by Dr. Jamieson; he also retracted vessels and nerves when it was possible to do so. With my fingers, a blunt pointed director, and from time to time a pair of blunt-pointed scissors, curved on the flat and directed toward the tumor, I began to work at the posterior margin of the tumor. I followed it back under the sterno-mastoid until the posterior portion was freed. The lower part of the tumor was now exposed and cautiously freed from its attachments; the sheath of the carotid was very freely exposed. Now the upper anterior part of the tumor was attacked; here there were several arteries and veins which had to be tied in two places and divided. The wall of the tumor was thinner; it finally gave away; there was a gush of a thick, clotted, dark, sebaceous substance, and thus an important guide to the extent of the tumor was lost. Keeping the cyst-wall on the stretch, bit by bit, with the blunt-pointed scissors, it was freed from its attachments. I was working at a great depth, and had to stop continually to sponge out the blood, which oozed freely, obscuring the parts. At length the whole growth was removed. Although no bleeding point could be found, a constant oozing came from the walls of the cavity. Some idea of the extent of the dissection can be formed from the fact that Dr. Jamieson and I both felt three of the transverse processes of the cervical vertebræ, which were laid bare, and that the carotid sheath was freely exposed. The sterno-mastoid was not divided, and part of the work was directed as much by the sense of touch as by sight. The bleeding was checked by filling the cavity with pledgets of lint, squeezed dry after soaking in turpentine. These were removed; a large drainage-tube was inserted; the wound sewed up with the continuous chromic gut suture; graduated compresses of Lawton's absorbent cotton in carbolized gauze applied to both sides of the wound—to bring the sides of the cavity into apposition—larger pads filled up the space under the jaw, and still larger pads surrounded the neck, side of head, shoulder, and upper part of chest. The operation was completed, the dressing applied, and the patient put to bed at 11.55 A.M., one hour and fifty-five minutes from the time when the first incision was made. A kind of cap, with four tapes tied to a bandage round the upper part of the chest, was applied to keep the head still. The temperature never rose to 100°, and the patient went home on the fourteenth day with a slight sinus in the track of drainage-tubes. She returned every five days for observation, and on the twenty-fourth day the parts were entirely healed up.

Case V.—December 23, 1884, P. Y——. He has a glandular tumor in left parotid region, extending forward under ramus of lower jaw, about the size of a hen's egg; firm, hard, very slightly movable; chloroform; turpentine as an antiseptic. Assisted by Dr. Jamieson I made a free vertical incision over the tumor, with a ⊢-cut forward below ramus lower jaw, opened the capsule and dissected out the tumor without much difficulty. Almost impossible to keep this patient's head quiet. Although a cap with tapes prevented bending the neck, he could rotate it constantly. Finally, a thin board splint was fastened to his head and shoulders, and the wound put at rest. Discharged, cured, on the fortieth day. The temperature was good all the time, and there was no purulent discharge.

Case VI.—July 17, 1885, Y. S. T——, aged sixty-one, teacher. Periosteal fibro-sarcoma of lower jaw, left side; growing slowly for four years. Tumor firmly adherent to jaw, goes down very deeply in the neck to one and two-third inch of clavicle. Solution bichloride, 1 in 2,000, as antiseptic. Assisted by Dr. Jamieson, Dr. Simons, U.S.N., and Dr. E. M. Griffith, attending physician to the hospital, I made a free elliptical incision, followed by a very careful dissection, tied both ends, and divided the facial artery and vein. The vessels passing over or into tumor were, most of them, so adherent that they had to be tied and then cut across. The attachments to the jaw were separated. After a long and tedious dissection the tumor was freed from its attachments; it was raised from its bed; a slight tear then occurred in a large vein near its junction with the jugular. The wound was filled with solution of bichloride from a sponge which had been kept ready for such an emergency, and the vein was tied in two places and divided between the ligatures. For the first time I heard the hiss of air entering a vein. A drainage-tube was inserted, the wound closed by a continuous suture, and a bichloride and wood-wool dressing applied. The old man kept perfectly quiet; the temperature never rose above 99°, and the wound was entirely healed on the eleventh day after the operation.

Case VII.—October 21, 1885, Mrs. T——, aged twenty-four. Sebaceous tumor under right side of lower jaw, from angle to near symphysis, extending two inches downward. This case was seen at the Margaret Williamson Memorial Hospital for Women, where I have the honor to be the visiting surgeon. Assisted by Dr. Elizabeth Reifsnyder, the Superintendent; by Miss McKechnie, the Superintendent of Nursing; Dr. Philip Leech, U.S.N.; and Dr. Jamieson, I made a very free incision over the surface of the tumor, found its wall adherent in every direction, and spent nearly an hour in slowly picking out the prolongations which ran between the deep fascia of the parts. The very thin wall of the tumor gave way, and the soft, glairy contents ran out. At last all was clear except a vessel which appeared to be the lingual artery. As our cat-gut was used up, I tied

this with carbolized silk, left the ligature long, and removed the sac of the tumor. The wound was dusted with powdered iodoform, and filled in from the bottom with squares of lint full of powdered iodoform. The ligature was left to hang out. Gamgee pads over all. The temperature never rose to 100°, and the patient was discharged, cured, thirty-four days after the operation.

Case VIII.—November 4, 1885. She applied to have a strumous gland, the size of a pigeon's egg, removed from the right side of the neck. An incision was made over and parallel with the anterior border of the sterno-mastoid. On removing the gland three others were found to be diseased, the incision was enlarged, and these were also removed. Wood-wool and bichloride dressing. The temperature continued nearly normal for a while, then rose to 101°, and on the tenth day pus was discharged. After several examinations a small sinus was found, this was dilated, and with a sharp spoon a gland cavity was scraped out. The patient's neck was immovably fastened, and she was discharged, cured, on the thirty-second day after the operation. This patient was treated at her own home, and was more difficult to manage than those who were in the hospital.

Remarks.—Case IV.: The wife of a mandarin, and sister of a mandarin of enormous wealth and influence; presented a tumor which seemed to be about the size of an orange. The tumor proved to be very much larger than could be determined from the most careful examination. It involved very deep-seated parts, part of the brachial plexus was exposed during the operation, and yet the patient made an excellent recovery. Case VI.: Periosteal fibro-sarcoma was so firmly adherent to the surrounding parts that it required great care not to lacerate the structures with which it was in contact. Case VII. presented unusual difficulties. At one time I feared that it would be impossible to remove the whole growth, but by perseverance it was fully detached. In Case VIII. the wound might never have closed if the sinus at its bottom had not been found, after prolonged examination, and the suppurating gland causing the mischief removed. In Case IV. the operation was made longer and more difficult by my determination not to divide the fibres of the sterno-mastoid. Should I meet with such another case, I would not hesitate to divide the muscle in part, and unite its cut ends afterward.

Premising that, as a general rule, malignant tumors had better be left alone, it is well to study the location of a tumor, and plan beforehand how to make the incisions. The incisions should be large enough to give free access to the tumor on all sides, its surface should be clearly made out; then work at it, using a blunt-pointed director and the finger-nails to tear up the adhesions. Blunt-pointed scissors, curved on the flat and directed toward the tumor, are better than the knife. Secure all vessels before cutting them. Many vessels and nerves may be saved by freeing them a little and letting the assistant retract them. A good assistant is all-important. As I assist my colleague, Dr. Jamieson, in all of his operations, and he returns the compliment by assisting me, we have learned to be of great service to one another. Keep the tumor on the stretch, free the lower part, and ascertain the relations of the great vessels to it; compress the internal jugular where there is any danger of injury of that vessel admitting air to the heart. Should any large vein be accidentally severed, fill the cavity of the wound with fluid to prevent entrance of air. In dressing the wound have free drainage, use continuous cat-gut suture, paint line of suture with iodoform and collodion, leaving aperture of drainage-tube free. Use compress of small Gamgee pads on both sides of the line of suture, fill angle of neck with pads, and put on large pads, covering whole neck, shoulder, and upper part of chest, over all. Keep the head immovable by a splint made fast to back and shoulders and to the head. A wooden splint, well padded, will do, but not so well as one of solid leather moulded to the parts. Give the patient nourishing food, and trust no one but yourself with any detail of the after-treatment.

I am happy to acknowledge the valuable assistance and advice rendered to me on many occasions by medical officers of the United States Navy. Fleet Surgeons Bogert and Kershner, Surgeons Streets, Price, Simons, Ferrabee, Scott, Leech, Sayre, and others, have visited the hospital and cheered me with kind words of sympathy. Surgeons from the French, Russian, German, English, Italian, Japanese, and other men-of-war, have visited the hospital and taken a share in our work.

NOTES OF SOME RECENT CASES OF HIP-JOINT DISEASE, INCLUDING TWO CASES OF EXCISION, AND ONE OF BRISEMENT FORCÉ, WITH REMARKS ON SOME OTHERS.

By W. E. WHITEHEAD, M.D.

In the present state of opinion generally, among medical men, concerning the results of the treatment of hip-joint disease, I think that I need make no excuses for reporting the following cases. I am still further strengthened in this course by the encouraging words of an eminent surgeon, and, in my opinion, the highest authority on orthopedic surgery, who, on receiving the photographs from me of one of my two cases of excision herein published, replied to me as follows:

"My dear Doctor Whitehead: Many thanks for your beautiful photographs of exsected hip; they are really magnificent and make me feel happy to think that I have done some good in the world by propagating an idea that is yielding such splendid results. Yet in this city there are those who continue to denounce exsection as unjustifiable. In the face of such a case as this of yours, and some fifty more almost like it, that I can show, how can men be so blind as not to admit the utility, in fact, the necessity, of such an operation? Let us live in hope that the scales may some day fall from their eyes. I congratulate you heartily, and wish you a continued success. Yours truly,

"Lewis A. Sayre."

Case of hip-joint disease of over three years' duration; excision of four and one-eighth inches of bone, followed by [illegible] joint.—The following case, Freddie H——, of Denver, aged eleven, was first seen by me on February 11, 1886, in consultation with Dr. A. Diedrichs, of Denver, who, with the consent of the father of the boy, desired me to treat the case. It was one of advanced hip-joint disease of over three years' duration, dating from a kick from a schoolmate, and the boy had been successively under the care of two or three Denver surgeons of some prominence. His condition at the time of my first visit to him is accurately shown at Fig. 1, considerably reduced from a fine photograph by Rinehart, and engraved by the Mills Engraving Co., of Denver.

There was considerable pain in the hip, and limited movement of the joint. No abscess about the hip was detected at this time, though suspected, and some days later a wire cuirass was ordered for him, with a view to fixation of the joint and extension after tenotomy, and breaking up the adhesions about the joint.

On February 27th I was called to see him, and found an abscess at the upper and front part of the thigh; and on the following day I aspirated, and withdrew a small quantity of pus, and decided on excision of the diseased bone. On March 9th I made a second aspiration, and on March 13th, in the presence of, and assisted by, Drs. A. Diedrichs, H. W. McLauthlin, L. T. Durbin, and

Mr. N. D. Estes, medical student, I did subperiosteal excision of the femur, and removed, after successive cuts before I got to healthy bone, four and one-eighth inches of bone, this being the length of the bone in the dried state; besides, I removed considerable diseased bone, with a bone gouge, from the acetabulum. The periosteal cavity was filled with balsam of Peru, and this cavity and the wound stuffed with oakum, and the wound dressed. After suitably preparing him for extension, I placed him, before he came from under the influence of the ether, in the wire cuirass, previously provided.

Fig. 1.—Before Subperiosteal Excision.

The bone was very soft and easily broken, and extensively diseased. Fig. 2, copied from a photograph of it, shows its exact size, as nearly as possible, and gives a fair idea of its appearance. The treatment in the cuirass lasted about nine weeks, having commenced passive motion about the sixth week, and after the wound was well filled with granulations. He was afterward placed in a Sayre's extension splint, somewhat modified from an old splint which had been ordered for him some months before by one of his surgical attendants, and which he had never been able to wear with any comfort, and consequently without any benefit. I should mention that the attempt to obtain anchylosis, or nature's cures, so called, was made a year or two before I saw him, with partial success, by one of his attendants, if such a thing can be called a success.

Fig. 2.

There was an accident which happened to me in the treatment of this case, and which I should not fail to mention. Desirous one day to make greater flexion of the knee, after its long confinement in the cuirass, than I had heretofore made, and the patient resisting considerably, I broke his tibia, just below the knee-joint, or rather separated the epiphysis. Immediately I applied a plaster-of-Paris bandage to the whole limb, and after three weeks removed it, the leg having sustained no permanent injury whatever from this accident.

The boy wore the extension splint, and I continued weight extension to the limb for a few weeks only after he was removed from the cuirass. He now has less than one inch of shortening, wearing a shoe with a slightly raised sole, and has, I may say, perfect motion of the hip-joint, and can walk for considerable distances without crutch or cane, and is going to school every day. Of

Fig. 3.—Six Months after Operation.

Fig. 4.—Six Months after Operation.

course the limb is still very much smaller and weaker than the other, after three or more years of arrested growth and disuse of it. He is gaining in strength and health constantly, and in time will have as useful a limb as could be desired. Figs. 3, 4, and 5, engraved from photographs of him taken about the first of last October, show his condition at that time, and which is constantly improving. Some weeks ago there was an exceedingly small sinus, very superficially seated under the skin, and rather low down, at the former site of one of the drainage-tubes, but was nearly healed, and of no importance.

Fig. 5.—Six Months after Operation.

Hip-joint disease of less than three months' duration, with abscess and rapid and extensive destruction of bone; at an earlier period mistaken for rheumatism, and hot poultices continuously applied to hip for five days; excision; death on ninth day, from rapid blood-poisoning.—G. M. B——, five and a half years of age, was first seen by me, March 24, 1886. Examination at once revealed the third stage of hip-joint disease, with well-defined abscess, which I aspirated the same day, and from which I drew off five or six ounces of pus. This

case was of less than three months' duration; and, about six weeks or two months before I saw it, was mistaken by a prominent surgeon of Denver for rheumatism, and *hot flaxseed-meal poultices were, by his direct orders, applied continuously to the hip for five days.* I found extension applied to the limb, but not properly applied, and of course the extension gave no relief, and the slightest movement caused severe pain in the hip. The pulse was variable, and from 120 to 160; but the strength was good, and, indeed, there was a surprising degree of vitality and will-power about this child. This encouraged me to hope for success from excision, which having been explained to the parents some days later, or rather the next day, I readily obtained their consent to perform, and at once ordered a wire cuirass to be made for the child by Brittain & Barber, model-makers, two enterprising and skilful mechanics of Denver. The temperature varied considerably. On the day after the aspiration it was 101.4° at 8 P.M. On March 27th, at 6 A.M., the temperature was 103.4, and gradually falling; at 6 A.M., the following morning, it was 98.6° and twelve hours afterward was 103.6°; and the following morning it was only 100°. In the meantime I aspirated a second time.

On March 31st, the wire cuirass being ready, I excised two and one half inches of diseased femur, and also removed some diseased bone from the acetabulum, and adopted the same treatment as in the preceding case.

The patient was etherized by Dr. A. Diedrichs, and I was assisted by Dr. H. A. Lemen, of Denver, and also by Dr. N. D. Estes. The little patient reacted well after the operation, and each day, and sometimes twice a day, the wound was thoroughly cleansed with a sufficiently antiseptic solution of carbolic acid, which so well promotes a serous discharge, and the wound was well dressed with oakum and suitably bandaged to express the forming pus from between the muscles and from the wound.

The temperature on an average was somewhat lower after than before the operation, yet it exhibited the same variable character, up and down, so that on April 3d, at 9 P.M., it was 99.5°, and on April 4th, at 6 A.M., 103°; and then declining was, at 6.30 A.M. on April 5th, 99.8°; and it ranged a little over 100° on the 6th and 7th of April, until 3 P.M. on the 7th, when it was 102.6°. At night, and at 1.30 A.M. on the 8th, and sixteen and a half hours afterw rd, I was hurriedly called to see her, and found the temperature 104.8°, and rapidly rising, and in a few hours she died.

FIG. 6

At Fig. 6 is seen a Kaolatype, copied from a photograph of the piece of bone removed, and it shows how a quickly formed suppuration will, in a very short time, soften and destroy bone. Two-thirds of the head of the femur was destroyed, as may be seen in the figure, and the parts between the intertrochanteric lines, as seen in front, and also behind, are softened and much eroded. I was vigilantly on the alert against fatal blood-poisoning; in fact, the case was one of almost continuous or chronic blood-poisoning from the time I first saw it, and the operation afforded the only chance of life by removing the offending mass of diseased bone. There was no doubt in my mind that the danger of an open-wound antiseptic dressing of these cases was less than to close the wound, however aseptic the wound is made at the time of its closure. The danger of the burrowing of pus beneath and between the muscles is very great, which danger the oakum dressing, when properly applied, removes by absorbing and drawing to the surface, and thus gives a decided advantage to the Sayre dressing over other dressings. Moreover, the distention of the periosteal cavity with oakum, after subperiosteal excision, and until the cavity is sufficiently filled with granulations, is very desirable to preserve the shape of the periosteum while the new bone is forming from it, at the same time that a proper extension is made to prevent shortening as much as possible.

Fibrous anchylosis, following hip-joint disease of three years' duration; tenotomy; brisement forcé; restoration of perfect motion to the joint, with only one and one-eighth inch shortening.—I. B——, aged seven, of Loveland, Col., was placed under my treatment by Dr. Charles Denison, of Denver. The doctor accompanied the boy and his mother to my office, and fully agreed with me in the necessity of making an effort for his relief.

A photograph by Rinehart, of Denver, was taken of him the same day, which was some time last August, and from which an engraving was copied, as seen at Fig. 7, and which gives a faithful representation of his appearance at that time.

The little patient, some three years ago, fell and hurt himself, and soon afterward he complained of his hip, and finally Dr. Charles Ambrook, of Boulder, Col., recognized the complaint as hip-joint disease, and put a belladonna plaster over the hip, and recommended or applied treatment, as I am informed, after the plan suggested by Dr. Joseph C. Hutchinson, of Brooklyn, N. Y., that is, that the boy should use a pair of crutches, and wear a raised sole to his shoe on the well side. When I examined him last August, in the presence of Dr. Denison, we found fibrous anchylosis of the left hip, with very limited motion, and permanent contraction of the adductor muscles about the hip, and of the rectus femoris; also strong contraction of the tendo Achillis. There was about three and a half to four inches of shortening. The boy walked with a crutch, partly bearing his weight on the toes of the left foot. He went home, and returning to Denver last September, on the 18th of that month, after he was etherized by Dr. H. W. McLauthlin, assisted by Drs. Denison and W. H. Davis, I cut subcutaneously the adductor longus, gracilis, and rectus femoris muscles. After carefully closing the little wounds in the skin with successive layers of adhesive plaster, and applying a bandage, I proceeded at once to break up the adhesions about the joint, which being accomplished and free motion of the joint obtained, and without cutting the tendo Achillis, which I cut a week later, I applied plasters and bandages for making extension, and put him in a wire cuirass made for him by Brittain & Barber, of Denver. Ice-bags were packed around the hip, and a small bag of shot applied over the iliac artery, just heavy enough to lessen slightly the circulation in this part. The pressure of the bandage over the point where the rectus femoris was cut gave me a little trouble, and threatened an abscess at this part, but which was averted by the application of an ice-bag and iodine, and by a different arrangement of the

bandage. Passive motion was commenced at the end of two weeks, and but for the inflamed part in the groin alluded to, the motion could have been used more freely. However, perfect motion was obtained, with freedom from all pain; and after he had been in the cuirass for about three weeks he was removed from it, and extension with weight and pulley alone used. Brittain & Barber made for him my modification of the Sayre and Shaffer splints shown at Fig. 10, and which he wears now, more as a support to the limb than as an extension apparatus, of which he is not much in need, as there is no soreness or disease of the joint.

Figs. 8, 9, and 10, engraved from photographs of him five weeks after the operation, show his condition at that time, and a letter received from his mother to-day (November 23d) says he is doing "splendidly." He has one and one-eighth of an inch shortening, and wears on the left shoe a cork sole to correct this; and after he has developed the weak muscles of the formerly disused limb, will be able to walk with ease and comfort.

Fig. 8. Fig. 9. Fig. 10.

Remarks.—I believe that such cases as the above promise the most satisfactory results; but the principles of treatment of hip-joint disease are as necessary and as applicable to these cases as to the worst.

Mr. J. T——, living near Denver, consulted me on the 18th of last May about his son, aged between six and seven years, and who had partial anchylosis of the hip-joint, resulting from previous disease of the joint. The limb was fairly well developed, and offered a fine prospect of success from *brisement forcé*, without tenotomy. The father, being a wealthy German, preferred to take his son to Germany, but with what result I am not able to say.

As illustrating the importance of an early recognition of hip-joint disease, I shall allude to the case of a child, three and a half years old, and son of Mr. F. S——, of Denver, which case, on the 15th of August, 1868, Dr. H. A. Lemen, of Denver, requested me to see with him. He rightly thought the case one of hip-joint disease, affecting the left hip, and our joint examination fully favored this opinion. Yet at the time, the patient being naked and placed on the carpeted floor for examination, I thought I detected more or less rigidity about the right hip, as well as about the left one; and on bringing the right popliteal space down so as to touch the level surface on which the child was placed, the pelvis on that side also tilted upward, and I spoke of this to Dr. Lemen at the time. However, there was no pain about this hip, or any pain that could be referred to the joint on this side. I was somewhat puzzled, but not convinced that there was any disease of *this* joint until later. Dr. Lemen at once turned the case over to me for treatment; and I had the child confined to bed and applied extension to the left limb only, and in the line of the deformity, for two weeks; but finding that I failed to properly prepare the limb for the extension splint ordered for him, I re-examined the muscles about the groin, and discovered that tenotomy was needed. So on the 30th of August, the patient being etherized by Dr. W. H. Davis, of Denver, I cut the rectus femoris and adductor longus muscles, and in two weeks more the limb was ready for the extension splint, which was applied, and which the child continued to wear with comfort and benefit until the right hip showed unmistakable signs of disease. This required the extension splint to be removed, and the child to be put to bed again, and I applied extension to both limbs, and requested Messrs. Brittain & Barber to alter the waist-band of the splint, and to make an extension splint also for the other side. The child has been in bed for some weeks, but his general condition has improved under the use of the extension, and nearly all soreness has left the right hip, as well as the opposite one, so that he is now about ready for the double-extension splint. This case has been troublesome to manage, as it has been difficult to keep the bandages clean, notwithstanding rubber drawers pulled over them, as the child frequently wets himself, and the bandages become offensive from the decomposing urine, and loosen the plaster and excoriate the skin; so that I am compelled often to change them, powder the excoriated surface with iodoform, and resort to such expedients to I can best adopt to keep up a continuous extension on the joints, and rightly applied. But the child sleeps well at night, is free from pain, and only suffers when the extension is off; his appetite is good, and he is advancing satisfactorily.

Although this child has a strumous appearance, yet I believe with Dr. Sayre that the strumous diathesis is made to play too prominent a part as the cause of hip-joint disease; and in this connection, and as explaining the origin of the disease in both hips in this case, I shall briefly relate a part of its history, which I did not know at first: Just before Christmas of 1885 the child, as the mother relates, slipped and fell on a wet, slippery oil-cloth, with both legs stretched widely apart. He complained the next morning of pain in both hips, and continued to be ailing; was better and then worse for some time; he was stiff every morning, and after playing for a while his joints would become more supple, and he would seem all right. For a considerable time the parents did not think the matter serious, but last summer took their child to Dr. Lemen, their family physician, who at once recognized the nature of the complaint.

In this case I mentioned that for two weeks I failed to properly prepare the limb for the extension splint, until I did tenotomy of some of the muscles.

This may happen to the best surgeon.

During last August Dr. Edmund J. A. Rogers, of this city, requested me to see with him a case of hip-joint disease in a little girl, three and a half years of age, the daughter of Mr T. J. M——, of Denver. The case was of eighteen months' standing, and was at first seen by another surgeon, who provided for the child a Taylor's hip-joint splint, and which she was wearing at the time I first saw her. The instrument caused more or less discomfort and pain each time, after being worn a while. An examination of the child showed that the thigh, on the afflicted side, was flexed on the pelvis; and in attempting to straighten the limb the pelvis was tilted upward. The adductor longus and rectus femoris muscles were rigidly contracted, and required tenotomy. On August 21st, Dr. Rogers having etherized the child, I cut the adductor longus, rectus femoris, and tensor vaginæ femoris fascia, and immediately I could straighten the leg without the pelvis tilting upward. The child was put to bed and an extension of three pounds weight applied. Dr. Rogers requested me to take charge of the case, and after ten or fifteen days of extension in bed I had the

old splint of Taylor altered, in conformity with my idea of making extension, as shown at Fig. 10. The child had not rested well at night, and was more or less ailing all the time; but from the time of the tenotomy the extension afforded complete relief, and she slept all night without waking; her appetite improved, and she gained some three pounds, or more, in as many weeks. She has been wearing the altered splint with comfort, and all soreness had left the joint some weeks ago, when I last saw her.

In conclusion, I shall allude to the splint represented at Fig. 10. I wish to claim nothing for this splint except that it is a useful combination of other instruments, and I believe will be found to answer a better purpose than some of those in use. This instrument, made for me by Messrs. Brittain & Barber, of Denver, differs from the Shaffer hip-joint extension splint in not having the weight of the body deflected from its straight course along a bent or bayonet-shaped bar of steel to the sole of the foot, and which causes the bar to bend under the weight, and the foot to tend to turn inward. On the contrary, the force exercised by the weight of the body is decomposed, and transmitted solidly downward by two vertical rods of steel to the small horizontal rod under the sole of the shoe; and around this small rod the shoe turns to permit flexion and extension of the foot. The rest of the instrument is arranged for extension and other motions, like Sayre's short splint for the treatment of hip-joint disease. The Shaffer spiral spring is made strong enough to keep the weight of the body from stretching the adhesive straps, which are designed solely for extension at the hip joint. This spring can be loosened or fastened, and moved up or down for an inch or two, by means of the same key that is used to extend or rotate the limb.

Clinical Department.

INTUBATION OF THE LARYNX FOR DIPHTHERITIC CROUP IN A CHILD NINE MONTHS OLD—RECOVERY.

Dr. Homer O. Bates, Physician to the Children's Department Chicago Policlinic, reports the following case: "On Monday, August 30th, two children were brought to me suffering from diphtheria. The first, Lillian S——, four years old, received a supporting and stimulating in treatment, local applications of the persulphate of iron in glycerine being made to the throat. The case terminated favorably, though for several days the child was very hoarse and could not speak audibly. The second child, Gertie S——, nine months old, had patches of false membrane on the fauces and right tonsil. She was put upon the same course of treatment as her older sister, but on the following day I was telephoned for, as the baby was suffering from frequent attacks of dyspnœa. I found the family living in a brick structure, badly ventilated, and filled with unpleasant odors. I ordered carbolic acid to be used freely in boiling water kept constantly on a stove, and to be sprinkled around the house. The following morning the child was evidently failing rapidly. There was lividity of the face, and the respiration was labored, with recession of the chest-walls at each inspiration. I suggested intubation to the parents, who readily gave their consent. Dr. Frank E. Waxham was called and came immediately, and we assisted him in the introduction of a laryngeal tube of small calibre. There was almost immediate relief; the child had not slept for several hours, but now went to sleep, being awakened at intervals of half to one hour by quite severe attacks of coughing. She was allowed to nurse frequently, only little at a time, as it provoked coughing. In the evening, eight hours after intubation, I found respiration easy, but the temperature was 103⅗° F. in the groin. Antipyrin was given in six-grain doses every six hours by the rectum, and the temperature was reduced to 101⅘° F. in twelve hours. But the little patient was in a critical condition, there being sonorous and sibilant râles and ominous, dry, tubular respiration all over the chest; face livid; pulse irregular, rapid, and feeble; respiration imperfect and sighing; urine scanty.

"There being evidences of diphtheritic bronchitis, a prescription of carb. ammoniæ, gr. j.; potass. acetat., gr. iv.; tr. nucis vomicæ, ♏ j.; syr. ipecac, ♏ x.; in syr. glycyrrhiza, to be taken every two hours. The relief was very pronounced; moist râles were heard in the evening over whole chest, and the next morning the temperature was 101⅘° F. in groin. From this time on the babe improved, though signs of diphtheritic bronchitis continued for some time. The tube was left *in situ* until the morning of the fourth day, and the medicine was gradually withdrawn during a period of twelve days. A strong solution of carbolic acid was kept boiling in the room, and this no doubt had a beneficial effect, and I would most certainly recommend this procedure to be rigorously carried out in all cases of diphtheritic croup."

VACCINATION FROM A SYPHILITIC CHILD WITHOUT SYPHILITIC INFECTION.

Dr. Charles Rosewater, of Omaha, Neb., writes that in reading a note on syphilis from vaccination in a recent issue of The Medical Record he was reminded of a case which Dr. Fürth related last winter in the Policlinic at Vienna, Austria. When he was in charge of the Foundling Hospital there he vaccinated a number of children one day from the arm of a child which at the time was apparently healthy. Several days later the latter broke out with a syphilitic eruption. The children vaccinated from it had already been distributed to various points in the country, but Dr. Fürth feeling the great responsibility resting upon him, took special pains to hunt up each child and keep it under observation for some time. Not one of the children vaccinated from the syphilitic child had syphilis or showed any signs of it during the several months that it was watched. Reasoning from this case Dr. Fürth concluded that vaccination with the pure lymph from a syphilitic child will not produce syphilis, and that it is only when blood has been mixed with the lymph that syphilis is imparted in vaccination.

DISLOCATION OF THE THIRD CERVICAL VERTEBRA WITH DEATH ON THE FIFTEENTH DAY.

Dr. J. J. Best, of Martinsburg, W. Va., sends us the following interesting history under the above caption: "On October 19th W. F——, aged nineteen, fell from the top of an old willow-tree to the ground, a distance of thirty feet. Dr. W. J. Best was summoned, and found him completely paralyzed from his shoulders down—both motion and sensation being lost; the left femur was fractured at the lower third of the shaft. He was perfectly conscious from the moment of his fall to his death—which occurred on the 3d inst. By a gentle pressure of the finger at the third cervical vertebra, his eyes would roll upward and backward into the sockets—breathing became stertorous, and he would lapse into unconsciousness if the pressure was kept up for a moment. All available means failed to excite the lost motion and sensation. His bladder had to be emptied with a catheter, and the intestines evacuated by enemata. Rapid emaciation went on from the onset. His death occurred on the fifteenth day from the time of injury. I was present and conducted the examination, post-mortem, which revealed that the third cervical vertebra was dislocated forward and downward—closely compressing the spinal cord at the lower portion of the bone. The spinous

process of the fourth cervical vertebra was fractured. There were no other serious injuries. Death was clearly the result of the compression of the cord. Had the upper portion of the third cervical vertebra compressed this cord equally as much as the lower, I believe death would have been instantaneous. Union of the fractured femur had begun."

Progress of Medical Science.

Treatment of Uterine Fibromata by Electricity.—At the French Surgical Congress, held in October, Dr. Apostoli read a paper, supplementary to a memoir published two years ago, in which he urged the claims of his method of the electrical treatment of uterine fibromata, as being novel, rational, precise, and easily borne by the patient. The treatment is continued through a period of from three to nine months, the galvano-cauterization of the uterus being repeated at suitable intervals. The author claims to have obtained positive results in at least ninety-five per cent. of the cases treated. The tumors were reduced in many cases to one-half of their former volume, but never entirely disappeared. The hemorrhages were definitely arrested, and the signs of compression were made to disappear, while the patients were greatly improved in their general condition. The cases of unsuccess were all those of fibro-cystic tumors.

An Epidemic of Furuncles.—Dr. Hergott reports a series of observations relating to a little epidemic of boils occurring in the Maternity Hospital at Nancy. Five women were attacked, one after the other, by an eruption of furuncles on the gluteal region. The epidemic was traced to the use of a vessel which had not been properly cleaned, for, as soon as it was thoroughly disinfected, the boils ceased to make their appearance.—*Annales de Gynécologie.*

Circumcision in Diabetes.—One of the most distressing of the minor symptoms in glycosuria is pruritus of the meatus in those whose prepuce covers the glans. The prepuce often becomes parchment-like, and cannot be retracted, and this chronic condition of phimosis renders the itching almost intolerable. Landouzy, a quarter of a century ago, asserted that surgical operations should never be attempted in diabetic patients; and since that time many other authorities have counselled against interference of this nature. Dr. Francon, however, reports, in the *Lyon Médical* of October 24, 1886, some cases of phimosis in patients affected with glycosuria, in which the operation of circumcision was followed by the happiest results. The author concludes that circumcision, performed under strict antiseptic precautions, is indicated in diabetes, whenever the pruritus penis is so pronounced as to cause the patient serious annoyance or distress.

Hemi-Rheumatism, or the One-sided Predominance of Manifestations of Chronic Rheumatism.—Dr. Cazalis draws attention to a feature of chronic rheumatism which he and others, as well as Dr. Demeaux, have frequently observed. His conclusions are as follows (*Bulletin de l'Académie de Médecine*): In more than two-thirds of chronic rheumatics there exists, in some cases during a long period, a tendency to arthritic manifestations, external or internal, predominating on one side of the body; and sometimes this predominance is such that these cases might be called hemi-rheumatics. In these hemi-rheumatics the right side appears the most frequently affected. When pulmonary congestion, or bronchitis of an arthritic nature, shows itself in these patients, these conditions oftener appear on the side in which the rheumatism preponderates. It is on that side is observed that pleuritic friction which M. Collin (de Saint-Honoré) has considered to be an indication of arthritism, and which, with M. Cazalis, corresponds to the friction or crepitation of the joints in dry arthritis. As hemi-rheumatism is oftener observed on the right side, one understands why M. Collin at once localized his pleuritic friction on the right side. On the side on which rheumatism predominates, is also more frequently observed that other and more constant sign of chronic rheumatism—some time ago recognized and described by M. Verneuil and M. Potain—the deformity and projection of the great toe. If, in simple chronic rheumatism, hemi-rheumatism appears oftener to affect the right side, hemichorea and hysteria, on the contrary, which to many practitioners of the present day seem to be transformations of arthritism from one generation to another, more frequently affect the left side. Now, if hemicrania is added to these arthritic attributes, a singular tendency to hemilaterality will be recognized in all these arthritic modifications. These facts seem to support the still uncertain theory, but which is becoming more and more in favor, that the central nervous system greatly influences the localization of these chronic rheumatic manifestations.

An Epidemic of Paronychia.—Dr. Audry reports, in the *Lyon Médical* of October 24, 1886, an epidemic of "runround" affecting the pupils in a school of which he was the medical inspector. The first case occurred in a girl nine and a half years of age, who had a panaris on the tip of the middle-finger, about the nail. The trouble lasted about two months, and seemed to have affected the child's general health, as she became pale and anæmic. Following this case, twelve of the other children, in addition to the teacher, had superficial paronychia, affecting in every instance the fingers of the right hand. The index was the finger most commonly attacked, but one child had panaris of two fingers, and in the case of the teacher the thumb and four fingers of the right hand were affected one after the other. Examination of the purulent fluid from the runrounds showed the presence of a few staphylococci and numerous streptococci. From a study of these cases the author concludes that runround is a contagious affection, and may occur as an epidemic in cases in which large numbers of children are together in one place, as in a school. He advises that children with paronychia be forbidden to come to school while the affection lasts, or, if allowed to attend, that they be kept isolated as well as possible from their mates, the finger being covered with a light antiseptic dressing.

A Case of Bacteriuria.—The following curious case is reported by Drs. Schottelius and Reinhold in the *Centralblatt fur Klinische Medicin*, No. 37, 1886. A man, aged forty-five years, was admitted to the hospital, suffering from dropsy following mitral disease. There was also tolerably well-marked albuminuria. The œdema disappeared after rest in bed without medication, and the albumen disappeared from the urine. But further examination of that fluid revealed the presence of large numbers of bacilli. They were found in the freshly-voided acid urine, even after it had been passed two or three times through the filter, and gave to this fluid a peculiar glistening cloudiness which did not disappear on warming, or the addition of nitric acid. On the other hand, the cloudiness was not increased to any appreciable extent by boiling, and the subsequent addition of nitric acid. There were no signs pointing to disease of the kidneys, bladder, or urethra, and repeated examinations of the blood failed to reveal the presence of any micro-organisms in this fluid. Microscopical examination of the urine showed every drop to be filled with countless numbers of bacilli. These were about five times as long as they were broad, and there were also longer rods, which were sometimes joined to form long threads, showing, however, by transverse markings, the points of union of the individual rods. Culture experiments in the urine itself gave negative results, as the fluid seemed to be already saturated with the bacilli, and to be unable to supply nutriment to any greater number. In bouillon and various vegetable infusions, however, the bacilli grew with great rapidity. In culture fluids, at the

end of about three days, the rods broke down into spores of slightly oval shape and of comparatively small size; but in the urine no spores were found. Inoculation experiments upon animals gave negative results. The patient is still in hospital under treatment for his cardiac trouble, and the writers express the hope that a post-mortem examination will serve to throw some light on the nature of this puzzling case.

Diagnostic Value of the White Streak in Scarlatina.—This phenomenon, which can be produced by rubbing a soft body upon the skin which is affected with the scarlatinal eruption, is considered an important diagnostic sign of scarlatina. When, in the normal condition, one draws a line upon the skin with a smooth surface, as the rounded extremity of a pencil, and uses moderate pressure, there may be observed at the points touched a white line which lasts for some time. This paleness is due to the moderate excitation of the vaso-motor nerves, and the contraction of the smaller vessels which follows it. If the pressure has been very strong, in place of a white line a red line bordered by two white ones is produced. The excitation in this case has paralyzed, temporarily, the small vessels instead of contracting them, while in the area which is contiguous, where the pressure has been less strong, the excitation has only led to constriction of the vessels. In certain diseases the effects which are obtained by this procedure vary greatly. Trousseau, for example, has shown that in patients suffering from meningitis, a red line is produced by pressure with the greatest ease, and this has been called the meningitic line. It may also be produced in all the diseases which lead to perturbation of function in the nervous system. Thus, it may be produced in many cases of typhoid fever, in erysipelas, variola, rubeola, and the diphtheritic eruptions. But it is not the same in appearance in scarlatina during the entire period of the eruption. In place of getting the red meningitic line, a pale, rather persistent line is produced, which extends plainly to the bottom of the eruption. This fact was long ago noticed by Bouchut, and was considered a valuable sign as a means of diagnosis, both in children and adults. It is not equally prominent and distinct at all periods of the eruption, Velpeau having observed that it is not produced when the efflorescence of scarlatina is at its highest degree of development. In the diphtheritic eruption which resembles that of scarlatina accompanied by angina, the excitation of the skin produces a red line, and not the white one of scarlatina. This sign is especially valuable in those cases of measles in which the eruption closely resembles that of scarlatina. The same is true in variola, in which other differential signs are often absent. It must be borne in mind that the important feature in making this test is that the white line appears upon the surface which is covered by the eruption.—*L'Union Médicale du Canada.*

The Treatment of Whitlow and Sprains.—Dr. John Chiene writes as follows on the treatment of whitlows and sprains: In deep-seated digital inflammations over the first and second phalanges, the cause is either an inflammation of the flexor sheath or periosteal in origin. In inflammations over the anterior aspect of the terminal phalanx, the cause is periosteal, and the worst that can happen is necrosis of the terminal phalanx. In all cases make your incision early, central, and in the long axis of the finger. Relieve tension, and prevent spread of the inflammation from the flexor sheath on the finger to the common flexor sheath on the anterior aspect of the wrist. In periosteal cases early incisions prevent necrosis of the affected phalanx. Whitlows are infective conditions, and are due to a colony of micrococci. The periosteal whitlows are cases of acute suppurative periostitis. The infective character of these conditions must not mislead the surgeon into supposing that careful antiseptic precautions are unnecessary. Sepsis and infection are perfectly distinct conditions. Relieve the tension, and the evil effects of the pathogenic micrococci will soon subside; prevent sepsis, caused by the entrance of septic organisms from the external air, and rapid healing will be the result. In patients who are liable to whitlows, as in people who suffer from boils and carbuncles, administer corrosive sublimate internally; it is a most powerful anti-fermentative. In sprains, carefully applied elastic pressure, with wadding, combined with massage and passive movement, gives the best results. In diagnosticating an injury look before you touch a limb. Remember the normal relations of the styloid processes in diagnosticating injuries in the region of the wrist; the relation of the head of the radius to the external condyle of the humerus in the elbow-joint; and let the coracoid process and its relation to the head of the humerus be the principal guiding landmark in injuries of the region of the shoulder. Always expose the uninjured corresponding region, examine it in the first instance, and let it be your standard (having satisfied yourself that it is normal) in diagnosticating the injury on the opposite side.—*Edinburgh Medical Journal.*

Rheumatismal Thyroiditis.—Dr. Carrié relates the following case, in the *Journal de Médicine de Paris*, of October 17, 1886. He was called to see a woman, forty years old, a domestic, who had fever, vague muscular pains, headache, and a sore throat which rendered deglutition exceedingly painful. The woman was robust and had always enjoyed excellent health. There was no submaxillary swelling, the tongue was covered with a white fur, and there was no appetite. The pharynx was uniformly red, the tonsils were hardly at all swollen, and were free from any membrane, the uvula was slightly œdematous. An emetic and a cathartic were prescribed. The following morning there was little fever, swallowing was less painful, but the fauces were very red, the color being of a deeper hue around the pillars. Frequent hot emollient gargles were ordered, with a Dover's powder at night. The trouble subsided in a few days. Eleven days later the woman again applied for relief, saying that she had pain in the neck, and she believed also that there was a little swelling there. This swelling increased and was found to be located in the thyroid gland, which was very tender on pressure. Movements of deglutition were very painful, the distress not being in the throat but seated lower down, and motions of the head also caused severe pain, so that the patient had the appearance of a person suffering from torticollis. Belladonna ointment was applied externally, and one drachm of salicylate of sodium was administered. Dr. Carrié regarding the case as of a rheumatic nature. The following day there was very little pain. The salicylate was repeated in the same dose, and the next day there was no pain, and the swelling had almost entirely disappeared. A week later the patient had an effusion into the knee-joint, which disappeared under treatment by salicylate of sodium and sulphur baths.

Puerperal Tetanus.—Dr. W. Netzel related the following case at a meeting of the Swedish Medical Association (*Hygiea*). A primipara, twenty-five years old, was sent to the obstetrical clinic thirty-six hours after labor pains had begun. The fœtus was dead and was strongly engaged in the pelvis. The os was only slightly dilated and very rigid. The fœtus was extracted after perforation of the head, and the uterine cavity was then washed out with a three per cent. solution of carbolic acid. At the end of four days the body temperature began to rise, and the discharges acquired a foul odor. On the eighth day there appeared trismus and rigidity of the neck, and then followed opisthotonos and tetanic convulsions, and the patient died in two days. The autopsy showed a rupture of the cervix, the tear extending so as to involve the peritoneum. There was parenchymatous degeneration of most of the internal organs. The brain, spinal cord, and meninges were markedly hyperæmic. The author regarded the tetanus as symptomatic of a general infection received by the patient during the first stage of labor.

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COUNTRY DOCTORS AND HARD THINKING.

THE writer who recently characterized the country physician as a man who could do little and could think less, has evidently barked up the wrong tree. We are so constantly receiving, from all parts of the country, just protests against his idea, that we are willing to take a side in the argument.

Statisticians have not yet proved that brains are indigenous to any particular region. In fact, transportation being just as cheap for a full, as an empty, head, there is no embargo on the freest possible distribution of the commodity over the country. Surroundings, too, have a great deal to do toward developing wit and mental power. In olden times the favorite simile for progress was the best foot forward. Now it is the best head forward. We have reason to believe that heads are pretty evenly distributed over the country. At least they have been bobbing up quite promiscuously and plentifully over the general fields of medical literature, and make as good a showing in one locality as in another.

The quality of grain can speak for itself if left to itself. It is not the question where you come from so much as what you are. The seed always produces its kind, and generally the hardier the soil the sweeter the fruit.

Emergencies and surroundings are everything to bring out the qualities of mind or body. Nothing quickens a man's perceptions more certainly, or develops more surely his inner practical resources, than the consciousness that he has to think with his own brain and act with his own hand. Thinking, and hard thinking at that, becomes a habit with such men, and the working out of their own salvation is an acknowledged necessity.

When any writer presumptuously says that a country doctor never does any hard thinking, he has evidently never met even the average representative of that class. We modestly venture this assertion because we have seen the country doctor under all circumstances; have oftentimes worked with him in his own fields of practice; have been in communication with him in many other ways, and we believe we know the man.

All other things being equal, the only difference between the metropolitan and rural practitioner is in the surroundings. The former is in a position to have plenty of help and very many, if need be, to think for him; the latter is generally alone in an emergency and has to do his own thinking. The country doctor's mental guy-ropes are his own experience and that of the marshalled authorities in his library; the metropolitan practitioner can, if he chooses, fasten the different tendrils of his web to the door-posts of all the experts and specialists in his neighborhood. Counsel in the city is the rule, in the country it is the exception.

The country doctor is expected to be ready for anything, and he generally is. Besides being a student he is expected to be thoroughly practical in all his methods. He has not, it is true, all the modern appliances at his command. One old-fashioned speculum may do all the business of two or three generations, occupying large and small compartments alike, common to young, middle aged, and old, changing in office from the grandmother to the granddaughter, and yet the average of cures for leucorrhœa, abrasions of the os or cancer of the cervix, may even equal those obtained in the Woman's Hospital.

The same might be said for other departments of his practice. He cannot pick his instruments from hundreds in the hospital closet, cannot have skilled assistants at every turn, and antiseptic solutions everywhere, nor has he skilled attendants to watch for temperature rises, secondary hemorrhages and the like. His fracture cases are generally miles from his office with no friendly assistance at hand to loosen the damaging grip of an unyielding bandage.

It goes without the saying that the country doctor must of necessity learn to help himself, and if he cannot do it with his brains he certainly cannot with his hands. The instrument is one thing and the brains behind it is another, and, alas! very often we may say *vice versa*. The hard, square thinking generally strikes the balance the right way.

During his solitary drives he must do the mental sorting of his cases and place each in its own category. And here is where the thinking must come in, and where seeming difficulties must smooth themselves to the common-sense level of practical experience.

It is within the experience of many a country doctor that between miles of drive he may meet, single-handed, every variety of disease in any of the different departments of practice. At one end of the road may be a breech presentation, at the other a herniotomy. His ear must as perfectly recognize the crackling râle of an ominous pneumonia, and the husky sibilance of an urgent croup, as the grating crepitus of a fractured bone, or the clicking ring of sound and stone. To string these varied experiences into consistent practical work, requires something more than shallow reasoning or careless guesswork. And yet we are fain to believe that this is the ordinary business of the general practitioner in the country. It is this training, forced upon him by circumstances, which must necessarily make him a reasoning and practical man. He is to our mind the beau-ideal of a general practitioner, forced to be ready for everything, and afraid of nothing. The whole body belongs to him, and he does his best with each part. Every subject connected with its diseases must necessarily interest him. He is, *per force*, a reader, a thinker, and a doer. His very habits make him the best judge of the practical work of others, as he must weigh the evidence in favor of new methods before he dares assume the responsibility of their

trial, as he alone will be accountable for evil results. It does not matter how much of the lung is involved in inflammation, the patient's friends watch for the fever to be reduced. Nor do they care to know the character of a urinary cast so long as proper diuresis is induced. The cause of a diarrhœa is of no interest to the patient if the discharges are not stopped. The man with retention of urine may never have heard of the prostate gland, but he wants to urinate. The good woman with the momentary expectancy of maternity does not care for the presentation, so long as she can get the baby in good time.

In all his cases he is brought face to face with his patients. He must treat all their diseases, and with reasonable success. To do this must require some intellectual effort. If we judge only by the results, we are free to make comparisons. Certainly his statistics do not perceptibly weigh down the mortuary record.

We are tempted to take sides with the country doctor because, unfortunately for him, he does often enough assert his claims. When the latter is the case he generally writes something worth reading, and founds his observations on what he has seen, what he knows, and what he has thought out for himself.

PNEUMOTOMY

We predict that there will yet come a time when we shall have pneumotomies and pneumotomists in surgery, just as we now have ovariotomists and ovariotomies. Already pneumotomy has made much headway, and has encountered far less opposition than did laparotomy. Since the lungs are the most frequently diseased of all organs, the surgical opportunities which they invite may develop almost indefinitely.

A successful pneumotomy, recently performed at the Hôpital Trousseau, by MM. Prengrueber and de Beurmann, illustrates so clearly what the operation is capable of doing, as well as its comparative simplicity, that we venture to give an account of it.

A child of twelve years entered the hospital with a history of having been ill for four years. Six months before admission it had been suddenly taken with fever, pain in the right side, and vomiting of blood. It improved for a time, then relapsed, and on admission to the hospital was found to have a good-sized cavity in the lung. The child's expectoration was very fetid, and a gangrenous process was diagnosticated. No tuberculosis was present, judged by the absence of bacilli from the sputa; and it was supposed that the gangrene and excavation had been caused by the breaking down of a bronchopneumonic process or of a suppurating interlobar pleurisy.

A U-shaped incision was made in a line with, and below, the lower angle of the scapula and the tissues cut through to the bone, a circular wound ten centimetres in diameter being made, at the bottom of which lay the fifth and sixth ribs. The periosteum was incised in a longitudinal direction, and very carefully dissected off the rib. About two inches of each rib was then removed.

A fenestrum had now been made in the thoracic wall, of which the vertical walls measured seven to eight centimetres, the horizontal five centimetres. At the bottom of the wound the lung could be seen bound firmly to the wall by adhesions of the visceral and parietal pleura. The lung was now penetrated by a thermo-cautery moderately heated. After it had reached a depth of three centimetres it entered the cavity, as was evidenced by the exit of fetid gas and secretions. The opening was enlarged so that a finger could be passed into the cavity. It was left to drain itself without any washing or disinfection. The operation lasted only three-quarters of an hour, and there was no loss of blood; air passed freely in and out of the thoracic wound. The expectoration became gradually less fetid and smaller in amount, and by the fourth day the communication of the cavity with the bronchi had closed. The cavity was then for the first time systematically washed out, and began to heal up. At the end of three weeks the healing was not complete, nor had the fetor entirely disappeared, but the general condition of the patient was excellent and showed plainly the efficacy of the operation.

RECENT STUDIES OF TUMORS OF THE MESENTERY

It is a well-established fact in pathology that new-growths of any kind rarely develop primarily in connection with serous membranes. It might be expected, perhaps, that the mesentery, if any place, would develop such growths, since it is the seat of such a constant ebb and flow of fluids surcharged with the products of gastro-intestinal activity. Yet very little attention has been paid to the study of the matter, and it is only in late years, when the frequency of laparotomy has made an investigation of the condition of the mesentery more common, that definite contributions to the neoplastic history of this tissue have been made. According to the *Gazette des Hôpitaux*, M. Péan has reported some cases of primary and secondary tumors of the mesentery in his work on the "Diagnose et Traitement des Tumeurs de l'Abdomen." Dr. Terrillon has also published a very detailed account of lipomas of the mesentery in the *Archives de Médecine* for April, 1886. We are, however, indebted to Dr. Victor Augagneur, of Lyons, for a thorough study of the whole subject, based upon the histories of eighty cases. Dr. Augagneur finds that the tumors of the mesentery may be classed as follows: Lymphangiomas, cysts, lipomas, fibromas, sarcomas, carcinomas, "embryomas," and ganglionic tumors of dyscrasic origin (tubercular, syphilitic, leukæmic, etc.). The rarest class of tumors is the lymphangioma, of which only two cases have been reported.

On the other hand, the most frequent of mesenteric tumors are the cysts. These constitute a third of the whole number, and are hydatid, serous, or bloody in character, the latter being produced generally by traumatism. The lipomas are rarely pure in type, but are mixed with some other anatomical elements, the myxolipoma being most frequent.

It is doubtful whether fibromas are ever really found in the mesentery. One case alone has been reported, by Péan, and some uncertainty as to the true nature of this is expressed.

Malignant growths very rarely, if ever, attack the mesentery primarily. Those which are oftenest found in it are sarcomas and lymphomas.

The question whether a mesenteric tumor can be diag-

nosticated is discussed by M. Augagneur at length, and he comes to the conclusion that their existence may be determined when an intra-abdominal tumor is present which unites the three following symptoms: Situation in the median line, great mobility, a tympanitic zone anterior to and below the tumor. If the general condition permits the exclusion of malignant tumors, the diagnosis will probably lie between a lipoma and a cyst. The diagnosis between these two can be determined by fluctuation and exploratory puncture. For the cysts the best treatment is capillary puncture, or if this is impossible, laparotomy, with drainage or ablation.

The lipomas are rapidly growing tumors, and need surgical interference early. In most of the cases death has followed in three years.

THE OPERATION FOR THE RADICAL CURE OF OTORRHŒA.

SINCE the foundation of a more correct system of aural pathology, due mainly to the labors of Toynbee, treatment of diseases of the ear has rested upon a much more secure basis, although, as in all departments of medicine, a great deal of unnecessarily meddlesome, not to say injurious, treatment still prevails. Indeed, the acquirement of a knowledge of the special anatomy and pathology of the ear, together with dexterity in the examination of the fundus of the organ, requisite to accuracy in diagnosis as well as to successful treatment, is attended with difficulties scarcely exceeded in any other branch of surgery, and comparatively but few have cared to devote their time to research in a field apparently so limited.

Many of our colleagues can remember when the resources of aural surgery were almost confined to indiscriminate syringing and the introduction of caustic and astringent medicaments, and we feel sure that no one will regret that in the more irremediable cases of chronic purulency of the middle ear, a successful surgical treatment, promising a radical cure, is likely to take the place of protracted and temporizing methods. This advance has been largely due to the operative procedures undertaken for the relief of deafness and tinnitus resulting from chronic catarrhal and chronic purulent inflammation of the middle ear, notably by Kessel and Schwartze; they have shown that extirpation of portions, or of nearly the entire transmitting mechanism, was sometimes succeeded by the disappearance of purulency. In Professor Schwartze's recent work on the surgical diseases of the ear (1885), he states that in removing the "otherwise incurable obstructions in the transmitting mechanism of the tympanum," where great deafness and tinnitus existed, the middle ear may be more successfully treated. Schwartze cites three examples of chronic purulent inflammation of the middle ear in which he operated, and he states that, according to Kessel, excision of the malleus may cure purulent discharge as well as remove distressing tinnitus and improve the hearing-power "in cases of large defects of the drum-head, with caries of the handle of the malleus, when the discharge had been considered incurable."

Since Schwartze's operations were, however, seemingly undertaken where much of the membrana vibrans remained, and probably with a desire to relieve the patient of tinnitus and deafness mainly in view, his success in curing the otorrhœa was not marked; Schwartze's operations, however, were seemingly undertaken where a large portion of the drum-head remained, with a view mainly to relieve deafness and tinnitus, and as the removal of the incus is not mentioned, it was probably allowed to remain. The incidental relief or cure of otorrhœa in his cases was not marked, and, moreover, the drum-head was generally reproduced. The operation now practised in this country by Dr. Sexton is for the cure of otorrhœa alone, and is exceptionally recommended where, from the presence of a portion of the drum-head, and a connection between the incus and stapes, any considerable hearing power remains. Dr. Sexton regards it as exceedingly important to remove the incus—not the least difficult part of the operation. Professor Schwartze removed the malleus by casting a snare over its handle, a procedure found to be difficult when bleeding was free; besides, it is alleged that the handle of the malleus is liable to be broken off by this method. The difficulties having been overcome by experience and the use of suitable instruments for the removal of diseased structures, we cannot see why, if a cure can be speedily effected by an operation so safe in skilful hands, excision of the ossicles may not take its place in aural surgery. In the cases usually selected for operation a morbid fringe of drum-head along the superior margin of the tympanic ring alone remains; the diseased malleus and incus, usually displaced, are found stowed away as useless rubbish in the attic of the tympanum, while more or less necrotic tissue is retained in both the attic and antrum, giving rise to a chronic discharge which resists ordinary treatment.

INFLAMMABLE BREATH.

THE note of Dr. F. E. Quimby, in THE MEDICAL RECORD of November 27, 1886, concerning the case of a man who, as he was blowing out a match, had an eructation from the stomach of gas, which ignited and burned his face, has called forth a number of communications from correspondents referring to reports of similar cases.

A gentleman of this city writes that Lauder Brunton, in his work on "Disorders of Digestion," quotes a case reported by C. Anton Ewald. The patient was surprised to find inflammable gas issuing from the mouth. Ewald collected the gas and analyzed it, finding it composed largely of marsh gas, though it was by no means identical in composition and physical characters with this gas. The source of the gas is chemical change in the food and mucus occurring in the intestinal tract in some forms of imperfect digestion, whence it passes through the open pyloric and cardiac orifices of the stomach.

Dr. F. C. Clark, of Stillwater, Minn., suggests that the gas was similar in composition to that which escapes from the rectum, and which, as is well known, is inflammable. The phenomena is due to the presence, in small quantities, of hydrogen sulphide, which is produced by the decomposition of organic matters containing sulphur.

Dr. F. C. Shattuck, of Boston, mentions Ewald's case, and also one related by Senator, in which large quantities of sulphuretted hydrogen were belched from the stomach. Lauder Brunton gives the details of these cases in an article published in *The Practitioner*, for 1880, vol. ii., p.

267. According to the *Medical Times and Gazette*, for 1878, Ewald's case was the third that had been reported up to that date.

Dr. William Graham, of Brussels, Canada, refers to the reports of a number of cases of this nature. One case is related by Dr. Beatson, in the *British Medical Journal* of February 13, 1886. The patient had been troubled with eructations having a very disagreeable odor, and one night when blowing out a match, his breath caught fire, with a crack like the report of a pistol, which was so loud as to awaken his wife. Dr. Scott Orr reports, in the same journal, under date of February 27th, a similar case occurring in a man seventy years of age. The patient had been troubled for two years with dyspeptic symptoms, and had eructations of gas which had such an offensive odor as to make him miserable when in anyone's company. One evening, while he was lighting his pipe, one of those involuntary eructations took place, and the gas became ignited, burning his mustache and lips, and frightening him greatly. The gas went off with a "puff," such as occurs when a match is applied to a pinch of gunpowder. The same thing has happened to the patient five or six times. Waldenburg, in 1864, published a case of dyspepsia, in which there were eructations of gas which was inflammable, and exploded with a bluish flame. In a paper by Schultze (*Berliner Klinische Wochenschrift*, 1874), it is stated that Professor Friedreich, of Heidelberg, had a patient who belched up inflammable gases.

The writer refers also to the case related by Ewald in his work on indigestion. The analysis of the expired gas was as follows: Carbonic acid, 20.57; hydrogen, 20.57; carburetted hydrogen, 10.75; oxygen, 6.72; nitrogen, 41.38; sulphuretted hydrogen, trace.

"The explanation as given by Drs. Beatson and Saunby is no doubt the correct one. The gas probably arises from the food remaining too long in the stomach, as in cases of dilatation, undergoing decomposition and generating gases such as carburetted hydrogen and free hydrogen, both of which are inflammable . . . Professor Müller (*Deutsche Medicinische Wochenschrift*), who has investigated the formation of gases, ascribes their generation in the stomach and intestines to the action of certain forms of bacteria upon the carbo-hydrates of the food.

"For the relief of this condition Ewald advises lavage of the stomach after Kussmaul's method. Heynsius says that chlorinated water gives more relief than anything else. Waldenburg obtained the best results from half-ounce doses of glycerine three times a day. Saunby suggests that these patients should take small quantities of solid food, without vegetables, every two or three hours."

THE ORGANIZATION OF QUACKERY.

A SHORT time ago we published a statement to the effect that a summons had been issued for a national convention of quacks. Whether such a convention has convened or not, it is quite true that the advertising quacks of this country are organized for mutual support to an extent that is not generally known. Perhaps the following letter, which we have recently received from a trustworthy physician practising in this city, will best show one phase of this matter. He writes:

"I have recently been treating a young man who is such an extraordinary illustration of the harm which quackery can do that his case may interest your readers. He is a strongly-built, robust-looking young fellow, a mechanic by trade. Up to the age of eighteen he had masturbated to a considerable extent, but had never observed any ill effects or known that the practice was harmful. He accidentally came across one of the pamphlets that are distributed through the city by a down-town quack. In this all the evils possible to imagine from sexual excess were portrayed. The young fellow was frightened literally out of his wits. He went to this quack, who took all his money, and promised to cure him, but did not. After saving up more money he successively went to two other quacks, who treated him in the same way, with the same result. His main trouble now is a mental one, a hypochondriacal depression, of which I am trying to rid him; but a serious drawback has been his mail. Two or three times a week he gets letters, or circulars, or pamphlets from all kinds of quacks, quack agencies, instrument-makers, and patent medicine men. Each has some new method of curing his trouble, and some new way of hinting at the frightful consequences if not cured. He has thus been kept in a constant ferment. He tells me that one thinks his name was not put on a list, and I think it very likely the case."

Nothing in any phase of human life is more painful and revolting than such unblushing efforts to work upon the misery and misfortune of mankind. Medicine, when thus prostituted, is truly the vilest of all the trades devised by man; for it creates sickness, misery, and uncleanliness in order to fatten upon it.

The unfortunate feature of it nowadays is that it is being reduced to a system, has its organs, its institutes, and organizations for mutual benefit.

THE ALKALOIDS OF HYOSCYAMUS AND THEIR THERAPEUTICAL PROPERTIES.

THE most diverse reports have been made with regard both to the dosage and effects of the alkaloids of hyoscyamus. Judging from the contributions to English and American journals there are at least four different substances which have been used under the names of those alkaloids. These are the crystalline hyoscyamine, commercial amorphous hyoscyamine, Merck's amorphous hyoscyamine, and hyoscine.

According to statements made in a discussion on this subject at a recent meeting of the Neurological Society, the amorphous hyoscyamine of Merck is practically identical with hyoscine. Physicians should prescribe, therefore, the crystalline hyoscyamine when they desire the effect of this alkaloid, and the amorphous hyoscyamine, or hyoscine, when they desire that of the other; for it seems that the two drugs are not identical in their physiological or therapeutical properties, and that it is only the latter (*i.e.*, amorphous hyoscyamine, or hyoscine) which has pronounced hypnotic properties. With regard to hyoscine, Dr. J. Mitchell Bruce has recently reported his experience with it as a cerebral sedative (*The Practitioner*). The hydrobromate is the

salt used, since it is soluble in water. After referring to the researches of Professor Wood he reports ten cases of his own, which shows, he thinks, that hyoscine is a powerful cerebral sedative, relieving mania, delirium, and insomnia. The disadvantages of the drug are that its effects are temporary, and that it sometimes produces great shallowness and weakness of respiration, or even Cheyne-Stokes rhythm. Dr. Bruce has, however, heard of no fatal result from its use. He found the best working dose to be only gr. $\frac{1}{200}$ hypodermatically, or gr. $\frac{1}{100}$ by the mouth, which is less than the dose ordinarily used in this country. Hyoscine does not cause dryness of the throat, nor does it relieve night-sweats.

Dr. S. G. Webber, of Boston (*Boston Medical and Surgical Journal*) has been using hyoscine as a hypnotic with fair success; he gives it internally in doses of gr. $\frac{1}{100}$ to gr. $\frac{1}{60}$.

There seems to be little doubt that it is the amorphous hyoscyamine of Merck, or the hyoscine, which contains the sedative properties of hyoscyamus. It has not been satisfactorily ascertained which alkaloid possesses the more anti-spasmodic properties, though excellent results have been reported from their use in paralysis agitans, chorea, and other convulsive troubles.

WHO FIRST USED COCAINE IN CIRCUMCISION?

We have received several communications from various parts of the country, the writers of which dispute the claim made by Dr. Kingsley to priority in the use of cocaine as an anæsthetic in circumcision.

Dr. E. W. Smith, of Meriden, Conn., writes that the first of a series of circumcisions in which he used cocaine was performed on January 3, 1885. The patient, thirty-five years of age, presented himself for treatment for phymosis and venereal warts. Five or six injections of a four per cent. solution were made in the prepuce, and, with the patient for an assistant, the operation was performed in the usual manner. Dr. Smith makes no claim himself to priority, but thinks that Dr. Kingsley's claim should not pass unchallenged.

Dr. F. S. White, Assistant Physician to the North Texas Insane Asylum, Terrell, Tex., closes a note on this subject as follows: "Now, without any details, I wish to state that I performed circumcision under cocaine on Mr. S——, Decatur, Tex., on June 15, 1884. The usual indications were present, and the usual results were obtained, viz., complete union in six days."

Finally, Dr. Albert H. Cordier, of Windom, Kan., informs us that in December, 1884, he received from Dr. W. W. Murphy, at that time connected with the New York Eye and Ear Infirmary, a drachm of the four per cent. solution of the hydrochlorate of cocaine. On January 7, 1885, a man came to his office to be circumcised. He injected ten or fifteen drops of the solution in the prepuce, along the line of the proposed incision. At the expiration of a few minutes the operation was performed, the patient experiencing not the least pain, but acting as an amused and greatly interested assistant. This case was reported at the meeting of the Kansas State Medical Society, in May, 1885. "So far," writes Dr. Cordier, "my case is the first recorded one, coming to my knowledge, in the United States, and I believe my operation of circumcision under cocaine was the first one performed in America."

Dr. C. E. Bruce, of this city, reported, at some length, a case of circumcision under cocaine, in The Medical Record of October 31, 1885, and many other cases were reported about the same time in various journals in this country and abroad.

In the date given by Dr. White, June 15, 1884, there is evidently an error, and he probably meant to write 1885; for the letter of Dr. Noyes to The Medical Record, in which was announced the discovery of the local anæsthetic properties of cocaine, was written under date of September 19, 1884, and was published on October 11th, of the same year.

It would therefore seem that to Dr. E. W. Smith, although he does not claim it, belongs the credit of having first used the drug in this operation, although Dr. Cordier, having reported his case in May, 1885, is clearly entitled to the claim of priority in this application of cocaine, at least until some one brings evidence of having recorded an instance of its use at a still earlier date.

But, with all respect to our correspondents, we cannot see that a claim of priority in this matter is of any special value. Cocaine was used for minor operations on other tissues than those of the eye, almost immediately after the announcement of its discovery. No one would attribute much importance to a claim of priority in the use of ether in circumcision, when the anæsthetic had already been used hundreds of times in other operations, and the case of cocaine seems to be a parallel one.

THE PREVALENCE AND DISTRIBUTION OF SKIN DISEASES IN AMERICA.

The Statistical Committee of the American Dermatological Association is in the habit of issuing each year a report of the number and character of the skin diseases in several of the principal cities of this country. The tables furnished throw an interesting light upon the cutaneous aberrations of certain sections. Thus among nearly 15,000 cases of skin disease reported, New York furnished 5,692; Boston, 4,401; Chicago, 2,546; Philadelphia, 1,354; Baltimore, 673; and St. Louis none at all. A study of these figures will show that as the star of empire takes its westward way it twinkles upon a diminishing number of reported cases of skin disease; and it in particular shines upon Chicago, triumphant over St. Louis by twenty-five hundred to nothing.

The tables furnish some instructive information as to the comparative frequency of the different cutaneous disorders.

This is shown as follows:

Eczema, 4,370 cases, or over one-fourth of all; syphiloderma, 1,723; acne, 1,026; scabies, 724; tinea, 647; psoriasis, 535; pediculosis, 515; pruritus, 356; impetigo, 335; alopecia, 300; urticaria, 286; exanthemata, 197; dermatitis venenata, 166; verruca, 163; seborrhœa, 156; comedo, 145; herpes zoster, 141.

A study of the prevalent skin disorders indicates that there is here a wide field for preventive medicine. For example, there are over a thousand cases of parasitic affections, and nearly twice as many diseases of syphilitic origin, so that it is particularly apparent that a conti-

nent life and the free use of soap would most materially restrict the beneficent labors of the dermatologist. Skin diseases, however, appear to be increasing, despite the growth of sanitary science. We are particularly struck with the fact that Boston has presented, for two years, the largest number of cases of alopecia. This is directly in harmony with observations taken from another point of view, and confirms the opinion that Boston is still more than holding its own as the intellectual centre of the continent.

The significance of the large preponderance of cases of scabies in Boston is less apparent. Two-thirds of all the cases last year were credited to that city, and we can only hint that this increase has been coincident with the development of the mind-cure and the preliminary arrangements for the Harvard Centennial.

New York reports the largest number of almost all forms of disorders of the sweat apparatus, and also of disorders of a hyperæmic and exudative type; while to Philadelphia is given the distinction of reporting the only case of anidrosis.

RECEPTION TO PROFESSOR ASHHURST.

Mr. William H. S. Wood, of New York, well known to the medical profession everywhere as the head of the publishing house of William Wood & Co., gave a reception, on Wednesday evening, December 5th, to Professor John Ashhurst, Jr. A large number of the leading medical men of the city were present, together with many eminent representatives of the profession from elsewhere, to pay their respects to the distinguished author and teacher.

The number of gentlemen who availed themselves of the invitation thus to meet Dr. Ashhurst must be very gratifying to our *confrère* from Philadelphia, evincing the high esteem which his erudition and surgical skill has won for him in the hearts of his professional brethren. It is not often that so many prominent medical men from widely distant localities are gathered together on such pleasant social occasions.

M. Pasteur, who is exhausted by the incessant labors of the last few years, has left for Bordighera, where a villa has been placed at his disposal. He has stated that the subscriptions to the proposed Pasteur Institute now amount to nearly one million eight hundred thousand francs, and contributions still flow in, though more slowly. This sum was inadequate, not that the buildings will cost much, but that funds were required to fit up the laboratories, and to maintain a staff of medical assistants and attendants. At least eighty or a hundred thousand francs a year will have to be guaranteed, and he calculated that a sum of between three million and four million francs would have to be collected. M. Pasteur felt confident that this sum would be forthcoming.

New York Polyclinic.—Dr. R. C. M. Page has been elected to the Professorship of Diseases of the Chest and General Medicine in the Polyclinic. The appointment fills the chair made vacant by the resignation of Dr. Leaming, who, as Professor Emeritus, still remains as President of the Faculty.

News of the Week.

The State Board of Charities held a special meeting on December 10th for the purpose of considering its annual report. This showed a slight increase in the pauper and reformatory classes, and a large increase in the number of insane, the various asylums of the State having 13,533 insane persons in their custody and care on October 1, 1886, as against 12,707 on October 1, 1885. The asylums for the insane throughout the State are generally crowded, and there is urgent need for further accommodation for this class.

Freire and the Yellow Fever Inoculations.—To those who have jumped so eagerly to the support of Dr. Freire's claims as a yellow fever preventer, we commend a perusal of the following, written to *Science* by a correspondent in Brazil. He says: "Considerable interest has been manifested among medical men in the proposed American Commission to study Dr. Freire's yellow fever investigations and method of inoculation. The work of Dr. Freire seems to have awakened a more lively interest abroad than here. The official support that he received as President of the Board of Health, has been withdrawn since his retirement from that post, on account of his commendable, though perhaps not always judicious, efforts to suppress the powerful industry of manufactured wines, while the general attitude of the medical profession is that of extreme reserve. While he has a number of very fervent followers, a number of prominent physicians have vigorously combated his conclusions. As few, if any, of his critics are practised microscopists, he has been able to meet their scientific arguments quite successfully, but has been less fortunate in the defence of his statistics regarding the immunity of inoculated persons. Like all Brazilian statistics, these are too loosely drawn to inspire confidence. A large proportion of the inoculated has been among the shifting population, whose subsequent history can only be followed with difficulty; and Freire is accused of not admitting that the disease is yellow fever, in the case of the death of an inoculated person, no matter what the opinion of the attending physician may be."

Dr. Henry Slack, of Fishkill, N. Y., died last week in his fifty-sixth year. He graduated at Albany Medical College in 1852.

The Successor of the Late Dr. John P. Gray.—The Board of Managers of the Utica Asylum have appointed Dr. G. Adler Blumer Superintendent, to succeed the late Dr. Gray. Dr. Blumer is an Englishman, but graduated in medicine seven years ago at the University of Pennsylvania. We trust that Dr. Blumer will now secure a competent pathologist for the Asylum, and that some scientific work of recognizable value will result. If we mistake not, no asylum in the country is so nicely equipped with laboratory facilities, or so abundantly supplied with funds for their use.

Alexander Krapotkin, a Russian biologist, physicist, and astronomer, who was banished to Siberia in 1874, has recently shot himself in Tomsk.

The Epidemic of Cholera which has been prevalent in the north of Italy during this year has offered the occasion for a study of the disease, which has been made by Drs. Tizzoni and Cattani, of Bologna, the results of whose researches are contained in a recent number of the *Centralblatt für Med. Wissensch.* It is interesting to find that Koch's researches are confirmed and extended.

A Medical Election.—By a recent amendment of its medical laws, English practitioners have received the right to elect a certain number of direct representatives to the General Medical Councils—this council having previously been made up of representatives of the teaching bodies. Considerable excitement has attended the first election. The results, so far as known, give the election to Mr. Wheelhouse, Sir Walter Foster, and Dr. Glover for England, Dr. Bruce for Scotland, and Dr. Kidel for Ireland.

Drumine, a New Australian Local Anæsthetic. has been discovered and described by Dr. John Reid (*Australian Medical Gazette*, October, 1886). Drumine is the alkaloid from *Euphorbia Drummondii*, and is an almost tasteless substance soluble in chloroform and water, and producing local anæsthesia of mucous membranes in a way similar to cocaine.

A Case of Actinomycosis in a Woman is reported as observed at Springfield, Ill. The disease affected the jaw.

Merlatti, the Faster, had, at last accounts, fasted for fifty days. He has been under strict surveillance, and has, it is said, taken only filtered water. He has lost twenty-two pounds of flesh. The daily excretion of urea has fallen to eight grammes. The heart beats sixty-six times per minute, and sphygmographic tracings show low arterial tension. There is a reduplication of the second sound.

An Association of General Practitioners has been formed in England to advance the interests, support the rights, and promote the welfare of the general practitioner; and especially, also, to obtain for him a voice in the management of his own affairs upon the various legislative councils of the profession. It must be inferred that the British Medical Association doesn't look after the general practitioner as it ought.

Palpatometry as a Means of Diagnosis.—A Russian physician, Dr. V. V. Filipopovitch, has recently published a pamphlet containing some observations on the advantage of ascertaining the degree of tenderness over particular areas by means of an instrument corresponding to Eulenberg's baræsthesiometer; it may be compared to a vertical spring letter-weight, the plate of which is replaced by an extremity having the desired form. The term used is "palpatometry;" the highest pressure, by variously shaped extremities, which could be borne without pain, was tested. This was found, by trial on a number of healthy subjects, to vary from fifteen hundred to two thousand grammes, when the instrument with the knob was used. The work of M. Peter is referred to, as also Dr. Burney Yeo's lectures on "Pain in the Region of the Heart and Palpitation" (which have been translated into Russian), and several diagrams and charts are given of heart and other diseases, where the mapping out of the surface, according to iso-æsthesic, or, rather, iso-analgesic, areas, indicates with great exactness the course of the disease, whether favorable or otherwise. The author has observed that, in typhoid fever, the spleen undergoes a marked and sudden increase of sensitiveness within the forty-eight hours immediately preceding defervescence. This was quite appreciable to ordinary manual palpation, and, during an epidemic of typhoid, he was able to predict pretty accurately the occurrence of defervescence. He points out the value of more exact means of estimating tenderness in affections where peritonitis is feared.—*British Medical Journal*

The Nomenclature of New Drugs.—The *British Medical Journal* has the following sensible comments upon this subject: "A tendency has recently become evident to name new drugs, especially those of chemical origin, rather in accordance with their supposed therapeutic effect than with their chemical constitution. The names antipyrin, antifebrin, and hypnone are examples of a practice which cannot but lead to much confusion. If a drug which lowers the temperature in fever is to be called antifever, then we shall have others known as pain-killers, or diarrhœa-producers. Further, a drug, originally introduced as a local anæsthetic—aconite, for example—may subsequently be applied to totally different uses. Such a practice, moreover, by stamping a drug with the mark of one description of physiological action, would tend to divert the attention from other and possibly not less important attributes. It would be going back to the *mistura tussis* or the *bolus purgans* of our ancestors."

The Prediction that the Pneumatic Cabinet would soon be made use of by quacks, seems likely to be fulfilled. We have received a copy of a daily paper, published in a large city in Western Pennsylvania, in which an owner of the pneumatic cabinet devotes two columns to parading its virtues, and announces that he will soon publish a pamphlet in which the people can learn all of its beneficent capabilities

Cocaine vs. Chloroform in Whooping Cough.—In the *Journal of the American Medical Association* for October 9th, Dr. A. Y. P. Garnett, of Washington, says: "In order to procure it in a form sufficiently volatile to be readily vaporized, I selected chloroform as the solvent. A six per cent. solution of muriate of cocaine in chloroform was prepared, and ten minims poured in a wine-glass, made warm by tepid water, was placed under the patient's mouth, while the mother was instructed to keep the nostrils closed. . . . It was found by this means many of the paroxysms were arrested or materially cut short," etc. Dr. T. J. Tyner, of San Antonio, writes to the *Journal* of December 4th: "In reading the paper, the thought at once occurred to me that the relief was derived from the chloroform, the vapors of which passed off, leaving the cocaine. At my request Mr. James Kennedy, Ph.G., investigated the matter, and handed me the following as the result: 'Cocaine hydrochlorate does not volatilize at the temperature of the water-bath, nor does it rise with the vapor of its chloroformic solution. A six per cent. solution of cocaine in chloroform, evaporated to dryness on water-bath, yielded as a residue the entire quantity of the salt.'"

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, December 3, 1886.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. JAMES B. HUNTER read a paper (see p. 673) on

FEEDING AFTER SURGICAL OPERATIONS.

DR. R. F. WEIR said, with regard to the nausea and intense thirst after etherization, that he had resorted to all the measures mentioned by Dr. Hunter, and had to add to the list of remedies only one, which he had used with very satisfactory results during the last five or six years—namely, hot water, as hot as it can be swallowed, in small quantities; it will very often allay the thirst and nausea.

He had been impressed by the omission of two points—one doubtless non-intentional, and the other might be intentional. The first was the use of peptonized milk, which had given him good results, particularly when resorted to among the earlier articles employed. The second was the use, in patients in whom neither stomach nor the rectum would retain either food or stimulants, of hypodermic injections of stimulants. Dr. Weir did not believe that the injection, hypodermically, of twenty minims or more of whiskey, and repeated until the patient received two or three drachms, produced very much benefit. At all events, when the rectum would bear them, he preferred to give stimulants by rectal injection.

In cases in which all the means mentioned by Dr. Hunter had failed, and still the stomach remained irritable after an operation, he had been in the habit of using some preparation of opium to allay the irritability.

DR. A. B. BALL thought that it was extremely important to administer food, under the conditions named, and in similar cases, in very small quantities, even by the teaspoonful.

With regard to abstinence from food, he agreed with Dr. Hunter entirely, and believed that it could be abstained from for one or two days, or even longer, without any unpleasant effects in very many cases.

DR. E. G. LORING thought that the tendency had been to give too much food during the nausea following anæsthesia, and he was also very much in favor of giving what was administered in small quantities.

With regard to the use of opium, he had kept patients under its influence, with almost complete abstinence from food, for one or two days, with the most satisfactory results.

As to the administration of stimulants, he had been in the habit of giving them hot instead of cold, and he believed that this method was particularly beneficial.

DR. SHRADY believed that absolute rest for the stomach was the first to be considered in the treatment of nausea after operations. He fully indorsed the other recommendations of Dr. Hunter. In connection with the nourishment of patients, he referred to a novel practice which was first brought to his attention by Dr. J. M. Cleveland, the Medical Superintendent of the Hudson River State Asylum at Poughkeepsie. Dr. Cleveland had shown him several insane patients upon whom had been tried, with good results, an hypodermitic injection of cod-liver oil, to the amount of an ounce at a time.

METHOD OF ADMINISTERING ETHER TO AVOID ITS PROFOUNDLY DEPRESSING EFFECTS.

DR. SEXTON remarked that it had seemed to him the depressing effects of ether might be avoided by beginning anæsthetization with nitrous oxide.

DR. HUNTER thought the only advantage in that method was that it was more agreeable to the patient. According to his experience, the depressing effect was not modified, and the nausea following had not been diminished.

DR. SEXTON had given the nitrous oxide for the purpose of obtaining its stimulating effect, which would increase the safety of the administration of ether.

DR. WEIR could corroborate Dr. Hunter's statement with reference to the after-effects of ether when preceded by nitrous oxide.

DR. SHRADY believed that ether produced its best effects when inhaled gradually at the beginning of anæsthetization, and he thought that the patients vomited less frequently afterward when it was given in this way.

DR. LORING had operated once while the patient was under the influence of nitrous oxide, and he was so much alarmed concerning the cyanosis that he had not tried it since.

DR. SEXTON said that he had been obliged to discontinue the use of nitrous oxide in operations on the ear, because the least motion on the part of the patient made their performance exceedingly difficult. He thought that no fear need be entertained with regard to its producing injurious effects on the general system.

DR. LORING had been best pleased with the administration of ether from an open sponge, without cone or towel, given slowly and with plenty of air.

DR. WEIR'S method was to give an hypodermic injection of morphia with a small quantity of atropia, and then to have the patient take a dozen or so full, deep inspirations just before beginning with the ether. When used in this way the ether could be removed earlier, and a less quantity was required. He thought, however, that the method did not diminish the vomiting.

The PRESIDENT thought that it rather increased it.

DR. SPENCER, present by invitation, remarked that the occurrence of nausea had been diminished by the use of Clover's inhaler at the Woman's Hospital, and that the patients could be anæsthetized quicker and came out of the anæsthesia more promptly than when the ether had been given by other methods. The rule was to give as little food as possible and only in small quantities after etherizing a patient, and, as a rule, vomiting did not occur. If it did occur, not much effect was produced by whatever was given to control it. One of the surgeons relied upon the administration of drugs and food by the rectum after operations, and he did not have so much annoyance from flatulence as when these substances were given by the mouth.

DR. HUNTER, in closing the discussion, said that he had intended to mention peptonized milk as one of the articles of food to be used.

He thought that it was a very bad method to administer ether *gradually*, as the struggles of the patient were liable to be increased, and as much ether was consumed in quieting these as frequently was required for the entire operation when given rapidly. He regarded the administration of morphine at the same time as dangerous. He had seen one case in which, after the administration of an hypodermic injection according to the routine method, after an operation, the patient passed into fatal coma.

DR. SHRADY said that he was very sorry to hear Dr. Hunter make the remark he had concerning the gradual administration of ether, for his experience had been entirely opposed to the method of overwhelming the patient at once with the anæsthetic.

DR. HUNTER said that for several years he did not give ether without considerable air, as he used the Allis inhaler. But recently he had been using Clover's inhaler with more satisfactory results, and it admitted scarcely any air.

DR. C. L. DANA then opened the discussion on

THE THERAPEUTIC EFFECTS OF STROPHANTHUS.

Strophanthus hispidus is a plant found in Central Africa, where it is employed by the natives as an arrow-poison. Its chemical character and pharmacological ac-

tion have been studied by Professor Thomas R. Fraser, of Edinburgh, who reported his first results in 1869, again in 1872 and 1885. Several French observers have also made contributions to its chemistry. Professor Fraser, however, has the credit (*British Medical Journal*, November 14, 1885) of showing that strophanthus has a pretty definite therapeutical action. He found strophanthus to be a powerful stimulant to the heart-muscle, slowing its beat and increasing the strength of its systole. In poisonous doses it stopped the frog's heart in systole, and caused early cadaveric rigidity. It does not seem to have much effect upon the blood-vessels.

It differs from digitalis, then, in stimulating the heart-action without acting on the blood-vessels. It reduces the pulse, slightly lowers the temperature, increases the flow of urine; is not hæmostatic, is not cumulative, and rarely causes gastro-intestinal troubles. Its active principle is a glucoside, strophanthin. This exists in large amount in all parts of the plant—six to eight per cent. It represents all the therapeutic properties of the plant.

Professor Fraser reports six cases of cardiac disease, all mitral lesions, double or single, in which the drug was signally useful.

Dr. Dana had used strophanthus in five cases, as follows:

Case I.—Male, forty-seven years of age. Symptoms: Anasarca, dyspnœa, slight pulmonary œdema, double mitral and direct aortic murmurs, action irregular and tumultuous. Diagnosis: Valvular disease of heart, double mitral murmur, and aortic stenosis. Treatment: June 21st to July 20th, under infus. digital., acet. pot., glonoin; daily amount of urine, 36 to 58 ounces, average 45 ounces. July 21st and 22d, added fl. ext. scoparius; urine, 62 to 68 ounces. July 23d and 24th, gave only scoparius; urine, 60 ounces. July 24th to 27th, added apocyn. cannabin.; urine, 60 to 47 ounces. There was no material change up to July 27th. July 27th, tr. strophanthus, three minims, t.i.d., till August 5th; urine, 96 ounces, gradually falling to 40 ounces, average 60 ounces. Three days after strophanthus begun, the œdema was nearly gone, patient more comfortable, dyspnœa less. August 5th to 12th, strophanthus stopped, and glonoin, digitalis, potas. resumed; urine, 48 to 36 ounces, average 40 ounces. August 12th, strophanthus, four minims, t.i.d., increased to eight minims, t.i.d., continued till August 24th; urine, 30 to 20 ounces, finally to 40 ounces. August 16th, under seven minims, t.i.d., patient has little œdema, and is quite comfortable, appetite good. August 25th to 29th, scoparius, digital., glonoin; urine, 32 to 24 ounces. August 30th to September 1st, apocynum. can.; urine, 30 ounces. Some improvement. September 1st to 3d, potas. iodide; urine, 48 to 96 ounces. Patient died while straining at stool.

Remarks.—Tr. strophanthus relieved the œdema and dyspnœa, and improved the general condition for a time, after four other drugs had been tried and failed, but patient finally died. It was a bad case. The urine was not especially affected by the drug.

Case II.—Louis V——, fifty-six years of age. Symptoms: Anasarca, dyspnœa, palpitations, præcordial pain, cyanotic, hydrothorax. Diagnosis: Mitral insufficiency and dilatation, no Bright's. Treatment: July 10th to 15th, digital., pot. acetat., apocynum; urine, 26 to 50 ounces, average 54 ounces; pulse, 88; respiration, 23. July 15th to August 8th, strophanthus, three minims, t.i.d.; urine, 72 to 104 ounces, average 60 ounces. July 31st, great improvement. August 31st, discharged cured.

Remarks.—Tr. strophanthus caused great improvement; pulse lowered, with increased œdema gone.

Case III.—Louis P——, sixteen years of age. Symptoms: Intense anæmia, dyspnœa, slight general anasarca, heart-action very tumultuous; pulse, 105; respiration, 66; urine, twenty-five per cent. albumen, hyaline casts. Diagnosis: Bright's disease, anæmia, weak heart, but no organic disease. Treatment: August 16th to 23d, glonoin, apocyn., digit., and strophanthus, venesection; urine, 30 to 184 to 92 ounces. August 23d to 28th, strophan. stopped; urine, 150 ounces. August 28th to September 15th, no diuretics; urine, 40 ounces. Better. September 15th, strophanthus, three minims, t.i.d.; urine rose from 40 to 52 to 76, 70 to 66 to 68 ounces. Improving.

Remarks.—In this case strophanthus was used to steady the heart and test the diuretic action of the drug. It did have some diuretic action. The improved condition of the heart cannot be referred to the strophanthus alone.

Case IV.—Anna S——, fifty-nine years of age. Symptoms: Stupid, cyanotic, œdema of legs; urine, forty-three per cent. albumen. Diagnosis: Bright's disease. Treatment: August 11th to 22d, inf. scoparius, nitroglycerin, strophanthus; urine, 34 to 60 to 37 to 62 to 43 ounces. No improvement.

Remarks.—The drug did no good. It was given mainly to test its diuretic power. The case was a bad one.

Case V.—Martha E. S——, fifty years of age. Symptoms: Anasarca, dyspnœa; respiration, 32; pulse, 90. Diagnosis: Mitral regurgitant. Treatment: August 15th to 21st, strophanthus, three minims, t.i.d.; urine, 30 to 28 to 27 ounces. Improved; heart more regular. August 21st to 28th, added glonoin; urine, 22 to 27 ounces. Improved.

Remarks.—Under the strophanthus the patient improved, but not in any striking way.

Concluding note.—In the two cases of Bright's with accompanying cardiac irregularity and weakness no benefit, or no striking benefit, was observed. In the three cardiac cases progressive improvement occurred while the drug was being administered. In two cases marked improvement occurred after the strophanthus was administered, while previously no special improvement was observed, three cardiac tonics having been previously tried in one case, two in the other.

Dr. E. G. Loring regarded the discovery of the elective action of drugs as one of the most beautiful advancements of modern physiology and therapeutics. Atropia dilates the pupil, eserine does exactly the opposite, and the effect of both these drugs is upon one muscle only. It may be that strophanthus affects the cardiac muscle and has no other action. He had been able to produce dilatation of the pupil with $\frac{1}{1000000}$ of a grain of atropia.

Dr. A. A. Smith said that strophanthus had been used in his wards in Bellevue Hospital in several cases. In two cases of pulmonary œdema it was administered with astonishing results. The first was a case of mitral systolic and double aortic lesion, and pulmonary œdema developed after unusual exertion. Five minims of the tincture were given every fourth hour, and the patient recovered. True, the patient was dry-cupped, but Dr. Smith had but little faith in this as a means of affording relief in these cases, and the patient was also kept in the semi-recumbent position. He doubted the existence of an elective action in strophanthus.

The second was a case of pulmonary œdema occurring with pneumonia, and the drug, in two doses of four minims each, given hypodermically at an interval of two hours, permanently relieved the patient.

It had also been used in emphysema with good effect, and in one case of heart-stroke, without much elevation of temperature, but pale surface and feeble heart, with most excellent results.

Dr. Beverley Robinson presented a patient; also the histories of several cases that had been treated in St. Luke's Hospital by the administration of strophanthus. The notes had been furnished him by the house physician, Dr. Geo. K. Swinburne.

Case I. "*Irritable heart*" (*weak heart*); *cardiac dilatation; dyspepsia.*—H. W——, fifty-four years of age, native of Ireland, and family history negative, was admitted August 14, 1886. In 1864 he had an attack of "palpitation of the heart and dyspepsia," while a soldier,

which was accompanied by marked dyspnœa, headache, and severe pain in both shoulders, but particularly the left. He had a similar attack seven or eight years ago, and another four years ago. During the last six months has occasionally had pain in the epigastric region, with marked palpitation and dyspnœa. Three weeks before admission these symptoms were developed by errors in diet. When he entered the hospital he was cyanotic, his tongue was coated, appetite poor, pulse feeble, 108; respiration, 24; temperature, 98.6° F. Urine, 1.018, acid, and contained neither albumen nor sugar, but amorphous urates. No true apex-beat of the heart could be felt, but below the fifth intercostal space, inside of the mammary line, was a distinct pulsation synchronous with cardiac systole. There was a rasping murmur with the first sound, transmitted downward over the pulsating area, upward over the aortic area and into the neck, and to the left into the axillæ. The liver and spleen were enlarged, and there was moderate bronchitis. From August 15th to 31st the patient took digitalis and caffein, and the quantity of urine passed daily varied from 38 to 160 ounces, the last amount being obtained the third day after admission. August 31st it was 42 ounces. From September 1st to 28th he took convallaria, and the quantity of urine fluctuated between 66 and 32 ounces. From September 29th to October 2d he took digitalis again, and the quantity of urine varied from 20 to 32 ounces. From October 3d to November 4th he took *strophanthus*, five minims, t.i.d., and the quantity of urine passed varied from 30 to 79 ounces; average, 43. From November 5th to December 2d the patient was treated by *lavage*, with special reference to his dyspepsia, having previously received ingluvin and other stomachic remedies. The quantity of urine passed ranged between 32 and 68 ounces; average, 43. The patient's *pulse*, from August 15th to 31st, ranged from 84 to 150, 188 to 204. From August 31st to September 9th the pulse was moderately slow and regular (under convallaria). From September 9th to October 2d the pulse ranged from 90 to 222, being above 150 considerable of the time. At times its rapidity was reduced by the use of galvanism and the application of the cautery to the præcordial region. From October 3d to November 3d pulsation could be felt over præcordial region. Pulse ranged from 102 to 78, 72, 108 to 192. From November 5th to 30th it ranged between 96 and 108 (under *lavage*).

Case II. *Mitral regurgitation, hypertrophy and dilatation, chronic diffuse nephritis.*—J. S. W——, male, forty years of age, English, and a tobacconist, was admitted August 25, 1886. Notes by Dr. Swinburne. Dr. Dench, house physician. Both parents died of dropsy. Patient has drank alcoholics to excess; has had gonorrhœa, pleurisy, typhoid fever, and rheumatism, and has suffered more or less from dyspnœa and palpitation. A few months ago his feet and ankles began to swell and he began to lose flesh. On admission his urine contained albumen and granular casts. There was a loud systolic murmur over the apex and over the præcordia, with evidence of enlargement of the heart. There was enlargement of the liver and spleen.

This patient received digitalis, convallaria, and caffein, with more or less temporary benefit. On October 1st he passed only 5 ounces of urine, and strophanthus was prescribed, five drops, t.i.d., and within twenty-four hours the quantity was increased to 53 ounces. Pulse weak, irregular, 108. During the next twenty-four hours he passed 72 ounces of urine. Pulse 108, and dicrotic. Patient improved and was up on October 28th. On October 30th thoracentesis was performed, but only fourteen ounces of fluid were withdrawn. From this date forward the patient took caffein, glonoin, acetate of potash, etc., and died November 20th.

While the patient was taking digitalis and acetate of potash the quantity of urine passed in twenty-four hours varied from 42 to 52 ounces; when taking convallaria the quantity ranged between 52 and 36 ounces; and while strophanthus was administered the quantity varied from 72 to 32.

Case III. *Mitral regurgitation and cardiac dilatation.*—John H. B——, forty years of age, United States, was admitted October 6, 1886. Chronic alcoholism; pulse 144, very weak. Injection of strophanthus added strength to the pulse and lessened its frequency. Urine contained casts and albumen.

From October 8th to 18th the patient took strophanthus, and the daily quantity of urine varied from 26 to 32 ounces. The quantity remained substantially the same while taking convallaria, caffein, digitalis, etc.

Case IV. *Chronic myocarditis; mitral stenosis.*—H. W. L——, male, thirty-one years of age, was admitted November 5, 1886. Father died of heart disease. Patient has never had rheumatism; uses alcohol freely, has suffered from dyspeptic symptoms, dizziness, dyspnœa, and pain in præcordia. Heart feeble, and radial pulse irregular and scarcely perceptible. Apex beat in the fifth intercostal space and four inches from the median line. Lungs emphysematous; systolic murmur over apex.

While taking strophanthus the daily quantity of urine varied from 94 to 64 ounces; and while taking digitalis it ranged from 42 to 86 ounces.

Case V. *Mitral [illegible] dilatation.*—T. N——, male, thirty-six years of age, was admitted November 5, 1886. Patient had rheumatism ten years ago, and diphtheria six years ago. His father had rheumatism.

While taking strophanthus the daily quantity of urine varied from 40 to 28 ounces; and under digitalis from 32 to 54 ounces.

Other cases to the number of *twelve* were added, and included one of weak heart after pneumonia, one of athletic heart possibly (?), one of excessive frequency of cardiac action, one of mitral regurgitation without dropsy or effusion into cavities, one of mitral regurgitation and œdema of hands and legs, and two others of mitral and aortic disease combined.

The results obtained in all these cases, it was believed, supported the belief that even in the same case the mere change from one cardiac tonic to another will increase the quantity of urine for a day or two, or more; and that, although the previous one had appeared to have some remarkable degree of efficiency. The most important fact to know in any given case was the symptoms which pointed to the stage of the disease.

Dr. Robinson further remarked that he regarded the case of Williamson (the first), who was presented, as a very good illustration of what Da Costa described several years ago as a weak or irritable heart. Then the question arises, Is a weak, irritable heart due to deficiency of muscular power, or has the pneumogastric nerve lost its proper physiological action? He regarded the present case as one in which the nerve had lost its proper physiological action, and he also believed that it was not known to what extent digitalis affected the nerves that control the heart. Inasmuch as in this particular instance strophanthus had affected the heart favorably, it remained to be considered whether the good effect was due to its action upon the cardiac muscle or upon the pneumogastric nerve, and he believed that it was due to the tonic influence of the drug upon the latter.

Dr. A. B. Ball remarked that cases of extreme rapidity of the pulse were very apt to be due to defective nerve-supply of the heart. He did not believe that a cardiac muscle which was enlarged to carry out a certain degree of compensation was ever a truly strong heart; it was always more or less weakened in its muscular tissue.

Dr. C. L. Dana remarked that the man presented by Dr. Robinson was about the age of the patients in whom Semmola diagnosticated what he called bulbar ataxy, due to degeneration of the nuclei in the bulb that supplies the nerve-force for the heart. The peculiar blueness of the ends of the fingers on both hands, at times with slight

œdema of the legs, he regarded as almost pathognomonic.

He further said that he wished to speak of strophanthus simply as a drug that would probably meet indications which were not met by other cardiac tonics, and that only in certain cases it would be beneficial.

The Society then went into executive session.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 10, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DOUBLE OVARIAN FIBROID.

DR. H. MARION SIMS presented a specimen, removed from a patient aged forty-eight, the mother of two children, the youngest being sixteen years old. She had always enjoyed excellent health up to five years ago, when she began to have severe pains in the right side of the abdomen, dragging pain in the back, with violent bearing down, and inability to either stand or walk without suffering. The severity of the pains increased to such an extent that she consulted a physician, who put her on a general tonic plan of treatment, which was continued for two or three years without special improvement. Two years ago she noticed a lump of considerable size in the right side of the abdomen, which grew steadily, though slowly, and the pain increased in severity until finally the patient was bedridden, and in that condition she was brought to Dr. Sims last June. She had change of life four years ago. The tumor occupied the right side of the pelvic cavity, pressed the uterus firmly against the sacrum, and extended half-way across the abdomen. It was readily removed, there were but few adhesions, and the patient made a rapid recovery, without the development of an unfavorable symptom. She was discharged cured at the end of four weeks, and had remained very well. The operation was performed more for the relief of the reflex symptoms than for the mere removal of the tumor.

DR. J. S. THATCHER presented

A HEART THAT HAD TWO ANEURISMS,

both communicating with the left ventricle at the apex, and both apparently being between the two layers of the pericardial sac, the pericardium having been previously adherent, and the cavities having been formed by the pressure of the blood from the ventricle. The two openings between the ventricle and the aneurismal sacs were about the size of an ordinary match, and their edges were smooth and made up entirely of fibrous tissue. They had evidently existed for a considerable time before death. The muscular tissue around the holes was very much thinned, and in their immediate neighborhood had disappeared entirely. The largest aneurismal cavity was nearly filled with laminated fibrin; the smallest contained fluid blood. The largest sac was about the size of two fists, the smallest of one fist. The patient was a woman fifty years of age, who gave the history of eight abortions, without other evidence of syphilis, and the history of an attack of rheumatism two years before death. About one week before death she had a severe pain in her left leg, and was unable to use the limb. Otherwise she had been able to be about, and had been fairly comfortable. She died, apparently of heart failure, and death was not sudden.

The coronary arteries exhibited only slight change. There was marked atheroma at the beginning of the aorta, and probably atheroma of the finer branches of the coronary arteries.

DR. L. EMMETT HOLT presented the specimens from a case of

SINGLE KIDNEY.

They were taken from the body of a male child, aged ten months, who died of dysentery at the New York Infant Asylum. The symptoms were acute, and the temperature high; during life the urine contained a small amount of albumen, but no casts were found. No malformation existed in the bladder, testicles, nor anywhere in the body, except in the kidneys. The right was much enlarged, weight one ounce and six drachms. It extended from the eleventh rib to the promontory of the sacrum. It was lighter than normal in color, and on section showed to the naked eye quite indistinct markings. The left kidney was represented by a body about the size of a pigeon's egg, which was composed of one larger cyst and four or five smaller ones, held together by loose areolar tissue. These contained a thin, watery fluid. The suprarenal capsule was as large as upon the right side, and surmounted this rudimentary kidney. The left renal artery was present, but was only about one-sixth the calibre of that going to the right side. The left ureter opened normally into the bladder, and was pervious from the bladder to a point an inch and a half from the kidney. From thence it could not be isolated. It was of very small size, barely admitting a fine probe. The right ureter was about twice the normal size.

DR. O. H. ROGERS presented a specimen of

CONGENITAL MULTIPLE CYST, OCCUPYING THE POSITION OF THE LEFT KIDNEY.

It was a dissecting-room specimen, and was found in the body of a child that died within three or four days after its birth. The right kidney was normal.

DR. PRUDDEN referred to the fact that in all the cases in which he had presented the specimens, the left kidney was absent.

The Society then went into executive session.

Stated Meeting, November 24, 1886.

JOHN A. WYETH, M.D., PRESIDENT, IN THE CHAIR.

DR. W. M. CARPENTER presented, in behalf of a candidate, a specimen of *Epulis*, which was referred to the Committee on Microscopy.

DR. R. VAN SANTVOORD presented microscopic slides which showed several

MILIARY ANEURISMS

removed from the brain of a man in which there were six or seven cortical hemorrhages. The ordinary process of macerating the brain was carried on for a time, and then, instead of washing it away with a stream of running water, he took hold of both carotids and pulled out the leash of vessels quickly, when, on washing the leash in a bowl he found that six diseased branches had been obtained.

CARDIAC THROMBI — CALCIFICATION OF THE AORTIC VALVES—WEAKENED LEFT VENTRICLE AND PULMONARY ŒDEMA.

Dr. Van Santvoord also presented a heart taken from the body of a woman who said that she was fifty-five years of age, although she was apparently much older. She was in the hospital two weeks before death. Her predominant symptom was great feebleness of cardiac action.

On autopsy there were found the lesions of pulmonary phthisis in both lungs—most extensive in the left, in which there was a cavity at the apex. The brain was œdematous. The liver was fatty and the kidneys showed somewhat advanced chronic diffuse nephritis. The spleen contained a small nodule, probably tubercular, although it looked somewhat like a gummatous growth. The left ventricle was slightly hypertrophied and dilated, and it contained a number of cardiac thrombi, firm and nearly white. The aortic valves were the seat of advanced calcification; the aorta and the coronary arteries were only

slightly atheromatous. The right side of the heart was apparently normal. The cardiac muscle was fatty. There was œdema of the lungs.

Dr. Van Santvoord regarded the case as one that exemplified the cause of pulmonary œdema demonstrated experimentally by Dr. W. H. Welch, namely, when marked weakness of the left ventricle is present œdema of the lungs occurs very frequently.

Dr. Van Santvoord further presented a specimen that illustrated

AORTIC [illegible]

PERICARDITIS.

A. G.——, aged forty-four years, had been an inmate of the Randall's Island Insane Asylum for nine years. His occupation had been that of a driver of a brewery wagon. He had been working on the farm prior to his admission to the hospital. Beyond these facts nothing was known of his previous history. He was found to be suffering from an acute nephritis which ultimately became complicated by acute pericarditis, which proved fatal. A typical double aortic murmur was heard over his heart. There was also heard a systolic murmur of the apex not transmitted to the left. A cardiac friction murmur was heard four days before death.

The autopsy showed slight thickening of the cerebral arachnoid and anæmia of the brain. The lungs were very œdematous. A small amount of effusion was found in each pleura. The liver showed a moderate amount of irregularly distributed cirrhotic change, central congestion of lobules and fatty degeneration. The spleen was about double its normal size and firm. The kidneys were normal in size, œdematous and the cortex was mottled yellow. The mucosa of the stomach was thickened and ecchymotic. The intestines showed marked venous injection. The mucosa was thickened in the duodenum and the large intestine. The pericardium contained two ounces of clear fluid. Both layers of the pericardium were coated with yellow lymph. The right cavities were apparently normal. The left ventricle was considerably dilated and hypertrophied. Two leaflets of the aortic valve were only slightly thickened, the third, corresponding to the right coronary artery, showed a notch at one side of the corpus arantii. From one side of this notch projected three short fibrous vegetations, from the other one about one inch long. The mitral orifice admitted the ends of three fingers. The valves looked normal. The muscular substance was pale, but not apparently degenerated. The coronary arteries were in good condition. The aorta showed extensive atheroma, calcareous plaques existing low down. It was not dilated. The right radial was apparently normal.

From the fact that two of the leaflets were only slightly thickened from the notch-shaped lesion, and limitation of the fibrinous outgrowths to the edges of this notch, it seems probable that the lesion was caused by a rupture of the valve.

Another feature of interest in the case was the marked disproportion between the valvular changes and those in the aorta. The causal connection between laborious occupations and atheromatous changes in the aorta and aortic valves is well recognized. The occupation of this patient, viz., that of driver of a beer wagon, was one involving considerable strain, such as might have been sufficient to cause atheroma. What other factors may have been at work in the absence of history can only be conjectured.

Compensation of the cardiac lesion was apparently good prior to his last illness. It seems plausible to suppose that the extra strain thrown on the aorta by the cardiac systole, which was necessary to maintain this compensation, was a factor of importance in increasing the atheroma of the aorta. The valves, however, being subjected to a subnormal strain on account of the regurgitation did not share in this factor, and so the unusual disproportion between the general disease of the valves and the aorta may be supposed to have arisen. The broad top of the sphygmographic tracing, taken when the patient was still in good general condition, showed a long and strong ventricular systole. Its rapid falling off and the comparatively slight development of the systolic impulse show the combined efforts of the atheroma of the aorta and the regurgitation.

As the auriculo-ventricular orifice was dilated the systolic murmur at the apex may have been due to relative incompetence of the mitral valve.

Dr. H. J. Boldt presented

[illegible]

the result of packing the uterine cavity with chloride-of-zinc cotton after curetting in a case of carcinoma. It came away at the end of ten days, and was interesting chiefly on account of its great thickness.

[illegible]

Dr. L. Emmett Holt presented several medium-sized, gall-stones which were interesting chiefly in connection with the clinical history of the case. They were removed from the body of a man, forty-five years of age, tall, and weighing two hundred pounds, who died last July. There was a history of attacks of biliary colic with jaundice. On the 8th of July he was taken with extreme pain in the region of the stomach and right hypochondrium, apparently due to indiscretion in diet. On the next day he was jaundiced, and had the symptoms of acute gastro-enteritis. The attack subsided, so that at the end of three or four days he was quite comfortable and remained so for ten days, when he had another attack, though less severe than the other, and from that time he began to lose flesh and strength and to have more or less fever. One day he had a violent chill and his temperature rose to 104° F. There was a history of previous malarial poisoning, sustained by the presence of an immensely enlarged spleen, and quinine was given in full doses. The temperature fell, but on the third day after the chill it again rose, and from that time until the death of the patient, it remained more or less elevated, but without chills.

At the autopsy, the heart was found to be slightly fatty, the liver intensely jaundiced and slightly fatty, and the kidneys the seat of recent parenchymatous nephritis. The other organs were apparently normal except the stomach and the duodenum with two or three feet of the jejunum, all of which showed the evidences of acute inflammation to a marked degree. The hepatic and the common bile-ducts were pervious. The jaundice was due, apparently, to the obstruction caused by the swollen condition of the mucous membrane of the duodenum about the orifice of the common duct. The gall-stones had ulcerated through the gall-bladder, a localized peritonitis had taken place, and the calculi had become encysted in an abscess that had formed upon the under surface of the liver in close proximity to the gall-bladder. Death was evidently caused by blood-poisoning from this abscess.

The symptomatology of the case rendered it exceedingly obscure.

Dr. Van Santvoord recalled a case, in Bellevue Hospital, which began very much as did Dr. Holt's, but terminated in the formation of an abscess that pointed externally and was opened along the line of the rectus muscle. The autopsy revealed several old sinuses leading into the cæcum, the small intestine, etc. Death resulted from repeated secondary hemorrhages following division of an abnormally distributed artery in an operation performed for the purpose of healing the sinuses.

PERIOSTITIS—OSTEO-MYELITIS—EXSECTION OF TIBIA.

Dr. Wyeth presented the whole of a tibia between the epiphyses, removed by operation from a boy twelve years of age, a patient in Mt. Sinai Hospital. On admission there was the history of chills and high temperature, and there was great tenderness on pressure over

the bone. A free incision was made three inches below the upper epiphysis and another just above the ankle-joint. These openings gave vent to a considerable quantity of pus, but the temperature was not materially reduced. The patient was next etherized, the bone exposed and trephined and found to be full of pus. The opening was enlarged, the cavity scraped, a drainage-tube inserted, and the case treated by the open method. The patient did very well after this operation; his temperature fell to 100° to 101½° F., and his general condition improved so much that five weeks afterward, five weeks and three days after the first incisions, Dr. Wyeth exsected the tibia completely from the upper to the lower epiphysis. The operation was done by the bloodless method; no arteries were tied; and hemorrhage, after the Esmarch bandage was removed, was controlled by compression. The periosteum was saved and it was hoped that there would be reproduction of the bone.

This was the last of nine cases of destructive osteitis of the tibia in which he had operated within the last fourteen months. In eight cases the results had been satisfactory, although the patients were in a bad general condition when operated upon. From two to four inches of the tibia were removed in three cases, and all the patients had recovered with reproduction of bone except one, in which it was destroyed by osteitis, and the patient returned three or four weeks ago with the fibula in the normal condition and nearly normal position, but with the tibia absent to the extent of about four inches. He was admitted to the hospital and Dr. Wyeth had made an effort to convert the fibula and the tibia into a single bone by removing the articular surfaces at the tibio-fibular joint with a thin layer of bone, and then drilling the two bones together with the hope of getting bony union, which can be supported by mechanical apparatus and thus enable the patient to walk. It might be necessary to perform a similar operation at the other articulation.

The point to which he wished to direct special attention, in connection with these cases, was that there was scarcely a condition of osteitis of the tibia which justified amputation. If, as soon as periostitis was recognized, operative procedure was resorted to, there was but little chance that the deeper disease would develop. When the more extensive operation was required good results might reasonably be expected so long as a thin layer of cartilage was left, although the presence of as much of the epiphysis as possible was desirable. He had not seen a case of arthritis or osteo-arthritis as the result of the operation.

Dr. Wyeth also presented two small specimens, one a lipoma and the other a small cystic tumor removed from the forehead, in order that he might have opportunity to speak of the use of

COCAINE IN MINOR SURGERY.

He had performed several such operations, and in not a single case did the patient suffer pain, nor had he seen any unpleasant symptoms. For producing the local anæsthesia he had used a four-per-cent. solution with an ordinary hypodermic syringe, injecting the fluid under the skin in the line of the incision across the tumor and around its periphery. He had performed ten or fifteen *circumcisions*, with great satisfaction by this method, and also had operated for ingrowing toe-nails without pain to the patient, as well as for hæmorrhoids, fistula in ano, etc.

As to the quantity that can be used with safety, he was unable to say positively. He had injected as much as three or four grains at a single operation. But the drug should be used with greater care within the domain of the fifth nerve than elsewhere. When the Esmarch bandage was used, he injected the solution into the bloodless tissues with less care concerning the quantity, because he always milked the solution out by squeezing the parts, and then washed the surface, and also, in addition, loosened the bandage and allowed bleeding to go on freely for a short time. The bandage was then tightened and the dressing completed, and he had not seen any unfavorable symptoms follow the use of quite large quantities of the drug.

Dr. Geo. F. Shrady referred to a case of acute necrosis of the humerus in which, some years ago, he exsected the entire shaft of the bone, placed the limb upon a single inclined plane and attached a weight, and there was reproduction of the bone for its entire length. At that time it was the longest bone on record that had been reproduced. The time required was about three months.

Dr. V. P. Gibney thought it very difficult to always determine just where periostitis ceased and osteo-myelitis began. Mr. Macnamara, of London, had expressed the opinion that the line could not be very easily drawn between these two diseases in all cases.

The operation performed by Dr. Wyeth, to make a single bone in the leg, was similar to one performed by Dr. W. T. Bull, the final result of which was that the girl had been able to dispense with all mechanical assistance in walking, except a high shoe. The upper and the lower fourths of the tibia remained as the result of bone disease from which she suffered when a child, and they were supported by the fibula. There was marked bow-leg. Dr. Bull divided the fibula obliquely opposite the terminal parts of the tibia, then divided the tibia obliquely, and fastened the one to the other with wire. The wound healed kindly, and the patient had a straight limb.

Dr. Schiff referred to a case in which no bone-formation had taken place, and the question of transplantation of bone was under consideration.

Dr. Boldt said that great care should be exercised with regard to the use of cocaine in the region of the tri-facial nerve, as he had seen less than one grain produce serious shock in the human subject. Judging from experiments made on dogs, he would say that one-tenth of a grain to one pound of weight was the maximum quantity to be administered to the human subject.

Dr. Liell referred to two cases in which Dr. Sims had removed, without pain, two vaginal cysts, by the aid of cocaine.

Dr. Van Santvoord asked Dr. Wyeth if he had dilated the anal sphincter without pain, under cocaine.

Dr. Wyeth said that he had not, although he had divided it repeatedly with perfect insensibility to the knife.

Dr. Lockwood alluded to a case in which cocaine-poisoning was produced by the injection into the neck of twenty minims of a four-per-cent solution preparatory to tracheotomy.

Dr. Wyeth thought it unsafe to give either ether or chloroform at once in a case in which cocaine failed to produce the desired anæsthesia.

Dr. Holt thought that the proportion of one-tenth of a grain to the pound would not hold good with regard to children. He had seen some very unpleasant symptoms follow the injection of twenty minims of a four-per-cent. solution in a child.

Dr. Schiff had seen two cases of circumcision in which sloughing occurred along the entire line of incision. He had also seen a case in which free parenchymatous hemorrhage occurred about three-fourths of an hour after operating under cocaine. Electricity favored the absorption of cocaine. He had never seen any bad constitutional effects produced by the drug.

Dr. Wyeth remarked that he had not seen any of the unpleasant effects mentioned by Dr. Schiff.

The Society then went into executive session.

"Labor Among Primitive Peoples."—It is said in the *Boston Medical and Surgical Journal* that in one of the largest book-stores of that city the clerks spent all their spare time for half a day looking through the department of political economy in order to find Dr. Engelmann's work with the above title.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CORONERS AND THEIR SALARIES—A STUDENTSHIP IN PATHOLOGY—A MEDICAL BISHOP—RESULT OF THE COUNCIL ELECTION—AN AUTHOR AND HIS HOSTILE CRITIC.

LONDON, November 7, 1886.

THE death of so distinguished a coroner as Sir John Humphreys brings forward once again the question of medical vs. legal coroners. The office has been held by both lawyers and doctors indifferently. Our profession naturally consider a medical man most fit for the office, and among many notable medical coroners have been Mr. Wakley and Dr. Lankester. Sir John Humphreys, however, although a lawyer, was esteemed so highly that he was elected to the presidency of the Coroners' Society. The appointment of coroner is one of the few valuable appointments open to medical men. The one now vacant is worth $10,000 a year, a sum far exceeding the salary of any medical officer of health. Our legal friends are astute enough to keep up the salary of any office for which they are eligible. It is, however, mooted that the district now in question should be divided and an additional coroner provided. The work has been very heavy, about five inquests a day being held on an average by the late coroner.

By the side of the princely bequest to his college made by the late Sir Erasmus Wilson, the John Lucas Walker fund appears but small. Yet it amounts to $50,000, and in this country there are not so many scientific endowments that we can afford to despise it. It is to be devoted to the furtherance of original research in pathology, by founding a studentship which will be worth at least a thousand dollars a year (probably more) and tenable for three years. Under certain circumstances the holder of it is eligible to be re-elected for a further term of two years. The student must study at the University of Cambridge during three terms of his tenure of the studentship, but need not be a member of the University, and the competition for the studentship will not be restricted to Cambridge men.

It is seldom that distinction is attained in more than one profession. Such, however, was the case with Bishop McDougall, whose death, after a prolonged period of ill health, recently occurred. He was educated for the medical profession at King's College, London. On becoming qualified he was appointed Demonstrator of Anatomy, and obtained the fellowship of the Royal College of Surgeons of England. He subsequently forsook medicine and, after studying at Oxford, entered the Church. In 1855, he was appointed to the colonial bishopric of Labuan and Sarawak in Northern Borneo. Here he found his medical lore of great service, and some successful operations spread his repute far and wide. On returning to this country he was appointed to a living in the Isle of Wight. The late Bishop was well known and much beloved. His daughter recently married a physician on the staff of the London Hospital.

The result of the Council election is made known this morning, though not yet officially declared. The caucus have scored a victory, and Messrs. Wheelhouse, Foster, and Glover are the successful candidates in the order named, receiving respectively, eight, seven, and six thousand odd votes. The last figure shows how half-hearted has been the support given to Dr. Glover. These figures scarcely tally with the statement made in the advertising columns of the *British Medical Journal*, November 26th, by Messrs. Carter and Ker, that for Messrs. Wheelhouse, Foster, and Glover, "they have received already some nine thousand promises." It is not probable that the election will pass unquestioned. A general meeting of the Association is talked of, and it is probable that one will be requisitioned, and the officials brought to book for the unfair way in which they have acted.

It is not often that an author advertises an unfavorable review of his own work. Yet, on taking up a recent number of the *Birmingham Medical Review*, I find a page of the advertisement department taken to insert a small displayed advertisement of a recent surgical work by a London hospital surgeon. The following quotation from a review of the work in a former number of the same journal, is appended: "A few chapters are fairly satisfactory . . . but only faint praise can be awarded to any others." This advertisement has presumably been designed and ordered by the surgeon in question, and is a droll method of expressing his contempt for the journal which condemns his work. However hard reviewers hit, it is as a rule, only once, and thick-skinned authors comfort themselves with the reflection that it will soon be forgotten. Meanwhile, they advertise the favorable reviews they have obtained. Yet, here is an author who spends money in publishing a hostile criticism on [illegible] Work.

"MR. LAWSON TAIT IN A PECULIAR TROUBLES."

[illegible]

SIR: When you favored your readers with the information indicated in the above quotation you displayed a far more intimate knowledge of my affairs than I possess myself. I have not yet experienced either of the troubles you refer to. That I could not find Schroeder's statistics is not surprising, seeing that they were published under his assistant's name—a name wholly unknown to me. When I did find them I also found that they wholly confirmed my own conclusion, and that the statements said to be based on them by Dr. Horatio D. Bigelow were wholly untrue. That was trouble for Dr. Bigelow, not for me.

As for your statement that I have recently commenced a suit for libel against somebody for saying something objectionable, it is wholly inaccurate. It is true that Dr. Steele, of Liverpool, published a gross and libellous letter about me, but on inquiry I found he was not worth powder and shot. I am, etc.,

LAWSON TAIT.

[illegible]

[We presumed at the time that our information was from a reliable source. We are glad now to correct the impression conveyed in the item referred to.—ED.]

THE LONG-BEARD HABIT.

[illegible]

SIR: Your correspondent, Dr. Curtis, appears to be very fond of long beards, and very indifferent to coat-tails, concerning which latter, indeed, he speaks with much disrespect. Of course he has a right to his prejudices; I know very well that there are some persons who think more of their beards than of their brains, and with good reason. But it was to prevent this class from becoming a prominent one in medicine that your editorial remarks, as I thought, were directed, and I was very glad to read them.

I am sorry that Dr. Curtis does not know what is meant by a "sense of humor," or a "sense of proportion," but as this is a medical journal, and not one for education in the ordinary forms of literary expression, I can hardly be expected to enlighten him now.

Your correspondent thinks that coat-tails will carry contagion as well as a profuse irradiation of whiskers. I cannot agree with him here, and it is certainly not the case with persons who pay the ordinary attentions to personal cleanliness. It is the custom in most parts of the world,

when examining cases of diphtheria, scarlet fever, etc., to bring the face and not the coat-tails in close proximity to the patient. I do not know, of course, what idiosyncrasies may exist in your correspondent's circle of acquaintance.

The plain facts appear to be this, as you have well stated: the customs of society and the precedents in our profession have decreed that long and hairy appendages are not suitable for those who attend the sick. The hair is a carrier of contagion, and long beards are particularly adapted for the lodgment of infectious germs. Let the physician, at least, reduce the risks of this kind as much as possible. Yours,

SANITAS.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 5 to December 11, 1886.

WOODHULL, A. A., Major and Surgeon. Ordered for duty at Post of Fort Leavenworth, Kan. S. O. 138, Department of the Missouri, December 3, 1886.

POPE, B. F., Major and Surgeon. Relieved from duty in the office of the Surgeon-General of the Army, and will report in person to the President of the Army Medical Examining Board in New York City, for duty as member and recorder of the Board. S. O. 285, A. G. O., December 9, 1886.

AINSWORTH, F. C., Captain and Assistant Surgeon. Will repair to this city and report in person to the Secretary of War, and on completion of the duty which may be required of him, will return to his station (New York City). S. O. 280, A. G. O., December 3, 1886.

AINSWORTH, FRED. C., Captain and Assistant Surgeon. Relieved from duty as Recorder of the Army Medical Examining Board in New York City, and ordered to report in person to the Surgeon-General of the Army for duty in his office. S. O. 282, A. G. O., December 6, 1886.

TURRILL, H. S., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Fort Spokane, Wash. Ter. S. O. 209, Department of the Columbia, November 29, 1886.

CARTER, EDWARD C., Captain and Assistant Surgeon. Leave of absence extended six months. S. O. 281, A. G. O., December 4, 1886.

BARROWS, CHAS. C., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared by his Post Commander. S. O. 285, A. G. O., December 9, 1886.

WILSON, GEO. F., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply to Headquarters of the Division of the Missouri for an extension of twenty days, to take effect about December 15, 1886. S. O. 125, Department of Dakota, December 1, 1886.

Official List of Changes in the Medical Corps of the United States Navy for the week ending December 11, 1886.

PERCY, H. T., Passed Assistant Surgeon. Ordered to Naval Academy, Annapolis, Md.

NERFLEET, ERNEST, Passed Assistant Surgeon. Granted sick leave for three months.

Medical Items.

BOTTLE-FEEDING AT THE NEW YORK INFANT ASYLUM,—Dr. E. Bradley, of this city, writes: "My attention has been drawn to an excerpt from a recent article by Dr. J. Lewis Smith, which you published in a late issue of your journal. This article, as it stands, seems to make bottle-feeding babies and *dying babies* synonymous terms. As visiting physician to the Mount Vernon branch of the New York Infant Asylum, I wish emphatically to disclaim, for one institution 'about New York,' any such fatal consequences from *bottle-feeding*. When I assumed duty at the Mount Vernon branch of the New York Infant Asylum, I had already had considerable and encouraging experience in private practice with the use of the peptonizing process, and I at once adopted the method at this institution. I continue, up to this time, to use the Fairchild process with perfect satisfaction. I have never observed any ill results from its use, while I do not hesitate to express the conviction that many lives have been saved by it. I have already, more than two years ago, stated that the marked improvement which I was then happy to record in the health of the children at the Mount Vernon institution was due, in my opinion, to this change in the method of feeding, and I now desire to say that further daily experience, both in hospital and private practice, has stronglyconfirmed thisview. Of course we always use *good breast-milk*, if it can be procured; when this is impossible, I invariably use the peptonized milk."

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 11, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	37	14
Scarlet fever	44	5
Cerebro-spinal meningitis	5	5
Measles	425	64
Diphtheria	120	59
Small-pox	0	0
Yellow fever	0	0

MALARIA AND GALL.—Dr. James H. Dunn, of Minneapolis, Minn., writes: "I am charmed with the theory of Mr. Hasty concerning the antagonism between malaria and phthisis mentioned in THE RECORD of October 16th. It enables me to account for the extraordinary symptoms of certain specialists who have recently condescended to be banished to the wilds of Minnesota. They must be suffering from malaria most virulent, at least their systems are saturated with 'gall' unspeakable. Should these gentlemen perish of phthisis, it would explode Mr. H.'s theory beyond repair, since their systems are at all times 'sufficiently impregnated with gall to destroy the bacillus of consumption,' or any other microbe. I shall, in the future, watch the statistics of phthisis in these persons with great interest, for corroborative evidence of this theory."

THE MALULANI HOSPITAL.—This hospital, established in 1884, at Waluku, Sandwich Islands, under the patronage of Princess Liliuokalani, is for the free treatment and nursing of indigent Hawaiians. It has connected with it a dispensary for the gratuitous distribution of medicines. Foreign patients are also admitted upon the payment of a certain sum for board and treatment. Up to the present time the attendance has been in the proportion of about three foreigners to one Hawaiian, the latter seeming to less readily appreciate the value of medical and hospital treatment. Since the opening of the institution about five hundred patients have been received. The hospital is under the care of the Franciscan Sisters. The first physician in charge was Dr. Enders, who has since been succeeded by Dr. Sutliff.

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Original Articles.

FERMENTATION, PUTREFACTION, AND SUPPURATION, WITH DEMONSTRATIONS AND EXPERIMENTS.[1]

BY H. KNAPP, M.D.,

MR. PRESIDENT: Will you kindly allow me a few introductory remarks on the importance of bacteriology in the study and practice of medicine.

Last summer I was struck by the first sentence[2] of a paper on Ptomaines, read by Professor Brieger, of Berlin, before the Congress of German Physicians at Wiesbaden, April 14, 1886, viz.: "The different forms of infectious diseases which constitute the bulk of all cases of sickness, are, according to the present standpoint of science, all caused by specific bacteria." This statement surprised me so much the more, as I had had, a few days before, a conversation on bacteriology with a celebrated professor of one of our New York colleges. "Bacteriology," said he, "is of great scientific interest, but in practice what does it signify? *Six diseases!*" This divergence of opinion induced me to seek for some statistics of germ-diseases. Looking up the death reports printed in different medical journals, I found the most extensive records in the *Boston Medical and Surgical Journal*, namely, weekly statements of reported mortality of the principal American cities. In the number for September 2, 1886, I found the following for the week ending August 21st:

New York, with an estimated population of 1,493,039, 736 deaths, of which from

In the other cities the returns were about the same. Thus I found the *reported* death-rate from infectious disease in American cities to be about fifty per cent. But how many diseases are now recognized to be of bacterial origin without being entered as infectious in the official records; for instance, gonorrhœa, syphilis, the different forms of malaria, anthrax, pneumonia, endocarditis, pleurisy, peritonitis, rhinoscleroma, xerosis, influenza, yellow atrophy of the liver, lepra, whooping-cough, a great number of skin diseases, and a host of others. The statistics in the *Boston Journal* contain, besides what I have mentioned, a column of deaths from diarrhœal diseases as follows (omitting the decimals): New York, twenty-one per cent.; Brooklyn, nineteen per cent.; Boston, twenty per cent.; Baltimore, twenty per cent.; Cincinnati, twenty-seven per cent.; Charleston, thirty-six per cent., etc. The great majority of these deaths, if not all, may be considered as due to germ-disease. If we add these twenty per cent. to the above, and reckon the deaths from pneumonia and the other diseases which I mentioned before, with only ten per cent. of fatal termination, we obtain a death-rate from bacterial diseases of over eighty per cent. It is to be noted that these statistics were compiled when there was no epidemic prevailing. And, gentlemen, this is not all. I have not said a word of the numerous deaths of surgical disease, which, if we except fatal hemorrhage and coarse injury to important organs, may all be attributed to the deleterious influences of bacteria. Add these to the above eighty per cent. with any quota you choose and you will see that, unless I have made a gross mistake, the professor of Berlin, in attributing the vast majority of all diseases to bacterial influences, has said the truth.

It is the knowledge and control of these influences that has, in the last ten years, so surprisingly reduced the death-rate from external diseases, and raised surgery to the proud position it now occupies.

In the advance of medical science surgery takes the lead at the present day, just as, according to Professor v. Bergmann, ophthalmology did at the time of v. Gräfe. It will, therefore, not be without interest and value to inquire what principle has infused such vital power into modern surgery, and whether this principle is likely to advance the other branches of medicine in a like manner. The key-note of modern surgery is expressed by the word antisepsis, which is the application of one branch only of bacteriology. Its scientific foundation is expressed by the words, Fermentation, Putrefaction, and Suppuration, which, in compliance with our president's kind invitation, I have chosen for the subject of my discourse this evening. In presenting this subject to you I shall follow its historical development, passing rapidly over the acquisition of our knowledge on fermentation and putrefaction, but dwelling on the important question of suppuration, in the solution of which a thousand hands are now busily at work with tools so refined, methods of investigation so accurate, and minds so scientifically trained as previous generations had not at their command.

Fermentation.—The scientific study of fermentation began with the investigations of Lavoisier, Fabroni, Thenard, and others, about a hundred years ago. These investigators thought it was a simple chemical decomposition.[1]

Appert preserved animal and vegetable substances by putting them in bottles, well corked, and exposed to a temperature of boiling water.

Gay Lussac (1810) found that in substances preserved in such bottles for years, fermentation was started by letting in a small quantity of oxygen, but then it went on without it, and produced an inordinate quantity of carbonic acid. He declared that oxygen was necessary to initiate fermentation, but not to keep it up. For him fermentation remained a mysterious phenomenon, setting in tardily and proceeding slowly, quite different from other chemical processes.

In 1835 Cagniard-Latour discovered the yeast-plant, and added to this curious *fact* of observation an *idea*, namely, that the yeast causes sucre to ferment by some action of its vegetation and of its life.[2] He found also that the yeast-globules multiplied by budding, whence the name "budding fungi, sprouting fungi," *Sprosspilze* in German. A year later Turpin described the yeast of beer as a vegetable microscopic organism, which he termed Torula cerevisiæ.[3]

[1] Read before the Pathological Society of the New York Academy of Medicine, December 17, 1886.

[2] Read before the Wadsworth Medical Society, Geneseo, N.Y., December 17, 1886.

[1] For details of the following, see Dr. Wm. Watson Cheyne's excellent book, Antiseptic Surgery.

[2] E. Duclaux: Le Microbe et la Maladie, p. 6. Paris, 1886.

[3] Tyndall: Fragments of Science, Fermi, Pasteur, Pouchet, International Scientific Series, 1886. $1.50, with 107 illustrations. A very

In 1836 Franz Schulze[1] proved that fermentable and putrescible substances did not decompose if, after they had been boiled, the access of atmospheric air was prevented, for instance, by a layer of oil, or if the air, before it reached the substance, had passed through sulphuric acid or some other liquid which retained or destroyed the germs contained in the air. I show you the apparatus as simplified by Pouchet. Urine that was boiled two months ago in a glass retort, which, when cooling, received atmospheric air through a system of Liebig's bulbs partially filled with strong sulphuric acid, is now as clear as when freshly voided.

In 1837 the subject was taken in hand by Schwann, and "to him rather than to Cagniard-Latour must be given the credit of the first real proof of the view that the yeast-cells were the real cause of fermentation."[2] Schwann's apparatus, which I place before you, and with which I have repeated his experiments, consists of a glass retort from which glass tubes lead on the one side into a beaker containing mercury, corrosive sublimate, and olive-oil, on the other form a coil and end in a fine point. In the retort meat is boiled until the life of all substances contained in the apparatus, including germs adherent to its walls, is destroyed. The tapering end of the free tube, through which, during the cooling of the retort, the air entered and was sterilized by heating the coil, is hermetically sealed. [The apparatus and its working are demonstrated.] The meat did not putrefy. Schwann made similar experiments on alcoholic fermentation, thus *proving that the air contains some substance which is destructible by heat, and causes putrefaction and fermentation.* The *gases of the air, being unalterable by heat, cannot be the cause of these processes.*

Helmholtz, after repeating and confirming Schwann's experiments,[3] made a very conclusive experiment, demonstrating that oxygen was not the cause of putrefaction. A meat infusion was boiled in a vessel, into which two platinum electrodes were fixed. After a time long enough to show that no fermentation would take place, an electric current, decomposing a part of the water, was sent through the liquid. The liquid remained pure.

In 1854[4] Schröder and von Dusch examined whether *filtration of the air* would be sufficient to prevent fermentation of boiled liquids. Their apparatus [which was demonstrated] consisted in a retort in which a fermentescible substance was boiled. From its neck a tube connected on one side with a jar having a stop-cook near its bottom, on the other side with a larger tube, which was filled with cotton that had been so heated as to destroy in it all animal and vegetable life. When the boiling had been prolonged long enough to purify the inner walls of the whole apparatus the stop-cock was opened, and as the water was slowly running out fresh air entered through the open tube on the other side, passing through the cotton filter before it reached the retort. The substances in the latter did neither ferment nor putrefy.

Another series of experiments (by Pasteur, Lister, Tyndall, and others) furnishes proof that the air can be purified by letting the particles suspended in it *settle by gravitation.* These investigators employed glass vessels, with tubes having one or several angular bends. I show you three such vessels in which grape-juice, meat-infusion, and milk were boiled four weeks ago. During and after the slow cooling the outside atmospheric air communicated with the air inside the flasks by the bent tubes, and you see that the contents in the three flasks are clear and sweet, whereas specimens taken from the same boiled liquids, on the same day, and left standing in open test-tubes, are decomposed.

The microscope has shown that all fermenting substances contain yeast-plants, and experiments, in various ways, have demonstrated that no fermentation takes place as long as the fermentescible substance is kept free from living yeast-cells. The presence of microbes thus being an essential factor in fermentation, the definition of fermentation ought to express it. We may therefore define fermentation as the *decomposition of carbo-hydrates into simpler compounds by the agency of living microbes.*

Putrefaction is a similar process. The decomposable substance contains nitrogen and sulphur besides carbon, hydrogen, and oxygen. The action of living bacteria is as essential in putrefaction as in fermentation. The species or varieties of these putrefactive micro-organisms are quite numerous. They do not belong to the class of budding fungi, but are fission fungi, either cocci or bacilli. Putrefaction apart from cold, heat, and exsiccation, can be prevented by the same methods which we have considered before. Germs in the putrescible substance, and the vessel which contains it, must be destroyed by heat or chemical substances, and the air, or any object coming in contact with it, must be germ free. The air can be purified (sterilized) by the same four ways which we have discussed in preventing fermentation: 1, By washing it (Fr. Schulze); 2, by heating (Schwann); 3, by filtration (Schröder and von Dusch), and 4, by rest and gravitation, the organic as well as the inorganic particles falling to the floor.

The products of putrefaction are CO_2, H, H_2S, butyric and other fatty acids, ammonia, tyrosin, etc. If there is sufficient access of air (O), there is but little foul smell, H_2O, CO_2, and NH_3 are formed, and the process is called mouldering (*Verwesung*), whereas by insufficient access of air foul-smelling products, H_2S and fatty acids are formed, besides the others, and the process is called putrefaction (*Fäulniss*).

Suppuration.—Is suppuration identical with, or the consequence of, putrefaction? Are the surgeons correct when they say, avoid putrefaction and there will be no suppuration, operate aseptically, treat a wound antiseptically, etc. As long as I believed in the mechanical or biological origin of suppuration, in contradistinction to its specific, *i.e.*, bacterial or parasitic origin, I thought the confusion of these different terms was wrong. But since it was demonstrated that the same species of bacteria produce suppuration as well as putrefaction, those surgeons were justified who, from practical experience, used these terms promiscuously, and more or less interchangeably. The pyogenic fungi will, for instance, curdle and decompose milk, and from putrefying substances bacteria are obtained that have a strong pyogenic action.

Moreover, the suppurating substances are of the same nature as the putrescible; chiefly albuminoids, containing C, H, O, N, and S. The difference only is that suppuration has relation to living, putrefaction to dead substances or tissues. Both are split in simpler and analogous compounds. Yet there is one point not completely settled; is the intervention of bacteria as strictly a necessity—*a cenditio sine qua non*—in suppuration as it is in putrefaction? Many surgeons, judging from the results of antiseptic precautions, have keenly maintained this principle to be, at least, practically true. Scientific research has more and more verified it, and quite recently a few investigators have, on the strength of rigorous experiments, declared that there is no suppuration whatever without the action of living bacteria. Your humble servant, who has followed this question with a keen and unswerving attention, has, until lately, not been so radical. I thought, as the majority of physicians, that bacteria might be a cause of suppuration, but not the only one. Brought up in the ideas of cellular pathology, it seemed natural to me that irritants of different nature might cause white blood-corpuscles to pass through the walls of the vessels and accumulate, together with the movable lymphoid cells, at certain places of the tissue toward which the currents of the juices drove them. A celebrated experiment of Recklinghausen shows a proliferation of the movable contractile corneal

corpuscles, after a frog or cat's cornea has been cauterized in the centre and placed, under appropriate conditions, on the object-table of a microscope for from one to three days. Another similar experiment appeared to me convincing of the possibility of a traumatic origin of suppuration. When a fresh frog's cornea is placed on the heated object-table of a microscope, and watched for an hour or two, we notice that the movable corpuscles emigrate from the tissue to the cut edge. There they cluster and apparently form a streak of pus.

The question of the formation of pus seemed to me of such fundamental importance that I took it up experimentally, and studied it under the following heads :

1. Does traumatism of any kind produce suppuration ?
2. Do foreign bodies occasion the formation of pus ?
3. Are there any kinds of chemical agents that cause suppuration ?

1. On the first question I made a series of experiments in Berlin last winter, and published them in the "Archives of Ophthalmology."[1] I performed all the operations that are practised on the eye, on the one side of a rabbit, with sterilized instruments, in an aseptic way ; on the other side the wound was contaminated with an emulsion of a pure culture of some pyogenic fungus. All the former healed by first intention, the latter suppurated with the regularity of a chemical experiment. Since that time I have repeated these experiments, with the same result, and for the sake of illustration I pass round a rabbit, operated on two weeks ago by students, during one of my lectures at the University Medical College. You see that the right eye shows a smooth scar with a perfectly clear eye, whereas the left, where an impure extraction of cataract had been made, shows a deformed eye, a large yellow staphyloma, after suppuration of the wound. Experimenting in this way with pure and contaminated material before the students, and letting them operate on animals in the same way, makes the instruction unusually impressive, convincing, and suggestive. The most persuasive didactic lecture on suppuration falls flat before an audience that has once witnessed two operations performed on the same animal, in the same way, by the same hands, with the only difference that the point of the knife during the second operation was dipped into an emulsion of staphylococcus pyogenes albus. The next day no irritation in the first wound, but the hideous picture of a phlegmonous inflammation in the other. The coarsest operation, the rudest treatment of a wound will not be followed by suppuration if only the pyogenic germs are excluded. In extractions of cataract (in rabbits, of course) I have purposely bruised and lacerated the iris, evacuated almost all the vitreous, then stirred up the rest with a platinum needle that had previously been brought to a glow, and finally scratched with the same needle the ciliary processes in every direction, yet no suppuration ensued ; whereas the smoothest and most cautious operations were invariably followed by suppuration when the wound was contaminated in some way by pyogenic fungi, I say pyogenic, not other fungi. Surgeons have long come to this conclusion ; yet the experimental test is more convincing than long series of operations, because it furnishes direct evidence by making in the primary and verifying experiments all things equal, except the presence or absence of a certain kind of micro-organism. These micro-organisms are now obtained unadulterated with other material, *i.e.*, in pure cultivations. Gradually we become as well acquainted with their morphological and biological properties as we are with the chemical and physical properties of organic or inorganic bodies. If the addition of a certain microbe determines the result of one of two otherwise equal experiments invariably and unambiguously in a certain direction, if the microbe can be obtained again from the one animal, but not from the other, and if, in new experiments, it always brings about the same results, then we may fairly say that the microbe is the cause of the phenomenon.

If in these cases microbes cause suppuration, are we allowed to conclude that every suppuration is caused by microbes ? Not from this fact alone. One of the fundamental observations that led to the introduction of antiseptic surgery was the fact that simple fractures heal without suppuration. But there is an occasional exception to this rule, and a law of nature is never established as long as the exceptions are not explained. In the exceptional cases of suppuration after a simple fracture, a focus of suppuration somewhere else in the body has either been discovered, or its presence can be assumed with certainty. The experimental proof of this fact has been furnished of late by Becker and F. Krause, who observed that simple fractures in healthy animals regularly healed by first intention, but just as regularly suppurated when pyogenic microbes were injected into a vein of the ear. The same observation holds good with extravasated blood, hydrocele liquid, and other sequestrated bodies when kept free from germs in a healthy animal. The experiments of Orth and Wyssokowitsch on ulcerated endocarditis furnish argument in the same line, and the famous operation of bistournage by Chauveau has the entire force of a faultless experiment. This galaxy of facts, which might be increased indefinitely, furnishes indisputable evidence that *mere traumatism, of whatever kind, never causes suppuration.*

2. The second question, *Do foreign bodies, as such, cause suppuration*, may be answered in brief, for Theo. Leber and others have experimentally studied and brought it to a certain final solution. Leber states that indifferent, non-oxidizable foreign bodies, aseptically introduced into the tissues or cavities of the human body, cause no inflammation, in particular no suppuration.[1] I have introduced a number of foreign bodies—for instance, pieces of a hair-pin—aseptically, into the anterior chamber. The hair-pin was old, rusty, and dirty. It was not cleansed, but before its introduction it was brought to a glow. A small piece of the periphery of the cornea was cauterized with a glowing strabismus hook, pierced with a sterilized small knife, the pin was introduced with an aseptic little forceps, pushed more deeply into the anterior chamber, and the wound-canal again sealed with the glowing hook. The foreign bodies caused no suppuration, they lay either free on the iris, or were surrounded by a delicate, apparently fibrous, exudation. In one rabbit (which I show you here), the foreign body in the right eye has been well borne, and lies in the anterior chamber, one end encapsuled, the other free, whereas the most violent phlegmon broke out in the other eye in the first twenty-four hours, and destroyed the globe completely. A similar piece of the same hair-pin had been brought to a glow and introduced in the same way, with the only difference that before the introduction it had been dipped into an emulsion of staphylococcus pyogenes albus. By these and similar experiments previous views, even if entertained by scientists of the greatest merit, are refuted. Among the supporters of the possibility of suppuration by the action of foreign bodies I may mention Pasteur, who, in 1878, claimed to have discovered the *microbe du pus*, derived from hydrant water. Nevertheless he pretended, on the strength of his experiments, that suppuration could be caused by foreign bodies introduced under the skin aseptically. J. Straus found that solid bodies aseptically introduced under the skin, produced no suppuration. Of his excellent method I shall speak presently.

3. I come to the last and most critical question of my subject, *Do chemical agents cause suppuration without the intervention of microbes?* This question has been answered positively by all but a few very recent investigators. Baumgarten, Theo. Leber, Uskoff, Orthmann, Councilman, Rosenbach, Passet, and others, assert hav-

[1] Vol. xv., p. 24, March 2, 1886.

[illegible]

ing convinced themselves that suppuration is caused by certain chemical agents, for instance mercury, oil of cantharides, petroleum, turpentine, and, above all, croton-oil, even if aseptically introduced. Four recent observers, however, contest this assertion on the strength of new and more rigorous experiments. The leading investigator among these four is J. Straus, who for the first time used a perfect aseptic method.[1] A sterilized glass tube, tapering in a point on one side, closed with a sterilized cotton plug on the other, was filled with sterilized croton-oil, and the point sealed up. He sterilized the skin of the animal by singeing it with Paquelin's cautery, stabbed it with a sterilized knife, introduced the thin end of the tube, broke off its point, blew through the cotton plug the oil out into the subcutaneous tissue, withdrew the tube, and sealed the wound-canal by burning its orifice with the cautery. Among 18 injections of turpentine 13 did not produce suppuration; of 5 injections of croton-oil 1 suppurated; of 2 injections of mercury none suppurated. When suppuration ensued he found cocci in the pus.

E. Scheuerlen[2] repeated the experiments of Councilman-Cohnheim,[3] with greater antiseptic precautions, in the laboratory of the surgical clinic (Bergmann's) of Berlin, under the auspices of Dr. Gaffky and Dr. Fehleisen. Small glass capsules, the ordinary vaccine tubes, were sterilized in a Koch steam sterilizer for half an hour, then, by means of a canula needle and a small piston, thrust under the skin of rabbits. Before the operation the skin in the region of the operation had been carefully shorn, and disinfected with a 1 to 1,000 corrosive sublimate solution. After the introduction, the little tube lay in the subcutaneous tissue about ten millimetres distant from the puncture of the skin. The region of the puncture was covered with a thick layer of iodoform collodium. He used about a dozen irritating substances, among others turpentine and croton-oil. A week or ten days after the introduction of the little tubes, when they lay free from irritation under the skin, and the small wound was perfectly healed, they were broken. A hard swelling occurred around them, but suppuration only in one of his thirty-two experiments (croton-oil), in which a puriform exudation extended from the skin all along the stab-wound. In this case the sterilization and healing had been imperfect, and bacteria, which were found in the purulent exudation, must have penetrated into the wound. In no other case were bacteria found in the infiltrated tissue around the broken capsule.

In 1885 a very instructive series of experiments was made by George Klemperer,[4] in Professor Leyden's laboratory at Berlin. Klemperer made injections of different substances, chiefly turpentine and croton-oil. He used Koch's syringe, sterilized in boiling water, and disinfected the skin of the animals by cauterizing it with glowing iron according to Straus. He also made a number of experiments with the glass capsules of Cohnheim and Councilman. Only in a few experiments, in which the precautious had been insufficient, he obtained pus, recognizable as such macroscopically and microscopically. Bacteria were found in it with the microscope and by cultivations. In all other cases he found sero-fibrinous exudation with coagulation-necrosis (Weigert), no bacteria by both microscopic and cultivation tests.

The last author I have to mention is Dr. J. A. Ruys. He made a series of experiments in the Pathological Laboratory of the University of Utrecht, and published them, November, 1885, in the *Deutsche Medicin. Wochenschrift*.[5] He chose the anterior chamber as the best place of experimentation, because the occurring changes could be directly watched from day to day. He injected one or two drops of turpentine or of a mixture of equal parts of croton and olive oils, or petroleum. Only in one of his twenty-one cases he obtained suppuration, in all others he noticed in the anterior chamber a fibrinous exudation, which in a shorter or longer time gradually was absorbed. When the animals were killed and the fibrinous exudation in the anterior chamber was examined, fibrine and leucocytes were found, but no bacteria. Cultivations from the exudation remained sterile. As verifying experiments Ruys introduced into the anterior chamber silk threads impregnated with the oil and an emulsion of staphylococcus pyogenes. Suppuration ensued.

The last-named four authors draw from their experiments the conclusion that *bacteria are the cause of every suppuration.*

This unconditional opinion, gentlemen, is not generally accepted. Even in Berlin where it has the strongest supporters, I found, last winter, the most competent bacteriologists unwilling to adopt it without reserve. It may be so, they said, but thus far it is not demonstrated beyond a doubt. I thought it therefore particularly desirable to subject the third question: *Do chemical agents cause suppuration*, to a further experimental inquiry. In my experiments (they are not yet concluded) I used turpentine and croton-oil, because these two substances have proved the most powerful to initiate or favor suppuration. The action of pure turpentine being less pronounced than that of croton-oil, the majority of my experiments have been made with the latter. Yet some experiments with the former may deserve mention.

Three weeks ago I injected a drop or two of pure sterilized turpentine, with a sterilized Koch's syringe, into the anterior chamber of a rabbit which I show you here. The next day white patches developed in the upper parts of both anterior chambers, no sediment in the lower parts. The patches grew larger and more intense, somewhat resembling corneal pustules. On the fifth day the upper part of the left cornea had become white, and there were some white patches also in the lower part. This condition looking like suppuration, I enucleated the eye, and found in the anterior chamber some flaky deposits on the posterior face of the cornea, of which I made microscopic preparations and four cultivations. The microscopic specimens showed fibrine and lymphoid corpuscles, but no microbes whatever. One of the specimens is under a microscope for your kind inspection. The four culture-tubes which I pass round have all remained sterile. The exudation, therefore, was not purulent, but fibrino-leucocytic. The three nodules in the anterior chamber of the other eye remained stationary for a few days and then began gradually and slowly to disappear. You see now that they have left a trace, but the eye is in good condition.

Turpentine, injected aseptically and in small quantities under the skin, produced some hard swelling, which in the second week began to disappear.

Sterilized turpentine, sixty-six centigrammes, injected into the abdominal cavity of a rabbit, produced no effect either objectively or subjectively. When the animal was killed, at the end of two weeks, no abnormity was found in the abdominal cavity.

Turpentine injected in both anterior chambers of a rabbit produced the same congestion of the iris and the patchy opacity in the upper parts of the anterior chambers as before described. It gradually was absorbed, and the eyes recovered.

The results of the experiments with turpentine were clear and easily obtained; not so those with croton-oil, the *crux experimentatorum*. At first I used croton-oil pure, sterilized, and injected it into the anterior chamber according to Ruys' method, singeing the place of puncture before and after the injection. A portion of the oil flowed out again, producing purulent discharge and diphtheroid deposits of the conjunctiva, and so much blistering of the skin that the surroundings of the eye were denuded to a considerable extent, the cornea ulcerated and sloughed, and the eye atrophied. [Rabbit demonstrated.]

Being as careful as I could, I did not succeed in ob-

[5] Virchow's Arch., 1883, vol. xcii., p. 217.

taining clean results with injections of croton-oil into the anterior chamber. Through the cornea there always was more or less puriform discharge from the conjunctiva, and though in the first three or four days the drop of oil was clearly seen at the upper border of the anterior chamber, the cornea became hazy, ulcerous, sloughed, and the majority of eyes were lost. Those which I removed before they burst showed no pus in the anterior chamber, but a flaky substance which neither on cultivation nor under the microscope discovered any microbes.

Pure croton-oil, injected under the skin, aseptically, the skin disinfected with the actual cautery before and after the introduction of the point of the syringe, produced a hard swelling, which, being incised, showed no pus, and under the microscope and in cultivations no microbes. In one case such a hard lump sloughed out with sharp, deep edges as if punched out. The wound healed rapidly without suppuration. Klemperer, whose experiments consisted almost exclusively in subcutaneous injections of different *acria*, has studied this mortification of tissue—Weigert's coagulation necrosis—particularly, and describes it well (*l. c.*).

As these experiments lack the demonstrative directness of the injections into the anterior chamber, I endeavored to modify Ruys' method, so as to obtain clean results. I injected a sterilized mixture of one part of pure croton-oil and two parts of olive-oil into the anterior chamber of the right eyes of four rabbits, thrusting the thoroughly sterilized syringe through the sclerotic, lens, and pupil into the anterior chamber. As soon as the opening of the point presented in the pupil I pressed upon the rubber ball, and one or two drops escaped and mounted to the top of the anterior chamber, without disturbing the iris or producing any apparent change in the size and configuration of the chamber. The left eyes of the same rabbits were experimented on in the same way; the croton-oil, however, was mixed with a very small quantity of a pure culture of staphylococcus aureus on agar-agar. After the syringe was withdrawn the point of puncture in the sclerotic was sealed up with a glowing strabismus-hook. The next day the right eyes showed moderate reaction, the drop of oil was distinctly visible in the upper part of the anterior chamber; pupil, iris, and cornea clear. The left eyes discharged pus from the conjunctiva, were swollen, the irides very red, the contents of the anterior chamber muddy. On the third day two of these rabbits died. The right eyes had only a few flakes, no pus in the anterior chamber; their vitreous was clear. The left eyes showed a hemorrhagic exudation, with coherent flakes, and soft, purulent patches in the anterior chamber, and purulent patches in the vitreous. Cultivation and microscopic specimens showed no, or only a few, microbes in the right eyes, but multitudes of microbes in the left.

On the fourth day another rabbit died. Result of the examination the same: Fibrino-leucocytic exudation in the right eye, hemorrhagic, and purulent exudation, with multitudes of microbes, in the left.

The fourth rabbit of this series showed no particular reaction in the right eye. The cornea was hazy, iris and pupil, however, visible. Left eye enlarged, a yellow deposit in lower third of anterior chamber. Animal looked sick, but was not moribund. Killed on the seventh day. In right no pus; some exudation in iris angle, vitreous turbid. Left eye: anterior chamber and vitreous cloudy, containing puriform patches. Dry cover-specimens and cultivations were made from both eyes, and many organs, with the following results: The microscopic specimens showed a few unmistakable cocci in the right eye, multitudes in the left.

Cultivations after seven days: Right anterior chamber one small colony, right vitreous four small colonies. Left anterior chamber and vitreous, luxuriant growths, liquefying gelatine on the third day. Blood from heart, six isolated colonies; blood from kidney, four well-developed colonies. Brain, none.]

I have still to add that in this group of rabbits I injected aseptically small quantities of sterilized croton-olive oil under the skin of the back of the right side, and the same, contaminated with staphylococcus aureus, under the skin of the back of the left side. In neither was there any remarkable reaction. Yet from the left sides tolerably well-developed growths were obtained. In the three before-mentioned rabbits cultivations were made from both eyes. Anterior chamber and vitreous showed abundant growths in the left (infected) eyes, very scant growths from the right.

How shall we interpret these results? Suppuration with luxuriant growths of cocci in the infected organs, some flaky fibrino-leucocytic exudation in the eyes into which croton-olive oil sterilized, and with, it seems, sufficient antiseptic precautions, had been injected, yet these eyes contained some cocci. The answer is given by the more extensive examination of the body of the fourth rabbit. Suppuration with multitudes of cocci was found in the infected eye; no suppuration, but some cocci, were found in the blood, the kidneys, and the other eye. From the focus of suppuration the cocci had passed into the blood and were deposited in the kidneys, the chief place of their elimination, and in the other eye, which by the injection of croton-oil was irritated and in a fit condition for their development.

To remove this uncertainty I made another series of experiments five days ago. Sterilized croton-olive oil was injected into the right eyes of three rabbits, and an emulsion of the same and staphylococcus albus into the left eyes of three other rabbits. The needle of Koch's syringe was introduced through the ciliary body, and advanced close behind the iris until it presented in the pupil. After the withdrawal of the syringe the puncture in the sclerotic was sealed with the actual cautery. The experiments succeeded very well and were remarkably clean. The results were striking; the infected eyes suppurated freely, the others showed only some whitish streaks in the upper parts of the cornea, descending in two rabbits along the posterior surface of the cornea. One of these eyes was enucleated yesterday. There was no pus in the anterior chamber, the vitreous was clear and the inner membranes were healthy. The streaks at the posterior face of the cornea presented themselves as whitish deposits. Under the microscope they consisted of networks and pencils of coagulated fibrine, and of epithelial cells of Descemet's membrane isolated and in clusters. Adherent to these cells and scattered in the specimen were numerous oil-globules; no trace of microbes. Cultivations taken from the striated deposit, kept in a warm room these twenty-four hours, show as yet no growth.

Mr. President and Gentlemen, I have reported substantially on all the experiments I have made. I shall continue them, principally according to the last-named method, which promises to give unambiguous results. As far as these experiments go, and in consideration of like results obtaines by some recent investigators, they furnish, it seems to me, sufficient evidence of the truth of the proposition, that *suppuration in every case depends on the action of microbes*. If, on the one hand, traumatism of any kind, if foreign bodies, if the most irritant chemical agents, if anything you may imagine is not of itself capable of producing suppuration; if, on the other hand, the addition of pyogenic microbes to any irritating substance, or wound, or any lesion whatsoever, produces, under proper conditions, suppuration without fail, we are certainly justified in ascribing to pyogenic germs the causative action in the formation of pus.

In conclusion, gentlemen, two words. What is pus? "An albuminous, non-coagulable fluid containing multitudes of leucocytes." What is suppuration? "The splitting of living nitrogenous tissue into simpler compounds through the influence of certain bacteria." In this way the parallelism of the three processes—fermentation, putrefaction, and suppuration—is established.

Clinical Department.

EPITHELIOMA OF THE AURICLE.

Dr. Douglas A. Joy, of Marshall, Mich., writes: "Dr. Pooley, in his article under the above title, which appeared in The Medical Record of November 20th, speaks of the auricle as being a very rare locality for the occurrence of epithelioma. As I had just treated a case almost identical with that described by Dr. Pooley, I thought it might be of interest to report it. The patient, Mr. F——, is a day-laborer, of Irish extraction, and between sixty and seventy years of age. Some five years ago he froze his ear, and from that time he dates the appearance of a nodule situated on the helix of the auricle. This, at the time I first saw it, about a year ago, seemed to be of a purely verrucous character. I then advised some simple application, and lost sight of him until about a month ago, when he presented himself with the history of persistent pain in the auricle, especially at night, which prevented him from obtaining any sleep. I examined the sore, and found that it had enlarged to about the size of the thumb-nail, and had an ulcerating base. I advised immediate removal, on the ground that it was degenerating into a malignant growth. To this he at once consented. I then marked out with an aniline pencil the lines of proposed incisions, in the shape of a **v**, with the growth at the base, and injected along the line a few drops of a four per cent. solution of cocaine. After the lapse of about five minutes I proceeded to make the incisions, which were entirely painless. There was very free hemorrhage, but it was at once checked by drawing the edges together with silver wire. No dressings were applied, as he could not be relied upon to keep them in place, and he was allowed to go about his work as usual. He returned next day, with the statement that he had slept all night for the first time in several months, and he feared almost too soundly. The ear had scarcely swollen at all, and there was a very thin scab along the line of incision. The sutures were removed on the fifth day, and the scab came away, with complete healing, in one week. This seems to me a more radical and less painful treatment than that of Dr. Pooley, and the amount of deformity was very slight. I examined the growth with the microscope, and it showed the characteristic nests of epithelium, thus demonstrating its malignant character."

TRAUMATIC ABSCESS OF THE BRAIN.

Dr. J. B. Laidley, of Conway, Mass., reports the following interesting case: "On July 29th a boy, sixteen years of age, placed a loaded shell loosely in a vise, and attempted to dig out the cap, which, of course, exploded, sending the contents of the shell into the floor, while the shell itself struck the boy in the forehead. I was called to see him about twenty minutes after the accident; found him unconscious, with evident symptoms of compression and laceration. Upon making an examination with the finger, I found the shell had broken the frontal bone over the left eye near the median line. The force of the shell had neatly trephined the skull, driving the button of bone through the membranes into the brain, which was then oozing out of the wound. I carefully removed the loose piece of bone with my forceps, took away the portion of brain which was lacerated, and applied a compress and bandage. As soon as the bone was removed the boy became conscious and explained how the accident occurred. During the week following the accident the temperature, pulse, and respiration were very nearly normal, the patient giving no signs of serious trouble except twitching of the muscles; mind fairly clear. On the eighth day the temperature rose to 102°; there was slight delirium, and a small tumor began to protrude from the wound. This hernia increased in size slowly until August 21st, when it was as large as a hen's egg, beating synchronously with the brain, and bleeding freely on the slightest touch. During this time the patient's mind had been slowly failing; he would give half a dozen versions of how he was hurt, all within a few minutes; the muscles were continually twitching; pupil of right eye dilated slightly; left pupil very much contracted. I thought it best to remove the hernia, which I did on August 31st, shaving it down level with the bone. I found the cerebral matter below this tumor discolored and angry-looking; again applied a compress and bandage. The substance removed consisted of softened cerebral matter, infiltrated with blood and lymph. On August 31st the patient had a severe chill, lasting thirty minutes, and the wound, which had given signs of protruding again, receded. From this time until his death there was no protrusion of brain matter, but a thin, watery discharge kept up all the time (four weeks). This discharge was very abundant, wetting a pillow through in two or three hours. His mind now seemed entirely gone, dulness gave way to stupor, and this, in turn, was succeeded by coma, in which state he died. Autopsy revealed a large pus cavity behind the seat of injury, and a small collection of pus in the frontal lobe of the right hemisphere. The outer table of bone was not broken around the opening, but there were three cracks in the inner table, running from the opening an inch or more."

TREATMENT OF GLEET BY IODOFORM.

Dr. J. A. Winternitz, of New Castle, Pa., writes: "On June 8, 1885 Mr. A—— came to me for treatment for an old gleet, which was the result of an attack of gonorrhœa, two years previous. I passed a full-sized sound easily, and could discover no indication of stricture with an olive-pointed bougie. I put him on iron and cantharides internally, and a weak injection, and passed a large-sized sound three times a week, for a period of two months; then changed the injection to one of potass iodide, and afterward used fld. ext. ergot, but with no better result. I used the cupped sound, with an application of glycerine and tannin for several weeks, but with no benefit.

"In July I first began the use of iodoform in this manner. I caused a tube to be made of the same shape as a steel sound, open at both ends, with a loosely fitting piston. Partially filling this with finely pulverized iodoform, I first directed the patient to urinate, and then introduced the bougie to the prostatic portion of the urethra, and began distributing the iodoform as evenly and thinly as possible over the whole portion of the urethra through which the instrument had passed. I then directed the patient to refrain from micturition as long as possible. The applications were made twice daily—in the morning, and again in the evening as near the hour of retiring as possible. After a course of treatment lasting fifteen days Mr. A—— was discharged, completely cured, and two months after had no sign of a returning discharge.

"Mr. G—— came to me in January, and I treated him very much the same as I did the preceding case. He had gleet for three years, had been operated on for stricture, but his chronic urethritis still remained after the cutting operation. I used iodoform, as in the case before stated, and succeeded in obtaining a cure in seventeen days.

"Mr. D—— came to me in January for consultation for an old gleet of seven years' standing. He was cured by the use of applications of iodoform in seventeen days. The discharge had ceased after the third day. He had then been compelled to leave the city for a day, and the next morning did not notice any discharge, but was unwilling to cease treatment until he was satisfied of a permanent cure.

"Mr. J—— came to me in April, having had gleet

for two years and a half. In July I made the first application of iodoform, and when it became necessary for him to urinate he was unable to do so for the period of fifteen minutes, and then urination was painful, until a small plug of iodoform had come away. I became more careful in the use of this drug, and have not been bothered by a recurrence of the symptoms. I discharged Mr. J——, cured, in twenty days. I have since treated four cases of gleet, and have had none which resisted treatment longer than four weeks. I always use constitutional tonic treatment in connection with the iodoform, and take considerable care that the iodoform be finely and evenly distributed over the canal, always making an examination for stricture, and treating it, should it exist, by dilatation, before using iodoform."

AN IMPROVED METHOD FOR COMPRESSING AIR.

Dr. E. L. Oatman, of Nyack, N. Y., sends us an account of a simple and apparently very effective method of compressing air for use in atomizing fluids. In the cellar or basement a common galvanized iron range-boiler is placed, and connected by two pipes, entering it below, with the main water-supply and with the drain. At the upper end a tube is attached, which passes up to the physician's office. All the pipes are fitted with stop-cocks. To charge the reservoir, this air-tube and the discharge-pipe are closed, while the supply-pipe is opened. The water now rushes in and places the contained air under a high pressure. When the water ceases to flow, the supply-pipe should be closed. The compressed air may now be used when required by opening the air-pipe, the stop-cock of which is placed in the office. When the pressure is exhausted, the reservoir may be emptied by opening both the air-tube and the discharge-pipe, and the air may then be again compressed as before, by closing the latter pipes and opening the supply-pipe. The discharge-pipe should be of large calibre, say two inches, so that the apparatus may be quickly emptied. The arrangement would be improved, Dr. Oatman writes, by using two connecting reservoirs, allowing the water to enter only the first, which should be the larger of the two, thus compressing the air in the second, where it can be kept ready for use. The water may now be discharged from the first, for which purpose it should be provided with a second air-tube, leaving it ready for instant use when the pressure is exhausted in the second reservoir. All the cocks governing the tubes of the apparatus may be placed in the office, if desired. Ten dollars will cover the entire cost of the apparatus.

CASES OF INTESTINAL OBSTRUCTION.

Dr. Edward Clark, of Hyde County, N. C., reports the case of an ensign in the navy who was suddenly seized, while on duty surveying Pamlico Sound, with pain in the left side of the abdomen. As the pain continued, and the patient began to pass bloody urine, Dr. Clark was summoned. The temperature was 98° F., pulse intermittent but not accelerated; the urine contained blood, and there was constant, not lancinating, pain in the direction of the left ureter; the abdomen was tympanitic over the course of the large intestine, except at the sigmoid flexure, where there was marked dulness. The patient was vomiting, and the bowels were obstinately constipated, straining efforts at stool having been ineffective for several days previously. A brisk mercurial cathartic, and enemas of ox-gall and spirits of turpentine failed to relieve the obstruction of the bowels. After repeated doses of castor-oil the bowels moved thoroughly, and the patient was relieved. The tendency to constipation continued for several days, but yielded to diet and laxatives. During the height of the attack the temperature rose to 100.2° F. The urine was bloody only at the times when the paroxysms of pain were most severe, the symptom being due, the writer believes, to the results of pressure by the fecal mass. The pulse lost its intermittent character after the constipation was relieved. In a similar attack, two years before, the patient had been treated for peritonitis.

Dr. Clark reports a second case of intestinal obstruction occurring in a negress. He ordered aloes, to be followed by castor-oil. This caused the bowels to move, and with the fecal masses came a large number of pledgets of cotton. The patient had a large cavity in one of her teeth, and had been in the habit, for a year or more, of plugging it with cotton. These pledgets became loosened frequently during mastication, and were swallowed with the food. Purgatives had been required to obtain a motion of the bowels, and their action was always attended with severe pain and a gurgling noise in the neighborhood of the ileo-cæcal valve. The patient had been bedridden and emaciated, but is now, two years after the above occurrence, in perfect health.

A SIMPLE SUBSTITUTE FOR HARE-LIP PINS.

Dr. Charles F. Mason, U.S.A., of Fort Huachuca, Ariz. Terr., reports the following case as an illustration of how much can be accomplished with simple means: "A. B——, a robust female child of three months, was brought to me by the mother, with the request that I should operate upon its hare-lip at once, as she was compelled to go to the country and could not return for some time. The fissure was single, on the left side, and extended up just within the margin of the nostril. Having no hare-lip pins at hand, and not liking the wire suture for this purpose, I began to look around for a substitute. I soon found in a dry-goods store a 'toilet pin,' which I thought would answer very well. This pin is one and five-eighths inch in length, has a sharp point, and a glass bead top, which much facilitates its introduction, and is of the finest tempered English steel. The ordinary single-flap operation was performed and two pins introduced, fine catgut sutures being used between the pins, and, as far as possible, along the mucous edges of the incision. The wound was then dusted with iodoform and painted with collodion, and two narrow strips of isinglass plaster carried across the cheeks over the incision, so as to relax the tissues as much as possible. The child was allowed to nurse in the usual way. The pins were withdrawn on the fourth day without difficulty, and were found to be as smooth as upon introduction, and almost as bright. The wound had healed throughout by first intention, and there was only slight irritation where the pins had been, and this, I believe, could have been almost entirely avoided by withdrawing them one day earlier."

A CURIOUS MALFORMATION OF THE RECTUM.

Dr. Frederick T. Simpson, of Hartford, Conn., writes: "A variety of malformation of the rectum not described by Holmes, Gross, Erichsen, or other author, so far as I have read, has recently come under my observation. It consisted in a prolongation of the rectum beyond its usual termination at the anus, across the perineum to the posterior border of the scrotum. It was attached by its upper surface to the median raphé, and presented a small orifice at its termination through which meconium escaped in small quantities, by dint of considerable straining on the part of the child. There appeared to be no sphincter action to this opening, bits of fecal matter remaining partly evacuated. An incision, made just anterior and down to the anus, and kept open by the daily passage of sounds for three weeks, effected a natural condition of the parts, the rest of the tube drying up into a small fibrous cord."

Progress of Medical Science.

Special Indications for Adopting the High-Altitude Treatment of Phthisis.—The good results so frequently obtained in treating phthisis by a prolonged residence at high altitudes are deducible from principles of climatology now very generally recognized. *The Lancet*, October 30, 1886, prints the following suggestive observations on this subject: "The three chief characteristics of the climate of high altitudes are purity of the air, aërial rarefaction, and cold. Purity of the air being equally essential in all types and stages of phthisis, we cannot derive from this factor any help in the selection of cases for the mountain treatment, but the due consideration of the remaining two is capable of affording valuable instruction and guidance. The atmospheric rarefaction throws a greatly increased strain upon the circulatory apparatus; hence we conclude that valvular disease of the heart or feeble circulatory power is a strong contraindication against the adoption of the high-altitude treatment. For a similar reason this method of treatment is inapplicable to persons of advanced age, in whom the arteries are likely to have undergone more or less senile degeneration. The rarefaction of the air increases the number and depth of the respirations, and promotes the elimination of carbonic acid from the pulmonary epithelium. Hence it presses hardly upon those who do not possess a sufficient remnant of functionally competent lung to react to the increased strain thus thrown on the breathing apparatus. Cases, therefore, in which there is extensive destruction of lung tissue are unlikely to profit by the high-altitude treatment. It was long thought that hæmoptysis was a contraindication to having recourse to the mountains—an idea founded no doubt on a mistaken analogy drawn from the experience of mountaineers, who not uncommonly suffer from epistaxis or melæna during their expeditions. Now, no fact in connection with this question is better established than that hemorrhage is rare at high altitudes, even in patients who suffer repeatedly from it while resident on the plains. A little reflection will show that there is no real discrepancy between these apparently divergent phenomena. The conditions of blood-pressure at the orifices of the body and in the lungs are not only not identical, but are actually reversed. Anæmia or congestion at the surface of the body implies an opposite condition of the viscera, and among them of the lungs; hence the fact that epistaxis occurs at high elevations, so far from warranting a dread of hæmoptysis, is rather a ground of security against its occurrence. The prevalence of cold at high altitudes leads us to conclude that cases of phthisis complicated by renal or rheumatic affections, are unlikely to benefit by this line of treatment. We infer, also, that sufficient constitutional vigor to resist the depressing influence of low temperatures is a *sine quâ non* of a successful result; but it must be borne in mind that, while the shade temperature at Davos may be many degrees below, the thermometer in the sun often registers as much as one hundred degrees of heat. This sharp contrast between the sun and shade temperatures is one of the apparent drawbacks to the climate at high altitudes, but the risk of chill is to a very large extent obviated by the extreme dryness of the atmosphere. The combination of cold, dryness, and rarefaction constitutes a climate of a highly stimulating type; hence we should expect to find that phthisical patients of the neurotic temperament would be unduly excited by it, while the torpid and phlegmatic might be expected to profit from such stimulation. Organic nervous disease, marked functional nervous excitement, especially hysteria, and persistent sleeplessness, are, on similar grounds, likely to prove strong contraindications to the adoption of the high altitude treatment. The nature of the response of the organism to disease may afford us valuable guidance in this connection. Where high temperature, rapid emaciation, and much prostration indicate profound constitutional disturbance, we may conclude that the mountain treatment is inapplicable, the probability being that it would tend to aggravate the inflammatory processes and precipitate the fatal issue, which is but too certain to ensue in such cases, whatever line of practice be adopted. On the other hand, cases of chronic and stationary phthisis, with slight constitutional disturbance, are likely to react favorably to the stimulating properties of the climate of high altitudes. The foregoing conclusions, which are fairly deducible from a due consideration of the conditions of the case, are verified by practical experience. The cases that do best at high altitudes are those of simple phthisis in patients who are free from cardiac, renal, or rheumatic complications, and who exhibit a torpid reaction to the disease. Many cases of respiratory disease, other than phthisis, benefit strikingly by the high-altitude treatment, notably cases of delayed convalescence from pneumonia and fibroid pleurisy. Here the explanation is not far to seek. Such cases need before all things a stimulation of the vital powers to enable the affected organs to rid themselves of morbid deposits and resume their normal functional activity, and this stimulation is precisely the most essential physiological effect of the mountain climate. The only precaution necessary in such cases is to guard against a premature adoption of the high-altitude treatment. In early convalescence, where there is still some lingering pyrexia, with feeble digestive power, such a line of practice would run the risk of promoting a recrudescence of disease, but at a somewhat later stage its value is alike theoretically evident and demonstrated by experience."

Treatment of Elephantiasis by Nitrate of Mercury Ointment.—Dr. Neff had a case of elephantiasis in which the size of the legs was reduced one-half by the constant use of an ointment composed of one drachm of nitrate of mercury and one ounce of vaseline, rubbed in well, and the wearing of rubber bandages on the feet and legs.—*College and Clinical Record.*

Intermittent Hæmaturia.—In the *South African Medical Journal* of September 8, 1886, Dr. Chute says that this affection is very prevalent in King William's Town, and probably also in other parts of the Cape Colony. Rarely has it happened that the patients sought advice for the passing of blood. In the most severe case that fell under his notice the mother of the boy noticed some blood-stains upon the shirt and clothes, and, having read in the papers of the great prevalence of syphilis in the Colony and its spread by native servants, thought the child might have become affected with the disease. In another case, a boy he attended for fractured leg, his mother remarked that this boy of all the family seemed to be the most delicate, and no reason could be assigned. He was under exactly the same conditions as the rest of the family, and while his sisters were strong and robust he was always delicate, and he had an anæmic undergrown look. Upon inquiry it was found that for eighteen months he had suffered from this form of hæmaturia, and upon microscopical examination of the urine the cause of the hæmaturia was at once apparent. The cause of all the cases was Bilharzia hæmatobia. The author then describes the affection as follows: "The symptoms vary very much, the unvarying cardinal one being the passing of blood with the last few drops of urine; this may vary from being a few drops to as much as a teaspoonful; in severe cases it is accompanied by pain at end of micturition and the passing of shreds and flakes of mucus mixed with blood-clot. The feature of the blood coming after the urine has passed is invariable, the first portion being quite clear. Although in recent cases blood passes, yet it may exist without the appearance of any, or in such slight quantities as to escape notice altogether. In one case he remembered questioning

the lad closely about this and he said he had never passed blood. However, on examining the urine microscopically the eggs of Bilharzia were plentiful and also blood corpuscles, although to the naked eye there was no discoloration. The only other symptom is the effect of this continual drain of blood—the patients look anæmic and delicate, although they do not complain. A boy suffering from this complaint, compared with a healthy boy of the same age, shows by his general appearance that there has been a serious disturbance of growth and nutrition, and he is decidedly anæmic. There is generally in such specimens of urine not only blood but more or less of a flocculent deposit; if this be allowed to settle and with a pipette a portion removed and examined under an inch objective, the eggs of Bilharzia will easily be seen. They are unmistakable, being oval in shape, with one end prolonged into a sharp-beaked spine. Under an inch objective the contained embryo cannot be seen distinctly, but a quarter-inch objective brings out details, and often had he seen the violent wriggling movements to escape from its capsule, with the cilia all round the body in rapid motion, whirling about the free sarcode globules. If the clear upper portion of urine be poured away and the deposit freely diluted with water, the eggs may be observed to hatch and let free the embryo, as a free swimming animalcule; its shape then is elongated, pear-shaped, with one end rather conical, and the upper end flattened. At this end, projecting from the middle, is a supple shaped head, and around this supple head and the shoulders, if he might so call the blunt end of the body, the cilia are more evident and have stronger movement. The body is fringed with cilia all round; the general movement of the free embryo is a rapid forward swimming, with slight undulations from side to side. It does not seem capable of affixing itself by either end, as so many of the rotifera do." To the author's mind the most important point to endeavor to ascertain, was to learn how this disease was contracted, so as to ensure prevention, for every effort to effect a cure, by the use of nearly all the drugs of the Pharmacopœia, had, so far as he was concerned, failed to produce anything but a most transient effect. A great help to this end would be to learn its geographical distribution. The disease common in Egypt seems to be different from the Cape variety, as there it produces dysentery, and often death, and the nematoid worm has often been found in veins of the mesentery and liver by Griesinger and Bilharz.

Alleged Medicinal Qualities of Vegetables.—Spinach has a direct effect upon complaints of the kidneys. The common dandelion, used as greens, is excellent for the same trouble. Asparagus purges the blood. Celery acts admirably upon the nervous system and is a cure for rheumatism and neuralgia. Tomatoes act upon the liver. Beets and turnips are excellent appetizers. Lettuce and cucumbers are cooling in their effects upon the system. Onions, garlic, leeks, olives, and shallots, all of which are similar, possess medicinal virtues of a marked character, stimulating the circulatory system, with the consequent increase of the saliva and the gastric juice, promoting digestion. Red onions are an excellent diuretic and the white ones are recommended eaten raw as a remedy for insomnia. They are a tonic and nutritious. A soup made from onions is regarded by the French as an excellent restorative in debility of the digestive organs.

Frequency of the Pulse in Healthy Men.—Bleuler and Lehman found from experiments upon themselves in bed in the morning, that the number of pulsations increased by drinking hot water or tea, diminished by drinking it cold: they increased by warming the body with covering, and diminished on uncovering, the difference being from ten to fourteen beats a minute. Remaining in bed fasting for twenty-four hours did not vary the frequency of the pulse in the various hours of the day. Mental activity diminished it more or less. A certain influence was produced by weak sensations in the digestive canal, increasing along with the sense of heat and weight in the stomach, with nausea and a slight sense of tension in the intestine, and especially in the rectum, though not with the presence of certain salts, as cooking salt, or saltpetre of soda, which produce this intestinal sense.

Aneurism of the Occipital Artery.—The following instance of this rare condition is reported by Dr. J. Henry C. Simes in the *Polyclinic* of October, 1886. Stephen T——, aged twenty-five, Hungarian, unmarried and a miner, was admitted into the surgical ward of the Episcopal Hospital on August 4, 1886. A very satisfactory history could not be obtained from the patient, on account of his inability to speak or understand any other language but his own; however, Dr. Simes was able to ascertain that the swelling, located at the back of his head, had been noticed by him since he was twelve years of age. He had no recollection of ever having had any injury to the part, nor does he remember ever having had any sickness. There were no evidences of any constitutional diseases. An examination revealed a swelling, situated in the right occipital region, and extending from the middle line of the skull to the mastoid process of the right temporal bone. It was about the size of a large orange, oval in shape, with a slight constriction about its middle. The scalp covering the tumor presented nothing abnormal. A very marked pulsation was evident to the sight, and by palpation it was found to be expansive and to correspond to the cardiac pulse. Pressure upon the occipital artery almost completely arrested the pulsation in the tumor, while pressure upon the posterior auricular artery diminished the force of the pulsation, but did not arrest it. Both the occipital and posterior auricular arteries were increased in size. The growth of the tumor had been gradual, but the pain, which was now a prominent symptom, had greatly increased during the past year. The history and examination of the tumor indicated an aneurism, which seemed to him to implicate the occipital and posterior auricular arteries, the latter in a much less degree than the former. On August 7th, with the assistance of Dr. Nancrede, he made the lower incision for ligating the occipital artery, and passed a catgut ligature around it. This procedure, while it very markedly lessened the force of the pulsations in the tumor, did not entirely arrest them, and it was determined to ligate the external carotid artery. By continuing the incision downward no difficulty was experienced in reaching and tying the vessel, which, when ligated, completely stopped the pulsations in the tumor. A drainage-tube was placed in the wound, its surface dusted with iodoform, the skin was drawn together by silver sutures, and a dressing of bichloride of mercury applied. The wound healed without any complication, except a small abscess which formed in the track of the drainage-tube, and the patient left the hospital on September 2d. On the third day after the operation, August 10th, a very slight pulsation could be felt in the tumor, which was only evident by careful palpation, and at the time the patient left the hospital this pulsation had not increased. The tumor had diminished to one-third of its original size.

Hæmatemesis in Hysterical Patients of both Sexes.—Dr. Ollivier, of Paris, read a paper at the recent Congress at Nancy, on hæmatemesis, more particularly in the absence of the catamenia. In cases of hysteria in both sexes hæmatemesis was met with, and appeared due to a special condition of the nervous system. He asserted that this variety of hæmatemesis, which was too often regarded as symptomatic of ulcer of the stomach, was in reality a form of local hysteria, with gastralgia, accompanied by hemorrhage. The absence of any disturbance of nutrition, the suddenness of the onset, the presence of nervous disturbances, and the prompt re-establishment of health, would generally serve as indications of the true nature of the complaint

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FASTING AND ITS USES.

AFTER all, the fasting performances which are now going on in Europe may have a beneficial effect in the education not only of the laity, but of the profession. Both these classes are in the habit of paying too much attention to the almighty dinner-table, and of thinking that "stuffing" is a panacea for most of our physical ills. The truth is that our systems are, as a rule, over-supplied, and in most chronic ailments, leaving aside phthisis, the problem is more one of assimilation and excretion than of ingestion. The fact that many, perhaps most, human beings can live for at least two weeks on water alone, and that some can undoubtedly live six or seven weeks on that thin beverage, is one that should be made part of our practical physiological and therapeutical knowledge.

One Mr. John Griscom, of this city, who claims to have fasted several times for periods of two, three, or more weeks, and whose remarks bear the stamp of good sense, gives the following practical statements about fasting: "It is a matter of fact that a person does feel better after a fast of forty-eight hours. It is true that a craving for food will take place in this time, because the system is in the habit of taking food, but after that the sensation does not occur. A person to fast through the will-power, not believing it is right, would destroy the nervous system in two or three days. But if there is a full belief that it can be done without harm, one can do it easily. The trouble is the majority of people believe that it can't be done, and thus people frighten themselves to death rather than starve to death. With the prejudice against fasting wholly removed, anyone in the enjoyment of perfect health could fast two or three weeks without inconvenience. But if a man should fast simply as an experiment, without a full belief that he could do it, he would kill himself."

Mr. Griscom thinks that the elixirs used by Succi and others act by making the person believe fasting not injurious; and it is evident that he regards the mental condition as one of great importance to the person starved.

We do not see that the physiological studies lately made upon the professional starvers, in Italy and France, are likely to add anything to our knowledge of tissue changes or other phenomena of inanition. The matter has been fully gone over by Chossat, Bidder and Schmidt, Moleschott, Voit, and others. Even experimental observations upon man have not been wanting, for Moleschott has studied the phenomena of inanition upon six melancholics who fasted for from twenty-one to twenty-two days.

As a rule, animals die when, in consequence of deprivation of food, their body-weight is diminished from three-fifths to one-half. The length of time taken for this fall in weight, however, varies greatly; certain amphibia and reptiles can live for from six to nine months without food. On the other hand, when deprived of food, most birds and small mammals die in from six to nine days. Singing-birds may die in one day, while birds of prey will live two weeks; dogs die in four weeks, horses in from two to three weeks.

It was known before the time of Tanner or Merlatti that man can live about twelve days without food or drink, and that in stuporous conditions, where the body is in complete rest, the human system can last for twenty or even forty days under the same conditions. Death has occurred, however, in from seven to ten days when no water or food was taken; with water alone, death has occurred in eighteen days. Fasting beyond two weeks is, therefore, not always safe. When a person is deprived of food and drink, the sense of hunger is felt for about forty-eight hours; it then disappears—due perhaps to a paralysis of the sensory fibres of the vagus in the stomach. The sense of thirst, however, remains until death. The body-weight steadily diminishes, more rapidly in young animals, who stand inanition badly. When water is taken, the loss of flesh is much less rapid. The waste of tissue attacks the fat first and most completely, the brain and bone least. The muscles and great abdominal viscera are severely affected, losing about half their weight. The blood, relatively to the weight of the body, remains in about the same amount.

The excretion of urea falls, from its daily average of thirty to forty grammes to about eight grammes.

The idea that starvation may prove a powerful therapeutic measure is somewhat fanciful. This is known: that starved animals are more liable to parasitic affections and to septic and contagious diseases. Apart from the sufferings that it entails, therefore, starvation can never be a very safe means of treatment. A form of water-starvation has already been extensively tried in Germany under the name of the "dry-cure," or "Schroth's cure." In this the patients are kept for three or four days on two wine-glasses of hot wine daily; then, after a day of free libations, the fluid is again taken away; meanwhile the patients are subjected to hot wet packs. This treatment has not proved a brilliant success, although it is claimed to have cured cases of inveterate syphilis and gastro-ectasis. With some modifications it has been used successfully in the treatment of heart diseases and dropsical symptoms.

A SUGGESTION CONCERNING THE EXAMINATION OF SPUTA.

A SUGGESTION of some clinical value is made by Dr. R. W. Philp, in the November *Edinburgh Review*, concerning the examination of sputa for the tubercle bacillus. The present methods of detection often fail, he says, on account of the frequent scarcity of the bacillus in

any given specimen, and the tenacious character of the latter renders it difficult to get the film on the cover-glass sufficiently thin and uniform. He advises that the whole sputa for the twenty-four hours should be placed in a conical vessel, very like a urine deposit glass, and that it should be subjected for another twenty-four hours to a uniform heat of 36–39° C. This temperature he considers to fairly represent the temperature existing in the lungs—the habitat, for the time being, of the parasite.

At the end of the above time the thicker portions of the sputa will have settled to the bottom of the glass, and will have lost much of their tenacity. The supernatant fluid can be easily decanted, or a drop of the thickened portion can be withdrawn by means of a pipette. This latter portion can be spread upon the cover-glass with uniformity, and, of course, is much more liable to show bacilli, if present, than a drop of sputum before concentration. They are often five times as abundant.

Furthermore, declares Dr. Philp, this slow, uniform heat, easily obtained by placing the glass on the back part of a range, produces an actual culture or propagation of the bacilli. To the objection that the bacilli grow slowly in natural fluids, such as blood-serum, he replies that the sputa are probably a better culture-medium, and hence produce a more speedy germ-development. In any event, the above method of examination has common sense and simplicity to commend it. It does not interfere with other methods. It rather acts as an adjunct to them.

THE FOOD OF AMERICANS.

Professor W. O. Atwater and Mr. Carroll D. Wright have recently investigated the subject of the amount and cost of food used in this country. Chemical analysis of meats, fish, etc., are given, and the comparative cost and nutritive value of the different foods is estimated. As regards their utility to the economy, protein is ranked at five, fats at three, and carbo-hydrates at one. Protein is thus five times as valuable a food constituent as sugar or starch; but its cost varies greatly according to the force that contains it. For example, a pound of protein in beef costs $1.06, in oysters $3.36, in milk 61 cts., and in wheat flour 12 cts.

Some old and some new dietaries are given. We present in a tabulated form the more striking of these. The food is estimated in grammes, four hundred and fifty-four to a pound, and 28.4 to the ounce.

	Pr.	Cm.	Fat	Carb.	Val.
German Soldier [illegible]	1.4	[illegible]	[illegible]	[illegible]	[illegible]
London Sewing Girl [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Chesterfield Mem.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pittsburgher in ti[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Brewery Laborer	[illegible]	[illegible]	73	[illegible]	[illegible]
Vest[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The authors of the monograph under consideration have made some practical investigations into the dietaries of artistans and working-people in Massachusetts. It was found that the feeding of these classes on a large scale, as in a boading-house, containing seventy-seven persons, costs twenty-two cents per individual daily. In a small mechanic's family, the individual cost is forty-seven cents.

On analyzing the dietary it is found that a Massachusetts Yankee eats 5½ pounds of food daily, of which 2⅛ pounds is some form of animal food and contains over half a pound of pure protein.

The general conclusions regarding the eating habits of Americans are that we, as a people, consume an excessive amount of food, the excesses being most pronounced in the line of meats and sweetmeats. The question arises whether this alleged excess is actually eaten or whether it is not largely wasted. It is not a matter of common observation among physicians that Americans are great eaters. Certainly, as compared with the English, we are abstemious. The average weight of the food, exclusive of liquors, consumed by a healthy adult is from three to four pounds. We doubt if Americans, as a rule, greatly exceed this, although a four-pound diet is attributed to the Yankee of Massachusetts. Americans are an active race, physically and mentally, and need a good deal of food. It is doubtful if they eat too much; beyond any doubt they waste food, eat too large a proportion of sweets, and, furthermore, they do not drink enough.

THE HEALTH OF RAILROAD EMPLOYEES.

The public is particularly interested in the physical condition of a class of men upon whose carefulness, skill, and physical soundness so many lives depend.

The general opinion has been that the occupation of railroad employees is not a healthy one. Duchesne stated that while in the first few years they may improve in general health, yet at the end of ten years they become tired out; at the end of fifteen they are sufferers; and at the end of twenty they can rarely continue in service. Loyat affirms that varicocele is very frequent among engineers and firemen, and that almost every one has to wear a suspensory bandage. Engineers are especially liable to rheumatism and pneumonia. After some years' service a certain proportion of them develop a dulness of sight and hearing. Others suffer from conditions much like that of a mild form of spinal concussion, *i.e.*, continuous pains in the limbs, with muscular feebleness. Engineers, after some years of the strain which naturally goes with a position involving much anxiety, sometimes develop a peculiar mental state, which may be called cerebral irritation, characterized by excessive nervousness and morbid sensations of dread and fear.

With regard to the important subject of hearing, Lichtenberg, of Buda-Pesth, has just reported the results of his examinations of two hundred and fifty railroad employees. Among this number he found ninety-two, or over one-third, affected with ear disease; thirty-two had catarrhal troubles; in three the labyrinth was involved; and in thirty the external auditory meatus was the seat of some disease.

At the Annual Meeting of the New York Medico-Legal Society, held December 8th, at the Hotel Buckingham, Dr. Charles K. Mills read a paper on "Benjamin Rush;" and Dr. L. W. Baker, of Baldwinsville, Mass., read a paper on "Epilepsy and Forensic Medicine." The meeting was followed by the annual banquet. Mr. Clark Bell was elected President, and Albert Bach, Esq., Secretary of the Society.

News of the Week.

A Polyclinic has been established in Detroit.

The "Dr. Bird," who has occupied such a distinguished position in the Colin-Campbell divorce suit, is a Mr. Tom Bird, M.R.C.S., of Grosvenor Square, London, who, according to Churchill's "Medical Directory," is instructor in the use of anæsthetics at Guy's Hospital. He is said to be a young man and a bachelor.

Poisoned in a Beer Saloon.—An exchange states, as a matter of news, that a man went into a beer saloon in Berlin and poisoned himself there. The thing is done every day in this city.

The Pittsburgh Medical Review is the title of a new medical monthly edited by seven medical gentlemen of Pittsburgh, Pa., viz.: Drs. X. O. Werder, C. S. Shaw, J. J. Buchanan, A. Koenig, P. McCough, J. J. Green, and T. L. Hazzard. The first number is well printed, well made up, and presents altogether a promising appearance.

A New Hypnotic is Methylal (*Pharm. Zeitg.*, No. 91, 1886). Internally it is given in doses of 1.5 gramme; externally it may be used as a local anæsthetic mixed with oil, wax, and ointment.

The Louisville Clinical Society is the title of a new medical organization recently started under the Presidency of Dr. John A. Ouchterlony.

The "Antiseptic Shake" has become a well-recognized convention in the clinics of the city. The surgeon about to operate extends to his invited guest, not his hand, but his elbow, which is gently seized by the latter, a slight pendulum motion is made, the courtesies of the day exchanged, and then the quasi-anatomical relations cease. Thus it is shown that true courtesy is not inconsistent with micro-parasitical innocuousness.

Professors Hardy and Sappey, of the Paris Faculty of Medicine, have been retired on account of age.

The Medico-Chirurgical Society of German Physicians of New York.—At the annual meeting of the Society, held December 6, 1886, the following officers were elected for the ensuing year: President, Dr. Leonard Weber; Vice-President, Dr. B. Scharlau; Recording Secretary, Dr. Willy Meyer; Corresponding Secretary, Dr. H. J. Garrigues; Treasurer, Dr. A. Krog. The Society appears to be flourishing, the membership having risen to almost two hundred during the current year.

Severed Digits.—There have been times when the following remarkable case, reported by Dr. O. N. Bradbury, in the *Boston Medical and Surgical Journal*, would have been received with some doubts: "Mr. Editor—The reunion of severed digits is becoming a matter of considerable interest. I have a case it might be well to place among the others already reported. Some nine years ago I was called to ride about half a mile to see a little boy seven years of age. Twenty to twenty-five minutes before my arrival he was in the wood-shed, and very generously holding small sticks upon the chopping-block for a sister, a year or so younger, to cut with a rather heavy axe. The axe came down too near the hand, and severed the forefinger of the left hand, just *above* the second joint. The cut was made square and complete, the severed end falling among the chips, where I found it about twenty-five minutes later. Warmed it fully in warm water; adjusted it with great care; took two stitches, strapped and splinted carefully. Two years afterward, it puzzled me to tell which forefinger had been cut. The merest trace of a scar was found. The action of the joint was perfect, the finger was well nourished, the muscles apparently as strong as those of the other forefinger, and the little fellow would not acknowledge there was any numbness. Yours very truly, ——."

A Surgeon's Suicide because of an Unsuccessful Operation.—M. Kolomnin, professor at the St. Petersburg Surgical Academy, is reported to have committed suicide after having failed in the performance of a dangerous operation. Many surgeons who read this notice will appreciate, if they do not commend, Dr. Kolomnin's act. The mental depression which some surgeons suffer after an unsuccessful operation, even if no possible blame can be attached, is often very great.

Cundurango Wine has been recommended by Dr. Wilhelmy, of Berlin, and Dr. Hoffmann, of Basle, in cancer and ulcer of the stomach.

The Varying Strengths of Pepsin.—The *American Analyst* states that experiments show that there are just as many degrees of strength of "concentrated pepsin" as there are lots made.

Deaths in the "Big Flat."—The "Big Flat" is an enormous tenement-house in Mott Street, containing a population of 478 persons, most of whom are Roumanians and Poles. The Society for Improving the Condition of the Poor finds that the mortality-rate for three and three-quarter years was 42.40 per 1,000, while that for the whole city was 25.72. Of these, sixty-two per cent. were among children under five years of age.

Medico-legal Science in New York.—There is something the matter with medico-legal science in this city. Report says that the Medico-legal Society has fallen into decay; and the Medical Jurisprudence Society has recently been disrespectfully referred to as a "quasi-medical organization." There was a time when medico-legal science flourished in New York. We trust it may yet do so again.

Mollin is the name of a new vehicle for the application of drugs to the skin. It is a soft soap containing an excess of fat with glycerine. It is said to be very readily absorbed.

No Pathogenic Gonococcus.—Dr. S. Giovannini, of Bologna, finds five different micro-parasites in the discharges of gonorrhœa. Two are identical with those found in the healthy urethra. None of the other three, when cultivated, produce gonorrhœa.

The Doctor is the title of a new semi-weekly journal devoted to the interests "of physicians and their friends," edited by Charles Avery Wells and published in this city. It aims to fill the somewhat difficult rôle of "a gossip, but not a tattler," "of a gay, but not an unlicensed loiterer," by the doctor's hearth-stone. The first number is a very creditable one.

Bryonia Diöica as a Uterine Hæmostatic.—Professor Petresen, of Bukarest, and Dr. Christodoresca, unite in saying that bryonia is a very efficient drug in uterine hemorrhage.

Another Death from Sublimate Injections (1 to 2,000) after child-birth is reported from the clinic of Breisky, at Prague. Sublimate injections will soon have as bad a record as chloroform.

The New Test for Sugar, Phenylhydrazine, gives a precipitate of yellow crystals when sugar is present. The test is delicate, but if albumen is present in the fluid it must be removed.

The Operation of Gastrotomy for a Table-knife, recently performed at St. Louis, illustrates the phenomenal promptness of the occidental surgeon, to say nothing of the skill. The patient, a tailor, swallowed a table-knife nine and a half inches long. A surgeon was immediately notified, and thirty minutes later an incision was made in the linea alba, the stomach opened, and the knife removed. The points of interest, says the *St. Louis Medical and Surgical Journal*, were: 1, Performing gastrotomy for the removal of a foreign body *without* establishing an artificial fistula; 2, the fact that this case is unique, no other being on record of a man swallowing a case-knife; 3, the use of the Czerny-Lembert suture on the stomach. The patient at last accounts was out of danger and doing well. He is sitting up and his temperature and pulse are normal. The editor adds: There are on record but four cases of operation for the removal of swallowed case-knives, in each of which the operation for the removal was performed after adhesions had formed between the stomach and the abdominal wall. An account of another case was published by Hartknochs in "Alt und Neues Preussen," 1684, in which a table-knife 18 ctm. long by 1.5 ctm. wide was removed from the stomach by Daniel Schwabe, of Koenigsberg, in 1635. The incision in the stomach "snapped shut," and the viscus was dropped back without being sutured. Five stitches were put into the abdominal incision, and the case recovered. The account of this case, however, is obscure and not well authenticated.

The Announcement is made that *The Journal of Nervous and Mental Disease* will hereafter be issued under the imprint of J. H. Vail & Co. (21 Astor Place, New York City). The editor states that the attempt to issue the journal monthly has been highly successful.

Portrait of Harvey.—Mrs. Kate Chase Sprague is the possessor of a life-size portrait of Harvey, the discoverer of the circulation of the blood, which she recently loaned to the Lotos Club of New York for one of its art exhibitions. She paid $8,000 for it. It is thought to be a Van Dyke, though it is only positively known that it was painted in the time of Charles I.—*The Doctor*.

The Death of Professor Grohe, Professor of Pathological Anatomy at Griefswald is announced. Professor Grawitz is expected to succeed him.

Honors to a Medical Editor.—The Grand Cross of Isabel the Catholic has been conferred on Dr. Matias Nieto Serrano, editor of *El Siglo Medico*, the leading Spanish medical weekly.

A New Surgical Society in Berlin.—A surgical society has been organized in Berlin, and held its first meeting on November 22d. Her von Adelmann opened the proceedings by explaining the object of the society, namely, to hold meetings once a month, in the lecture-rooms of the various hospitals of Berlin. The presidents, to be taken in alphabetical order, will receive the society each in turn in his own lecture-hall, and will undertake to deliver an address, or to preside during the delivery of one. The first president took for the subject of his address the "Removal of the Diseased Spleen," and gave a historical retrospect of this operation in the "septic era." Professor Bergmann showed a patient, then convalescent, whose spleen he had removed fourteen days before, on account of the presence of hydatids. Herr de Ruyter stated that a mixture of iodoform, ether, and alcohol, killed the most resistant micro-organisms.

The First Excision of the Spleen in Spain was recently performed by Dr. Ribera at Madrid. The patient was a boy of ten. He died on the day after the operation from shock.

All of Darwin's Breeding Experiments are outdone by Dr. Funkhouser, of St. Louis, who recently exhibited a specimen of an embryo five days old, the result of the union of a rooster and a duck. This was the only fertile specimen of sixteen such eggs hatched in an incubator. The doctor thought his experiment tended to upset prevailing ideas about species, general orders, and classes. Dr. Funkhouser states all sources of error, with regard to the roosters and ducks, had been carefully avoided. But we must beg leave to express doubts on this point. We have heard of an Egyptian observer who testified to the fruitful results of an indiscretion between a hippopotamus and an alligator, but the observation has not been confirmed. Dr. Funkhouser's experiment is revolutionary and needs most careful confirmation.

The Vagina as a Receptacle for Food.—Dr. I. N. Love, of St. Louis, claims that the vagina can be used as a receptacle for food and means of conveying nourishment to the system. The food should be digested by peptonization or the use of diastase.

Marriage and the First Child.—Even the bright and beautiful period of the honeymoon does not escape the cold scrutiny of science. In six thousand "cases" of matrimony Dr. Ansell found that the primal product of connubial joys was announced on an average at the end of sixteen months. The majority are born before the end of the first year and seven-eights before the end of the second.

Western Railroad Hospitals.—A daily paper gives the following account of our railroad hospitals, which are, we believe, a peculiarly American institution: The railroad hospital system has been established by two great lines, the Central Pacific and the Missouri Pacific. They are supported by compulsory contributions of from twenty-five to fifty cents a month from the employees. The Missouri Pacific has four hospitals, situated at St. Louis and Sedalia, Mo., and at Fort Worth and Palestine, Tex. There is one chief surgeon, Dr. W. B. Oulten, and an assistant in charge of each hospital.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 16, 1886.

ABRAHAM JACOBI, M.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT introduced to the Academy Dr. Charles A. L. Reed, of Cincinnati, O., who occupied a seat upon the platform.

The Statistical Secretary, DR. A. B. JUDSON, announced the death of Dr. E. R. Chapin, one of the founders of the Academy, and a generous donor to the library.

The Recording Secretary, DR. A. M. JACOBUS, read letters received from Dr. Alfred L. Loomis and Dr. John C. Dalton, withdrawing their names from the list of nominations for President; also a letter from Dr. T. E. Satterthwaite, declining the nomination for member of the Committee on Library.

DR. H. KNAPP then delivered a discourse on

FERMENTATION, PUTREFACTION, AND SUPPURATION,

in which he demonstrated his subject by means of apparatus and the results of experiments performed upon the eyes of rabbits (see p. 701).

DR. HEITZMAN said that he came from Dr. Knapp's laboratory nearly a convert, yet at the same time a number of very trustworthy observers had been able to obtain suppuration without the aid of micro-organisms. Even the boss physiologist, Koch himself, was not quite convinced of the correctness of the assertion, "No microbes, no pus." The idea that there was a kind of putrefaction in tissue that leads to suppuration he regarded as rather trustworthy. And still he believed that there was something besides bacteriology in pathology, although one could not avoid pitching into the work in this new department of investigation.

The PRESIDENT gave notice of a special meeting to be held December 30th, and also appointed as tellers to serve at the annual meeting Drs. E. S. Peck, A. S. Hunter, and J. A. Andrews.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE DISCUSSION ON THE TREATMENT OF VESICAL TUMORS—SPECIAL MEETING OF THE METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION—SIR ANDREW CLARK AND MR. TIMOTHY HOLMES ON MEDICAL PROVIDENT INSTITUTIONS—DEATH OF DR. WILTSHIRE.

LONDON, December , 1886.

AT the last meeting of the Clinical Society the subject of vesical tumors and their treatment was discussed at some length. Sir Henry Thompson opened the discussion by reading a paper in which he gave the history of six cases. Three of these were operated on by the suprapubic method, two by perineal section, and from one patient (a female) the tumor was removed by dilatation of the urethra. In two out of the six cases a complete cure was obtained as the result of the operation; in two others life was prolonged; in the remaining two cases sufficient time had not yet elapsed to speak with certainty as to the ultimate result.

Mr. Bernard Pitts read notes of a case of tumor of the bladder in which the perineal operation having been performed two years previously, the suprapubic operation was adopted on a return of the symptoms. The original growth was a papilloma, and when the bladder was opened above the pubes it was found that recurrence had taken place at the site of the old pedicle, viz., just below the right ureter. It was removed and the base of the growth scraped with a sharp spoon. In a month the opening in the bladder had closed, all trace of blood had disappeared from the urine, and the patient was free from pain. Discussing the probable future history of the case, Mr. Pitts suggested that under certain circumstances (such as a change in the character of the growth, or if the growth were so luxuriant that successive operations failed to keep it in check) it might be justifiable to give a chance of prolonged life by diverting the ureters. The ureter might be reached by an incision in the groin, ligatured near the bladder, and the end then brought to the surface. After the wound had healed and the kidney was accustomed to the change, the same operation should be done on the opposite side. The growth could then be dealt with through the suprapubic opening and, if necessary, portions of the bladder removed.

Mr. Croft related a case of flat epitheliomatous growth situated behind the trigone. It was not found possible to remove the tumor by the perineal operation, but great relief followed the establishment of the perineal fistula. In the case of a lady the urethra was dilated and the whole growth scraped away by the finger-nail. It was now four months since the operation, and the hæmaturia had not returned.

Mr. Bryant remarked that the founders of that Society would have regarded the suprapublic operation as a rash innovation. He thought it should be preferred to the perineal operation in most cases of extensive growth and growths near the fundus, but perineal exploration ought first to be used. He had operated on twelve cases by the perineal method. One ended fatally; probably, he said, because the suprapubic operation had not been employed. With characteristic courage Mr. Bryant gave the particulars of this case. A fibrous polypoid growth was removed from the fundus of a man's bladder. After its removal a second one was detected, but could not be so readily removed. It was drawn into the perineal wound and snipped off. The patient died from peritonitis, and a small hole was found in his bladder at the site of the polypus last removed. Mr. Bryant narrated two cases in which very severe hemorrhage was caused by the presence of very small tumors—one so small that it was removed through having become caught in the eyelet of a sounding catheter. Both cases were cured by removal of the tumor. Mr. Bryant also related a case in which the whole bladder appeared to be filled with villous growth. Sir Henry Thompson's forceps were used, and a good deal of the growth was removed. The bladder was scraped and the walls roughly wiped with a sponge on a holder. Although reduced by hemorrhage to the last degree of anæmia, the man steadily recovered and remained well for six months. Slight hæmaturia then came on and continued for a week, when it ceased and never recurred.

Mr. Henry Morris said he had operated by the perineal method in five or six cases. In only two cases was further operation thought justifiable. In one of these the tumor was as large as an orange, hard and nodulated. It being found impossible to remove it through the perineal wound, a suprapubic opening was made. The two openings were a great advantage, but it was impossible to remove all the disease. Though the rectal bag was much inflated it was surprising to find how little the bladder had been elevated. Which wound should be closed, the other being left open for drainage? He did not think the suggestion made by Mr. Pitts was too adventurous.

Sir Henry Thompson said washing out the bladder by the catheter was not a certain method of diagnosis. The lithotrite might remove fragments suitable for diagnosis, but this should be done cautiously. He could not with

certainty (even with the finger in the rectum) diagnose a vesical tumor by means of the sound, as the papillomata were very soft. The perineal opening was no disadvantage whatever, and should be the exploratory opening. Drainage afterward through the suprapubic opening was sufficient. The suggestion made by Mr. Pitts was well worth consideration, and he was thankful for a suggestion thrown out by the president (Mr. Bryant) as to the use of a sponge tied round a holder in clearing out an extensive villous growth.

On Friday evening, December 3, a specially convened meeting of the Metropolitan Counties Branch of the British Medical Association was held to consider the action of the two colleges in excluding the Society of Apothecaries from their combination. The question was also raised of the rights of members and licentiates of the College of Physicians to a voice in its management. At present, as at the Surgical College, all power is in the hands of the Fellows. A few years since the movement began for conferring a voice in his College on the "Member" of the College of Surgeons, and an "Association of Members" then formed has now become a powerful body. A similar association may not improbably soon be formed at the sister College. Affairs are more complex there, because there are three grades and the highest grade is only obtainable by election by those already in. As the council propose, and their nominations are *usually* (though not invariably, as proved by a notable occasion during Sir W. Jenner's period of office) accepted, it may be said that election is virtually by favor of the council. At the meeting on Friday the claims of the general practitioner were vigorously enforced. Dr. Morton gave a lengthy account of the circumstances which had led up to the present agitation, and was seconded by Dr. Verdon, one of the secretaries of the newly created Association of General Practitioners. Mr. George Brown gave a short but incisive address. Mr. Timothy Holmes, of St. George's Hospital, then propose a resolution, which was seconded by Mr. Gubb. The only speaker representing the opposition was Mr. Stoker, who deprecated conferring the privileges of the Fellows on the Members.

An important conference took place yesterday afternoon at the Society of Arts, to consider the question of medical treatment at hospitals. Sir Andrew Clark, who presided, said that not only the interests of the sick poor, but also those of the profession were involved in the matter. They had first to decide whether the existence of provident societies was necessary, whether the good they did was more than counterbalanced by the evil, how they should be managed, and whether they should be affiliated to hospitals or have an autonomy of their own.

Mr. Timothy Holmes proposed the first resolution, which was to the effect that medical attendance on the poorer classes ought to be conducted on the principle of sick assurances. Those who could not pay ordinary medical fees should, he said, pay for medical attendance by payments made during health. He feared provident medical institutions could not be made self-supporting unless the members were very numerous. The motion was seconded by Mr. Lushington, Treasurer of Guy's Hospital, and carried unanimously. The next motion was proposed by Mr. Bonsfield, Chairman of the Metropolitan Provident Medical Association, and was "That the attention of the governing bodies of hospitals and other public authorities be called to the necessity for some check in the indiscriminate provision of medical treatment at hospitals and dispensaries." This was seconded by Mr. Nelson Hardy, and carried unanimously. On the motion of Sir Spencer Wells, a committee was appointed to report on "the subject of assurance as applied to the treatment of the sick."

Dr. Alfred Wiltshire died a few days ago. He was for many years Junior Obstetric Physician to St. Mary's Hospital, and only resigned this appointment last year in consequence of prolonged ill health. He made numerous contributions to obstetrical literature. Quite a little discussion on the subject of vicarious menstruation was started last year by the publication of a clinical lecture by Dr. Wiltshire dealing with the subject.

INTERNATIONAL MEDICAL CONGRESS — A LETTER FROM DR. JACOBI.

To the Editor of The Medical Record.

SIR. In the session of the International Medical Congress of Copenhagen I was appointed the American member of the Committee for Collective Investigation, and permitted to select a colleague in the United States. Thus the pamphlets and circulars prepared by, or with the authority of, the General Committee in London, were distributed under the names of N. S. Davis and the undersigned. They were made returnable to my address on January 1, 1887.

As I have resigned my position on the above committee, I require the permission and privilege of notifying, through your journal, the holders of the above pamphlets, that they ought to be sent to N. S. Davis, M.D., 85 Randolph Street, Chicago, Ill., instead of the undersigned.

Very respectfully,

A. JACOBI, M.D.

11 West Thirty-third Street, New York.

A QUESTION OF PRIORITY OF INVENTION.

To the Editor of The Medical Record.

SIR: Permit me to call your attention to the fact that the essential improvement in the vaginal speculum of Dr. Hubbard W. Mitchell, described as original in your journal, of December 11, 1886, viz., the flange for the support of the upper buttock, was devised by Dr. Paul F. Mundé, and presented by him before the New York Obstetrical Society, May 17, 1881, its description being published in the *American Journal of Obstetrics*, in 1882 (Supplement to volume xv., p. 15), and in "Mundé's Minor Surgical Gynecology" (p. 83), in 1885.

The constant use of this speculum by Dr. Mundé, and the increasing appreciation in which it is held by the profession, as evinced by the large demand made for it according to the statement of the instrument-makers, would seem to prove the utility of the modification, it being of value not only when making a vaginal examination without assistance, but even when held by a nurse, the freedom of her left hand, which its projecting flange allows, enabling her to aid the operator in various ways.

BROOKS H. WELLS, M.D.

72 West Forty-fifth Street.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 12, 1886, to December 18, 1886.

WILLIAMS, JOHN W., Major and Surgeon. Ordered for duty at Jackson Barracks, La. S. O. 205, Division of the Atlantic, December 14, 1886.

POPE, BENJAMIN F., Major and Surgeon. So much of S. O. 285, A. G. O., December 9, 1886, as directs him to report in person to the President of the Army Medical Examining Board, New York City, for duty as member and recorder of the board, is revoked. S. O. 287, A. G. O., December 11, 1886.

CORSON, JOSEPH K., Captain and Assistant Surgeon. Leave of absence extended seven days. S. O. 288, A. G. O., December 13, 1886.

BALL, R. R., First Assistant Surgeon. Ordered for duty at Fort Riley, Kan. S. O. 144, Department of the Missouri, December 13, 1886.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 18, 1886:

	Cases.	Deaths.
Typhus fever	0	0
Typhoid fever	10	2
Scarlet fever	28	3
Cerebro-spinal meningitis	1	1
Measles	558	[illegible]
Diphtheria	139	50
Small-pox	0	0
Yellow fever	0	0

DR. ARNING AND THE HAWAIIAN GOVERNMENT.—As stated in a previous note in these columns, Dr. Arning, who was called to the Sandwich Islands to make a study of the leprosy prevailing there, has returned to Germany. The immediate cause of his return was a disagreement which he had with the Board of Health at Honolulu. After having been in the islands two years he presented a report to the board, which report was objected to as not being sufficiently complete, and the author was requested to present a fuller and more satisfactory one. Dr. Arning replied that he considered the information given was as complete and conclusive as necessary for a lay Board of Health, and that he did not desire to have a full scientific report published at present, as his investigations were not nearly completed, and would probably need to be continued over many more years in order to allow him to come to positive conclusions. The only answer to this note was that a special committee, appointed by the board to make such reduction in the medical staff of the Government as they deemed advisable, had decided to discontinue Dr. Arning's services on the staff. Judging from the correspondence published by the Board of Health, it would appear as though they had acted somewhat hastily. But whatever the merits of the controversy, it is unfortunate that the labors begun by Dr. Arning, and which were so full of promise, should be so suddenly ended.

NOTES ON OPHTHALMOLOGY.—Galezowski believes that normal tears contain bacilli which penetrate the wound during an operation and produce infection. Antiseptics, according to him, act in operations upon the eye only while they are in contact with the wound. Galezowski would have us, therefore, protect the wound against contact with the tears. Knapp, however, believes the tear is an antiseptic fluid, and I think he is correct. We have many cases to prove that Galezowski is wrong in this matter. Engelskjon declares that the faradic and galvanic currents exert an opposite influence on the limits of the field of vision, and that this influence can be utilized for diagnostic purposes and as a remedy, the current which enlarges the visual field acting beneficially on the disease in question. Myopia, in Germany, is a subject of very serious consideration. The government has solicited expert opinion as to school arrangement, and there is apprehension of the possibility of its spread injuring the efficiency of the army. A large number of Chinese and Japanese have been examined by Holmgren, who found them color-blind to the same extent and in the same way as Europeans. Ackland reports a case of slight ectropion which recovered after the extraction of an eye-tooth. Cocaine and eserine have been successfully used in combination for the relief of glaucomatous pain. Dr. Armaiznac, of Paris, employs a three per cent. solution of cocaine and a solution of eserine 1 to 200. A drop of each is placed in the eye at intervals of six minutes. Very signal benefit resulted in the cases reported by Dr. Armaiznac. Iodol is a combination of iodine and pyrol. This compound is the latest addition to ocular therapeutics and is contributed by an Italian. Iodol possesses anæsthetic and antiseptic properties. It is also said to have a marked influence on the healing process of rebellious ulcers. In phlyctenular keratitis, chronic conjunctivitis, blepharitis marginalis, ulcer of cornea, and affections of lachrymal passages great efficiency is claimed for iodol. It is a grayish-white powder, insoluble in water. It may be employed mixed with equal weights of vaseline, or in alcoholic solution with glycerine.—*Alabama Medical and Surgical Journal.*

PRIZES OFFERED BY THE ACADEMY OF MEDICINE OF PARIS.—The following are some of the prizes, with the subjects, offered by the Académie de Médecine for general competition during 1887: The Academy Prize (10,000 francs): "Vaginal Hysterectomy, the Indications and Operative Procedures." The Argenteuil Prize (10,000 francs); this prize, which is sexennial, will be awarded to the author of the most notable improvement in measures for the cure of urethral strictures, or to the author of the best work on the treatment of other diseases of the urinary passages. The Barbier Prize (2,000 francs) will be given to the discoverer of the most efficient means of curing diseases considered incurable, such as rabies, cancer, cholera, etc. "Encouragement" may be accorded to those who come nearest to attaining the object without actually accomplishing it. The Capuron Prize (1,000 francs): "Post-partum Involution, the Changes and Pathological States which Result." The Civrieux Prize (1,000 francs): "Vesical Neuralgias." The Desportes Prize (1,200 francs), for the best work on "Practical Medical Therapeutics." The Ernest Godard Prize (1,000 francs), for the best work on "External Pathology." The Hygiene of Infancy Prize (1,000 francs): "A Clinical Study of Athrepsia." The Lefèvre Prize (2,000 francs): "On Melancholia." The Portal Prize (600 francs): "On Primary Renal Tuberculosis." The Saint-Léger Prize (1,500 francs), for experiments to produce goitre in animals by administering substances extracted from the water or earth of goitrous regions. The prize will not be awarded unless the experiments have been successfully repeated by the Academy's commission. The Vernois Prize (800 francs). for the best work on hygiene. Competing essays for all these prizes must be sent to the Academy before May 1, 1887, written in French or Latin, accompanied by a sealed envelope and a device to identify the author. The condition of concealment of the author's name does not apply to competitors for the Argenteuil, Barbier, Desportes, Godard, and Vernois prizes.

THE TRIALS OF A MEDICAL EXPERT.—Dr. F. A. Schmidt, writing in *Daniel's Texas Medical Journal*, relates his experience as an expert witness in a trial for rape. He and a brother practitioner were summoned about midnight by a deputy sheriff to examine the victim at her house, and the next day was commanded to go to the county-seat, ten miles distant, to repeat the examination. He was detained for a day or two, at his own expense, then allowed to go home, then summoned again and held for two days, and so on. The jury disagreed, and shortly after that the writer moved to another town one hundred and fifty miles away. Here one day he was arrested and taken in custody of the sheriff to the town where the court was held. The trial was adjourned, but the witness was put under bonds of $500 to insure his next appearance. Now, in order to save his bond he had to watch the case, telegraphing back and forth in order to keep himself advised of the doings of the court. Finally the case was dismissed, but not until Dr. Schmidt had spent over two hundred dollars in money, and lost more through the enforced neglect of his practice. He received no compensation whatever for his worry and trouble.

Treatment of Phthisis.—The introduction of sulphuretted hydrogen into the respiratory passages by breathing gives rise to various disturbances, which may terminate, when a sufficient amount is taken, in death; but it was shown by Claude Bernard that when absorbed by the rectum an almost indefinite quantity may be eliminated by the lungs without harm. Dr. Bergeon, of the Faculty of Lyons, has been experimenting on the action of gaseous enemata for some time, and finds them useful in a variety of diseases depending upon the presence of micro-organisms. The practical point was to find a suitable vehicle for the administration of the sulphuretted hydrogen, which should at the same time be without danger to the economy and easily tolerated by the bowel. It is said that carbonic acid fulfils these conditions. It is easily tolerated by the large intestine. It is rapidly absorbed, and is eliminated by the lungs with the medicinal gas it contains. It has, moreover, a therapeutic action itself, which may be the chief factor of this new treatment. Dr. Bergeon states that those who have tried this method in Paris, Lyons, Geneva, and Marseilles, in cases of phthisis, have generally observed a rapid disappearance of the suppuration, with progressive improvement. Expectoration has ceased, and the only stethoscopic signs remaining are of a dry character, and due to cavities and cicatrices. In the last three months the treatment has been tried at the Hôpital St. Antoine. In two cases of asthma, an injection of carbonic acid, charged with sulphydric acid, was made half an hour after admission. The dyspnœa was decreased considerably, and the treatment being continued, the respiration became free, and the attacks did not recur during the treatment. Nine cases of pulmonary phthisis, presenting general and physical signs of the disease, together with bacilli, were treated in the same manner. Cough and expectoration were greatly diminished, and the increase in weight was rapid—from one to two pounds a week, amounting in one instance to nine pounds in six weeks. The bacilli, however, did not disappear from the sputa. Dr. Bergeon recommends his method in phthisis, asthma, whooping-cough, inflammation, bronchiectasis, bronchorrhœa, and pulmonary catarrh. He insists upon the greatest care in its application. The CO_2 should be absolutely pure, and prepared by the action of sulphuric acid on bicarbonate of soda. The recipient should be perfectly free from air, and great care should be taken to prevent the entrance of air at any part of the tube, its introduction into the bowel, even in minute quantities, being said to cause meteorism and enteralgia. Four or five litres of CO_2 charged with sulphuretted hydrogen are sufficient for an injection, which should be repeated twice daily, care being taken not to administer the gas within three hours after a meal. As regards the *modus operandi*, two very important instruments for the production of the gas and its subsequent sulphydration are figured in the *Bulletin de l'Académie de Médicine*, but practically the two points seem to be the introduction of the pure CO_2 into a five-litre bag without admixture with air, and its passage through a sulphureous solution before entrance into the bowel. Those who possess a thermo-cautère will find that, with a little ingenuity, nothing but a bag to hold the CO_2 is necessary beyond the apparatus which works the cautery. The bag being adapted to the aspirating-ball of the thermo-cautère by means of an india-rubber tube, which may be kept closed by a clip instead of the more expensive tap, a rectum-tube is substituted at the other end for the cautery. The bottle of the thermo-cautère being replaced by a more capacious jar holding a pint of sulphydric solution in its lower half, and leaving room for the gas above, the apparatus is complete. Upon removing the clip between the bag and the ball, and working the latter, the CO_2 is aspirated and forced through the solution, where it becomes charged with sulphuretted hydrogen, and then passes on to the bowel. It may be mentioned in this connection that various anti-microbic treatments are being carried out in the Paris hospitals. At Laennec they are using hypodermic injections of eucalyptol, as proposed by Dr. Roussel, who claims that the bacilli are thus destroyed. In the majority of cases this has not been observed; but in one instance, which will probably be communicated to the Academy shortly, the micro-organisms, which were abundant in the sputa on admission, disappeared under treatment. Dr. Filleau claims to obtain a similar result by the use of a one-per-cent. solution of carbolic acid, of which he injects a hundred drops at each operation. No local irritation of any importance follows, if the carbolic acid is chemically pure, in the form of silky crystals. Iodoform increases daily in favor, especially where there is hypersecretion.—*Lancet.*

Cancer and the Elimination of Urea.—The elaborate researches of F. Henri Jean and Eug. Prout on the elimination of urea in cancer show that the daily amount of urea is not lessened in any constant manner in this disease, as has been claimed. They also show that the daily average in hospital patients is below that given in ordinary physiological text-books, being from 21.6 to 8.41 grammes.

Antipyrin has been found by Umbach to reduce the elimination of urea in healthy persons, and thus presumably lessens tissue-waste. Wiczkowski found the reverse true of fever patients.

The Cost of Membership in Medical Societies in Philadelphia, according to the *Polyclinic*, reaches about twenty-five dollars annually.

To Remove Freckles.—The following method is recommended by Dr. Halkin: The skin, being washed and dried, is put on the stretch with two fingers of the left hand, and a drop of carbolic acid is applied exactly over the patch. When it dries, the operation is completed. The skin becomes white, and the slight sensation of burning disappears in a few minutes. The thin crust which forms after the cauterization should not be disturbed; it detaches itself spontaneously in eight or ten days, leaving a rosy coloration, which is soon replaced by the normal color of the skin.—*American Practitioner.*

Convulsions may be frequently cut short like magic by turning the patient on his left side. Nausea, occurring as an after-effect of chloroform and ether narcosis, may generally be controlled in the same manner.—*Chicago Medical Times.*

Medical and Scientific Newspapers in Japan.—From recently published statistics of the Japanese press it appears there are seven medical papers, with a monthly circulation of 13,514; nine relating to sanitary matters, with a circulation of 8,195; and two on the pharmacopœia. There are seven devoted to various branches of science.—*Ex.*

Shot-Gun Prescriptions.—A physician in Fort Wayne, according to the Fort Wayne *Journal of the Medical Sciences*, recently prescribed for a baby five prescriptions at once, and one contained seven different drugs, divided into ten doses. Poor baby! Another prescription for an adult, contained fourteen different drugs, divided into forty doses. At last accounts the patients and the doctor were living.

Our City Charities.—Dr. W. Washburn, of this city, writes: Under the heading, "Our Expensive City Government," you make a comparison that implies a state of facts which do not exist. You say that "the average cost of food per capita annually in prison and asylums is $35.51 to $47.12," and then go on to show that the "Department of Charities and Correction spends $100 per capita per annum," without taking into account that this $100 per capita includes the per capita cost of the salaries paid to the officers, as well as the fuel and light, and clothing in the cases of the insane, together with medicines and other necessary things.

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